

APPENDIX G
HUMAN HEALTH RISK ASSESSMENT

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HUMAN HEALTH RISK ASSESSMENT
ELLENVILLE SCRAP IRON AND METAL - RI/FS
VILLAGE OF ELLENVILLE, TOWN OF WAWARSING,
ULSTER COUNTY, NEW YORK

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ACRONYMS AND ABBREVIATIONS

ABS	Dermal absorption fraction
ABS _{GI}	Gastrointestinal absorption fraction
ARAR	Applicable or Relevant and Appropriate Requirement
AST	aboveground storage tanks
AT	Averaging time
ATSDR	Agency for Toxic Substances and Disease Registry
bgs	below ground surface
BW	Body weight
C&D	Construction and Demolition
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cm ²	Square centimeter
COPC	chemical of potential concern
CSM	Conceptual Site Model
CTE	Central tendency exposure
DESA	(EPA's) Division of Environmental Science and Assessment
ED	Exposure duration
EF	Exposure frequency
ELCR	Excess Lifetime Cancer Risk
EPA	United States Environmental Protection Agency
EPC	Exposure point concentration
FI	Fraction ingested
FS	Feasibility Study
ft	feet
HDR	Henningson, Durham & Richardson Architecture and Engineering, PC.
HEAST	Health Effects Assessment Summary Tables
HHRA	Human Health Risk Assessment
HI	Hazard index
HQ	Hazard quotient
IEUBK	Integrated Exposure Uptake Biokinetic
IRIS	Integrated Risk Information System
IUR	Inhalation unit risk
J	Estimated (data qualifier)
kg/day	Kilogram per day
Kp	Permeability coefficient
m ³ /day	Cubic meter per day
m ³ /hr	Cubic meter per hour
m ³ /kg	Cubic meter per kilogram
mg/cm ²	Milligram per square centimeter
mg/day	Milligram per day
mg/kg	Milligram per kilogram
mg/kg-day	Milligram of chemical per kilogram body weight per day
mg/l	Milligram per liter
MMOA	Mutagenic mode of action
mg/m ³	Milligram per cubic meter

NAD	North American Datum
NAVD	North American Vertical Datum
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PAH	polycyclic aromatic hydrocarbon
PAR	Pathways Analysis Report
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
PEF	Particulate emission factor
ppm	parts per million
PPRTV	Provisional peer-reviewed toxicity value
PRG	Preliminary Remediation Goal
QA/QC	Quality assurance and quality control
RAGS	Risk Assessment Guidance for Superfund
REAC	Response, Engineering and Analytical Contract
RfC	Reference concentration
RfD	Reference dose
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RME	Reasonable maximum exposure
RSL	Regional Screening Level (December 2009)
SCO	Soil Cleanup Objective
SF	Slope factor
START	Superfund Technical Assessment and Response Team
SVOC	semi-volatile organic compound
TCLP	Toxic Characteristics Leaching Procedure
U	Undetected (data qualifier)
UCDOH	Ulster County Department of Health
UCL	Upper confidence limit
µg /L	Microgram per liter
µg/dL	Microgram per deciliter
µg/m ³	Microgram per cubic meter
VOC	volatile organic compound
XRF	x-ray fluorescence

1.0 INTRODUCTION AND OBJECTIVES

This report presents the methods and the results of the baseline human health risk assessment (HHRA) conducted as part of the Remedial Investigation (RI) for the Ellenville Scrap Iron and Metal Superfund Site (the Site) located in Ellenville, Town of Wawarsing, Ulster County, New York. This HHRA is submitted as part of the Remedial Investigation (RI) Report that presents the activities and findings of the RI activities performed at the Site. This HHRA report has been prepared by Henningson, Durham & Richardson, Architecture and Engineering PC (HDR), in association with HDR Engineering, Inc. under United States Environmental Protection Agency (EPA) Contract Number EP-W-09-009, EPA Work Assignment Number 008-RICO-02LX. The HHRA Report was prepared pursuant to the EPA-approved Final Work Plan (HDR 2009), discussions with EPA Region 2 staff, and current EPA guidance.

An HHRA is prepared to evaluate potential health risks associated with a site under current and future land use conditions. The specific objectives of this HHRA for Ellenville Scrap Metal Site are as follows:

- Estimate the magnitude of potential human health risks associated with current and potential, hypothetical future Site conditions
- Identify the environmental media and contaminants that pose the primary potential risk to human health
- Provide the basis to support risk management decisions about the need for further action at the Site.

The methods used to conduct the HHRA for the Site are based on the risk assessment framework developed by EPA, as documented in “Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final” (“RAGS”; EPA 1989), other EPA guidance, and discussions with EPA Region 2 staff. The methods for the baseline HHRA were established in the Final Work Plan developed for the Site by HDR and approved by EPA. Standard Risk Tables consistent with RAGS Part D were developed for the HHRA, and are included in Attachment A (these tables are referred to as “RAGS Tables” herein to differentiate them from other tables).

As part of the human health evaluation for the Site, HDR submitted an Interim Draft Pathway Analysis Report (PAR; January 22, 2010) for EPA review and comment. The PAR submittal included several draft HHRA tables that were subsequently updated based on comments received from EPA and incorporated into this HHRA Report.

Support on this document has been obtained from CH2M Hill, a Team Subcontractor of HDR, who has provided quality assurance reviews of the PAR and HHRA.

2.0 SITE DESCRIPTION AND BACKGROUND

The Ellenville Scrap Iron and Metal Site is a former scrap iron and metals reclamation facility and unlicensed landfill located at 34 Cape Road (also known as Cape Avenue) in Ellenville, Ulster County, New York. The majority of the 24-acre facility is in the Town of Wawarsing, and a smaller portion is within the Village of Ellenville itself. The Site is bordered to the north by Cape Road, to the south and west by Beer Kill (also known as Good Beer Kill) and to the east by residential properties. From 1950 to 1997, the Site was operated mainly as an automobile battery recycling facility. Scrap metal, used tires, construction and demolition (C&D) debris and other waste materials were also accepted during Site activities and stored on about 10 of the 24-acre Site. As part of the operations, large amounts of materials were burned and the ash residue dumped on-Site.

Following sale of the property in 1997, the new owner of the property began accepting significantly greater amounts of C&D debris and other wastes, most of which appear to have been disposed on an embankment at the edge of the upper portion of the Site. From 1987 to 1998, the New York State Department of Environmental Conservation (NYSDEC) inspected the Ellenville facility on numerous occasions and directed the owners to remediate conditions at the Site. In 1998, NYSDEC obtained a restraining order that prohibited further activities at the Site. The Site was proposed for placement on the National Priorities List (NPL) on September 13, 2001 and was placed on the NPL October 7, 2002.

Detailed descriptions of the Site's history, location, physical features and setting, geology, hydrogeology, environmental conditions, regulatory agency involvement (i.e., site characterization activities, interim remedial measures), and other information is included in the RI. Some of the RI information is summarized here in the HHRA if relevant for discussions of current or future human health exposures. For reference, a Site Location Map is provided as Figure 1, and a Site Plan is included as Drawing 1.

3.0 DATA EVALUATION

Existing site characterization and environmental sample data available for the Site are described in detail in the RI Report. This HHRA considered the most-recent / relevant historic data sets for inclusion in the HHRA for use in selecting chemicals of potential concern (COPCs), developing exposure point concentrations (EPCs), and ultimately estimating cancer risks and noncancer hazards. The below table provides a summary of the data utilized for the HHRA.

TABLE 1
Summary of Site Investigations and Project Milestones

Site Characterization Event	Date	Investigator / Lead Agency	Comments
Sampling Event	6/5/2000	Weston	EPA START contractor collected surface soil (including off-Site parcels), sediment
Remedial Investigation	2007/2008	Foster Wheeler / Tetra Tech	Samples taken as part of the RI include: on-Site MWs including installation of new wells, test pits, Hydropunch™, direct push soil samples, surface water samples, sediment samples, leachate samples, a sample from the former compactor area, on-Site soil gas samples, off-Site residential surface soil samples, and background soil samples.
DESA Well Sampling	2008/2009/2010	EPA	Sampling of “EPA” monitoring wells.

Data from the following media were assessed in the HHRA:

- On-Site surface soils (0 - 2 ft bgs)
- On-Site subsurface soils (0 - 10 ft bgs)
- On-Site shallow groundwater (within 10 ft bgs)
- On-Site monitoring well groundwater (from monitoring wells only)
- Beer Kill sediment
- Beer Kill surface water
- On-Site leachate
- On-Site Soil gas
- Off-Site surface soil (0 – 2 ft bgs)

A summary of the sample sets used in the HHRA is provided in Table 2. Sample location maps are provided in the RI, and included in the HHRA for reference (refer to Drawing 1, Figure 2).

The data assessed in the HHRA is predominately from the central portion of the Site running from Cape Road to Beer Kill, where historic metal reclamation and debris placement occurred. The remainder of the data used in the HHRA, primarily from the western portion of the Site and further along Cape Road, completes the characterization of the Site although these portions were not used for metal reclamation or landfill operations. The topography in this area generally precluded development or industrial-type operations.

Only validated laboratory data were utilized in the HHRA; data generated from real-time field screening instruments and mobile laboratory were not included in the quantitative HHRA. These non fixed laboratory data are described in detail in the RI. All data without qualifiers and all data qualified as estimated (J) were used in the HHRA. Consistent with EPA guidance, data qualified as rejected (R) were considered unusable for risk assessment purposes (EPA 1989, 1992). Wherever field duplicates exist for a single sample, only the one (original) version of the results are included.

Based on discussions with EPA Region 2 and observations during HDR's site reconnaissance activities, all on-Site data for a given medium were first grouped together for the entire Site. That is, initially no groupings of data based on areas of concern (AOCs), physical features, or other location-specific factors were conducted for the HHRA. To further evaluate individual portions of the Site in more detail, a separate analysis was then conducted for on-Site soils for identified AOCs. Attachment B includes descriptions and locations of the AOCs.

Off-Site soil data were also grouped together into a single data set and evaluated separately from the on-Site media. In addition, a lead analysis was conducted for each off-Site parcel for which soil data were available (refer to Attachment C).

Standard EPA RAGS D Table 2's (Attachment A) provide a list of detected analytes at the Site, by media. Chemicals for which all results were reported as non-detect (U-qualified) are not listed in the tables. Discussions of the media-specific data reduction and organization that were conducted for this HHRA are included in the following subsections.

3.1 Soil Data (On-Site)

Soil analytical data were aggregated into the following subsets, corresponding to depth intervals deemed relevant for potential human exposures:

- Surface soils, represented by soil samples collected from 0 to 2 feet below ground surface (bgs); and

- Subsurface soils, represented by all soil samples collected in the interval of 0-10 ft bgs.

Data from deep subsurface soils, represented by soil samples collected from a depth of greater than 10 ft bgs, were not included in the HHRA because it is unlikely the soil will be disturbed or accessed by human receptors.

The surface soil data set was used to evaluate potential current and future exposures via “non-intrusive” human activities, including trespassing (current), recreational (future), industrial (future), and residential (future) land uses. The subsurface soil data set was used to evaluate potential direct contact exposures associated with potential intrusive work (i.e., construction activities associated with future site development). It was presumed that intensive redevelopment (including potential localized mechanical excavation to depth of 10 ft bgs) could occur.

Samples were assigned to the surface soil data set on the basis of the lower depth of the reported sample collection interval; samples with a lower depth of 2.0 feet bgs or less were included in the surface soil data set. RAGS Tables 2.1 in Attachment A include data reduction for on-Site surface soils and subsurface soils. It should be noted that data from samples referred to as “upland sediment” in previous investigations (i.e., shallow soils within or near leachate areas observed at the times of sampling) were included in these soil data sets because the potential for exposure to these areas by receptors is similar to site-wide surface soils.

3.2 Groundwater Data

Validated groundwater analytical data were aggregated into two data sets, corresponding to depth intervals and on-Site groundwater resources deemed relevant for potential human exposures:

- Shallow Groundwater: One groundwater data set was used to evaluate potential direct contact exposures to receptors involved with excavation activities under a future land use scenario (for example, construction or utility workers digging trenches to repair or install subsurface utilities on-Site). RI data from the Hydropunch™ sampling, plus one grab sample of excavation water, where shallow groundwater was sampled at a depth of less than 10 ft bgs, were utilized. Since leachate observed at the Site is suspected to seep from shallow groundwater originating in the upland buried waste areas, leachate data were included in the shallow groundwater data set.
- On-Site Groundwater: Another groundwater data set was created to evaluate hypothetical residential exposures (assuming on-Site groundwater may be used for domestic purposes in the future). Only data from the existing RI monitoring wells (identified as EPA-001 through -007) were used. The on-Site monitoring wells are generally installed to deeper

intervals than the Hydropunch™ sample points, and the monitoring well construction provides more representative groundwater data (i.e., less concern with turbidity issues).

If groundwater beneath the Site was used for a future residential scenario (e.g., a private well servicing potable and domestic needs), a well(s) would likely be installed into a deep bedrock aquifer, and draw water from depths greater than the screened intervals of the EPA monitoring wells. Moreover, it has been reported that adjacent and nearby homes along Cape Road are connected to a municipal water supply and distribution system (ATSDR 2006). Use of the data from EPA wells is therefore considered to be conservative for evaluation of potential future groundwater use scenarios at the Site.

Data from the three most-recent rounds of groundwater monitoring (October 2008, October 2009, and January 2010) were used in the HHRA. RAGS Table 2.2 includes data summaries for on-Site groundwater (Attachment A).

3.3 Sediment Data

Sediment data collected from the Beer Kill were deemed to correspond to locations potentially relevant for human exposures, and were used to evaluate potential current and future exposures for recreational activities. Note that some sediment and surface water samples were co-located during the RI sampling, mainly along the site boundary and the near shore bank of Beer Kill (see Drawing 1). RAGS Table 2.3 includes data summaries for Beer Kill sediment.

3.4 Surface Water data

The surface water data from samples collected in Beer Kill were used to evaluate potential current and future exposures for recreational activities. Surface water and sediment samples were often co-located. RAGS Table 2.4 includes data reduction for Beer Kill surface water.

3.5 Leachate Data

Leachate data were obtained from samples collected from leachate seeps located on or at the base of the upper plateaus / waste placement areas of the Site, and upland surface water samples (drainage tributaries) that were present at the time of sampling. The on-Site leachate data were used to evaluate potential current exposures via “non-intrusive” trespassing activities, and potential future exposures. RAGS Table 2.5 includes data reduction for on-Site leachate.

3.6 Soil Gas Data

Soil gas data exist from Summa canister samples collected from around the Site, as described in the RI Report. The soil gas data are summarized in RAGS Table 2.6 of Attachment A; however, no quantitative assessment of risk associated with potential exposures to this medium was conducted. Figure 2 provides soil gas sample locations. Soil gas data are discussed qualitatively

below, in terms of COPC concentrations above screening criteria and the corresponding locations of samples at the Site.

3.7 Residential Soil Data (Off-Site)

Surface soil analytical data obtained during the RI and previous investigations at off-Site, residential properties were assessed (separately from on-Site media). The data include samples collected from as deep as 2 ft bgs. Data from all off-Site locations were combined to develop the off-Site soils data set. This data set was used to evaluate potential residential exposures via “non-intrusive” human activities. RAGS Table 2.7 of Attachment A includes data summaries for off-Site surface soils. A separate lead analysis was conducted for the off-Site parcels, and is included in Attachment C and described below in Section 3.8.2.

3.8 Other Considerations

Background sampling was conducted during the RI (TetraTech, 2007) to establish concentrations in surface soil, sediment, and surface water media from locations not impacted from the Ellenville Site. The background soil sampling and a discussion of the off-site lead analysis are provided in the below subsections.

3.8.1 Background Soil Sampling

Ten off-Site surface soil samples (plus one duplicate sample) were collected in right-of-ways located upgradient / upwind of the Site, and attempts were made to collect these samples away from roadways. The surface soils were collected from 0 to 6 inches bgs. Only a few SVOCs, mostly PAHs, were detected at low concentrations (considerably below the NYSDEC Unrestricted Use Soil Cleanup Objectives [SCOs]) in some of the samples. Three pesticide compounds (4,4-DDD, 4,4-DDE and 4,4-DDT) exceeded NYSDEC Unrestricted Use SCOs in one or more samples. Only two of the ten background samples did not have an exceedance for at least one of the three pesticide compounds. Based on their wide distribution, the presence of the pesticide compounds might indicate historical use of these pesticides in the site area. PCBs were not detected in any of the background samples. Among the metals results, samples from five locations (plus the duplicate sample) exceeded the NYSDEC Unrestricted Use SCO for lead, ranging from 79.6 mg/kg to 677 mg/kg (TetraTech, 2007). The soil background analytical results for metals are provided on RAGS Tables 2.1 and 2.7 as reference for the on-Site and off-Site soil data evaluated in the HHRA. The NYSDEC SCOs (for Residential and Industrial uses, as applicable) are also provided on these RAGS Tables for further reference.

3.8.2 Lead Analysis (Off-Site Residential Properties)

The potential for health risks from exposure to lead is evaluated based on estimated blood lead levels (BLL) relative to a benchmark BLL rather than through the conventional toxicity values used for other COPCs. Lead was identified in off-Site surface soils as a COPC and the lead concentrations were evaluated separately. Modeling of BLL was not conducted based on input from EPA Region 2 staff; rather, qualitative evaluations were conducted for nine off-Site residential parcels (Attachment C).

4.0 CHEMICALS OF POTENTIAL CONCERN

COPCs are chemicals that are carried through the exposure and baseline risk analysis portions of the HHRA. Standard EPA risk assessment methodologies (1989, 2001b) were followed in selecting COPCs. The COPC selection process consisted of the following steps:

- The maximum detected concentration (MDC) of each chemical was compared to a risk-based screening level, and a chemical whose MDC was below the screening level was eliminated as a COPC. Although reported by the laboratory as “total” rather than speciated, the screening values of the more toxic forms of chromium (hexavalent chromium) and mercury (methyl mercury) were used, consistent with EPA Region 2 guidance.
- A chemical occurring at a low frequency of detection (less than 5% in a data set of at least 20 samples) was eliminated as a COPC. However, known human carcinogens (weight-of-evidence classification A) were retained as COPCs, regardless of the frequency of detection.
- Naturally-occurring elements considered essential for human nutrition (calcium, magnesium, potassium, and sodium) were eliminated as COPCs.

4.1 Risk-Based Screening Levels

The EPA’s Regional Screening Level (RSL) Table (EPA, December 2009) was used as the primary source for risk-based screening levels. The table contains RSLs corresponding to either a 1×10^{-6} excess lifetime cancer risk (ELCR) level for carcinogens or a Hazard Quotient (HQ) of 1.0 for non-carcinogenic effects. The screening toxicity criteria for this HHRA correspond to a 1×10^{-6} ELCR or a hazard index (HI) of 0.1 (for non-carcinogenic effects). Using 10 percent of the RSLs for non-carcinogens (i.e., HI of 0.1) is protective against underestimation of non-cancer hazards from possible exposure to multiple non-carcinogens that affect the same target organ.

For the identification of COPCs, the following RSLs were utilized.

- Soils and sediments - residential soil RSLs (for on-Site and off-Site surface soils; on-Site sediment data) and industrial soil RSLs (for on-Site subsurface soils).
- Groundwater, surface water, and leachate - tap water RSLs.
- Soil gas - residential air (multiplied by a factor of 10 to account for a generic 10:1 soil gas-to-indoor air attenuation factor). The screening process thus considers a future vapor intrusion pathway potential for volatile site contaminants. As an additional means of comparison, soil gas data were also compared to shallow soil gas screening values included in the Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (EPA, 2002). Table 2c (Target Shallow Soil Gas Concentration; 1×10^{-6} risk; 0.1 Attenuation Factor) was utilized, and results are included on RAGS Table 2.6 – Supplement (Attachment A). The COPC screening using the December 2009 RSLs for residential air resulted in a greater number of soil gas COPCs than screening using the 2002 draft guidance.

In certain cases where RSLs were not available for comparison, the chemical was typically retained as a COPC in accordance with EPA Region 2 guidance. Media-specific COPC screening and identification are provided in RAGS Table 2s of Attachment A.

4.2 Mutagenic Mode of Action (MMAO)

In March 2005 the USEPA published the *Supplemental Guidance for Assessing Susceptibility from Early-Life Exposures to Carcinogens* to provide additional focus on childhood exposures to carcinogens, as recommended in the *Guidelines for Carcinogen Risk Assessment* (USEPA, 2005b). The Supplemental Guidance document evaluated cancer risks from early-life exposure and compared them to cancer risks associated with exposures occurring later in life. This evaluation was done to determine if additional safety factors should be used when childhood cancer risks are quantitatively evaluated. EPA is developing guidance that can be used to determine if a chemical is carcinogenic via a mutagenic mode of action (MMAO) (USEPA, 2007c). Several chemicals have been identified by the EPA as possible carcinogens that act via a mutagenic mode of action. Eight (8) of the MMAO chemicals were identified as COPCs at the Site: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and hexavalent chromium (CrVI)¹. These chemicals are addressed as having MMAOs in the Exposure Assessment and Toxicity Assessment portions of the HHRA.

¹ Since speciation analysis was not conducted on the total chromium data at the Site, the HHRA assumed that this metal exists in the more toxic form of Cr VI. Impacts of this assumption on the risk estimates are discussed further in the uncertainty analysis.

5.0 EXPOSURE ASSESSMENT

The exposure assessment evaluates the nature and magnitude of potential exposures associated with the Site. The assessment includes a description of the exposure setting and land use, identification of potential receptors and exposure pathways, identification of exposure points, and estimation of exposure point concentrations (EPC) and chemical intakes.

The exposure assessment is summarized in the HHRA conceptual site model (CSM, Figure 3) and RAGS Part D Standard Table 1, which is presented in Attachment A. Components of the exposure assessment are described in the following subsections.

5.1 Site Setting

The RI report contains information on the exposure setting and land use at the Site and vicinity, including site history, physical features, geology, hydrogeology, climate, and demographics. Information from the RI was used to develop the CSM. The Site is currently unoccupied, and chain link fencing borders the Site along Cape Road and along a portion of the northern site boundary to deter access. The Site is accessed from a locked gate along Cape Road. Fencing was observed along residential parcels on the southern Site border, from approximately Beer Kill and up towards Cape Road. It should be noted that no current human uses of the Site (i.e., trespassing, recreational activities such as hiking or hunting) were observed during HDR site reconnaissance activities.

Several residential properties are located in a neighborhood adjacent to the Site. One of these residential properties to the east of the Site (Parcel A along Cape Road) was formerly part of the Site, but is now a separate property and was thus considered as an off-Site parcel in the HHRA. Soil remediation was conducted at this property in 2004. EPA removed one foot of soil, collected post-excavation soil samples, installed a geofabric membrane and covered it with one foot of topsoil and then sod. Levels of lead as high as 230,000 mg/kg were reported in surface soils from samples collected prior to the removal action (ATSDR, 2006). The post-excavation soil samples were collected from either the 0 to 4 inch or 0 to 6 inch depths following the removal of 1 foot of soil and before placement of the geofabric membrane and backfilling with one foot of certified clean fill (Weston 2005).

The COPCs noted in the off-Site surface soils may have originated via run-off or erosion from the Site, or from air-borne deposition of dusts during active site operations. Possible fate and transport mechanisms are detailed in the RI report. Chemicals found in soils at these properties may have also originated from other sources of contamination or activities (e.g., use of lead paint, pesticides, and other chemicals; and/or use of imported soil/fill materials).

Domestic water is supplied to the residences along Cape Road by a municipal source and distribution system. Private wells reportedly exist in the area of the Site; however, the nearest

homes served by private wells exist across Beer Kill and have previously been tested by the NYSDOH. Water samples from five of these wells were collected in March 1998 and December 1999. Samples were analyzed for VOCs, SVOCs, PCBs, pesticides and metals. Low levels of acetone, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, chloroform, diethylphthalate, and di-n-butyl phthalate were detected at levels below the NYSDOH drinking water standards promulgated for public water supplies. No other organic contaminants were detected, and levels of inorganics were reportedly similar to the area's background levels. No impacts from the Site have been identified in these wells (ATSDR, 2006).

According to NYSDEC, the designated uses for Beer Kill are fishing, swimming, and the maintenance and propagation of fish, aquatic life, and wildlife (NYSDEC 2010a). No evidence of human use of the portions of Beer Kill that border the Site was observed during site reconnaissance efforts. The portion of Beer Kill along the Site is generally too shallow for swimming, and is not easily accessed due to the presence of the Site on one side and a steep roadway embankment on the opposite side.

5.1.1 Current Exposure Setting and Potential Receptors

The Site is currently unoccupied and fencing, topography/vegetation, and the Beer Kill waterway appear to effectively deter human site use. Although no site use was observed during reconnaissance activities, the following current exposure scenarios and corresponding receptors were identified:

- On-Site Trespasser / all upland portions (child / adult)
- Recreator / Beer Kill (child / adult)
- Off-Site Resident (child / adult)

Much of the upland portions of the Site are covered with vegetation or debris, and a relatively small percentage of the Site area consists of bare surficial soil areas. As such, the current potential for on-Site exposures to contaminants carried in air-borne particulates (on-Site or at off-Site locations) is low. The CSM (Figure 3) and RAGS Table 1 summarize the exposure setting and potential exposure scenarios.

5.1.2 Future Land Use and Potential Receptors

Hypothetical redevelopment of the entire Site into a residential or commercial/industrial setting was evaluated. Construction workers involved in soil excavation activities as part of the implementation of such reuse could be exposed to COPCs at the Site. The potential future receptors were identified for the HHRA as follows:

- Recreators / Beer Kill (child / adult); same as assessed in Current Land Use scenario
- On-Site Recreators / upland portions (child / adult)
- On-Site Residents (child / adult)
- On-Site Commercial / Industrial Workers (adult)
- On-Site Construction / Utility Workers (adult)
- Off-Site Residents (child / adult); same as assessed in Current Land Use scenario.
- Off-Site Construction Workers; because only shallow soil data are available, construction worker exposures can only be evaluated qualitatively. Future excavation activities may be conducted to depths greater than 2 ft bgs (e.g., beneath the geofabric installed at Parcel A subsequent to the 2004 soil removal).

5.2 Identifying Exposure Pathways

Potential receptors and exposure pathways were identified on the basis of site configuration, current/future land use, activity patterns, and professional judgment in consultation with EPA Region 2. The routes of exposure quantitatively evaluated in this HHRA are the following:

- On-site Trespassers and Recreators - surface soil (ingestion, dermal, inhalation) and leachate (ingestion, dermal);
- Recreators in Beer Kill - sediment (ingestion, dermal) and surface water (ingestion, dermal);
- On-Site Residents - surface soil (ingestion, dermal, inhalation), leachate (ingestion, dermal), groundwater (ingestion, dermal). Since no VOCs were identified as COPCs in on-Site groundwater, inhalation was not evaluated for the domestic use / shower scenario. Inhalation of chemical vapors from soil gas released into indoor air (for future buildings) was assessed qualitatively;
- On-Site Commercial/industrial Workers - surface soil (ingestion, dermal, inhalation) and leachate (ingestion, dermal); potable groundwater use was not quantified since residential groundwater exposures can be used as a conservative representation of worker exposures;
- On-Site Construction/utility Workers - Subsurface soil (0-10 ft bgs; ingestion, dermal, inhalation) and shallow groundwater (including leachate; dermal). Inhalation exposures from a “trench scenario” were not quantified based on discussions with EPA;
- Off-Site Residents - surface soil (ingestion, dermal, inhalation).

5.3 Exposure Points and Exposure Point Concentrations

Potential exposure points are identified based on current and potential future population activity patterns and the relationship of those activities to the presence of contaminated media. A location is identified as a potential exposure point if someone might ingest or have dermal contact with contaminated media or inhale contaminated air at that location.

The exposure point concentration (EPC) is the estimated concentration of the COPC in the medium to which a receptor may be exposed. EPCs were calculated following EPA guidance (EPA 2002c) and input from EPA Region 2. EPCs were derived for the following HHRA data sets:

- On-Site surface soils (0 - 2 ft bgs)
- On-Site subsurface soils (0 - 10 ft bgs)
- On-Site shallow groundwater (0-10 ft bgs), for direct contact, construction/utility worker scenario
- On-Site monitoring well groundwater, for future on-Site residential scenarios
- Beer Kill sediment
- On-Site leachate
- Off-Site surface soil (0 – 2 ft bgs)

Table 3 includes a summary of the COPCs by medium. Since no COPCs were identified in Beer Kill surface water, no further assessment was conducted on surface water. Also, since vapor intrusion is evaluated qualitatively, EPCs for soil gas were not developed. EPCs in the media of interest and the basis for their calculation are presented in RAGS Part D format (EPA 2001b) as RAGS Table 3's (Attachment A).

The protocol used to develop EPC values for use in the risk assessment is described below. Maximum detected concentrations were used as EPCs when less than 10 samples were available for a specific analyte in an environmental medium or where there were less than 4 detected concentrations. If 10 or more samples were available (and 4 or more detections were observed), the 95% upper confidence limit (UCL) of the arithmetic mean value was calculated with ProUCL Version 4.00.04 software (ProUCL). ProUCL's recommended statistical calculation to determine a 95% UCL is accepted (unless a contrary reason is apparent in the output; such instances are noted in RAGS Table 3's), and the recommended statistical result is treated as the EPC for the analyte in the specified medium. Exceptions are made for lead, where the arithmetic mean is used for the EPC, and instances where the recommended statistic is larger than the

maximum detected concentration, in which case the maximum detected concentration is used. ProUCL output is included in Attachment D.

5.4 Chemical Intake Estimates

Estimates of exposure are based on EPCs, scenario-specific assumptions, and intake parameters. Chemical intake estimates were developed following EPA guidance (1989) using intake parameters from various agency sources (EPA 1989, 1991a, 1997b, 2001a, 2004c, 2004e). Consistent with EPA guidance (1995), exposure intake estimates were calculated for a reasonable maximum exposure (RME) scenario. The RME case represents the highest exposure reasonably expected to occur and is calculated using the EPC and RME parameters. The average exposure is the most likely exposure expected to occur and is calculated using the EPC and central tendency exposure (CTE) parameters. Exposure factors and risk estimates for the RME scenario are presented in Attachment A. CTE factors and risk estimates are presented in Attachment E for site media exceeding EPA acceptable risk levels based on the RME scenario². The pathway-specific exposure parameters and chemical intake and exposure equations are depicted on RAGS Tables 4.1 through 4.4 (Attachment A). Dermal exposure worksheets are also included as RAGS Table 4 Supplements. Chemical-specific properties required to evaluate dermal exposures to COPCs are summarized in Table 4.

The exposure parameter values used in the intake equations are based on a series of reported and assumed factors related to current and potential land use patterns at the Site. Exposure parameters also account for a number of physiological factors, such as daily breathing rate and surface area of exposed skin. Because some COPCs have a MMOA, age-specific exposure factors were identified, including the exposure times associated with each age bracket (0-2 years; 2-6 years; 6-16 years; 16-30 years), physiological factors (e.g., body weights and skin surface areas), and temporal factors (number of days or years across the exposure bracket). Where applicable, exposure factors associated with MMOA chemicals are noted in the RAGS Table 4's.

Exposure frequencies of 350 days per year for residents, 250 days per year for commercial/industrial (EPA 1991a) workers, and 250 days per year for construction/utility workers were used. For trespassers and recreators, a RME frequency of 40 days per year was used (EPA 1997). No evidence of trespassing was observed during the site reconnaissance activities, and the assumption of exposure frequency is expected to be conservative.

² Note that since it is unlikely that on-site groundwater will be utilized as a potable source, a CTE analysis for hypothetical domestic uses of groundwater is not included.

Particulate emission factors (PEFs) were calculated for construction worker and residential settings (the residential PEF was applied for all receptor scenarios except the construction worker), using equations and methodologies from the *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites* (EPA, 2002). The PEF calculations and values are shown on RAGS Table 4.1 Supplements in Attachment A.

The estimated leachate contact rate was assumed to be 5 mL/hr, based on professional judgment and using 5% of the RME for incidental ingestion of water while swimming (children aged 6-15 yrs) (EPA 1991a). An exposure frequency of 10 days per year, event frequency of 1 event per day, and event duration of 1 hr were assumed were based on professional judgment, and were used to estimate construction worker exposures to groundwater via dermal contact. Construction work at the Site may be completed by several subcontractors assigned to specific tasks, and it is highly unlikely that an individual subcontractor would be tasked solely with working below the ground surface in a trench over the entire course of a construction project. RAGS Table 4.2a and 4.2a Supplement include the dermal absorbed dose equation, exposure parameters, and dermal worksheets developed for the construction worker scenario.

Other receptors, such as trespassers and future recreators, residents, and commercial/industrial workers may be exposed to leachate areas at the Site via dermal contact. For these receptors, event frequency (1 event/day) and event duration (1 hr/event) were selected based on professional judgment. RAGS Tables 4.4 and Table 4.4 Supplements include the exposure factors and dermal worksheets for these receptors.

6.0 TOXICITY ASSESSMENT

The toxicity assessment identifies the reference doses (RfDs), reference concentrations (RfCs), oral slope factors (SFs), and inhalation unit risks (IURs) used to estimate adverse noncancer health effects and cancer risks for the COPCs. The target organs/systems and critical effects on which the toxicity values are based are also presented. The toxicity values are discussed in Sections 6.1 and 6.2, and special considerations regarding chemicals with a MMOA, chemical speciation, and lead are also identified.

The following hierarchy of sources was used for toxicity values:

- EPA's Integrated Risk Information System (IRIS). IRIS is an on-line database that contains EPA-approved chronic RfDs, SFs, RfCs, and IURs (EPA 2005). IRIS remains in the "first tier" of the recommended hierarchy as the generally preferred source of human health toxicity values.

- EPA's Provisional Peer-Reviewed Toxicity Values (PPRTVs). HDR received feedback from EPA in February 2010 concerning the availability of PPRTV values for COPCs that do not have toxicity values available on IRIS.
- Other EPA and non-EPA sources. These sources include Agency for Toxic Substances and Disease Registry's (ATSDR) minimal risk levels (MRL; ATSDR 2009), and EPA's Health Effects Assessment Summary Tables (HEAST; EPA 1997a).

The toxicity values are presented in RAGS Part D format in Tables 5.1, 5.2, 6.1 and 6.2 in Attachment A.

When toxicity values were not available from any of the recommended sources, toxicity values for chemically-similar compounds were *not* used based on direction by EPA Region 2. The pathway/receptor risk did not include contributions from those COPCs, and the resulting underestimates of risk are noted qualitatively in the uncertainty analysis.

6.1 Reference Doses and Reference Concentrations

The potential for adverse noncancer health effects from exposure to COPCs was characterized by comparing an exposure estimate (intake) with an RfD and air exposure concentration with the RfC. EPA (1989, 2005) defines an RfD as an estimate (with uncertainty that spans perhaps an order of magnitude or greater) of a daily exposure level for the human population, including sensitive subpopulations, that is likely to be without an appreciable risk of deleterious effects. The RfDs are expressed as mg/kg-day and are specific to the chemical, exposure route (for example, ingestion), and exposure duration (chronic or subchronic). In accordance with EPA (2004c), dermal RfDs were derived by multiplying the oral RfDs by an appropriate oral-to-dermal adjustment factor (the gastrointestinal ABS [ABS_{GI}] value). ABS_{GI} values recommended by EPA (2004c) in the derivation of dermal RfDs for COPCs are shown in RAGS Table 5.1 as "Oral Absorption Efficiency for Dermal" values.

Non-carcinogenic toxicity values for the inhalation pathway are typically expressed as RfCs. The inhalation RfC is analogous to the RfD and is an estimate of the air concentration in mg/m^3 that an individual can breathe over the period of exposure without a risk of adverse health effects. The inhalation RfC considers toxic effects for the respiratory system (portal-of-entry).

Chronic RfDs/RfCs were used to evaluate exposures that occur over periods of more than 7 years; subchronic RfDs/RfCs were used for exposures of less than 7 years. The potential exposures considered in this HHRA for the receptors identified range from durations of 1 year (construction / utility worker) to 30 years (resident). Chronic RfDs/RfCs were used for shorter duration exposures when specific subchronic values were not available.

RAGS Tables 5.1 and 5.2 of Attachment A include a summary of the noncancer toxicity values used in the risk assessment.

6.2 Cancer Slope Factors and Inhalation Unit Risks

The toxicity information considered in the assessment of potential cancer risks includes a weight-of-evidence classification and a CSF and IUR. The weight-of-evidence classification qualitatively describes the likelihood that a chemical is a human carcinogen and is based on an evaluation of the available data from human and animal studies. Chemicals may be assigned to one of five groups (A through E).

A CSF is an upper bound estimate, approximating a 95 percent UCL on the increased cancer risk from lifetime exposure to a chemical (EPA 1989). Similar to RfDs, CSFs are specific to the chemical and route of exposure. As with dermal RfDs, dermal CSFs were derived from oral CSFs with adjustment for absorption efficiency (i.e., CSF / ABS_{GI}). Carcinogenic toxicity values for the inhalation pathway are typically expressed as IURs (unit of $[ug/m^3]^{-1}$).

Tables 6.1 and 6.2 present the cancer toxicity values used for the toxicity assessment.

6.3 MMOA Chemicals

Eight COPCs act via a MMOA: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and chromium (VI). To estimate ELCRs for these chemicals, age-dependent adjustment factors (ADAFs) were applied in a separate analysis to compute MMOA cancer risk estimates in accordance with EPA guidelines. For children ages 0 to 2 years, the default ADAF is 10; for children ages 2 to 16 years, the default ADAF is 3; for the age category of 16-30 years, the default ADAF is 1.

6.4 Chemical Speciation

Specific chemical speciation was assumed for two COPCs:

- Hexavalent chromium toxicity values and RSLs were used to evaluate “total chromium” concentrations detected in environmental media. As a conservative approach, the more toxic form of chromium was assumed and is discussed further in the uncertainty analysis.
- Methylmercury toxicity values and RSLs were used to evaluate “total mercury” concentrations detected in environmental media. As a conservative approach, the more toxic form of mercury was assumed.

6.5 Lead

The potential for human health effects caused by lead exposures is typically evaluated based on estimated BLL. Mathematical models have been developed to estimate BLL based on total lead uptake from exposures by diet, drinking water, air, and soil. EPA has developed a soil RSL (400 mg/kg) based on EPA's IEUBK Model for Lead in Children.

For off-Site residential parcels, a separate lead analysis was conducted as part of the HHRA. EPA Region 2-specific Lead Sheets were prepared to summarize the maximum and average lead concentrations per parcel; no modeling was conducted. The off-Site parcel analysis is included as Attachment C.

7.0 RISK CHARACTERIZATION

The final step in the HHRA is the characterization of the potential risks associated with exposure to chemicals detected at a site. Noncancer health hazards and cancer risks are characterized separately.

7.1 Characterization of Noncancer Hazards

For chemicals that are not classified as carcinogens and for those carcinogens known to cause adverse health effects other than cancer, the potential for exposure to result in adverse health effects other than cancer is evaluated by comparing the intake with an RfD. When calculated for a single chemical, the comparison yields a ratio termed the HQ:

$$\text{Hazard Quotient} = \frac{\text{Intake (mg/kg-day)}}{\text{RfD (mg/kg-day)}}$$

$$\text{Hazard Quotient} = \frac{\text{Exposure Concentration (mg/m}^3\text{)}}{\text{RfC (mg/m}^3\text{)}}$$

To evaluate the potential for adverse health effects other than cancer from simultaneous exposure to multiple chemicals, the HQs for all chemicals are summed, yielding an HI as follows:

$$\text{Hazard Index} = \sum HQ \quad (10-2)$$

Pathway-specific HIs are then summed to estimate a total HI for each receptor group. If the total HI exceeds 1.0, further evaluation using a segregated HI analysis was performed to assess whether target organ-specific HIs are a concern (EPA 1989).

RAGS Tables 7.1 through 7.6 present the EPC, intake/exposure concentration, RfD/RfC, and calculated HQs for each receptor group, exposure medium, and pathway combination. RAGS Table 9's present the summary of HIs for each receptor, exposure medium, and exposure point combination, and include a summary of noncancer hazards by similar effect or target organ. The exposure media exceeding EPA's acceptable level (a target organ-specific HI of 1.0) are provided in RAGS Table 10's.

7.2 Characterization of Excess Lifetime Cancer Risks

Risks associated with exposure to chemicals classified as carcinogens are estimated as the incremental probability that an individual will develop cancer over a lifetime as a direct result of an exposure (EPA 1989). The estimated risk is expressed as a unitless probability.

EPA guidance on exposure levels considered protective of human health is followed to aid in the interpretation of the risk assessment results. In the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), EPA defined general remedial action goals for sites on the National Priorities List (Title 40 of the *Code of Federal Regulations* Part 300.430). The goals included a range for an excess lifetime cancer risk (ELCR), which is "an excess upper-bound lifetime cancer risk to an individual of between 10^{-4} [1E-04] and 10^{-6} [1E-06]," or 1 in 10,000 to 1 in 1,000,000. The goals set out in the NCP are applied once a decision has been made to remediate a site. A more recent EPA directive (EPA 1991b) provides additional guidance on the role of the HHRA in supporting risk management decisions, and in particular, determining whether remedial action is necessary at a site. Specifically, the guidance states, "Where cumulative carcinogenic site risk to an individual based on reasonable maximum exposure for both current and future land use is less than 10^{-4} , and the noncancer HQ is less than 1, action generally is not warranted unless there are adverse environmental impacts." The ELCR range between 10^{-4} and 10^{-6} is referred to as the "risk management range".

For chemicals classified as carcinogens, three steps are used in estimating ELCR. First, to derive an ELCR estimate for a single chemical and pathway, the following equations are used:

$$\text{Chemical-Specific ELCR} = \text{Intake (mg/kg-day)} \times \text{CSF (mg/kg-day)}^{-1}$$

$$\text{Chemical-Specific ELCR} = \text{Exposure concentration (ug/m}^3\text{)} \times \text{IUR (ug/m}^3\text{)}^{-1}$$

Second, to estimate the ELCR associated with exposure to multiple carcinogens for a single exposure pathway, individual chemical ELCR are assumed to be additive, as follows:

$$\text{Pathway-Specific ELCR} = \sum \text{Chemical-Specific ELCR}$$

Third, pathway-specific risks are summed to estimate the total ELCR for a receptor group. The ELCR for residents, trespassers, and recreators are the aggregate ELCR for adult and child receptors.

Separate cancer risks for chemicals with a MMOA were conducted using ADAFs:

$$\text{Chemical-Specific Cancer Risk MOA} = \text{Intake} \times \text{ADAF} \times \text{CSF}$$

Specific equations used to evaluate the MMOA chemicals are provided on RAGS Table 7 Supplement. At the direction of EPA, separate ELCR estimates for MMOA chemicals are included as a summary on the bottom of RAGS Table 7's. The risk summaries presented on RAGS Table 9's include the adjusted risks from the MMOA chemicals. The exposure media exceeding EPA's acceptable level (an ELCR of 1E-04) are provided in RAGS Table 10's.

7.3 Cumulative Risk Estimates

This section summarizes the estimated ELCRs and noncancer adverse health effects based on RME scenarios at the Site, and identifies chemicals of concern (COCs) in Site media (see RAGS Table 7's, 9's, and 10's in Attachment A). Table 5 summarizes the RME ELCRs and HIs, and indicates contributions from the eight MMOA chemicals. RAGS Table 9's provide a summary of non-cancer hazards by target organ, where the individual COPC HQs that target the same organ are summed to evaluate aggregate target organ effects.

The following cumulative risk estimates were calculated for the indicated receptors and exposure media; for non-carcinogenic effects, the maximum target organ-specific HI is presented.

RECEPTOR	MEDIA	Carcinogenic Risk		Hazard Index	Average Lead
		Routes Total	Chemical Drivers	Routes Total	Conc. in Soil
Adult Trespasser	Soil 0 - 2ft bgs	--		1E-01	1,100 mg/kg
	Leachate	--		5E-02	
	Route Total	--		2E-01	
Child Trespasser	Soil 0 - 2ft bgs	--		1E+00	1,100 mg/kg
	Leachate	--		1E-01	
	Route Total	--		1E+00	
Child - Adult Aggregate Trespasser	Soil 0 - 2ft bgs	7E-04	Benzo(a)pyrene, Chromium VI	--	1,100 mg/kg
	Leachate	3E-03	PAHs, Aroclor 1260	--	
	Route Total	4E-03		--	
Adult Recreator	Soil 0 - 2ft bgs	--		1E-01	1,100 mg/kg
	Leachate	--		5E-02	
	Beer Kill Creek Sediment	--		2E-02	
	Beer Kill Creek Surface Water	--		--	
	Route Total	--		2E-01	
Child Recreator	Soil 0 - 2ft bgs	--		1E+00	1,100 mg/kg
	Leachate	--		1E-01	
	Beer Kill Creek Sediment	--		2E-01	
	Beer Kill Creek Surface Water	--		--	
	Route Total	--		1E+00	
Child - Adult Aggregate Recreator	Soil 0 - 2ft bgs	7E-04	Benzo(a)pyrene, Chromium VI	--	1,100 mg/kg
	Leachate	3E-03	PAHs, Aroclor 1260	--	
	Beer Kill Creek Sediment	6E-06		--	
	Beer Kill Creek Surface Water	--		--	
	Route Total	4E-03		--	
Adult On-Site Resident	Soil 0 - 2ft bgs	--		1E+00	1,100 mg/kg
	Leachate	--		5E-01	
	Groundwater (Tap Water)	--		8E+00	
	Route Total	--		1E+01	
Child On-Site Resident	Soil 0 - 2ft bgs	--		9E+00	1,100 mg/kg
	Leachate	--		1E+00	
	Groundwater (Tap Water)	--		3E+01	
	Route Total	--		4E+01	
Child - Adult Aggregate On-Site Resident	Soil 0 - 2ft bgs	6E-03	PAHs, Chromium VI	--	1,100 mg/kg
	Leachate	2E-02	PAHs, Chromium VI, Aroclor 1260	--	
	Groundwater (Tap Water)	4E-03	Arsenic, Chromium VI	--	
	Route Total	3E-02		--	
Adult Construction Worker	Soil 0 - 10ft bgs	2E-04	Chromium VI	4E+00	918 mg/kg
	Groundwater (in Excavations to 10ft bgs)	5E-06		7E-02	
	Route Total	2E-04		5E+00	
Adult Commercial / Industrial Worker	Soil 0 - 2ft bgs	3E-04	Chromium VI	7E-01	1,100 mg/kg
	Leachate	2E-03	PAHs, Aroclor 1260	2E-01	
	Route Total	2E-03		9E-01	
Adult Off-Site Resident	Off-Site Soil 0 - 2ft bgs	--		2E+00	77 to 47,071 mg/kg
Route Total	--		2E+00		
Child Off-Site Resident	Off-Site Soil 0 - 2ft bgs	--		2E+01	77 to 47,071 mg/kg
Route Total	--		2E+01		
Child - Adult Off-Site Resident	Off-Site Soil 0 - 2ft bgs	1E-04		--	77 to 47,071 mg/kg
Route Total	1E-04		--		

Note: Risk contributions from MMOA Chemicals included in above summations.
Bold values indicate HI > 1 or ELCR > 1x10⁻⁴

7.4 Site-Wide Chemicals of Concern

On RAGS Table 10's, specific COPCs were retained as COCs. For carcinogenic risks, COCs were identified within each medium for a particular receptor if the total medium risk exceeded 1E-04; a COPC contributing an individual ELCR of 1E-06 or greater in that medium was retained as a COC. For noncancer hazards, COCs were identified within each medium for a particular receptor if a target organ-specific HI exceeded 1.0; a COPC contributing an individual HQ of 0.1 or greater in that medium was identified as a COC.

A summary of the COCs identified for the Ellenville Site is included on Table 7³. Note that lead was identified as a COPC in several Site media but was not evaluated quantitatively in the risk assessment. As such, lead is included on the Table 7 COC summary for media in which it was identified as a COPC.

7.5 Qualitative Risk Estimates

A screening assessment was performed using the shallow soil gas data collected at the Site (refer to RAGS Table 2.6 in Attachment A); all sample depths were within 5 ft bgs. A total of 11 COPCs were identified, based on screening against the residential air RSL with application of a 10:1 soil gas-to-indoor air attenuation factor. Chloroform was detected above the RSL at sample location SG-025, which is within 100 ft of a residential structure. Two other VOCs (benzene and PCE) were detected at levels above the RSL at sample location SG-96, which is also within 100 ft of an existing residential structure (refer to Figure 2 for soil gas sample map). Further evaluation of soil gas and/or possible vapor intrusion exposures at off-Site properties may be warranted.

Since only one VOC was identified as a COPC in leachate (in an upland surface water sample collected north of the waste/debris placement area, *not* from samples collected from observed leachate areas), inhalation of leachate was not assessed quantitatively. Although VOCs were analyzed and a few were detected in the leachate areas of the Site (see RAGS Table 2.5 of Attachment A), no volatile COPCs were identified in the leachate areas. Therefore, VOCs in leachate are not expected to pose significant risk issues.

7.6 Off-Site Lead Summary

As presented in the Lead Sheets of Attachment C, lead was detected in soil at levels above residential screening levels. Delineation of lead concentrations has not been completed at some parcels. The distribution of lead concentrations in the off-Site areas (based on a review of surface soil data) does not appear to correlate completely with distance from the Site. For instance, aside from Parcel A, the highest concentrations were identified at Parcels B (8,970 mg/kg), E (11,110 mg/kg), and F (5,280 mg/kg) which do not directly border the Ellenville Site. Although impacts may have occurred from the Site via erosion, runoff, or deposition, other sources of lead are possible (e.g., use of lead-based paint in older homes; atmospheric deposition of lead from vehicle fuel). Further evaluation of lead in off-Site residential soil may be warranted.

³ RAGS Table 10's were not created for receptor scenarios where no COCs were identified.

7.7 Areas of Concern

The site was divided into five on-site AOCs to facilitate development and evaluation of remedial alternatives based on the nature and extent of contamination. The on-site AOCs are depicted on Figure B-1 (in Attachment B), and described below:

AOC-1 - Landfill Area – Upgradient Area of the site adjacent to Cape Avenue where the majority of site operations were conducted. Solid wastes (scrap metal, wood, concrete, glass, plastic, and construction and demolition debris) were deposited in this area to a depth of greater than 12 feet. SVOCs, metals, PCBs and pesticides were detected in the soil samples.

AOC-2 - Debris Pile Area – Adjacent to the southern boundary of the landfill area, on the lower plateau area of the site. The area was used for historic debris piles (scrap metal, pallets, railroad ties, tires, transite, batteries). The debris piles were removed in 2005 by NYSDEC. The area is characterized by debris mixed into the surface soils and a leachate seep from the landfill area. SVOCs, metals, PCBs and pesticides were detected in the soil within the area.

AOC-3 - Dumpster Staging Area – Adjacent to and south of the landfill area. The area was used for the storage of solid waste dumpsters. SVOCs, metals, and PCBs were detected in the soils within the area. This area can be separated from the debris pile area because of differences in the amount of the surficial debris observed in the area.

AOC-4 - Scattered Debris Area – Along the southern boundary of the site and extending along the Beer Kill and to the north of the landfill area. The area is vegetated with older-growth trees, scattered debris and isolated debris piles (drums, scrap metal, ties). The drums and some of the debris were removed by NYSDEC in 2005. SVOCs, pesticides, and metals were detected in the soils.

AOC-5 - Battery Disposal Area – Adjacent to and east of the landfill area (34 Cape Avenue residence). Battery casing were disposed on the hillside behind the residence. Removal of a portion of the battery casing from the surface of the hillside was completed by NYSDEC in 2005. SVOCs, PCBs, and metals were detected in the soils within the area.

For the AOC analysis, surface soils (0-2 ft bgs) and subsurface soils (0-10 ft bgs) were evaluated for residential and construction worker receptors, respectively, so that comparisons could be made with the site-wide risk estimates. RAGS Table 2s and 3s were generated for each AOC for purposes of identifying soil COPCs in each area and to develop EPCs. All RAGS tables developed for the AOC analysis are included in Attachment B.

A RME evaluation was conducted on the COPCs identified for each AOC. The risks and noncancer hazards identified for the AOCs (including the MMOA chemical risks) were evaluated, and COCs were identified using the rationale for the site-wide assessment (Section 7.4). For reference, Table 6 includes a risk summary of the AOC analysis. Table 8 includes a summary of the COCs identified for the AOCs.

A summary of the AOC risks calculated is as follows:

Receptor, Age, Media	Cancer Risk				
	AOC-1	AOC-2	AOC-3	AOC-4	AOC-5
On-Site Resident Child-Adult Aggregate On-Site Soil (0 - 2ft bgs)	8E-02	3E-03	1E-03	3E-04	2E-04
Construction / Utility Worker On-Site Soil (0 - 10ft bgs)	9E-04	4E-05	2E-05	4E-06	2E-04

* MMOA contributions to risk are reflected in above values where applicable.

Receptor, Age, Media	Non-Cancer HI				
	AOC-1	AOC-2	AOC-3	AOC-4	AOC-5
On-Site Resident Adult On-Site Soil (0 - 2ft bgs)	3E+00	5E-01	1E+00	3E-01	5E-01
On-Site Resident Child On-Site Soil (0 - 2ft bgs)	3E+01	4E+00	1E+01	3E+00	4E+00
Construction / Utility Worker On-Site Soil (0 - 10ft bgs)	7E+00	4E-01	2E+00	8E-01	7E-01

Based on the AOC analyses, the highest risks and noncancer hazards were identified in AOC-1, the upper plateau area of the Site associated with historic debris placement and landfilling. The risks estimated in AOC-1 for residents and construction workers generally exceeded the site-wide risks estimated for the same scenarios. Of the five AOCs, the lowest risk estimates were identified in AOC-4, located along the southern boundary of the Site and extending along the Beer Kill and to the north of the landfill area. This area is vegetated with older growth trees, and contained scattered debris and isolated debris piles (drums, scrap metal, ties); the drums and some debris were removed by NYSDEC in 2005. The risks for AOC-4 were generally lower than the site-wide risk estimates for residents and construction workers.

7.8 Central Tendency Exposure (CTE) Analysis

As noted in the Exposure Assessment section, the average exposure is the most likely exposure expected to occur at the Site and is calculated using the EPC and CTE parameters. For receptors with estimated RME hazards or ELCRs above the action levels ($HI > 1.0$ or $ELCR > 1 \times 10^{-4}$) and where COCs were identified in the RME scenario, CTE analyses were conducted. CTE parameter values were established based on the references used in the RME case. It should be noted that the use of on-site groundwater for potable / domestic purposes is highly unlikely (see Section 3.2), and therefore hypothetical on-site groundwater use was not evaluated in the CTE analysis.

For reference, a CTE risk summary table is included as Table 9a, and the COCs identified for the CTE scenario are included in Table 9b. Some HIs > 1.0 for the RME scenario, including child trespasser, child recreator, and adult resident, are below 1.0 in the CTE analysis. The construction worker and off-site resident risks are below 1×10^{-4} in the CTE scenario.

Attachment E presents the risk estimate results of the CTE scenarios. The CTE exposure factors used are summarized in RAGS Table 4's and Table 4 Supplements. The CTE risk and hazard calculations are provided in the RAGS Table 7's, Table 9's, and Table 10's (also included in Attachment E).

7.9 Uncertainty Evaluation

Uncertainties are inherent in estimates of potential cancer risk and noncancer health hazards. The following subsections present the major sources of uncertainties in the HHRA.

7.9.1 Data Evaluation and Selection of Chemicals of Potential Concern

Selecting representative sampling locations and collecting a sufficient number of samples determines the success of characterizing a contaminated site. Adequate site characterization is particularly important when a primary source of contamination is buried debris, given the heterogeneity of contamination typically associated with debris. The likely heterogeneity of on-site subsurface conditions was recognized as a potential source of uncertainty in this HHRA.

To develop a hypothetical groundwater use scenario (ingestion/ dermal contact via showering or bathing), groundwater data from the on-Site EPA wells were used to develop COPCs and EPCs. This approach is conservative and is believed to overestimate receptor risks for the following reasons. If groundwater beneath the Site were to be used for a future residential scenario (e.g., a private well servicing potable and domestic needs), a well(s) would likely be installed into a deep

bedrock aquifer, and draw water from depths greater than the screened intervals of the EPA monitoring wells. Potable testing as per NYSDOH or Ulster County procedures would be conducted, to evaluate water quality and the viability of groundwater use. Water derived from a deep aquifer would likely have significantly less site-related impact than the EPA wells that were installed to investigate contaminant conditions at the Site.

For the construction worker scenario, HydropunchTM and test pit grab water samples were used to assess direct contact with shallow groundwater at the Site. As these samples typically contain relatively high levels of turbidity, the resultant concentrations of metals and other COPCs may have been biased high (i.e., greater concentrations than what a receptor would likely encounter at the exposure point), resulting in a potential overestimate of risk.

The COPCs in off-Site surface soils may have originated via run-off or erosion from the Site, particularly historically during active site operations. Chemicals found in soils at these properties may have also originated from other sources of contamination or activities (e.g., use of lead-based paint, pesticides, and other chemicals; use of imported soil/fill materials). With the exception of lead, COPCs identified for the off-Site parcels were evaluated together in one data set. Noncancer hazards were above 1.0 for both child and adult receptors, with antimony being the main contributor (maximum concentration of 2200 mg/kg). It should be noted that antimony was not identified as a COC in on-Site soil, and the maximum detected concentration in the off-Site area may be due to an off-Site source or may be an anomaly in the data set.

The RSL values for Cr (VI) and methyl mercury were used to screen site data for total chromium and mercury, respectively. This approach is conservative since speciation analysis has not been conducted for these metals and it is unlikely that all samples contain these chemical species.

7.9.2 Exposure Assessment

Qualitative assessments were made for on-Site soil gas and off-Site subsurface soils that may be encountered by a construction worker conducting excavation (e.g., Parcel A residence). For soil gas, it was noted that three COPCs (benzene, chloroform, and PCE) with concentrations above the RSLs (3.8, 0.48, and 122.1 ug/m³, respectively) were located within 100 ft of an existing off-Site residence. A total of 11 soil gas COPCs were identified in the site data, and indicate potential vapor intrusion issues for buildings constructed at the Site in the future, and potentially to off-Site properties within 100 ft of the soil gas sampling points.

For the adjacent property (Parcel A), potential exposure to lead and other COPCs may exist for construction workers. Soil was removed at this property previously, and it was reported that a geofabric, clean fill, and sod were installed after the removal. However, post-excavation data were not available to evaluated soils at depths greater than 2 ft bgs. In addition, the exact areas

of excavation were not available during preparation of the HHRA and therefore all historic data (including soil samples that may have been part of the Parcel A excavation) were used in the HHRA.

The sample collection strategy was designed as a purposive investigation, whereby samples were collected in areas of suspected or known contamination. The primary objective of this sampling effort was to define the nature and extent of contamination. The EPCs based on these non-random samples are likely to overestimate the concentrations at the exposure point as well as the actual intake dose to the receptor. In addition, the maximum values of COPCs were used where no statistics could be run (due to small sample size or other reasons). The use of the maximum detected values may overestimate risks.

7.9.3 Toxicity Assessment

RfDs based on chronic (7 year or longer) exposures were used in the risk assessment, although construction workers were assumed to have an exposure duration of only 1 year. Subchronic toxicity values, when available, were used to evaluate construction worker exposures; however, use of chronic RfDs for this receptor (when subchronic RfDs were not available) introduces uncertainty to the risk estimates.

A second uncertainty associated with toxicity values is the unavailability of toxicity values for all COPCs at the Site. The cancer risks and noncancer hazards can be assessed only for those COPCs for which the relevant toxicity values are available. As per EPA Region 2 guidance, no surrogate chemicals were utilized to derive toxicity values for the COPCs having no values available from IRIS, PPRTV, HEAST or other sources listed in Section 6.0. By not employing surrogate toxicity data, some risks were likely to have been underestimated. Noncancer hazards may be underestimated for exposure to the carcinogenic PAH COPCs, for which no RfD was available.

Further, the application of an absorbed dose adjustment factor (ABS_{gi}) to oral toxicity values to assess the dermal pathway introduces uncertainty into the results; risks may be overestimated or underestimated using this approach.

There are many uncertainties inherent with using ADAFs for carcinogens with a mutagenic MOA. A few of the uncertainties are listed below.

- At this point in time, the database used to evaluate early life susceptibility to mutagens is limited.

- Development of the default ADAFs was based only on results of the repeated exposure studies because it was concluded that the lifetime exposure study design had less ability to distinguish potential increased susceptibility from early life exposures.
- The default ADAFs were derived from studies where exposures were much higher than those typically observed in the environment. The mutagenic potential of a chemical may be much less, and may be overcome by DNA repair mechanisms at typical exposure levels.

Selection of the appropriate toxicity value for chromium depends on the chemical species of chromium encountered; Cr(VI) is a potent carcinogen, whereas trivalent chromium is not. Chromium occurs in nature primarily in the trivalent form, which is its most stable oxidation state. Activities conducted at the Site do not indicate that chromium manufacturing operations were performed, or that chromic acid or other chromates were present, used or stored on-Site. This could indicate that the chromium speciation at the Site does not include Cr(VI). However, chromium was detected in multiple media, including leachate emanating from the buried debris area, indicating a mobile form of chromium and the possible presence of Cr(VI) at the Site. Studies indicate that Cr (VI) in soils containing high organic matter and clays tend to be reduced to Cr (III) at a greater rate than sands. Leaching of Cr (VI) was found to be greater in clays and sands than in highly organic soils (Song, 2006). No hexavalent chromium data were available for the Site (all detected chromium at the Site was evaluated as total chromium). Conservatively, toxicity factors for Cr(VI) were applied to all chromium data in the risk assessment. This convention may overestimate risks to chromium at the Site.

A potential source of uncertainty in the evaluation of health risk associated with inorganics in soil is the assumption that inorganics in soil are readily absorbed by human receptors. Inorganics in soil are not readily desorbed from soil after being taken into the body (or bioavailable). This contrasts with the form of most inorganics tested in toxicity tests, where the inorganic compound under assessment may have been in a different form to begin with, as well as have been dissolved in water or an easily digestible carrier. Inorganics detected in soil such as that sampled at the Site are usually bound to soil macromolecules in forms that are not easily dissolved or digestible by human enzymatic systems. In this HHRA, it was assumed that 100 percent of the inorganics detected in soil are bioavailable to human receptors. This assumption may be responsible, in part, for the elevated risk and hazard estimates of the inorganics in the assessment. The uncertainty in this case is assumed to overestimate potential risks due to inorganics.

8.0 SUMMARY

This Human Health Risk Assessment (HHRA) was prepared as part of the Remedial Investigation Report (RI) for the Ellenville Scrap Iron and Metal Superfund Site (the Site) located in Ellenville, Town of Wawarsing, Ulster County, New York. The HHRA identifies environmental media and contaminants that pose potential risk to human health; assesses potential health risks associated with the Site under current and future land use conditions; and provides a basis to support risk management decisions at the Site. The methods used to conduct the HHRA are based on the risk assessment guidance developed by EPA and discussions with EPA Region 2 staff.

Receptors and complete exposure pathways were identified in order to characterize risks. Site topography/vegetation, fencing, and Beer Kill appear to deter activity at the Site in the current use scenario; however, it was determined that trespassers and recreators (Beer Kill) may have complete exposure pathways. Future site use assumes that recreators (for both the upland portion of the site and Beer Kill), on-Site residents, on-Site commercial / industrial workers, and construction / utility workers may use the Site and potentially be exposed to contaminated media. Off-site residents were analyzed separately in both the current and future scenarios.

The site-wide RME analysis, which is summarized on Table 5 and described in Section 8.0, shows that cancer risk and/or non-cancer hazard indices exceed the EPA risk management levels for some receptors and environmental media. The following receptors and corresponding media were determined to be above the risk management criteria:

Receptors and associated media that exceed ELCR benchmark (RME)
<i>Child/Adult Aggregate Trespasser – Soil, Leachate</i>
<i>Child/Adult Aggregate Recreator – Soil, Leachate</i>
<i>Child/Adult Aggregate On-Site Resident – Soil, Leachate, Groundwater</i>
<i>Construction Worker – Soil</i>
<i>Commercial/Industrial Worker – Soil, Leachate</i>
<i>Child/Adult Aggregate Off-Site Resident – Soil</i>

Receptors and associated media that exceed HI benchmark (RME)
<i>Child Trespasser – Soil</i>
<i>Child Recreator – Soil</i>
<i>Adult On-Site Resident – Groundwater</i>
<i>Child On-Site Resident – Soil, Leachate, Groundwater</i>
<i>Construction Worker – Soil</i>
<i>Adult Off-Site Resident – Soil</i>
<i>Child Off-Site Resident – Soil</i>

A separate RME analysis was conducted for each of the AOCs for soil (0 – 2 ft bgs, and 0 – 10 ft bgs) and is presented in Attachment B. This analysis identifies AOC 1 (landfill area) as having ELCR and HI estimates above the corresponding site-wide estimates. AOC-4 (area along the southern boundary of the site and extending along the Beer Kill and to the north of the landfill area) was noted to have ELCR and HI values that were lower than the site-wide estimates. A CTE analysis was performed for receptors whose risk estimates were estimated to be above of the risk criteria in the RME case. The CTE analysis is presented in Attachment E. Additionally a separate lead analysis was performed for off-site residential soil.

9.0 REFERENCES

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TABLES

Table 2
Summary of Samples Included in HHRA
Ellenville Scrap Iron and Metal Facility
008-RICO-02LX

On-site Surface Soil (0-2 ft bgs) Dataset

1	SS-01 (Weston, 6/2000)
2	SS-02 (Weston, 6/2000)
3	SS-03 (Weston, 6/2000)
4	SS-04 (Weston, 6/2000)
5	SS-05 (Weston, 6/2000)
6	SS-06 (Weston, 6/2000)
7	SS-07 (Weston, 6/2000)
8	SS-08 (Weston, 6/2000)
9	SS-09 (Weston, 6/2000)
10	SS-10 (Weston, 6/2000)
11	SS-11 (Weston, 6/2000)
12	SS-12 (Weston, 6/2000)
13	SS-13 (Weston, 6/2000)
14	SS-14 (Weston, 6/2000)
15	SS-15 (Weston, 6/2000)
16	SS-16 (Weston, 6/2000)
17	SS-17 (Weston, 6/2000)
18	SS-18 (Weston, 6/2000)
19	SS-19 (Weston, 6/2000)
20	SS-20 (Weston, 6/2000)
21	SS-21 (Weston, 6/2000)
22	SS-001 (Tetra Tech, 10/2007 & 4/2008) *
23	SS-002 (Tetra Tech, 10/2007 & 4/2008) *
24	SS-003 (Tetra Tech, 10/2007 & 4/2008) *
25	SS-004 (Tetra Tech, 10/2007 & 4/2008) *
26	SS-005 (Tetra Tech, 10/2007 & 4/2008) *
27	SS-006 (Tetra Tech, 10/2007 & 4/2008) *
28	SS-007 (Tetra Tech, 10/2007 & 4/2008) *
29	SS-008 (Tetra Tech, 10/2007 & 4/2008) *
30	SS-009 (Tetra Tech, 10/2007 & 4/2008) *
31	SS-010 (Tetra Tech, 10/2007 & 4/2008) *
32	SS-011 (Tetra Tech, 10/2007)
33	SS-012 (Tetra Tech, 10/2007)
34	SS-013 (Tetra Tech, 10/2007)
35	SS-014 (Tetra Tech, 10/2007)
36	SS-015 (Tetra Tech, 10/2007)
37	SS-016 (Tetra Tech, 10/2007 & 4/2008) *
38	SS-017 (Tetra Tech, 10/2007 & 4/2008) *

Table 2
Summary of Samples Included in HHRA
Ellenville Scrap Iron and Metal Facility
008-RICO-02LX

39	SS-018 (Tetra Tech, 10/2007 & 4/2008) *
40	SS-019 (Tetra Tech, 10/2007)
41	SS-020 (Tetra Tech, 10/2007)
42	SS-021 (Tetra Tech, 10/2007)
43	SS-022 (Tetra Tech, 10/2007)
44	SS-023 (Tetra Tech, 10/2007)
45	SS-024 (Tetra Tech, 10/2007)
46	SS-025 (Tetra Tech, 10/2007)
47	SS-026 (Tetra Tech, 10/2007)
48	SS-027 (Tetra Tech, 10/2007)
49	SS-028 (Tetra Tech, 10/2007)
50	SS-029 (Tetra Tech, 10/2007)
51	SS-030 (Tetra Tech, 10/2007)
52	SS-031 (Tetra Tech, 10/2007)
53	SS-032 (Tetra Tech, 10/2007)
54	SS-033 (Tetra Tech, 10/2007)
55	SS-034 (Tetra Tech, 10/2007)
56	SS-035 (Tetra Tech, 10/2007)
57	SS-036 (Tetra Tech, 10/2007)
58	SS-037 (Tetra Tech, 10/2007)
59	SS-038 (Tetra Tech, 10/2007)
60	SS-039 (Tetra Tech, 10/2007)
61	SS-040 (Tetra Tech, 10/2007)
62	SS-041 (Tetra Tech, 10/2007)
63	SS-042 (Tetra Tech, 10/2007)
64	SS-043 (Tetra Tech, 10/2007)
65	SS-044 (Tetra Tech, 10/2007)
66	SS-045 (Tetra Tech, 4/2008)
67	SS-046 (Tetra Tech, 4/2008)
68	SS-047 (Tetra Tech, 4/2008)
69	SS-048 (Tetra Tech, 4/2008)
70	SS-049 (Tetra Tech, 4/2008)
71	SS-050 (Tetra Tech, 4/2008)
72	SS-051 (Tetra Tech, 4/2008)
73	SS-052 (Tetra Tech, 4/2008)
74	SS-053 (Tetra Tech, 4/2008)
75	DP-002 (Tetra Tech, 11/2007)
76	DP-004 (Tetra Tech, 11/2007)
77	DP-021 (Tetra Tech, 11/2007)
78	DP-022 (Tetra Tech, 11/2007)

Table 2
Summary of Samples Included in HHRA
Ellenville Scrap Iron and Metal Facility
008-RICO-02LX

79	DP-026 (Tetra Tech, 11/2007)
80	DP-029 (Tetra Tech, 11/2007)
81	TP-07 (Tetra Tech, 11/2007)
82	TP-09 (Tetra Tech, 11/2007)
83	SWSD-01 SD01 (Tetra Tech, 2008) - upland sediment
84	SWSD-02 SD02 (Tetra Tech, 2008) - upland sediment
85	SWSD-03 SD03 (Tetra Tech, 2008) - upland sediment
86	SWSD-04 SD04 (Tetra Tech, 2008) - upland sediment

On-site Subsurface Soil (0-10 ft bgs) Dataset

1	SS-01 (Weston, 6/2000)
2	SS-02 (Weston, 6/2000)
3	SS-03 (Weston, 6/2000)
4	SS-04 (Weston, 6/2000)
5	SS-05 (Weston, 6/2000)
6	SS-06 (Weston, 6/2000)
7	SS-07 (Weston, 6/2000)
8	SS-08 (Weston, 6/2000)
9	SS-09 (Weston, 6/2000)
10	SS-10 (Weston, 6/2000)
11	SS-11 (Weston, 6/2000)
12	SS-12 (Weston, 6/2000)
13	SS-13 (Weston, 6/2000)
14	SS-14 (Weston, 6/2000)
15	SS-15 (Weston, 6/2000)
16	SS-16 (Weston, 6/2000)
17	SS-17 (Weston, 6/2000)
18	SS-18 (Weston, 6/2000)
19	SS-19 (Weston, 6/2000)
20	SS-20 (Weston, 6/2000)
21	SS-21 (Weston, 6/2000)
22	SS-001 (Tetra Tech, 10/2007 & 4/2008) *
23	SS-002 (Tetra Tech, 10/2007 & 4/2008) *
24	SS-003 (Tetra Tech, 10/2007 & 4/2008) *
25	SS-004 (Tetra Tech, 10/2007 & 4/2008) *
26	SS-005 (Tetra Tech, 10/2007 & 4/2008) *
27	SS-006 (Tetra Tech, 10/2007 & 4/2008) *
28	SS-007 (Tetra Tech, 10/2007 & 4/2008) *
29	SS-008 (Tetra Tech, 10/2007 & 4/2008) *

Table 2
Summary of Samples Included in HHRA
Ellenville Scrap Iron and Metal Facility
008-RICO-02LX

30	SS-009 (Tetra Tech, 10/2007 & 4/2008) *
31	SS-010 (Tetra Tech, 10/2007 & 4/2008) *
32	SS-011 (Tetra Tech, 10/2007)
33	SS-012 (Tetra Tech, 10/2007)
34	SS-013 (Tetra Tech, 10/2007)
35	SS-014 (Tetra Tech, 10/2007)
36	SS-015 (Tetra Tech, 10/2007)
37	SS-016 (Tetra Tech, 10/2007 & 4/2008) *
38	SS-017 (Tetra Tech, 10/2007 & 4/2008) *
39	SS-018 (Tetra Tech, 10/2007 & 4/2008) *
40	SS-019 (Tetra Tech, 10/2007)
41	SS-020 (Tetra Tech, 10/2007)
42	SS-021 (Tetra Tech, 10/2007)
43	SS-022 (Tetra Tech, 10/2007)
44	SS-023 (Tetra Tech, 10/2007)
45	SS-024 (Tetra Tech, 10/2007)
46	SS-025 (Tetra Tech, 10/2007)
47	SS-026 (Tetra Tech, 10/2007)
48	SS-027 (Tetra Tech, 10/2007)
49	SS-028 (Tetra Tech, 10/2007)
50	SS-029 (Tetra Tech, 10/2007)
51	SS-030 (Tetra Tech, 10/2007)
52	SS-031 (Tetra Tech, 10/2007)
53	SS-032 (Tetra Tech, 10/2007)
54	SS-033 (Tetra Tech, 10/2007)
55	SS-034 (Tetra Tech, 10/2007)
56	SS-035 (Tetra Tech, 10/2007)
57	SS-036 (Tetra Tech, 10/2007)
58	SS-037 (Tetra Tech, 10/2007)
59	SS-038 (Tetra Tech, 10/2007)
60	SS-039 (Tetra Tech, 10/2007)
61	SS-040 (Tetra Tech, 10/2007)
62	SS-041 (Tetra Tech, 10/2007)
63	SS-042 (Tetra Tech, 10/2007)
64	SS-043 (Tetra Tech, 10/2007)
65	SS-044 (Tetra Tech, 10/2007)
66	SS-045 (Tetra Tech, 4/2008)
67	SS-046 (Tetra Tech, 4/2008)
68	SS-047 (Tetra Tech, 4/2008)
69	SS-048 (Tetra Tech, 4/2008)

Table 2
Summary of Samples Included in HHRA
Ellenville Scrap Iron and Metal Facility
008-RICO-02LX

- 70 SS-049 (Tetra Tech, 4/2008)
- 71 SS-050 (Tetra Tech, 4/2008)
- 72 SS-051 (Tetra Tech, 4/2008)
- 73 SS-052 (Tetra Tech, 4/2008)
- 74 SS-053 (Tetra Tech, 4/2008)
- 75 DP-001 (Tetra Tech, 11/2007)
- 76 DP-002 (Tetra Tech, 11/2007)
- 77 DP-003 (Tetra Tech, 11/2007)
- 78 DP-004 (Tetra Tech, 11/2007)
- 79 DP-005 (Tetra Tech, 11/2007)
- 80 DP-006 (Tetra Tech, 11/2007)
- 81 DP-008 (Tetra Tech, 11/2007)
- 82 DP-009 (Tetra Tech, 11/2007)
- 83 DP-010 (Tetra Tech, 11/2007)
- 84 DP-011 (Tetra Tech, 11/2007)
- 85 DP-012 (Tetra Tech, 11/2007)
- 86 DP-014 (Tetra Tech, 11/2007)
- 87 DP-015 (Tetra Tech, 11/2007)
- 88 DP-016 (Tetra Tech, 11/2007)
- 89 DP-017 (Tetra Tech, 11/2007)
- 90 DP-019 (Tetra Tech, 11/2007)
- 91 DP-020 (Tetra Tech, 12/2007)
- 92 DP-021 (Tetra Tech, 12/2007)
- 93 DP-022 (Tetra Tech, 12/2007)
- 94 DP-023 (Tetra Tech, 12/2007)
- 95 DP-025 (Tetra Tech, 12/2007)
- 96 DP-026 (Tetra Tech, 12/2007)
- 97 DP-027 (Tetra Tech, 12/2007)
- 98 DP-028 (Tetra Tech, 12/2007)
- 99 DP-029 (Tetra Tech, 12/2007)
- 100 DP-030 (Tetra Tech, 12/2007)
- 101 TP-01 (Tetra Tech, 11/2007)
- 102 TP-02 (Tetra Tech, 11/2007)
- 103 TP-03 (Tetra Tech, 11/2007)
- 104 TP-04 (Tetra Tech, 11/2007)
- 105 TP-05 (Tetra Tech, 11/2007)
- 106 TP-06 (Tetra Tech, 11/2007)
- 107 TP-07 (Tetra Tech, 11/2007)
- 108 TP-08 (Tetra Tech, 11/2007)
- 109 TP-09 (Tetra Tech, 11/2007)

Table 2
 Summary of Samples Included in HHRA
 Ellenville Scrap Iron and Metal Facility
 008-RICO-02LX

- 110 TP-10 (Tetra Tech, 11/2007)
- 111 SWSD-01 SD01 (Tetra Tech, 2008)
- 112 SWSD-02 SD02 (Tetra Tech, 2008)
- 113 SWSD-03 SD03 (Tetra Tech, 2008)
- 114 SWSD-04 SD04 (Tetra Tech, 2008)

Off-site Surface Soil (0-2 ft bgs) Dataset

- 1 SS-22 (Weston, 6/2000)
- 2 SS-23 (Weston, 6/2000)
- 3 SS-24 (Weston, 6/2000)
- 4 SS-25 (Weston, 6/2000)
- 5 SS-26 (Weston, 6/2000)
- 6 SS-28 (Weston, 6/2000)
- 7 SS-29 (Weston, 6/2000)
- 8 SS-30 (Weston, 6/2000)
- 9 SS-31 (Weston, 6/2000)
- 10 SS-32 (Weston, 6/2000)
- 11 SS-33 (Weston, 6/2000)
- 12 SS-34 (Weston, 6/2000)
- 13 SS-35 (Weston, 6/2000)
- 14 SS-36 (Weston, 6/2000)
- 15 SS-37 (Weston, 6/2000)
- 16 SS-38 (Weston, 6/2000)
- 17 SS-39 (Weston, 6/2000)
- 18 RSS-01 (Tetra Tech, 12/2007)
- 19 RSS-02 (Tetra Tech, 12/2007) 0-6" sample
- 20 RSS-02 (Tetra Tech, 12/2007) 6-24" sample
- 21 RSS-03 (Tetra Tech, 12/2007)
- 22 RSS-04 (Tetra Tech, 12/2007)
- 23 RSS-05 (Tetra Tech, 12/2007) 0-6" sample
- 24 RSS-05 (Tetra Tech, 12/2007) 6-24" sample
- 25 RSS-06 (Tetra Tech, 12/2007)
- 26 RSS-08 (Tetra Tech, 12/2007)
- 27 RSS-09 (Tetra Tech, 12/2007)
- 28 RSS-10 (Tetra Tech, 12/2007)
- 29 RSS-11 (Tetra Tech, 12/2007) 0-6" sample
- 30 RSS-11 (Tetra Tech, 12/2007) 6-24" sample
- 31 RSS-12 (Tetra Tech, 12/2007)
- 32 RSS-13 (Tetra Tech, 12/2007)

Table 2
Summary of Samples Included in HHRA
Ellenville Scrap Iron and Metal Facility
008-RICO-02LX

33	RSS-13 (Tetra Tech, 12/2007) 0-6" sample
34	RSS-13 (Tetra Tech, 12/2007) 6-24" sample
35	RSS-14 (Tetra Tech, 12/2007)
36	RSS-15 (Tetra Tech, 12/2007)
37	RSS-16 (Tetra Tech, 12/2007)
38	RSS-17 (Tetra Tech, 12/2007)
39	RSS-18 (Tetra Tech, 12/2007) 0-6" sample
40	RSS-18 (Tetra Tech, 12/2007) 6-24" sample
41	RSS-19 (Tetra Tech, 12/2007)
42	RSS-20 (Tetra Tech, 12/2007)
43	RSS-21 (Tetra Tech, 12/2007)
44	RSS-22 (Tetra Tech, 12/2007)
45	RSS-23 (Tetra Tech, 12/2007)
46	RSS-24 (Tetra Tech, 12/2007)

* Denotes surface soil sample location where TetraTech returned for purposes of additional sample collection and analysis. Samples assumed to not be from exact locations as original sample and are thus used in the HHRA.

TABLE 3
 SITE WIDE SUMMARY OF COPCS
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

On-Site Surface Soil (0 - 2ft bgs) 40 COPCs	On-Site Subsurface Soil (0 - 10ft bgs) 30 COPCs	Groundwater 9 COPCs	Shallow Groundwater (0 - 10 ft bgs) 34 COPCs	Beer Kill Creek Sediment 8 COPCs	Soil Gas 11 COPCs	Beer Kill Creek Surface Water No COPCs	Leachate Areas 27 COPCs	Off-Site Residential Soil (0 - 2ft bgs) 28 COPCs
Acenaphthylene	Acenaphthylene	Aluminum	Chloroform	Benzo(a)pyrene	1,2,4-trimethylbenzene	NO COPCs	Chloroform	Acenaphthylene
Bis(2-ethylhexyl)phthalate	Benzo(a)anthracene	Antimony	Tetrachloroethene	Phenanthrene	1,3,5-trimethylbenzene		Benzo(a)anthracene	Benzo(a)anthracene
Benzo(a)anthracene	Benzo(a)pyrene	Arsenic	Benzo(a)anthracene	Endrin ketone	2-Hexanone		Benzo(a)pyrene	Benzo(a)pyrene
Benzo(a)pyrene	Benzo(b)fluoranthene	Chromium	Benzo(a)pyrene	Arsenic	Benzene		Benzo(b)fluoranthene	Benzo(b)fluoranthene
Benzo(b)fluoranthene	Benzo(k)fluoranthene	Cobalt	Benzo(b)fluoranthene	Chromium	Carbon Tetrachloride		Benzo(g,h,i)perylene	Benzo(g,h,i)perylene
Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Iron	Benzo(g,h,i)perylene	Cobalt	Chloroform		Benzo(k)fluoranthene	Carbazole
Benzo(k)fluoranthene	Carbazole	Manganese	Benzo(k)fluoranthene	Iron	Chloromethane		Carbazole	Dibenzo(a,h)anthracene
Carbazole	Di-n-octylphthalate	Nickel	Carbazole	Manganese	Ethylbenzene		Chrysene	Indeno(1,2,3-cd)pyrene
Chrysene	Dibenzo(a,h)anthracene		Chrysene		Tetrachloroethylene		Dibenzo(a,h)anthracene	Phenanthrene
Di-n-octylphthalate	Dimethylphthalate		Dibenzo(a,h)anthracene		Trichloroethylene		Indeno(1,2,3-cd)pyrene	Endrin aldehyde
Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene		Indeno(1,2,3-cd)pyrene		Trichlorofluoromethane		Naphthalene	Endrin ketone
Dimethylphthalate	Phenanthrene		Naphthalene				Phenanthrene	Endosulfan II
Indeno(1,2,3-cd)pyrene	Endosulfan sulfate		Phenanthrene				Dieldrin	delta-BHC
Naphthalene	Dieldrin		Dieldrin				alpha-Chlordane	gamma-Chlordane
Phenanthrene	Endrin aldehyde		Endrin aldehyde				Aroclor-1260	Aroclor-1260
Endosulfan sulfate	Endrin ketone		Endosulfan I				Aluminum	Aluminum
Dieldrin	Endosulfan II		Aroclor-1260				Arsenic	Antimony
Endrin aldehyde	gamma-Chlordane		Aluminum				Barium	Arsenic
Endrin ketone	Aroclor-1254		Antimony				Cadmium	Barium
Endosulfan II	Aroclor-1260		Arsenic				Chromium	Cadmium
gamma-Chlordane	Antimony		Barium				Copper	Chromium
Aroclor-1254	Arsenic		Beryllium				Iron	Cobalt
Aroclor-1260	Chromium		Cadmium				Lead	Copper
Aluminum	Cobalt		Chromium				Manganese	Iron
Antimony	Copper		Cobalt				Nickel	Lead
Arsenic	Iron		Copper				Vanadium	Manganese
Barium	Lead		Iron				Zinc	Mercury
Cadmium	Manganese		Lead					Zinc
Chromium	Thallium		Manganese					
Cobalt	Vanadium		Mercury					
Copper			Nickel					
Iron			Silver					
Lead			Vanadium					
Manganese			Zinc					
Mercury								
Nickel								
Silver								
Thallium								
Vanadium								
Zinc								

Table 4
COPC List and Chemical-Specific Parameters
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Chemical of Potential Concern (COPC)	Permeability Coefficient (Kp) (cm/hr)	Absorption Factor (ABS) (unitless)
Benzene+	--	--
Carbon Tetrachloride+	--	--
Chloroform	6.80E-03	--
Chloromethane+	--	--
Ethylbenzene+	--	--
Tetrachloroethene	3.30E-02	--
Trichloroethene+	--	--
Trichlorofluoromethane+	--	--
1,2,4-Trimethylbenzene+	--	--
1,3,5-Trimethylbenzene+	--	--
Acenaphthylene	8.90E-02	1.30E-01
Benzo(a)anthracene	4.70E-01	1.30E-01
Benzo(a)pyrene	7.00E-01	1.30E-01
Benzo(b)fluoranthene	7.00E-01	1.30E-01
Benzo(g,h,i)perylene	1.07E+00	1.30E-01
Benzo(k)fluoranthene	6.90E-01	1.30E-01
Bis(2-ethylhexyl)phthalate	2.50E-02	1.00E-01
Carbazole	5.25E-02	1.00E-01
Chrysene	4.70E-01	1.30E-01
Dibenzo(a,h)anthracene	1.50E+00	1.30E-01
Dimethylphthalate	1.40E-03	1.00E-01
Di-n-octylphthalate	2.27E+00	1.00E-01
Indeno(1,2,3-cd)pyrene	1.00E+00	1.30E-01
Naphthalene	4.70E-02	1.00E-01
Phenanthrene	1.40E-01	1.30E-01
alpha-Chlordane	3.40E-02	4.00E-02
Aroclor-1254	7.17E-01	1.40E-01
Aroclor-1260	2.79E+00	1.40E-01
Dieldrin	1.20E-02	--
Endosulfan I	2.83E-03	--
Endosulfan II	2.81E-03	--
Endosulfan Sulfate	1.77E-03	--
Endrin Aldehyde	1.72E-02	--
Endrin Ketone	2.29E-02	--
gamma-Chlordane	1.02E-01	--
Aluminum	1.00E-03	--
Antimony	1.00E-03	--
Arsenic	1.00E-03	3.00E-02
Barium	1.00E-03	--
Beryllium	1.00E-03	--
Cadmium	1.00E-03	1.00E-03
Chromium (VI)	2.00E-03	--
Chromium (III)	1.00E-03	--
Cobalt	4.00E-04	--
Copper	1.00E-03	--
Iron	1.00E-03	--
Lead	1.00E-04	--
Manganese	1.00E-03	--
Mercury (Methyl Mercury)	1.00E-03	--
Nickel	2.00E-04	--
Silver	6.00E-04	--
Thallium	1.00E-03	--
Vanadium	1.00E-03	--
Zinc	6.00E-04	--

+ denotes soil gas COPC that was not evaluated in a quantitative analysis.

Kp values obtained from Appendix B (Screening Table and Reference Values for the Water Pathway) of RAGS Part E and RAIS.

ABS values derived from Exhibit 3-4 of RAGS Part E and December 2009 RSL table.

Table 5
Site Wide Risk Summary
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

	RECEPTOR	MEDIA	Carcinogenic Risk			Routes Total	Non-Carcinogenic HQ			Routes Total
			Ingestion	Inhalation	Dermal		Ingestion	Inhalation	Dermal	
Current	Adult Trespasser	Soil 0 - 2ft bgs	--	--	--	--	1.06E-01	3.62E-04	2.29E-03	1.09E-01
		Leachate	--	--	--	--	3.42E-03	--	4.81E-02	5.16E-02
		Route Total	--	--	--	--	1.10E-01	3.62E-04	5.04E-02	1.60E-01
	Child Trespasser	Soil 0 - 2ft bgs	--	--	--	--	9.91E-01	3.62E-04	1.50E-02	1.01E+00
		Leachate	--	--	--	--	1.59E-02	--	1.10E-01	1.26E-01
		Route Total	--	--	--	--	1.01E+00	3.62E-04	1.25E-01	1.13E+00
	Child - Adult Aggregate Trespasser	Soil 0 - 2ft bgs	6.78E-04	1.15E-06	4.80E-05	7.27E-04	--	--	--	--
		Leachate	3.30E-06	--	2.81E-03	2.82E-03	--	--	--	--
		Route Total	6.81E-04	1.15E-06	2.86E-03	3.54E-03	--	--	--	--
Current / Future	Adult Recreator	Soil 0 - 2ft bgs	--	--	--	--	1.06E-01	3.62E-04	2.29E-03	1.09E-01
		Leachate	--	--	--	--	3.42E-03	--	4.81E-02	5.16E-02
		Beer Kill Creek Sediment	--	--	--	--	1.82E-02	--	3.31E-04	1.86E-02
		Beer Kill Creek Surface Water	--	--	--	--	--	--	--	--
		Route Total	--	--	--	--	1.28E-01	3.62E-04	5.08E-02	1.79E-01
	Child Recreator	Soil 0 - 2ft bgs	--	--	--	--	9.91E-01	3.62E-04	1.50E-02	1.01E+00
		Leachate	--	--	--	--	1.59E-02	--	1.10E-01	1.26E-01
		Beer Kill Creek Sediment	--	--	--	--	1.70E-01	--	2.17E-03	1.72E-01
		Beer Kill Creek Surface Water	--	--	--	--	--	--	--	--
		Route Total	--	--	--	--	1.18E+00	3.62E-04	1.28E-01	1.31E+00
	Child - Adult Aggregate Recreator	Soil 0 - 2ft bgs	6.78E-04	1.15E-06	4.80E-05	7.27E-04	--	--	--	--
		Leachate	3.30E-06	--	2.81E-03	2.82E-03	--	--	--	--
		Beer Kill Creek Sediment	6.13E-06	--	2.82E-07	6.41E-06	--	--	--	--
		Beer Kill Creek Surface Water	--	--	--	--	--	--	--	--
		Route Total	6.87E-04	1.15E-06	2.86E-03	3.55E-03	--	--	--	--
Future	Adult On-Site Resident	Soil 0 - 2ft bgs	--	--	--	--	9.29E-01	3.80E-02	2.00E-02	9.88E-01
		Leachate	--	--	--	--	2.99E-02	--	4.21E-01	4.51E-01
		Groundwater (Tap Water)	--	--	--	--	7.43E+00	--	6.63E-01	8.10E+00
		Route Total	--	--	--	--	8.39E+00	3.80E-02	1.10E+00	9.53E+00
	Child On-Site Resident	Soil 0 - 2ft bgs	--	--	--	--	8.68E+00	3.80E-02	1.31E-01	8.84E+00
		Leachate	--	--	--	--	1.39E-01	--	9.66E-01	1.11E+00
		Groundwater (Tap Water)	--	--	--	--	2.60E+01	--	1.96E+00	2.80E+01
		Route Total	--	--	--	--	3.48E+01	3.80E-02	3.05E+00	3.79E+01
	Child - Adult Aggregate On-Site Resident	Soil 0 - 2ft bgs	5.93E-03	1.20E-04	4.20E-04	6.47E-03	--	--	--	--
		Leachate	2.89E-05	--	2.46E-02	2.47E-02	--	--	--	--
		Groundwater (Tap Water)	2.62E-03	--	9.64E-04	3.58E-03	--	--	--	--
		Route Total	8.58E-03	1.20E-04	2.60E-02	3.47E-02	--	--	--	--
Future	Adult Construction Worker	Soil 0 - 10ft bgs	2.61E-05	1.78E-04	2.10E-06	2.06E-04	8.43E-01	3.60E+00	1.87E-02	4.46E+00
		Groundwater (in Excavations to 10ft bgs)	--	--	4.76E-06	4.76E-06	--	--	7.18E-02	7.18E-02
		Route Total	2.61E-05	1.78E-04	6.86E-06	2.11E-04	8.43E-01	3.60E+00	9.05E-02	4.53E+00
Future	Adult Commercial / Industrial Worker	Soil 0 - 2ft bgs	2.45E-04	9.43E-06	1.27E-05	2.67E-04	6.64E-01	9.06E-03	8.29E-03	6.81E-01
		Leachate	3.25E-06	--	2.05E-03	2.06E-03	2.13E-02	--	1.74E-01	1.96E-01
		Route Total	2.49E-04	9.43E-06	2.07E-03	2.32E-03	6.85E-01	9.06E-03	1.82E-01	8.77E-01
Current / Future	Adult Off-Site Resident	Off-Site Soil 0 - 2ft bgs	--	--	--	--	2.05E+00	1.83E-02	3.96E-03	2.07E+00
		Route Total	--	--	--	--	2.05E+00	1.83E-02	3.96E-03	2.07E+00
	Child Off-Site Resident	Off-Site Soil 0 - 2ft bgs	--	--	--	--	1.91E+01	1.83E-02	2.59E-02	1.91E+01
		Route Total	--	--	--	--	1.91E+01	1.83E-02	2.59E-02	1.91E+01
	Child - Adult Off-Site Resident	Off-Site Soil 0 - 2ft bgs	9.09E-05	1.40E-06	9.97E-06	1.02E-04	--	--	--	--
		Route Total	9.09E-05	1.40E-06	9.97E-06	1.02E-04	--	--	--	--

Note: Risk contributions from MMOA Chemicals included in above summations.
Bold values indicate HI > 1.0 or ELCR > 1x10⁻⁴

Table 6
 Summary of Non-Cancer HIs and Cancer Risks
 Areas of Concern 1 through 5
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Receptor, Age, Media	Route	Cancer Risk				
		AOC-1	AOC-2	AOC-3	AOC-4	AOC-5
On-Site Resident Child-Adult Aggregate On-Site Soil (0 - 2ft bgs)	Ingestion	7.94E-02	2.06E-03	7.73E-04	2.00E-04	1.60E-04
	Dermal Absorption	1.06E-03	5.93E-04	2.18E-04	5.98E-05	2.53E-05
	Inhalation (Fugitive Dust)	3.19E-04	3.19E-05	6.06E-06	1.31E-06	1.99E-06
	Total:	8.07E-02	2.69E-03	9.97E-04	2.61E-04	1.87E-04
Construction / Utility Worker On-Site Soil (0 - 10ft bgs)	Ingestion	1.02E-04	9.61E-06	8.29E-06	1.32E-06	1.70E-04
	Dermal Absorption	5.20E-06	2.40E-06	2.47E-06	2.66E-07	6.57E-05
	Inhalation (Fugitive Dust)	7.74E-04	2.67E-05	1.17E-05	2.59E-06	5.14E-06
	Total:	8.81E-04	3.87E-05	2.24E-05	4.18E-06	2.41E-04

* MMOA contributions to risk are reflected in above values where applicable.

Receptor, Age, Media	Route	Non-Cancer HI				
		AOC-1	AOC-2	AOC-3	AOC-4	AOC-5
On-Site Resident Adult On-Site Soil (0 - 2ft bgs)	Ingestion	3.31E+00	3.99E-01	1.38E+00	2.95E-01	4.43E-01
	Dermal Absorption	4.48E-02	5.39E-02	3.82E-02	3.69E-03	7.06E-03
	Inhalation (Fugitive Dust)	9.29E-02	2.44E-02	6.75E-02	2.63E-02	2.06E-02
	Total:	3.45E+00	4.77E-01	1.48E+00	3.25E-01	4.71E-01
On-Site Resident Child On-Site Soil (0 - 2ft bgs)	Ingestion	3.09E+01	3.73E+00	1.29E+01	2.76E+00	4.14E+00
	Dermal Absorption	2.93E-01	3.53E-01	2.50E-01	2.42E-02	4.63E-02
	Inhalation (Fugitive Dust)	9.29E-02	2.44E-02	6.75E-02	2.63E-02	2.06E-02
	Total:	3.13E+01	4.10E+00	1.32E+01	2.81E+00	4.20E+00
Construction / Utility Worker On-Site Soil (0 - 10ft bgs)	Ingestion	1.50E+00	1.61E-01	1.89E+00	6.98E-01	5.49E-01
	Dermal Absorption	3.84E-02	2.95E-02	1.74E-02	6.47E-03	1.25E-02
	Inhalation (Fugitive Dust)	5.68E+00	1.66E-01	2.35E-01	8.21E-02	1.56E-01
	Total:	7.22E+00	3.57E-01	2.14E+00	7.87E-01	7.17E-01

bold Indicates HI > 1.0 or ELCR 1x10⁻⁴

TABLE 7
SUMMARY OF COCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Cancer Risk Chemicals of Concern							
Soil (0 - 2ft)		Soil (0 - 10)		Leachate Areas		Shallow Groundwater in Excavations	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Benzo(a)anthracene	TR, RC, RES, CI	Benzo(a)pyrene	CW	Benzo(a)anthracene	TR, RC, RES, CI	No COCs	--
Benzo(a)pyrene	TR, RC, RES, CI	Chromium (VI)	CW	Benzo(a)pyrene	TR, RC, RES, CI		
Benzo(b)fluoranthene	TR, RC, RES, CI			Benzo(b)fluoranthene	TR, RC, RES, CI		
Benzo(k)fluoranthene	RES			Benzo(k)fluoranthene	TR, RC, RES, CI		
Chrysene	RES			Chrysene	TR, RC, RES		
Dibenzo(a,h)anthracene	TR, RC, RES, CI			Dibenzo(a,h)anthracene	TR, RC, RES, CI		
Indeno(1,2,3-cd)pyrene	TR, RC, RES, CI			Indeno(1,2,3-cd)pyrene	TR, RC, RES, CI		
Aroclor-1254	RES			Dieldrin	RES		
Aroclor-1260	TR, RC, RES, CI			Aroclor-1260	TR, RC, RES, CI		
Arsenic	TR, RC, RES, CI			Arsenic	RES, CI		
Chromium (VI)	TR, RC, RES, CI			Chromium (VI)	TR, RC, RES, CI		

Cancer Risk Chemicals of Concern							
Groundwater		Off-Site Soil		Beer Kill Sediment		Beer Kill Surface Water	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Arsenic	RES	Benzo(a)anthracene	ORES	No COCs	--	No COCs	--
Chromium (VI)	RES	Benzo(a)pyrene	ORES				
		Benzo(b)fluoranthene	ORES				
		Dibenzo(a,h)anthracene	ORES				
		Arsenic	ORES				
		Chromium (VI)	ORES				

TABLE 7
SUMMARY OF COCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Non-Cancer Hazard Chemicals of Concern							
Soil (0 - 2ft)		Soil (0 - 10)		Leachate Areas		Shallow Groundwater in Excavations	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Chromium (VI)	RES	Arsenic	CW	Lead	*	Lead	*
Copper	RES	Manganese	CW				
Iron	RES	Lead	*				
Lead	*						

Non-Cancer Hazard Chemicals of Concern							
Groundwater		Off-Site Soil		Beer Kill Sediment		Beer Kill Surface Water	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Aluminum	RES	Antimony	ORES	No COCs	--	No COCs	--
Arsenic	RES	Lead	*				
Cobalt	RES						
Manganese	RES						
Chromium (VI)	RES						

* Lead was identified as a COPC in several of the on-site media, and is included in the above COC inventory since no further quantitative assessment of lead was conducted.

Receptor Code:

-
- TR Trespasser
 - RC Recreator
 - RES On-Site Resident
 - ORES Off-Site Resident
 - CW Construction / Utility Worker
 - CI Commercial / Industrial Worker

Table 8
 AOC CHEMICALS OF CONCERN
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

AOC-1		AOC-2		AOC-3	
Soil (0 - 2ft)	Soil (0 - 10ft)	Soil (0 - 2ft)	Soil (0 - 10ft)	Soil (0 - 2ft)	Soil (0 - 10ft)
Benzo(a)anthracene	Benzo(a)pyrene	Benzo(a)anthracene	Lead *	Benzo(a)anthracene	Lead *
Benzo(a)pyrene	Chromium (VI)	Benzo(a)pyrene		Benzo(a)pyrene	
Benzo(b)fluoranthene	Manganese	Benzo(b)fluoranthene		Benzo(b)fluoranthene	
Benzo(k)fluoranthene	Lead *	Benzo(k)fluoranthene		Benzo(k)fluoranthene	
Chrysene		Dibenzo(a,h)anthracene		Dibenzo(a,h)anthracene	
Dibenzo(a,h)anthracene		Chrysene		Indeno(1,2,3,-cd)perylene	
Indeno(1,2,3,-cd)perylene		Indeno(1,2,3,-cd)perylene		Dieldrin	
Phenanthrene		Aroclor 1254		Aroclor 1254	
Aroclor 1254		Aroclor 1260		Aroclor 1260	
Aroclor 1260		Arsenic		Antimony	
Antimony		Chromium (VI)		Arsenic	
Arsenic		Lead *		Chromium (VI)	
Chromium (VI)				Copper	
Iron				Manganese	
Lead *				Lead *	

AOC-4		AOC-5	
Soil (0 - 2ft)	Soil (0 - 10ft)	Soil (0 - 2ft)	Soil (0 - 10ft)
Benzo(a)anthracene	Lead *	Benzo(a)anthracene	Benzo(a)pyrene
Benzo(a)pyrene		Benzo(a)pyrene	Lead *
Benzo(b)fluoranthene		Benzo(b)fluoranthene	
Dibenzo(a,h)anthracene		Indeno(1,2,3,-cd)perylene	
Indeno(1,2,3,-cd)perylene		Antimony	
Chromium (VI)		Chromium (VI)	
Lead *		Lead *	

Note:

* Lead was identified as a COPC in several of the on-site media, and is included in the above COC inventory since no further quantitative assessment of lead was conducted.

Table 9a
 SITE-WIDE SUMMARY OF RISK
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

	RECEPTOR	MEDIA	Carcinogenic Risk			Routes	Non-Carcinogenic HQ			Routes
			Ingestion	Inhalation	Dermal	Total	Ingestion	Inhalation	Dermal	Total
Current	Child - Adult Aggregate Trespasser	Soil 0 - 2ft bgs	3.35E-04	1.07E-06	9.35E-06	3.45E-04	--	--	--	--
		Leachate	1.55E-06	--	1.87E-03	1.87E-03	--	--	--	--
		Route Total	3.36E-04	1.07E-06	1.88E-03	2.21E-03	--	--	--	--
Current / Future	Child - Adult Aggregate Recreator	Soil 0 - 2ft bgs	3.35E-04	1.07E-06	9.35E-06	3.45E-04	--	--	--	--
		Leachate	1.55E-06	--	1.87E-03	1.87E-03	--	--	--	--
		Beer Kill Creek Sediment	2.90E-06	--	4.83E-08	2.95E-06	--	--	--	--
		Beer Kill Creek Surface Water	--	--	--	--	--	--	--	--
		Route Total	3.39E-04	1.07E-06	1.88E-03	2.22E-03	--	--	--	--
Future	Adult On-Site Resident	Soil 0 - 2ft bgs	--	--	--	--	4.65E-01	3.80E-02	2.86E-03	5.06E-01
		Leachate	--	--	--	--	1.49E-02	--	2.12E-01	2.27E-01
		Route Total	--	--	--	--	4.80E-01	3.80E-02	2.15E-01	7.32E-01
	Child On-Site Resident	Soil 0 - 2ft bgs	--	--	--	--	4.34E+00	3.80E-02	2.63E-02	4.40E+00
		Leachate	--	--	--	--	6.97E-02	--	4.85E-01	5.55E-01
		Route Total	--	--	--	--	4.41E+00	3.80E-02	5.12E-01	4.96E+00
	Child - Adult Aggregate On-Site Resident	Soil 0 - 2ft bgs	2.93E-03	1.12E-04	8.04E-05	3.12E-03	--	--	--	--
		Leachate	1.35E-05	--	1.63E-02	1.63E-02	--	--	--	--
		Route Total	2.94E-03	1.12E-04	1.64E-02	1.95E-02	--	--	--	--
Future	Adult Construction Worker	Soil 0 - 10ft bgs	3.46E-06	7.81E-05	9.20E-07	8.25E-05	2.24E-01	3.15E+00	1.64E-02	3.39E+00
		Groundwater (in Excavations to 10ft bgs)	--	--	1.52E-06	1.52E-06	--	--	3.50E-02	3.50E-02
		Route Total	3.46E-06	7.81E-05	2.44E-06	8.40E-05	2.24E-01	3.15E+00	5.13E-02	3.43E+00
Future	Adult Commercial / Industrial Worker	Soil 0 - 2ft bgs	2.84E-05	2.18E-06	4.19E-07	3.10E-05	2.91E-01	7.93E-03	1.04E-03	3.00E-01
		Leachate	3.76E-07	--	3.33E-04	3.34E-04	9.35E-03	--	7.67E-02	8.61E-02
		Route Total	2.87E-05	2.18E-06	3.34E-04	3.65E-04	3.00E-01	7.93E-03	7.77E-02	3.86E-01
Current / Future	Adult Off-Site Resident	Off-Site Soil 0 - 2ft bgs	--	--	--	--	1.02E+00	1.83E-02	5.65E-04	1.04E+00
		Route Total	--	--	--	--	1.02E+00	1.83E-02	5.65E-04	1.04E+00
	Child Off-Site Resident	Off-Site Soil 0 - 2ft bgs	--	--	--	--	9.55E+00	1.83E-02	5.19E-03	9.57E+00
		Route Total	--	--	--	--	9.55E+00	1.83E-02	5.19E-03	9.57E+00
	Child - Adult Off-Site Resident	Off-Site Soil 0 - 2ft bgs	1.59E-05	1.29E-06	1.87E-06	1.90E-05	--	--	--	--
		Route Total	1.59E-05	1.29E-06	1.87E-06	1.90E-05	--	--	--	--

Table 9b
 CHEMICALS OF CONCERN
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Cancer Risk Chemicals of Concern							
Soil (0 - 2ft)		Soil (0 - 10)		Leachate Areas		Shallow Groundwater in Excavations	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Benzo(a)anthracene	TR, RC, RES	No COCs	--	Benzo(a)anthracene	TR, RC, RES, CI	No COCs	--
Benzo(a)pyrene	TR, RC, RES			Benzo(a)pyrene	TR, RC, RES, CI		
Benzo(b)fluoranthene	TR, RC, RES			Benzo(b)fluoranthene	TR, RC, RES, CI		
Benzo(k)fluoranthene	RES			Benzo(k)fluoranthene	TR, RC, RES, CI		
Dibenzo(a,h)anthracene	TR, RC, RES			Chrysene	RES		
Indeno(1,2,3-cd)pyrene	TR, RC, RES			Dibenzo(a,h)anthracene	TR, RC, RES, CI		
Aroclor-1260	RES			Indeno(1,2,3-cd)pyrene	TR, RC, RES, CI		
Arsenic	TR, RC, RES			Aroclor-1260	TR, RC, RES, CI		
Chromium (VI)	TR, RC, RES			Arsenic	RES		
				Chromium (VI)	TR, RC, RES, CI		

Cancer Risk Chemicals of Concern							
Groundwater		Off-Site Soil		Beer Kill Sediment		Beer Kill Surface Water	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Not Evaluated in CTE		No COCs	--	No COCs		No COCs	--

Non-Cancer Hazard Chemicals of Concern							
Soil (0 - 2ft)		Soil (0 - 10)		Leachate Areas		Shallow Groundwater in Excavations	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Chromium (VI)	RES	Lead	*	Lead	*	Lead	*
Lead	*	Manganese	CW				

Table 9b
 CHEMICALS OF CONCERN
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

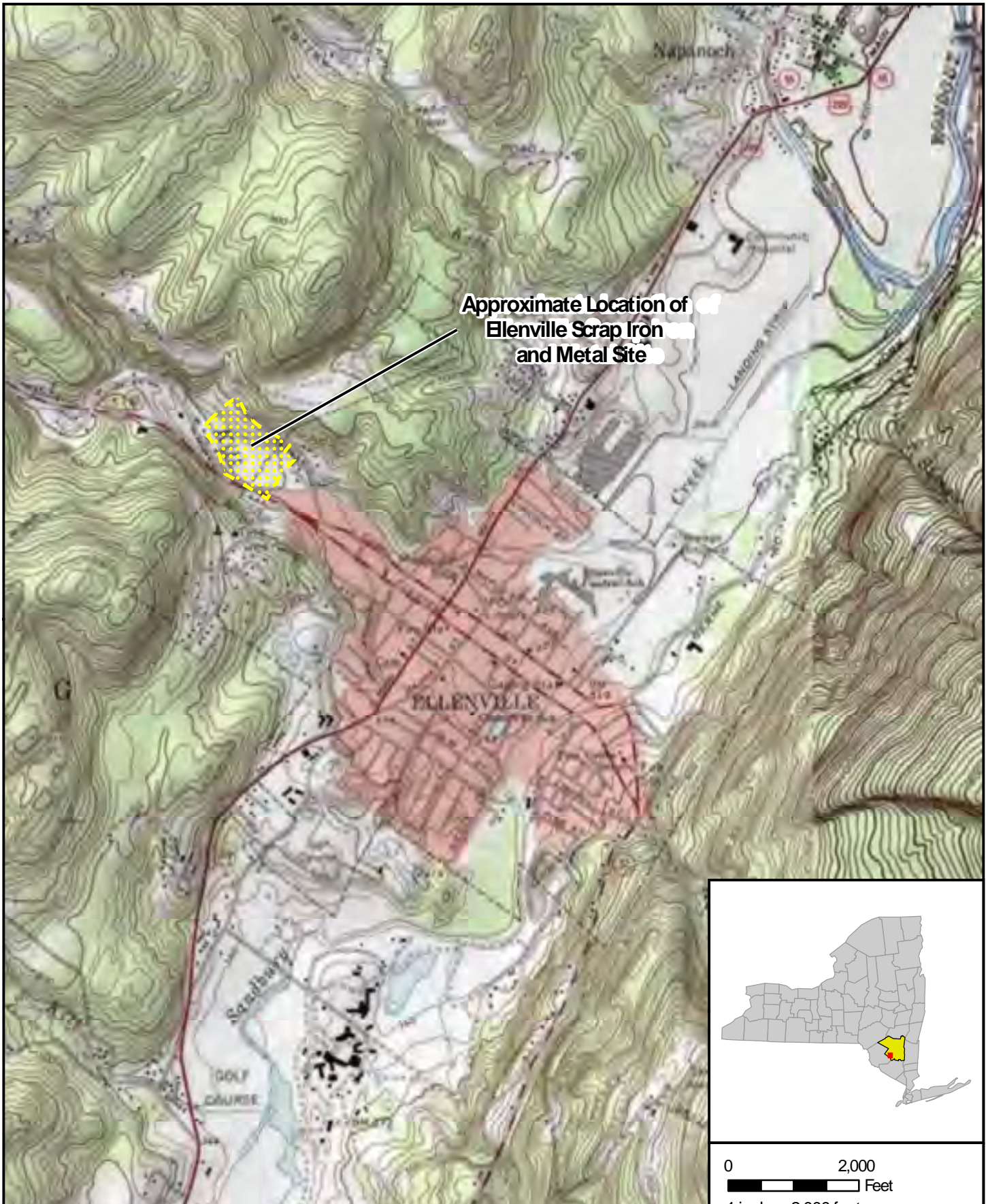
Non-Cancer Hazard Chemicals of Concern							
Groundwater		Off-Site Soil		Beer Kill Sediment		Beer Kill Surface Water	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Not Evaluated in CTE	--	Antimony Lead	ORES *	No COCs	--	No COCs	--

* Lead was identified as a COPC in several of the on-site media, and is included in the above COC inventory since no further quantitative assessment of lead was conducted.

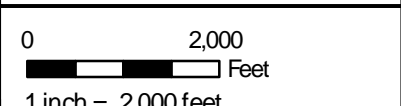
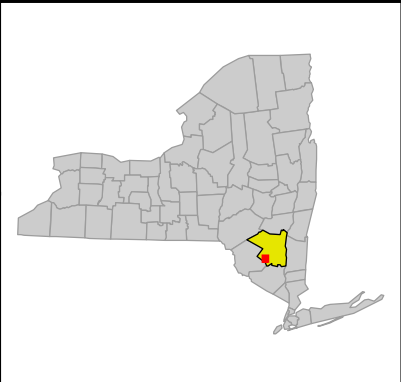
Receptor Code:

-
- TR Trespasser
 - RC Recreator
 - RES On-Site Resident
 - ORES Off-Site Resident
 - CW Construction / Utility Worker
 - CI Commercial / Industrial Worker

FIGURES



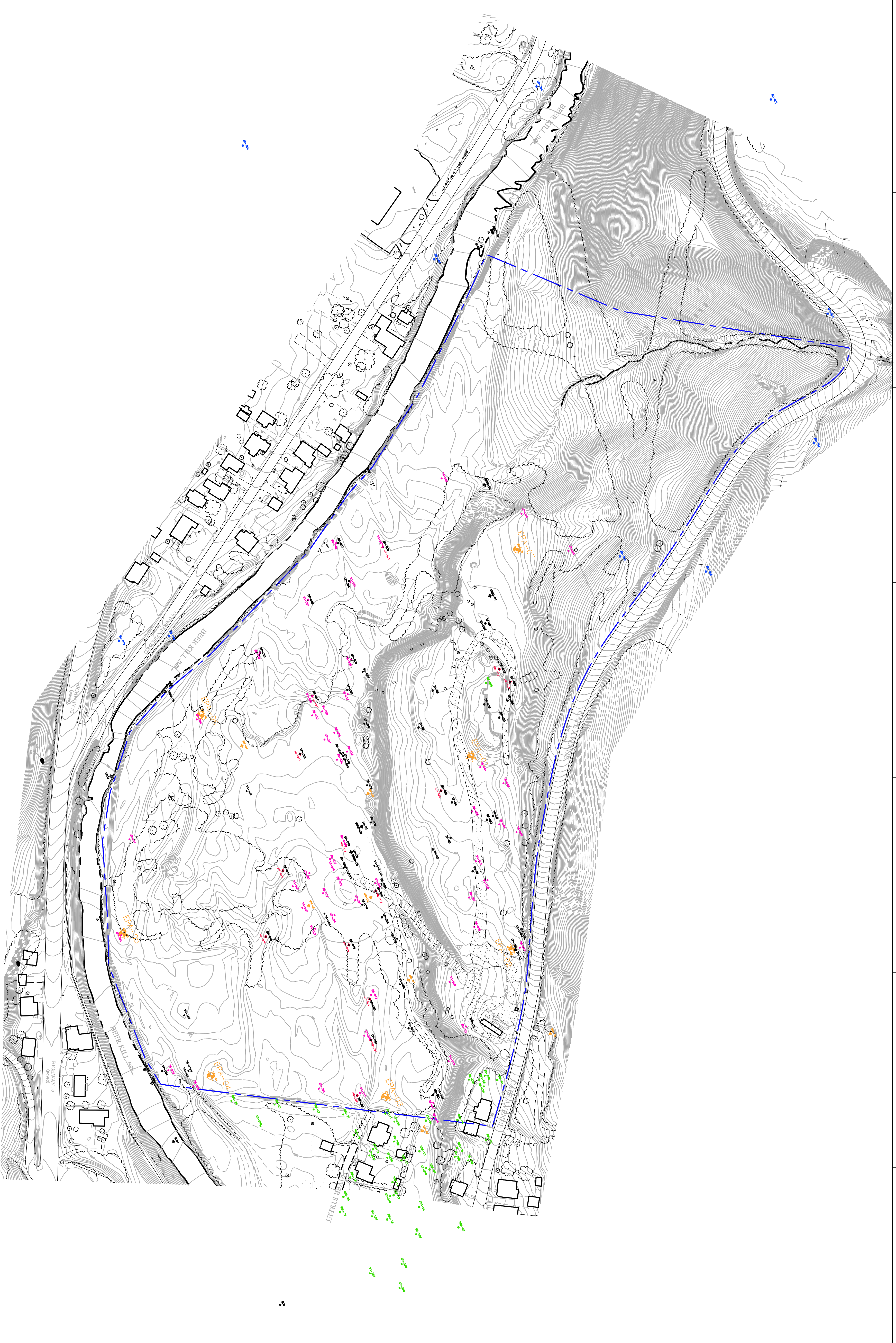
Approximate Location of Elenville Scrap Iron and Metal Site



Source: United States Geological Survey Topographic Map

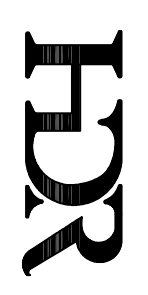
	Elenville Scrap Iron and Metal Site Site Location		
	Job No. 114488	Date 10/02/09	Figure No. 1

1 2 3 4 5 6 7 8



- LEGEND:**
- SITE BOUNDARY
 - LIMIT OF SURFACE WATER
 - BK-004 BACKGROUND SOIL SAMPLE LOCATION
 - PR-001 DIRECT PUSH LOCATION
 - EX-001 POST EXCAVATION SOIL SAMPLE LOCATION
 - HP-001 HYDROPUNCH LOCATION
 - LH-001 LEACHATE SAMPLE LOCATION
 - PE-001 PRE-EXISTING MONITORING WELLS LOCATIONS
 - EPA-04 REMEDIAL INVESTIGATION MONITORING WELLS LOCATIONS
 - SR-001 RESIDENTIAL SOIL SAMPLE LOCATION
 - SW-001 SURFACE WATER SAMPLE LOCATION
 - SW-002 SURFACE WATER STAFF GAUGE LOCATION
 - SS-001 SURFACE SOIL SAMPLE LOCATION
 - SS-002 SURFACE SOIL SAMPLE LOCATION
 - SS-003 SURFACE SOIL SAMPLE LOCATION
 - SS-004 SURFACE SOIL SAMPLE LOCATION
 - SS-005 SURFACE SOIL SAMPLE LOCATION
 - SS-006 SURFACE SOIL SAMPLE LOCATION
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 - SS-099 SURFACE SOIL SAMPLE LOCATION
 - SS-100 SURFACE SOIL SAMPLE LOCATION
 - TP-001 TEST PIT LOCATION
 - EXISTING TREE LINE
 - DIRT ACCESS ROAD

SURVEY NOTES:
 SOURCE: SURVEYED BY BANC 3 INC., P.C. ON MARCH 25, 2008 UNDER TERRA TECH, INC. RAC FOR EPA.
 HORIZONTAL DATUM: NEW YORK STATE PLANE
 (EAST)-NORTH AMERICAN DATUM (NAD83/FEET)

 Headquarters, Building & Residential, Architecture and Engineering, P.C. in Association with HDR Engineering, Inc.		
ISSUE	DATE	DESCRIPTION
1	02/19/2010	DRAFT ISSUE
2	07/01/2010	FINAL ISSUE

PROJECT MANAGER	E.S.
LEAD DESIGN PROF.	T.M.C.
DESIGN ENGINEER	J.J.
DRAWN BY	J.W.
PROGRAM MANAGER	B.W.
QUALITY ASSURANCE MGR.	R.M.
PROJECT NUMBER	114488

ELLENVILLE SCRAP IRON
 AND METAL SITE
 VILLAGE OF ELLENVILLE,
 TOWN OF WAWARUSING,
 ULSTER COUNTY, NEW YORK

UNITED STATES ENVIRONMENTAL
 PROTECTION AGENCY
 CONTRACT NO. EP-W-09-009
 WORK ASSIGNMENT NO.
 008-RICO-02LX

SAMPLE LOCATIONS

0 50 100 200
 0 50 100 200
 1" = 100'

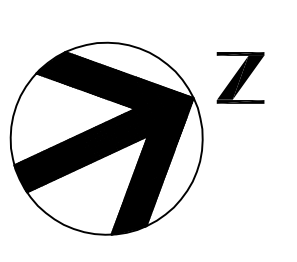
FILENAME -
 SCALE 1" = 100'

SHEET
Drawing 1

1 2 3 4 5 6 7 8



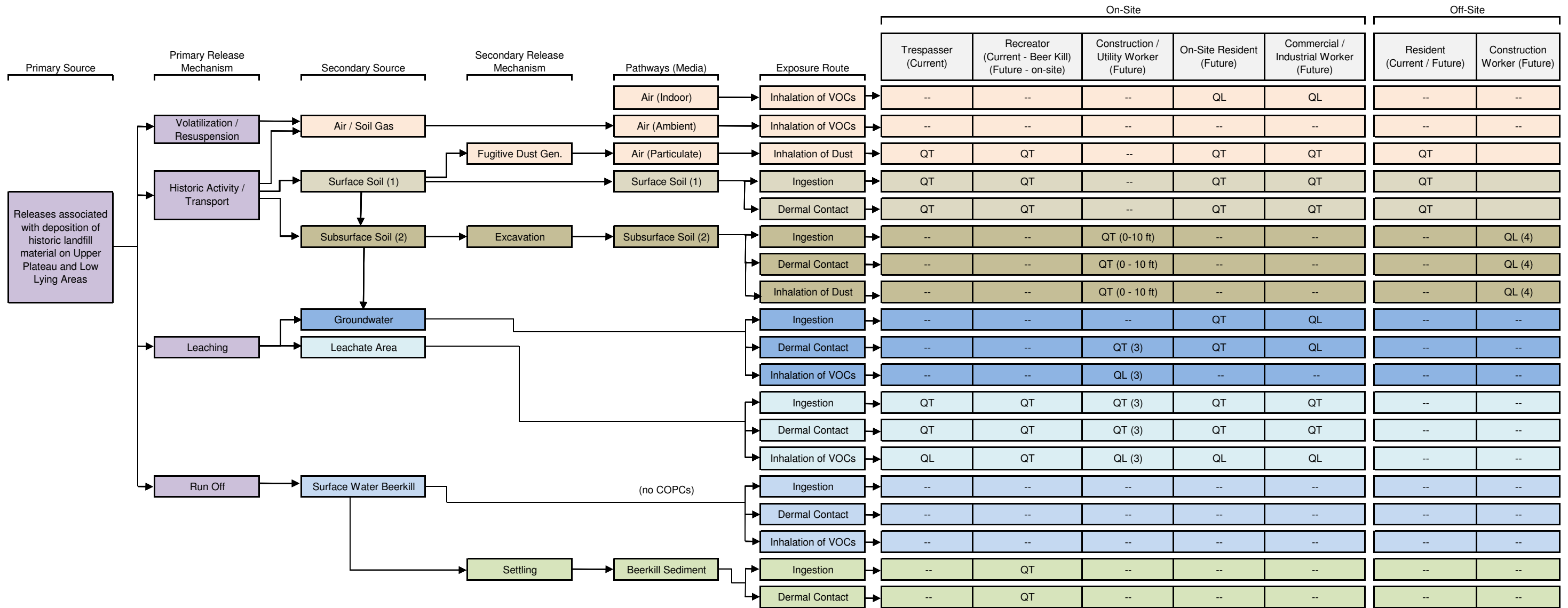
- LEGEND:**
- TAX MAP LOT LINES/PROPERTY LINE
 - - - - - LIMIT OF SURFACE WATER
 - - - - - SITE BOUNDARY
 - ▽ SC-014 SOIL GAS SURVEY SAMPLE LOCATIONS



SURVEY NOTES:
 SOURCE: SURVEYED BY BANC, 3 INC., P.C. ON MARCH 25, 2008 UNDER TERRA TECH, INC., RAC FOR EPA.
 HORIZONTAL DATUM: NEW YORK STATE PLANE
 (EAST-NORTH AMERICAN DATUM (NAD83/FEET))

		<p>PROJECT MANAGER: E.S.</p> <p>LEAD DESIGN PROF: T.M.C.</p> <p>DESIGN ENGINEER: J.J.</p> <p>DRAWN BY: J.W.</p> <p>PROGRAM MANAGER: B.W.</p> <p>QUALITY ASSURANCE MGR: R.M.</p> <p>PROJECT NUMBER: 114488</p>	
ISSUE	DATE	DESCRIPTION	
1	02/19/2010	DRAFT ISSUE	
2	07/01/2010	FINAL ISSUE	
<p>ELLENVILLE SCRAP IRON AND METAL SITE VILLAGE OF ELLENVILLE, TOWN OF WAWARISING, ULSTER COUNTY, NEW YORK</p> <p>UNITED STATES ENVIRONMENTAL PROTECTION AGENCY CONTRACT NO. EP-W-09-009 WORK ASSIGNMENT NO. 008-RICO-021X</p>			
<p>SOIL GAS SURVEY SAMPLE LOCATIONS</p>		<p>FILENAME -</p> <p>SCALE 1"=100'</p>	<p>SHEET</p> <p>Figure 2</p>

Figure 3
Conceptual Site Model
Ellenville Scrap Iron and Metal Site
008-RICO-02LX



Legend

 Air	 Leachate
 Surface Soil	 Qualitative Analysis
 Subsurface Soil	 Quantitative Analysis
 Surface Water	 Incomplete or insignificant pathways.
 Sediment	 Pathway
 Groundwater	

- Notes**
- (1) Surface Soil defined as 0 to 2 feet below ground surface; upland sediment merged with soil dataset
 - (2) Subsurface Soil defined as 0 to 10 feet below ground surface; upland sediment merged with soil dataset
 - (3) Leachate merged with Shallow Groundwater and Test Pit (grab) groundwater
 - (4) Impacted Soil present below geofabric on Parcel A

ATTACHMENT A
RME RAGS Tables

Table 1	Selection of Exposure Pathways
Table 2.1.1	Occurrence, Distribution, and Selection of Chemicals of Potential Concern (Surface Soil, 0-2 ft)
Table 2.1.2	Occurrence, Distribution, and Selection of Chemicals of Potential Concern (Subsurface Soil, 0-10 ft)
Table 2.2.1	Occurrence, Distribution, and Selection of Chemicals of Potential Concern (Shallow Groundwater)
Table 2.2.2	Occurrence, Distribution, and Selection of Chemicals of Potential Concern (Groundwater)
Table 2.3	Occurrence, Distribution, and Selection of Chemicals of Potential Concern (Sediment – Beer Kill)
Table 2.4	Occurrence, Distribution, and Selection of Chemicals of Potential Concern (Surface Water)
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Table 2.6	Occurrence, Distribution, and Selection of Chemicals of Potential Concern (Soil Gas)
Table 2-6 Supplement	Soil Gas Survey Sample Results – Comparison with Draft 2002 EPA VI Guidance
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Table 4.2a Supplement	Dermal Work Sheet, Groundwater
Table 4.3a	RME Beer Kill Creek Sediment, Values Used for Daily Intake Calculations (current and future)
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Table 4.4b	RME Leachate, Values Used for Daily Intake Calculations (future)
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Table 6.2	Cancer Toxicity Data – Inhalation Exposure
Table 7.1.1	RME, Calculation of Chemical Non-Cancer Hazards (current, trespasser, adult)
Table 7.1.2	RME, Calculation of Chemical Non-Cancer Hazards (current, trespasser, child)
Table 7.1.3	RME, Calculation of Chemical Cancer Risks (current, trespasser, child/adult aggregate)
Table 7.2.1	RME, Calculation of Chemical Non-Cancer Hazards (current/future, recreator, adult)
Table 7.2.2	RME, Calculation of Chemical Non-Cancer Hazards (current/future, recreator, child)
Table 7.2.3	RME, Calculation of Chemical Cancer Risks and Non-Cancer Hazards (current/future, recreator, child/adult aggregate)
Table 7.3.1	RME, Calculation of Chemical Non-Cancer Hazards (future, on-site resident, adult)
Table 7.3.2	RME, Calculation of Chemical Non-Cancer Hazards (future, on-site resident, child)

Table 7.3.3	RME, Calculation of Chemical Cancer Risks and Non-Cancer Hazards (future, on-site resident, child/adult aggregate)
Table 7.4.1	RME, Calculation of Chemical Cancer Risks and Non-Cancer Hazards (future, construction/utility worker, adult)
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Table 7.6.1	RME, Calculation of Chemical Non-Cancer Hazards (current/future, off-site resident, adult)
Table 7.6.2	RME, Calculation of Chemical Non-Cancer Hazards (current/future, off-site resident, child)
Table 7.6.3	RME, Calculation of Chemical Cancer Risks and Non-Cancer Hazards (current/future, off-site resident, child/adult aggregate)
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Table 9.6.2	Summary of Receptor Risks and Hazards for COPCs (current/future, off-site resident, child)
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Table 10.6.1	Risk Summary (current/future, off-site resident, adult)
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DRAFT Table 1.0
SELECTION OF EXPOSURE PATHWAYS
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current	Soil	Surface soil (0-2 ft)	On-site Soil (0-2 ft)	Trespasser	Child/Adult	Incidental Ingestion Dermal Absorption Inhalation of Dust	Quant Quant Quant	Potential complete exposure pathways. Trespassers are possible but not likely due to fencing. Upland sediment merged with surface soil.
Current	Leachate	Leachate	Leachate Area (on-site)	Trespasser	Child/Adult	Incidental Ingestion Dermal Absorption Inhalation	Quant Quant Qualitative	Potential complete exposure pathways. Trespassers are possible but not likely due to fencing. Only one VOC detected slightly above tap water screening level.
Current / Future	Soil	Surface soil (0-2 ft)	Residential Parcels A-I (0-2 ft, off-site soil)	Resident	Child/Adult	Incidental Ingestion Dermal Absorption Inhalation of Dust	Quant Quant Quant	Potential complete exposure pathway.
Current / Future	Sediment	Sediment in Beer Kill	Beer Kill Creek	Recreator	Child/Adult	Incidental Ingestion Dermal Absorption	Quant Quant	Potential complete exposure pathway. Recreation activities are possible based on site information and reconnaissance.
Current / Future	Surface water	Surface water	Beer Kill Creek	Recreator	Child/Adult	Incidental Ingestion Dermal Absorption	Qualitative Qualitative	Potential complete exposure pathway. Recreation activities are possible based on site information and reconnaissance. However, no COPCs identified.
Current / Future	Soil Gas	Indoor Air	Off-site Parcels A and D / indoor air	Resident	Child/Adult	Inhalation	Qualitative	Residences located within 100 ft of soil gas concentrations above screening levels.
Future	Soil	Surface soil (0-2 ft)	On-site Soil (0-2 ft)	Resident	Child/Adult	Incidental Ingestion Dermal Absorption Inhalation of Dust	Quant Quant Quant	Potential complete exposure pathway. Residential land use possible. Upland sediment merged with soil.
Future	Soil	Surface Soil (0-2 ft)	On-site Soil (0-2 ft)	Commercial / Industrial worker	Adult	Incidental Ingestion Dermal Absorption Inhalation of Dust	Quant Quant Quant	Potential complete exposure pathway. Commercial / industrial land use possible. Upland sediment merged with soil.
Future	Soil	Surface soil (0-2 ft)	On-site Soil (0-2 ft)	Recreator	Child/Adult	Incidental Ingestion Dermal Absorption Inhalation of Dust	Quant Quant Quant	Potential complete exposure pathway. Recreation activities are possible based on site information and reconnaissance, however, no recreators have been observed. Upland sediment merged with soil.
Future	Soil	Subsurface soil (0-10 ft)	On-site Soil (0-10 ft)	Construction / Utility worker	Adult	Incidental Ingestion Dermal Absorption Inhalation of Dust	Quant Quant Quant	Potential complete exposure pathway. Construction / utility work possible. Upland sediment merged with soil.

DRAFT Table 1.0
SELECTION OF EXPOSURE PATHWAYS
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Future	Leachate	Leachate	Leachate Area (on-site)	Resident	Child/Adult	Incidental Ingestion Dermal Absorption Inhalation	Quant Quant Qualitative	Potential complete exposure pathways for future residents. Only one VOC detected slightly above tap water screening level.
				Recreator	Child/Adult	Incidental Ingestion Dermal Absorption	Quant Quant	Potential complete exposure pathways for future recreators.
				Commercial / Industrial Worker	Adult	Incidental Ingestion Dermal Absorption Inhalation	Quant Quant Qualitative	Potential complete exposure pathways for future commercial / industrial workers. Only one VOC detected slightly above tap water screening level.
Future	Groundwater	Groundwater	On-site groundwater (tap water) Shower	Resident	Child/Adult	Direct Ingestion Dermal Absorption	Quant Quant	Future potable use evaluation.
			On-site groundwater (tap water) Shower	Commercial / Industrial worker	Adult	Direct Ingestion Dermal Absorption	Qualitative Qualitative	Future potable use; risk estimates can be conservatively represented by the residential risk estimates.
			Shallow groundwater in excavations to 10 ft bgs	Construction / Utility worker (0 - 10 ft)	Adult	Dermal Absorption Inhalation	Quant Qualitative	Potential exposure pathway during excavation assuming exposure to groundwater within 10 ft bgs, leachate, and test pit (grab) groundwater. Potential complete exposure pathway during excavation activities.
Future	Soil Gas	Indoor Air	On-site building / indoor air	Resident	Child/Adult	Inhalation	Qualitative	Potential complete exposure pathway. Residential land use possible. Pathway evaluated qualitatively.
				Commercial / Industrial worker	Adult	Inhalation	Qualitative	Potential complete exposure pathway. Commercial/industrial land use possible. Pathway evaluated qualitatively.

Notes:

bgs - below ground surface

ft - feet

Quant - quantitatively

Leachate medium includes upland surface water.

TABLE 2.1.1
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current/Future
 Medium: Soil
 Exposure Medium: Surface soil (0 - 2 ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Residential Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N) (6)	Rationale for Selection or Deletion (6)
VOLATILE ORGANICS														
On Site Soil (0-2 ft)	98-82-8	Isopropylbenzene	4.60E-01 (J)	4.60E-01 (J)	(mg/kg)	DP-022	1 of 92	0.0047U-0.012U	4.60E-01	NA	2.10E+02 ns	Not Available	N	Max < RSL
	1330-20-07	m/p-Xylene (d)	4.60E-04 (J)	1.20E+01 (J)	(mg/kg)	DP-029	4 of 73	0.0047U-0.012U	1.20E+01	NA	6.30E+01 ns	100	N	Max < RSL
	78-93-3	2-Butanone	3.00E-03 (J)	2.80E+00 (J)	(mg/kg)	SS-035	16 of 97	0.0094U-0.012U	2.80E+00	NA	2.80E+03 n	100	N	Max < RSL
	108-10-1	4-Methyl-2-pentanone	1.20E-03 (J)	2.00E-03 (J)	(mg/kg)	TP-07	2 of 92	0.0094U-0.023U	2.00E-03	NA	5.30E+02 ns	Not Available	N	Max < RSL
	67-64-1	Acetone	4.60E-03 (J)	8.00E-01 (J)	(mg/kg)	SS-035	38 of 97	0.0094U-0.023U	8.00E-01	NA	6.10E+03 n	100	N	Max < RSL
	71-43-2	Benzene	1.00E-03 (J)	1.50E-01 (J)	(mg/kg)	DP-029	2 of 92	0.0094U-0.017U	1.50E-01	NA	1.10E+00 c*	2.9	N	Max < RSL
	100-41-4	Ethylbenzene	1.00E-03 (J)	3.00E+00 (J)	(mg/kg)	DP-029	3 of 92	0.0054U-0.012U	3.00E+00	NA	5.40E+00 c	30	N	Max < RSL
	79-20-9	Methyl Acetate	6.40E-03 (J)	2.20E-01 (J)	(mg/kg)	DP-022	31 of 97	0.0051U-0.012U	2.20E-01	NA	7.80E+03 ns	Not Available	N	Max < RSL
	108-87-2	Methylcyclohexane	1.10E-03 (J)	7.90E-03 (J)	(mg/kg)	SS-010	2 of 92	0.0051U-0.012U	7.90E-03	NA	nsI	Not Available	N	Low Detection Freq.
	75-09-2	Methylene chloride	6.90E-04 (J)	2.10E-01 (J)	(mg/kg)	DP-022	3 of 96	0.0051U-0.012U	2.10E-01	NA	1.10E+01 c	51	N	Max < RSL
	127-18-4	Tetrachloroethene	5.80E-04 (J)	7.10E-03 (J)	(mg/kg)	SS-009	3 of 92	0.0051U-0.012U	7.10E-03	NA	5.50E-01 c	5.5	N	Max < RSL
	108-88-3	Toluene	6.20E-04 (J)	7.90E-01 (J)	(mg/kg)	DP-029	8 of 93	0.0051U-0.012U	7.90E-01	NA	5.00E+02 ns	100	N	Max < RSL
	75-69-4	Trichlorofluoromethane	6.10E-03 (J)	6.10E-03 (J)	(mg/kg)	DP-026	1 of 97	0.0051U-0.012U	6.10E-03	NA	7.90E+01 n	Not Available	N	Max < RSL
	156-59-2	cis-1,2-Dichloroethene	7.90E-04 (J)	7.90E-04 (J)	(mg/kg)	TP-09	1 of 97	0.0047U-0.012U	7.90E-04	NA	7.80E+01 n	59	N	Max < RSL
	95-47-6	o-Xylene	2.80E-03 (J)	7.70E-01 (J)	(mg/kg)	DP-029	3 of 73	0.0051U-0.012U	7.70E-01	NA	3.80E+02 ns	100	N	Max < RSL
	SEMI-VOLATILE ORGANICS													
On Site Soil (0-2 ft)	95-94-3	1,2,4,5-Tetrachlorobenzene	9.10E-02 (J)	9.10E-02 (J)	(mg/kg)	SS-014	1 of 68	0.18U-1.1U	9.10E-02	NA	1.80E+00 n	Not Available	N	Max < RSL
	91-57-6	2-Methylnaphthalene	2.60E-02 (J)	1.10E+01 (J)	(mg/kg)	DP-029	27 of 87	0.18U-1.1U	1.10E+01	NA	3.10E+01 n	Not Available	N	Max < RSL
	106-44-5	4-Methylphenol	6.80E-02 (J)	6.80E-02 (J)	(mg/kg)	SS-009	1 of 87	0.18U-1.1U	6.80E-02	NA	3.10E+01 n	Not Available	N	Max < RSL
	83-32-9	Acenaphthene	1.20E-02 (J)	9.60E+00 (mg/kg)	(mg/kg)	SS-019	35 of 87	0.18U-0.42U	9.60E+00	NA	3.40E+02 n	100	N	Max < RSL
	208-96-8	Acenaphthylene	5.50E-02 (J)	3.90E+00 (mg/kg)	(mg/kg)	SS-033	33 of 87	0.18U-0.42U	3.90E+00	NA	nsI	100	Y	No Screening Criteria
	98-86-2	Acetophenone	2.30E-02 (J)	6.30E+00 (J)	(mg/kg)	SS-004	21 of 87	0.18U-1.1U	6.30E+00	NA	7.80E+02 ns	Not Available	N	Max < RSL
	120-12-7	Anthracene	1.10E-02 (J)	1.90E+01 (mg/kg)	(mg/kg)	SS-019	46 of 87	0.18U-0.42U	1.90E+01	NA	1.70E+03 n	100	N	Max < RSL
	117-81-7	Bis(2-ethylhexyl)phthalate	5.20E-02 (J)	6.20E+01 (D)	(mg/kg)	SS01 (W)	60 of 87	0.19U-0.42U	6.20E+01	NA	3.50E+01 c*	Not Available	Y	Max > RSL
	100-52-7	Benzaldehyde	1.90E-02 (J)	1.30E+00 (mg/kg)	(mg/kg)	SS-016	28 of 87	0.18U-1.1U	1.30E+00	NA	7.80E+02 ns	Not Available	N	Max < RSL
	56-55-3	Benzo(a)anthracene	2.30E-02 (J)	4.20E+01 (mg/kg)	(mg/kg)	SS-019	63 of 86	0.19U-0.23U	4.20E+01	NA	1.50E-01 c	1	Y	Max > RSL
	50-32-8	Benzo(a)pyrene	4.50E-02 (J)	3.80E+01 (mg/kg)	(mg/kg)	SS-019	61 of 85	0.19U-0.23U	3.80E+01	NA	1.50E-02 c	1	Y	Max > RSL
	205-99-2	Benzo(b)fluoranthene	6.30E-02 (J)	5.40E+01 (mg/kg)	(mg/kg)	SS-019	67 of 87	0.19U-0.23U	5.40E+01	NA	1.50E-01 c	1	Y	Max > RSL
	191-24-2	Benzo(g,h,i)perylene	6.50E-02 (J)	1.60E+01 (mg/kg)	(mg/kg)	SS07 (W)	49 of 82	0.19U-0.23U	1.60E+01	NA	nsI	100	Y	No Screening Criteria
	207-08-9	Benzo(k)fluoranthene	2.60E-02 (J)	2.80E+01 (D)	(mg/kg)	SS07 (W)	60 of 85	0.19U-0.23U	2.80E+01	NA	1.50E+00 c	1	Y	Max > RSL
	92-52-4	Biphenyl	2.60E-02 (J)	1.90E+00 (mg/kg)	(mg/kg)	DP-022	12 of 87	0.18U-1.1U	1.90E+00	NA	3.90E+02 ns	Not Available	N	Max < RSL
	85-68-7	Butylbenzylphthalate	1.40E-02 (J)	2.50E+02 (J)	(mg/kg)	SS12 (W)	47 of 83	0.18U-1.1U	2.50E+02	NA	2.60E+02 c*	Not Available	N	Max < RSL
	105-60-2	Caprolactam	3.00E-04 (J)	7.10E+00 (mg/kg)	(mg/kg)	SS-002	9 of 87	0.18U-1.1U	7.10E+00	NA	3.10E+03 n	Not Available	N	Max < RSL
	86-74-8	Carbazole	7.10E-03 (J)	9.30E+00 (mg/kg)	(mg/kg)	SS-019	41 of 87	0.18U-1.1U	9.30E+00	NA	nsI	Not Available	Y	No Screening Criteria
	218-01-9	Chrysene	1.70E-02 (J)	4.00E+01 (mg/kg)	(mg/kg)	SS-019	68 of 87	0.19U-0.23U	4.00E+01	NA	1.50E+01 c	1	Y	Max > RSL
	84-74-2	Di-n-butylphthalate	1.10E-02 (J)	2.10E+00 (mg/kg)	(mg/kg)	SS12 (W)	41 of 87	0.18U-0.42U	2.10E+00	NA	6.10E+02 n	Not Available	N	Max < RSL
	117-84-0	Di-n-octylphthalate	5.30E-02 (J)	5.00E+00 (mg/kg)	(mg/kg)	SS07 (W)	14 of 65	0.19U-0.28U	5.00E+00	NA	nsI	Not Available	Y	No Screening Criteria
	53-70-3	Dibenzo(a,h)anthracene	5.30E-02 (J)	7.40E+00 (mg/kg)	(mg/kg)	SS07 (W)	39 of 77	0.18U-0.42U	7.40E+00	NA	1.50E-02 c	0.33	Y	Max > RSL
	132-64-9	Dibenzofuran	7.60E-02 (J)	6.60E+00 (mg/kg)	(mg/kg)	SS-019	29 of 87	0.18U-0.42U	6.60E+00	NA	7.80E+00 n	Not Available	N	Max < RSL
	131-11-3	Dimethylphthalate	4.70E-02 (J)	1.30E+00 (mg/kg)	(mg/kg)	SS-001	12 of 87	0.18U-0.42U	1.30E+00	NA	nsI	Not Available	Y	No Screening Criteria
	206-44-0	Fluoranthene	3.60E-02 (J)	8.30E+01 (mg/kg)	(mg/kg)	SS07 (W)	71 of 87	0.19U-0.23U	8.30E+01	NA	2.30E+02 n	100	N	Max < RSL
	86-73-7	Fluorene	7.30E-03 (J)	9.10E+00 (mg/kg)	(mg/kg)	SS07 (W)	34 of 87	0.18U-0.42U	9.10E+00	NA	2.30E+02 n	100	N	Max < RSL
	193-39-5	Indeno(1,2,3-cd)pyrene	8.30E-02 (J)	2.00E+01 (J)	(mg/kg)	SS07 (W)	55 of 83	0.19U-0.23U	2.00E+01	NA	1.50E-01 c	0.5	Y	Max > RSL
	86-30-6	N-Nitrosodiphenylamine	4.10E-01 (J)	3.30E+00 (mg/kg)	(mg/kg)	DP-022	3 of 87	0.18U-1.1U	3.30E+00	NA	9.90E+01 c	Not Available	N	Max < RSL

TABLE 2.1.1
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current/Future
 Medium: Soil
 Exposure Medium: Surface soil (0 - 2 ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Residential Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
On Site Soil (0-2 ft)	91-20-3	Naphthalene	5.50E-02 (J)	1.10E+01	(mg/kg)	SS-019	29 of 87	0.18U-0.42U	1.10E+01	NA	3.60E+00 c*	100	Y	Max > RSL
	85-01-8	Phenanthrene	1.50E-02 (J)	7.30E+01	(mg/kg)	SS-019	62 of 87	0.19U-0.23U	7.30E+01	NA	nsl	100	Y	No Screening Criteria
	108-95-2	Phenol	2.30E-02 (J)	2.90E-01 (J)	(mg/kg)	SS01 (W)	6 of 87	0.19U-1.1U	2.90E-01	NA	1.80E+03 n	100	N	Max < RSL
	129-00-0	Pyrene	3.70E-02 (J)	8.40E+01	(mg/kg)	SS-019	73 of 87	0.18U-1.1U	8.40E+01	NA	1.70E+02 n	100	N	Max < RSL
PESTICIDES / PCBs														
On Site Soil (0-2 ft)	72-54-8	4,4'-DDD	1.80E-03 (J)	6.40E-02 (J)	(mg/kg)	SS11 (W)	14 of 87	0.19U-0.21U	6.40E-02	NA	2.00E+00 c	2.6	N	Max < RSL
	72-55-9	4,4'-DDE	4.20E-04 (J)	6.30E-02 (NJ)	(mg/kg)	SS25 (W)	23 of 79	0.0037U-0.0055U	6.30E-02	NA	1.40E+00 c	1.8	N	Max < RSL
	50-29-3	4,4'-DDT	1.20E-03 (J)	9.70E-01 (J)	(mg/kg)	DP-026	21 of 78	0.0037U-0.0055U	9.70E-01	NA	1.70E+00 c*	1.7	N	Max < RSL
	1031-07-8	Endosulfan sulfate	1.80E-03 (J)	5.70E-02 (NJ)	(mg/kg)	SS03 (W)	7 of 81	0.0037U-0.0055U	5.70E-02	NA	nsl	4.8	Y	No Screening Criteria
	309-00-2	Aldrin	5.60E-03	5.60E-03	(mg/kg)	DP-026	1 of 88	0.0019U-0.0028U	5.60E-03	NA	2.90E-02 c*	0.019	N	Max < RSL
	58-89-9	gamma-BHC (Lindane)	2.30E-04 (J)	2.20E-02 (J)	(mg/kg)	SS-019	10 of 87	0.0019U-0.0037U	2.20E-02	NA	5.20E-01 c*	0.28	N	Max < RSL
	60-57-1	Dieldrin	2.80E-03 (J)	1.20E-01 (J)	(mg/kg)	SS02 (W)	19 of 80	0.0037U-0.0055U	1.20E-01	NA	3.00E-02 c	0.039	Y	Max > RSL
	72-20-8	Endrin	6.20E-04 (J)	1.10E-01 (J)	(mg/kg)	SS-001	12 of 83	0.0037U-0.0055U	1.10E-01	NA	1.80E+00 n	2.2	N	Max < RSL
	7421-93-4	Endrin aldehyde	3.40E-03 (J)	9.60E-02 (J)	(mg/kg)	SS-047	8 of 82	0.0037U-0.0055U	9.60E-02	NA	nsl	Not Available	Y	No Screening Criteria
	53494-70-5	Endrin ketone	3.10E-04 (J)	1.20E-01 (J)	(mg/kg)	SS07 (W)	14 of 86	0.0037U-0.0055U	1.20E-01	NA	nsl	Not Available	Y	No Screening Criteria
	1024-57-3	Heptachlor epoxide	1.50E-04 (J)	2.70E-02 (J)	(mg/kg)	SS-047	4 of 84	0.0019U-0.0028U	2.70E-02	NA	5.30E-02 c*	Not Available	N	Max < RSL
	76-44-8	Heptachlor	9.90E-05 (J)	2.80E-02	(mg/kg)	DP-026	8 of 88	0.0019U-0.0037U	2.80E-02	NA	1.10E-01 c	0.42	N	Max < RSL
	72-43-5	Methoxychlor	2.60E-02 (J)	2.60E-01	(mg/kg)	SS07 (W)	13 of 85	0.019U-0.028U	2.60E-01	NA	3.10E+01 n	Not Available	N	Max < RSL
	115-29-7	Endosulfan I	8.30E-03 (J)	1.50E-02	(mg/kg)	SS-051	2 of 85	0.0019U-0.0037U	1.50E-02	NA	3.70E+01 n	4.8	N	Max < RSL
	319-84-6	alpha-BHC	6.40E-04 (J)	1.70E-01 (J)	(mg/kg)	SS11 (W)	3 of 88	0.0019U-0.0037U	1.70E-01	NA	7.70E-02 c	0.097	N	Low Detection Freq.
	12789-03-6	alpha-Chlordane	8.50E-04 (J)	6.50E-02 (NJ)	(mg/kg)	SS07 (W)	14 of 82	0.0019U-0.0037U	6.50E-02	NA	1.60E+00 c*	0.91	N	Max < RSL
	319-85-7	beta-BHC	2.10E-03	6.30E-03 (NJ)	(mg/kg)	SS20 (W)	2 of 74	0.0019U-0.0037U	6.30E-03	NA	2.70E-01 c	0.072	N	Max < RSL
	33213-65-9	Endosulfan II	2.30E-03 (J)	6.70E-01 (J)	(mg/kg)	SS-019	14 of 85	0.0037U-0.0073U	6.70E-01	NA	nsl	4.8	Y	No Screening Criteria
	319-86-8	delta-BHC	4.10E-04 (J)	5.80E-02 (J)	(mg/kg)	DP-026	3 of 88	0.0019U-0.0028U	5.80E-02	NA	nsl	100	N	Low Detection Freq.
	5566-34-7	gamma-Chlordane	1.10E-03 (J)	3.80E-02 (J)	(mg/kg)	SS07 (W)	10 of 80	0.0024U-0.0028U	3.80E-02	NA	nsl	Not Available	Y	No Screening Criteria
	12674-11-2	Aroclor-1016	8.80E-01 (J)	8.80E-01 (J)	(mg/kg)	SS-016	1 of 87	0.033U-0.055U	8.80E-01	NA	3.90E-01 n	1	N	Low Detection Freq.
	53469-21-9	Aroclor-1242	3.10E-02 (J)	5.40E+00	(mg/kg)	DP-026	3 of 87	0.033U-0.055U	5.40E+00	NA	2.20E-01 c	1	N	Low Detection Freq.
	12672-29-6	Aroclor-1248	4.80E-02 (JN)	6.60E-01	(mg/kg)	SS-047	4 of 87	0.033U-0.055U	6.60E-01	NA	2.20E-01 c	1	N	Low Detection Freq.
11097-69-1	Aroclor-1254	5.10E-02 (J)	4.80E+00	(mg/kg)	DP-026	14 of 86	0.033U-0.055U	4.80E+00	NA	1.10E-01 c**	1	Y	Max > RSL	
11096-82-5	Aroclor-1260	1.70E-02 (J)	4.30E+01 (J)	(mg/kg)	SS-014	48 of 87	0.033U-0.055U	4.30E+01	NA	2.20E-01 c	1	Y	Max > RSL	
METALS														
On Site Soil (0-2 ft)	7429-90-5	Aluminum	7.50E+01 (J)	4.39E+04	(mg/kg)	SS-006	89 of 89	--	4.39E+04	8.50E+03	7.70E+03 n	Not Available	Y	Max > RSL
	7440-36-0	Antimony	3.00E-01 (J)	1.15E+02 (J)	(mg/kg)	SS22 (W)	59 of 89	6.6U-8.3U	1.15E+02	8.80E+00 U	3.10E+00 n	Not Available	Y	Max > RSL
	7440-38-2	Arsenic	2.30E+00	2.63E+01	(mg/kg)	DP-029	88 of 89	--	2.63E+01	7.40E+00	3.90E-01 c*	16	Y	Max > RSL
	7440-39-3	Barium	2.77E+01 (J)	5.13E+03	(mg/kg)	SS09 (W)	88 of 89	0-22.4U	5.13E+03	1.48E+02	1.50E+03 n	350	Y	Max > RSL
	7440-41-7	Beryllium	1.70E-01 (J)	1.20E+00	(mg/kg)	SS-007	81 of 89	0.56U-0.8U	1.20E+00	5.10E-01 J	1.60E+01 n	14	N	Max < RSL
	7440-43-9	Cadmium	2.10E-01 (J)	1.86E+01 (J)	(mg/kg)	SS-009	69 of 89	0.54U-0.56U	1.86E+01	1.20E+00	7.00E+00 n	2.5	Y	Max > RSL
	7440-70-2	Calcium	2.87E+02 (J)	7.80E+04	(mg/kg)	SS-016	88 of 88	--	7.80E+04	3.27E+04	nsl	Not Available	N	Essential Nutrient
	7440-47-3	Chromium (a)	3.60E+00	1.21E+04 (J)	(mg/kg)	SS06 (W)	85 of 85	--	1.21E+04	2.22E+01	2.90E-01 c	Not Available	Y	Max > RSL
	7440-48-4	Cobalt	2.90E+00 (BJ)	2.85E+01	(mg/kg)	SS06 (W)	87 of 89	5.6U-8U	2.85E+01	7.00E+00	2.30E+00 n	Not Available	Y	Max > RSL
	7440-50-8	Copper	8.60E+00	1.04E+04 (J)	(mg/kg)	SS09 (W)	68 of 68	--	1.04E+04	2.58E+01	3.10E+02 n	270	Y	Max > RSL
	57-12-5	Cyanide	1.30E-01 (J)	5.50E+00 (J)	(mg/kg)	SS-012	9 of 68	2.9U-3.5U	5.50E+00	3.70E+00	1.60E+02 n	27	N	Max < RSL
	7439-89-6	Iron	4.50E+03	2.24E+05	(mg/kg)	SS06 (W)	86 of 86	--	2.24E+05	1.79E+04	5.50E+03 n	Not Available	Y	Max > RSL
	7439-92-1	Lead	1.09E+01	1.82E+04	(mg/kg)	SS22 (W)	71 of 72	--	1.82E+04	6.67E+02 J	4.00E+02 nL	400	Y	Max > RSL
	7439-95-4	Magnesium	1.30E+03	1.13E+04	(mg/kg)	SWSD-04	78 of 78	--	1.13E+04	3.12E+03	nsl	Not Available	N	Essential Nutrient

TABLE 2.1.1
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current/Future
 Medium: Soil
 Exposure Medium: Surface soil (0 - 2 ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Residential Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
On Site Soil (0-2 ft)	7439-96-5	Manganese	1.66E+02 (J)	2.01E+03 (J)	(mg/kg)	SS-043	89 of 89	--	2.01E+03	6.04E+02 J	1.80E+02 n	2000	Y	Max > RSL
	7439-97-6	Mercury (b)	5.90E-02 (J)	2.60E+00 (J)	(mg/kg)	SS-009	57 of 72	0.11U-0.12U	2.60E+00	2.40E-01	7.80E-01 n	0.81	Y	Max > RSL
	7440-02-0	Nickel	9.20E+00	4.81E+02	(mg/kg)	SS06 (W)	89 of 89	--	4.81E+02	1.69E+01	1.50E+02 n	140	Y	Max > RSL
	7440-09-7	Potassium	2.03E+02 (J)	1.26E+03	(mg/kg)	SWSD-04	85 of 89	0-560U	1.26E+03	6.89E+02	nsi	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	3.50E-01 (J)	3.40E+00 (J)	(mg/kg)	SS-001	47 of 89	3.9U-4.8U	3.40E+00	5.20E+00 U	3.90E+01 n	36	N	Max < RSL
	7440-22-4	Silver	1.10E-01 (J)	6.14E+01	(mg/kg)	SS09 (W)	64 of 89	1.1U-1.4U	6.14E+01	3.70E-01 J	3.90E+01 n	36	Y	Max > RSL
	7440-23-5	Sodium	8.22E+01 (B)	1.89E+03	(mg/kg)	SS-009	31 of 89	542U-803U	1.89E+03	1.96E+02 J	nsi	Not Available	N	Essential Nutrient
	7440-28-0	Thallium	5.40E-01 (J)	4.60E+00	(mg/kg)	SS06 (W)	35 of 89	2.8U-3.4U	4.60E+00	3.70E+00 U	nsi	Not Available	Y	No Screening Criteria
	No CAS	Vanadium (c)	5.70E+00 (J)	8.41E+02	(mg/kg)	SS-007	88 of 89	--	8.41E+02	1.49E+01	3.90E+01 n	Not Available	Y	Max > RSL
	7440-66-6	Zinc	3.36E+01	1.60E+04	(mg/kg)	SS09 (W)	89 of 89	--	1.60E+04	2.92E+02	2.30E+03 n	2200	Y	Max > RSL

Footnotes:

- (1) Minimum / Maximum detected concentration
 - (2) Maximum detected concentration used as screening value
 - (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
 - (4) US EPA Region 9 Master RSL Table December 2009 - Residential Soils
 - (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Residential site use.
 - (6) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Low detection freq.: analyte detected in less than 5% of samples in data set of at least 20 samples.
 - (a) Cr(VI) values used for screening of chromium data.
 - (b) Methylmercury value used for screening of mercury data.
 - (c) Vanadium and Compounds screening level used for Vanadium.
 - (d) Xylene, Mixture screening level used.
- Note:** Residential Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ = 0.1).
- L based on EPA's IEUBK Model for Lead in Children
- m Concentration may exceed ceiling limit
- s Concentration may exceed Csat
- nsi No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

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- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank
- NA Not Available
- mg/kg milligram per kilogram
- ARAR Applicable or Relevant and Appropriate Requirement

TABLE 2.1.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: Subsurface soil (0 - 10 ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Industrial Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
VOLATILE ORGANICS														
On Site Soil (0-10 ft)	98-82-8	Isopropylbenzene	8.60E-04 (J)	1.20E+00	(mg/kg)	TP-04	6 of 121	0.0047 U-0.55U	1.20E+00	NA	1.10E+03 ns	Not Available	N	Max < RSL
	1330-20-7	m/p-Xylene (d)	4.60E-04 (J)	2.90E+01	(mg/kg)	TP-04	11 of 102	0.0047 U-0.23U	2.90E+01	NA	2.70E+02 ns	1,000	N	Max < RSL
	95-50-1	1,2-Dichlorobenzene	1.30E-03 (J)	1.30E-03 (J)	(mg/kg)	TP-08	1 of 92	0.0049 U-1.1U	1.30E-03	NA	9.80E+02 ns	1,000	N	Max < RSL
	106-46-7	1,4-Dichlorobenzene	1.00E-03 (J)	1.90E-03 (J)	(mg/kg)	TP-08	2 of 92	0.004 U-1.1U	1.90E-03	NA	1.20E+01 c	250	N	Max < RSL
	78-93-3	2-Butanone	3.00E-03 (J)	2.80E+00 (J)	(mg/kg)	SS-035	22 of 126	0.0085U-2.2U	2.80E+00	NA	2.00E+04 nms	1,000	N	Max < RSL
	591-78-6	2-Hexanone	4.10E-03 (J)	4.10E-03 (J)	(mg/kg)	DP-003	1 of 121	0.0085U-2.2U	4.10E-03	NA	1.40E+02 n	Not Available	N	Max < RSL
	108-10-1	4-Methyl-2-pentanone	1.20E-03 (J)	2.00E-03 (J)	(mg/kg)	TP-07	2 of 121	0.0085U-2.2U	2.00E-03	NA	5.30E+03 ns	Not Available	N	Max < RSL
	67-64-1	Acetone	4.60E-03 (J)	8.00E-01 (J)	(mg/kg)	SS-035	50 of 126	0.0013 U-2.2 U	8.00E-01	NA	6.30E+04 nms	1,000	N	Max < RSL
	71-43-2	Benzene	1.00E-03 (J)	2.20E-01 (J)	(mg/kg)	DP-025	3 of 121	0.0047 U-1.1U	2.20E-01	NA	5.40E+00 c*	89	N	Max < RSL
	75-15-0	Carbon disulfide	5.40E-03 (J)	1.10E-02 (mg/kg)		TP-06	3 of 126	0.0047 U-1.1U	1.10E-02	NA	3.70E+02 ns	Not Available	N	Max < RSL
	110-82-7	Cyclohexane	1.20E-03 (J)	6.70E+00 (mg/kg)		TP-04	4 of 121	0.0049 U-1.1U	6.70E+00	NA	2.90E+03 ns	Not Available	N	Max < RSL
	100-41-4	Ethylbenzene	1.00E-03 (J)	6.70E+00 (mg/kg)		TP-04	9 of 121	0.0047 U-1.1U	6.70E+00	NA	2.70E+02 c	780	N	Max < RSL
	79-20-9	Methyl Acetate	6.40E-03 (J)	6.50E-01 (mg/kg)		DP-025	33 of 126	0.0051 U-1.1U	6.50E-01	NA	1.00E+05 nms	Not Available	N	Max < RSL
	108-87-2	Methylcyclohexane	1.10E-03 (J)	2.60E+00 (mg/kg)		TP-04	5 of 121	0.0046 U-1.1U	2.60E+00	NA	nsI	Not Available	N	Low Detection Freq.
	75-09-2	Methylene chloride	5.60E-04 (J)	2.10E-01 (J)	(mg/kg)	DP-022	6 of 125	0.0046 U-1.1U	2.10E-01	NA	5.30E+01 c	Not Available	N	Max < RSL
	1634-04-4	Methyltert-butylether	1.10E-01 (J)	1.10E-01 (J)	(mg/kg)	DP-025	1 of 126	0.0046 U-1.1U	1.10E-01	NA	2.20E+02 c	1,000	N	Max < RSL
	100-42-5	Styrene	9.80E-01 (J)	9.80E-01 (mg/kg)		DP-025	1 of 121	0.0046 U-1.1U	9.80E-01	NA	3.60E+03 ns	Not Available	N	Max < RSL
	127-18-4	Tetrachloroethene	4.80E-04 (J)	7.10E-03 (J)	(mg/kg)	SS-009	9 of 121	0.0046 U-1.1U	7.10E-03	NA	2.60E+00 c	300	N	Max < RSL
	108-88-3	Toluene	6.20E-04 (J)	3.80E+00 (mg/kg)		DP-025	12 of 122	0.0046 U-1.1U	3.80E+00	NA	4.50E+03 ns	1,000	N	Max < RSL
	79-01-6	Trichloroethene	9.50E-04 (J)	1.10E-03 (J)	(mg/kg)	TP-02	2 of 121	0.0046 U-1.1U	1.10E-03	NA	1.40E+01 c	400	N	Max < RSL
	75-69-4	Trichlorofluoromethane	6.10E-03 (J)	8.90E-01 (mg/kg)		DP-025	2 of 126	0.0046 U-1.1U	8.90E-01	NA	3.40E+02 ns	Not Available	N	Max < RSL
	156-59-2	cis-1,2-Dichloroethene	4.70E-04 (J)	7.90E-04 (J)	(mg/kg)	TP-09	2 of 126	0.0046 U-1.1U	7.90E-04	NA	1.00E+03 ns	1,000	N	Max < RSL
	95-47-6	o-Xylene	6.10E-04 (J)	7.60E+00 (mg/kg)		TP-04	10 of 102	0.0046 U-1.1U	7.60E+00	NA	1.90E+03 ns	1,000	N	Max < RSL
SEMI-VOLATILE ORGANICS														
On Site Soil (0-10 ft)	95-94-3	1,2,4,5-Tetrachlorobenzene	9.10E-02 (J)	9.10E-02 (J)	(mg/kg)	SS-014	1 of 97	0.18 U-13U	9.10E-02	NA	1.80E+01 n	Not Available	N	Max < RSL
	91-57-6	2-Methylnaphthalene	2.40E-02 (J)	1.10E+01 (mg/kg)		DP-022	32 of 116	0.18 U-13U	1.10E+01	NA	4.10E+02 ns	Not Available	N	Max < RSL
	106-44-5	4-Methylphenol	6.80E-02 (J)	3.00E-01 (J)	(mg/kg)	DP-025	2 of 116	0.18 U-13U	3.00E-01	NA	3.10E+02 n	Not Available	N	Max < RSL
	83-32-9	Acenaphthene	1.20E-02 (J)	1.60E+01 (mg/kg)		TP-02	43 of 116	0.18 U-2.7U	1.60E+01	NA	3.30E+03 n	1,000	N	Max < RSL
	208-96-8	Acenaphthylene	5.50E-02 (J)	3.90E+00 (mg/kg)		SS-033	35 of 116	0.18 U-13U	3.90E+00	NA	nsI	1,000	Y	No Screening Criteria
	98-96-2	Acetophenone	2.30E-02 (J)	6.30E+00 (J)	(mg/kg)	SS-004	30 of 116	0.18 U-13U	6.30E+00	NA	1.00E+04 nms	Not Available	N	Max < RSL
	120-12-7	Anthracene	1.10E-02 (J)	3.00E+01 (mg/kg)		TP-02	54 of 116	0.18 U-1.3U	3.00E+01	NA	1.70E+04 nm	1,000	N	Max < RSL
	117-81-7	Bis(2-ethylhexyl)phthalate	5.20E-02 (J)	6.20E+01 (D)	(mg/kg)	SS01 (W)	73 of 116	0.18 U-13U	6.20E+01	NA	1.20E+02 c	Not Available	N	Max < RSL
	100-52-7	Benzaldehyde	1.90E-02 (J)	1.30E+00 (mg/kg)		SS-016	29 of 116	0.18 U-13U	1.30E+00	NA	1.00E+04 nms	Not Available	N	Max < RSL
	56-55-3	Benzo(a)anthracene	2.30E-02 (J)	5.00E+01 (mg/kg)		TP-02	72 of 115	0.18 U-13U	5.00E+01	NA	2.10E+00 c	11	Y	Max > RSL
	50-32-8	Benzo(a)pyrene	2.80E-02 (J)	4.30E+01 (mg/kg)		TP-02	71 of 114	0.18 U-1.3U	4.30E+01	NA	2.10E-01 c	1.1	Y	Max > RSL
	205-99-2	Benzo(b)fluoranthene	6.20E-02 (J)	5.40E+01 (mg/kg)		SS-019	76 of 116	0.18 U-1.3U	5.40E+01	NA	2.10E+00 c	11	Y	Max > RSL
	191-24-2	Benzo(g,h,i)perylene	2.90E-02 (J)	2.40E+01 (mg/kg)		TP-06	57 of 111	0.19 U-1.3U	2.40E+01	NA	nsI	1,000	Y	No Screening Criteria
	207-08-9	Benzo(k)fluoranthene	2.60E-02 (J)	3.80E+01 (mg/kg)		TP-02	69 of 114	0.18 U-1.3U	3.80E+01	NA	2.10E+01 c	110	Y	Max > RSL
	92-52-4	Biphenyl	2.60E-02 (J)	1.90E+00 (mg/kg)		DP-022	16 of 116	0.18 U-13U	1.90E+00	NA	5.10E+03 ns	Not Available	N	Max < RSL
	85-68-7	Butylbenzylphthalate	1.40E-02 (J)	2.50E+02 (J)	(mg/kg)	SS12 (W)	56 of 112	0.18 U-13U	2.50E+02	NA	9.10E+02 c	Not Available	N	Max < RSL
	105-60-2	Caprolactam	3.00E-04 (J)	7.10E+00 (mg/kg)		SS-002	9 of 116	0.18 U-13U	7.10E+00	NA	3.10E+04 nm	Not Available	N	Max < RSL
	86-74-8	Carbazole	7.10E-03 (J)	1.80E+01 (mg/kg)		TP-06	47 of 116	0.18 U-1.1U	1.80E+01	NA	nsI	Not Available	Y	No Screening Criteria
	218-01-9	Chrysene	1.70E-02 (J)	4.80E+01 (mg/kg)		TP-02	78 of 116	0.18 U-1U	4.80E+01	NA	2.10E+02 c	110	N	Max < RSL
	84-74-2	Di-n-butylphthalate	1.10E-02 (J)	9.80E+00 (mg/kg)		DP-025	46 of 116	0.18 U-13U	9.80E+00	NA	6.20E+03 n	Not Available	N	Max < RSL

TABLE 2.1.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: Subsurface soil (0 - 10 ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Industrial Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N) (6)	Rationale for Selection or Deletion (6)
	117-84-0	Di-n-octylphthalate	2.10E-02 (J)	5.00E+00	(mg/kg)	SS07 (W)	19 of 94	0.18 U-13U	5.00E+00	NA	nsI	Not Available	Y	No Screening Criteria
	53-70-3	Dibenzo(a,h)anthracene	5.30E-02 (J)	7.40E+00	(mg/kg)	SS07 (W)	44 of 106	0.18 U-13U	7.40E+00	NA	2.10E-01 c	1.1	Y	Max > RSL
	132-64-9	Dibenzofuran	7.60E-02 (J)	7.80E+00	(mg/kg)	TP-02	33 of 116	0.18 U-13U	7.80E+00	NA	1.00E+02 ns	Not Available	N	Max < RSL
	131-11-3	Dimethylphthalate	4.70E-02 (J)	1.60E+00 (J)	(mg/kg)	DP-025	14 of 116	0.18 U-13U	1.60E+00	NA	nsI	Not Available	Y	No Screening Criteria
	206-44-0	Fluoranthene	2.60E-02 (J)	1.10E+02	(mg/kg)	TP-02	83 of 116	0.18 U-0.93U	1.10E+02	NA	2.20E+03 n	1,000	N	Max < RSL
	86-73-7	Fluorene	7.30E-03 (J)	1.60E+01	(mg/kg)	TP-02	41 of 116	0.18 U-13U	1.60E+01	NA	2.20E+03 n	1,000	N	Max < RSL
	193-39-5	Indeno(1,2,3-cd)pyrene	2.80E-02 (J)	2.80E+01	(mg/kg)	TP-06	64 of 112	0.18 U-1.3U	2.80E+01	NA	2.10E+00 c	11	Y	Max > RSL
	86-30-6	N-Nitrosodiphenylamine	4.10E-01	3.30E+00	(mg/kg)	DP-022	3 of 116	0.18 U-13U	3.30E+00	NA	3.50E+02 c	Not Available	N	Max < RSL
	91-20-3	Naphthalene	2.50E-02 (J)	1.10E+01	(mg/kg)	SS-019	35 of 116	0.18 U-13U	1.10E+01	NA	1.80E+01 c*	1,000	N	Max < RSL
	87-86-5	Pentachlorophenol	2.90E-01 (J)	2.90E-01 (J)	(mg/kg)	TP-03	1 of 113	0.18 U-25U	2.90E-01	NA	9.00E+00 c	55	N	Max < RSL
	85-01-8	Phenanthrene	1.50E-02 (J)	8.00E+01	(mg/kg)	TP-02	73 of 116	0.19 U-0.61U	8.00E+01	NA	nsI	1,000	Y	No Screening Criteria
	108-95-2	Phenol	2.30E-02 (J)	9.80E-01 (J)	(mg/kg)	DP-025	8 of 116	0.18 U-13U	9.80E-01	NA	1.80E+04 nm	1,000	N	Max < RSL
	129-00-0	Pyrene	3.40E-02 (J)	8.70E+01	(mg/kg)	TP-02	86 of 116	0.18 U-1.1U	8.70E+01	NA	1.70E+03 n	1,000	N	Max < RSL
PESTICIDES / PCBs														
On Site Soil (0-10 ft)	72-54-8	4,4'-DDD	1.10E-03 (J)	1.60E-01 (J)	(mg/kg)	TP-01	23 of 114	0.0034 U-0.21U	1.60E-01	NA	7.20E+00 c	180	N	Max < RSL
	72-55-9	4,4'-DDE	4.20E-04 (J)	1.30E-01 (JN)	(mg/kg)	TP-08	31 of 106	0.0034 U-0.0055U	1.30E-01	NA	5.10E+00 c	120	N	Max < RSL
	50-29-3	4,4'-DDT	1.20E-03 (J)	9.70E-01 (J)	(mg/kg)	DP-026	31 of 105	0.0034 U-0.0055U	9.70E-01	NA	7.00E+00 c*	94	N	Max < RSL
	1031-07-8	Endosulfan sulfate	1.80E-03 (J)	5.70E-02 (NJ)	(mg/kg)	SS03 (W)	11 of 107	0.0034 U-0.0055U	5.70E-02	NA	nsI	920	Y	No Screening Criteria
	309-00-2	Aldrin	1.80E-03 (J)	5.60E-03 (JN)	(mg/kg)	TP-08	5 of 115	0.0017 U-0.004U	5.60E-03	NA	1.00E-01 c	1.4	N	Max < RSL
	58-89-9	gamma-BHC (Lindane)	2.30E-04 (J)	2.20E-02 (J)	(mg/kg)	SS-019	10 of 113	0.0017 U-0.0037U	2.20E-02	NA	2.10E+00 c	23	N	Max < RSL
	60-57-1	Dieldrin	1.10E-03 (J)	2.90E-01 (JN)	(mg/kg)	TP-08	28 of 107	0.0034 U-0.0055U	2.90E-01	NA	1.10E-01 c	2.8	Y	Max > RSL
	72-20-8	Endrin	6.20E-04 (J)	2.90E-01 (J)	(mg/kg)	TP-08	18 of 110	0.0034 U-0.0055U	2.90E-01	NA	1.80E+01 n	410	N	Max < RSL
	7421-93-4	Endrin aldehyde	1.10E-03 (J)	1.10E-01 (J)	(mg/kg)	TP-01	16 of 107	0.0034 U-0.0055U	1.10E-01	NA	nsI	Not Available	Y	No Screening Criteria
	53494-70-5	Endrin ketone	3.10E-04 (J)	1.20E-01 (D)	(mg/kg)	SS07 (W)	21 of 113	0.0034 U-0.0055U	1.20E-01	NA	nsI	Not Available	Y	No Screening Criteria
	1024-57-3	Heptachlor epoxide	1.50E-04 (J)	3.60E-02 (J)	(mg/kg)	TP-08	11 of 109	0.0017 U-0.0028U	3.60E-02	NA	1.90E-01 c*	Not Available	N	Max < RSL
	76-44-8	Heptachlor	9.90E-05 (J)	1.00E-01	(mg/kg)	DP-025	12 of 115	0.0017 U-0.0037U	1.00E-01	NA	3.80E-01 c	29	N	Max < RSL
	72-43-5	Methoxychlor	2.30E-02 (J)	2.60E-01	(mg/kg)	SS07 (W)	16 of 110	0.017 U-0.44U	2.60E-01	NA	3.10E+02 n	Not Available	N	Max < RSL
	115-29-7	Endosulfan I	4.10E-03 (J)	1.50E-02	(mg/kg)	SS-051	3 of 113	0.0017 U-0.004U	1.50E-02	NA	3.70E+02 n	920	N	Max < RSL
	319-84-6	alpha-BHC	6.40E-04 (J)	1.70E-01 (J)	(mg/kg)	SS11 (W)	5 of 115	0.0017 U-0.004U	1.70E-01	NA	2.70E-01 c	14	N	Max < RSL
	12789-03-6	alpha-Chlordane	8.40E-04 (J)	6.50E-02 (NJ)	(mg/kg)	SS07 (W)	22 of 109	0.0017 U-0.0037U	6.50E-02	NA	6.50E+00 c*	47	N	Max < RSL
	319-85-7	beta-BHC	7.20E-04 (J)	5.00E-02 (JN)	(mg/kg)	DP-025	6 of 97	0.0017 U-0.0037U	5.00E-02	NA	9.60E-01 c	14	N	Max < RSL
	33213-65-9	Endosulfan II	2.30E-03 (J)	6.70E-01 (J)	(mg/kg)	SS-019	16 of 110	0.0034 U-0.0073U	6.70E-01	NA	nsI	920	Y	No Screening Criteria
	319-86-8	delta-BHC	4.10E-04 (J)	5.80E-02 (J)	(mg/kg)	DP-026	6 of 115	0.0018 U-0.004U	5.80E-02	NA	nsI	1,000	N	Low Detection Freq.
	5566-34-7	gamma-Chlordane	1.10E-03 (J)	6.50E-02 (J)	(mg/kg)	TP-06	16 of 105	0.0018 U-0.0028U	6.50E-02	NA	nsI	Not Available	Y	No Screening Criteria
	12674-11-2	Aroclor-1016	8.80E-01 (J)	8.80E-01 (J)	(mg/kg)	SS-016	1 of 115	0.033 U-1.9U	8.80E-01	NA	3.70E+00 c**	25	N	Max < RSL
	53469-21-9	Aroclor-1242	3.10E-02 (J)	1.30E+01	(mg/kg)	DP-025	6 of 115	0.033 U-1.9U	1.30E+01	NA	7.40E-01 c	25	N	Low Detection Freq.
	12672-29-6	Aroclor-1248	1.40E-02 (J)	8.10E-01 (J)	(mg/kg)	TP-03	7 of 115	0.033 U-1.9U	8.10E-01	NA	7.40E-01 c	25	N	Low Detection Freq.
	11097-69-1	Aroclor-1254	2.00E-02 (J)	5.70E+00	(mg/kg)	DP-025	21 of 114	0.033 U-1.9U	5.70E+00	NA	7.40E-03 c*	25	Y	Max > RSL
	11096-82-5	Aroclor-1260	1.70E-02 (J)	4.30E+01	(mg/kg)	TP-08	59 of 115	0.033 U-1.9U	4.30E+01	NA	7.40E-01 c	25	Y	Max > RSL

TABLE 2.1.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: Subsurface soil (0 - 10 ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Industrial Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N) (6)	Rationale for Selection or Deletion (6)
METALS														
On Site Soil (0-10 ft)	7429-90-5	Aluminum	7.50E+01 (J)	4.39E+04	(mg/kg)	SS-006	118 of 118	--	4.39E+04	8.50E+03	9.90E+04 nm	Not Available	N	Max < RSL
	7440-36-0	Antimony	3.00E-01 (J)	1.15E+02	(J) (mg/kg)	SS22 (W)	77 of 118	0.0081 U-8U	1.15E+02	8.80E+00 U	4.10E+01 n	Not Available	Y	Max > RSL
	7440-38-2	Arsenic	2.20E+00	3.74E+01 (J)	(mg/kg)	TP-04	117 of 118	0-0.0081U	3.74E+01	7.40E+00	1.60E+00 c	16	Y	Max > RSL
	7440-39-3	Barium	2.77E+01 (J)	5.13E+03	(mg/kg)	SS09 (W)	117 of 118	--	5.13E+03	1.48E+02	1.90E+04 nm	10,000	N	Max < RSL
	7440-41-7	Beryllium	1.70E-01 (J)	1.20E+00	(mg/kg)	SS-007	92 of 118	0.53 U-0.8U	1.20E+00	5.10E-01 J	2.00E+02 n	2,700	N	Max < RSL
	7440-43-9	Cadmium	1.00E-01 (J)	1.86E+01 (J)	(mg/kg)	SS-009	89 of 118	0.53 U-0.68U	1.86E+01	1.20E+00	8.00E+01 n	60	N	Max < RSL
	7440-70-2	Calcium	2.80E+02 (J)	7.94E+04 (J)	(mg/kg)	TP-02	117 of 117	--	7.94E+04	3.27E+04	nsI	Not Available	N	Essential Nutrient
	7440-47-3	Chromium (a)	3.60E+00	1.21E+04 (J)	(mg/kg)	SS06 (W)	114 of 114	--	1.21E+04	2.22E+01	5.60E+00 c	Not Available	Y	Max > RSL
	7440-48-4	Cobalt	2.90E+00 (BJ)	3.62E+01 (J)	(mg/kg)	TP-04	116 of 118	--	3.62E+01	7.00E+00	3.00E+01 n	Not Available	Y	Max > RSL
	7440-50-8	Copper	4.30E+00	1.04E+04 (J)	(mg/kg)	SS09 (W)	97 of 97	5.6 U-8U	1.04E+04	2.58E+01	4.10E+03 n	10,000	Y	Max > RSL
	57-12-5	Cyanide	1.00E-01 (J)	5.50E+00 (J)	(mg/kg)	SS-012	18 of 95	0.009U-3.5U	5.50E+00	3.70E+00	2.00E+03 n	10,000	N	Max < RSL
	7439-89-6	Iron	4.50E+03	2.24E+05	(mg/kg)	SS06 (W)	106 of 106	--	2.24E+05	1.79E+04	7.20E+04 nm	Not Available	Y	Max > RSL
	7439-92-1	Lead	2.50E+00	1.82E+04 (J)	(mg/kg)	SS22 (W)	101 of 101	--	1.82E+04	6.67E+02 J	8.00E+02 nL	3,900	Y	Max > RSL
	7439-95-4	Magnesium	1.30E+03	1.13E+04 (mg/kg)	(mg/kg)	SWSD-03	107 of 107	--	1.13E+04	3.12E+03	nsI	Not Available	N	Essential Nutrient
	7439-96-5	Manganese	1.66E+02 (J)	3.26E+03 (J)	(mg/kg)	TP-04	118 of 118	--	3.26E+03	6.04E+02 J	2.30E+03 n	10,000	Y	Max > RSL
	7439-97-6	Mercury (b)	3.30E-02 (J)	2.60E+00 (J)	(mg/kg)	SS-009	63 of 101	0.1U-0.12U	2.60E+00	2.40E-01	1.00E+01 n	5.7	N	Max < RSL
	7440-02-0	Nickel	9.20E+00	5.73E+02 (J)	(mg/kg)	TP-04	118 of 118	--	5.73E+02	1.69E+01	2.00E+03 n	10,000	N	Max < RSL
	7440-09-7	Potassium	2.03E+02 (J)	1.31E+03 (J)	(mg/kg)	TP-03	107 of 118	--	1.31E+03	6.89E+02	nsI	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	3.50E-01 (J)	1.64E+01 (mg/kg)	(mg/kg)	DP-025	51 of 118	3.5U-4.8U	1.64E+01	5.20E+00 U	5.10E+02 n	6,800	N	Max < RSL
	7440-22-4	Silver	1.10E-01 (J)	6.14E+01 (mg/kg)	(mg/kg)	SS09 (W)	87 of 118	--	6.14E+01	3.70E-01 J	5.10E+02 n	6,800	N	Max < RSL
7440-23-5	Sodium	6.08E+01 (J)	1.89E+03 (mg/kg)	(mg/kg)	SS-009	50 of 118	504U-803U	1.89E+03	1.96E+02 J	nsI	Not Available	N	Essential Nutrient	
7440-28-0	Thallium	5.40E-01 (J)	4.60E+00 (mg/kg)	(mg/kg)	SS06 (W)	36 of 118	2.5U-3.4U	4.60E+00	3.70E+00 U	nsI	Not Available	Y	No Screening Criteria	
No CAS	Vanadium (c)	5.70E+00 (J)	8.41E+02 (mg/kg)	(mg/kg)	SS-007	117 of 118	--	8.41E+02	1.49E+01	5.20E+01 n	Not Available	Y	Max > RSL	
7440-66-6	Zinc	3.36E+01	1.60E+04 (mg/kg)	(mg/kg)	SS09 (W)	118 of 118	--	1.60E+04	2.92E+02	3.10E+04 nm	10,000	N	Max < RSL	

Footnotes:

- (1) Minimum / Maximum detected concentration
 - (2) Maximum detected concentration used as screening value
 - (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
 - (4) US EPA Region 9 Master RSL Table December 2009 - Industrial Soils
 - (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Industrial site use.
 - (6) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Low detection freq.: analyte detected in less than 5% of samples in data set of at least 20 samples.
 - (a) Cr(VI) value used for screening of chromium data.
 - (b) Methylmercury value used for screening of mercury data.
 - (c) Vanadium and Compounds screening level used for Vanadium.
 - (d) Xylene, Mixture screening level used.
- Note:** Industrial Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1 x 10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ = 0.1).
- L based on EPA's ALM model for Lead
- m Concentration may exceed ceiling limit
- s Concentration may exceed Csat
- nsI No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank
- mg/kg milligrams per kilogram
- ARAR Applicable or Relevant and
- Appropriate Requirement

Table 2.2.1
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Groundwater
 Exposure Medium: Shallow Groundwater

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Screening Toxicity Value (N/C) (3)	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)	
VOLATILE ORGANICS													
On-Site Shallow Groundwater	78-93-3	2-Butanone	1.10E+00	1.10E+00	(µg/L)	HW-002	1 of 12	5U-5U	1.10E+00	7.1E+02	n	N	Max < RSL
	75-15-0	Carbon disulfide	1.50E-01	1.60E+00	(µg/L)	HW-001	3 of 12	0.5U-0.5U	1.60E+00	1.0E+02	n	N	Max < RSL
	67-66-3	Chloroform	4.50E-01 (J)	4.50E-01 (J)	(µg/L)	SWSD-01	1 of 12	0.5U-0.5U	4.50E-01	1.9E-01	c	Y	Max > RSL
	74-87-3	Chloromethane	2.60E-01 (J)	2.60E-01 (J)	(µg/L)	EX-001	1 of 12	0.5U-0.5U	2.60E-01	1.9E+01	n	N	Max < RSL
	100-41-4	Ethylbenzene	1.00E+00 (J)	1.00E+00 (J)	(µg/L)	L01 (W)	1 of 12	0.5U-0.5U	1.00E+00	1.5E+00	c	N	Max < RSL
	1634-04-4	Methyltert-butylether	4.40E-01 (J)	4.40E-01 (J)	(µg/L)	HW-001	1 of 12	0.5U-0.5U	4.40E-01	1.2E+01	c	N	Max < RSL
	127-18-4	Tetrachloroethene	2.90E-01 (J)	5.30E-01	(µg/L)	HW-002	2 of 12	0.5U-0.5U	5.30E-01	1.1E-01	c	Y	Max > RSL
	79-01-6	Trichloroethene	7.20E-02 (J)	2.30E-01 (J)	(µg/L)	LH-01	2 of 12	0.5U-0.5U	2.30E-01	2.0E+00	c	N	Max < RSL
	75-69-4	Trichlorofluoromethane	1.90E-01 (J)	1.90E-01 (J)	(µg/L)	HW-001	1 of 12	0.5U-0.5U	1.90E-01	1.3E+02	n	N	Max < RSL
SEMI-VOLATILE ORGANICS													
On-Site Shallow Groundwater	83-32-9	Acenaphthene	6.00E+00 (J)	6.00E+00 (J)	(µg/L)	L01 (W)	1 of 11	5U-6.1U	6.00E+00	2.2E+02	n	N	Max < RSL
	120-12-7	Anthracene	3.00E+00 (J)	3.00E+00 (J)	(µg/L)	L01 (W)	1 of 11	5U-6.1U	3.00E+00	1.1E+03	n	N	Max < RSL
	117-81-7	Bis(2-ethylhexyl)phthalate	3.00E+00 (J)	3.00E+00 (J)	(µg/L)	L01 (W)	1 of 11	5U-6.1U	3.00E+00	4.8E+00	c	N	Max < RSL
	56-55-3	Benzo(a)anthracene	4.60E-01 (J)	4.00E+00 (J)	(µg/L)	L01 (W)	2 of 11	5U-6.1U	4.00E+00	2.9E-02	c	Y	Max > RSL
	50-32-8	Benzo(a)pyrene	5.20E-01 (J)	4.00E+00 (J)	(µg/L)	L01 (W)	2 of 11	5U-6.1U	4.00E+00	2.9E-03	c	Y	Max > RSL
	205-99-2	Benzo(b)fluoranthene	6.50E-01 (J)	6.50E-01 (J)	(µg/L)	LH-01	1 of 11	5U-6.1U	6.50E-01	2.9E-02	c	Y	Max > RSL
	191-24-2	Benzo(g,h,i)perylene	3.00E+00 (J)	3.00E+00 (J)	(µg/L)	L01 (W)	1 of 11	5U-6.1U	3.00E+00	nsf		Y	No Screening Criteria
	207-08-09	Benzo(k)fluoranthene	2.10E-01 (J)	6.00E+00 (J)	(µg/L)	L01 (W)	2 of 11	5U-6.1U	6.00E+00	2.9E-01	c	Y	Max > RSL
	85-68-7	Butylbenzylphthalate	4.80E-01 (J)	1.40E+00 (J)	(µg/L)	LH-01	2 of 11	5U-6.1U	1.40E+00	3.5E+01	c	N	Max < RSL
	105-60-2	Caprolactam	4.00E+00 (J)	4.00E+00 (J)	(µg/L)	HW-001	1 of 11	5U-6.1U	4.00E+00	1.8E+03	n	N	Max < RSL
	86-74-8	Carbazole	1.00E+00 (J)	7.00E+00 (J)	(µg/L)	L01 (W)	3 of 11	5U-6.1U	7.00E+00	nsf		Y	No Screening Criteria
	218-01-9	Chrysene	3.70E-01 (J)	5.00E+00 (J)	(µg/L)	L01 (W)	2 of 11	5U-6.1U	5.00E+00	2.9E+00	c	Y	Max > RSL
	84-74-2	Di-n-butylphthalate	6.70E-01 (J)	1.40E+00 (J)	(µg/L)	HW-001	2 of 11	5U-6.1U	1.40E+00	3.7E+02	n	N	Max < RSL
	53-70-3	Dibenzo(a,h)anthracene	1.00E+00 (J)	1.00E+00 (J)	(µg/L)	L01 (W)	1 of 11	5U-6.1U	1.00E+00	2.9E-03	c	Y	Max > RSL
	132-64-9	Dibenzofuran	2.00E+00 (J)	2.00E+00 (J)	(µg/L)	L01 (W)	1 of 11	5U-6.1U	2.00E+00	3.7E+00	n	N	Max < RSL
	84-66-2	Diethylphthalate	3.20E-01 (J)	3.20E-01 (J)	(µg/L)	LH-01	1 of 11	5U-6.1U	3.20E-01	2.9E+03	n	N	Max < RSL
	206-44-0	Fluoranthene	2.10E-01 (J)	1.00E+01 (J)	(µg/L)	L01 (W)	3 of 11	5U-6.1U	1.00E+01	1.5E+02	n	N	Max < RSL
	86-73-7	Fluorene	4.00E+00 (J)	4.00E+00 (J)	(µg/L)	L01 (W)	1 of 11	5U-6.1U	4.00E+00	1.5E+02	n	N	Max < RSL
	193-39-5	Indeno(1,2,3-cd)pyrene	3.00E+00 (J)	3.00E+00 (J)	(µg/L)	L01 (W)	1 of 11	5U-6.1U	3.00E+00	2.9E-02	c	Y	Max > RSL
	91-20-3	Naphthalene	4.00E+00 (J)	4.00E+00 (J)	(µg/L)	L01 (W)	1 of 11	5U-6.1U	4.00E+00	1.4E-01	c*	Y	Max > RSL
	85-01-8	Phenanthrene	2.70E-01 (J)	1.00E+01 (J)	(µg/L)	L01 (W)	2 of 11	5U-6.1U	1.00E+01	nsf		Y	No Screening Criteria
	129-00-0	Pyrene	2.70E-01 (J)	1.00E+01 (J)	(µg/L)	L01 (W)	3 of 11	5U-6.1U	1.00E+01	1.1E+02	n	N	Max < RSL

Table 2.2.1
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Screening Toxicity Value (N/C) (3)	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)	
PESTICIDES / PCBs													
On-Site Shallow	60-57-1	Dieldrin	2.40E-02 (J)	2.40E-02 (J)	(µg/L)	L01 (W)	1 of 10	0.1U-0.12U	2.40E-02	4.2E-03	c	<u>Y</u>	Max > RSL
Groundwater	7421-93-4	Endrin aldehyde	7.30E-02 (J)	7.30E-02 (J)	(µg/L)	HW-027	1 of 10	0.1U-0.12U	7.30E-02	nsI		<u>Y</u>	No Screening Criteria
	1024-57-3	Heptachlor epoxide	1.80E-03 (J)	1.80E-03 (J)	(µg/L)	LH-02	1 of 10	0.05U-0.056U	1.80E-03	7.4E-03	c*	N	Max < RSL
	959-98-8	Endosulfan I	4.20E-01 (J)	4.20E-01 (J)	(µg/L)	HW-002	1 of 10	0.050U-0.056U	4.20E-01	nsI		<u>Y</u>	No Screening Criteria
	12789-03-06	alpha-Chlordane	3.00E-02 (J)	3.00E-02 (J)	(µg/L)	L01 (W)	1 of 10	0.050U-0.056U	3.00E-02	1.9E-01	c*	N	Max < RSL
	11096-82-5	Aroclor-1260	5.40E-01 (J)	5.40E-01 (J)	(µg/L)	L01 (W)	1 of 10	0.1U-1U	5.40E-01	3.4E-02	c	<u>Y</u>	Max > RSL
METALS													
On-Site Shallow	7429-90-5	Aluminum	6.61E+01 (J)	4.36E+05 (J)	(µg/L)	HW-001	11 of 12	314U-1060U	4.36E+05	3.7E+03	n	<u>Y</u>	Max > RSL
Groundwater	7440-36-0	Antimony	2.56E+01 (J)	4.66E+01 (J)	(µg/L)	HW-001	2 of 12	60U-60U	4.66E+01	1.5E+00	n	<u>Y</u>	Max > RSL
	7440-38-2	Arsenic	2.10E+00 (B)	5.57E+02 (J)	(µg/L)	HW-001	7 of 12	10U-10U	5.57E+02	4.5E-02	c	<u>Y</u>	Max > RSL
	7440-39-3	Barium	3.58E+01 (B)	4.88E+03 (J)	(µg/L)	HW-001	9 of 12	--	4.88E+03	7.3E+02	n	<u>Y</u>	Max > RSL
	7440-41-7	Beryllium	3.00E-01 (B)	2.36E+01 (J)	(µg/L)	HW-001	4 of 12	5U-5U	2.36E+01	7.3E+00	n	<u>Y</u>	Max > RSL
	7440-43-9	Cadmium	1.70E+00 (J)	3.92E+01 (J)	(µg/L)	HW-001	5 of 12	5U-5U	3.92E+01	1.8E+00	n	<u>Y</u>	Max > RSL
	7440-70-2	Calcium	1.26E+04 (J)	3.60E+05 (J)	(µg/L)	HW-001	12 of 12	182000U-199000U	3.60E+05	nsI		N	Essential nutrient
	7440-47-3	Chromium (a)	3.60E+00 (J)	4.35E+03 (J)	(µg/L)	HW-002	9 of 12	0-24.9U	4.35E+03	4.3E-02	c	<u>Y</u>	Max > RSL
	7440-48-4	Cobalt	8.00E-01 (B)	4.93E+02 (J)	(µg/L)	HW-001	5 of 12	50U-50U	4.93E+02	1.1E+00	n	<u>Y</u>	Max > RSL
	7440-50-8	Copper	1.62E+01 (BJ)	1.48E+03 (J)	(µg/L)	HW-002	9 of 12	0-68.5U	1.48E+03	1.5E+02	n	<u>Y</u>	Max > RSL
	7439-89-6	Iron	7.12E+01 (J)	1.13E+06 (J)	(µg/L)	HW-001	12 of 12	1850U-8810U	1.13E+06	2.6E+03	n	<u>Y</u>	Max > RSL
	7439-92-1	Lead	1.57E+01 (J)	1.80E+03 (J)	(µg/L)	LH-01(D)	11 of 12	30.9U-82.3U	1.80E+03	1.5E+01	AL	<u>Y</u>	Max > RSL
	7139-95-4	Magnesium	2.98E+03 (J)	2.16E+05 (J)	(µg/L)	HW-001	12 of 12	32800U-32800U	2.16E+05	nsI		N	Essential nutrient
	7439-96-5	Manganese	1.07E+01 (J)	3.86E+04 (J)	(µg/L)	HW-001	11 of 12	391U-805U	3.86E+04	8.8E+01	n	<u>Y</u>	Max > RSL
	7439-97-6	Mercury (b)	6.80E-02 (J)	1.60E+00 (J)	(µg/L)	HW-001	6 of 11	0.2U-0.2U	1.60E+00	3.7E-01	n	<u>Y</u>	Max > RSL
	7440-02-0	Nickel	6.30E+00 (B)	1.27E+03 (J)	(µg/L)	HW-001	9 of 12	0-43.8U	1.27E+03	7.3E+01	n	<u>Y</u>	Max > RSL
	7440-09-7	Potassium	3.07E+03 (J)	3.24E+04 (J)	(µg/L)	HW-001	10 of 12	6750U-8470U	3.24E+04	nsI		N	Essential nutrient
	7440-22-4	Silver	5.10E+00 (J)	4.46E+01 (J)	(µg/L)	HW-001	4 of 12	--	4.46E+01	1.8E+01	n	<u>Y</u>	Max > RSL
	7440-23-5	Sodium	1.88E+04 (J)	5.84E+04 (J)	(µg/L)	SWSD-01	12 of 12	--	5.84E+04	nsI		N	Essential nutrient
		No CAS	Vanadium	4.00E+00 (B)	6.49E+02 (J)	(µg/L)	HW-001	7 of 12	50U-50U	6.49E+02	1.8E+01	n	<u>Y</u>
	7440-66-6	Zinc	3.36E+01 (J)	5.33E+03 (J)	(µg/L)	HW-002	12 of 12	365U-709U	5.33E+03	1.1E+03	n	<u>Y</u>	Max > RSL

Table 2.2.1
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Footnotes:

- (1) Minimum and maximum detected concentrations represented for each compound.
- (2) Maximum detected concentration of chemical used for screening.
- (3) US EPA Region 9 Master RSL Table December 2009 - Tapwater
- (4) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - (a) Tap water value for Chromium (VI) from USEPA RSL (Dec. 2009) used as screening value for chromium.
 - (b) Tap water value for methyl mercury from USEPA RSL (Dec. 2009) used as screening value for mercury.

Notes: Tapwater RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1×10^{-6} .

The lead action level (AL) was used to screen lead concentrations.

Shallow groundwater includes hydropunch groundwater (HW), leachate (L, LH, SW) and testpit/grab groundwater (EX) samples collected from depths less than 10 ft bgs. Data set used to evaluate exposure by construction/utility worker.

Screening Toxicity Value Codes

- n non-cancer
c cancer
* where n SL < 100x c SL
** where n SL < 10x c SL

Definitions:

- RSL Regional Screening Level
CAS Chemical Abstracts Service
AL Action Level
ARAR Applicable or Relevant and Appropriate Requirements
nsl no value listed on RSL Master Table (December 2009)

Qualifier:

- J Estimated Value
B Analyte Found in Associated Blank

TABLE 2.2.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Groundwater
 Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR (4)	COPC Flag (Y/N)	Rationale for Selection or Deletion (5)
VOLATILE ORGANICS													
On-site Groundwater	179601-23-1	m/p-Xylene	5.60E-02 (J)	5.60E-02 (J)	(µg/L)	EPA-03	1 of 17	0.5U-5U	5.60E-02	2.0E+01 n	Not available	N	Max < RSL
	67-64-1	Acetone	2.80E+00 (J)	9.20E+00 (J)	(µg/L)	EPA-03	3 of 17	5U-10U	9.20E+00	2.2E+03 n	Not available	N	Max < RSL
	75-15-0	Carbon disulfide	1.10E-01 (J)	1.80E-01 (J)	(µg/L)	EPA-04	2 of 17	0.5U-5U	1.80E-01	1.0E+02 n	60	N	Max < RSL
	108-88-3	Toluene	1.00E-01 (J)	1.00E-01 (J)	(µg/L)	EPA-03	1 of 17	0.5U-5U	1.00E-01	2.3E+02 n	5	N	Max < RSL
SEMI-VOLATILE ORGANICS													
On-site Groundwater	105-60-2	Caprolactam	6.30E-01 (J)	6.30E-01 (J)	(µg/L)	EPA-04	1 of 5	--	6.30E-01	1.8E+03 n	Not available	N	Max < RSL
	84-66-2	Diethylphthalate	1.90E-01 (J)	2.00E-01 (J)	(µg/L)	EPA-05	3 of 5	--	2.00E-01	2.9E+03 n	Not available	N	Max < RSL
METALS													
On-site Groundwater	7429-90-5	Aluminum	1.30E+02	5.94E+03	(µg/L)	EPA-06	8 of 11	0-100U	5.94E+03	3.7E+03 n	Not available	<u>Y</u>	Max > RSL
	7440-36-0	Antimony	2.80E+00 (J)	3.60E+00	(µg/L)	EPA-03	5 of 16	2U-20U	3.60E+00	1.5E+00 n	3	<u>Y</u>	Max > RSL
	7440-38-2	Arsenic	9.90E-01 (J)	9.55E+01	(µg/L)	EPA-03	7 of 16	0-8U	9.55E+01	4.5E-02 c	25	<u>Y</u>	Max > RSL
	7440-39-3	Barium	8.80E+00 (J)	4.76E+02	(µg/L)	EPA-03	13 of 16	0-100U	4.76E+02	7.3E+02 n	1000	N	Max < RSL
	7440-41-7	Beryllium	2.60E-01 (J)	6.10E-01 (J)	(µg/L)	EPA-03	2 of 16	1U-3U	6.10E-01	7.3E+00 n	Not available	N	Max < RSL
	7440-43-9	Cadmium	1.60E-01 (J)	4.30E-01 (J)	(µg/L)	EPA-03	2 of 16	1U-3U	4.30E-01	1.8E+00 n	5	N	Max < RSL
	7440-70-2	Calcium	9.70E+03	7.83E+04	(µg/L)	EPA-03	11 of 11	--	7.83E+04	nsI	Not Available	N	Essential Nutrient
	7440-47-3	Chromium (a)	7.90E-01 (J)	2.80E+02	(µg/L)	EPA-03	9 of 16	0-5U	2.80E+02	4.3E-02 c	50	<u>Y</u>	Max > RSL
	7440-48-4	Cobalt	4.80E-01 (J)	1.14E+01	(µg/L)	EPA-03	3 of 16	.3U-20U	1.14E+01	1.1E+00 n	Not available	<u>Y</u>	Max > RSL
	7440-50-8	Copper	4.50E+00 (J)	1.80E+01	(µg/L)	EPA-03	4 of 16	2U-10U	1.80E+01	1.5E+02 n	200	N	Max < RSL
	7439-89-6	Iron	4.91E+01 (J)	1.40E+04	(µg/L)	EPA-03	11 of 11	--	1.40E+04	2.6E+03 n	300	<u>Y</u>	Max > RSL
	7439-92-1	Lead	7.00E-01 (J)	1.90E+00 (J)	(µg/L)	EPA-03	3 of 16	1U-8U	1.90E+00	1.5E+01 AL	25	N	Max < RSL
	7139-95-4	Magnesium	1.40E+03	2.02E+04	(µg/L)	EPA-03	11 of 11	--	2.02E+04	nsI	Not Available	N	Essential Nutrient
	7439-96-5	Manganese	9.20E+00 (J)	1.00E+04	(µg/L)	EPA-03	16 of 16	--	1.00E+04	8.8E+01 n	300	<u>Y</u>	Max > RSL
	7440-02-0	Nickel	9.70E-01 (J)	1.80E+02	(µg/L)	EPA-03	10 of 16	20U-20U	1.80E+02	7.3E+01 n	100	<u>Y</u>	Max > RSL
	7440-09-7	Potassium	5.04E+02 (J)	3.85E+03 (J)	(µg/L)	EPA-04	9 of 11	0-500U	3.85E+03	nsI	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	2.50E+00 (J)	4.80E+00 (J)	(µg/L)	EPA-04	2 of 16	5U-20U	4.80E+00	1.8E+01 n	10	N	Max < RSL
	7440-22-4	Silver	8.30E-01 (J)	1.20E+00 (J)	(µg/L)	EPA-03	3 of 16	1U-5U	1.20E+00	1.8E+01 n	50	N	Max < RSL
	7440-23-5	Sodium	6.80E+03	2.74E+04	(µg/L)	EPA-04	11 of 11	--	2.74E+04	nsI	20,000	N	Essential Nutrient
	7440-62-2	Vanadium	2.70E+00 (J)	2.70E+00 (J)	(µg/L)	EPA-03	1 of 16	5U-20U	2.70E+00	1.8E+01 n	Not available	N	Max < RSL
	7440-66-6	Zinc	1.60E+00 (J)	5.00E+01	(µg/L)	EPA-03	12 of 16	0-20U	5.00E+01	1.1E+03 n	Not available	N	Max < RSL

TABLE 2.2.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Footnotes:

- (1) Minimum and maximum detected levels represented for each compound.
- (2) Maximum detected concentration of chemical used for screening.
- (3) US EPA Region 9 Master RSL Table December 2009 - Tapwater
- (4) NYSDEC TOGS 1.1.1 (Class GA groundwater standards).
- (5) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Max < RSL: Max concentration is less than the Region 9 Regional Screening Level
- (a) Tap water value for Chromium (VI) from USEPA RSL (Dec. 2009) used as screening value for chromium.
 The lead action level (AL) was used to screen lead concentrations.
 Tapwater RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1×10^{-6} .

Screening Toxicity Value Codes

n	non-cancer
c	cancer
*	where n SL < 100x c SL
**	where n SL < 10x c SL
<hr/>	
nsI	no value listed on RSL Master Table (December 2009)

Definitions:

RSL	Regional Screening Level
CAS	Chemical Abstracts Service
AL	Action Level
ARAR	applicable or relevant and appropriate requirement

Qualifier:

J	Estimated Value
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TABLE 2.3
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Medium: Sediment (Beer Kill system)
 Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
VOLATILE ORGANICS													
Beer Kill Sediment	67-64-1	Acetone	1.60E-02	1.60E-02	(mg/kg)	SWSD-06	1 of 6	0.011U-0.011U	1.60E-02	6.1E+03	n	N	Max < RSL
SEMI-VOLATILE ORGANICS													
Beer Kill Sediment	98-86-2	Acetophenone	5.00E-02 (J)	6.60E-02 (J)	(mg/kg)	SWSD-06	2 of 6	0.21U-0.41U	6.60E-02	7.8E+02	ns	N	Max < RSL
	100-52-7	Benzaldehyde	1.00E-01 (J)	1.00E-01 (J)	(mg/kg)	SWSD-06	2 of 6	0.4U-0.4U	1.00E-01	7.8E+02	ns	N	Max < RSL
	56-55-3	Benzo(a)anthracene	3.40E-02 (J)	4.00E-02 (J)	(mg/kg)	SWSD-07	2 of 6	0.4U-0.4U	4.00E-02	1.5E-01	c	N	Max < RSL
	50-32-8	Benzo(a)pyrene	3.30E-02 (J)	4.60E-02 (J)	(mg/kg)	SWSD-07	2 of 6	0.4U-0.4U	4.60E-02	1.5E-02	c	Y	Max > RSL
	205-99-2	Benzo(b)fluoranthene	4.70E-02 (J)	5.70E-02 (J)	(mg/kg)	SWSD-07	2 of 6	0.4U-0.4U	5.70E-02	1.5E-01	c	N	Max < RSL
	207-08-09	Benzo(k)fluoranthene	1.90E-02 (J)	2.10E-02 (J)	(mg/kg)	SWSD-06	2 of 6	0.4U-0.4U	2.10E-02	1.5E+00	c	N	Max < RSL
	218-01-9	Chrysene	4.00E-02 (J)	4.10E-02 (J)	(mg/kg)	SWSD-07	2 of 6	0.4U-0.4U	4.10E-02	1.5E+01	c	N	Max < RSL
	206-44-0	Fluoranthene	4.00E-02 (J)	6.50E-02 (J)	(mg/kg)	SWSD-06	2 of 6	0.4U-0.4U	6.50E-02	2.3E+02	n	N	Max < RSL
	85-01-8	Phenanthrene	1.50E-02 (J)	4.10E-02 (J)	(mg/kg)	SWSD-06	2 of 6	0.4U-0.4U	4.10E-02	nsI		Y	No Screening Criteria
	108-95-2	Phenol	1.60E-02 (J)	3.00E-02 (J)	(mg/kg)	SWSD-06	2 of 6	0.4U-0.4U	3.00E-02	1.8E+03	n	N	Max < RSL
	129-00-0	Pyrene	4.20E-02 (J)	7.60E-02 (J)	(mg/kg)	SWSD-06	2 of 6	0.4U-0.4U	7.60E-02	1.7E+02	n	N	Max < RSL
PESTICIDES / PCBs													
Beer Kill Sediment	72-55-9	4,4'-DDE	1.80E-04 (J)	2.90E-04 (J)	(mg/kg)	SWSD-06	2 of 6	0.004U-0.0041U	2.90E-04	1.4E+00	c	N	Max < RSL
	50-29-3	4,4'-DDT	2.70E-04 (J)	7.90E-04 (J)	(mg/kg)	SWSD-06	3 of 6	0.004U-0.0041U	7.90E-04	1.7E+00	c*	N	Max < RSL
	58-89-9	gamma-BHC (Lindane)	9.20E-05 (J)	9.20E-05 (J)	(mg/kg)	SD02	1 of 6	0.0021U-0.0022U	9.20E-05	5.2E-01	c*	N	Max < RSL
	60-57-1	Dieldrin	7.70E-05 (J)	2.50E-04 (J)	(mg/kg)	SD03	2 of 6	0.004U-0.0042U	2.50E-04	3.0E-02	c	N	Max < RSL
	72-20-8	Endrin	2.20E-04 (J)	3.50E-04 (J)	(mg/kg)	SWSD-07	2 of 6	0.004U-0.0051U	3.50E-04	1.8E+00	n	N	Max < RSL
	53494-70-5	Endrin ketone	4.40E-04 (J)	4.40E-04 (J)	(mg/kg)	SWSD-07	1 of 6	0.004U-0.0042U	4.40E-04	nsI		Y	No Screening Criteria
	76-44-8	Heptachlor	1.40E-04 (J)	1.40E-04 (J)	(mg/kg)	SWSD-07	1 of 6	0.0021U-0.021U	1.40E-04	1.1E-01	c	N	Max < RSL
	5566-34-7	gamma-Chlordane	1.00E-04 (J)	1.00E-04 (J)	(mg/kg)	SD03	1 of 6	0.002U-0.0022U	1.00E-04	1.6E+00	c*	N	Max < RSL
METALS													
Beer Kill Sediment	7429-90-5	Aluminum	5.33E+03	6.63E+03	(mg/kg)	SD01	6 of 6	--	6.63E+03	7.7E+03	n	N	Max < RSL
	7440-38-2	Arsenic	3.00E+00	5.30E+00	(mg/kg)	SWSD-07	6 of 6	--	5.30E+00	3.9E-01	c*	Y	Max > RSL
	7440-39-3	Barium	5.63E+01	8.52E+01	(mg/kg)	SD02	6 of 6	--	8.52E+01	1.5E+03	n	N	Max < RSL
	7440-41-7	Beryllium	2.70E-01 (B)	3.70E-01 (B)	(mg/kg)	SD01	6 of 6	--	3.70E-01	1.6E+01	n	N	Max < RSL
	7440-43-9	Cadmium	2.30E-01 (J)	2.50E-01 (J)	(mg/kg)	SWSD-07	2 of 6	0.07U - 0.08J	2.50E-01	7.0E+00	n	N	Max < RSL
	7440-70-2	Calcium	6.58E+02 (B)	2.68E+03	(mg/kg)	SD01	6 of 6	--	2.68E+03	nsI		N	Essential Nutrient
	7440-47-3	Chromium (a)	6.30E+00 (J)	8.80E+00 (J)	(mg/kg)	SD01	6 of 6	--	8.80E+00	2.9E-01	c	Y	Max > RSL
	7440-48-4	Cobalt	6.10E+00 (B)	8.00E+00 (B)	(mg/kg)	SD02	6 of 6	--	8.00E+00	2.3E+00	n	Y	Max > RSL
	7440-50-8	Copper	4.00E+00 (BJ)	1.02E+01	(mg/kg)	SWSD-07	6 of 6	--	1.02E+01	3.1E+02	n	N	Max < RSL
	7439-89-6	Iron	1.43E+04	1.93E+04	(mg/kg)	SD01	6 of 6	--	1.93E+04	5.5E+03	n	Y	Max > RSL
	7439-92-1	Lead	1.00E+01	1.44E+01 (J)	(mg/kg)	SWSD-07	6 of 6	--	1.44E+01	4.0E+02	nL	N	Max < RSL
	7139-95-4	Magnesium	2.10E+03	2.88E+03	(mg/kg)	SD01	6 of 6	--	2.88E+03	nsI		N	Essential Nutrient
	7439-96-5	Manganese	6.16E+02 (J)	9.98E+02 (J)	(mg/kg)	SD02	6 of 6	--	9.98E+02	1.8E+02	n	Y	Max > RSL
	7440-02-0	Nickel	1.17E+01	1.77E+01	(mg/kg)	SD01	6 of 6	--	1.77E+01	1.5E+02	n	N	Max < RSL
	7440-09-7	Potassium	3.36E+02 (B)	3.78E+02 (B)	(mg/kg)	SD03	6 of 6	--	3.78E+02	nsI		N	Essential Nutrient
	No CAS	Vanadium	5.80E+00 (B)	7.50E+00 (B)	(mg/kg)	SD01	6 of 6	--	7.50E+00	3.9E+01	n	N	Max < RSL
	7440-66-6	Zinc	5.52E+01	8.84E+01	(mg/kg)	SD01	6 of 6	--	8.84E+01	2.3E+03	n	N	Max < RSL

TABLE 2.3
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Footnotes:

- (1) Minimum and maximum detected concentrations represented for each compound.
- (2) Maximum Detected Concentration of Chemical used for screening.
- (3) US EPA Region 9 Master RSL Table December 2009 - Residential Soils
- (4) Rationales for Selection or Deletion Definitions:
 Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level

- (a) Cr(VI) values used for screening of chromium data.

Note: Residential Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1×10^{-6} .

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL
- nsl No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- mg/kg milligrams per kilogram
- COPC Chemical of Potential Concern
- ARAR Applicable or Relevant and Appropriate Requirements

Qualifiers:

- J Estimated Value
- B Analyte Found in Associated Blank

TABLE 2.4
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Surface Water (Beer Kill System)
Exposure Medium: Surface Water

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
VOLATILE ORGANICS													
Beer Kill Surface Water	74-87-3	Chloromethane	1.90E-01 (J)	1.90E-01 (J)	(µg/L)	SWSD-07	1 of 2	0.5U-0.5U	1.90E-01	1.9E+01 n		N	Max < RSL
SEMI-VOLATILE ORGANICS													
Beer Kill Surface Water	85-68-7	Butylbenzylphthalate	8.20E-01 (J)	8.20E-01 (J)	(µg/L)	SWSD-07	1 of 2	5U-5U	8.20E-01	3.5E+01 c		N	Max < RSL
	84-66-2	Diethylphthalate	2.50E-01 (J)	2.50E-01 (J)	(µg/L)	SWSD-07	1 of 2	5U-5U	2.50E-01	2.9E+03 n		N	Max < RSL
METALS													
Beer Kill Surface Water	7440-70-2	Calcium	4.89E+03 (J)	5.07E+03	(µg/L)	SWSD-07	2 of 2	--	5.07E+03	nsI		N	Essential Nutrient
	7439-89-6	Iron	1.19E+02	1.23E+02	(µg/L)	SWSD-06	2 of 2	100U-100U	1.23E+02	2.6E+03 n		N	Max < RSL
	7439-96-5	Manganese	8.80E+00 (J)	9.20E+00 (J)	(µg/L)	SWSD-06	2 of 2	15U-15U	9.20E+00	8.8E+01 n		N	Max < RSL
	7440-23-5	Sodium	6.29E+03	6.60E+03	(µg/L)	SWSD-07	2 of 2	--	6.60E+03	nsI		N	Essential Nutrient

Footnotes:

- (1) Minimum and maximum detected levels represented for each compound.
- (2) Maximum detected concentration of chemical used for screening.
- (3) US EPA Region 9 Master RSL Table December 2009 - Tapwater
- (4) Rationales for Selection or Deletion Definitions:
 Max < RSL: Max concentration is less than the Region 9 Regional Screening Level

Note: Tapwater RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
 No PCBs or Pesticides were detected in Beer Kill System surface water samples.

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL
- nsI No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- µg/L micrograms per liter
- COPC Chemical of Potential Concern
- ARAR Applicable or Relevant and Appropriate Requirements

Qualifiers:

- J Estimated Value

TABLE 2.5
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Medium: Leachate
 Exposure Medium: On-site Leachate Areas and Surface Water

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
VOLATILE ORGANICS													
On-Site Leachate	67-64-1	Acetone	2.60E+01	2.60E+01	(µg/L)	SWSD-02	1 of 8	5U - 5U	2.60E+01	2.2E+03	n	N	Max < RSL
Areas and Upland	75-15-0	Carbon Disulfide	1.50E-01 (J)	1.50E-01 (J)	(µg/L)	LH-02	1 of 8	0.5U-0.5U	1.50E-01	1.0E+02	n	N	Max < RSL
Surface Water	67-66-3	Chloroform	4.50E-01 (J)	4.50E-01 (J)	(µg/L)	SWSD-01	1 of 8	0.5U-0.5U	4.50E-01	1.9E-01	c	Y	Max > RSL
	74-87-3	Chloromethane	1.20E-01 (J)	1.20E-01 (J)	(µg/L)	SWSD-02	1 of 8	0.5U-0.5U	1.20E-01	1.9E+01	n	N	Max < RSL
	100-41-4	Ethylbenzene	1.00E+00 (J)	1.00E+00 (J)	(µg/L)	L01(W)	1 of 8	0.5U-10U	1.00E+00	1.5E+00	c	N	Max < RSL
	79-01-6	Trichloroethene	2.30E-01 (J)	2.30E-01 (J)	(µg/L)	LH-01	1 of 8	0.5U-0.5U	2.30E-01	2.0E+00	c	N	Max < RSL
SEMI-VOLATILE ORGANICS													
On-Site Leachate	83-32-9	Acenaphthene	6.00E+00 (J)	6.00E+00 (J)	(µg/L)	L01(W)	1 of 7	5U-5U	6.00E+00	2.2E+02	n	N	Max < RSL
Areas and Upland	120-12-7	Anthracene	3.00E+00 (J)	3.00E+00 (J)	(µg/L)	L01(W)	1 of 7	5U-5U	3.00E+00	1.1E+03	n	N	Max < RSL
Surface Water	117-81-7	Bis(2-ethylhexyl)phthalate	3.00E+00 (J)	3.00E+00 (J)	(µg/L)	L01(W)	1 of 7	5U-5U	3.00E+00	4.8E+00	c	N	Max < RSL
	56-55-3	Benzo(a)anthracene	4.60E-01 (J)	4.00E+00 (J)	(µg/L)	L01(W)	2 of 7	5U-5U	4.00E+00	2.9E-02	c	Y	Max > RSL
	50-32-8	Benzo(a)pyrene	5.20E-01 (J)	4.00E+00 (J)	(µg/L)	L01(W)	2 of 7	5U-5U	4.00E+00	2.9E-03	c	Y	Max > RSL
	205-99-2	Benzo(b)fluoranthene	6.50E-01 (J)	6.50E-01 (J)	(µg/L)	LH-01	1 of 7	5U-5U	6.50E-01	2.9E-02	c	Y	Max > RSL
	191-24-2	Benzo(g,h,i)perylene	3.00E+00 (J)	3.00E+00 (J)	(µg/L)	L01(W)	1 of 7	5U-5U	3.00E+00	nsI		Y	No Screening Criteria
	207-08-09	Benzo(k)fluoranthene	2.10E-01 (J)	6.00E+00 (J)	(µg/L)	L01(W)	2 of 7	5U-5U	6.00E+00	2.9E-01	c	Y	Max > RSL
	85-68-7	Butylbenzylphthalate	4.80E-01 (J)	1.40E+00 (J)	(µg/L)	LH-01	2 of 7	5U-5U	1.40E+00	3.5E+01	c	N	Max < RSL
	86-74-8	Carbazole	1.00E+00 (J)	7.00E+00 (J)	(µg/L)	L01(W)	3 of 7	5U-5U	7.00E+00	nsI		Y	No Screening Criteria
	218-01-9	Chrysene	3.70E-01 (J)	5.00E+00 (J)	(µg/L)	L01(W)	2 of 7	5U-5U	5.00E+00	2.9E+00	c	Y	Max > RSL
	84-74-2	Di-n-butylphthalate	6.70E-01 (J)	6.70E-01 (J)	(µg/L)	LH-01	1 of 7	5U-5U	6.70E-01	3.7E+02	n	N	Max < RSL
	53-70-3	Dibenzo(a,h)anthracene	1.00E+00 (J)	1.00E+00 (J)	(µg/L)	L01(W)	1 of 7	5U-5U	1.00E+00	2.9E-03	c	Y	Max > RSL
	132-64-9	Dibenzofuran	2.00E+00 (J)	2.00E+00 (J)	(µg/L)	L01(W)	1 of 7	5U-5U	2.00E+00	3.7E+00	n	N	Max < RSL
	84-66-2	Diethylphthalate	3.20E-01 (J)	3.20E-01 (J)	(µg/L)	LH-01	1 of 7	5U-5U	3.20E-01	2.9E+03	n	N	Max < RSL
	206-44-0	Fluoranthene	2.10E-01 (J)	1.00E+01 (J)	(µg/L)	L01(W)	3 of 7	5U-5U	1.00E+01	1.5E+02	n	N	Max < RSL
86-73-7	Fluorene	4.00E+00 (J)	4.00E+00 (J)	(µg/L)	L01(W)	1 of 7	5U-5U	4.00E+00	1.5E+02	n	N	Max < RSL	
193-39-5	Indeno(1,2,3-cd)pyrene	3.00E+00 (J)	3.00E+00 (J)	(µg/L)	L01(W)	1 of 7	5U-5U	3.00E+00	2.9E-02	c	Y	Max > RSL	
91-20-3	Naphthalene	4.00E+00 (J)	4.00E+00 (J)	(µg/L)	L01(W)	1 of 7	5U-5U	4.00E+00	1.4E-01	c*	Y	Max > RSL	
85-01-8	Phenanthrene	2.70E-01 (J)	1.00E+01 (J)	(µg/L)	L01(W)	2 of 7	0-5U	1.00E+01	nsI		Y	No Screening Criteria	
129-00-0	Pyrene	2.70E-01 (J)	1.00E+01 (J)	(µg/L)	L01(W)	3 of 7	--	1.00E+01	1.1E+02	n	N	Max < RSL	
PESTICIDES / PCBs													
On-Site Leachate	60-57-1	Dieldrin	2.40E-02 (J)	2.40E-02 (J)	(µg/L)	L01(W)	1 of 7	0.1U-0.1U	2.40E-02	4.2E-03	c	Y	Max > RSL
Areas and Upland	1024-57-3	Heptachlor epoxide	1.80E-03 (J)	1.80E-03 (J)	(µg/L)	LH-02	1 of 7	0.05U-0.05U	1.80E-03	7.4E-03	c*	N	Max < RSL
Surface Water	5103-71-9	alpha-Chlordane	3.00E-02 (J)	3.00E-02 (J)	(µg/L)	L01(W)	1 of 7	0.050U-0.050U	3.00E-02	nsI		Y	No Screening Criteria
	11096-82-5	Aroclor-1260	5.40E-01 (J)	5.40E-01 (J)	(µg/L)	L01(W)	1 of 7	1U-1U	5.40E-01	3.4E-02	c	Y	Max > RSL

TABLE 2.5
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Leachate
Exposure Medium: On-site Leachate Areas and Surface Water

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Screening Toxicity Value (N/C) (3)	Potential ARAR/TBC Value	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
METALS													
On-Site Leachate Areas and Upland Surface Water	7429-90-5	Aluminum	6.61E+01 (J)	9.10E+03	(µg/L)	LH-01(EPA)	4 of 8	314U-1060U	9.10E+03	3.7E+03 n		Y	Max > RSL
	7440-38-2	Arsenic	5.80E+01	5.80E+01	(µg/L)	LH-01(EPA)	1 of 8	10U-10U	5.80E+01	4.5E-02 c		Y	Max > RSL
	7440-39-3	Barium	7.30E+01 (J)	8.10E+02	(µg/L)	LH-01(EPA)	3 of 8	--	8.10E+02	7.30E+02 n		Y	Max > RSL
	7440-43-9	Cadmium	1.70E+00 (J)	1.00E+01	(µg/L)	LH-01(EPA)	2 of 8	0-5U	1.00E+01	1.8E+00 n		Y	Max > RSL
	7440-70-2	Calcium	1.32E+04	1.99E+05	(µg/L)	LH-02	5 of 8	182000U-199000U	1.99E+05	nsi		N	Essential Nutrient
	7440-47-3	Chromium (a)	3.60E+00 (J)	1.10E+02	(µg/L)	LH-01(EPA)	3 of 8	0-24.9U	1.10E+02	4.3E-02 c		Y	Max > RSL
	7440-50-8	Copper	1.97E+01 (J)	8.30E+02	(µg/L)	LH-01(EPA)	3 of 8	0-68.5U	8.30E+02	1.5E+02 n		Y	Max > RSL
	7439-89-6	Iron	7.12E+01 (J)	5.40E+04	(µg/L)	LH-01(EPA)	5 of 8	1850U-8810U	5.40E+04	2.6E+03 n		Y	Max > RSL
	7439-92-1	Lead	3.09E+01	1.80E+03	(µg/L)	LH-01(EPA)	5 of 8	30.9U-82.3U	1.80E+03	1.5E+01 AL		Y	Max > RSL
	7439-95-4	Magnesium	3.09E+03 (J)	4.10E+04	(µg/L)	LH-01(EPA)	5 of 8	32800U-32800U	4.10E+04	nsi		N	Essential Nutrient
	7439-96-5	Manganese	1.07E+01 (J)	8.05E+02	(µg/L)	LH-01	4 of 8	15U-15U	8.05E+02	8.8E+01 n		Y	Max > RSL
	7439-97-6	Mercury	6.80E-02 (J)	9.30E-02 (J)	(µg/L)	SWSD-01	2 of 7	0-0.2U	9.30E-02	3.7E-01 n		N	Max < RSL
	7440-02-0	Nickel	2.09E+01 (J)	1.00E+02	(µg/L)	LH-01(EPA)	3 of 8	0-43.8U	1.00E+02	7.3E+01 n		Y	Max > RSL
	7440-09-7	Potassium	6.75E+03	8.47E+03	(µg/L)	LH-02	3 of 8	6750U-8470U	8.47E+03	nsi		N	Essential Nutrient
	7440-22-4	Silver	5.40E+00	5.40E+00	(µg/L)	LH-01(EPA)	1 of 8	0.7U-10U	5.40E+00	1.8E+01 n		N	Max < RSL
	7440-23-5	Sodium	3.13E+04	5.84E+04	(µg/L)	SWSD-01	5 of 8	--	5.84E+04	nsi		N	Essential Nutrient
7440-62-2	Vanadium	1.00E+02	1.00E+02	(µg/L)	LH-01(EPA)	1 of 8	50U-50U	1.00E+02	1.8E+01 n		Y	Max > RSL	
7440-66-6	Zinc	3.36E+01 (J)	5.30E+03	(µg/L)	LH-01(EPA)	5 of 8	365U-709U	5.30E+03	1.1E+03 n		Y	Max > RSL	

Footnotes:

- (1) Minimum and maximum detected levels represented for each compound.
- (2) Maximum detected concentration of chemical used for screening.
- (3) US EPA Region 9 Master RSL Table December 2009 - Tapwater
- (4) Rationales for Selection or Deletion Definitions:
 Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 (a) Tap water value for Chromium (VI) from USEPA RSL (Dec. 2009) used as screening value for chromium.
 (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events
 (EPA) Indicates sample ID from January 2010 EPA sampling event.
Note: Tapwater RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
 Lead Action Level (AL) used for screening.
 Tap water value for methyl mercury from USEPA RSL (Dec. 2009) used as screening value for mercury.

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- nsi No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- µg/L micrograms per liter
- COPC Chemical of Potential Concern
- ARAR Applicable or Relevant and Appropriate Requirements

Qualifiers:

- J Estimated Value

TABLE 2.6
OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil Gas
Exposure Medium: Indoor Air

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Residential Screening Toxicity Value (N/C) (3)	COPC Flag (Y/N)	Rationale for Selection or Deletion (4)
VOLATILE ORGANICS												
Indoor Air (buildings at off-site parcels; future on-site buildings)	71-55-6	1,1,1-Trichloroethane	5.46E-01 (J)	4.26E+01	(µg/m ³)	SG-014	8 of 13	2.7U - 27.3U	4.26E+01	5.20E+03 n	N	Max < RSL
	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	7.66E-01 (J)	9.20E+00 (J)	(µg/m ³)	SG-007	6 of 13	3.8U-38.3U	9.20E+00	3.10E+04 n	N	Max < RSL
	75-34-3	1,1-Dichloroethane	4.76E+00 (J)	9.52E+00 (J)	(µg/m ³)	SG-007	2 of 13	2U-19.8U	9.52E+00	1.50E+01 n	N	Max < RSL
	95-63-6	1,2,4-Trimethylbenzene	2.95E+00 (J)	4.47E+01	(µg/m ³)	SG-007	13 of 13	--	4.47E+01	7.30E+00 n	Y	Max > RSL
	108-67-8	1,3,5-Trimethylbenzene	9.83E-01 (J)	1.23E+01 (J)	(µg/m ³)	SG-007	10 of 13	4.9U-9.8U	1.23E+01	nsl	Y	No Screening Criteria
	78-93-3	2-Butanone	1.18E+00 (J)	1.06E+02	(µg/m ³)	SG-048	13 of 13	--	1.06E+02	5.20E+03 n	N	Max < RSL
	591-78-6	2-Hexanone	8.19E-01 (J)	2.46E+00	(µg/m ³)	SG-078	2 of 13	2.0U-20.5U	2.46E+00	nsl	Y	No Screening Criteria
	108-10-1	4-Methyl-2-pentanone	1.23E+00 (J)	3.69E+00 (J)	(µg/m ³)	SG-048	3 of 13	2.0U-20.5U	3.69E+00	3.10E+03 n	N	Max < RSL
	67-64-1	Acetone	4.75E+00	4.99E+02	(µg/m ³)	SG-007	13 of 13	--	4.99E+02	3.20E+04 n	N	Max < RSL
	71-43-2	Benzene	9.58E-01 (J)	8.95E+00 (J)	(µg/m ³)	SG-023	12 of 13	1.6U	8.95E+00	3.10E+00 c	Y	Max > RSL
	74-83-9	Bromomethane	3.88E+00 (J)	3.88E+00 (J)	(µg/m ³)	SG-048	1 of 13	1.9U-19.4U	3.88E+00	5.20E+00 n	N	Max < RSL
	110-54-3	n-Hexane	1.76E+00	2.26E+02	(µg/m ³)	SG-014	4 of 13	1.8U-17.6U	2.26E+02	7.30E+02 n	N	Max < RSL
	75-15-0	Carbon disulfide	5.60E+00 (J)	2.71E+01	(µg/m ³)	SG-014	3 of 13	3.1U-15.6U	2.71E+01	7.30E+02 n	N	Max < RSL
	56-23-5	Carbon tetrachloride	2.77E+00	2.77E+00	(µg/m ³)	SG-124	1 of 13	0.3U - 2.5U	2.77E+00	1.60E+00 c	Y	Max > RSL
	67-66-3	Chloroform	4.88E-01 (J)	4.88E+00 (J)	(µg/m ³)	SG-025	4 of 13	2.4U-24.4U	4.88E+00	1.10E+00 c	Y	Max > RSL
	74-87-3	Chloromethane	2.07E-01 (J)	2.48E+02 (D)	(µg/m ³)	SG-048	3 of 13	1U-10.3U	2.48E+02	9.40E+01 n	Y	Max > RSL
	110-82-7	Cyclohexane	1.14E+01 (J)	1.14E+01 (J)	(µg/m ³)	SG-007	1 of 13	1.7U-17.2U	1.14E+01	6.30E+03 n	N	Max < RSL
	75-71-8	Dichlorodifluoromethane	2.47E+00 (J)	1.88E+02	(µg/m ³)	SG-007	12 of 13	24.7U	1.88E+02	2.10E+02 n	N	Max < RSL
	100-41-4	Ethylbenzene	4.34E-01 (J)	2.26E+01	(µg/m ³)	SG-007	10 of 13	4.3U-8.7U	2.26E+01	9.70E+00 c	Y	Max > RSL
	75-09-2	Methylene chloride	2.08E+00 (J)	1.56E+01 (J)	(µg/m ³)	SG-007	12 of 13	17.4U	1.56E+01	5.20E+01 c	N	Max < RSL
100-42-5	Styrene	8.52E-01 (J)	4.09E+01	(µg/m ³)	SG-014	3 of 13	2.1U-21.3U	4.09E+01	1.00E+03 n	N	Max < RSL	
127-18-4	Tetrachloroethene	1.09E+01	2.44E+03 (D)	(µg/m ³)	SG-124	13 of 13	--	2.44E+03	4.10E+00 c	Y	Max > RSL	
108-88-3	Toluene	1.51E+00 (J)	3.28E+02	(µg/m ³)	SG-007	13 of 13	--	3.28E+02	5.20E+03 n	N	Max < RSL	
79-01-6	Trichloroethene	6.45E-01	9.67E+01	(µg/m ³)	SG-014	5 of 13	0.2U - 2.5U	9.67E+01	1.20E+01 c	Y	Max > RSL	
75-69-4	Trichlorofluoromethane	3.37E+00 (J)	2.47E+03 (D)	(µg/m ³)	SG-014	13 of 13	--	2.47E+03	7.30E+02 n	Y	Max > RSL	
1330-20-7	m/p-Xylene	1.74E+00 (J)	7.38E+01	(µg/m ³)	SG-007	13 of 13	--	7.38E+01	7.30E+02 n	N	Max < RSL	
95-47-6	o-Xylene	8.68E-01 (J)	2.74E+01	(µg/m ³)	SG-007	12 of 13	8.7U	2.74E+01	7.30E+02 n	N	Max < RSL	

TABLE 2.6
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Footnotes:

- (1) Minimum and maximum detected levels represented for each compound.
- (2) Maximum Detected Concentration of Chemical used for screening.
- (3) US EPA Region 9 Master RSL Table December 2009 - Residential Air
 To assess vapor intrusion potential, an attenuation factor is 10:1 is assumed for future land use scenario involving building construction.
- (4) Maximum detected concentration is greater than the Regional Screening Level for the given chemical.

Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level

Note: Residential Air RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1×10^{-6} .

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- $\mu\text{g}/\text{m}^3$ micrograms per cubic meter

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where $n \text{ SL} < 100x \text{ c SL}$
- ** where $n \text{ SL} < 10x \text{ c SL}$

nsl No Screening Toxicity Level indicated by
 USEPA on RSL Master Table (December 2009)

Qualifiers:

- J Estimated Value
- D Dilution

Table 2-6 supplement
Soil Gas Survey Sample Results - Comparison with Draft 2002 EPA VI Guidance

Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Sample ID Sample Date Sample Collection Depth Units	SG-007	SG-014	SG-023	SG-025	SG-037	From Table 2c EPA Guidance Value (1)
	10/22/2007	10/24/2007	10/23/2007	10/24/2007	10/26/2007	
	5 ft	5 ft	5 ft	5 ft	5 ft	
	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	
1,1,1-Trichloroethane	33.3	42.6	27.3 U	5.5 U	15.3	22,000
1,1,2-Trichloro-1,2,2-trifluoroethane	9.2 J	3.8 J	38.3 U	7.7 U	2.3 J	300,000
1,1-Dichloroethane	9.5 J	4.8 J	19.8 U	4.0 U	4.0 U	5,000
1,2,4-Trimethylbenzene	44.7	10.8	22.1 J	8.4	3.9 J	60
1,3,5-Trimethylbenzene	12.3 J	3.4 J	6.9 J	2.0 J	1.0 J	60
2,2,4-Trimethylpentane	5.1 J	70.1	23.4 UJ	4.7 UJ	4.7 U	--
2-Butanone	32.4 J	12.7	10.3 J	3.8 J	4.7	10,000
2-Hexanone	20.5 U	8.2 U	20.5 U	4.1 U	4.1 U	--
4-Methyl-2-pentanone	20.5 U	8.2 U	20.5 U	4.1 U	4.1 U	800
Acetone	498.8	261.3	68.9	16.2	26.1 J	3,500
Benzene	6.7 J	5.8 J	8.9 J	1.3 J	1.0 J	3.1
Bromomethane	19.4 U	7.8 U	19.4 U	3.9 U	3.9 U	50
Carbon disulfide (bisulfide)	13.1 J	27.1	15.6 U	3.1 U	3.1 U	7,000
Chloroform	24.4 U	9.8 U	24.4 U	4.9 J	4.9 U	1.1
Chloromethane	10.3 U	4.1 U	10.3 U	2.1 U	2.1 U	24
Cyclohexane	11.4 J	6.9 U	17.2 U	3.4 U	3.4 U	--
Dichlorodifluoromethane	187.9	22.3	24.7 U	2.5 J	138.5	2,000
Ethylbenzene	22.6	20.8	6.5 J	1.7 J	4.3 U	22
Methylene chloride	15.6 J	3.8 J	17.4 U	2.1 J	2.8 J	52
n-Heptane	22.1	155.7	20.5 U	4.1 U	4.1 U	--
n-Hexane	15.5 J	225.6	17.6 U	3.5 U	3.5 U	--
p-Ethyltoluene	13.8 J	3.9 J	4.9 J	2.0 J	4.9 U	--
Styrene	21.3 U	40.9	21.3 U	4.3 U	4.3 U	10,000
Tetrachloroethene	271.3	62.4	101.7	10.9	440.9 D	8.1
Toluene	327.9	29.4	24.5	5.3	2.6 J	4,000
Trichloroethene	2.5 U	96.7	2.5 U	0.5 U	3.9	0.22
Trichlorofluoromethane	1,236	2,472.1 D	48.3	3.4 J	786.6 D	7,000
Xylene, m/p-	73.8	24.3	28.7	8.2	3.0 J	70,000
Xylene, o-	27.4	8.7 J	10.0 J	3.0 J	1.3 J	70,000
Xylenes, Total (Sum)	101.2	33	38.6	11.3	4.3 J	--
Total Detected VOCs	2,991.6	3,642.0	380.3	87.0	1,438.2	

Table 2-6 supplement
Soil Gas Survey Sample Results - Comparison with Draft 2002 EPA VI Guidance

Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Sample ID Sample Date Sample Collection Depth Units	SG-048	SG-061	SG-074	SG-078	SG-096	From Table 2c EPA Guidance Value (1)
	10/26/2007	10/29/2007	10/30/2007	10/30/2007	10/31/2007	
	5 ft	5 ft	5 ft	5 ft	5 ft	
	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	
1,1,1-Trichloroethane	4.4 J	3.8 J	0.5 J	2.7 U	1.6 J	22,000
1,1,2-Trichloro-1,2,2-trifluoroethane	15.3 U	7.7 U	0.8 J	0.8 J	2.3 J	300,000
1,1-Dichloroethane	7.9 U	4.0 U	2.0 U	2.0 U	2.0 U	5,000
1,2,4-Trimethylbenzene	5.9 J	2.9 J	3.4	17.7	12.3	60
1,3,5-Trimethylbenzene	9.8 U	4.9 U	1.5 J	5.9	3.9	60
2,2,4-Trimethylpentane	9.3 U	4.7 U	2.3 U	2.3 UJ	2.3 U	--
2-Butanone	106.2	53.1	3.8	13.3 J	5	10,000
2-Hexanone	8.2 U	4.1 U	2.0 U	2.5	0.8 J	--
4-Methyl-2-pentanone	3.7 J	4.1 U	2.0 U	1.2 J	2.0 U	800
Acetone	380.1 JD	68.9 J	20.0 J	45.1	20.2	3,500
Benzene	2.6 J	2.6 J	1.3 J	<u>3.5</u>	<u>3.8</u>	3.1
Bromomethane	3.9 J	3.9 U	1.9 U	1.9 U	1.9 U	50
Carbon disulfide (bisulfide)	5.6 J	3.1 U	1.6 U	1.6 U	1.6 U	7,000
Chloroform	9.8 U	4.9 U	0.5 J	2.4 U	<u>2.9</u>	1.1
Chloromethane	<u>247.8 D</u>	2.1 U	1.0 U	2.3	1.0 U	24
Cyclohexane	6.9 U	3.4 U	1.7 U	1.7 U	1.7 U	--
Dichlorodifluoromethane	39.6	37.1	8.9	6.9	17.8	2,000
Ethylbenzene	3.5 J	1.7 J	0.9 J	1.7 J	1.3 J	22
Methylene chloride	5.9 J	2.8 J	6.3	7.3	6.3	52
n-Heptane	3.3 J	4.1 U	2.0 U	0.8 J	0.8 J	--
n-Hexane	7.0 U	3.5 U	1.8 U	2.5	1.8	--
p-Ethyltoluene	9.8 U	4.9 U	1.5 J	1.5 J	1.5 J	--
Styrene	3.0 J	4.3 U	2.1 U	2.1 U	0.9 J	10,000
Tetrachloroethene	<u>434.1</u>	<u>373.0 D</u>	<u>74.6</u>	<u>169.6 D</u>	<u>122.1</u>	8.1
Toluene	56.5	20	5.7	7.5	4.1	4,000
Trichloroethene	1.0 U	<u>1.1</u>	0.2 U	0.2 U	0.2 U	0.22
Trichlorofluoromethane	224.7	230.4 D	112.4 D	56.2	31.5	7,000
Xylene, m/p-	8.7 J	5.2	3	5.2	4.3	70,000
Xylene, o-	3.0 J	1.7 J	1.3 J	2.6	1.7 J	70,000
Xylenes, Total (Sum)	11.7 J	6.9	4.3	7.8	6.1	--
Total Detected VOCs	1,554.2	811.2	250.7	361.9	253.0	

Table 2-6 supplement
Soil Gas Survey Sample Results - Comparison with Draft 2002 EPA VI Guidance

Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Sample ID Sample Date Sample Collection Depth Units	SG-098	SG-121	SG-124	From Table 2c EPA Guidance Value (1)
	11/1/2007	11/2/2007	11/2/2007	
	0 - 5 ft	0 - 5 ft	0 - 5 ft	
	µg/m ³	µg/m ³	µg/m ³	
1,1,1-Trichloroethane	2.7 U	10.9 U	7.6 J	22,000
1,1,2-Trichloro-1,2,2-trifluoroethane	3.8 U	15.3 U	15.3 U	300,000
1,1-Dichloroethane	2.0 U	7.9 U	7.9 U	5,000
1,2,4-Trimethylbenzene	4.9	7.4 J	2.9 J	60
1,3,5-Trimethylbenzene	1.5 J	2.5 J	9.8 U	60
2,2,4-Trimethylpentane	2.3 U	9.3 U	9.3 U	--
2-Butanone	1.2 J	10.6	6.5	10,000
2-Hexanone	2.0 U	8.2 U	8.2 U	--
4-Methyl-2-pentanone	2.0 U	8.2 U	2.5 J	800
Acetone	4.8	40.4 J	35.6 J	3,500
Benzene	1.6 U	<u>5.1 J</u>	2.6 J	3.1
Bromomethane	1.9 U	7.8 U	7.8 U	50
Carbon disulfide (bisulfide)	1.6 U	6.2 U	6.2 U	7,000
Chloroform	<u>1.5 J</u>	9.8 U	9.8 U	1.1
Chloromethane	0.2 J	4.1 U	4.1 U	24
Cyclohexane	1.7 U	6.9 U	6.9 U	--
Dichlorodifluoromethane	3.5	4.0 J	13.4	2,000
Ethylbenzene	0.4 J	8.7 U	8.7 U	22
Methylene chloride	9	6.9	7.6	52
n-Heptane	2.0 U	8.2 U	8.2 U	--
n-Hexane	1.8 U	7.0 U	7.0 U	--
p-Ethyltoluene	0.5 J	9.8 U	9.8 U	--
Styrene	2.1 U	8.5 U	8.5 U	10,000
Tetrachloroethene	<u>128.9</u>	<u>813.9 D</u>	<u>2,441.7 D</u>	8.1
Toluene	1.5 J	4.9 J	15.1	4,000
Trichloroethene	<u>0.6</u>	<u>21</u>	<u>52.1</u>	0.22
Trichlorofluoromethane	12.4	618.0 D	36	7,000
Xylene, m/p-	1.7 J	2.2 J	5.2 J	70,000
Xylene, o-	0.9 J	8.7 U	1.7 J	70,000
Xylenes, Total (Sum)	2.6 J	2.2 J	6.9 J	--
Total Detected VOCs	176.1	1,539.1	2,637.4	

Table 2-6 supplement
Soil Gas Survey Sample Results - Comparison with Draft 2002 EPA VI Guidance

Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Notes:

U - Analytical Non-Detect Value

J - Estimated Analytical Value

R - Rejected Analytical Value

D - Analytical sample diluted

BDL - Below Detection Limit

µg/m³ - micrograms per cubic meter

-- indicates no standard comparison criteria or guidance value

- Only detected constituents summarized in this table
- Values that are **bold and underlined** indicate exceedance of comparison criteria

Sampling Performed By:

Tetra Tech EC, Inc.

Analytical Laboratory:

ChemTech Consulting Group (Mountainside, NJ)

References:

(1) United States Environmental Protection Agency OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (EPA, 2002). Table 2c - Target Shallow Soil Gas Concentration (1×10^{-6} risk; 0.1 Attenuation Factor).

Table 2.7
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current/Future
 Medium: Soil
 Exposure Medium: Surface Soil (0-2 ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Residential Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)	
METALS															
Off-Site Surface	7429-90-5	Aluminum	4.14E+03	8.92E+03	(mg/kg)	SS29 (W)	45 of 45	458U-9960U	8.92E+03	8.50E+03	7.70E+03	n	Not Available	Y	Max > RSL
Soil (0-2 ft bgs)	7440-36-0	Antimony	2.80E-01 (J)	2.21E+03 (J)	(mg/kg)	SS22 (W)	22 of 45	--	2.21E+03	8.80E+00 U	3.10E+00	n	Not Available	Y	Max > RSL
Res. Parcels A-I	7440-38-2	Arsenic	1.60E+00	2.03E+01	(mg/kg)	SS32 (W)	45 of 45	1.6U-20.3U	2.03E+01	7.40E+00	3.90E-01	c*	16	Y	Max > RSL
	7440-39-3	Barium	2.49E+01 (J)	3.59E+03 (J)	(mg/kg)	SS28 (W)	45 of 45	--	3.59E+03	1.48E+02	1.50E+03	n	350	Y	Max > RSL
	7440-41-7	Beryllium	1.10E-01 (B)	5.40E-01 (J)	(mg/kg)	RSS-13	45 of 45	--	5.40E-01	5.10E-01 J	1.60E+01	n	14	N	Max < RSL
	7440-43-9	Cadmium	3.00E-01 (J)	1.38E+01 (J)	(mg/kg)	SS28 (W)	25 of 45	0.59U-2.1U	1.38E+01	1.20E+00	7.00E+00	n	2.5	Y	Max > RSL
	7440-70-2	Calcium	2.74E+02 (J)	1.99E+04 (J)	(mg/kg)	SS22 (W)	45 of 45	--	1.99E+04	3.27E+04	nsI	Not Available	N	Essential Nutrient	
	7440-47-3	Chromium (a)	6.20E+00	2.62E+01	(mg/kg)	SS22 (W)	45 of 45	0.50U-58.9U	2.62E+01	2.22E+01	2.90E-01	c	Not Available	Y	Max > RSL
	7440-48-4	Cobalt	4.20E+00 (J)	9.60E+00 (B)	(mg/kg)	SS29 (W)	45 of 45	5.8U-7.6U	9.60E+00	7.00E+00	2.30E+00	n	Not Available	Y	Max > RSL
	7440-50-8	Copper	9.80E+00	7.51E+02	(mg/kg)	RSS15	45 of 45	9.8U-92.9U	7.51E+02	2.58E+01	3.10E+02	n	270	Y	Max > RSL
	57-12-5	Cyanide	9.90E-02 (J)	4.40E-01 (J)	(mg/kg)	RSS-08	12 of 27	0.11U-3.5U	4.40E-01	3.70E+00	1.60E+02	n	27	N	Max < RSL
	7439-89-6	Iron	9.55E+03	6.02E+04	(mg/kg)	SS32 (W)	45 of 45	9550U-60200U	6.02E+04	1.79E+04	5.50E+03	n	Not Available	Y	Max > RSL
	7439-92-1	Lead	1.74E+01	2.30E+05	(mg/kg)	SS22 (W)	45 of 45	--	2.30E+05	6.67E+02 J	4.00E+02	nL	400	Y	Max > RSL
	7439-95-4	Magnesium	1.14E+03 (B)	5.77E+03	(mg/kg)	SS29 (W)	45 of 45	--	5.77E+03	3.12E+03	nsI	Not Available	N	Essential Nutrient	
	7439-96-5	Manganese	2.40E-02 (J)	8.18E+02 (J)	(mg/kg)	RSS-15	33 of 33	0.20U-764U	8.18E+02	6.04E+02 J	1.80E+02	n	2000	Y	Max > RSL
	7439-97-6	Mercury (b)	4.80E-02 (J)	1.30E+00	(mg/kg)	SS22 (W)	31 of 45	0.11U-91U	1.30E+00	2.40E-01	7.80E-01	n	0.81	Y	Max > RSL
	7440-02-0	Nickel	8.60E+00 (B)	5.06E+01 (J)	(mg/kg)	SS23 (W)	45 of 45	8.6U-94.5U	5.06E+01	1.69E+01	1.50E+02	n	140	N	Max < RSL
	7440-09-7	Potassium	2.65E+02 (J)	9.84E+02 (B)	(mg/kg)	SS25 (W)	45 of 45	630U-741U	9.84E+02	6.89E+02	nsI	Not Available	N	Essential Nutrient	
	7782-49-2	Selenium	6.70E-01 (J)	1.50E+00	(mg/kg)	SS32 (W)	7 of 45	0.58U-5U	1.50E+00	5.20E+00 U	3.90E+01	n	36	N	Max < RSL
	7440-22-4	Silver	1.90E-01 (B)	3.20E+00	(mg/kg)	SS22 (W)	20 of 45	1.4U-1.7U	3.20E+00	3.70E-01 J	3.90E+01	n	36	N	Max < RSL
	7440-23-5	Sodium	1.07E+02 (J)	4.08E+02 (J)	(mg/kg)	RSS-12	17 of 45	62.5U-710U	4.08E+02	1.96E+02 J	nsI	Not Available	N	Essential Nutrient	
	7440-62-2	Vanadium	5.70E+00 (B)	1.79E+01	(mg/kg)	SS32 (W)	44 of 45	--	1.79E+01	1.49E+01	3.90E+01	n	Not Available	N	Max < RSL
	7440-66-6	Zinc	7.30E+00	4.09E+03 (J)	(mg/kg)	SS28 (W)	44 of 45	--	4.09E+03	2.92E+02	2.30E+03	n	2200	Y	Max > RSL

Footnotes:

- (1) Minimum / Maximum detected concentration
 - (2) Maximum detected concentration used as screening value
 - (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
 - (4) US EPA Region 9 Master RSL Table December 2009 - Residential Soils
 - (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Residential site use.
 - (6) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Low detection freq.: analyte detected in less than 5% of samples in data set of at least 20 samples.
 - (a) Cr(VI) value used for screening of chromium data.
 - (b) Methyl mercury value used for screening of mercury data.
- Note:** Residential Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL. Screening values divided by 10 to account for potential non-cancer effects.
- L based on EPA's IEUBK Model for Lead in Children
- nsI No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank

TABLE 3.1.1
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface soil (0-2 ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
SEMI-VOLATILE ORGANICS									
On Site Soil (0-2 ft)	Acenaphthylene	(mg/kg)	4.62E-01	5.13E-01 (NP)	3.90E+00	5.13E-01	(mg/kg)	95% KM (t)	(1)
	Bis(2-ethylhexyl)phthalate	(mg/kg)	3.67E+00	9.79E+00 (NP)	6.20E+01 (D)	9.79E+00	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Benzo(a)anthracene	(mg/kg)	5.08E+00	1.12E+01 (NP)	4.20E+01	1.12E+01	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Benzo(a)pyrene	(mg/kg)	4.77E+00	1.05E+01 (NP)	3.80E+01	1.05E+01	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Benzo(b)fluoranthene	(mg/kg)	6.96E+00	1.56E+01 (NP)	5.40E+01	1.56E+01	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Benzo(g,h,i)perylene	(mg/kg)	1.63E+00	3.53E+00 (NP)	1.60E+01	3.53E+00	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Benzo(k)fluoranthene	(mg/kg)	3.14E+00	6.98E+00 (NP)	2.80E+01 (D)	6.98E+00	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Carbazole	(mg/kg)	8.03E-01	1.03E+00 (NP)	9.30E+00	1.03E+00	(mg/kg)	95% KM (t)	(1)
	Chrysene	(mg/kg)	5.29E+00	1.17E+01 (NP)	4.00E+01	1.17E+01	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Di-n-octylphthalate	(mg/kg)	4.07E-01	4.01E-01 (NP)	5.00E+00	4.01E-01	(mg/kg)	95% KM (t)	(1)
	Dibenzo(a,h)anthracene	(mg/kg)	6.82E-01	9.18E-01 (NP)	7.40E+00	9.18E-01	(mg/kg)	95% KM (BCA)	(1)
	Dimethylphthalate	(mg/kg)	3.33E-01	1.81E-01 (NP)	1.30E+00	1.81E-01	(mg/kg)	95% KM (t)	(1)
	Indeno(1,2,3-cd)pyrene	(mg/kg)	2.21E+00	4.83E+00 (NP)	2.00E+01 (J)	4.83E+00	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Naphthalene	(mg/kg)	4.66E-01	6.37E-01 (NP)	1.10E+01	6.37E-01	(mg/kg)	95% KM (BCA)	(1)
	Phenanthrene	(mg/kg)	5.00E+00	1.00E+01 (NP)	7.30E+01	1.00E+01	(mg/kg)	95% KM (Chebyshev)	(1)
PESTICIDES / PCBs									
On Site Soil (0-2 ft)	Endosulfan sulfate	(mg/kg)	6.05E-03	8.28E-03 (NP)	5.70E-02 (NJ)	8.28E-03	(mg/kg)	95% KM (Percentile Bootstrap)	(1)
	Dieldrin	(mg/kg)	1.00E-02	1.20E-02 (NP)	1.20E-01 (J)	1.20E-02	(mg/kg)	95% KM (t)	(1)
	Endrin aldehyde	(mg/kg)	7.03E-03	8.43E-03 (NP)	9.60E-02 (J)	8.43E-03	(mg/kg)	95% KM (t)	(1)
	Endrin ketone	(mg/kg)	1.22E-02	2.52E-02 (NP)	1.20E-01 (D)	2.52E-02	(mg/kg)	95% KM (Percentile Bootstrap)	(1)
	Endosulfan II	(mg/kg)	2.07E-02	3.43E-02 (NP)	6.70E-01 (J)	3.43E-02	(mg/kg)	95% KM (t)	(1)
	gamma-Chlordane	(mg/kg)	4.25E-03	4.62E-03 (NP)	3.80E-02 (J)	4.62E-03	(mg/kg)	95% KM (t)	(1)
	Aroclor-1254	(mg/kg)	1.20E+00	3.62E-01 (NP)	4.80E+00	3.62E-01	(mg/kg)	95% KM (t)	(1)
	Aroclor-1260	(mg/kg)	1.21E+00	4.51E+00 (NP)	4.30E+01	4.51E+00	(mg/kg)	97.5% KM (Chebyshev)	(1)

TABLE 3.1.1
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface soil (0-2 ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
METALS									
On Site Soil (0-2 ft)	Aluminum	(mg/kg)	8.24E+03	1.05E+04 (NP)	4.39E+04	1.05E+04	(mg/kg)	95% Chebyshev (Mean, Sd)	(2)
	Antimony	(mg/kg)	9.23E+00	1.92E+01 (NP)	1.15E+02 (J)	1.92E+01	(mg/kg)	95% KM (Chebyshev)	(1)
	Arsenic	(mg/kg)	8.32E+00	9.04E+00 (NP)	2.63E+01	9.04E+00	(mg/kg)	95% KM (BCA)	(6)
	Barium	(mg/kg)	2.82E+02	4.17E+02 (NP)	5.13E+03	4.17E+02	(mg/kg)	95% KM (BCA)	(2)
	Cadmium	(mg/kg)	2.63E+00	4.34E+00 (NP)	1.86E+01 (J)	4.34E+00	(mg/kg)	95% KM (Chebyshev)	(1)
	Chromium (a)	(mg/kg)	2.42E+02	1.14E+03 (NP)	1.21E+04 (J)	1.14E+03	(mg/kg)	99% Chebyshev (Mean, Sd)	(2)
	Cobalt	(mg/kg)	9.34E+00	1.01E+01 (NP)	2.85E+01	1.01E+01	(mg/kg)	95% KM (BCA)	(1)
	Copper	(mg/kg)	6.42E+02	1.09E+03 (LN)	1.04E+04 (J)	1.09E+03	(mg/kg)	95% H-UCL	(3)
	Iron	(mg/kg)	3.12E+04	4.42E+04 (NP)	2.24E+05	4.42E+04	(mg/kg)	95% Chebyshev (Mean, Sd)	(2)
	Lead	(mg/kg)	1.10E+03	--	1.82E+04	1.10E+03	(mg/kg)	Arithmetic Mean	(5)
	Manganese	(mg/kg)	6.88E+02	7.47E+02 (N)	2.01E+03 (J)	7.47E+02	(mg/kg)	95% Student's-t	(4)
	Mercury (b)	(mg/kg)	4.33E-01	5.38E-01 (NP)	2.60E+00 (J)	5.38E-01	(mg/kg)	95% KM (BCA)	(1)
	Nickel	(mg/kg)	5.29E+01	8.46E+01 (NP)	4.81E+02	8.46E+01	(mg/kg)	95% Chebyshev (Mean, Sd)	(2)
	Silver	(mg/kg)	2.20E+00	5.65E+00 (NP)	6.14E+01	5.65E+00	(mg/kg)	95% KM (Chebyshev)	(1)
	Thallium	(mg/kg)	1.19E+00	1.12E+00 (NP)	4.60E+00	1.12E+00	(mg/kg)	95% KM (% Bootstrap)	(1)
	Vanadium (c)	(mg/kg)	5.10E+01	7.01E+01 (NP)	8.41E+02	7.01E+01	(mg/kg)	95% KM (BCA)	(2)
	Zinc	(mg/kg)	9.78E+02	1.36E+03 (LN)	1.60E+04	1.36E+03	(mg/kg)	95% H-UCL	(3)

Footnotes:

- (1) Raw data mean using DL/2, calculated by ProUCL 4.00.04
- (2) Upper Confidence Limit Statistic calculated by ProUCL 4.00.04
- (3) Statistic Used to determine Exposure Point Concentration
- (a) Cr(VI) values used for screening of chromium data.
- (b) Methylmercury value used for screening of mercury data.
- (c) Vanadium and Compounds screening level used for Vanadium.

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram

Qualifiers:

- J Estimated Value
- N Presumptively Present
- D Dilution

Codes: Rationale Codes: (1) Data have multiple DLs, Use of Kaplan-Meier method recommended by ProUCL 4.00.04. (2) Data do not follow a discernable distribution [ProUCL 4.00.04], nonparametric UCL recommended. (3) Data follow approximate lognormal distribution at 5% significance level. (4) Data appear normally distributed. (5) Arithmetic mean used for EPC for lead. (6) Nonparametric UCL recommended by ProUCL 4.00.04.

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

Note: No volatile organic compounds were determined to be chemicals of potential concern.



TABLE 3.1.2
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil (0-10 ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
SEMI-VOLATILE ORGANICS									
On-Site Soil (0-10 ft)	Acenaphthylene	(mg/kg)	4.66E-01	4.18E-01 (NP)	3.90E+00	4.18E-01	(mg/kg)	95% KM (t)	(1)
	Benzo(a)anthracene	(mg/kg)	5.11E+00	1.11E+01 (NP)	5.00E+01	1.11E+01	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Benzo(a)pyrene	(mg/kg)	4.78E+00	1.04E+01 (NP)	4.30E+01	1.04E+01	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Benzo(b)fluoranthene	(mg/kg)	6.39E+00	1.36E+01 (NP)	5.40E+01	1.36E+01	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Benzo(g,h,i)perylene	(mg/kg)	1.69E+00	3.72E+00 (NP)	2.40E+01	3.72E+00	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Benzo(k)fluoranthene	(mg/kg)	3.42E+00	4.54E+00 (NP)	3.80E+01	4.54E+00	(mg/kg)	95% KM (BCA)	(1)
	Carbazole	(mg/kg)	1.02E+00	1.36E+00 (NP)	1.80E+01	1.36E+00	(mg/kg)	95% KM (t)	(1)
	Di-n-octylphthalate	(mg/kg)	4.55E-01	3.62E-01 (NP)	5.00E+00	3.62E-01	(mg/kg)	95% KM (t)	(1)
	Dibenzo(a,h)anthracene	(mg/kg)	7.16E-01	8.31E-01 (NP)	7.40E+00	8.31E-01	(mg/kg)	95% KM (t)	(1)
	Dimethylphthalate	(mg/kg)	3.69E-01	1.84E-01 (NP)	1.60E+00 (J)	1.84E-01	(mg/kg)	95% KM (t)	(1)
	Indeno(1,2,3-cd)pyrene	(mg/kg)	2.36E+00	5.21E+00 (NP)	2.80E+01	5.21E+00	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Phenanthrene	(mg/kg)	5.70E+00	1.37E+01 (NP)	8.00E+01	1.37E+01	(mg/kg)	97.5% KM (Chebyshev)	(1)
	PESTICIDES / PCBs								
On-Site Soil (0-10 ft)	Endosulfan sulfate	(mg/kg)	6.03E-03	8.94E-03 (NP)	5.70E-02 (NJ)	8.94E-03	(mg/kg)	95% KM (Percentile Bootstrap)	(1)
	Dieldrin	(mg/kg)	1.29E-02	1.69E-02 (NP)	2.90E-01 (JN)	1.69E-02	(mg/kg)	95% KM (t)	(1)
	Endrin aldehyde	(mg/kg)	7.87E-03	8.59E-03 (NP)	1.10E-01 (J)	8.59E-03	(mg/kg)	95% KM (t)	(1)
	Endrin ketone	(mg/kg)	1.10E-02	1.85E-02 (NP)	1.20E-01 (D)	1.85E-02	(mg/kg)	95% KM (Percentile Bootstrap)	(1)
	Endosulfan II	(mg/kg)	1.65E-02	2.72E-02 (NP)	6.70E-01 (J)	2.72E-02	(mg/kg)	95% KM (t)	(1)
	gamma-Chlordane	(mg/kg)	5.32E-03	6.59E-03 (NP)	6.50E-02 (J)	6.59E-03	(mg/kg)	95% KM (Percentile Bootstrap)	(1)
	Aroclor-1254	(mg/kg)	2.33E-01	3.56E-01 (NP)	5.70E+00	3.56E-01	(mg/kg)	95% KM (t)	(1)
	Aroclor-1260	(mg/kg)	1.20E+00	4.17E+00 (NP)	4.30E+01	4.17E+00	(mg/kg)	97.5% KM (Chebyshev)	(1)

TABLE 3.1.2
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil (0-10 ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
METALS									
On-Site Soil (0-10 ft)	Antimony	(mg/kg)	8.76E+00	1.64E+01 (NP)	1.15E+02 (J)	1.64E+01	(mg/kg)	95% KM (Chebyshev)	(1)
	Arsenic	(mg/kg)	8.37E+00	9.31E+00 (NP)	3.74E+01 (J)	9.31E+00	(mg/kg)	95% KM (BCA)	(1)
	Chromium (a)	(mg/kg)	2.01E+02	8.77E+02 (NP)	1.21E+04 (J)	8.77E+02	(mg/kg)	97.5% Chebyshev (Mean, Sd)	(2)
	Cobalt	(mg/kg)	9.56E+00	1.04E+01 (NP)	3.62E+01 (J)	1.04E+01	(mg/kg)	95% KM (BCA)	(1)
	Copper	(mg/kg)	5.30E+02	1.44E+03 (NP)	1.04E+04 (J)	1.44E+03	(mg/kg)	97.5% Chebyshev (Mean, Sd)	(2)
	Iron	(mg/kg)	2.99E+04	4.06E+04 (NP)	2.24E+05	4.06E+04	(mg/kg)	95% Chebyshev (Mean, Sd)	(2)
	Lead	(mg/kg)	9.18E+02	3.28E+03 (NP)	1.82E+04	9.18E+02	(mg/kg)	Arithmetic Mean	(3)
	Manganese	(mg/kg)	7.38E+02	8.00E+02 (G)	3.26E+03 (J)	8.00E+02	(mg/kg)	95% Approximate Gamma	(4)
	Thallium	(mg/kg)	1.26E+00	1.10E+00 (NP)	4.60E+00	1.10E+00	(mg/kg)	95% KM (% Bootstrap)	(1)
	Vanadium (c)	(mg/kg)	4.77E+01	6.52E+01 (NP)	8.41E+02	6.52E+01	(mg/kg)	95% KM (BCA)	(1)

Footnotes:

- (1) Mean using DL/2, calculated by ProUCL 4.00.04
- (2) Upper Confidence Limit calculated by ProUCL 4.00.04
- (3) Statistic Used to determine Exposure Point Concentration
- (a) Cr(VI) value used for screening of chromium data.
- (b) Methylmercury value used for screening of mercury data.
- (c) Vanadium and Compounds screening level used for Vanadium.

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- D Dilution
- J Estimated Value
- N Presumptively Present

Codes: Rationale Codes: (1) Data have multiple DLs, Use of Kaplan-Meier method recommended by ProUCL 4.00.04. (2) Data do not follow a discernable distribution [ProUCL 4.00.04], nonparametric UCL recommended. (3) Arithmetic mean used for EPC for lead. (4) Data follow approximate gamma distribution at 5% significance level, 95% adjusted gamma recommended by ProUCL 4.00.04.

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

Note: No volatile organic compounds were determined to be chemicals of potential concern.

TABLE 3.2.1
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Shallow Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
VOLATILE ORGANICS									
On-Site Shallow Groundwater	Chloroform	(µg/L)	*	--	4.5E-01 (J)	4.50E-01	(µg/L)	Maximum Detected Concentration	(1)
	Tetrachloroethene	(µg/L)	*	--	5.3E-01	5.30E-01	(µg/L)	Maximum Detected Concentration	(1)
SEMI-VOLATILE ORGANICS									
On-Site Shallow Groundwater	Benzo(a)anthracene	(µg/L)	*	--	4.0E+00 (J)	4.00E+00	(µg/L)	Maximum Detected Concentration	(1)
	Benzo(a)pyrene	(µg/L)	*	--	4.0E+00 (J)	4.00E+00	(µg/L)	Maximum Detected Concentration	(1)
	Benzo(b)fluoranthene	(µg/L)	*	--	6.5E-01 (J)	6.50E-01	(µg/L)	Maximum Detected Concentration	(1)
	Benzo(g,h,i)perylene	(µg/L)	*	--	3.0E+00 (J)	3.00E+00	(µg/L)	Maximum Detected Concentration	(1)
	Benzo(k)fluoranthene	(µg/L)	*	--	6.0E+00 (J)	6.00E+00	(µg/L)	Maximum Detected Concentration	(1)
	Carbazole	(µg/L)	2.85E+00	--	7.0E+00 (J)	7.00E+00	(µg/L)	Maximum Detected Concentration	(1)
	Chrysene	(µg/L)	*	--	5.0E+00 (J)	5.00E+00	(µg/L)	Maximum Detected Concentration	(1)
	Dibenzo(a,h)anthracene	(µg/L)	*	--	1.0E+00 (J)	1.00E+00	(µg/L)	Maximum Detected Concentration	(1)
	Indeno(1,2,3-cd)pyrene	(µg/L)	*	--	3.0E+00 (J)	3.00E+00	(µg/L)	Maximum Detected Concentration	(1)
	Naphthalene	(µg/L)	*	--	4.0E+00 (J)	4.00E+00	(µg/L)	Maximum Detected Concentration	(1)
Phenanthrene	(µg/L)	*	--	1.0E+01 (J)	1.00E+01	(µg/L)	Maximum Detected Concentration	(1)	
PESTICIDES / PCBs									
On-Site Shallow Groundwater	Dieldrin	(µg/L)	*	--	2.40E-02 (J)	2.40E-02	(µg/L)	Maximum Detected Concentration	(1)
	Endrin aldehyde	(µg/L)	*	--	7.30E-02 (J)	7.30E-02	(µg/L)	Maximum Detected Concentration	(1)
	Endosulfan I	(µg/L)	*	--	4.20E-01	4.20E-01	(µg/L)	Maximum Detected Concentration	(1)
	Aroclor-1260	(µg/L)	*	--	5.40E-01 (J)	5.40E-01	(µg/L)	Maximum Detected Concentration	(1)
METALS									
On-Site Shallow Groundwater	Aluminum	(µg/L)	7.53E+04	2.61E+05 (NP)	4.36E+05	2.61E+05	(µg/L)	95% KM (Chebyshev)	(5)
	Antimony	(µg/L)	*	--	4.66E+01 (J)	4.66E+01	(µg/L)	Maximum Detected Concentration	(5)
	Arsenic	(µg/L)	8.39E+01	1.77E+02 (NP)	5.57E+02	1.77E+02	(µg/L)	95% KM (BCA)	(5)
	Barium	(µg/L)	8.31E+02	2.67E+03 (NP)	4.88E+03	2.67E+03	(µg/L)	95% KM (Chebyshev)	(5)
	Beryllium	(µg/L)	5.32E+00	1.74E+01 (NP)	2.36E+01 (J)	1.74E+01	(µg/L)	95% KM (Percentile Bootstrap)	(5)
	Cadmium	(µg/L)	8.78E+00	2.07E+01 (NP)	3.92E+01	2.07E+01	(µg/L)	95% KM (Percentile Bootstrap)	(5)
	Chromium (a)	(µg/L)	5.00E+02	2.11E+03 (NP)	4.35E+03	2.11E+03	(µg/L)	95% KM (Chebyshev)	(5)

TABLE 3.2.1
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Shallow Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
	Cobalt	(µg/L)	9.62E+01	2.37E+02 (NP)	4.93E+02 (J)	2.37E+02	(µg/L)	95% KM (Percentile Bootstrap)	(5)
	Copper	(µg/L)	3.82E+02	1.07E+03 (NP)	1.48E+03	1.07E+03	(µg/L)	95% KM (Chebyshev)	(5)
	Iron	(µg/L)	2.09E+05	1.05E+06 (G)	1.13E+06	1.05E+06	(µg/L)	95% Adjusted Gamma	(4)
	Lead	(µg/L)	4.07E+02	---	1.80E+03	4.07E+02	(µg/L)	Arithmetic Mean	(3)
	Manganese	(µg/L)	7.43E+03	5.20E+04 (NP)	3.86E+04 (J)	3.86E+04	(µg/L)	Maximum Detected Concentration	(2)
	Mercury (b)	(µg/L)	4.46E-01	9.25E-01 (NP)	1.60E+00	9.25E-01	(µg/L)	95% KM (Percentile Bootstrap)	(5)
	Nickel	(µg/L)	2.57E+02	8.60E+02 (NP)	1.27E+03 (J)	8.60E+02	(µg/L)	95% KM (Chebyshev)	(5)
	Silver	(µg/L)	1.03E+01	4.23E+01 (NP)	4.46E+01 (J)	4.23E+01	(µg/L)	95% KM (Percentile Bootstrap)	(5)
	Vanadium	(µg/L)	1.46E+02	2.76E+02 (NP)	6.49E+02	2.76E+02	(µg/L)	95% KM (BCA)	(5)
	Zinc	(µg/L)	1.55E+03	3.77E+03 (G)	5.33E+03	3.77E+03	(µg/L)	95% Approximate Gamma	(4)

Footnotes:

- (1) Mean using DL/2, calculated by ProUCL 4.00.04
- (2) Upper Confidence Limit calculated by ProUCL 4.00.04
- (3) Statistic Used to determine 95% UCL or other measure of EPC
- * Insufficient number of detected concentrations (less than three) to permit calculation of arithmetic mean
- (a) Tap water value for Chromium (VI) from USEPA RSL (Dec. 2009) used as screening value for chromium.
- (b) Tap water value for methyl mercury from USEPA RSL (Dec. 2009) used as screening value for mercury.
- J Estimated Value

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because data has fewer than 4 detected concentrations. (2) 95% Upper Confidence Limit in excess of maximum detected concentration, maximum concentration used. (3) Arithmetic mean used for EPC for lead. (4) Data follow approximate gamma distribution at 5% significance level, 95% approximate gamma recommended by ProUCL 4.00.04. (5) Nonparametric method recommended by ProUCL 4.00.04.

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

TABLE 3.2.2
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
METALS									
On-site Groundwater	Aluminum	(µg/L)	1.43E+03	4.16E+03 (NP)	5.94E+03	4.16E+03	(µg/l)	95% KM (Chebyshev)	(3)
	Antimony	(µg/L)	7.06E+00	3.24E+00 (NP)	3.60E+00	3.24E+00	(µg/l)	95% KM (Percentile Bootstrap)	(3)
	Arsenic	(µg/L)	1.21E+01	2.17E+01 (NP)	9.55E+01	2.17E+01	(µg/l)	95% KM (t)	(3)
	Chromium (a)	(µg/L)	2.78E+01	5.93E+01 (NP)	2.80E+02	5.93E+01	(µg/l)	95% KM (BCA)	(3)
	Cobalt	(µg/L)	1.16E+01	--	1.14E+01	1.14E+01	(µg/l)	Maximum Detected Concentration	(1)
	Iron	(µg/L)	4.19E+03	6.45E+03 (N)	1.40E+04	6.45E+03	(µg/l)	95% Student's-t	(2)
	Manganese	(µg/L)	1.34E+03	2.76E+03 (G)	1.00E+04	2.76E+03	(µg/l)	95% Approximate Gamma	(4)
	Nickel	(µg/L)	2.24E+01	1.40E+02 (NP)	1.80E+02	1.40E+02	(µg/l)	99% KM (Chebyshev)	(3)
	Vanadium	(µg/L)	*	--	2.70E+00 (J)	2.70E+00	(µg/l)	Maximum Detected Concentration	(1)

Footnotes:

- (1) Mean using DL/2, calculated by ProUCL 4.00.04.
- (2) Upper Confidence Limit Statistic
- (3) Statistic Used to determine Exposure Point Concentration
- * Insufficient number of detected concentrations (less than three) to permit calculation of arithmetic mean.
- (a) Tap water value for Chromium (VI) from USEPA RSL (Dec. 2009) used as screening value for chromium.

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because data has fewer than 4 detected concentrations. (2) Data appears normally distributed, method recommended by ProUCL 4.00.04. (3) Data do not follow a discernable distribution [ProUCL 4.00.04], nonparametric UCL recommended. (4) Data follow approximate gamma distribution at 5% significance level, 95% approximate gamma recommended by ProUCL 4.00.04.

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

Definitions:

- ft bgs Feet below ground surface
- µg/l micrograms per liter

Qualifier:

- J Estimated Value

TABLE 3.3
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Sediment (Beer Kill system)
Exposure Medium: Sediment

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (2)	Rationale
SEMI-VOLATILE ORGANICS									
Beer Kill Sediment	Benzo(a)pyrene	(mg/kg)	1.80E-01	--	4.60E-02 (J)	4.60E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Phenanthrene	(mg/kg)	1.76E-01	--	4.10E-02 (J)	4.10E-02	(mg/kg)	Maximum Detected Concentration	(1)
PESTICIDES / PCBs									
Beer Kill Sediment	Endrin ketone	(mg/kg)	1.77E-03	--	2.50E-04 (J)	2.50E-04	(mg/kg)	Maximum Detected Concentration	(1)
METALS									
Beer Kill Sediment	Arsenic	(mg/kg)	3.97E+00	--	5.30E+00	5.30E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Chromium	(mg/kg)	7.77E+00	--	8.80E+00 (J)	8.80E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Cobalt	(mg/kg)	7.05E+00	--	8.00E+00 (B)	8.00E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Iron	(mg/kg)	1.60E+04	--	1.93E+04	1.93E+04	(mg/kg)	Maximum Detected Concentration	(1)
	Manganese	(mg/kg)	7.95E+02	--	9.98E+02 (J)	9.98E+02	(mg/kg)	Maximum Detected Concentration	(1)

Footnotes

- (1) Arithmetic mean calculated with inclusion of non-detect values, utilizing DL/2 substitution when applicable.
- (2) 95% UCL was not calculated because there were less than 10 total samples. The maximum detected concentration was used to represent the EPC.

mg/kg milligrams per kilogram

Note: No volatile organic compounds were determined to be chemicals of potential concern.

Qualifiers:

- J Estimated Value
- B Analyte Found in Associated Blank

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because there were less than 10 total samples.

TABLE 3.4
 EXPOSURE POINT CONCENTRATION SUMMARY
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Surface Water (Beer Kill System)
Exposure Medium: Surface Water

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution) (1)	Maximum Concentration	Exposure Point Concentration			
						Value	Units	Statistic (2)	Rationale
	No Chemicals of Potential Concern								

Footnotes

(1) & (2) 95% UCL was not calculated due to n being less than 8. The maximum concentration value was used instead.

Note: No volatile organic compounds, semi-volatile organic compounds, pesticides, PCBsm or metals were determined to be chemicals of potential concern.

TABLE 3.5
 EXPOSURE POINT CONCENTRATION SUMMARY
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Leachate
Exposure Medium: On-site Leachate Areas and Surface Water

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration				
						Value	Units	Statistic (2)	Rationale	
VOLATILE ORGANICS										
	Chloroform	(µg/L)	4.50E-01	--	4.50E-01 (J)	4.50E-01	(µg/L)	Maximum Detected Concentration	n<10	
SEMI-VOLATILE ORGANICS										
On-Site Leachate	Benzo(a)anthracene	(µg/L)	2.23E+00	--	4.00E+00 (J)	4.00E+00	(µg/L)	Maximum Detected Concentration	n<10	
Areas and Upland Surface	Benzo(a)pyrene	(µg/L)	2.26E+00	--	4.00E+00 (J)	4.00E+00	(µg/L)	Maximum Detected Concentration	n<10	
Water	Benzo(b)fluoranthene	(µg/L)	6.50E-01	--	6.50E-01 (J)	6.50E-01	(µg/L)	Maximum Detected Concentration	n<10	
	Benzo(g,h,i)perylene	(µg/L)	3.00E+00	--	3.00E+00 (J)	3.00E+00	(µg/L)	Maximum Detected Concentration	n<10	
	Benzo(k)fluoranthene	(µg/L)	3.11E+00	--	6.00E+00 (J)	6.00E+00	(µg/L)	Maximum Detected Concentration	n<10	
	Carbazole	(µg/L)	3.33E+00	--	7.00E+00 (J)	7.00E+00	(µg/L)	Maximum Detected Concentration	n<10	
	Chrysene	(µg/L)	2.69E+00	--	5.00E+00 (J)	5.00E+00	(µg/L)	Maximum Detected Concentration	n<10	
	Dibenzo(a,h)anthracene	(µg/L)	1.00E+00	--	1.00E+00 (J)	1.00E+00	(µg/L)	Maximum Detected Concentration	n<10	
	Indeno(1,2,3-cd)pyrene	(µg/L)	3.00E+00	--	3.00E+00 (J)	3.00E+00	(µg/L)	Maximum Detected Concentration	n<10	
	Naphthalene	(µg/L)	4.00E+00	--	4.00E+00 (J)	4.00E+00	(µg/L)	Maximum Detected Concentration	n<10	
	Phenanthrene	(µg/L)	5.14E+00	--	1.00E+01 (J)	1.00E+01	(µg/L)	Maximum Detected Concentration	n<10	
PESTICIDES / PCBs										
On-Site Leachate	Dieldrin	(µg/L)	2.40E-02	--	2.40E-02 (J)	2.40E-02	(µg/L)	Maximum Detected Concentration	n<10	
Areas and Upland Surface	alpha-Chlordane	(µg/L)	3.00E-02	--	3.00E-02 (J)	3.00E-02	(µg/L)	Maximum Detected Concentration	n<10	
Water	Aroclor-1260	(µg/L)	5.40E-01	--	5.40E-01 (J)	5.40E-01	(µg/L)	Maximum Detected Concentration	n<10	

TABLE 3.5
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Leachate
Exposure Medium: On-site Leachate Areas and Surface Water

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration				
						Value	Units	Statistic (2)	Rationale	
METALS										
On-Site Leachate	Aluminum	(µg/L)	2.64E+03	--	9.10E+03	9.10E+03	(µg/L)	Maximum Detected Concentration	n<10	
Areas and Upland Surface	Arsenic	(µg/L)	5.80E+01	--	5.80E+01	5.80E+01	(µg/L)	Maximum Detected Concentration	n<10	
Water	Barium	(µg/L)	3.23E+02	--	8.10E+02	8.10E+02	(µg/L)	Maximum Detected Concentration	n<10	
	Cadmium	(µg/L)	5.85E+00	--	1.00E+01	1.00E+01	(µg/L)	Maximum Detected Concentration	n<10	
	Chromium (a)	(µg/L)	4.62E+01	--	1.10E+02	1.10E+02	(µg/L)	Maximum Detected Concentration	n<10	
	Copper	(µg/L)	3.06E+02	--	8.30E+02	8.30E+02	(µg/L)	Maximum Detected Concentration	n<10	
	Iron	(µg/L)	1.30E+04	--	5.40E+04	5.40E+04	(µg/L)	Maximum Detected Concentration	n<10	
	Lead	(µg/L)	4.16E+02	--	1.80E+03	1.80E+03	(µg/L)	Maximum Detected Concentration	n<10	
	Manganese	(µg/L)	3.92E+02	--	8.05E+02	8.05E+02	(µg/L)	Maximum Detected Concentration	n<10	
	Nickel	(µg/L)	5.49E+01	--	1.00E+02	1.00E+02	(µg/L)	Maximum Detected Concentration	n<10	
	Vanadium	(µg/L)	1.00E+02	--	1.00E+02	1.00E+02	(µg/L)	Maximum Detected Concentration	n<10	
	Zinc	(µg/L)	1.32E+03	--	5.30E+03	5.30E+03	(µg/L)	Maximum Detected Concentration	n<10	

Footnotes

- (1) Arithmetic mean calculated with inclusion of non-detect values, utilizing DL/2 substitution when applicable.
- (2) 95% UCL was not calculated because there were less than 10 total samples. The maximum detected concentration was used to represent the EPC.
- µg/L micrograms per liter
- J Estimated Value
 - a. Tap water value for Chromium (VI) from USEPA RSL (Dec. 2009) used as screening value for chromium.

TABLE 3.7
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface Soil (0 - 2 ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
SEMI-VOLATILE ORGANICS									
Off-Site Residential Soil	Acenaphthylene	(mg/kg)	1.07E-01	--	5.3E-02 (J)	5.3E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(a)anthracene	(mg/kg)	1.26E-01	1.69E-01 (NP)	8.60E-01	1.69E-01	(mg/kg)	95% KM (BCA)	(2)
	Benzo(a)pyrene	(mg/kg)	1.20E-01	1.53E-01 (NP)	7.40E-01	1.53E-01	(mg/kg)	95% KM (BCA)	(2)
	Benzo(b)fluoranthene	(mg/kg)	1.52E-01	4.04E-01 (NP)	1.30E+00	4.04E-01	(mg/kg)	97.5% KM (Chebyshev)	(2)
	Benzo(g,h,i)perylene	(mg/kg)	9.44E-02	8.75E-02 (NP)	1.40E-01 (J)	8.75E-02	(mg/kg)	95% KM (t)	(2)
	Carbazole	(mg/kg)	1.02E-01	6.43E-02 (NP)	8.80E-02 (J)	6.43E-02	(mg/kg)	95% KM (t) UCL	(2)
	Dibenzo(a,h)anthracene	(mg/kg)	1.06E-01	7.89E-02 (NP)	9.60E-02 (J)	7.89E-02	(mg/kg)	95% KM (t)	(2)
	Indeno(1,2,3-cd)pyrene	(mg/kg)	9.80E-02	9.70E-02 (NP)	3.20E-01 (J)	9.70E-02	(mg/kg)	95% KM (t)	(2)
	Phenanthrene	(mg/kg)	1.19E-01	1.41E-01 (NP)	4.90E-01	1.41E-01	(mg/kg)	95% KM (BCA)	(2)
PESTICIDES / PCBs									
Off-Site Residential Soil	Endrin aldehyde	(mg/kg)	3.44E-03	4.73E-03 (NP)	4.20E-02 (J)	4.73E-03	(mg/kg)	95% KM (t)	(2)
	Endrin ketone	(mg/kg)	2.58E-03	3.62E-03 (NP)	1.30E-02 (J)	3.62E-03	(mg/kg)	95% KM (Percentile Bootstrap)	(2)
	Endosulfan II	(mg/kg)	1.98E-03	1.23E-03 (NP)	1.30E-03 (J)	1.23E-03	(mg/kg)	95% KM (Percentile Bootstrap)	(2)
	delta-BHC	(mg/kg)	1.09E-03	--	3.60E-03	3.60E-03	(mg/kg)	Maximum Detected Concentration	(1)
	gamma-Chlordane	(mg/kg)	1.48E-03	1.83E-03 (NP)	1.50E-02 (J)	1.83E-03	(mg/kg)	95% KM (t)	(2)
		Aroclor-1260	(mg/kg)	6.25E-02	8.32E-02 (NP)	3.80E-01	8.32E-02	(mg/kg)	95% KM (t)
METALS									
Off-Site Residential Soil	Aluminum	(mg/kg)	6.25E+03	6.55E+03 (N)	8.92E+03	6.55E+03	(mg/kg)	95% Student's-t	(3)
	Antimony	(mg/kg)	5.59E+01	5.49E+02 (NP)	2.21E+03 (J)	5.49E+02	(mg/kg)	99% KM (Chebyshev)	(2)
	Arsenic	(mg/kg)	5.79E+00	6.69E+00 (N)	2.03E+01	6.69E+00	(mg/kg)	95% Modified-t	(3)
	Barium	(mg/kg)	1.93E+02	5.36E+02 (NP)	3.59E+03 (J)	5.36E+02	(mg/kg)	95% Chebyshev(Mean, Sd)	(4)
	Cadmium	(mg/kg)	7.14E-01	1.39E+00 (NP)	1.38E+01 (J)	1.39E+00	(mg/kg)	95% KM (% Bootstrap)	(2)
	Chromium (a)	(mg/kg)	1.18E+01	1.29E+01 (N)	2.62E+01	1.29E+01	(mg/kg)	95% Modified-t	(3)
	Cobalt	(mg/kg)	6.14E+00	6.43E+00 (G)	9.60E+00 (B)	6.43E+00	(mg/kg)	95% Approximate Gamma	(5)
		Copper	(mg/kg)	6.67E+01	1.63E+02 (NP)	7.51E+02	1.63E+02	(mg/kg)	95% Chebyshev(Mean, Sd)

TABLE 3.7
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface Soil (0 - 2 ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
Off-Site Residential Soil	Iron	(mg/kg)	1.64E+04	1.87E+04 (N)	6.02E+04	1.87E+04	(mg/kg)	95% Modified-t	(4)
	Lead	(mg/kg)	5.97E+03	--	2.30E+05	5.97E+03	(mg/kg)	Arithmetic Mean	(6)
	Manganese	(mg/kg)	5.39E+02	5.83E+02 (N)	8.18E+02 (J)	5.83E+02	(mg/kg)	95% Student's-t	(3)
	Mercury (b)	(mg/kg)	1.87E-01	2.64E-01 (NP)	1.30E+00	2.64E-01	(mg/kg)	95% KM (BCA)	(2)
	Zinc	(mg/kg)	3.81E+02	1.57E+03 (NP)	4.09E+03 (J)	1.57E+03	(mg/kg)	99% Chebyshev (Mean, Sd)	(4)

Footnotes:

- (1) Arithmetic mean using DL/2, calculated by ProUCL 4.00.04
- (2) Upper Confidence Limit calculated by ProUCL 4.00.04
- (3) Statistic Used to determine Exposure Point Concentration
- (a) Cr(VI) value used for screening of chromium data.
- (b) Methyl mercury value used for screening of mercury data.

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank

Rationale Codes: (1) Maximum detected concentration is used as the EPC because data have fewer than 4 detected concentrations. (2) Data have multiple DLs, Use of Kaplan-Meier method recommended by ProUCL 4.00.04. (3) Data appear normally distributed. (4) Data do not follow a discernable distribution [ProUCL 4.00.04], nonparametric UCL recommended. (5) Data follow approximate gamma distribution at 5% significance level, 95% approximate gamma recommended by ProUCL 4.00.04. (6) Arithmetic mean used for EPC for lead.

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

Note: No volatile organic compounds were determined to be chemicals of potential concern.

Table 4.1a RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Medium: Soil
 Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Ingestion	Trespasser / Recreator	Child/Adult	On-site Surface Soil	CS	Chemical Concentration in Surface Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x IR x CF x FI x EF x ED) / (BW x AT)
				IR _c	Ingestion Rate (child)	200	mg/day	conservatively assume rates comparable to residential receptor	
					MOA chemical - child (0-2 years)	200	mg/day	EPA 2008,2009	
					MOA chemical - child (2-6 years)	200	mg/day	EPA 2008,2009	
					MOA chemical - child (6-16 years)	200	mg/day	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	100	mg/day	EPA 2008, 2009	
				IR _a	Ingestion Rate (adult)	100	mg/day	conservatively assume rates comparable to residential receptor	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				FI	Fraction Ingested	100%	unitless	best professional judgment	
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgment	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009	
ED _a	Exposure Duration (adult)	24	years	best professional judgment					
BW _c	Body Weight (child)	15	kg	EPA 1991					

Table 4.1a RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Medium: Soil
 Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Ingestion	Trespasser / Recreator	Child/Adult	On-site Surface Soil	BW	MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,2007	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,2007	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,2007	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,2007	
Ingestion	Trespasser / Recreator	Child/Adult	On-site Surface Soil	BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365	days	EPA 1989	
Ingestion	Trespasser / Recreator	Child/Adult Aggregate	On-site Surface Soil	IR-adj	Ingestion Rate (age-adjusted)	114.29	mg-yr/kg-day	calculated	Intake (mg/kg-day) = CS x IR-adj x EF x CF x 1/AT IR-adj = (ED-C x IR-C / BW-C) + (ED-A x IR-A / BW-A)
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	NA	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	
Ingestion	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	CS	Chemical Concentration in Off-Site Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x IR x CF x FI x EF x ED) / (BW x AT)
				IR _c	Ingestion Rate (child)	200	mg/day	EPA 1991	
					MOA chemical - child (0-2 years)	200	mg/day	EPA 2008,2009	
					MOA chemical - child (2-6 years)	200	mg/day	EPA 2008,2009	
					MOA chemical - child (6-16 years)	200	mg/day	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	100	mg/day	EPA 2008,2009	
				IR _a	Ingestion Rate (adult)	100	mg/day	EPA 1991	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				FI	Fraction Ingested	100%	unitless	best professional judgment	
EF	Exposure Frequency	350	days/yr	EPA 1991					

Table 4.1a RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Medium: Soil
 Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)	
Ingestion	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	ED _c	Exposure Duration (child)	6	years	EPA 1991		
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009		
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009		
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009		
					MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009		
				ED _a	Exposure Duration (adult)	24	years	EPA 1991		
	BW _c	Body Weight (child)	15	kg	EPA 1991					
Ingestion	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil		MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009, 1997		
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009, 1997		
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009, 1997		
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009, 1997		
					BW _a	Body Weight (adult)	70	kg		EPA 1991
					AT	Averaging Time	ED x 365	days		EPA 1989
Ingestion	Resident	Child/Adult Aggregate	Residences A-I Surface Soil and On-site Surface Soil	IR-adj	Ingestion Rate (age-adjusted)	114.29	mg-yr/kg-day	calculated	Intake (mg/kg-day) = CS x IR-adj x EF x CF x 1/AT	
					EF	Exposure Frequency	350	days/yr		EPA 1991
					CF	Conversion Factor	10 ⁻⁶	kg/mg		NA
					AT-C	Averaging Time - Cancer	25,550	days		EPA 1989
Dermal	Trespasser / Recreator	Child/Adult	On-site Surface Soil	CS	Chemical Concentration in Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x CF x SA x AF x ABS x EF x ED) / (BW x AT)	
					CF	Conversion Factor	10 ⁻⁶	kg/mg		N/A

Table 4.1a RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Soil
Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Dermal	Trespasser / Recreator	Child/Adult	On-site Surface Soil	SA _c	Skin Surface Area (child)	2800	cm ²	EPA 2004	
					MOA chemical - child (0-2 years)	2598	cm²/event	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	2939	cm²/event	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	4111	cm²/event	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	5700	cm²/event	EPA 2008,2009, 1997	
				SA _a	Skin Surface Area (adult)	5700	cm ²	EPA 2004	
				AF _c	Adherence Factor (child)	0.2	mg/cm ²	EPA 2002	
					MOA chemical - child (0-2 years)	0.2	mg/cm²	EPA 2008,2009	
					MOA chemical - child (2-6 years)	0.2	mg/cm²	EPA 2008,2009	
					MOA chemical - child (6-16 years)	0.2	mg/cm²	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	0.07	mg/cm²	EPA 2008,2009	
				AF _a	Adherence Factor (adult)	0.07	mg/cm ²	EPA 2002	
				ABS	Absorption Factor	chem spec	unitless	EPA 2004	
				EF _c	Exposure Frequency (child)	40	events/yr	EPA 1997	
				EF _a	Exposure Frequency (adult)	40	events/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgment	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009	

Table 4.1a RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Medium: Soil
 Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Dermal	Trespasser / Recreator	Child/Adult	On-site Surface Soil	ED _a	Exposure Duration (adult)	24	years	best professional judgment	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,1997	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
	AT	Averaging Time	ED x 365	days	EPA 1989				
Dermal	Trespasser / Recreator	Child / Adult Aggregate	On-site Surface Soil	DA -adj	Dermal Absorption, age-adjusted	361	mg-yr/kg-event	calculated	Intake (mg/kg-day) = CS x DA-adj x ABS x CF x EF x 1/AT
				ABS	Dermal Absorption Factor Solids	chem spec	unitless	EPA 2004	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	NA	
				EF	Exposure Frequency	40	events/yr	EPA 1997	
				AT-C	Averaging Time - Carcinogens	25,550	day	EPA 1989	
Dermal	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	CS	Chemical Concentration in Off-Site Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x CF x SA x AF x ABS x EF x ED) / (BW x AT)
				CF	Conversion Factor	10 ⁻⁶	kg/mg	-	
				SA _c	Skin Surface Area (child)	2800	cm ² /event	EPA 2002	
					MOA chemical - child (0-2 years)	2598	cm²/event	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	2939	cm²/event	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	4111	cm²/event	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	5700	cm²/event	EPA 2008,2009, 1997	
				SA _a	Skin Surface Area (adult)	5700	cm ² /event	EPA 2002	

Table 4.1a RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Medium: Soil
 Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Dermal	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	AF _c	Adherence Factor (child)	0.2	mg/cm ²	EPA 2002	
					MOA chemical - child (0-2 years)	0.2	mg/cm²	EPA 2008,2009	
					MOA chemical - child (2-6 years)	0.2	mg/cm²	EPA 2008,2009	
					MOA chemical - child (6-16 years)	0.2	mg/cm²	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	0.07	mg/cm²	EPA 2008,2009	
				AF _a	Adherence Factor (adult)	0.07	mg/cm ²	EPA 2002	
				ABS	Absorption Factor	chem spec	unitless	EPA 2004	
				EF _c	Exposure Frequency (child)	350	events/yr	EPA 1991	
				EF _a	Exposure Frequency (adult)	350	events/yr	EPA 1991	
				ED _c	Exposure Duration (child)	6	years	EPA 1991	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009	
ED _a	Exposure Duration (adult)	24	years	EPA 1991					
BW _c	Body Weight (child)	15	kg	EPA 1991					
Dermal	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil		MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,1997	

Table 4.1a RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Medium: Soil
 Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Dermal	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil		MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,1997	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365	days	EPA 1989	
Dermal	Resident	Child / Adult Aggregate	Residences A-I Surface Soil and On-site Surface Soil	DA -adj	Dermal Absorption, age-adjusted	361	mg-yr/kg- event	calculated	Intake (mg/kg-day) = CS x DA-adj x ABS x CF x EF x 1/AT DA-adj = (ED-C x SA-C x AF-C / BW- C) + (ED-A x SA-A x AF-A / BW-A)
				ABS	Dermal Absorption Factor Solids	chem spec	unitless	EPA 2004	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	NA	
				EF	Exposure Frequency	350	events/yr	EPA 1991	
				AT-C	Averaging Time - Carcinogens	25,550	day	EPA 1989	
Inhalation	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	CA	Chemical Concentration in Air	chem spec	mg/m ³	calculated	EC = (CA x ET x EF x ED x CF) x 1/AT Where CA (mg/m ³) = CS / PEF
				CS	chemical concentration in soil	EPC	mg/kg	RAGS Part D Table 3	
				PEF	Particulate Emission Factor	8.31E+08	m ³ /kg	calculated	
				ET	Exposure Time	24	hr/day	EPA 2009	
				EF	Exposure Frequency	350	days/yr	EPA 1991	
				ED _c	Exposure Duration (child)	6	years	EPA 1991	
				ED _a	Exposure Duration (adult)	24	years	EPA 1991	
				AT	Averaging Time	ED x 365	days	EPA 1989	
				CF	Conversion Factor	1/24	days/hr	EPA 1989	
Inhalation	Resident	Child/Adult Aggregate	Residences A-I Surface Soil and On-site Surface Soil	CA	Chemical Concentration in Air	chem spec	mg/m ³	calculated	EC = CA x ET x EF x ED x CF x 1/AT Where CA (mg/m ³) = CS / PEF
				PEF	Particulates Emissions Factor	8.31E+08	m ³ /kg	calculated	
				ET	Exposure Time	24	hr/day	EPA 2009	
				EF	Exposure Frequency	350	days/yr	EPA 1991	
				ED	Exposure Duration	30	years	EPA 1991	

Table 4.1a RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Medium: Soil
 Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Inhalation	Resident	Child/Adult Aggregate	Residences A-I Surface Soil and On-site Surface Soil	AT-C	Averaging Time - Carcinogens	25,550	days	EPA 1989	
				CF	Conversion Factor	1/24	days/hr	NA	
Inhalation	Trespasser / Recreator	Child/Adult	On-site (0-2 ft)	CA	Chemical Concentration in Air	chem spec	mg/m ³	calculated	$EC = (CA \times ET \times EF \times ED \times CF) / AT$
				ET	Exposure Time	2	hr/day	EPA 2009	Where $CA \text{ (mg/m}^3\text{)} = CS / PEF$
				PEF	Particulates Emissions Factor	8.31E+08	m ³ /kg	See Table 4.1a RME Supplement	
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgment	
				ED _a	Exposure Duration (adult)	24	years	best professional judgment	
				AT	Averaging Time	ED x 365	days	EPA 1989	
CF	Conversion Factor	1/24	days/hr	NA					
Inhalation	Trespasser / Recreator	Child/Adult Aggregate	On-site (0-2 ft)	CA	Chemical Concentration in Air	chem spec	mg/m ³	calculated	$EC = CA \times ET \times EF \times ED \times CF \times 1/AT$
				PEF	Particulates Emissions Factor	8.31E+08	m ³ /kg	See Table 4.1a RME Supplement	Where $CA \text{ (mg/m}^3\text{)} = CS / PEF$
				ET	Exposure Time	2	hr/day	best professional judgment	
				EF	Exposure Frequency	40	day/yr	EPA 1997	
				ED	Exposure Duration	30	years	best professional judgment	
				AT-C	Averaging Time - Carcinogens	25,550	days	EPA 1989	
CF	Conversion Factor	1/24	days/hr	NA					

Table 4.1a RME Soil Supplement
 Calculation of PEF for Residential Setting
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Formula:	
$PEF = Q/C_{wind} \times \frac{3600}{(0.036 \times V \times (U_m/U_t)^3 \times F(x))} = 8.31E+08$	<p>Note: this PEF used for resident and other receptors except construction workers</p>
Variables:	
Q/C_{wind} V U_m U_t $F(x)$	calculated (g/m ² -s per kg/m ³) fraction of vegetative cover (assumed to be 50%) mean annual wind speed (m/s), value of 4.69 used equivalent threshold value of windspeed at 7 m (m/s), value of 11.32 used derived value (0.194)
Q/C_{wind}	Geographical Zone 8 selected (Hartford, CT) $Q/C = \frac{A \times \exp \{ (\ln A_{site} - B) \}}{C} = 57.3$ <p>A_{site} = areal extent of site contamination, acres (value of 22.05 acres used, summing AOC 1-5)</p> <p>A, B, C constants from Exhibit D-4 of guidance</p> <p style="margin-left: 40px;"> $A = 15.3353$ $B = 21.669$ $C = 261.7432$ </p>

Table 4.1b RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: Surface Soil, Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Ingestion	Commercial / Industrial worker	Adult	On-site Surface Soil	CS	Chemical Concentration in Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x IR x CF x FI x EF x ED) / (BW x AT)
				IR _a	Ingestion Rate (adult)	100	mg/day	EPA 2001	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				FI	Fraction Ingested	100%	unitless	best professional judgment	
				EF	Exposure Frequency	250	days/yr	EPA 1991	
				ED	Exposure Duration	25	years	EPA 1991	
				BW	Body Weight	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	
Ingestion	Construction / Utility worker	Adult	On-site Subsurface Soil	CS	Chemical Concentration in Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x IR x CF x FI x EF x ED) / (BW x AT)
				IR _a	Ingestion Rate (adult)	330	mg/day	EPA 2001	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				FI	Fraction Ingested	100%	unitless	best professional judgment	
				EF	Exposure Frequency	250	days/yr	EPA 1991	
				ED _a	Exposure Duration (adult)	1	years	best professional judgment	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	
Dermal	Commercial / Industrial worker	Adult	On-site Surface Soil	CS	Chemical Concentration in Soil	EPC	mg/kg	RAGS D Table 3	Intake (mg/kg-day) = (CS x CF x SA x AF x ABS x EF x ED) / (BW x AT)
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				SA	Skin Surface Area	3300	cm ²	EPA 2004	
				AF	Adherence Factor	0.07	mg/cm ²	EPA 2004	
				ABS	Absorption Factor	chem-spec	unitless	EPA 2004	

Table 4.1b RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Dermal	Commercial / Industrial worker	Adult	On-site Surface Soil	EF	Exposure Frequency	250	events/yr	EPA 1991	
				ED	Exposure Duration	25	years	EPA 1991	
				BW	Body Weight	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	
Dermal	Construction / Utility worker	Adult	On-site Subsurface Soil	CS	Chemical Concentration in Soil	EPC	mg/kg	RAGS	Intake (mg/kg-day) = (CS x CF x SA x AF x ABS x EF x ED) / (BW x AT)
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				SA	Skin Surface Area	3300	cm ²	EPA 2004	
				AF	Adherence Factor	0.3	mg/cm ²	EPA 2004	
				ABS	Absorption Factor	chem-spec	unitless	EPA 2004	
				EF	Exposure Frequency	250	events/yr	EPA 1991	
				ED	Exposure Duration	1	years	best professional judgment	
				BW	Body Weight	70	kg	EPA 1991	
AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989					
Inhalation	Commercial / Industrial worker	Adult	On-site Surface Soil	CA	Chemical Concentration in Air	chem-spec	mg/m ³	calculated	EC (mg/m ³) = (CA x ET x EF x ED x CF) / AT Where CA (mg/m ³) = CS / PEF
				ET	Exposure Time	8	hr/day	EPA 2009	
				PEF	Particulates Emissions Factor	8.31E+08	m ³ /kg	See Table 4.1a RME Supplement	
				EF	Exposure Frequency	250	days/yr	EPA 1991	
				ED	Exposure Duration	25	years	EPA 1991	
				CF	Conversion Factor	1/24	days/hr	NA	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	
Inhalation	Construction / Utility worker	Adult	On-site Subsurface Soil	CA	Chemical Concentration in Air	chem-spec	mg/m ³	calculated	EC (mg/m ³) = (CA x ET x EF x ED x CF) / AT Where CA (mg/m ³) = CS / PEF
				ET	Exposure Time	8	hr/day	EPA 2009	
				PEF	Particulates Emissions Factor	1.35E+06	m ³ /kg	See Table 4.1b RME Supplement	
				EF	Exposure Frequency	250	days/yr	EPA 1991	

Table 4.1b RME Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
	Construction / Utility worker	Adult	On-site Subsurface Soil	ED	Exposure Duration	1	years	best professional judgment	
				CF	Conversion Factor	1/24	days/hr	NA	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	

Table 4.1b RME Soil Supplement
 Calculation of PEF for Construction Worker
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Formula:	
$PEF = Q/Csr \times \frac{1}{F_D} \times \frac{T \times A_R}{556 \times (W/3)^{0.4} \times (365 - p)/365 \times \sum VKT} = 1.35E+06$	
Variables:	
PEF calculated from Equation 5-5 of Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites (Dec. 2002)	
Q/Csr	Inverse of the ration of the 1-h geometric mean air concentration to the emission flux along a straight road segment bisecting a square site (g/m ² -s per kg/m ³): 39.8 (calculated below)
F _D	Dispersion correction factor (unitless) (0.185) Appendix E of Supplemental Guidance
$F_D = 0.1852 + \frac{5.3537}{t_c} + \frac{-9.6318}{t_c^2} = 0.1879$ <p style="text-align: right; margin-right: 100px;">t_c = duration of construction (hrs) 250 days x 8 hr/day = 2000 hrs</p>	
T	Total time over which construction occurs (in seconds, based on 12 month duration of disturbed soil): 7,200,000
A _R	Surface area of contaminated road segment (m ²) (A _R = L _R x W _R x 0.092903m ² /ft ²) = 1672 m²
<p style="margin-left: 40px;">L_R length of road segment (assumed to be 900 ft based on distance from Cape Road to Beer Kill, following historic dirt road)</p> <p style="margin-left: 40px;">W_R width of road segment (assumed to be 20 ft, or 6.10 m)</p>	
W	Mean vehicle weight (tons) (8 tons assumed , based on 2 cars per every 1 truck; cars assumed at 2 tons each and trucks at 20 tons each)
p	Number of days with at least .01 inches of precipitation (days/yr) (150 , based on Exhibit 5-2 of Supplemental Guidance)
VKT	Sum of fleet vehicles kilometers traveled during the exposure duration (km) Assume 20 vehicles/fleet, L _R distance per vehicle trip, 5 days/week, and 12 month duration. (900 ft x 20 vehicles per day, 250 days: 4,500,000 ft, or 1371 km)
Q/Csr	$Q/C = \frac{A \times \exp \{ (\ln A_{site} - B) / C \}}{C} = 14.3$ <p style="margin-left: 40px;">A_{site} = areal extent of site contamination, acres (value of 22.05 acres used, summing AOC 1-5)</p> <p style="margin-left: 40px;">A, B, C constants from Exhibit D-2 of guidance A = 12.9351 B = 5.7383 C = 71.7711</p>

Table 4.2a RME Groundwater
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Groundwater
 Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/ Model Name (1)
Ingestion	Residential	Child/Adult	On-site groundwater (tap water)	CW	Chemical Concentration in Water	EPC	mg/L	RAGS Part D Table 3	Intake (mg/kg-day) = (CW x IR x EF x ED) / (BW x AT)
				IR _c	Ingestion Rate (child)	1.5	liters/day	EPA 1997b	
					MOA chemical - child (0-2 years)	1.13	liters/day	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	1.5	liters/day	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	1.75	liters/day	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	2	liters/day	EPA 2008,2009, 1997	
				IR _a	Ingestion Rate (adult)	2	liters/day	EPA 1991	
				EF _c	Exposure Frequency (child)	350	days/yr	EPA 2004	
				EF _a	Exposure Frequency (adult)	350	days/yr	EPA 2004	
				ED _c	Exposure Duration (child)	6	years	best professional judgement	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	24	years	best professional judgement	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009, 1997	
BW _a	Body Weight (adult)	70	kg	EPA 1991					
AT	Averaging Time	ED x 365	days	EPA 1989					

Table 4.2a RME Groundwater
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/ Model Name (1)	
Ingestion	Residential	Child/Adult Aggregate	On-site groundwater (tap water)	IR-W-adj	Ingestion rate of water, age-adjusted	1.29	L-yr/kg-day	calc	Intake = CW x IR-W-adj x EF x 1/AT-C	
				EF	Exposure Frequency	350	days/yr	EPA 2004		IR-W-adj = $[(ED_c \times IR_c) / BW_c] + [(ED_a \times IR_a) / BW_a]$
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989		
Ingestion	Commercial / Industrial Worker	Adult	On-site groundwater (tap water)	Cw	Chemical Concentration in Water	EPC	mg/L	RAGS Part D Table 3 series for each risk estimate will document the rationale.	Intake (mg/kg-day) = (CW x IR x EF x ED) / (BW x AT)	
				IR _a	Ingestion Rate (adult)	2	liters/day			
				EF _a	Exposure Frequency (adult)	250	days/yr	EPA 2004		
				ED _a	Exposure Duration (adult)	25	years	professional judgement		
				BW _a	Body Weight (adult)	70	kg	EPA 1991		
				AT	Averaging Time	ED or 25,500	days	EPA 1989		
Dermal	Residential	Child/Adult	On-site groundwater (shower/bathing)	DAD	Dermally Absorbed Dose	calc	mg/kg-day	calc	DAD = DAevent x EV x ED x EF x SA / BW x AT	
				DAevent	Absorbed Dose per Event	calc	mg/cm ² - event	calc		
				SAC	MOA chemical - child (0-2 years)	6,600	cm ²	EPA 2004		inorganics:
					MOA chemical - child (2-6 years)	5,900	cm ²	EPA 2008,2009, 1997		
					MOA chemical - child (6-16 years)	6,880	cm ²	EPA 2008,2009, 1997		
					MOA chemical - adult (16-30 years)	12,346	cm ²	EPA 2008,2009, 1997		
				SA _a	Skin Surface Area (adult)	18,000	cm ²	EPA 2004		DAevent = Kp x Cw x tevent
				EV	Event Frequency	1	events/day	EPA 2004		
				EF	Exposure Frequency	350	days/year	EPA 2004		
				ED _c	MOA chemical - child (0-2 years)	6	years	EPA 2004		
					MOA chemical - child (2-6 years)	2	years	EPA 2008,2009		
					MOA chemical - child (6-16 years)	4	years	EPA 2008,2009		
					MOA chemical - adult (16-30 years)	10	years	EPA 2008,2009		
				ED _a	MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009		
					Exposure Duration (adult)	24	years	EPA 2004		
					BW _c	Body Weight (child)	15	kg		

Table 4.2a RME Groundwater
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Dermal	Residential	Child/Adult	On-site groundwater (shower/bathing)	BW	MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009, 1997	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365	days	EPA 1989	
				FA	Fraction Absorbed in Water	chem spec	unitless	EPA 2004	
				Kp	Dermal Permeability Coefficient	chem spec	cm/hr	EPA 2004	
				Cw	Chemical Concentration in Water	EPC	mg/cm ³	RAGS Part D Table 3	
				t _{event}	Lag Time per Event	chem spec	hr/event	EPA 2004	
				t _{event,c}	Event Duration (child)	1	hr/event	EPA 2004	
				t _{event,a}	Event Duration (adult)	0.58	hr/event	EPA 2004	
				t*	Time to Reach Steady State	chem spec	hr	EPA 2004	
B	Ratio of permeability coefficient of compound through stratum corneum relative to permeability coefficient across viable epidermis	chem spec	unitless	EPA 2004					
Dermal	Residential	Child/Adult Aggregate	On-site groundwater (shower/bathing)	DAevent-adj	Dermally Absorbed Dose, age-adjusted	calc	mg-yr/event-kg	calc	DAevent-adj = (DAevent - A x SA-A x ED-A x 1/BW-A) + (DAevent-C x SA-C x ED-C x 1/BW-C) DAD = DAevent-adj x EV x EF / AT-C
				EV	Event Frequency	1	event/day	EPA 2004	
				EF	Exposure Frequency	350	days/yr	EPA 2004	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	
Dermal	Commercial / Industrial worker	Adult	On-site groundwater (shower/bathing)	Cw	Chemical Concentration in Water	EPC	mg/L	RAGS Part D Table 3 series for each risk estimate will document the rationale.	Intake (mg/kg-day) = (CW x SA x PC x ET x EF x ED x CF) / (BW x AT)
				Sa	Skin Surface Area	18,000	cm ²	EPA 2004	
				PC	Permeability Constant	chem spec	cm/hr		
				ET	Exposure Time	0.25	hours/day	EPA 1997	
				EF	Exposure Frequency	250	days/year	EPA 2004	
				ED	Exposure Duration	25	years	professional judgement	
				CF	Conversion Factor	1L/1000cm ³		N/A	
				BW	Body Weight	70	kg	EPA 1991	

Table 4.2a RME Groundwater
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Dermal	Commercial / Industrial worker	Adult	On-site groundwater (shower/bathing)	AT	Averaging Time	ED or 25,500	days	EPA 1989	
Dermal	Construction / Utility worker	Adult	Shallow on-site groundwater (excavation)	DAD	Dermally Absorbed Dose	calc	mg/kg-day	calc	$DAD = DA_{event} \times EV \times ED \times EF \times SA / BW \times AT$
				DA _{event}	Absorbed Dose per Event	calc	mg/cm ² - event cm ²	calc	
				SA	Skin Surface Area	3,300	cm ²	EPA 2004	organics:
				EV	Event Frequency	1	events/day	EPA 2004, prof judg	$DA_{event} = \text{If } t_{event} \leq t^*, \text{ then: } DA_{event} = 2 \text{ FA} \times K_p \times C_w \sqrt{(6 \tau_{event} \times t_{event}) / \tau}$
				EF	Exposure Frequency	10	days/year	EPA 2004, prof judg	
				ED	Exposure Duration	1	years	best professional judgement	$DA_{event} = \text{If } t_{event} > t^*, \text{ then: } DA_{event} = \text{FA} \times K_p \times C_w \{ (t_{event}/1 + B) + 2 \tau_{event} [1 + 3B + 3B^2 / (1 + B)^2] \}$
				BW	Body Weight	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	inorganics: $DA_{event} = K_p \times C_w \times t_{event}$
				FA	Fraction Absorbed in Water	chem spec	unitless	EPA 2004	
				K _p	Dermal Permeability Coefficient	chem spec	cm/hr	EPA 2004	
				C _w	Chemical Concentration in Water	EPC	mg/cm ³	RAGS Part D Table 3	
				τ _{event}	Lag Time per Event	chem spec	hr/event	EPA 2004	$\tau_{event} = 0.105 \times 10^{(0.0056 \times MW)}$
				t _{event}	Event Duration	1	hr/event	best professional judgement	
				t*	Time to Reach Steady State	chem spec	hr	EPA 2004	
				B	Ratio of permeability coefficient of compound through stratum corneum relative to permeability coefficient across viable epidermis	chem spec	unitless	EPA 2004	$B = K_p \times (\sqrt{MW}) / 2.6$

Table 4.2a Supplement
 Dermal Worksheet for On-Site Resident and Construction/Utility Worker Receptors: Leachate and Groundwater Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Media: Groundwater (Tap Water)
 Receptor: On-Site Resident

Chemical	Variables						Formula Selection	DA _{event} Calculations Results			DAD Calculation Results			
	C _w	FA	K _p	Tau _{event}	t*	B		Adult	Child	Agg.	Cancer		Non-Cancer	
								DA _{event}	DA _{event}	DA _{event}	Child / Adult Aggregate	Adult	Child	
Aluminum	4.16E-03	1.0	1.00E-03	I	I	I	Inorganic	2.41E-06	4.16E-06	2.59E-02	3.55E-04	5.95E-04	1.76E-03	
Antimony	3.24E-06	1.0	1.00E-03	I	I	I	Inorganic	1.88E-09	3.24E-09	2.02E-05	2.76E-07	4.64E-07	1.37E-06	
Arsenic	2.17E-05	1.0	1.00E-03	I	I	I	Inorganic	1.26E-08	2.17E-08	1.35E-04	1.85E-06	3.10E-06	9.14E-06	
Chromium (VI)	5.93E-05	1.0	2.00E-03	I	I	I	Inorganic	6.87E-08	1.19E-07	7.37E-04	1.01E-05	1.69E-05	5.00E-05	
Cobalt	1.14E-05	1.0	4.00E-04	I	I	I	Inorganic	2.64E-09	4.56E-09	2.84E-05	3.89E-07	6.52E-07	1.92E-06	
Iron	6.45E-03	1.0	1.00E-03	I	I	I	Inorganic	3.74E-06	6.45E-06	4.01E-02	5.49E-04	9.22E-04	2.72E-03	
Manganese	2.76E-03	1.0	1.00E-03	I	I	I	Inorganic	1.60E-06	2.76E-06	1.72E-02	2.35E-04	3.95E-04	1.17E-03	
Nickel	1.40E-04	1.0	2.00E-04	I	I	I	Inorganic	1.63E-08	2.80E-08	1.74E-04	2.39E-06	4.01E-06	1.18E-05	

I = Inorganic (therefore inorganic equation chosen as default)

Intake Calculation Formula Variables & Values					
Variable	Cancer		Non-Cancer		Units
	Adult	Child	Adult	Child	
C _w	Chemical Specific		Chemical Specific		mg/cm ³
K _p	Chemical Specific		Chemical Specific		cm/hr
Tau	Chemical Specific		Chemical Specific		hrs/event
t*	Chemical Specific		Chemical Specific		hours
B	Chemical Specific		Chemical Specific		unitless
FA	Chemical Specific		Chemical Specific		unitless
EV	1	1	1	1	events/day
SA	18000	6600	18000	6600	cm ²
EF	350	350	350	350	days/yr
ED	24	6	24	6	years
ET (tevent)	0.58	1	0.58	1	hrs/event
BW	70	15	70	15	kg
AT	25,550	25,550	8,760	2,190	days

Table 4.2a Supplement
 Dermal Worksheet for On-Site Resident and Construction/Utility Worker Receptors: Leachate and Groundwater Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Media: Shallow Groundwater
 Receptor: Construction / Utility Worker

Chemical	Variables						Formula Selection	DAD Calc. Results		
	C _w	FA	K _p	Tau _{event}	t*	B		DA _{event}	Cancer	Non-Cancer
								Adult	Adult	Adult
Chloroform	4.50E-07	1.0	6.80E-03	5.00E-01	1.19E+00	2.86E-02	t _{event} ≤ t*	5.98E-09	1.10E-10	7.72E-09
Tetrachloroethene	5.30E-07	1.0	3.30E-02	9.10E-01	2.18E+00	2.00E-01	t _{event} ≤ t*	4.61E-08	8.51E-10	5.96E-08
Benzo(a)anthracene	4.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	7.40E-06	1.37E-07	9.56E-06
Benzo(a)pyrene	4.00E-06	1.0	7.00E-01	2.69E+00	1.17E+01	4.30E+00	t _{event} ≤ t*	1.27E-05	2.34E-07	1.64E-05
Benzo(b)fluoranthene	6.50E-07	1.0	7.00E-01	2.77E+00	1.20E+01	4.30E+00	t _{event} ≤ t*	2.09E-06	3.86E-08	2.70E-06
Benzo(g,h,i)perylene	3.00E-06	1.0	1.07E+00	3.70E+00	9.41E+00	6.84E+00	t _{event} ≤ t*	1.71E-05	3.15E-07	2.21E-05
Benzo(k)fluoranthene	6.00E-06	1.0	6.91E-01	2.72E+00	6.90E+00	4.22E+00	t _{event} ≤ t*	1.89E-05	3.49E-07	2.44E-05
Carbazole	7.00E-06	1.0	5.25E-02	9.07E-01	2.30E+00	2.61E-01	t _{event} ≤ t*	9.67E-07	1.78E-08	1.25E-06
Chrysene	5.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	9.25E-06	1.71E-07	1.20E-05
Dibenzo(a,h)anthracene	1.00E-06	0.6	1.50E+00	3.88E+00	1.76E+01	9.70E+00	t _{event} ≤ t*	4.90E-06	9.04E-08	6.33E-06
Indeno(1,2,3-cd)pyrene	3.00E-06	0.6	1.00E+00	3.78E+00	1.68E+01	6.70E+00	t _{event} ≤ t*	9.67E-06	1.78E-07	1.25E-05
Naphthalene	4.00E-06	1.0	4.70E-02	5.60E-01	1.34E+00	2.00E-01	t _{event} ≤ t*	3.89E-07	7.17E-09	5.02E-07
Phenanthrene	1.00E-05	1.0	1.40E-01	1.06E+00	4.11E+00	7.00E-01	t _{event} ≤ t*	3.98E-06	7.35E-08	5.15E-06
Dieldrin	2.40E-08	0.8	1.20E-02	1.46E+01	3.51E+01	1.00E-01	t _{event} ≤ t*	2.43E-09	4.49E-11	3.14E-09
Endosulfan I	4.20E-07	1.0	2.81E-03	2.00E+01	5.07E+01	2.18E-02	t _{event} ≤ t*	1.46E-08	2.69E-10	1.88E-08
Endrin aldehyde	7.30E-08	1.0	1.72E-02	1.43E+01	3.62E+01	1.29E-01	t _{event} ≤ t*	1.31E-08	2.42E-10	1.69E-08
Aroclor-1260	5.40E-07	1.0	2.79E+00	1.27E+01	3.23E+01	2.07E+01	t _{event} ≤ t*	1.48E-05	2.74E-07	1.92E-05
Aluminum	2.61E-01	1.0	1.00E-03	I	I	I	Inorganic	2.61E-04	4.81E-06	3.37E-04
Antimony	4.66E-05	1.0	1.00E-03	I	I	I	Inorganic	4.66E-08	8.60E-10	6.02E-08
Arsenic	1.77E-04	1.0	1.00E-03	I	I	I	Inorganic	1.77E-07	3.27E-09	2.29E-07
Barium	2.67E-03	1.0	1.00E-03	I	I	I	Inorganic	2.67E-06	4.93E-08	3.45E-06
Beryllium	1.74E-05	1.0	1.00E-03	I	I	I	Inorganic	1.74E-08	3.20E-10	2.24E-08
Cadmium	2.07E-05	1.0	1.00E-03	I	I	I	Inorganic	2.07E-08	3.82E-10	2.68E-08
Chromium (VI)	2.11E-03	1.0	2.00E-03	I	I	I	Inorganic	4.21E-06	7.77E-08	5.44E-06
Cobalt	2.37E-04	1.0	4.00E-04	I	I	I	Inorganic	9.48E-08	1.75E-09	1.22E-07
Copper	1.07E-03	1.0	1.00E-03	I	I	I	Inorganic	1.07E-06	1.98E-08	1.39E-06
Lead	4.07E-04	1.0	1.00E-04	I	I	I	Inorganic	4.07E-08	7.50E-10	5.25E-08
Manganese	3.86E-02	1.0	1.00E-03	I	I	I	Inorganic	3.86E-05	7.12E-07	4.99E-05
Mercury	9.25E-07	1.0	1.00E-03	I	I	I	Inorganic	9.25E-10	1.71E-11	1.19E-09
Nickel	8.60E-04	1.0	2.00E-04	I	I	I	Inorganic	1.72E-07	3.17E-09	2.22E-07
Silver	4.23E-05	1.0	6.00E-04	I	I	I	Inorganic	2.54E-08	4.68E-10	3.28E-08
Vanadium	2.76E-04	1.0	1.00E-03	I	I	I	Inorganic	2.76E-07	5.09E-09	3.56E-07
Zinc	3.77E-03	1.0	6.00E-04	I	I	I	Inorganic	2.26E-06	4.17E-08	2.92E-06

I = Inorganic (therefore inorganic equation chosen as default)

Intake Calculation Formula Variables & Values			
Variable	Cancer	Non-Cancer	Units
	Adult	Adult	
C _w	Chem. Spcf.	Chem. Spcf.	mg/cm ³
K _p	Chem. Spcf.	Chem. Spcf.	cm/hr
Tau	Chem. Spcf.	Chem. Spcf.	hrs/event
t*	Chem. Spcf.	Chem. Spcf.	hours
B	Chem. Spcf.	Chem. Spcf.	unitless
FA	Chem. Spcf.	Chem. Spcf.	unitless

Intake Calculation Formula Variables & Values			
Variable	Cancer	Non-Cancer	Units
	Adult	Adult	
EV	1	1	events/day
SA	3300	3300	cm ²
EF	10	10	days/yr
ED	1	1	years
ET (t _{event})	1	1	hrs/event
BW	70	70	kg
AT	25,550	365	days

Table 4.2a Supplement
 Dermal Worksheet for On-Site Resident and Construction/Utility Worker Receptors: Leachate and Groundwater Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Equations:	
$\text{If } t_{\text{event}} \leq t^*, \text{ then: } DA_{\text{event}} = 2FA \times K_p \times C_w \times \sqrt{\frac{B \times \tau_{\text{event}} \times t_{\text{event}}}{\pi}}$	
$\text{If } t_{\text{event}} > t^*, \text{ then: } DA_{\text{event}} = FA \times K_p \times C_w \left[\frac{t_{\text{event}}}{1+B} + 2\tau_{\text{event}} \left(\frac{1+3B+3B^2}{(1+B)^2} \right) \right]$	
$\text{For Inorganic Compounds: } DA_{\text{event}} = K_p \times C_w \times \tau_{\text{event}}$	
$DAD = \frac{DA_{\text{event}} \times EV \times ED \times EF \times SA}{BW \times AT}$	
Where:	
FA	Fraction absorbed water (dimensionless)
K _p	Dermal permeability coefficient of a compound in water (cm/hr)
C _w	Chemical concentration in water (mg/cm ³)
τ _{event}	Lag time per event (hr/event)
t _{event}	Event duration; also ED (hr/event)
t*	Time to reach steady-state (hr) = 2.4τ _{event}
B	Ratio of PC of a compound through the stratum corneum relative to its PC across the viable epidermis (dimensionless)

Notes:

K_p, τ_{event}, FA, and B are derived from RAGS part E.

τ_{event} = 0.105 × 10^(0.0056 × molec wt)

For FA, default value of 1.0 used if no value listed in RAGS part E.

SA_{Child} : it is assumed that a short-sleeved shirt, shorts and shoes are worn and that the exposed area is composed of the head, hands, forearms and lower legs.

SA_{Adult} : it is assumed that a short-sleeved shirt, shorts, and shoes are worn and that the exposed area is composed of the head, hands, forearms, and lower legs.

For Construction / Utility Worker SA value assumes an exposed head, forearms and hands.

Table 4.3a RME Beer Kill Creek Sediment
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current and Future
 Medium: Sediment
 Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Dermal	Recreator	Child/Adult	Beer Kill Creek	CS	Chemical Concentration in Sediment	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x CF x SA x AF x ABS x EF x ED) / (BW x AT)
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				SA _c	Skin Surface Area (child)	2800	cm ²	EPA 2002	
					MOA chemical - child (0-2 years)	2598	cm²/event	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	2939	cm²/event	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	4111	cm²/event	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	5700	cm²/event	EPA 2008,2009, 1997	
				SA _a	Skin Surface Area (adult)	5,700	cm ²	EPA 2002	
				AF _c	Adherence Factor (child)	0.2	mg/cm ²	EPA 2002	
					MOA chemical - child (0-2 years)	0.2	mg/cm²	EPA 2008,2009	
					MOA chemical - child (2-6 years)	0.2	mg/cm²	EPA 2008,2009	
					MOA chemical - child (6-16 years)	0.2	mg/cm²	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	0.07	mg/cm²	EPA 2008,2009	
				AF _a	Adherence Factor (adult)	0.07	mg/cm ²	EPA 2002	
				ABS	Absorption Factor	chem spec	unitless	EPA 2004	
				EF _c	Exposure Frequency (child)	40	events/yr	EPA 1997	
				EF _a	Exposure Frequency (adult)	40	events/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgment	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
	MOA chemical - child (6-16 years)	10	years	EPA 2008,2009					

Table 4.3a RME Beer Kill Creek Sediment
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Dermal	Recreator	Child/Adult	Beer Kill Creek	ED	MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	24	years	best professional judgment	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,1997	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
AT	Averaging Time	ED x 365	days	EPA 1989					
Dermal	Recreator	Child/Adult Aggregate	Beer Kill Creek	DA-adj	Dermal abs, age-adjusted	361	mg-yr/kg-event	calc	Intake = CS x DA - Adj x ABS x CF x EF x 1/AT
				ABS	Dermal absorption	chem spec	unitless	EPA 2004	
				CF	Conversion Factor	1.00E-06	kg/mg	-	
				EF	Exposure Frequency	40	events/yr	EPA 1997	
				AT-C	Averaging Time - Carcinogens	25,550	days	EPA 1989	
Ingestion	Recreator	Child/Adult	Beer Kill Creek	CS	Chemical Concentration in Sediment	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x IR x CF x FI x EF x ED) / (BW x AT)
				IR _c	Ingestion Rate (child)	200	mg/day	conservatively assume rates comparable to residential receptor	
					MOA chemical - child (0-2 years)	200	mg/day	EPA 2008,2009	
					MOA chemical - child (2-6 years)	200	mg/day	EPA 2008,2009	
					MOA chemical - child (6-16 years)	200	mg/day	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	100	mg/day	EPA 2008,2009	
				IR _a	Ingestion Rate (adult)	100	mg/day	conservatively assume rates comparable to residential receptor	

Table 4.3a RME Beer Kill Creek Sediment
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Ingestion	Recreator	Child/Adult	Beer Kill Creek	CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				FI	Fraction Ingested	1	unitless	best professional judgment	
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgment	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	24	years	best professional judgment	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,1997	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989					
Ingestion	Recreator	Child/Adult Aggregate	Beer Kill Creek	IR-adj	Ingestion Rate (age-adjusted)	114.29	mg-yr/kg-day	calculated	Intake = CS x IR-adj x EF x CF x 1/AT
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	NA	IR-adj = (ED-C x IR-C / BW-C) + (ED-Ax IR-a/BW-A)
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	

DRAFT Table 4.4a RME Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Leachate
Exposure Medium: Leachate

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/ Model Name (1)
Dermal	Recreator / Trespasser	Child/Adult	Leachate Area (on-site)	DAD	Dermally Absorbed Dose	calc	mg/kg-day	EPA 2004	$DAD = (DA_{event} \times EV \times ED \times EF \times SA) / (BW \times AT)$ organics: $DA_{event} = \text{If } t_{event} \leq t^*, \text{ then: } DA_{event} = 2 \text{ FA} \times K_p \times C_w \sqrt{(6 \tau_{event} \times t_{event}) / \pi}$ $DA_{event} = \text{If } t_{event} > t^*, \text{ then: } DA_{event} = \text{FA} \times K_p \times C_w \{ (t_{event} / (1 + B) + 2 t_{event} [1 + 3 B + 3 B^2 / (1 + B)^2]) \}$ inorganics: $DA_{event} = K_p \times C_w \times t_{event}$
				DA _{event}	Absorbed Dose per Event	chem spec	mg/cm ² - event	EPA 2004	
				S _{Ac}	Skin Surface Area (child)	2,800	cm ²	EPA 2004	
					MOA chemical - child (0-2 years)	2598	cm²	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	2939	cm²	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	4111	cm²	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	5700	cm²	EPA 2008,2009, 1997	
				S _a	Skin Surface Area (adult)	5,700	cm ²	EPA 2004	
				EV	Event Frequency	1	events/day	EPA 2004	
				EF	Exposure Frequency	40	days/year	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	EPA 2004	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	24	years	EPA 2004	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009, 1997	
	MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009, 1997					
BW _a	Body Weight (adult)	70	kg	EPA 1991					



DRAFT Table 4.4a RME Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Dermal	Recreator / Trespasser	Child/Adult	Leachate Area (on-site)	AT	Averaging Time	ED x 365	days	EPA 1989	$I_{\text{event}} = 0.105 \times 10^{(0.0056 \times MW)}$ $B = Kp \times (\sqrt{MW})/2.6$
				FA	Fraction Absorbed in Water	chem spec	unitless	EPA 2004	
				Kp	Dermal Permeability Coefficient	chem spec	cm/hr	EPA 2004	
				Cw	Chemical Concentration in Water	EPC	mg/cm ³	RAGS Part D Table 3	
				τ event	Lag Time per Event	chem spec	hr/event	EPA 2004	
				tevent _c	Event Duration (child)	1	hr/event	best professional judgment	
				tevent _a	Event Duration (adult)	1	hr/event	best professional judgment	
				t*	Time to Reach Steady State	chem spec	hr	EPA 2004	
B	Ratio of permeability coefficient of compound through stratum corneum relative to permeability coefficient across viable epidermis	chem spec	unitless	EPA 2004					
Dermal	Recreator / Trespasser	Child/Adult Aggregate	Leachate Area (on-site)	DAevent-adj	Dermally Absorbed Dose, age-adjusted	calc	mg-yr/event-kg	calc	$DA_{\text{event-adj}} = (DA_{\text{event}} - A \times SA - A \times ED - A \times 1/BW - A) + (DA_{\text{event}} - C \times SA - C \times ED - C \times 1/BW - C)$ $DAD = DA_{\text{event-adj}} \times EV \times EF / AT - C$
				EV	Event Frequency	1	event/day	EPA 2004	
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	
Ingestion	Recreator / Trespasser	Child/Adult	Leachate Area (on-site)	Cw	Chemical Concentration in Leachate	EPC	mg/L	RAGS Part D Table 3	$\text{Intake (mg/kg-day)} = (CW \times CR \times ET \times EF \times ED \times CF) / (BW \times AT)$
				CR	Contact Rate	5	ml/hour	professional judgment: taken as 5% of RME for incidental ingestion while swimming for children aged 6-15.	
				ET _c	Exposure Time (child)	1	hours/event	best professional judgment	
				ET _a	Exposure Time (adult)	1	hours/event	best professional judgment	
				EF _c	Exposure Frequency (child)	40	events/yr	EPA 1997	
				EF _a	Exposure Frequency (adult)	40	events/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgment	

DRAFT Table 4.4a RME Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/ Model Name (1)
Ingestion	Recreator / Trespasser	Child/Adult	Leachate Area (on-site)	ED	MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	24	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	24	years	best professional judgment	
				CF	conversion factor	0.001	L/mL	-	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009, 1997	
MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009, 1997						
Ingestion	Recreator / Trespasser	Child/Adult	Leachate Area (on-site)	BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	
Ingestion	Recreator / Trespasser	Child/Adult Aggregate	Leachate Area (on-site)	CR-L-adj	Leachate contact rate, age-adjusted	0.0037	L-yr/kg-event	calc	Intake = CW x CR-L-adj x EF x 1/AT-C CR-L-adj = [((EDc x CRc x ETc) / BWc) + ((EDa x CRa x ETa) / BWa)] x CF
				EF	Exposure Frequency	40	events/yr	EPA 1997	
				CF	Conversion Factor	0.001	L/mL	-	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	

Table 4.4a Supplement
 Dermal Worksheet for Trespasser and Recreator Receptors: Leachate Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Media: Leachate
 Receptor: On-Site Trespasser / Recreator

Chemical	Variables						Formula Selection	DA _{event} Calculations Results			DAD Calculation Results		
	C _w	FA	K _p	Tau _{event}	t*	B		Adult	Child	Agg,	Cancer	Non-Cancer	
								DA _{event}	DA _{event}	DA _{event}	Child / Adult Aggregate	Adult	Child
Chloroform	4.50E-07	1.0	6.80E-03	5.00E-01	1.19E+00	2.86E-02	t _{event} ≤ t*	5.98E-09	5.98E-09	1.84E-05	2.88E-08	5.34E-08	1.22E-07
Benzo(a)anthracene	4.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	7.40E-06	7.40E-06	2.28E-02	3.56E-05	6.61E-05	1.51E-04
Benzo(a)pyrene	4.00E-06	1.0	7.00E-01	2.69E+00	1.17E+01	4.30E+00	t _{event} ≤ t*	1.27E-05	1.27E-05	3.90E-02	6.11E-05	1.13E-04	2.60E-04
Benzo(b)fluoranthene	6.50E-07	1.0	7.00E-01	2.77E+00	1.20E+01	4.30E+00	t _{event} ≤ t*	2.09E-06	2.09E-06	6.43E-03	1.01E-05	1.87E-05	4.28E-05
Benzo(g,h,i)perylene	3.00E-06	1.0	1.07E+00	3.70E+00	9.41E+00	6.84E+00	t _{event} ≤ t*	1.71E-05	1.71E-05	5.25E-02	8.22E-05	1.52E-04	3.49E-04
Benzo(k)fluoranthene	6.00E-06	1.0	6.91E-01	2.72E+00	6.90E+00	4.22E+00	t _{event} ≤ t*	1.89E-05	1.89E-05	5.81E-02	9.09E-05	1.69E-04	3.86E-04
Carbazole	7.00E-06	1.0	5.25E-02	9.07E-01	2.30E+00	2.61E-01	t _{event} ≤ t*	9.67E-07	9.67E-07	2.97E-03	4.66E-06	8.63E-06	1.98E-05
Chrysene	5.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	9.25E-06	9.25E-06	2.85E-02	4.45E-05	8.26E-05	1.89E-04
Dibenzo(a,h)anthracene	1.00E-06	0.6	1.50E+00	3.88E+00	1.76E+01	9.70E+00	t _{event} ≤ t*	4.90E-06	4.90E-06	1.51E-02	2.36E-05	4.37E-05	1.00E-04
Indeno(1,2,3-cd)pyrene	3.00E-06	0.6	1.00E+00	3.78E+00	1.68E+01	6.70E+00	t _{event} ≤ t*	9.67E-06	9.67E-06	2.97E-02	4.66E-05	8.63E-05	1.98E-04
Naphthalene	4.00E-06	1.0	4.70E-02	5.60E-01	1.34E+00	2.00E-01	t _{event} ≤ t*	3.89E-07	3.89E-07	1.20E-03	1.87E-06	3.47E-06	7.95E-06
Phenanthrene	1.00E-05	1.0	1.40E-01	1.06E+00	4.11E+00	7.00E-01	t _{event} ≤ t*	3.98E-06	3.98E-06	1.22E-02	1.92E-05	3.56E-05	8.15E-05
alpha-Chlordane	3.00E-08	0.7	3.40E-02	2.13E+01	5.11E+01	3.00E-01	t _{event} ≤ t*	9.10E-09	9.10E-09	2.80E-05	4.38E-08	8.12E-08	1.86E-07
Dieldrin	2.40E-08	0.8	1.20E-02	1.46E+01	3.51E+01	1.00E-01	t _{event} ≤ t*	2.43E-09	2.43E-09	7.49E-06	1.17E-08	2.17E-08	4.98E-08
Aroclor-1260	5.40E-07	1.0	2.79E+00	1.27E+01	3.23E+01	2.07E+01	t _{event} ≤ t*	1.48E-05	1.48E-05	4.57E-02	7.15E-05	1.33E-04	3.04E-04
Aluminum	9.10E-03	1.0	1.00E-03				Inorganic	9.10E-06	9.10E-06	2.80E-02	4.38E-05	8.12E-05	1.86E-04
Arsenic	5.80E-05	1.0	1.00E-03				Inorganic	5.80E-08	5.80E-08	1.78E-04	2.79E-07	5.18E-07	1.19E-06
Barium	8.10E-04	1.0	1.00E-03				Inorganic	8.10E-07	8.10E-07	2.49E-03	3.90E-06	7.23E-06	1.66E-05
Cadmium	1.00E-05	1.0	1.00E-03				Inorganic	1.00E-08	1.00E-08	3.07E-05	4.81E-08	8.92E-08	2.05E-07
Chromium (VI)	1.10E-04	1.0	2.00E-03				Inorganic	2.20E-07	2.20E-07	6.76E-04	1.06E-06	1.96E-06	4.50E-06
Copper	8.30E-04	1.0	1.00E-03				Inorganic	8.30E-07	8.30E-07	2.55E-03	3.99E-06	7.41E-06	1.70E-05
Iron	5.40E-02	1.0	1.00E-03				Inorganic	5.40E-05	5.40E-05	1.66E-01	2.60E-04	4.82E-04	1.10E-03
Lead	1.80E-03	1.0	1.00E-04				Inorganic	1.80E-07	1.80E-07	5.53E-04	8.66E-07	1.61E-06	3.68E-06
Manganese	8.05E-04	1.0	1.00E-03				Inorganic	8.05E-07	8.05E-07	2.47E-03	3.87E-06	7.18E-06	1.65E-05
Nickel	1.00E-04	1.0	2.00E-04				Inorganic	2.00E-08	2.00E-08	6.15E-05	9.63E-08	1.78E-07	4.09E-07
Vanadium	1.00E-04	1.0	1.00E-03				Inorganic	1.00E-07	1.00E-07	3.07E-04	4.81E-07	8.92E-07	2.05E-06
Zinc	5.30E-03	1.0	6.00E-04				Inorganic	3.18E-06	3.18E-06	9.78E-03	1.53E-05	2.84E-05	6.51E-05

| = Inorganic (therefore inorganic equation chosen as default)

Variable	Cancer		Non-Cancer		Units
	Adult	Child	Adult	Child	
C _w	Chemical Specific	Chemical Specific	Chemical Specific	Chemical Specific	mg/cm ³
K _p	Chemical Specific	Chemical Specific	Chemical Specific	Chemical Specific	cm/hr
Tau	Chemical Specific	Chemical Specific	Chemical Specific	Chemical Specific	hrs/event
t*	Chemical Specific	Chemical Specific	Chemical Specific	Chemical Specific	hours
B	Chemical Specific	Chemical Specific	Chemical Specific	Chemical Specific	unitless
FA	Chemical Specific	Chemical Specific	Chemical Specific	Chemical Specific	unitless

Variable	Cancer		Non-Cancer		Units
	Adult	Child	Adult	Child	
EV	1	1	1	1	events/day
SA	5700	2800	5700	2800	cm ²
EF	40	40	40	40	days/yr
ED	24	6	24	6	years
ET (t _{event})	1	1	1	1	hrs/event
BW	70	15	70	15	kg
AT	25,550	25,550	8,760	2,190	days

Table 4.4a Supplement
 Dermal Worksheet for Trespasser and Recreator Receptors: Leachate Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Equations:	
<p>If $t_{event} \leq t^*$, then: $DA_{event} = 2FA \times K_p \times C_w \sqrt{\frac{6 \tau_{event} \times t_{event}}{\pi}}$</p> <p>If $t_{event} > t^*$, then: $DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2 \tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^3} \right) \right]$</p> <p>For Inorganic Compounds: $DA_{event} = K_p \times C_w \times t_{event}$</p> <p>$DAD = \frac{DA_{event} \times EV \times ED \times CF \times SA}{BW \times AT}$</p>	
Where:	
FA	Fraction absorbed water (dimensionless)
K_p	Dermal permeability coefficient of a compound in water (cm/hr)
C_w	Chemical concentration in water (mg/cm ³)
τ_{event}	Lag time per event (hr/event)
t_{event}	Event duration; also ED (hr/event)
t^*	Time to reach steady-state (hr) = $2.4\tau_{event}$
B	Ratio of PC of a compound through the stratum corneum relative to its PC across the viable epidermis (dimensionless)

Notes:

K_p , τ_{event} , FA, and B are derived from RAGS part E.

$\tau_{event} = 0.105 \times 10^{(0.0056 \times \text{molec wt})}$

For FA, default value of 1.0 used if no value listed in RAGS part E.

SA_{child} : it is assumed that a short-sleeved shirt, shorts and shoes are worn and that the exposed area is composed of the head, hands, forearms and lower legs.

SA_{adult} : it is assumed that a short-sleeved shirt, shorts, and shoes are worn and that the exposed area is composed of the head, hands, forearms, and lower legs.

Table 4.4b RME Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Leachate
 Exposure Medium: Leachate

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Dermal	Resident	Child/Adult	Leachate Area (on-site)	DAD	Dermally Absorbed Dose	calc	mg/kg-day	EPA 2004	$DAD = (DA_{event} \times EV \times ED \times EF \times SA) / (BW \times AT)$ organics: $DA_{event} = \text{If } t_{event} \leq t^*, \text{ then: } DA_{event} = 2 FA \times Kp \times Cw \sqrt{(6 \tau \text{ event} \times t_{event})/\pi}$ $DA_{event} = \text{If } t_{event} > t^*, \text{ then: } DA_{event} = FA \times Kp \times Cw \{ (t_{event}/1 + B) + 2 \tau \text{ event} [1 + 3 B + 3 B^2 / (1 + B)^2] \}$ inorganics: $DA_{event} = Kp \times Cw \times t_{event}$
				DA _{event}	Absorbed Dose per Event	chem spec	mg/cm ² -event	EPA 2004	
				S _{Ac}	Skin Surface Area (child)	2,800	cm ²	EPA 2004	
					MOA chemical - child (0-2 years)	2598	cm²	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	2939	cm²	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	4111	cm²	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	5700	cm²	EPA 2008,2009, 1997	
				S _{Aa}	Skin Surface Area (adult)	5,700	cm ²	EPA 2004	
				EV	Event Frequency	1	events/day	EPA 2004	
				EF	Exposure Frequency	350	days/year	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	EPA 2004	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	24	years	EPA 2004	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009, 1997	
	MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009, 1997					

Table 4.4b RME Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Dermal	Resident	Child/Adult	Leachate Area (on-site)	BW _a	Body Weight (adult)	70	kg	EPA 1991	$\tau_{event} = 0.105 \times 10^{(0.0056 \times MW)}$ $B = Kp \times (vMW)/2.6$
				AT	Averaging Time	ED x 365	days	EPA 1989	
				FA	Fraction Absorbed in Leachate	chem spec	unitless	EPA 2004	
				Kp	Dermal Permeability Coefficient	chem spec	cm/hr	EPA 2004	
				Cw	Chemical Concentration in Leachate	EPC	mg/cm ³	RAGS Part D Table 3	
				τ_{event}	Lag Time per Event	chem spec	hr/event	EPA 2004	
				tevent _c	Event Duration (child)	1	hr/event	best professional judgment	
				tevent _a	Event Duration (adult)	1	hr/event	best professional judgment	
				t*	Time to Reach Steady State	chem spec	hr	EPA 2004	
B	Ratio of permeability coefficient of compound through stratum corneum relative to permeability coefficient across viable epidermis	chem spec	unitless	EPA 2004					
Dermal	Resident	Child/Adult Aggregate	Leachate Area (on-site)	DAevent-adj	Dermally Absorbed Dose, age-adjusted	calc	mg-yr/event-kg	calc	$DA_{event-adj} = (DA_{event} - A \times SA - A \times ED - A \times 1/BW - A) + (DA_{event} - C \times SA - C \times ED - C \times 1/BW - C)$ $DAD = DA_{event-adj} \times EV \times EF / AT - C$
				EV	Event Frequency	1	event/day	EPA 2004	
				EF	Exposure Frequency	350	days/yr	EPA 1997	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	
Dermal	Commercial / Industrial worker	Adult	Leachate Area (on-site)	DAD	Dermally Absorbed Dose	calc	mg/kg-day	EPA 2004	$DAD = DA_{event} \times EV \times ED \times EF \times SA / BW \times AT$
				DAevent	Absorbed Dose per Event	chem spec	mg/cm ² -event	EPA 2004	
				SA	Skin Surface Area	3,300	cm ²	EPA 2004	
				EV	Event Frequency	1	events/day	EPA 2004	
				EF	Exposure Frequency	250	days/year	EPA 1997	
				ED	Exposure Duration	25	years	EPA 2004	
				BW	Body Weight	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365	days	EPA 1989	

Table 4.4b RME Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Dermal	Commercial / Industrial worker	Adult	Leachate Area (on-site)	FA	Fraction Absorbed in Water	chem spec	unitless	EPA 2004	$\tau_{\text{event}} = 0.105 \times 10^{(0.0056 \times \text{MW})}$
				Kp	Dermal Permeability Coefficient	chem spec	cm/hr	EPA 2004	
				Cw	Chemical Concentration in Water	EPC	mg/cm ³	RAGS Part D Table 3	
				τ_{event}	Lag Time per Event	chem spec	hr/event	EPA 2004	
				τ_{event_a}	Event Duration (adult)	1	hr/event	best professional judgment	
				t*	Time to Reach Steady State	chem spec	hr	EPA 2004	
B	Ratio of permeability coefficient of compound through stratum corneum relative to permeability coefficient across viable epidermis	chem spec	unitless	EPA 2004	$B = Kp \times (\text{vMW})/2.6$				
Ingestion	Resident	Child/Adult	Leachate Area (on-site)	Cw	Chemical Concentration in Leachate	EPC	mg/L	RAGS Part D Table 3	$\text{Intake (mg/kg-day)} = (\text{CW} \times \text{CR} \times \text{ET} \times \text{EF} \times \text{ED} \times \text{CF}) / (\text{BW} \times \text{AT})$
				CR	Contact Rate	5	mL/hour	professional judgment: taken as 5% of RME for incidental ingestion while swimming for children aged 6-15.	
				ET _c	Exposure Time (child)	1	hours/event	best professional judgment	
				ET _a	Exposure Time (adult)	1	hours/event	best professional judgment	
				EF _c	Exposure Frequency (child)	350	events/yr	EPA 1997	
				EF _a	Exposure Frequency (adult)	350	events/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	EPA 2004	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	14	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	24	years	EPA 2004	
				CF	Conversion Factor	0.001	L/mL	-	
BW _c	Body Weight (child)	15	kg	EPA 1991					

Table 4.4b RME Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Ingestion	Resident	Child/Adult	Leachate Area (on-site)		MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,1997	
Ingestion	Resident	Child/Adult	Leachate Area (on-site)	BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	
Ingestion	Resident	Child/Adult Aggregate	Leachate Area (on-site)	CR-L-adj	Leachate contact rate, age-adjusted	0.0037	L-yr/kg-event	calc	Intake (mg/kg-day) = CW x CR-L-adj x EF x 1/AT-C
				EF	Exposure Frequency	350	days/yr	EPA 2004	
				CF	Conversion Factor	0.001	L/mL	-	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	
Ingestion	Commercial / Industrial worker	Adult	Leachate Area (on-site)	Cw	Chemical Concentration in Leachate	EPC	mg/L	RAGS Part D Table 3	Intake (mg/kg-day) = (CW x CR x ET x EF x ED x CF) / (BW x AT)
				CR	Contact Rate	5	mL/hour	professional judgment: taken as 5% of RME for incidental ingestion while swimming for children aged 6-15.	
				ET _a	Exposure Time (adult)	1	hours/event	best professional judgment	
				EF _a	Exposure Frequency (adult)	250	events/yr	EPA 1991	
				ED _a	Exposure Duration (adult)	25	years	EPA 1991	
				CF	Conversion Factor	0.001	L/mL	-	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	

Table 4.4b Supplement
 Dermal Worksheet for On-Site Resident and Commercial/Industrial Worker Receptors: Leachate Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Media: Leachate
 Receptor: On-Site Resident

Chemical	Variables						Formula Selection	DA _{event} Calculations Results			DAD Calculation Results		
	C _w	FA	K _p	Tau _{event}	t*	B		Adult	Child	Agg,	Cancer	Non-Cancer	
								DA _{event}	DA _{event}	DA _{event}	Child / Adult Aggregate	Adult	Child
Chloroform	4.50E-07	1.0	6.80E-03	5.00E-01	1.19E+00	2.86E-02	t _{event} ≤ t*	5.98E-09	5.98E-09	1.84E-05	2.52E-07	4.67E-07	1.07E-06
Benzo(a)anthracene	4.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	7.40E-06	7.40E-06	2.28E-02	3.12E-04	5.78E-04	1.33E-03
Benzo(a)pyrene	4.00E-06	1.0	7.00E-01	2.69E+00	1.17E+01	4.30E+00	t _{event} ≤ t*	1.27E-05	1.27E-05	3.90E-02	5.35E-04	9.91E-04	2.27E-03
Benzo(b)fluoranthene	6.50E-07	1.0	7.00E-01	2.77E+00	1.20E+01	4.30E+00	t _{event} ≤ t*	2.09E-06	2.09E-06	6.43E-03	8.81E-05	1.63E-04	3.75E-04
Benzo(g,h,i)perylene	3.00E-06	1.0	1.07E+00	3.70E+00	9.41E+00	6.84E+00	t _{event} ≤ t*	1.71E-05	1.71E-05	5.25E-02	7.19E-04	1.33E-03	3.06E-03
Benzo(k)fluoranthene	6.00E-06	1.0	6.91E-01	2.72E+00	6.90E+00	4.22E+00	t _{event} ≤ t*	1.89E-05	1.89E-05	5.81E-02	7.95E-04	1.47E-03	3.38E-03
Carbazole	7.00E-06	1.0	5.25E-02	9.07E-01	2.30E+00	2.61E-01	t _{event} ≤ t*	9.67E-07	9.67E-07	2.97E-03	4.07E-05	7.55E-05	1.73E-04
Chrysene	5.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	9.25E-06	9.25E-06	2.85E-02	3.90E-04	7.23E-04	1.66E-03
Dibenzo(a,h)anthracene	1.00E-06	0.6	1.50E+00	3.88E+00	1.76E+01	9.70E+00	t _{event} ≤ t*	4.90E-06	4.90E-06	1.51E-02	2.06E-04	3.83E-04	8.77E-04
Indeno(1,2,3-cd)pyrene	3.00E-06	0.6	1.00E+00	3.78E+00	1.68E+01	6.70E+00	t _{event} ≤ t*	9.67E-06	9.67E-06	2.97E-02	4.07E-04	7.55E-04	1.73E-03
Naphthalene	4.00E-06	1.0	4.70E-02	5.60E-01	1.34E+00	2.00E-01	t _{event} ≤ t*	3.89E-07	3.89E-07	1.20E-03	1.64E-05	3.04E-05	6.96E-05
Phenanthrene	1.00E-05	1.0	1.40E-01	1.06E+00	4.11E+00	7.00E-01	t _{event} ≤ t*	3.98E-06	3.98E-06	1.22E-02	1.68E-04	3.11E-04	7.13E-04
alpha-Chlordane	3.00E-08	0.7	3.40E-02	2.13E+01	5.11E+01	3.00E-01	t _{event} ≤ t*	9.10E-09	9.10E-09	2.80E-05	3.83E-07	7.11E-07	1.63E-06
Dieldrin	2.40E-08	0.8	1.20E-02	1.46E+01	3.51E+01	1.00E-01	t _{event} ≤ t*	2.43E-09	2.43E-09	7.49E-06	1.03E-07	1.90E-07	4.36E-07
Aroclor-1260	5.40E-07	1.0	2.79E+00	1.27E+01	3.23E+01	2.07E+01	t _{event} ≤ t*	1.48E-05	1.48E-05	4.57E-02	6.25E-04	1.16E-03	2.66E-03
Aluminum	9.10E-03	1.0	1.00E-03				Inorganic	9.10E-06	9.10E-06	2.80E-02	3.83E-04	7.11E-04	1.63E-03
Arsenic	5.80E-05	1.0	1.00E-03				Inorganic	5.80E-08	5.80E-08	1.78E-04	2.44E-06	4.53E-06	1.04E-05
Barium	8.10E-04	1.0	1.00E-03				Inorganic	8.10E-07	8.10E-07	2.49E-03	3.41E-05	6.32E-05	1.45E-04
Cadmium	1.00E-05	1.0	1.00E-03				Inorganic	1.00E-08	1.00E-08	3.07E-05	4.21E-07	7.81E-07	1.79E-06
Chromium (VI)	1.10E-04	1.0	2.00E-03				Inorganic	2.20E-07	2.20E-07	6.76E-04	9.26E-06	1.72E-05	3.94E-05
Copper	8.30E-04	1.0	1.00E-03				Inorganic	8.30E-07	8.30E-07	2.55E-03	3.50E-05	6.48E-05	1.49E-04
Iron	5.40E-02	1.0	1.00E-03				Inorganic	5.40E-05	5.40E-05	1.66E-01	2.27E-03	4.22E-03	9.67E-03
Lead	1.80E-03	1.0	1.00E-04				Inorganic	1.80E-07	1.80E-07	5.53E-04	7.58E-06	1.41E-05	3.22E-05
Manganese	8.05E-04	1.0	1.00E-03				Inorganic	8.05E-07	8.05E-07	2.47E-03	3.39E-05	6.29E-05	1.44E-04
Nickel	1.00E-04	1.0	2.00E-04				Inorganic	2.00E-08	2.00E-08	6.15E-05	8.42E-07	1.56E-06	3.58E-06
Vanadium	1.00E-04	1.0	1.00E-03				Inorganic	1.00E-07	1.00E-07	3.07E-04	4.21E-06	7.81E-06	1.79E-05
Zinc	5.30E-03	1.0	6.00E-04				Inorganic	3.18E-06	3.18E-06	9.78E-03	1.34E-04	2.48E-04	5.69E-04

| = Inorganic (therefore inorganic equation chosen as default)

Intake Calculation Formula Variables & Values					
Variable	Cancer		Non-Cancer		Units
	Adult	Child	Adult	Child	
C _w	Chemical Specific		Chemical Specific		mg/cm ³
K _p	Chemical Specific		Chemical Specific		cm/hr
Tau	Chemical Specific		Chemical Specific		hrs/event
t*	Chemical Specific		Chemical Specific		hours
B	Chemical Specific		Chemical Specific		unitless
FA	Chemical Specific		Chemical Specific		unitless

Intake Calculation Formula Variables & Values					
Variable	Cancer		Non-Cancer		Units
	Adult	Child	Adult	Child	
EV	1	1	1	1	events/day
SA	5700	2800	5700	2800	cm ²
EF	350	350	350	350	days/yr
ED	24	6	24	6	years
ET (t _{event})	1	1	1	1	hrs/event
BW	70	15	70	15	kg
AT	25,550	25,550	8,760	2,190	days

Table 4.4b Supplement
 Dermal Worksheet for On-Site Resident and Commercial/Industrial Worker Receptors: Leachate Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Media: Leachate
 Receptor: Commercial / Industrial Worker

Chemical	Variables						Formula Selection	DAD Calc. Results		
	C _w	FA	K _p	Tau _{event}	t*	B		DA _{event}	Cancer	Non-Cancer
								Adult	Adult	Adult
Chloroform	4.50E-07	1.0	6.80E-03	5.00E-01	1.19E+00	2.86E-02	t _{event} ≤ t*	5.98E-09	6.90E-08	1.93E-07
Benzo(a)anthracene	4.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	7.40E-06	8.54E-05	2.39E-04
Benzo(a)pyrene	4.00E-06	1.0	7.00E-01	2.69E+00	1.17E+01	4.30E+00	t _{event} ≤ t*	1.27E-05	1.46E-04	4.10E-04
Benzo(b)fluoranthene	6.50E-07	1.0	7.00E-01	2.77E+00	1.20E+01	4.30E+00	t _{event} ≤ t*	2.09E-06	2.41E-05	6.76E-05
Benzo(g,h,i)perylene	3.00E-06	1.0	1.07E+00	3.70E+00	9.41E+00	6.84E+00	t _{event} ≤ t*	1.71E-05	1.97E-04	5.51E-04
Benzo(k)fluoranthene	6.00E-06	1.0	6.91E-01	2.72E+00	6.90E+00	4.22E+00	t _{event} ≤ t*	1.89E-05	2.18E-04	6.10E-04
Carbazole	7.00E-06	1.0	5.25E-02	9.07E-01	2.30E+00	2.61E-01	t _{event} ≤ t*	9.67E-07	1.12E-05	3.12E-05
Chrysene	5.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	9.25E-06	1.07E-04	2.99E-04
Dibenzo(a,h)anthracene	1.00E-06	0.6	1.50E+00	3.88E+00	1.76E+01	9.70E+00	t _{event} ≤ t*	4.90E-06	5.65E-05	1.58E-04
Indeno(1,2,3-cd)pyrene	3.00E-06	0.6	1.00E+00	3.78E+00	1.68E+01	6.70E+00	t _{event} ≤ t*	9.67E-06	1.12E-04	3.12E-04
Naphthalene	4.00E-06	1.0	4.70E-02	5.60E-01	1.34E+00	2.00E-01	t _{event} ≤ t*	3.89E-07	4.48E-06	1.26E-05
Phenanthrene	1.00E-05	1.0	1.40E-01	1.06E+00	4.11E+00	7.00E-01	t _{event} ≤ t*	3.98E-06	4.59E-05	1.29E-04
alpha-Chlordane	3.00E-08	0.7	3.40E-02	2.13E+01	5.11E+01	3.00E-01	t _{event} ≤ t*	9.10E-09	1.05E-07	2.94E-07
Dieldrin	2.40E-08	0.8	1.20E-02	1.46E+01	3.51E+01	1.00E-01	t _{event} ≤ t*	2.43E-09	2.81E-08	7.86E-08
Aroclor-1260	5.40E-07	1.0	2.79E+00	1.27E+01	3.23E+01	2.07E+01	t _{event} ≤ t*	1.48E-05	1.71E-04	4.79E-04
Aluminum	9.10E-03	1.0	1.00E-03				Inorganic	9.10E-06	1.05E-04	2.94E-04
Arsenic	5.80E-05	1.0	1.00E-03				Inorganic	5.80E-08	6.69E-07	1.87E-06
Barium	8.10E-04	1.0	1.00E-03				Inorganic	8.10E-07	9.34E-06	2.62E-05
Cadmium	1.00E-05	1.0	1.00E-03				Inorganic	1.00E-08	1.15E-07	3.23E-07
Chromium (VI)	1.10E-04	1.0	2.00E-03				Inorganic	2.20E-07	2.54E-06	7.10E-06
Copper	8.30E-04	1.0	1.00E-03				Inorganic	8.30E-07	9.57E-06	2.68E-05
Iron	5.40E-02	1.0	1.00E-03				Inorganic	5.40E-05	6.23E-04	1.74E-03
Lead	1.80E-03	1.0	1.00E-04				Inorganic	1.80E-07	2.08E-06	5.81E-06
Manganese	8.05E-04	1.0	1.00E-03				Inorganic	8.05E-07	9.28E-06	2.60E-05
Nickel	1.00E-04	1.0	2.00E-04				Inorganic	2.00E-08	2.31E-07	6.46E-07
Vanadium	1.00E-04	1.0	1.00E-03				Inorganic	1.00E-07	1.15E-06	3.23E-06
Zinc	5.30E-03	1.0	6.00E-04				Inorganic	3.18E-06	3.67E-05	1.03E-04

| = Inorganic (therefore inorganic equation chosen as default)

Intake Calculation Formula Variables & Values			
Variable	Cancer	Non-Cancer	Units
	Adult	Adult	
C _w	Chem. Spcf.	Chem. Spcf.	mg/cm ³
K _p	Chem. Spcf.	Chem. Spcf.	cm/hr
Tau	Chem. Spcf.	Chem. Spcf.	hrs/event
t*	Chem. Spcf.	Chem. Spcf.	hours
B	Chem. Spcf.	Chem. Spcf.	unitless
FA	Chem. Spcf.	Chem. Spcf.	unitless

Intake Calculation Formula Variables & Values			
Variable	Cancer	Non-Cancer	Units
	Adult	Adult	
EV	1	1	events/day
SA	3300	3300	cm ²
EF	250	250	days/yr
ED	25	25	years
ET (t _{event})	1	1	hrs/event
BW	70	70	kg
AT	25,550	9,125	days

Table 4.4b Supplement
 Dermal Worksheet for On-Site Resident and Commercial/Industrial Worker Receptors: Leachate Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Equations:	
$\text{If } t_{\text{event}} \leq t^*, \text{ then: } DA_{\text{event}} = 2FA \times K_p \times C_w \times \sqrt{\frac{D \times t_{\text{event}} \times t_{\text{event}}}{\pi}}$	
$\text{If } t_{\text{event}} > t^*, \text{ then: } DA_{\text{event}} = FA \times K_p \times C_w \left[\frac{t_{\text{event}}}{1 + D} + 2t_{\text{event}} \left(\frac{1 + 2B + 2B^2}{(1 + D)^2} \right) \right]$	
<p style="text-align: center;">For Inorganic Compounds: $DA_{\text{event}} = K_p \times C_w \times t_{\text{event}}$</p>	
$DAD = \frac{DA_{\text{event}} \times EV \times ED \times EF \times SA}{BW \times AT}$	
Where:	
FA	Fraction absorbed water (dimensionless)
K _p	Dermal permeability coefficient of a compound in water (cm/hr)
C _w	Chemical concentration in water (mg/cm ³)
Tau _{event}	Lag time per event (hr/event)
t _{event}	Event duration; also ED (hr/event)
t*	Time to reach steady-state (hr) = 2.4Tau _{event}
B	Ratio of PC of a compound through the stratum corneum relative to its PC across the viable epidermis (dimensionless)

Notes:

K_p, Tau_{event}, FA, and B are derived from RAGS part E.

$$Tau_{\text{event}} = 0.105 \times 10^{(0.0056 \times \text{molec wt})}$$

For FA, default value of 1.0 used if no value listed in RAGS part E.

SA_{Child}: it is assumed that a short-sleeved shirt, shorts and shoes are worn and that the exposed area is composed of the head, hands, forearms and lower legs.

SA_{Adult}: it is assumed that a short-sleeved shirt, shorts, and shoes are worn and that the exposed area is composed of the head, hands, forearms, and lower legs.

For Commercial / Industrial Worker SA value assumes an exposed head, forearms and hands.

Table 4
 Values Used for Daily Intake Calculations
 Ellenville Scrap Iron and Metal Site

Footnotes:

bold	Values associated with age dependent adjustment factors for chemicals of potential concern exhibiting mutagenicity mode of action.
cm ²	square centimeter
days/year	days per year
DAD	dermal absorbed dose
ED	exposure duration
EF	exposure frequency
EPA	U.S. Environmental Protection Agency
EPC	exposure point concentration
hrs/day	hours per day
kg	kilogram
kg/mg	kilograms per milligram
L/cm ³	liter per cubic centimeters
MOA	indicates exposure factor for chemical that act via mutagenic mode of action
mg/cm ²	milligrams per square centimeter
mg/day	milligrams per day
mg/kg	milligrams per kilogram
mg/kg-day	milligrams per kilogram per day
mg/L	milligrams per liter
mg/m ³	milligrams per cubic meter
ml/hr	milliliters per hour
m ³ /hr	cubic meters per hour
m ³ /kg	cubic meters per kilogram
PEF	particulate emission factor
RAGS	Risk Assessment Guidance for Superfund
RME	Reasonable maximum exposure

Value for ABS (dermal absorption fraction) were obtained from Exhibit 3-4 of EPA RAGS Part E, 2002 o December 2009 RSL Table.

Permeability Constant (Kp) is based on RAGS Part E 2002, Exhibit B3.

TABLE 5.1
NON-CANCER TOXICITY DATA - ORAL / DERMAL EXPOSURES
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Chemical of Potential Concern	Chronic (or Subchronic, if Chronic not available)	Oral RfD ^A		Oral Absorption Efficiency for Dermal ^B	Absorbed RfD for Dermal ^C		Primary Target Organ(s) ^D	Combined Uncertainty/Modifying Factors	RfD:Target Organ(s)	
		Value	Units		Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
1,2,4-trimethylbenzene	-	(l)	-	-	-	-	-	-	-	-
1,3,5-trimethylbenzene	-	(l)	-	-	-	-	-	-	-	-
Benzene	-	(l)	-	-	-	-	-	-	-	-
Carbon tetrachloride	-	(l)	-	-	-	-	-	-	-	-
Chloroform	Chronic / Subchronic	1.0E-02	(mg/kg-day)	-	1.0E-02	(mg/kg-day)	liver	100	IRIS (HEAST)	3/31/2010
Chloromethane	-	(l)	-	-	-	-	-	-	-	-
Ethylbenzene	-	(l)	-	-	-	-	-	-	-	-
Tetrachloroethylene	Chronic / Subchronic	1.0E-02 / (1.0E-1)	(mg/kg-day)	-	1.0E-02 / (1.0E-1)	(mg/kg-day)	liver	1000	IRIS (HEAST)	3/31/2010
Trichloroethylene	-	(l)	-	-	-	-	-	-	-	-
Trichlorofluoromethane	-	(l)	-	-	-	-	-	-	-	-
Acenaphthylene	-	-	-	-	-	-	-	-	-	-
bis(2-ethylhexyl)phthalate	Chronic	2.0E-02	(mg/kg-day)	-	2.0E-02	(mg/kg-day)	liver	1000	IRIS	3/31/2010
Benzo(a)anthracene	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-
Carbazole	-	-	-	-	-	-	-	-	-	-
Chrysene	-	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	Subchronic	2.0E-02	(mg/kg-day)	-	2.0E-02	(mg/kg-day)	kidney, liver	1000	HEAST	7/1/1997
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	Subchronic	1.0E-01	(mg/kg-day)	-	1.0E-01	(mg/kg-day)	-	-	PPRTV	9/25/2007
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-	-	-	-	-
Naphthalene	Chronic / Subchronic	2.0E-02 / (6.0E-1)	(mg/kg-day)	89%	2.0E-02 / (6.0E-1)	(mg/kg-day)	body weight	3000	IRIS (ATSDR)	3/31/2010
Phenanthrene	-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	-	-	-	-	-	-	-	-	-	-
Arochlor 1254	Chronic / Subchronic	2.0E-05 / (5.0E-5)	(mg/kg-day)	96%	2.0E-05 / (5.0E-5)	(mg/kg-day)	eyes, nails, immune system	300	IRIS (HEAST)	3/31/2010
Arochlor 1260	-	-	-	-	-	-	-	-	-	-

TABLE 5.1
NON-CANCER TOXICITY DATA - ORAL / DERMAL EXPOSURES
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Chemical of Potential Concern	Chronic (or Subchronic, if Chronic not available)	Oral RfD ^A		Oral Absorption Efficiency for Dermal ^B	Absorbed RfD for Dermal ^C		Primary Target Organ(s) ^D	Combined Uncertainty/Modifying Factors	RfD:Target Organ(s)	
		Value	Units		Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
delta-BHC	-	-	-	-	-	-	-	-	-	-
Dieldrin	Chronic / Subchronic	5.0E-05	(mg/kg-day)	-	5.0E-05	(mg/kg-day)	liver	100	IRIS (HEAST)	3/31/2010
Endosulfan I	-	-	-	-	-	-	-	-	-	-
Endosulfan II	-	-	-	-	-	-	-	-	-	-
Endosulfan Sulfate	-	-	-	-	-	-	-	-	-	-
Endrin Aldehyde	-	-	-	-	-	-	-	-	-	-
Endrin Ketone	-	-	-	-	-	-	-	-	-	-
gamma-Chlordane	-	-	-	-	-	-	-	-	-	-
Aluminum	Chronic	1.0E+00	(mg/kg-day)	-	1.0E+00	(mg/kg-day)	nervous system	100	PPRTV	10/23/2006
Antimony	Chronic / Subchronic	4.0E-04	(mg/kg-day)	15.0%	6.0E-05	(mg/kg-day)	Longevity, blood glucose, and cholesterol	1000	IRIS (HEAST)	3/31/2010
Arsenic	Chronic / Subchronic	3.0E-04	(mg/kg-day)	95.0%	3.0E-04	(mg/kg-day)	skin	3	IRIS (HEAST)	3/31/2010
Barium	Chronic	2.0E-01	(mg/kg-day)	7.0%	1.4E-02	(mg/kg-day)	kidney	300	IRIS	3/31/2010
	Subchronic	(7.0E-02)	(mg/kg-day)		4.9E-03	(mg/kg-day)			(HEAST)	
Beryllium	Chronic	2.0E-03	(mg/kg-day)	0.7%	1.4E-05	(mg/kg-day)	small intestine	300	IRIS	3/31/2010
	Subchronic	5.0E-03	(mg/kg-day)		3.5E-05	(mg/kg-day)			(HEAST)	
Cadmium (water)	Chronic / Subchronic	5.0E-04	(mg/kg-day)	5.0%	2.5E-05	(mg/kg-day)	Kidney	10	IRIS (ATSDR)	3/31/2010
Cadmium (diet)	Chronic	1.4E-01	(mg/kg-day)	2.5%	3.5E-03	(mg/kg-day)	Kidney	10	IRIS	3/31/2010
Chromium VI	Chronic	3.0E-03	(mg/kg-day)	2.5%	7.5E-05	(mg/kg-day)	no observed effects	900	IRIS	3/31/2010
		2.0E-02	(mg/kg-day)		5.0E-04	(mg/kg-day)			(HEAST)	
Cobalt	Chronic	3.0E-04	(mg/kg-day)	-	3.0E-04	(mg/kg-day)	iodine uptake	3000	PPRTV	8/25/2008
		1.0E-02	(mg/kg-day)		1.0E-02	(mg/kg-day)			(ATSDR)	
Copper	Chronic / Subchronic	4.0E-02	(mg/kg-day)	-	4.0E-02	(mg/kg-day)	GI	-	HEAST	7/31/1997
Iron	Chronic	7.0E-01	(mg/kg-day)	-	7.0E-01	(mg/kg-day)	GI	1.5	PPRTV	9/12/2008
Lead	-	-	-	-	-	-	-	-	-	-
Manganese (water)	Chronic	2.4E-02	(mg/kg-day)	4.0%	9.6E-04	(mg/kg-day)	CNS	1	IRIS	3/31/2010
Manganese (diet)	Chronic	1.4E-01	(mg/kg-day)	4.0%	5.6E-03	(mg/kg-day)	CNS	1	IRIS	3/31/2010
Mercury (E)	Chronic	3.0E-04	(mg/kg-day)	74 - 80%	3.0E-04	(mg/kg-day)	immune system	1000	IRIS	3/31/2010
	Subchronic	3.0E-03	(mg/kg-day)		3.0E-03	(mg/kg-day)			(HEAST)	

TABLE 5.1
NON-CANCER TOXICITY DATA - ORAL / DERMAL EXPOSURES
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Chemical of Potential Concern	Chronic (or Subchronic, if Chronic not available)	Oral RfD ^A		Oral Absorption Efficiency for Dermal ^B	Absorbed RfD for Dermal ^C		Primary Target Organ(s) ^D	Combined Uncertainty/Modifying Factors	RfD:Target Organ(s)	
		Value	Units		Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
Nickel (F)	Chronic	3.0E-02	(mg/kg-day)	4.0%	1.2E-03	(mg/kg-day)	body weight	300	IRIS	3/31/2010
	Subchronic	2.0E-02	(mg/kg-day)		8.0E-04	(mg/kg-day)			(HEAST)	
Silver	Chronic	5.0E-03	(mg/kg-day)	4.0%	2.0E-04	(mg/kg-day)	skin	3	IRIS	3/31/2010
Thallium	-	-	-	-	-	-	-	-	-	-
Vanadium (G)	Chronic	5.0E-03	(mg/kg-day)	2.6%	1.3E-04	(mg/kg-day)	decreased hair cystine	100	IRIS	3/31/2010
	Subchronic	7.0E-03	(mg/kg-day)		1.8E-04	(mg/kg-day)			(HEAST)	
Zinc (H)	Chronic	3.0E-01	(mg/kg-day)	-	3.0E-01	(mg/kg-day)	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	3	IRIS	3/31/2010

A - Based on Regional Screening Level (RSL) Master Table December 2009 and IRIS database. Subchronic values noted in parenthesis.

B - Based on Exhibit 4-1 of EPA's Dermal Guidance document (EPA 2004c). An ABSGI value of 100% was used for COPCs without ABSGI values listed in Exhibit 4-1 of EPA 2004c.

C - Per EPA's Dermal Guidance document (EPA 2004c), value is calculated as follows:

For GIABS values < 50%, absorbed RfD = Oral RfD x GIABS. For GIABS values > 50%, absorbed RfD = Oral RfD x 100%.

D - Based on EPA IRIS database and sources listed

E - based on mercury, insoluble or metallic

F - based on nickel soluble salts

G - based on vanadium and compounds

H - based on zinc (metallic)

I - COPC only via the inhalation pathway; oral toxicity values not needed.

Source Notes:

ATSDR (Agency for Toxic Substances and Disease Registry)

Cal EPA (California Environmental Protection Agency)

HEAST (EPA Health Effects Assessment Summary Tables)

IRIS (EPA Integrated Risk Information System)

PPRTV (EPA Provisional Peer Reviewed Toxicity Values)

** source of subchronic values indicated in parenthesis.

TABLE 5.2
NON-CANCER TOXICITY DATA - INHALATION EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Chemical of Potential Concern	Chronic (or Subchronic, if Chronic not available)	Inhalation RfC ^A		Primary Target Organ(s) ^B	Combined Uncertainty/Modifying Factors	RfC : Target Organ(s)	
		Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
1,2,4-trimethylbenzene	Chronic	7.0E-03	mg/m ³	blood	3000	PPRTV	6/11/2007
1,3,5-trimethylbenzene	Chronic	6.0E-03	mg/m ³	respiratory, neurological, blood	3000	PPRTV	4/20/2009
Benzene	Chronic	3.0E-02	mg/m ³	blood	300	IRIS	3/31/2010
Carbon tetrachloride	Chronic	1.0E-01	mg/m ³	liver	100	IRIS	3/31/2010
Chloroform	Chronic	9.8E-02	mg/m ³	liver	100	ATSDR	3/19/1997
Chloromethane	Chronic	9.0E-02	mg/m ³	central nervous system	1000	IRIS	3/31/2010
Ethylbenzene	Chronic	1.0E+00	mg/m ³	-	300	IRIS	3/31/2010
Tetrachloroethylene	Chronic	2.7E-01	mg/m ³	central nervous system	100	ATSDR	October-96
Trichloroethylene	-	-	-	-	-	-	-
Trichlorofluoromethane	Chronic	7.0E-01	mg/m ³	Kidney, lung	10,000	HEAST	July-97
Acenaphthylene	-	-	-	-	-	-	-
bis(2-ethylhexyl)phthalate	-	-	-	-	-	-	-
Benzo(a)anthracene	-	-	-	-	-	-	-
Benzo(a)pyrene	-	-	-	-	-	-	-
Benzo(b)fluoranthene	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	-	-	-	-	-	-	-
Benzo(k)fluoranthene	-	-	-	-	-	-	-
Carbazole	-	-	-	-	-	-	-
Chrysene	-	-	-	-	-	-	-
Di-n-octylphthalate	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-
Dimethylphthalate	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-	-
Naphthalene	Chronic	3.0E-03	mg/m ³	respiratory epithelium	3000	IRIS	3/31/2010
Phenanthrene	-	-	-	-	-	-	-

TABLE 5.2
NON-CANCER TOXICITY DATA - INHALATION EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Chemical of Potential Concern	Chronic (or Subchronic, if Chronic not available)	Inhalation RfC ^A		Primary Target Organ(s) ^B	Combined Uncertainty/Modifying Factors	RfC : Target Organ(s)	
		Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
alpha-Chlordane	-	(C)	-	-	-	-	-
Arochlor 1254	-	-	-	-	-	-	-
Arochlor 1260	-	-	-	-	-	-	-
delta-BHC	-	-	-	-	-	-	-
Dieldrin	-	-	-	-	-	-	-
Endosulfan I	-	(C)	-	-	-	-	-
Endosulfan II	-	-	-	-	-	-	-
Endosulfan Sulfate	-	-	-	-	-	-	-
Endrin Aldehyde	-	-	-	-	-	-	-
Endrin Ketone	-	-	-	-	-	-	-
gamma-Chlordane	-	-	-	-	-	-	-
Aluminum	Chronic	5.0E-03	mg/m ³	psychomotor, cognitive impairment	300	PPRTV	9/12/2008
Antimony	-	-	-	-	-	-	-
Arsenic	Chronic	1.5E-05	mg/m ³	Developmental, cardiovascular system, nervous system	30	Cal EPA (RSL)	December-08
Barium	Chronic	5.0E-04	mg/m ³	developmental	1000	HEAST	7/31/1997
Beryllium	-	(C)	-	-	-	-	-
Cadmium	Chronic	1.0E-05	mg/m ³	kidney	9	ATSDR	July-08
Chromium VI	Chronic	1.0E-04	mg/m ³	lung	300	IRIS	3/31/2010
		3.0E-04	mg/m ³			(ATSDR)	
Cobalt	Chronic	6.0E-06	mg/m ³	respiratory	300	PPRTV	8/25/2008
Copper	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-
Manganese	Chronic	5.0E-05	mg/m ³	CNS	1000	IRIS	3/31/2010

TABLE 5.2
NON-CANCER TOXICITY DATA - INHALATION EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Chemical of Potential Concern	Chronic (or Subchronic, if Chronic not available)	Inhalation RfC ^A		Primary Target Organ(s) ^B	Combined Uncertainty/Modifying Factors	RfC : Target Organ(s)	
		Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
Mercury	Chronic	3.0E-04	mg/m ³	CNS	30	IRIS	3/31/2010
Nickel	Chronic	9.0E-05	mg/m ³	respiratory	30	ATSDR	5/13/2005
Silver	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-

A - Based on Regional Screening Level (RSL) Master Table December 2009 and IRIS database. Subchronic values noted in parenthesis.

B - Based on EPA IRIS database.

C - COPC in shallow groundwater only; inhalation toxicity values not needed.

Source Notes:

ATSDR (Agency for Toxic Substances and Disease Registry)

Cal EPA (California Environmental Protection Agency)

HEAST (EPA Health Effects Assessment Summary Tables)

IRIS (EPA Integrated Risk Information System)

PPRTV (EPA Provisional Peer Reviewed Toxicity Values)

** Source of subchronic values indicated in parenthesis.

TABLE 6.1
 CANCER TOXICITY DATA - ORAL / DERMAL EXPOSURES
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Chemical of Potential Concern	Oral Cancer Slope Factor ^A		Oral Absorption ^B Efficiency for Dermal	Absorbed Cancer Slope Factor for Dermal ^C		Weight of Evidence/ Cancer Guideline Description	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
1,2,4-trimethylbenzene	(D)	(mg/kg-day) ⁻¹	-	-	-	-	-	-
1,3,5-trimethylbenzene	(D)	(mg/kg-day) ⁻¹	-	-	-	-	-	-
Benzene	(D)	-	-	-	-	-	-	-
Carbon tetrachloride	(D)	-	-	-	-	-	-	-
Chloroform	3.1E-02	(mg/kg-day) ⁻¹	-	3.1E-02	(mg/kg-day) ⁻¹	-	Cal EPA	03/31/10
Chloromethane	(D)	-	-	-	-	-	-	-
Ethylbenzene	(D)	-	-	-	-	-	-	-
Tetrachloroethylene	5.4E-01	(mg/kg-day) ⁻¹	-	5.4E-01	(mg/kg-day) ⁻¹	-	Cal EPA	03/31/10
Trichloroethylene	(D)	-	-	-	-	-	-	-
Trichlorofluoromethane	(D)	-	-	-	-	-	-	-
Acenaphthylene	-	-	-	-	-	-	-	-
bis(2-ethylhexyl)phthalate	1.4E-02	(mg/kg-day) ⁻¹	-	1.4E-02	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	IRIS	03/31/10
Benzo(a)anthracene ¹	7.3E-01	(mg/kg-day) ⁻¹	58-89%	7.3E-01	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	ECAO	03/01/94
Benzo(a)pyrene ¹	7.3E+00	(mg/kg-day) ⁻¹	58-89%	7.3E+00	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	IRIS	03/31/10
Benzo(b)fluoranthene ¹	7.3E-01	(mg/kg-day) ⁻¹	58-89%	7.3E-01	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	ECAO	03/01/94
Benzo(g,h,i)perylene	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene ¹	7.3E-02	(mg/kg-day) ⁻¹	58-89%	7.3E-02	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	ECAO	03/01/94
Carbazole	2.0E-02	(mg/kg-day) ⁻¹	-	2.0E-02	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	HEAST	07/31/97
Chrysene ¹	7.3E-03	(mg/kg-day) ⁻¹	58-89%	7.3E-03	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	ECAO	03/01/94
Di-n-octylphthalate	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene ¹	7.3E+00	(mg/kg-day) ⁻¹	-	7.3E+00	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	ECAO	03/01/94
Dimethylphthalate	-	-	-	-	-	-	-	-

TABLE 6.1
 CANCER TOXICITY DATA - ORAL / DERMAL EXPOSURES
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Chemical of Potential Concern	Oral Cancer Slope Factor ^A		Oral Absorption ^B Efficiency for Dermal	Absorbed Cancer Slope Factor for Dermal ^C		Weight of Evidence/ Cancer Guideline Description	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
Indeno(1,2,3-cd)pyrene ¹	7.3E-01	(mg/kg-day) ⁻¹	58-89%	7.3E-01	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	ECAO	03/01/94
Naphthalene	-	-	-	-	-	-	-	-
Phenanthrene	-	-	-	-	-	-	-	-
alpha-Chlordane	-	-	-	-	-	-	-	-
Aroclor 1254	2.0E+00	(mg/kg-day) ⁻¹	80 - 96%	2.0E+00	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	IRIS	03/31/10
Aroclor 1260	2.0E+00	(mg/kg-day) ⁻¹	80 - 96%	2.0E+00	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	IRIS	03/31/10
delta-BHC	-	-	-	-	-	-	-	-
Dieldrin	1.6E+01	(mg/kg-day) ⁻¹	-	1.6E+01	(mg/kg-day) ⁻¹	B2 - probable human carcinogen	IRIS	03/31/10
Endosulfan I	-	-	-	-	-	-	-	-
Endosulfan II	-	-	-	-	-	-	-	-
Endosulfan Sulfate	-	-	-	-	-	-	-	-
Endrin Aldehyde	-	-	-	-	-	-	-	-
Endrin Ketone	-	-	-	-	-	-	-	-
gamma-Chlordane	-	-	-	-	-	-	-	-
Aluminum	-	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-
Arsenic	1.5E+00	(mg/kg-day) ⁻¹	95.0%	1.5E+00	(mg/kg-day) ⁻¹	A - human carcinogen	IRIS	03/31/10
Barium	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-
Cadmium	-	-	-	-	-	-	-	-
Chromium VI	5.0E-01	(mg/kg-day) ⁻¹	2.5%	2.0E+01	(mg/kg-day) ⁻¹	D - not classifiable	NJDEP	-
Cobalt	-	-	-	-	-	-	-	-

TABLE 6.1
 CANCER TOXICITY DATA - ORAL / DERMAL EXPOSURES
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Chemical of Potential Concern	Oral Cancer Slope Factor ^A		Oral Absorption ^B Efficiency for Dermal	Absorbed Cancer Slope Factor for Dermal ^C		Weight of Evidence/ Cancer Guideline Description	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
Copper	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-
Manganese	-	-	-	-	-	-	-	-
Mercury	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-

1 - chemical that operates with a mutagenic mode of action

A - Based on Regional Screening Level (RSL) Master Table December 2009 and IRIS database.

B - Based on Exhibit 4-1 of EPA's Dermal Guidance document (EPA 2004c). An ABSGI value of 100% was used for COPCs without ABSGI values listed in Exhibit 4-1 of EPA 2004c.

C - Per EPA's Dermal Guidance document (EPA 2004c), value is calculated as follows:

For GIABS values < 50%, oral cancer slope factor = Oral RfD / GIABS. For GIABS values > 50%, oral cancer slope factor = Oral RfD / 100%.

D - COPC only via the inhalation pathway; oral toxicity values not needed.

Source Notes:

ATSDR (Agency for Toxic Substances and Disease Registry)

Cal EPA (California Environmental Protection Agency)

HEAST (EPA Health Effects Assessment Summary Tables)

IRIS (EPA Integrated Risk Information System)

ECAO (Environmental Criteria and Assessment Office)

NJDEP (New Jersey Department of Environmental Protection)

PPRTV (EPA Provisional Peer Reviewed Toxicity Values)

TABLE 6.2
 CANCER TOXICITY DATA - INHALATION EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Chemical of Potential Concern	Unit Risk ^A		Weight of Evidence/ Cancer Guideline Description	Unit Risk : Inhalation CSF	
	Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
1,2,4-trimethylbenzene	-	-	-	-	-
1,3,5-trimethylbenzene	-	-	-	-	-
Benzene	7.8E-06	(ug/m ³) ⁻¹	A - human carcinogen likely carcinogen	IRIS	3/31/2010
Carbon tetrachloride	6.0E-06	(ug/m ³) ⁻¹		IRIS	3/31/2010
Chloroform	2.3E-05	(ug/m ³) ⁻¹	B2	IRIS	3/31/2010
Chloromethane	-	-	-	-	-
Ethylbenzene	-	-	-	-	-
Tetrachloroethylene	5.9E-06	(ug/m ³) ⁻¹	-	Cal EPA	-
Trichloroethylene	2.0E-06	(ug/m ³) ⁻¹	-	Cal EPA	-
Trichlorofluoromethane	-	-	-	-	-
Acenaphthylene	-	-	-	-	-
bis(2-ethylhexyl)phthalate	2.4E-06	(ug/m ³) ⁻¹	-	Cal EPA	-
Benzo(a)anthracene ¹	1.1E-04	(ug/m ³) ⁻¹	-	Cal EPA	-
Benzo(a)pyrene ¹	1.1E-03	(ug/m ³) ⁻¹	-	Cal EPA	-
Benzo(b)fluoranthene ¹	1.1E-04	(ug/m ³) ⁻¹	-	Cal EPA	-
Benzo(g,h,i)perylene	-	-	-	-	-
Benzo(k)fluoranthene ¹	1.1E-04	(ug/m ³) ⁻¹	-	Cal EPA	-
Carbazole	-	-	-	-	-
Chrysene ¹	1.1E-05	(ug/m ³) ⁻¹	-	Cal EPA	-
Di-n-octylphthalate	-	-	-	-	-
Dibenzo(a,h)anthracene ¹	1.2E-03	(ug/m ³) ⁻¹	-	Cal EPA	-
Dimethylphthalate	-	-	-	-	-
Indeno(1,2,3-cd)pyrene ¹	1.1E-04	(ug/m ³) ⁻¹	-	Cal EPA	-
Naphthalene	3.4E-05	(ug/m ³) ⁻¹	C - possible human carcinogen	Cal EPA	-
Phenanthrene	-	-		-	-
alpha-Chlordane	(B)	-	-	-	-

TABLE 6.2
 CANCER TOXICITY DATA - INHALATION EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Chemical of Potential Concern	Unit Risk ^A		Weight of Evidence/ Cancer Guideline Description	Unit Risk : Inhalation CSF	
	Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
Arochlor 1254	5.7E-04	(ug/m ³) ⁻¹	B2 - probable human carcinogen	IRIS	3/31/2010
Arochlor 1260	5.7E-04	(ug/m ³) ⁻¹	B2 - probable human carcinogen	IRIS	3/31/2010
delta-BHC	-	-	-	-	-
Dieldrin	4.6E-03	(ug/m ³) ⁻¹	B2 - probable human carcinogen	IRIS	03/31/10
Endosulfan I	(B)	-	-	-	-
Endosulfan II	-	-	-	-	-
Endosulfan Sulfate	-	-	-	-	-
Endrin Aldehyde	-	-	-	-	-
Endrin Ketone	-	-	-	-	-
gamma-Chlordane	-	-	-	-	-
Aluminum	-	-	-	-	-
Antimony	-	-	-	-	-
Arsenic	4.3E-03	(ug/m ³) ⁻¹	A - human carcinogen	IRIS	03/31/10
Barium	-	-	-	-	-
Beryllium	(B)	-	-	-	-
Cadmium	1.8E-03	(ug/m ³) ⁻¹	B1 - probable human carcinogen	IRIS	03/31/10
Chromium VI	8.4E-02	(ug/m ³) ⁻¹	A - human carcinogen	IRIS	03/31/10
Cobalt	9.0E-03	(ug/m ³) ⁻¹	-	PPRTV	-
Copper	-	-	-	-	-
Iron	-	-	-	-	-
Lead	-	-	-	-	-
Manganese	-	-	-	-	-
Mercury	-	-	-	-	-
Nickel	2.6E-04	(ug/m ³) ⁻¹	-	Cal EPA	-
Silver	-	-	-	-	-
Thallium	-	-	-	-	-

TABLE 6.2
 CANCER TOXICITY DATA - INHALATION EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Chemical of Potential Concern	Unit Risk ^A		Weight of Evidence/ Cancer Guideline Description	Unit Risk : Inhalation CSF	
	Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
Vanadium	-	-	-	-	-
Zinc	-	-	-	-	-

1 - chemical that operates with a mutagenic mode of action

A - Based on Regional Screening Level (RSL) Master Table December 2009 and IRIS database.

B - COPC in shallow groundwater only; inhalation toxicity values not needed.

Source Notes:

ATSDR (Agency for Toxic Substances and Disease Registry)

Cal EPA (California Environmental Protection Agency)

HEAST (EPA Health Effects Assessment Summary Tables)

IRIS (EPA Integrated Risk Information System)

PPRTV (EPA Provisional Peer Reviewed Toxicity Values)

Table 7.1.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current
 Receptor Population: Trespasser
 Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.17E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.06E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.55E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.26E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.87E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.67E-07	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.12E-07	mg/kg-day	2.00E-02	mg/kg-day	3.06E-05
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.42E-08	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.50E-07	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.45E-08	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.73E-08	mg/kg-day	1.00E-01	mg/kg-day	5.73E-07
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.50E-08	mg/kg-day	2.00E-02	mg/kg-day	1.25E-06
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.92E-07	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.98E-08	mg/kg-day	2.00E-02	mg/kg-day	1.99E-06
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.13E-07	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.17E-08	mg/kg-day	2.00E-05	mg/kg-day	1.58E-03
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.94E-07	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.69E-07	mg/kg-day	3.00E-04	mg/kg-day	5.65E-04
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.71E-09	mg/kg-day	2.50E-05	mg/kg-day	1.08E-04
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--				
Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total															2.29E-03	

Table 7.1.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.03E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.75E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.65E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.43E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.53E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.09E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.53E-06	mg/kg-day	2.00E-02	mg/kg-day	7.67E-05
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.61E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.83E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-07	mg/kg-day	1.00E-01	mg/kg-day	1.44E-06
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.28E-08	mg/kg-day	2.00E-02	mg/kg-day	3.14E-06
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.56E-07	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.97E-08	mg/kg-day	2.00E-02	mg/kg-day	4.99E-06
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.57E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.88E-09	mg/kg-day	5.00E-05	mg/kg-day	3.76E-05
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.37E-09	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.30E-09	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.32E-09	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.95E-09	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.23E-10	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.67E-08	mg/kg-day	2.00E-05	mg/kg-day	2.83E-03
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.05E-07	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.64E-03	mg/kg-day	1.00E+00	mg/kg-day	1.64E-03
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.00E-06	mg/kg-day	4.00E-04	mg/kg-day	7.51E-03
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.42E-06	mg/kg-day	3.00E-04	mg/kg-day	4.72E-03
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.53E-05	mg/kg-day	2.00E-01	mg/kg-day	3.27E-04
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.79E-07	mg/kg-day	5.00E-04	mg/kg-day	1.36E-03
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.79E-04	mg/kg-day	3.00E-03	mg/kg-day	5.96E-02
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.59E-06	mg/kg-day	3.00E-04	mg/kg-day	5.29E-03
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.71E-04	mg/kg-day	4.00E-02	mg/kg-day	4.28E-03
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.92E-03	mg/kg-day	7.00E-01	mg/kg-day	9.88E-03
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.72E-04	mg/kg-day	--	mg/kg-day	--
				Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-04	mg/kg-day	2.40E-02	mg/kg-day	4.87E-03
				Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.42E-08	mg/kg-day	3.00E-04	mg/kg-day	2.81E-04
				Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.32E-05	mg/kg-day	3.00E-02	mg/kg-day	4.41E-04
				Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.84E-07	mg/kg-day	5.00E-03	mg/kg-day	1.77E-04
				Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.75E-07	mg/kg-day	--	mg/kg-day	--
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-05	mg/kg-day	5.00E-03	mg/kg-day	2.19E-03
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.13E-04	mg/kg-day	3.00E-01	mg/kg-day	7.10E-04
				Exp. Route Total												
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.64E-12	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.23E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.27E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.16E-10	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.71E-10	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.88E-11	mg/m ³	--	mg/m ³	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.67E-11	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.08E-10	mg/m ³	--	mg/m ³	--
Carbazole	1.24E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.13E-11	mg/m ³	--	mg/m ³	--				

Table 7.1.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Inhalation (Fugitive Dust)	Chrysene	1.41E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-10	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-11	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	1.10E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-11	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.41E-12	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.31E-11	mg/m ³	--	mg/m ³	--
				Naphthalene	7.67E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.00E-12	mg/m ³	3.00E-03	mg/m ³	2.33E-09
				Phenanthrene	1.20E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.10E-10	mg/m ³	--	mg/m ³	--
				Dieldrin	1.44E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.32E-13	mg/m ³	--	mg/m ³	--
				Endosulfan II	4.13E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.77E-13	mg/m ³	--	mg/m ³	--
				Endosulfan sulfate	9.96E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.10E-14	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	1.01E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.26E-14	mg/m ³	--	mg/m ³	--
				Endrin ketone	3.03E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.77E-13	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	5.56E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.08E-14	mg/m ³	--	mg/m ³	--
				Aroclor-1254	4.36E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.98E-12	mg/m ³	--	mg/m ³	--
				Aroclor-1260	5.42E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.95E-11	mg/m ³	--	mg/m ³	--
				Aluminum	1.26E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.15E-07	mg/m ³	5.00E-03	mg/m ³	2.30E-05
				Antimony	2.31E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.11E-10	mg/m ³	--	mg/m ³	--
				Arsenic	1.09E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.93E-11	mg/m ³	1.50E-05	mg/m ³	6.62E-06
				Barium	5.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.59E-09	mg/m ³	5.00E-04	mg/m ³	9.17E-06
				Cadmium	5.22E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.76E-11	mg/m ³	1.00E-05	mg/m ³	4.76E-06
				Chromium (VI)	1.37E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.26E-08	mg/m ³	1.00E-04	mg/m ³	1.26E-04
				Cobalt	1.22E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.11E-10	mg/m ³	6.00E-06	mg/m ³	1.86E-05
				Copper	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.20E-08	mg/m ³	--	mg/m ³	--
				Iron	5.32E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.86E-07	mg/m ³	--	mg/m ³	--
				Lead	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-08	mg/m ³	--	mg/m ³	--
				Manganese	8.99E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.21E-09	mg/m ³	5.00E-05	mg/m ³	1.64E-04
				Mercury	6.47E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.91E-12	mg/m ³	3.00E-04	mg/m ³	1.97E-08
				Nickel	1.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.29E-10	mg/m ³	9.00E-05	mg/m ³	1.03E-05
				Silver	6.80E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.21E-11	mg/m ³	--	mg/m ³	--
				Thallium	1.34E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.23E-11	mg/m ³	--	mg/m ³	--
				Vanadium	8.43E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.70E-10	mg/m ³	--	mg/m ³	--
				Zinc	1.64E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.50E-08	mg/m ³	--	mg/m ³	--
				Exp. Route Total												
Exposure Point Total															1.09E-01	
Exposure Medium Total															1.09E-01	
Medium Total															1.09E-01	
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.34E-08	mg/kg-day	1.00E-02	mg/kg-day	5.34E-06
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.61E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.13E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.87E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.52E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.69E-04	mg/kg-day	--	mg/kg-day	--
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.63E-06	mg/kg-day	--	mg/kg-day	--
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.26E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.37E-05	mg/kg-day	--	mg/kg-day	--
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.63E-05	mg/kg-day	--	mg/kg-day	--
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.47E-06	mg/kg-day	2.00E-02	mg/kg-day	1.73E-04

Table 7.1.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations									
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units							
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.56E-05	mg/kg-day	--	mg/kg-day	--				
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.12E-08	mg/kg-day	--	mg/kg-day	--				
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.17E-08	mg/kg-day	5.00E-05	mg/kg-day	4.35E-04				
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.33E-04	mg/kg-day	--	mg/kg-day	--				
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.12E-05	mg/kg-day	1.00E+00	mg/kg-day	8.12E-05				
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.18E-07	mg/kg-day	3.00E-04	mg/kg-day	1.73E-03				
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.23E-06	mg/kg-day	1.40E-02	mg/kg-day	5.16E-04				
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.92E-08	mg/kg-day	2.50E-05	mg/kg-day	3.57E-03				
				Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.96E-06	mg/kg-day	7.50E-05	mg/kg-day	2.62E-02				
				Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.41E-06	mg/kg-day	4.00E-02	mg/kg-day	1.85E-04				
				Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.82E-04	mg/kg-day	7.00E-01	mg/kg-day	6.88E-04				
				Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.61E-06	mg/kg-day	--	mg/kg-day	--				
				Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.18E-06	mg/kg-day	9.60E-04	mg/kg-day	7.48E-03				
				Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.78E-07	mg/kg-day	1.20E-03	mg/kg-day	1.49E-04				
				Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.92E-07	mg/kg-day	1.30E-04	mg/kg-day	6.86E-03				
				Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.84E-05	mg/kg-day	3.00E-01	mg/kg-day	9.46E-05				
				Exp. Route Total															4.81E-02	
				Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.52E-09	mg/kg-day	1.00E-02	mg/kg-day	3.52E-07
								Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.13E-08	mg/kg-day	--	mg/kg-day	--
								Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.13E-08	mg/kg-day	--	mg/kg-day	--
Benzo(b)fluoranthene	6.50E-04	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.09E-09	mg/kg-day	--	mg/kg-day	--				
Benzo(g,h,i)perylene	3.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.35E-08	mg/kg-day	--	mg/kg-day	--				
Benzo(k)fluoranthene	6.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.70E-08	mg/kg-day	--	mg/kg-day	--				
Carbazole	7.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.48E-08	mg/kg-day	--	mg/kg-day	--				
Chrysene	5.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.91E-08	mg/kg-day	--	mg/kg-day	--				
Dibenzo(a,h)anthracene	1.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.83E-09	mg/kg-day	--	mg/kg-day	--				
Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.35E-08	mg/kg-day	--	mg/kg-day	--				
Naphthalene	4.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.13E-08	mg/kg-day	2.00E-02	mg/kg-day	1.57E-06				
Phenanthrene	1.00E-02	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.83E-08	mg/kg-day	--	mg/kg-day	--				
alpha-Chlordane	3.00E-05	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.35E-10	mg/kg-day	--	mg/kg-day	--				
Dieldrin	2.40E-05	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.88E-10	mg/kg-day	5.00E-05	mg/kg-day	3.76E-06				
Aroclor-1260	5.40E-04	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.23E-09	mg/kg-day	--	mg/kg-day	--				
Aluminum	9.10E+00	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.12E-05	mg/kg-day	1.00E+00	mg/kg-day	7.12E-05				
Arsenic	5.80E-02	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.54E-07	mg/kg-day	3.00E-04	mg/kg-day	1.51E-03				
Barium	8.10E-01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.34E-06	mg/kg-day	2.00E-01	mg/kg-day	3.17E-05				
Cadmium	1.00E-02	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.83E-08	mg/kg-day	5.00E-04	mg/kg-day	1.57E-04				
Chromium (VI)	1.10E-01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.61E-07	mg/kg-day	3.00E-03	mg/kg-day	2.87E-04				
Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.50E-06	mg/kg-day	4.00E-02	mg/kg-day	1.62E-04								
Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.23E-04	mg/kg-day	7.00E-01	mg/kg-day	6.04E-04								
Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-05	mg/kg-day	--	mg/kg-day	--								
Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.30E-06	mg/kg-day	2.40E-02	mg/kg-day	2.63E-04								
Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.83E-07	mg/kg-day	3.00E-02	mg/kg-day	2.61E-05								
Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.83E-07	mg/kg-day	5.00E-03	mg/kg-day	1.57E-04								
Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.15E-05	mg/kg-day	3.00E-01	mg/kg-day	1.38E-04								
Exp. Route Total															3.42E-03					
		Exposure Point Total													5.16E-02					
		Exposure Medium Total													5.16E-02					
Medium Total															5.16E-02					
										Total of Receptor Risks Across All Media		--	Total of Receptor Hazards Across All Media		1.60E-01					

Table 7.1.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current
 Receptor Population: Trespasser
 Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.73E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.94E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.60E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.27E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.88E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.71E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.01E-06	mg/kg-day	2.00E-02	mg/kg-day	2.00E-04
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.20E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.22E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.88E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.76E-07	mg/kg-day	1.00E-01	mg/kg-day	3.76E-06
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.64E-07	mg/kg-day	2.00E-02	mg/kg-day	8.20E-06
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.57E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.61E-07	mg/kg-day	2.00E-02	mg/kg-day	1.30E-05
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.32E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.07E-07	mg/kg-day	2.00E-05	mg/kg-day	1.04E-02
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.58E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.11E-06	mg/kg-day	3.00E-04	mg/kg-day	3.70E-03
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.77E-08	mg/kg-day	2.50E-05	mg/kg-day	7.09E-04
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--				
Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total																
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.50E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.63E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.54E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.27E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.16E-06	mg/kg-day	--	mg/kg-day	--

Table 7.1.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units			
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.02E-05	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.43E-05	mg/kg-day	2.00E-02	mg/kg-day	7.16E-04
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.50E-06	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.71E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.34E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.34E-06	mg/kg-day	1.00E-01	mg/kg-day	1.34E-05
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.86E-07	mg/kg-day	2.00E-02	mg/kg-day	2.93E-05
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.06E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.31E-07	mg/kg-day	2.00E-02	mg/kg-day	4.65E-05
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.75E-08	mg/kg-day	5.00E-05	mg/kg-day	3.51E-04
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.01E-08	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.21E-08	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.23E-08	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.68E-08	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.75E-09	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.29E-07	mg/kg-day	2.00E-05	mg/kg-day	2.64E-02
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.58E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.53E-02	mg/kg-day	1.00E+00	mg/kg-day	1.53E-02
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.80E-05	mg/kg-day	4.00E-04	mg/kg-day	7.01E-02
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.32E-05	mg/kg-day	3.00E-04	mg/kg-day	4.40E-02
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.10E-04	mg/kg-day	2.00E-01	mg/kg-day	3.05E-03
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.33E-06	mg/kg-day	5.00E-04	mg/kg-day	1.27E-02
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.67E-03	mg/kg-day	3.00E-03	mg/kg-day	5.56E-01
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.48E-05	mg/kg-day	3.00E-04	mg/kg-day	4.93E-02
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.60E-03	mg/kg-day	4.00E-02	mg/kg-day	3.99E-02
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.46E-02	mg/kg-day	7.00E-01	mg/kg-day	9.23E-02
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.61E-03	mg/kg-day	--	mg/kg-day	--
				Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.09E-03	mg/kg-day	2.40E-02	mg/kg-day	4.55E-02
				Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.86E-07	mg/kg-day	3.00E-04	mg/kg-day	2.62E-03
				Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.24E-04	mg/kg-day	3.00E-02	mg/kg-day	4.12E-03
				Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.25E-06	mg/kg-day	5.00E-03	mg/kg-day	1.65E-03
				Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.63E-06	mg/kg-day	--	mg/kg-day	--
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.02E-04	mg/kg-day	5.00E-03	mg/kg-day	2.05E-02				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.99E-03	mg/kg-day	3.00E-01	mg/kg-day	6.63E-03				
Exp. Route Total															9.91E-01	
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.64E-12	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.23E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.27E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.16E-10	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.71E-10	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.88E-11	mg/m ³	--	mg/m ³	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.67E-11	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.08E-10	mg/m ³	--	mg/m ³	--
				Carbazole	1.24E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.13E-11	mg/m ³	--	mg/m ³	--
				Chrysene	1.41E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-10	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-11	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	1.10E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-11	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.41E-12	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.31E-11	mg/m ³	--	mg/m ³	--
				Naphthalene	7.67E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.00E-12	mg/m ³	3.00E-03	mg/m ³	2.33E-09

Table 7.1.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units			
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Phenanthrene	1.20E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.10E-10	mg/m ³	--	mg/m ³	--
				Dieldrin	1.44E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.32E-13	mg/m ³	--	mg/m ³	--
				Endosulfan II	4.13E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.77E-13	mg/m ³	--	mg/m ³	--
				Endosulfan sulfate	9.96E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.10E-14	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	1.01E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.26E-14	mg/m ³	--	mg/m ³	--
				Endrin ketone	3.03E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.77E-13	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	5.56E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.08E-14	mg/m ³	--	mg/m ³	--
				Aroclor-1254	4.36E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.98E-12	mg/m ³	--	mg/m ³	--
				Aroclor-1260	5.42E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.95E-11	mg/m ³	--	mg/m ³	--
				Aluminum	1.26E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.15E-07	mg/m ³	5.00E-03	mg/m ³	2.30E-05
				Antimony	2.31E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.11E-10	mg/m ³	--	mg/m ³	--
				Arsenic	1.09E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.93E-11	mg/m ³	1.50E-05	mg/m ³	6.62E-06
				Barium	5.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.59E-09	mg/m ³	5.00E-04	mg/m ³	9.17E-06
				Cadmium	5.22E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.76E-11	mg/m ³	1.00E-05	mg/m ³	4.78E-06
				Chromium (VI)	1.37E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.26E-08	mg/m ³	1.00E-04	mg/m ³	1.26E-04
				Cobalt	1.22E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.11E-10	mg/m ³	6.00E-06	mg/m ³	1.86E-05
				Copper	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.20E-08	mg/m ³	--	mg/m ³	--
				Iron	5.32E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.86E-07	mg/m ³	--	mg/m ³	--
				Lead	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-08	mg/m ³	--	mg/m ³	--
				Manganese	8.99E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.21E-09	mg/m ³	5.00E-05	mg/m ³	1.64E-04
				Mercury	6.47E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.91E-12	mg/m ³	3.00E-04	mg/m ³	1.97E-08
				Nickel	1.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.29E-10	mg/m ³	9.00E-05	mg/m ³	1.03E-05
				Silver	6.80E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.21E-11	mg/m ³	--	mg/m ³	--
				Thallium	1.34E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.23E-11	mg/m ³	--	mg/m ³	--
				Vanadium	8.43E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.70E-10	mg/m ³	--	mg/m ³	--
				Zinc	1.64E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.50E-08	mg/m ³	--	mg/m ³	--
				Exp. Route Total												
Exposure Point Total																1.01E+00
Exposure Medium Total																1.01E+00
Medium Total																1.01E+00
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.22E-07	mg/kg-day	1.00E-02	mg/kg-day	1.22E-05
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.51E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.60E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.28E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.49E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.86E-04	mg/kg-day	--	mg/kg-day	--
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.98E-05	mg/kg-day	--	mg/kg-day	--
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.89E-04	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.00E-04	mg/kg-day	--	mg/kg-day	--
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.98E-04	mg/kg-day	--	mg/kg-day	--
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.95E-06	mg/kg-day	2.00E-02	mg/kg-day	3.98E-04
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.15E-05	mg/kg-day	--	mg/kg-day	--
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.86E-07	mg/kg-day	--	mg/kg-day	--
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.98E-08	mg/kg-day	5.00E-05	mg/kg-day	9.96E-04
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.04E-04	mg/kg-day	--	mg/kg-day	--
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.86E-04	mg/kg-day	1.00E+00	mg/kg-day	1.86E-04
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.19E-06	mg/kg-day	3.00E-04	mg/kg-day	3.95E-03
Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.66E-05	mg/kg-day	1.40E-02	mg/kg-day	1.18E-03				
Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-07	mg/kg-day	2.50E-05	mg/kg-day	8.18E-03				
Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.50E-06	mg/kg-day	7.50E-05	mg/kg-day	6.00E-02				

Table 7.1.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations						
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient	
							Value	Units	Value	Units		Value	Units				
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.70E-05	mg/kg-day	4.00E-02	mg/kg-day	4.24E-04	
				Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-03	mg/kg-day	7.00E-01	mg/kg-day	1.58E-03	
				Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.68E-06	mg/kg-day	--	mg/kg-day	--	
				Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.65E-05	mg/kg-day	9.60E-04	mg/kg-day	1.72E-02	
				Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.09E-07	mg/kg-day	1.20E-03	mg/kg-day	3.41E-04	
				Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-06	mg/kg-day	1.30E-04	mg/kg-day	1.57E-02	
				Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.51E-05	mg/kg-day	3.00E-01	mg/kg-day	2.17E-04	
			Exp. Route Total														1.10E-01
			On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.64E-08	mg/kg-day	1.00E-02	mg/kg-day	1.64E-06
					Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-07	mg/kg-day	--	mg/kg-day	--
		Benzo(a)pyrene			4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-07	mg/kg-day	--	mg/kg-day	--	
		Benzo(b)fluoranthene			6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.37E-08	mg/kg-day	--	mg/kg-day	--	
		Benzo(g,h,i)perylene			3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-07	mg/kg-day	--	mg/kg-day	--	
		Benzo(k)fluoranthene			6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.19E-07	mg/kg-day	--	mg/kg-day	--	
		Carbazole			7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.56E-07	mg/kg-day	--	mg/kg-day	--	
		Chrysene			5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.83E-07	mg/kg-day	--	mg/kg-day	--	
		Dibenzo(a,h)anthracene			1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-08	mg/kg-day	--	mg/kg-day	--	
		Indeno(1,2,3-cd)pyrene			3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-07	mg/kg-day	--	mg/kg-day	--	
		On-Site Leachate Areas	Incidental Ingestion	Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-07	mg/kg-day	2.00E-02	mg/kg-day	7.31E-06	
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-07	mg/kg-day	--	mg/kg-day	--	
alpha-Chlordane	3.00E-05			mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-09	mg/kg-day	--	mg/kg-day	--			
Dieldrin	2.40E-05			mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.77E-10	mg/kg-day	5.00E-05	mg/kg-day	1.75E-05			
Aroclor-1260	5.40E-04			mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.97E-08	mg/kg-day	--	mg/kg-day	--			
Aluminum	9.10E+00			mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.32E-04	mg/kg-day	1.00E+00	mg/kg-day	3.32E-04			
Arsenic	5.80E-02			mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.12E-06	mg/kg-day	3.00E-04	mg/kg-day	7.06E-03			
Barium	8.10E-01			mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.96E-05	mg/kg-day	2.00E-01	mg/kg-day	1.48E-04			
Cadmium	1.00E-02			mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-07	mg/kg-day	5.00E-04	mg/kg-day	7.31E-04			
Chromium (VI)	1.10E-01			mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.02E-06	mg/kg-day	3.00E-03	mg/kg-day	1.34E-03			
On-Site Leachate Areas	Incidental Ingestion	Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.03E-05	mg/kg-day	4.00E-02	mg/kg-day	7.58E-04			
		Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.97E-03	mg/kg-day	7.00E-01	mg/kg-day	2.82E-03			
		Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.58E-05	mg/kg-day	--	mg/kg-day	--			
		Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.94E-05	mg/kg-day	2.40E-02	mg/kg-day	1.23E-03			
		Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-06	mg/kg-day	3.00E-02	mg/kg-day	1.22E-04			
		Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-06	mg/kg-day	5.00E-03	mg/kg-day	7.31E-04			
		Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.94E-04	mg/kg-day	3.00E-01	mg/kg-day	6.45E-04			
		Exp. Route Total													1.59E-02		
		Exposure Point Total														1.26E-01	
		Exposure Medium Total														1.26E-01	
Medium Total														1.26E-01			
Total of Receptor Risks Across All Media										--	Total of Receptor Hazards Across All Media				1.13E+00		

Table 7.1.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Current
Receptor Population:	Trespasser
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	3.77E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	8.20E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.99E-07
				Benzo(a)pyrene	1.05E+01	mg/kg	7.74E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.65E-06
				Benzo(b)fluoranthene	1.56E+01	mg/kg	1.14E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.34E-07
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	2.60E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	5.13E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	3.75E-08
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	5.54E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	7.75E-09
				Carbazole	1.03E+00	mg/kg	5.80E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.16E-09
				Chrysene	1.17E+01	mg/kg	8.60E-07	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	6.28E-09
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	6.74E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.92E-07
				Dimethylphthalate	9.18E-01	mg/kg	5.19E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	2.27E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	3.55E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.59E-07
				Naphthalene	6.37E-01	mg/kg	3.60E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	7.35E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	2.86E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.73E-08
				Aroclor-1260	4.51E+00	mg/kg	3.56E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	7.13E-07
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	1.53E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.30E-07
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	4.34E+00	mg/kg	2.45E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--				
Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

Table 7.1.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								8.88E-06
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	9.18E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	2.00E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.46E-06
				Benzo(a)pyrene	1.05E+01	mg/kg	1.88E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.38E-05
				Benzo(b)fluoranthene	1.56E+01	mg/kg	2.78E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.03E-06
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	6.32E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	1.25E-06	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	9.12E-08
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	1.75E-06	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	2.45E-08
				Carbazole	1.03E+00	mg/kg	1.84E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	3.68E-09
				Chrysene	1.17E+01	mg/kg	2.09E-06	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	1.53E-08
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	1.64E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.20E-06
				Dimethylphthalate	9.18E-01	mg/kg	1.64E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	7.17E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	8.65E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.31E-07
				Naphthalene	6.37E-01	mg/kg	1.14E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	1.79E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	2.15E-09	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	3.44E-08
				Endosulfan II	3.43E-02	mg/kg	6.14E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	1.48E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	1.51E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	4.51E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	8.27E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	6.48E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.30E-07
				Aroclor-1260	4.51E+00	mg/kg	8.06E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.61E-06
				Aluminum	1.05E+04	mg/kg	1.87E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	3.43E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Arsenic	9.04E+00	mg/kg	1.62E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.43E-06				
Barium	4.17E+02	mg/kg	7.47E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Cadmium	4.34E+00	mg/kg	7.76E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Chromium (VI)	1.14E+03	mg/kg	2.04E-04	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	1.02E-04				
Cobalt	1.01E+01	mg/kg	1.81E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Copper	1.09E+03	mg/kg	1.96E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Iron	4.42E+04	mg/kg	7.91E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	1.97E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

Table 7.1.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Manganese	7.47E+02	mg/kg	1.34E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Mercury	5.38E-01	mg/kg	9.63E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Nickel	8.46E+01	mg/kg	1.51E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Silver	5.65E+00	mg/kg	1.01E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Thallium	1.12E+00	mg/kg	2.00E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	1.25E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	2.44E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Exp. Route Total							
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	2.42E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	5.26E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	5.78E-12
				Benzo(a)pyrene	1.27E-08	mg/m ³	4.96E-11	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	5.46E-11
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	7.32E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	8.06E-12
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	1.66E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	3.29E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	3.62E-12
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	4.61E-11	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	1.11E-13
				Carbazole	1.24E-09	mg/m ³	4.84E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Chrysene	1.41E-08	mg/m ³	5.51E-11	mg/m ³	1.10E-05	(µg/m ³) ⁻¹	6.06E-13
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	4.32E-12	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	5.19E-12
				Dimethylphthalate	1.10E-09	mg/m ³	4.32E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	1.89E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	2.28E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.50E-12
				Naphthalene	7.67E-10	mg/m ³	3.00E-12	mg/m ³	3.40E-05	(µg/m ³) ⁻¹	1.02E-13
				Phenanthrene	1.20E-08	mg/m ³	4.71E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Dieldrin	1.44E-11	mg/m ³	5.65E-14	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	2.60E-13
				Endosulfan II	4.13E-11	mg/m ³	1.62E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endosulfan sulfate	9.96E-12	mg/m ³	3.90E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin aldehyde	1.01E-11	mg/m ³	3.97E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	3.03E-11	mg/m ³	1.19E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	5.56E-12	mg/m ³	2.18E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1254	4.36E-10	mg/m ³	1.70E-12	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	9.72E-13
				Aroclor-1260	5.42E-09	mg/m ³	2.12E-11	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.21E-11
Aluminum	1.26E-05	mg/m ³	4.93E-08	mg/m ³	--	(µg/m ³) ⁻¹	--				
Antimony	2.31E-08	mg/m ³	9.03E-11	mg/m ³	--	(µg/m ³) ⁻¹	--				
Arsenic	1.09E-08	mg/m ³	4.26E-11	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	1.83E-10				
Barium	5.02E-07	mg/m ³	1.97E-09	mg/m ³	--	(µg/m ³) ⁻¹	--				
Cadmium	5.22E-09	mg/m ³	2.04E-11	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	3.68E-11				
Chromium (VI)	1.37E-06	mg/m ³	5.38E-09	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	4.52E-07				
Cobalt	1.22E-08	mg/m ³	4.77E-11	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	4.29E-10				
Copper	1.32E-06	mg/m ³	5.15E-09	mg/m ³	--	(µg/m ³) ⁻¹	--				

Table 7.1.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Iron	5.32E-05	mg/m ³	2.08E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Lead	1.32E-06	mg/m ³	5.18E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Manganese	8.99E-07	mg/m ³	3.52E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Mercury	6.47E-10	mg/m ³	2.53E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Nickel	1.02E-07	mg/m ³	3.98E-10	mg/m ³	2.60E-04	(µg/m ³) ⁻¹	1.04E-10
				Silver	6.80E-09	mg/m ³	2.66E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Thallium	1.34E-09	mg/m ³	5.26E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Vanadium	8.43E-08	mg/m ³	3.30E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Zinc	1.64E-06	mg/m ³	6.41E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
							Exp. Route Total				
		Exposure Point Total								1.35E-04	
	Exposure Medium Total									1.35E-04	
Medium Total											1.35E-04
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	2.88E-08	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	8.92E-10
				Benzo(a)anthracene	4.00E-03	mg/L	3.56E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.60E-05
				Benzo(a)pyrene	4.00E-03	mg/L	6.11E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.46E-04
				Benzo(b)fluoranthene	6.50E-04	mg/L	1.01E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.35E-06
				Benzo(g,h,i)perylene	3.00E-03	mg/L	8.22E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	9.09E-05	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	6.64E-06
				Carbazole	7.00E-03	mg/L	4.66E-06	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	9.31E-08
				Chrysene	5.00E-03	mg/L	4.45E-05	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	3.25E-07
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	2.36E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.72E-04
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	4.66E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.40E-05
				Naphthalene	4.00E-03	mg/L	1.87E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E-02	mg/L	1.92E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				alpha-Chlordane	3.00E-05	mg/L	4.38E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	2.40E-05	mg/L	1.17E-08	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.88E-07
				Aroclor-1260	5.40E-04	mg/L	7.15E-05	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.43E-04
				Aluminum	9.10E+00	mg/L	4.38E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	5.80E-02	mg/L	2.79E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	4.19E-07
				Barium	8.10E-01	mg/L	3.90E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.00E-02	mg/L	4.81E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.10E-01	mg/L	1.06E-06	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	2.12E-05
Copper	8.30E-01	mg/L	3.99E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Iron	5.40E+01	mg/L	2.60E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.80E+00	mg/L	8.66E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	8.05E-01	mg/L	3.87E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	1.00E-01	mg/L	9.63E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Vanadium	1.00E-01	mg/L	4.81E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

Table 7.1.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
					Value	Units	Value	Units	Value	Units	
Leachate	Leachate	On-Site Leachate Areas	Dermal Abs.	Zinc	5.30E+00	mg/L	1.53E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								8.57E-04
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	2.61E-09	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	8.08E-11
				Benzo(a)anthracene	4.00E-03	mg/L	2.32E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.69E-08
				Benzo(a)pyrene	4.00E-03	mg/L	2.32E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.69E-07
				Benzo(b)fluoranthene	6.50E-04	mg/L	3.77E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.75E-09
				Benzo(g,h,i)perylene	3.00E-03	mg/L	1.74E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	3.48E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.54E-09
				Carbazole	7.00E-03	mg/L	4.05E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	8.11E-10
				Chrysene	5.00E-03	mg/L	2.90E-08	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	2.11E-10
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	5.79E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.23E-08
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	1.74E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.27E-08
				Naphthalene	4.00E-03	mg/L	2.32E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E-02	mg/L	5.79E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				alpha-Chlordane	3.00E-05	mg/L	1.74E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	2.40E-05	mg/L	1.39E-10	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	2.22E-09
				Aroclor-1260	5.40E-04	mg/L	3.13E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	6.26E-09
				Aluminum	9.10E+00	mg/L	5.27E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	5.80E-02	mg/L	3.36E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	5.04E-07
				Barium	8.10E-01	mg/L	4.69E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.00E-02	mg/L	5.79E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.10E-01	mg/L	6.37E-07	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	3.19E-07
				Copper	8.30E-01	mg/L	4.81E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	5.40E+01	mg/L	3.13E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	1.80E+00	mg/L	1.04E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	8.05E-01	mg/L	4.66E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Nickel	1.00E-01	mg/L	5.79E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	1.00E-01	mg/L	5.79E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	5.30E+00	mg/L	3.07E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								1.08E-06
		Exposure Point Total									8.58E-04
	Exposure Medium Total										8.58E-04
Medium Total											8.58E-04
Total of Receptor Risks Across All Media											9.93E-04

Table 7.1.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

Footnotes:

[a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.

[b] Inputs were applied as follows:
 Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
 Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
 Age 6 - 16 Adult IR/CR and BW; ED = 10, ADAF = 3
 Age 16 - 30 Adult IR/CR and BW; ED = 14; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

On-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	1.12E+01	7.30E-01	3.57E-06	7.30E-01	8.09E-06	1.10E-04	1.46E-11
Benzo(a)pyrene	1.05E+01	7.30E+00	3.37E-05	7.30E+00	7.63E-05	1.10E-03	1.38E-10
Benzo(b)fluoranthene	1.56E+01	7.30E-01	4.98E-06	7.30E-01	1.13E-05	1.10E-04	2.04E-11
Benzo(k)fluoranthene	6.98E+00	7.00E-02	2.14E-07	7.00E-02	4.85E-07	1.10E-04	9.17E-12
Chrysene	1.17E+01	7.30E-03	3.74E-08	7.30E-03	8.48E-08	1.10E-05	1.54E-12
Dibenzo(a,h)anthracene	9.18E-01	7.30E+00	2.94E-06	7.30E+00	6.66E-06	1.20E-03	1.31E-11
Indeno(1,2,3-cd)pyrene	4.83E+00	7.30E-01	1.55E-06	7.30E-01	3.50E-06	1.10E-04	6.34E-12
Chromium (VI)	1.14E+03	2.00E+01	--	5.00E-01	5.67E-04	8.40E-02	1.14E-06

*Cancer Risk using ADAF

On-Site Leachate							
MMOA Chemical	CW (mg/L)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	4.00E-03	7.30E-01	9.74E-05	7.30E-01	8.35E-08	--	--
Benzo(a)pyrene	4.00E-03	7.30E+00	1.67E-03	7.30E+00	8.35E-07	--	--
Benzo(b)fluoranthene	6.50E-04	7.30E-01	2.75E-05	7.30E-01	1.36E-08	--	--
Benzo(k)fluoranthene	6.00E-03	7.00E-02	2.38E-05	7.00E-02	1.20E-08	--	--
Chrysene	5.00E-03	7.30E-03	1.22E-06	7.30E-03	1.04E-09	--	--
Dibenzo(a,h)anthracene	1.00E-03	7.30E+00	6.45E-04	7.30E+00	2.09E-07	--	--
Indeno(1,2,3-cd)pyrene	3.00E-03	7.30E-01	1.27E-04	7.30E-01	6.26E-08	--	--
Chromium (VI)	1.10E-01	2.00E+01	7.93E-05	5.00E-01	1.57E-06	--	--

*Cancer Risk using ADAF

Table 7.2.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Receptor Population: Recreator
 Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.17E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.06E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.55E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.26E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.87E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.67E-07	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.12E-07	mg/kg-day	2.00E-02	mg/kg-day	3.06E-05
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.42E-08	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.50E-07	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.45E-08	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.73E-08	mg/kg-day	1.00E-01	mg/kg-day	5.73E-07
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.50E-08	mg/kg-day	2.00E-02	mg/kg-day	1.25E-06
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.92E-07	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.98E-08	mg/kg-day	2.00E-02	mg/kg-day	1.99E-06
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.13E-07	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.17E-08	mg/kg-day	2.00E-05	mg/kg-day	1.58E-03
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.94E-07	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.69E-07	mg/kg-day	3.00E-04	mg/kg-day	5.65E-04
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.71E-09	mg/kg-day	2.50E-05	mg/kg-day	1.08E-04
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--				
Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total																
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.03E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.75E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.65E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.43E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.53E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.09E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.53E-06	mg/kg-day	2.00E-02	mg/kg-day	7.67E-05
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.61E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.83E-06	mg/kg-day	--	mg/kg-day	--

Table 7.2.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations						
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient			
							Value	Units	Value	Units		Value	Units	Value	Units				
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-07	mg/kg-day	--	mg/kg-day	--			
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-07	mg/kg-day	1.00E-01	mg/kg-day	1.44E-06			
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.28E-08	mg/kg-day	2.00E-02	mg/kg-day	3.14E-06			
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.56E-07	mg/kg-day	--	mg/kg-day	--			
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.97E-08	mg/kg-day	2.00E-02	mg/kg-day	4.99E-06			
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.57E-06	mg/kg-day	--	mg/kg-day	--			
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.88E-09	mg/kg-day	5.00E-05	mg/kg-day	3.76E-05			
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.37E-09	mg/kg-day	--	mg/kg-day	--			
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.30E-09	mg/kg-day	--	mg/kg-day	--			
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.32E-09	mg/kg-day	--	mg/kg-day	--			
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.95E-09	mg/kg-day	--	mg/kg-day	--			
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.23E-10	mg/kg-day	--	mg/kg-day	--			
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.67E-08	mg/kg-day	2.00E-05	mg/kg-day	2.83E-03			
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.05E-07	mg/kg-day	--	mg/kg-day	--			
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.64E-03	mg/kg-day	1.00E+00	mg/kg-day	1.64E-03			
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.00E-06	mg/kg-day	--	mg/kg-day	7.51E-03			
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.42E-06	mg/kg-day	3.00E-04	mg/kg-day	4.72E-03			
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.53E-05	mg/kg-day	2.00E-01	mg/kg-day	3.27E-04			
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.79E-07	mg/kg-day	5.00E-04	mg/kg-day	1.36E-03			
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.79E-04	mg/kg-day	3.00E-03	mg/kg-day	5.96E-02			
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.59E-06	mg/kg-day	3.00E-04	mg/kg-day	5.29E-03			
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.71E-04	mg/kg-day	4.00E-02	mg/kg-day	4.28E-03			
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.92E-03	mg/kg-day	7.00E-01	mg/kg-day	9.88E-03			
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.72E-04	mg/kg-day	--	mg/kg-day	--			
				Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-04	mg/kg-day	2.40E-02	mg/kg-day	4.87E-03			
				Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.42E-08	mg/kg-day	3.00E-04	mg/kg-day	2.81E-04			
				Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.32E-05	mg/kg-day	3.00E-02	mg/kg-day	4.41E-04			
				Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.84E-07	mg/kg-day	5.00E-03	mg/kg-day	1.77E-04			
				Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.75E-07	mg/kg-day	--	mg/kg-day	--			
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-05	mg/kg-day	5.00E-03	mg/kg-day	2.19E-03			
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.13E-04	mg/kg-day	3.00E-01	mg/kg-day	7.10E-04			
				Exp. Route Total															
				Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.64E-12	mg/m ³	--	mg/m ³
Benzo(a)anthracene	1.34E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.23E-10	mg/m ³	--	mg/m ³	--			
Benzo(a)pyrene	1.27E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.16E-10	mg/m ³	--	mg/m ³	--			
Benzo(b)fluoranthene	1.87E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.71E-10	mg/m ³	--	mg/m ³	--			
Benzo(g,h,i)perylene	4.25E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	3.88E-11	mg/m ³	--	mg/m ³	--			
Benzo(k)fluoranthene	8.40E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	7.67E-11	mg/m ³	--	mg/m ³	--			
Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.08E-10	mg/m ³	--	mg/m ³	--			
Carbazole	1.24E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.13E-11	mg/m ³	--	mg/m ³	--			
Chrysene	1.41E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-10	mg/m ³	--	mg/m ³	--			
Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-11	mg/m ³	--	mg/m ³	--			
Dimethylphthalate	1.10E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-11	mg/m ³	--	mg/m ³	--			
Di-n-octylphthalate	4.83E-10	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	4.41E-12	mg/m ³	--	mg/m ³	--			
Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	5.31E-11	mg/m ³	--	mg/m ³	--			
Naphthalene	7.67E-10	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	7.00E-12	mg/m ³	3.00E-03	mg/m ³	2.33E-09			
Phenanthrene	1.20E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.10E-10	mg/m ³	--	mg/m ³	--			
Dieldrin	1.44E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.32E-13	mg/m ³	--	mg/m ³	--			
Endosulfan II	4.13E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	3.77E-13	mg/m ³	--	mg/m ³	--			
Endosulfan sulfate	9.96E-12	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	9.10E-14	mg/m ³	--	mg/m ³	--			
Endrin aldehyde	1.01E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	9.26E-14	mg/m ³	--	mg/m ³	--			
Endrin ketone	3.03E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	2.77E-13	mg/m ³	--	mg/m ³	--			
gamma-Chlordane	5.56E-12	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	5.08E-14	mg/m ³	--	mg/m ³	--			
Aroclor-1254	4.36E-10	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	3.98E-12	mg/m ³	--	mg/m ³	--			

Table 7.2.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations						
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RC		Hazard Quotient		
							Value	Units	Value	Units		Value	Units	Value	Units			
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Aroclor-1260	5.42E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.95E-11	mg/m ³	--	mg/m ³	--		
				Aluminum	1.26E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.15E-07	mg/m ³	5.00E-03	mg/m ³	2.30E-05		
				Antimony	2.31E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.11E-10	mg/m ³	--	mg/m ³	--		
				Arsenic	1.09E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.93E-11	mg/m ³	1.50E-05	mg/m ³	6.62E-06		
				Barium	5.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.59E-09	mg/m ³	5.00E-04	mg/m ³	9.17E-06		
				Cadmium	5.22E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.76E-11	mg/m ³	1.00E-05	mg/m ³	4.76E-06		
				Chromium (VI)	1.37E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.26E-08	mg/m ³	1.00E-04	mg/m ³	1.26E-04		
				Cobalt	1.22E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.11E-10	mg/m ³	6.00E-06	mg/m ³	1.86E-05		
				Copper	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.20E-08	mg/m ³	--	mg/m ³	--		
				Iron	5.32E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.86E-07	mg/m ³	--	mg/m ³	--		
				Lead	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-08	mg/m ³	--	mg/m ³	--		
				Manganese	8.99E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.21E-09	mg/m ³	5.00E-05	mg/m ³	1.64E-04		
				Mercury	6.47E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.91E-12	mg/m ³	3.00E-04	mg/m ³	1.97E-08		
				Nickel	1.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.29E-10	mg/m ³	9.00E-05	mg/m ³	1.03E-05		
				Silver	6.80E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.21E-11	mg/m ³	--	mg/m ³	--		
				Thallium	1.34E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.23E-11	mg/m ³	--	mg/m ³	--		
				Vanadium	8.43E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.70E-10	mg/m ³	--	mg/m ³	--		
				Zinc	1.64E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.50E-08	mg/m ³	--	mg/m ³	--		
				Exp. Route Total														
			Exposure Point Total															
Exposure Medium Total																1.09E-01		
Medium Total																1.09E-01		
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.34E-08	mg/kg-day	1.00E-02	mg/kg-day	5.34E-06		
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.61E-05	mg/kg-day	--	mg/kg-day	--		
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.13E-04	mg/kg-day	--	mg/kg-day	--		
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.87E-05	mg/kg-day	--	mg/kg-day	--		
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.52E-04	mg/kg-day	--	mg/kg-day	--		
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.69E-04	mg/kg-day	--	mg/kg-day	--		
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.63E-06	mg/kg-day	--	mg/kg-day	--		
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.26E-05	mg/kg-day	--	mg/kg-day	--		
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.37E-05	mg/kg-day	--	mg/kg-day	--		
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.63E-05	mg/kg-day	--	mg/kg-day	--		
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.47E-06	mg/kg-day	2.00E-02	mg/kg-day	1.73E-04		
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.56E-05	mg/kg-day	--	mg/kg-day	--		
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.12E-08	mg/kg-day	--	mg/kg-day	--		
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.17E-08	mg/kg-day	5.00E-05	mg/kg-day	4.35E-04		
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.33E-04	mg/kg-day	--	mg/kg-day	--		
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.12E-05	mg/kg-day	1.00E+00	mg/kg-day	8.12E-05		
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.18E-07	mg/kg-day	3.00E-04	mg/kg-day	1.73E-03		
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.23E-06	mg/kg-day	1.40E-02	mg/kg-day	5.16E-04		
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.92E-08	mg/kg-day	2.50E-05	mg/kg-day	3.57E-03		
			Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.96E-06	mg/kg-day	7.50E-05	mg/kg-day	2.62E-02			
Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.41E-06	mg/kg-day	4.00E-02	mg/kg-day	1.85E-04						
Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.82E-04	mg/kg-day	7.00E-01	mg/kg-day	6.88E-04						
Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.61E-06	mg/kg-day	--	mg/kg-day	--						
Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.18E-06	mg/kg-day	9.60E-04	mg/kg-day	7.48E-03						
Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.78E-07	mg/kg-day	1.20E-03	mg/kg-day	1.49E-04						
Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.92E-07	mg/kg-day	1.30E-04	mg/kg-day	6.86E-03						
Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.84E-05	mg/kg-day	3.00E-01	mg/kg-day	9.46E-05						
Exp. Route Total																4.81E-02		
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.52E-09	mg/kg-day	1.00E-02	mg/kg-day	3.52E-07		
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.13E-08	mg/kg-day	--	mg/kg-day	--		
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.13E-08	mg/kg-day	--	mg/kg-day	--		
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.09E-09	mg/kg-day	--	mg/kg-day	--		

Table 7.2.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations									
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.35E-08	mg/kg-day	--	mg/kg-day	--				
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.70E-08	mg/kg-day	--	mg/kg-day	--				
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.48E-08	mg/kg-day	--	mg/kg-day	--				
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.91E-08	mg/kg-day	--	mg/kg-day	--				
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.83E-09	mg/kg-day	--	mg/kg-day	--				
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.35E-08	mg/kg-day	--	mg/kg-day	--				
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.13E-08	mg/kg-day	2.00E-02	mg/kg-day	1.57E-06				
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.83E-08	mg/kg-day	--	mg/kg-day	--				
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.35E-10	mg/kg-day	--	mg/kg-day	--				
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.88E-10	mg/kg-day	5.00E-05	mg/kg-day	3.76E-06				
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.23E-09	mg/kg-day	--	mg/kg-day	--				
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.12E-05	mg/kg-day	1.00E+00	mg/kg-day	7.12E-05				
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.54E-07	mg/kg-day	3.00E-04	mg/kg-day	1.51E-03				
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.34E-06	mg/kg-day	2.00E-01	mg/kg-day	3.17E-05				
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.83E-08	mg/kg-day	5.00E-04	mg/kg-day	1.57E-04				
				Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.61E-07	mg/kg-day	3.00E-03	mg/kg-day	2.87E-04				
				Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.50E-06	mg/kg-day	4.00E-02	mg/kg-day	1.62E-04				
				Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.23E-04	mg/kg-day	7.00E-01	mg/kg-day	6.04E-04				
				Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-05	mg/kg-day	--	mg/kg-day	--				
				Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.30E-06	mg/kg-day	2.40E-02	mg/kg-day	2.63E-04				
				Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.83E-07	mg/kg-day	3.00E-02	mg/kg-day	2.61E-05				
Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.83E-07	mg/kg-day	5.00E-03	mg/kg-day	1.57E-04								
Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.15E-05	mg/kg-day	3.00E-01	mg/kg-day	1.38E-04								
Exp. Route Total															3.42E-03					
Exposure Point Total																5.16E-02				
Exposure Medium Total																5.16E-02				
Medium Total																5.16E-02				
Sediment	Sediment in Beer Kill	Beer Kill Creek	Dermal Absorption	Benzo(a)pyrene	4.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.74E-09	mg/kg-day	--	mg/kg-day	--				
				Phenanthrene	4.10E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.33E-09	mg/kg-day	--	mg/kg-day	--				
				Endrin ketone	2.50E-04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
				Arsenic	5.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.93E-08	mg/kg-day	3.00E-04	mg/kg-day	3.31E-04				
				Chromium (VI)	8.80E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--				
				Cobalt	8.00E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
				Iron	1.93E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--				
				Manganese	9.98E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
				Exp. Route Total																3.31E-04
				Sediment	Sediment in Beer Kill	Beer Kill Creek	Incidental Ingestion	Benzo(a)pyrene	4.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.20E-09	mg/kg-day	--	mg/kg-day	--
								Phenanthrene	4.10E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.42E-09	mg/kg-day	--	mg/kg-day	--
								Endrin ketone	2.50E-04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.91E-11	mg/kg-day	--	mg/kg-day	--
								Arsenic	5.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.30E-07	mg/kg-day	3.00E-04	mg/kg-day	2.77E-03
								Chromium (VI)	8.80E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.38E-06	mg/kg-day	3.00E-03	mg/kg-day	4.59E-04
								Cobalt	8.00E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.25E-06	mg/kg-day	3.00E-04	mg/kg-day	4.17E-03
Iron	1.93E+04	mg/kg	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.02E-03	mg/kg-day	7.00E-01	mg/kg-day	4.32E-03				
Manganese	9.98E+02	mg/kg	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.56E-04	mg/kg-day	2.40E-02	mg/kg-day	6.51E-03				
Exp. Route Total																				1.82E-02
Exposure Point Total																				1.86E-02
Exposure Medium Total																1.86E-02				
Medium Total																1.86E-02				
Surface Water	Surface Water in Beer Kill	Beer Kill Creek	No Chemicals met the COPC criteria for this medium.																	
			Exp. Route Total														0.00E+00			
			Exposure Point Total														0.00E+00			
Exposure Medium Total															0.00E+00					
Medium Total																0.00E+00				
Total of Receptor Risks Across All Media											--	Total of Receptor Hazards Across All Media				1.79E-01				

Table 7.2.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Recreator
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.73E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.94E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.60E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.27E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.88E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.71E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.01E-06	mg/kg-day	2.00E-02	mg/kg-day	2.00E-04
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.20E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.22E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.88E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.76E-07	mg/kg-day	1.00E-01	mg/kg-day	3.76E-06
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.64E-07	mg/kg-day	2.00E-02	mg/kg-day	8.20E-06
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.57E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.61E-07	mg/kg-day	2.00E-02	mg/kg-day	1.30E-05
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.32E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.07E-07	mg/kg-day	2.00E-05	mg/kg-day	1.04E-02
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.58E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.11E-06	mg/kg-day	3.00E-04	mg/kg-day	3.70E-03
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.77E-08	mg/kg-day	2.50E-05	mg/kg-day	7.09E-04
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--				
Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total																
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.50E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.63E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.54E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.27E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.16E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.02E-05	mg/kg-day	--	mg/kg-day	--

Table 7.2.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Bis(2-ethylhexyl)phthalate	9.79E+00	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.43E-05	mg/kg-day	2.00E-02	mg/kg-day	7.16E-04
				Carbazole	1.03E+00	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.50E-06	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.71E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.34E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.34E-06	mg/kg-day	1.00E-01	mg/kg-day	1.34E-05
				Di-n-octylphthalate	4.01E-01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.86E-07	mg/kg-day	2.00E-02	mg/kg-day	2.93E-05
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.06E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.31E-07	mg/kg-day	2.00E-02	mg/kg-day	4.65E-05
				Phenanthrene	1.00E+01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.75E-08	mg/kg-day	5.00E-05	mg/kg-day	3.51E-04
				Endosulfan II	3.43E-02	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.01E-08	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.21E-08	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.23E-08	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.68E-08	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.75E-09	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.29E-07	mg/kg-day	2.00E-05	mg/kg-day	2.64E-02
				Aroclor-1260	4.51E+00	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.58E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.53E-02	mg/kg-day	1.00E+00	mg/kg-day	1.53E-02
				Antimony	1.92E+01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.80E-05	mg/kg-day	4.00E-04	mg/kg-day	7.01E-02
				Arsenic	9.04E+00	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.32E-05	mg/kg-day	3.00E-04	mg/kg-day	4.40E-02
				Barium	4.17E+02	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.10E-04	mg/kg-day	2.00E-01	mg/kg-day	3.05E-03
				Cadmium	4.34E+00	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.33E-06	mg/kg-day	5.00E-04	mg/kg-day	1.27E-02
				Chromium (VI)	1.14E+03	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.67E-03	mg/kg-day	3.00E-03	mg/kg-day	5.56E-01
				Cobalt	1.01E+01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.48E-05	mg/kg-day	3.00E-04	mg/kg-day	4.93E-02
				Copper	1.09E+03	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.60E-03	mg/kg-day	4.00E-02	mg/kg-day	3.99E-02
				Iron	4.42E+04	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.46E-02	mg/kg-day	7.00E-01	mg/kg-day	9.23E-02
				Lead	1.10E+03	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.61E-03	mg/kg-day	--	mg/kg-day	--
				Manganese	7.47E+02	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.09E-03	mg/kg-day	2.40E-02	mg/kg-day	4.55E-02
				Mercury	5.38E-01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.86E-07	mg/kg-day	3.00E-04	mg/kg-day	2.62E-03
				Nickel	8.46E+01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.24E-04	mg/kg-day	3.00E-02	mg/kg-day	4.12E-03
				Silver	5.65E+00	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.25E-06	mg/kg-day	5.00E-03	mg/kg-day	1.65E-03
				Thallium	1.12E+00	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.63E-06	mg/kg-day	--	mg/kg-day	--
				Vanadium	7.01E+01	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.02E-04	mg/kg-day	5.00E-03	mg/kg-day	2.05E-02
Zinc	1.36E+03	mg/m ³	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.99E-03	mg/kg-day	3.00E-01	mg/kg-day	6.63E-03				
Exp. Route Total																
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.64E-12	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	1.34E-08	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.23E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.27E-08	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.16E-10	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	1.87E-08	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.71E-10	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	4.25E-09	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.88E-11	mg/m ³	--	mg/m ³	--
				Benzo(k)fluoranthene	8.40E-09	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.67E-11	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.08E-10	mg/m ³	--	mg/m ³	--
				Carbazole	1.24E-09	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.13E-11	mg/m ³	--	mg/m ³	--
				Chrysene	1.41E-08	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-10	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	1.10E-09	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-11	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	1.10E-09	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-11	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	4.83E-10	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.41E-12	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.31E-11	mg/m ³	--	mg/m ³	--
				Naphthalene	7.67E-10	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.00E-12	mg/m ³	3.00E-03	mg/m ³	2.33E-09
				Phenanthrene	1.20E-08	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.10E-10	mg/m ³	--	mg/m ³	--
				Dieldrin	1.44E-11	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.32E-13	mg/m ³	--	mg/m ³	--

Table 7.2.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient	
							Value	Units	Value	Units		Value	Units	Value	Units		
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Endosulfan II	4.13E-11	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.77E-13	mg/m ³	--	mg/m ³	--	
				Endosulfan sulfate	9.96E-12	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.10E-14	mg/m ³	--	mg/m ³	--	
				Endrin aldehyde	1.01E-11	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.26E-14	mg/m ³	--	mg/m ³	--	
				Endrin ketone	3.03E-11	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.77E-13	mg/m ³	--	mg/m ³	--	
				gamma-Chlordane	5.56E-12	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.08E-14	mg/m ³	--	mg/m ³	--	
				Aroclor-1254	4.36E-10	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.98E-12	mg/m ³	--	mg/m ³	--	
				Aroclor-1260	5.42E-09	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.95E-11	mg/m ³	--	mg/m ³	--	
				Aluminum	1.26E-05	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.15E-07	mg/m ³	5.00E-03	mg/m ³	2.30E-05	
				Antimony	2.31E-08	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.11E-10	mg/m ³	--	mg/m ³	--	
				Arsenic	1.09E-08	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.93E-11	mg/m ³	1.50E-05	mg/m ³	6.62E-06	
				Barium	5.02E-07	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.59E-09	mg/m ³	5.00E-04	mg/m ³	9.17E-06	
				Cadmium	5.22E-09	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.76E-11	mg/m ³	1.00E-05	mg/m ³	4.76E-06	
				Chromium (VI)	1.37E-06	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.26E-08	mg/m ³	1.00E-04	mg/m ³	1.26E-04	
				Cobalt	1.22E-08	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.11E-10	mg/m ³	6.00E-06	mg/m ³	1.86E-05	
				Copper	1.32E-06	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.20E-08	mg/m ³	--	mg/m ³	--	
				Iron	5.32E-05	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.86E-07	mg/m ³	--	mg/m ³	--	
				Lead	1.32E-06	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-08	mg/m ³	--	mg/m ³	--	
				Manganese	8.99E-07	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.21E-09	mg/m ³	5.00E-05	mg/m ³	1.64E-04	
				Mercury	6.47E-10	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.91E-12	mg/m ³	3.00E-04	mg/m ³	1.97E-08	
				Nickel	1.02E-07	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.29E-10	mg/m ³	9.00E-05	mg/m ³	1.03E-05	
				Silver	6.80E-09	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.21E-11	mg/m ³	--	mg/m ³	--	
Thallium	1.34E-09	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.23E-11	mg/m ³	--	mg/m ³	--					
Vanadium	8.43E-08	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.70E-10	mg/m ³	--	mg/m ³	--					
Zinc	1.64E-06	mg/kg	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.50E-08	mg/m ³	--	mg/m ³	--					
Exp. Route Total																3.62E-04	
Exposure Point Total																	1.01E+00
Exposure Medium Total																	1.01E+00
Medium Total																	1.01E+00
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.22E-07	mg/kg-day	1.00E-02	mg/kg-day	1.22E-05	
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.51E-04	mg/kg-day	--	mg/kg-day	--	
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.60E-04	mg/kg-day	--	mg/kg-day	--	
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.28E-05	mg/kg-day	--	mg/kg-day	--	
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.49E-04	mg/kg-day	--	mg/kg-day	--	
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.86E-04	mg/kg-day	--	mg/kg-day	--	
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.98E-05	mg/kg-day	--	mg/kg-day	--	
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.89E-04	mg/kg-day	--	mg/kg-day	--	
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.00E-04	mg/kg-day	--	mg/kg-day	--	
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.98E-04	mg/kg-day	--	mg/kg-day	--	
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.95E-06	mg/kg-day	2.00E-02	mg/kg-day	3.98E-04	
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.15E-05	mg/kg-day	--	mg/kg-day	--	
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.86E-07	mg/kg-day	--	mg/kg-day	--	
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.98E-08	mg/kg-day	5.00E-05	mg/kg-day	9.96E-04	
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.04E-04	mg/kg-day	--	mg/kg-day	--	
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.86E-04	mg/kg-day	1.00E+00	mg/kg-day	1.86E-04	
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.19E-06	mg/kg-day	3.00E-04	mg/kg-day	3.95E-03	
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.66E-05	mg/kg-day	1.40E-02	mg/kg-day	1.18E-03	
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-07	mg/kg-day	2.50E-05	mg/kg-day	8.18E-03	
				Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.50E-06	mg/kg-day	7.50E-05	mg/kg-day	6.00E-02	
				Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.70E-05	mg/kg-day	4.00E-02	mg/kg-day	4.24E-04	
Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-03	mg/kg-day	7.00E-01	mg/kg-day	1.58E-03					
Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.68E-06	mg/kg-day	--	mg/kg-day	--					

Table 7.2.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient	
							Value	Units	Value	Units		Value	Units	Value	Units		
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.65E-05	mg/kg-day	9.60E-04	mg/kg-day	1.72E-02	
				Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.09E-07	mg/kg-day	1.20E-03	mg/kg-day	3.41E-04	
				Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-06	mg/kg-day	1.30E-04	mg/kg-day	1.57E-02	
				Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.51E-05	mg/kg-day	3.00E-01	mg/kg-day	2.17E-04	
			Exp. Route Total								--				1.10E-01		
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.64E-08	mg/kg-day	1.00E-02	mg/kg-day	1.64E-06	
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-07	mg/kg-day	--	mg/kg-day	--	
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-07	mg/kg-day	--	mg/kg-day	--	
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.37E-08	mg/kg-day	--	mg/kg-day	--	
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-07	mg/kg-day	--	mg/kg-day	--	
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.19E-07	mg/kg-day	--	mg/kg-day	--	
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.56E-07	mg/kg-day	--	mg/kg-day	--	
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.83E-07	mg/kg-day	--	mg/kg-day	--	
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-08	mg/kg-day	--	mg/kg-day	--	
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-07	mg/kg-day	--	mg/kg-day	--	
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-07	mg/kg-day	2.00E-02	mg/kg-day	7.31E-06	
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-07	mg/kg-day	--	mg/kg-day	--	
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-09	mg/kg-day	--	mg/kg-day	--	
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.77E-10	mg/kg-day	5.00E-05	mg/kg-day	1.75E-05	
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.97E-08	mg/kg-day	--	mg/kg-day	--	
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.32E-04	mg/kg-day	1.00E+00	mg/kg-day	3.32E-04	
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.12E-06	mg/kg-day	3.00E-04	mg/kg-day	7.06E-03	
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.96E-05	mg/kg-day	2.00E-01	mg/kg-day	1.48E-04	
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-07	mg/kg-day	5.00E-04	mg/kg-day	7.31E-04	
				Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.02E-06	mg/kg-day	3.00E-03	mg/kg-day	1.34E-03	
Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.03E-05	mg/kg-day	4.00E-02	mg/kg-day	7.58E-04					
Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.97E-03	mg/kg-day	7.00E-01	mg/kg-day	2.82E-03					
				Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.58E-05	mg/kg-day	--	mg/kg-day	--	
				Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.94E-05	mg/kg-day	2.40E-02	mg/kg-day	1.23E-03	
				Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-06	mg/kg-day	3.00E-02	mg/kg-day	1.22E-04	
				Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-06	mg/kg-day	5.00E-03	mg/kg-day	7.31E-04	
				Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.94E-04	mg/kg-day	3.00E-01	mg/kg-day	6.45E-04	
				Exp. Route Total												1.59E-02	
		Exposure Point Total												1.26E-01			
	Exposure Medium Total													1.26E-01			
Medium Total																	
Sediment	Sediment in Beer Kill	Beer Kill Creek	Dermal Absorption	Benzo(a)pyrene	4.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.45E-08	mg/kg-day	--	mg/kg-day	--	
				Phenanthrene	4.10E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.18E-08	mg/kg-day	--	mg/kg-day	--	
				Endrin ketone	2.50E-04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--	
				Arsenic	5.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.51E-07	mg/kg-day	3.00E-04	mg/kg-day	2.17E-03	
				Chromium (VI)	8.80E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--	
				Cobalt	8.00E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--	
				Iron	1.93E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--	
				Manganese	9.98E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--	
				Exp. Route Total													2.17E-03
				Sediment	Sediment in Beer Kill	Beer Kill Creek	Incidental Ingestion	Benzo(a)pyrene	4.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.72E-08	mg/kg-day
Phenanthrene	4.10E-02	mg/kg	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.99E-08	mg/kg-day	--	mg/kg-day	--	
Endrin ketone	2.50E-04	mg/kg	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-10	mg/kg-day	--	mg/kg-day	--	
Arsenic	5.30E+00	mg/kg	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.74E-06	mg/kg-day	3.00E-04	mg/kg-day	2.58E-02	
Chromium (VI)	8.80E+00	mg/kg	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.29E-05	mg/kg-day	3.00E-03	mg/kg-day	4.29E-03	
Cobalt	8.00E+00	mg/kg	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-05	mg/kg-day	3.00E-04	mg/kg-day	3.90E-02	

Table 7.2.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient	
							Value	Units	Value	Units		Value	Units	Value	Units		
Sediment	Sediment in Beer Kill	Beer Kill Creek	Incidental Ingestion	Iron	1.93E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.82E-02	mg/kg-day	7.00E-01	mg/kg-day	4.03E-02	
				Manganese	9.98E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-03	mg/kg-day	2.40E-02	mg/kg-day	6.08E-02	
			Exp. Route Total													1.70E-01	
			Exposure Point Total														1.72E-01
			Exposure Medium Total														1.72E-01
Medium Total															1.72E-01		
Surface Water	Surface Water in Beer Kill Creek	No Chemicals met the COPC criteria for this medium.															
		Beer Kill Creek															
		Exp. Route Total														0.00E+00	
		Exposure Point Total														0.00E+00	
Exposure Medium Total															0.00E+00		
Medium Total															0.00E+00		
Total of Receptor Risks Across All Media										--	Total of Receptor Hazards Across All Media					1.31E+00	

Table 7.2.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Recreator
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	3.77E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	8.20E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.99E-07
				Benzo(a)pyrene	1.05E+01	mg/kg	7.74E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.65E-06
				Benzo(b)fluoranthene	1.56E+01	mg/kg	1.14E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.34E-07
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	2.60E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	5.13E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	3.75E-08
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	5.54E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	7.75E-09
				Carbazole	1.03E+00	mg/kg	5.80E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.16E-09
				Chrysene	1.17E+01	mg/kg	8.60E-07	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	6.28E-09
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	6.74E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.92E-07
				Dimethylphthalate	9.18E-01	mg/kg	5.19E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	2.27E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	3.55E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.59E-07
				Naphthalene	6.37E-01	mg/kg	3.60E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	7.35E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	2.86E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.73E-08
				Aroclor-1260	4.51E+00	mg/kg	3.56E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	7.13E-07
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	1.53E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.30E-07
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	4.34E+00	mg/kg	2.45E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

Table 7.2.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								8.88E-06
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	9.18E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	2.00E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.46E-06
				Benzo(a)pyrene	1.05E+01	mg/kg	1.88E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.38E-05
				Benzo(b)fluoranthene	1.56E+01	mg/kg	2.78E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.03E-06
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	6.32E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	1.25E-06	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	9.12E-08
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	1.75E-06	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	2.45E-08
				Carbazole	1.03E+00	mg/kg	1.84E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	3.68E-09
				Chrysene	1.17E+01	mg/kg	2.09E-06	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	1.53E-08
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	1.64E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.20E-06
				Dimethylphthalate	9.18E-01	mg/kg	1.64E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	7.17E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	8.65E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.31E-07
				Naphthalene	6.37E-01	mg/kg	1.14E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	1.79E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	2.15E-09	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	3.44E-08
				Endosulfan II	3.43E-02	mg/kg	6.14E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	1.48E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	1.51E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	4.51E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	8.27E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	6.48E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.30E-07
				Aroclor-1260	4.51E+00	mg/kg	8.06E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.61E-06
				Aluminum	1.05E+04	mg/kg	1.87E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	3.43E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	1.62E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.43E-06
				Barium	4.17E+02	mg/kg	7.47E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Cadmium	4.34E+00	mg/kg	7.76E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Chromium (VI)	1.14E+03	mg/kg	2.04E-04	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	1.02E-04				
Cobalt	1.01E+01	mg/kg	1.81E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Copper	1.09E+03	mg/kg	1.96E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Iron	4.42E+04	mg/kg	7.91E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	1.97E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	7.47E+02	mg/kg	1.34E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	9.63E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	8.46E+01	mg/kg	1.51E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Silver	5.65E+00	mg/kg	1.01E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

Table 7.2.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Thallium	1.12E+00	mg/kg	2.00E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	1.25E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	2.44E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								1.26E-04
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	2.42E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	5.26E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	5.78E-12
				Benzo(a)pyrene	1.27E-08	mg/m ³	4.96E-11	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	5.46E-11
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	7.32E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	8.06E-12
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	1.66E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	3.29E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	3.62E-12
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	4.61E-11	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	1.11E-13
				Carbazole	1.24E-09	mg/m ³	4.84E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Chrysene	1.41E-08	mg/m ³	5.51E-11	mg/m ³	1.10E-05	(µg/m ³) ⁻¹	6.06E-13
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	4.32E-12	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	5.19E-12
				Dimethylphthalate	1.10E-09	mg/m ³	4.32E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	1.89E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	2.28E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.50E-12
				Naphthalene	7.67E-10	mg/m ³	3.00E-12	mg/m ³	3.40E-05	(µg/m ³) ⁻¹	1.02E-13
				Phenanthrene	1.20E-08	mg/m ³	4.71E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Dieldrin	1.44E-11	mg/m ³	5.65E-14	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	2.60E-13
				Endosulfan II	4.13E-11	mg/m ³	1.62E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endosulfan sulfate	9.96E-12	mg/m ³	3.90E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin aldehyde	1.01E-11	mg/m ³	3.97E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	3.03E-11	mg/m ³	1.19E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	5.56E-12	mg/m ³	2.18E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1254	4.36E-10	mg/m ³	1.70E-12	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	9.72E-13
				Aroclor-1260	5.42E-09	mg/m ³	2.12E-11	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.21E-11
				Aluminum	1.26E-05	mg/m ³	4.93E-08	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	2.31E-08	mg/m ³	9.03E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	1.09E-08	mg/m ³	4.26E-11	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	1.83E-10
				Barium	5.02E-07	mg/m ³	1.97E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Cadmium	5.22E-09	mg/m ³	2.04E-11	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	3.68E-11
				Chromium (VI)	1.37E-06	mg/m ³	5.38E-09	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	4.52E-07
				Cobalt	1.22E-08	mg/m ³	4.77E-11	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	4.29E-10
				Copper	1.32E-06	mg/m ³	5.15E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Iron	5.32E-05	mg/m ³	2.08E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Lead	1.32E-06	mg/m ³	5.18E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
Manganese	8.99E-07	mg/m ³	3.52E-09	mg/m ³	--	(µg/m ³) ⁻¹	--				
Mercury	6.47E-10	mg/m ³	2.53E-12	mg/m ³	--	(µg/m ³) ⁻¹	--				
Nickel	1.02E-07	mg/m ³	3.98E-10	mg/m ³	2.60E-04	(µg/m ³) ⁻¹	1.04E-10				
Silver	6.80E-09	mg/m ³	2.66E-11	mg/m ³	--	(µg/m ³) ⁻¹	--				

Table 7.2.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Thallium	1.34E-09	mg/m ³	5.26E-12	mg/m ³	--	(μg/m ³) ⁻¹	--
				Vanadium	8.43E-08	mg/m ³	3.30E-10	mg/m ³	--	(μg/m ³) ⁻¹	--
				Zinc	1.64E-06	mg/m ³	6.41E-09	mg/m ³	--	(μg/m ³) ⁻¹	--
			Exp. Route Total								4.53E-07
		Exposure Point Total								1.35E-04	
		Exposure Medium Total								1.35E-04	
Medium Total											1.35E-04
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	2.88E-08	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	8.92E-10
				Benzo(a)anthracene	4.00E-03	mg/L	3.56E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.60E-05
				Benzo(a)pyrene	4.00E-03	mg/L	6.11E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.46E-04
				Benzo(b)fluoranthene	6.50E-04	mg/L	1.01E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.35E-06
				Benzo(g,h,i)perylene	3.00E-03	mg/L	8.22E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	9.09E-05	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	6.64E-06
				Carbazole	7.00E-03	mg/L	4.66E-06	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	9.31E-08
				Chrysene	5.00E-03	mg/L	4.45E-05	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	3.25E-07
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	2.36E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.72E-04
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	4.66E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.40E-05
				Naphthalene	4.00E-03	mg/L	1.87E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E-02	mg/L	1.92E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				alpha-Chlordane	3.00E-05	mg/L	4.38E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	2.40E-05	mg/L	1.17E-08	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.88E-07
				Aroclor-1260	5.40E-04	mg/L	7.15E-05	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.43E-04
				Aluminum	9.10E+00	mg/L	4.38E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	5.80E-02	mg/L	2.79E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	4.19E-07
				Barium	8.10E-01	mg/L	3.90E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.00E-02	mg/L	4.81E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.10E-01	mg/L	1.06E-06	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	2.12E-05
				Copper	8.30E-01	mg/L	3.99E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	5.40E+01	mg/L	2.60E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	1.80E+00	mg/L	8.66E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	8.05E-01	mg/L	3.87E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Nickel	1.00E-01	mg/L	9.63E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Vanadium	1.00E-01	mg/L	4.81E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	5.30E+00	mg/L	1.53E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
		Exp. Route Total								8.57E-04	
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	2.61E-09	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	8.08E-11
				Benzo(a)anthracene	4.00E-03	mg/L	2.32E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.69E-08
				Benzo(a)pyrene	4.00E-03	mg/L	2.32E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.69E-07
				Benzo(b)fluoranthene	6.50E-04	mg/L	3.77E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.75E-09
				Benzo(g,h,i)perylene	3.00E-03	mg/L	1.74E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Benzo(k)fluoranthene	6.00E-03	mg/L	3.48E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.54E-09				

Table 7.2.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk		
							Value	Units	Value	Units			
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Carbazole	7.00E-03	mg/L	4.05E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	8.11E-10		
				Chrysene	5.00E-03	mg/L	2.90E-08	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	2.11E-10		
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	5.79E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.23E-08		
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	1.74E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.27E-08		
				Naphthalene	4.00E-03	mg/L	2.32E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Phenanthrene	1.00E-02	mg/L	5.79E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				alpha-Chlordane	3.00E-05	mg/L	1.74E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Dieldrin	2.40E-05	mg/L	1.39E-10	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	2.22E-09		
				Aroclor-1260	5.40E-04	mg/L	3.13E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	6.26E-09		
				Aluminum	9.10E+00	mg/L	5.27E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Arsenic	5.80E-02	mg/L	3.36E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	5.04E-07		
				Barium	8.10E-01	mg/L	4.69E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Cadmium	1.00E-02	mg/L	5.79E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Chromium (VI)	1.10E-01	mg/L	6.37E-07	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	3.19E-07		
				Copper	8.30E-01	mg/L	4.81E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Iron	5.40E+01	mg/L	3.13E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Lead	1.80E+00	mg/L	1.04E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Manganese	8.05E-01	mg/L	4.66E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Nickel	1.00E-01	mg/L	5.79E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Vanadium	1.00E-01	mg/L	5.79E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Zinc	5.30E+00	mg/L	3.07E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
Exp. Route Total										1.08E-06			
Exposure Point Total									8.58E-04				
Exposure Medium Total										8.58E-04			
Medium Total											8.58E-04		
Sediment	Sediment in Beer Kill	Beer Kill Creek	Dermal Absorption	Benzo(a)pyrene	4.60E-02	mg/kg	3.38E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.47E-08		
				Phenanthrene	4.10E-02	mg/kg	3.01E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Endrin ketone	2.50E-04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Arsenic	5.30E+00	mg/kg	8.99E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.35E-07		
				Chromium (VI)	8.80E+00	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--		
				Cobalt	8.00E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Iron	1.93E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
			Manganese	9.98E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
			Exp. Route Total										1.59E-07
			Incidental Ingestion	Benzo(a)pyrene	4.60E-02	mg/kg	8.23E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	6.01E-08		
				Phenanthrene	4.10E-02	mg/kg	7.34E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Endrin ketone	2.50E-04	mg/kg	4.47E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Arsenic	5.30E+00	mg/kg	9.48E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.42E-06		
				Chromium (VI)	8.80E+00	mg/kg	1.57E-06	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	7.87E-07		
Cobalt	8.00E+00	mg/kg		1.43E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--					
Iron	1.93E+04	mg/kg		3.45E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--					

Table 7.2.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	
							Value	Units	Value	Units		
Sediment	Sediment in Beer Kill	Beer Kill Creek	Ingestion	Manganese	9.98E+02	mg/kg	1.79E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
			Exp. Route Total								2.27E-06	
		Exposure Point Total										2.43E-06
		Exposure Medium Total										2.43E-06
Medium Total											2.43E-06	
Surface Water	Surface Water in Beer Kill Creek	No Chemicals met the COPC criteria for this medium.										
		Beer Kill Creek	Exp. Route Total									--
			Exposure Point Total									
		Exposure Medium Total										--
Medium Total											--	
Total of Receptor Risks Across All Media											9.96E-04	

Footnotes:

[a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.

[b] Inputs were applied as follows:

- Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
- Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
- Age 6 - 16 Adult IR/CR and BW; ED = 10; ADAF = 3
- Age 16 - 30 Adult IR/CR and BW; ED = 14; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

On-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	1.12E+01	7.30E-01	3.57E-06	7.30E-01	8.09E-06	1.10E-04	1.46E-11
Benzo(a)pyrene	1.05E+01	7.30E+00	3.37E-05	7.30E+00	7.63E-05	1.10E-03	1.38E-10
Benzo(b)fluoranthene	1.56E+01	7.30E-01	4.98E-06	7.30E-01	1.13E-05	1.10E-04	2.04E-11
Benzo(k)fluoranthene	6.98E+00	7.00E-02	2.14E-07	7.00E-02	4.85E-07	1.10E-04	9.17E-12
Chrysene	1.17E+01	7.30E-03	3.74E-08	7.30E-03	8.48E-08	1.10E-05	1.54E-12
Dibenzo(a,h)anthracene	9.18E-01	7.30E+00	2.94E-06	7.30E+00	6.66E-06	1.20E-03	1.31E-11
Indeno(1,2,3-cd)pyrene	4.83E+00	7.30E-01	1.55E-06	7.30E-01	3.50E-06	1.10E-04	6.34E-12
Chromium (VI)	1.14E+03	2.00E+01	--	5.00E-01	5.67E-04	8.40E-02	1.14E-06

*Cancer Risk using ADAF

On-Site Leachate							
MMOA Chemical	CW (mg/L)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	4.00E-03	7.30E-01	9.74E-05	7.30E-01	8.35E-08	--	--
Benzo(a)pyrene	4.00E-03	7.30E+00	1.67E-03	7.30E+00	8.35E-07	--	--
Benzo(b)fluoranthene	6.50E-04	7.30E-01	2.75E-05	7.30E-01	1.36E-08	--	--
Benzo(k)fluoranthene	6.00E-03	7.00E-02	2.38E-05	7.00E-02	1.20E-08	--	--
Chrysene	5.00E-03	7.30E-03	1.22E-06	7.30E-03	1.04E-09	--	--
Dibenzo(a,h)anthracene	1.00E-03	7.30E+00	6.45E-04	7.30E+00	2.09E-07	--	--
Indeno(1,2,3-cd)pyrene	3.00E-03	7.30E-01	1.27E-04	7.30E-01	6.26E-08	--	--
Chromium (VI)	1.10E-01	2.00E+01	7.93E-05	5.00E-01	1.57E-06	--	--

*Cancer Risk using ADAF

On-Site Sediment							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)pyrene	4.60E-02	7.30E+00	1.47E-07	7.30E+00	3.33E-07	--	--
Chromium (VI)	8.80E+00	2.00E+01	--	5.00E-01	4.37E-06	--	--

*Cancer Risk using ADAF



TABLE 7.3.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Receptor Population: Resident (on-site)
 Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.65E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.93E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.48E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.10E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.51E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.96E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.35E-06	mg/kg-day	2.00E-02	mg/kg-day	2.68E-04
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.61E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.31E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.52E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.02E-07	mg/kg-day	1.00E-01	mg/kg-day	5.02E-06
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.19E-07	mg/kg-day	2.00E-02	mg/kg-day	1.10E-05
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.43E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.48E-07	mg/kg-day	2.00E-02	mg/kg-day	1.74E-05
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.11E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.77E-07	mg/kg-day	2.00E-05	mg/kg-day	1.39E-02
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.45E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.48E-06	mg/kg-day	3.00E-04	mg/kg-day	4.94E-03
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.37E-08	mg/kg-day	2.50E-05	mg/kg-day	9.48E-04
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--				
Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
			Exp. Route Total											2.00E-02		
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.03E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.53E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.13E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.84E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.57E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.34E-05	mg/kg-day	2.00E-02	mg/kg-day	6.71E-04
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-06	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.60E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.26E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.26E-06	mg/kg-day	1.00E-01	mg/kg-day	1.26E-05

TABLE 7.3.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.49E-07	mg/kg-day	2.00E-02	mg/kg-day	2.75E-05				
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.62E-06	mg/kg-day	--	mg/kg-day	--				
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.73E-07	mg/kg-day	2.00E-02	mg/kg-day	4.36E-05				
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.37E-05	mg/kg-day	--	mg/kg-day	--				
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.64E-08	mg/kg-day	5.00E-05	mg/kg-day	3.29E-04				
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.70E-08	mg/kg-day	--	mg/kg-day	--				
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.13E-08	mg/kg-day	--	mg/kg-day	--				
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.15E-08	mg/kg-day	--	mg/kg-day	--				
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.45E-08	mg/kg-day	--	mg/kg-day	--				
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.33E-09	mg/kg-day	--	mg/kg-day	--				
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.96E-07	mg/kg-day	2.00E-05	mg/kg-day	2.48E-02				
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.17E-06	mg/kg-day	--	mg/kg-day	--				
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.43E-02	mg/kg-day	1.00E+00	mg/kg-day	1.43E-02				
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.63E-05	mg/kg-day	4.00E-04	mg/kg-day	6.57E-02				
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.24E-05	mg/kg-day	3.00E-04	mg/kg-day	4.13E-02				
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.72E-04	mg/kg-day	2.00E-01	mg/kg-day	2.86E-03				
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.94E-06	mg/kg-day	5.00E-04	mg/kg-day	1.19E-02				
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.56E-03	mg/kg-day	3.00E-03	mg/kg-day	5.21E-01				
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.39E-05	mg/kg-day	3.00E-04	mg/kg-day	4.63E-02				
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.50E-03	mg/kg-day	4.00E-02	mg/kg-day	3.74E-02				
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.05E-02	mg/kg-day	7.00E-01	mg/kg-day	8.65E-02				
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.51E-03	mg/kg-day	--	mg/kg-day	--				
				Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.02E-03	mg/kg-day	2.40E-02	mg/kg-day	4.27E-02				
				Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.37E-07	mg/kg-day	3.00E-04	mg/kg-day	2.46E-03				
				Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.16E-04	mg/kg-day	3.00E-02	mg/kg-day	3.86E-03				
				Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.74E-06	mg/kg-day	5.00E-03	mg/kg-day	1.55E-03				
				Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.53E-06	mg/kg-day	--	mg/kg-day	--				
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.60E-05	mg/kg-day	5.00E-03	mg/kg-day	1.92E-02				
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.86E-03	mg/kg-day	3.00E-01	mg/kg-day	6.21E-03				
				Exp. Route Total																
				Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.92E-10	mg/m ³	--	mg/m ³	--
								Benzo(a)anthracene	1.34E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-08	mg/m ³	--	mg/m ³	--
								Benzo(a)pyrene	1.27E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.22E-08	mg/m ³	--	mg/m ³	--
Benzo(b)fluoranthene	1.87E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.79E-08	mg/m ³	--	mg/m ³	--				
Benzo(g,h,i)perylene	4.25E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	4.08E-09	mg/m ³	--	mg/m ³	--				
Benzo(k)fluoranthene	8.40E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	8.06E-09	mg/m ³	--	mg/m ³	--				
Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.13E-08	mg/m ³	--	mg/m ³	--				
Carbazole	1.24E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.19E-09	mg/m ³	--	mg/m ³	--				
Chrysene	1.41E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.35E-08	mg/m ³	--	mg/m ³	--				
Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.06E-09	mg/m ³	--	mg/m ³	--				
Dimethylphthalate	1.10E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.06E-09	mg/m ³	--	mg/m ³	--				
Di-n-octylphthalate	4.83E-10	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	4.63E-10	mg/m ³	--	mg/m ³	--				
Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	5.58E-09	mg/m ³	--	mg/m ³	--				
Naphthalene	7.67E-10	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	7.35E-10	mg/m ³	3.00E-03	mg/m ³	2.45E-07				
Phenanthrene	1.20E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.16E-08	mg/m ³	--	mg/m ³	--				
Dieldrin	1.44E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.38E-11	mg/m ³	--	mg/m ³	--				
Endosulfan II	4.13E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	3.96E-11	mg/m ³	--	mg/m ³	--				
Endosulfan sulfate	9.96E-12	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	9.55E-12	mg/m ³	--	mg/m ³	--				
Endrin aldehyde	1.01E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	9.73E-12	mg/m ³	--	mg/m ³	--				
Endrin ketone	3.03E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	2.91E-11	mg/m ³	--	mg/m ³	--				
gamma-Chlordane	5.56E-12	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	5.33E-12	mg/m ³	--	mg/m ³	--				
Aroclor-1254	4.36E-10	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	4.18E-10	mg/m ³	--	mg/m ³	--				
Aroclor-1260	5.42E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	5.20E-09	mg/m ³	--	mg/m ³	--				
Aluminum	1.26E-05	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-05	mg/m ³	5.00E-03	mg/m ³	2.42E-03				
Antimony	2.31E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	2.21E-08	mg/m ³	--	mg/m ³	--				
Arsenic	1.09E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.04E-08	mg/m ³	1.50E-05	mg/m ³	6.95E-04				

TABLE 7.3.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Barium	5.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.82E-07	mg/m ³	5.00E-04	mg/m ³	9.63E-04
				Cadmium	5.22E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.00E-09	mg/m ³	1.00E-05	mg/m ³	5.00E-04
				Chromium (VI)	1.37E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.32E-06	mg/m ³	1.00E-04	mg/m ³	1.32E-02
				Cobalt	1.22E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.17E-08	mg/m ³	6.00E-06	mg/m ³	1.95E-03
				Copper	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.26E-06	mg/m ³	--	mg/m ³	--
				Iron	5.32E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.10E-05	mg/m ³	--	mg/m ³	--
				Lead	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.27E-06	mg/m ³	--	mg/m ³	--
				Manganese	8.99E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.62E-07	mg/m ³	5.00E-05	mg/m ³	1.72E-02
				Mercury	6.47E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.21E-10	mg/m ³	3.00E-04	mg/m ³	2.07E-06
				Nickel	1.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.76E-08	mg/m ³	9.00E-05	mg/m ³	1.08E-03
				Silver	6.80E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.52E-09	mg/m ³	--	mg/m ³	--
				Thallium	1.34E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-09	mg/m ³	--	mg/m ³	--
				Vanadium	8.43E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.09E-08	mg/m ³	--	mg/m ³	--
				Zinc	1.64E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.57E-06	mg/m ³	--	mg/m ³	--
Exp. Route Total															3.80E-02	
Exposure Point Total																9.88E-01
Exposure Medium Total																9.88E-01
Medium Total																9.88E-01
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.67E-07	mg/kg-day	1.00E-02	mg/kg-day	4.67E-05
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.78E-04	mg/kg-day	--	mg/kg-day	--
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.91E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.63E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.33E-03	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.47E-03	mg/kg-day	--	mg/kg-day	--
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.55E-05	mg/kg-day	--	mg/kg-day	--
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.23E-04	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.83E-04	mg/kg-day	--	mg/kg-day	--
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.55E-04	mg/kg-day	--	mg/kg-day	--
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.04E-05	mg/kg-day	2.00E-02	mg/kg-day	1.52E-03
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.11E-04	mg/kg-day	--	mg/kg-day	--
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.11E-07	mg/kg-day	--	mg/kg-day	--
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.90E-07	mg/kg-day	5.00E-05	mg/kg-day	3.80E-03
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.16E-03	mg/kg-day	--	mg/kg-day	--
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.11E-04	mg/kg-day	1.00E+00	mg/kg-day	7.11E-04
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.53E-06	mg/kg-day	3.00E-04	mg/kg-day	1.51E-02
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.32E-05	mg/kg-day	1.40E-02	mg/kg-day	4.52E-03
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.81E-07	mg/kg-day	2.50E-05	mg/kg-day	3.12E-02
				Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.72E-05	mg/kg-day	7.50E-05	mg/kg-day	2.29E-01
				Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.48E-05	mg/kg-day	4.00E-02	mg/kg-day	1.62E-03
				Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.22E-03	mg/kg-day	7.00E-01	mg/kg-day	6.02E-03
				Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-05	mg/kg-day	--	mg/kg-day	--
				Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.29E-05	mg/kg-day	9.60E-04	mg/kg-day	6.55E-02
				Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.56E-06	mg/kg-day	1.20E-03	mg/kg-day	1.30E-03
				Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.81E-06	mg/kg-day	1.30E-04	mg/kg-day	6.01E-02
				Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.48E-04	mg/kg-day	3.00E-01	mg/kg-day	8.28E-04
Exp. Route Total																4.21E-01
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.08E-08	mg/kg-day	1.00E-02	mg/kg-day	3.08E-06
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.74E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.74E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.45E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.11E-07	mg/kg-day	--	mg/kg-day	--
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.79E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.42E-07	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.85E-08	mg/kg-day	--	mg/kg-day	--
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-07	mg/kg-day	--	mg/kg-day	--

TABLE 7.3.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.74E-07	mg/kg-day	2.00E-02	mg/kg-day	1.37E-05				
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.85E-07	mg/kg-day	--	mg/kg-day	--				
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-09	mg/kg-day	--	mg/kg-day	--				
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.64E-09	mg/kg-day	5.00E-05	mg/kg-day	3.29E-05				
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.70E-08	mg/kg-day	--	mg/kg-day	--				
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.23E-04	mg/kg-day	1.00E+00	mg/kg-day	6.23E-04				
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.97E-06	mg/kg-day	3.00E-04	mg/kg-day	1.32E-02				
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.55E-05	mg/kg-day	2.00E-01	mg/kg-day	2.77E-04				
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.85E-07	mg/kg-day	5.00E-04	mg/kg-day	1.37E-03				
				Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.53E-06	mg/kg-day	3.00E-03	mg/kg-day	2.51E-03				
				Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.68E-05	mg/kg-day	4.00E-02	mg/kg-day	1.42E-03				
				Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.70E-03	mg/kg-day	7.00E-01	mg/kg-day	5.28E-03				
				Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.23E-04	mg/kg-day	--	mg/kg-day	--				
				Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.51E-05	mg/kg-day	2.40E-02	mg/kg-day	2.30E-03				
				Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.85E-06	mg/kg-day	3.00E-02	mg/kg-day	2.28E-04				
				Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.85E-06	mg/kg-day	5.00E-03	mg/kg-day	1.37E-03				
				Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.63E-04	mg/kg-day	3.00E-01	mg/kg-day	1.21E-03				
				Exp. Route Total				--	--	--	--	--	--	--	--	--	--	2.99E-02		
				Exposure Point Total				--	--	--	--	--	--	--	--	--	--	--	4.51E-01	
				Exposure Medium Total				--	--	--	--	--	--	--	--	--	--	--	4.51E-01	
				Medium Total															4.51E-01	
Groundwater	Groundwater (Tapwater)	Groundwater (Tapwater)	Dermal Absorption	Aluminum	4.16E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.95E-04	mg/kg-day	1.00E+00	mg/kg-day	5.95E-04				
				Antimony	3.24E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.64E-07	mg/kg-day	6.00E-05	mg/kg-day	7.73E-03				
				Arsenic	2.17E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.10E-06	mg/kg-day	3.00E-04	mg/kg-day	1.03E-02				
				Chromium (VI)	5.93E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.69E-05	mg/kg-day	7.50E-05	mg/kg-day	2.26E-01				
				Cobalt	1.14E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.52E-07	mg/kg-day	3.00E-04	mg/kg-day	2.17E-03				
				Iron	6.45E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.22E-04	mg/kg-day	7.00E-01	mg/kg-day	1.32E-03				
				Manganese	2.76E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.95E-04	mg/kg-day	9.60E-04	mg/kg-day	4.12E-01				
				Nickel	1.40E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.01E-06	mg/kg-day	1.20E-03	mg/kg-day	3.34E-03				
				Exp. Route Total				--	--	--	--	--	--	--	--	--	--	6.63E-01		
				Groundwater	Groundwater (Tapwater)	Groundwater (Tapwater)	Direct Ingestion	Aluminum	4.16E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.14E-01	mg/kg-day	1.00E+00	mg/kg-day	1.14E-01
								Antimony	3.24E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.89E-05	mg/kg-day	4.00E-04	mg/kg-day	2.22E-01
	Arsenic	2.17E-02	mg/L					--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.93E-04	mg/kg-day	3.00E-04	mg/kg-day	1.98E+00			
	Chromium (VI)	5.93E-02	mg/L					--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.62E-03	mg/kg-day	3.00E-03	mg/kg-day	5.41E-01			
	Cobalt	1.14E-02	mg/L					--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.12E-04	mg/kg-day	3.00E-04	mg/kg-day	1.04E+00			
	Iron	6.45E+00	mg/L					--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.77E-01	mg/kg-day	7.00E-01	mg/kg-day	2.52E-01			
	Manganese	2.76E+00	mg/L					--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.57E-02	mg/kg-day	2.40E-02	mg/kg-day	3.16E+00			
	Nickel	1.40E-01	mg/L					--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.84E-03	mg/kg-day	3.00E-02	mg/kg-day	1.28E-01			
	Exp. Route Total							--	--	--	--	--	--	--	--	--	--	7.43E+00		
	Exposure Point Total							--	--	--	--	--	--	--	--	--	--	--	8.10E+00	
	Exposure Medium Total				--	--	--	--	--	--	--	--	--	--	--	8.10E+00				
	Medium Total															8.10E+00				
Total of Receptor Risks Across All Media										--	Total of Receptor Hazards Across All Media				9.53E+00					

TABLE 7.3.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-05	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-05	mg/kg-day	1.00E-01	mg/kg-day	1.17E-04
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.13E-06	mg/kg-day	2.00E-02	mg/kg-day	2.56E-04
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.18E-05	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.14E-06	mg/kg-day	2.00E-02	mg/kg-day	4.07E-04
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.28E-04	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.53E-07	mg/kg-day	5.00E-05	mg/kg-day	3.07E-03
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.39E-07	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.06E-07	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.08E-07	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.22E-07	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.91E-08	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.63E-06	mg/kg-day	2.00E-05	mg/kg-day	2.31E-01
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.76E-05	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.34E-01	mg/kg-day	1.00E+00	mg/kg-day	1.34E-01
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.45E-04	mg/kg-day	4.00E-04	mg/kg-day	6.13E-01
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.16E-04	mg/kg-day	3.00E-04	mg/kg-day	3.85E-01
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.34E-03	mg/kg-day	2.00E-01	mg/kg-day	2.67E-02
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.54E-05	mg/kg-day	5.00E-04	mg/kg-day	1.11E-01
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-02	mg/kg-day	3.00E-03	mg/kg-day	4.87E+00
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.30E-04	mg/kg-day	3.00E-04	mg/kg-day	4.32E-01
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.40E-02	mg/kg-day	4.00E-02	mg/kg-day	3.49E-01
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.65E-01	mg/kg-day	7.00E-01	mg/kg-day	8.07E-01
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-02	mg/kg-day	--	mg/kg-day	--
				Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.55E-03	mg/kg-day	2.40E-02	mg/kg-day	3.98E-01
				Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.88E-06	mg/kg-day	3.00E-04	mg/kg-day	2.29E-02
				Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.08E-03	mg/kg-day	3.00E-02	mg/kg-day	3.60E-02
				Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.22E-05	mg/kg-day	5.00E-03	mg/kg-day	1.44E-02
				Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.43E-05	mg/kg-day	--	mg/kg-day	--
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.96E-04	mg/kg-day	5.00E-03	mg/kg-day	1.79E-01
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.74E-02	mg/kg-day	3.00E-01	mg/kg-day	5.80E-02
				Exp. Route Total												
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.92E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-08	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.27E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.22E-08	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.79E-08	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.08E-09	mg/m ³	--	mg/m ³	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.06E-09	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.13E-08	mg/m ³	--	mg/m ³	--
				Carbazole	1.24E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.19E-09	mg/m ³	--	mg/m ³	--
				Chrysene	1.41E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.35E-08	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.06E-09	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	1.10E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.06E-09	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.63E-10	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.58E-09	mg/m ³	--	mg/m ³	--
				Naphthalene	7.67E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.35E-10	mg/m ³	3.00E-03	mg/m ³	2.45E-07
				Phenanthrene	1.20E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.16E-08	mg/m ³	--	mg/m ³	--
				Dieldrin	1.44E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.38E-11	mg/m ³	--	mg/m ³	--
				Endosulfan II	4.13E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.96E-11	mg/m ³	--	mg/m ³	--
				Endosulfan sulfate	9.96E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.55E-12	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	1.01E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.73E-12	mg/m ³	--	mg/m ³	--
				Endrin ketone	3.03E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.91E-11	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	5.56E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.33E-12	mg/m ³	--	mg/m ³	--
				Aroclor-1254	4.36E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.18E-10	mg/m ³	--	mg/m ³	--

TABLE 7.3.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Aroclor-1260	5.42E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.20E-09	mg/m ³	--	mg/m ³	--				
				Aluminum	1.26E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-05	mg/m ³	5.00E-03	mg/m ³	2.42E-03	--			
				Antimony	2.31E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.21E-08	mg/m ³	--	mg/m ³	--	--	--		
				Arsenic	1.09E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.04E-08	mg/m ³	1.50E-05	mg/m ³	6.95E-04	6.95E-04	--		
				Barium	5.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.82E-07	mg/m ³	5.00E-04	mg/m ³	9.63E-04	9.63E-04	--		
				Cadmium	5.22E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.00E-09	mg/m ³	1.00E-05	mg/m ³	5.00E-04	5.00E-04	--		
				Chromium (VI)	1.37E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.32E-06	mg/m ³	1.00E-04	mg/m ³	1.32E-02	1.32E-02	--		
				Cobalt	1.22E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.17E-08	mg/m ³	6.00E-06	mg/m ³	1.95E-03	1.95E-03	--		
				Copper	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.26E-06	mg/m ³	--	mg/m ³	--	--	--		
				Iron	5.32E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.10E-05	mg/m ³	--	mg/m ³	--	--	--		
				Lead	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.27E-06	mg/m ³	--	mg/m ³	--	--	--		
				Manganese	8.99E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.62E-07	mg/m ³	5.00E-05	mg/m ³	1.72E-02	1.72E-02	--		
				Mercury	6.47E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.21E-10	mg/m ³	3.00E-04	mg/m ³	2.07E-06	2.07E-06	--		
				Nickel	1.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.76E-08	mg/m ³	9.00E-05	mg/m ³	1.08E-03	1.08E-03	--		
				Silver	6.80E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.52E-09	mg/m ³	--	mg/m ³	--	--	--		
				Thallium	1.34E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-09	mg/m ³	--	mg/m ³	--	--	--		
				Vanadium	8.43E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.09E-08	mg/m ³	--	mg/m ³	--	--	--		
				Zinc	1.64E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.57E-06	mg/m ³	--	mg/m ³	--	--	--		
				Exp. Route Total															3.80E-02	
				Exposure Point Total																8.84E+00
				Exposure Medium Total																8.84E+00
Medium Total																8.84E+00				
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.07E-06	mg/kg-day	1.00E-02	mg/kg-day	1.07E-04				
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.33E-03	mg/kg-day	--	mg/kg-day	--	--	--		
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.27E-03	mg/kg-day	--	mg/kg-day	--	--	--	--	
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.75E-04	mg/kg-day	--	mg/kg-day	--	--	--	--	
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.06E-03	mg/kg-day	--	mg/kg-day	--	--	--	--	
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.38E-03	mg/kg-day	--	mg/kg-day	--	--	--	--	
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.73E-04	mg/kg-day	--	mg/kg-day	--	--	--	--	
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.66E-03	mg/kg-day	--	mg/kg-day	--	--	--	--	
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.77E-04	mg/kg-day	--	mg/kg-day	--	--	--	--	
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.73E-03	mg/kg-day	--	mg/kg-day	--	--	--	--	
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.96E-05	mg/kg-day	2.00E-02	mg/kg-day	3.48E-03	3.48E-03	--	--	
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.13E-04	mg/kg-day	--	mg/kg-day	--	--	--	--	
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.63E-06	mg/kg-day	--	mg/kg-day	--	--	--	--	
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.36E-07	mg/kg-day	5.00E-05	mg/kg-day	8.72E-03	8.72E-03	--	--	
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.66E-03	mg/kg-day	--	mg/kg-day	--	--	--	--	
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.63E-03	mg/kg-day	1.00E+00	mg/kg-day	1.63E-03	1.63E-03	--	--	
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.04E-05	mg/kg-day	3.00E-04	mg/kg-day	3.46E-02	3.46E-02	--	--	
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.45E-04	mg/kg-day	1.40E-02	mg/kg-day	1.04E-02	1.04E-02	--	--	
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.79E-06	mg/kg-day	2.50E-05	mg/kg-day	7.16E-02	7.16E-02	--	--	
				Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.94E-05	mg/kg-day	7.50E-05	mg/kg-day	5.25E-01	5.25E-01	--	--	
				Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.49E-04	mg/kg-day	4.00E-02	mg/kg-day	3.71E-03	3.71E-03	--	--	
Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.67E-03	mg/kg-day	7.00E-01	mg/kg-day	1.38E-02	1.38E-02	--	--					
Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.22E-05	mg/kg-day	--	mg/kg-day	--	--	--	--					
Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-04	mg/kg-day	9.60E-04	mg/kg-day	1.50E-01	1.50E-01	--	--					
Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.58E-06	mg/kg-day	1.20E-03	mg/kg-day	2.98E-03	2.98E-03	--	--					
Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.79E-05	mg/kg-day	1.30E-04	mg/kg-day	1.38E-01	1.38E-01	--	--					
Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.69E-04	mg/kg-day	3.00E-01	mg/kg-day	1.90E-03	1.90E-03	--	--					
Exp. Route Total																9.66E-01				

TABLE 7.3.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units							
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-07	mg/kg-day	1.00E-02	mg/kg-day	1.44E-05				
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.28E-06	mg/kg-day	--	mg/kg-day	--				
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.28E-06	mg/kg-day	--	mg/kg-day	--				
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.08E-07	mg/kg-day	--	mg/kg-day	--				
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.59E-07	mg/kg-day	--	mg/kg-day	--				
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.92E-06	mg/kg-day	--	mg/kg-day	--				
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.24E-06	mg/kg-day	--	mg/kg-day	--				
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.60E-06	mg/kg-day	--	mg/kg-day	--				
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.20E-07	mg/kg-day	--	mg/kg-day	--				
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.59E-07	mg/kg-day	--	mg/kg-day	--				
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.28E-06	mg/kg-day	2.00E-02	mg/kg-day	6.39E-05				
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.20E-06	mg/kg-day	--	mg/kg-day	--				
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.59E-09	mg/kg-day	--	mg/kg-day	--				
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.67E-09	mg/kg-day	5.00E-05	mg/kg-day	1.53E-04				
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.73E-07	mg/kg-day	--	mg/kg-day	--				
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.91E-03	mg/kg-day	1.00E+00	mg/kg-day	2.91E-03				
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.85E-05	mg/kg-day	3.00E-04	mg/kg-day	6.18E-02				
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.59E-04	mg/kg-day	2.00E-01	mg/kg-day	1.29E-03				
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.20E-06	mg/kg-day	5.00E-04	mg/kg-day	6.39E-03				
				Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.52E-05	mg/kg-day	3.00E-03	mg/kg-day	1.17E-02				
				Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.65E-04	mg/kg-day	4.00E-02	mg/kg-day	6.63E-03				
				Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.73E-02	mg/kg-day	7.00E-01	mg/kg-day	2.47E-02				
				Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.75E-04	mg/kg-day	--	mg/kg-day	--				
				Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.57E-04	mg/kg-day	2.40E-02	mg/kg-day	1.07E-02				
				Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.20E-05	mg/kg-day	3.00E-02	mg/kg-day	1.07E-03				
				Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.20E-05	mg/kg-day	5.00E-03	mg/kg-day	6.39E-03				
				Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.69E-03	mg/kg-day	3.00E-01	mg/kg-day	5.65E-03				
Exp. Route Total																1.39E-01				
Exposure Point Total																	1.11E+00			
Exposure Medium Total																	1.11E+00			
Medium Total																	1.11E+00			
Groundwater	Groundwater (Tapwater)	Groundwater (Tapwater)	Dermal Absorption	Aluminum	4.16E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.76E-03	mg/kg-day	1.00E+00	mg/kg-day	1.76E-03				
				Antimony	3.24E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.37E-06	mg/kg-day	6.00E-05	mg/kg-day	2.28E-02				
				Arsenic	2.17E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.14E-06	mg/kg-day	3.00E-04	mg/kg-day	3.05E-02				
				Chromium (VI)	5.93E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.00E-05	mg/kg-day	7.50E-05	mg/kg-day	6.67E-01				
				Cobalt	1.14E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.92E-06	mg/kg-day	3.00E-04	mg/kg-day	6.41E-03				
				Iron	6.45E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.72E-03	mg/kg-day	7.00E-01	mg/kg-day	3.89E-03				
				Manganese	2.76E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-03	mg/kg-day	9.60E-04	mg/kg-day	1.21E+00				
				Nickel	1.40E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.18E-05	mg/kg-day	1.20E-03	mg/kg-day	9.85E-03				
				Exp. Route Total																1.96E+00
				Direct Ingestion	Aluminum	4.16E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.99E-01	mg/kg-day	1.00E+00	mg/kg-day	3.99E-01			
					Antimony	3.24E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.11E-04	mg/kg-day	4.00E-04	mg/kg-day	7.78E-01			
					Arsenic	2.17E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.08E-03	mg/kg-day	3.00E-04	mg/kg-day	6.92E+00			
					Chromium (VI)	5.93E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.68E-03	mg/kg-day	3.00E-03	mg/kg-day	1.89E+00			
			Cobalt		1.14E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.09E-03	mg/kg-day	3.00E-04	mg/kg-day	3.64E+00				
			Iron		6.45E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.18E-01	mg/kg-day	7.00E-01	mg/kg-day	8.83E-01				
			Manganese		2.76E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.65E-01	mg/kg-day	2.40E-02	mg/kg-day	1.10E+01				
			Exp. Route Total																2.60E+01	
			Exposure Point Total																	2.80E+01
			Exposure Medium Total																	2.80E+01
			Medium Total																	2.80E+01
Total of Receptor Risks Across All Media											--	Total of Receptor Hazards Across All Media					3.79E+01			

TABLE 7.3.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	3.30E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	7.17E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.24E-06
				Benzo(a)pyrene	1.05E+01	mg/kg	6.77E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.94E-05
				Benzo(b)fluoranthene	1.56E+01	mg/kg	1.00E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.30E-06
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	2.27E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	4.49E-06	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	3.28E-07
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	4.84E-06	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	6.78E-08
				Carbazole	1.03E+00	mg/kg	5.08E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.02E-08
				Chrysene	1.17E+01	mg/kg	7.52E-06	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	5.49E-08
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	5.90E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.31E-06
				Dimethylphthalate	9.18E-01	mg/kg	4.54E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	1.98E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	3.11E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.27E-06
				Naphthalene	6.37E-01	mg/kg	3.15E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	6.44E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	2.51E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.01E-07
				Aroclor-1260	4.51E+00	mg/kg	3.12E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	6.24E-06
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	1.34E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.01E-06
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	4.34E+00	mg/kg	2.14E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

TABLE 7.3.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								7.77E-05
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	8.03E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	1.75E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.28E-05
				Benzo(a)pyrene	1.05E+01	mg/kg	1.65E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.20E-04
				Benzo(b)fluoranthene	1.56E+01	mg/kg	2.43E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.78E-05
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	5.53E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	1.09E-05	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	7.98E-07
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	1.53E-05	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	2.15E-07
				Carbazole	1.03E+00	mg/kg	1.61E-06	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	3.22E-08
				Chrysene	1.17E+01	mg/kg	1.83E-05	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	1.34E-07
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	1.44E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.05E-05
				Dimethylphthalate	9.18E-01	mg/kg	1.44E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	6.28E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	7.57E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.52E-06
				Naphthalene	6.37E-01	mg/kg	9.97E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	1.57E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	1.88E-08	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	3.01E-07
				Endosulfan II	3.43E-02	mg/kg	5.37E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	1.30E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	1.32E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	3.95E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	7.23E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	5.67E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.13E-06
				Aroclor-1260	4.51E+00	mg/kg	7.05E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.41E-05
				Aluminum	1.05E+04	mg/kg	1.64E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	3.00E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	1.42E-05	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.12E-05
				Barium	4.17E+02	mg/kg	6.53E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Cadmium	4.34E+00	mg/kg	6.79E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Chromium (VI)	1.14E+03	mg/kg	1.79E-03	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	8.94E-04				
Cobalt	1.01E+01	mg/kg	1.59E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Copper	1.09E+03	mg/kg	1.71E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Iron	4.42E+04	mg/kg	6.92E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	1.72E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	7.47E+02	mg/kg	1.17E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	8.42E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	8.46E+01	mg/kg	1.32E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Silver	5.65E+00	mg/kg	8.84E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

TABLE 7.3.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Thallium	1.12E+00	mg/kg	1.75E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	1.10E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	2.13E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								1.10E-03
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	2.54E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	5.52E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	6.07E-10
				Benzo(a)pyrene	1.27E-08	mg/m ³	5.21E-09	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	5.73E-09
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	7.69E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	8.46E-10
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	1.75E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	3.45E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	3.80E-10
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	4.84E-09	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	1.16E-11
				Carbazole	1.24E-09	mg/m ³	5.08E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Chrysene	1.41E-08	mg/m ³	5.79E-09	mg/m ³	1.10E-05	(µg/m ³) ⁻¹	6.36E-11
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	4.54E-10	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	5.45E-10
				Dimethylphthalate	1.10E-09	mg/m ³	4.54E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	1.98E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	2.39E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.63E-10
				Naphthalene	7.67E-10	mg/m ³	3.15E-10	mg/m ³	3.40E-05	(µg/m ³) ⁻¹	1.07E-11
				Phenanthrene	1.20E-08	mg/m ³	4.95E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Dieldrin	1.44E-11	mg/m ³	5.93E-12	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	2.73E-11
				Endosulfan II	4.13E-11	mg/m ³	1.70E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endosulfan sulfate	9.96E-12	mg/m ³	4.09E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin aldehyde	1.01E-11	mg/m ³	4.17E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	3.03E-11	mg/m ³	1.25E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	5.56E-12	mg/m ³	2.28E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1254	4.36E-10	mg/m ³	1.79E-10	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.02E-10
				Aroclor-1260	5.42E-09	mg/m ³	2.23E-09	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.27E-09
				Aluminum	1.26E-05	mg/m ³	5.18E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	2.31E-08	mg/m ³	9.49E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	1.09E-08	mg/m ³	4.47E-09	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	1.92E-08
				Barium	5.02E-07	mg/m ³	2.06E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Cadmium	5.22E-09	mg/m ³	2.14E-09	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	3.86E-09
				Chromium (VI)	1.37E-06	mg/m ³	5.65E-07	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	4.74E-05
				Cobalt	1.22E-08	mg/m ³	5.01E-09	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	4.51E-08
				Copper	1.32E-06	mg/m ³	5.41E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
Iron	5.32E-05	mg/m ³	2.19E-05	mg/m ³	--	(µg/m ³) ⁻¹	--				
Lead	1.32E-06	mg/m ³	5.44E-07	mg/m ³	--	(µg/m ³) ⁻¹	--				
Manganese	8.99E-07	mg/m ³	3.70E-07	mg/m ³	--	(µg/m ³) ⁻¹	--				
Mercury	6.47E-10	mg/m ³	2.66E-10	mg/m ³	--	(µg/m ³) ⁻¹	--				
Nickel	1.02E-07	mg/m ³	4.18E-08	mg/m ³	2.60E-04	(µg/m ³) ⁻¹	1.09E-08				
Silver	6.80E-09	mg/m ³	2.79E-09	mg/m ³	--	(µg/m ³) ⁻¹	--				

TABLE 7.3.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	
							Value	Units	Value	Units		
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Thallium	1.34E-09	mg/m ³	5.52E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	
				Vanadium	8.43E-08	mg/m ³	3.47E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	
				Zinc	1.64E-06	mg/m ³	6.73E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	
			Exp. Route Total									
		Exposure Point Total										1.22E-03
		Exposure Medium Total										1.22E-03
Medium Total												1.22E-03
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	2.52E-07	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	7.81E-09	
				Benzo(a)anthracene	4.00E-03	mg/L	3.12E-04	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.28E-04	
				Benzo(a)pyrene	4.00E-03	mg/L	5.35E-04	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.90E-03	
				Benzo(b)fluoranthene	6.50E-04	mg/L	8.81E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.43E-05	
				Benzo(g,h,i)perylene	3.00E-03	mg/L	7.19E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Benzo(k)fluoranthene	6.00E-03	mg/L	7.95E-04	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	5.81E-05	
				Carbazole	7.00E-03	mg/L	4.07E-05	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	8.15E-07	
				Chrysene	5.00E-03	mg/L	3.90E-04	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	2.85E-06	
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	2.06E-04	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.51E-03	
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	4.07E-04	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.97E-04	
				Naphthalene	4.00E-03	mg/L	1.64E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Phenanthrene	1.00E-02	mg/L	1.68E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				alpha-Chlordane	3.00E-05	mg/L	3.83E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Dieldrin	2.40E-05	mg/L	1.03E-07	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.64E-06	
				Aroclor-1260	5.40E-04	mg/L	6.25E-04	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.25E-03	
				Aluminum	9.10E+00	mg/L	3.83E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Arsenic	5.80E-02	mg/L	2.44E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	3.66E-06	
				Barium	8.10E-01	mg/L	3.41E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Cadmium	1.00E-02	mg/L	4.21E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Chromium (VI)	1.10E-01	mg/L	9.26E-06	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	1.85E-04	
				Copper	8.30E-01	mg/L	3.50E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Iron	5.40E+01	mg/L	2.27E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Lead	1.80E+00	mg/L	7.58E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Manganese	8.05E-01	mg/L	3.39E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Nickel	1.00E-01	mg/L	8.42E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Vanadium	1.00E-01	mg/L	4.21E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Zinc	5.30E+00	mg/L	1.34E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Exp. Route Total								7.50E-03
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	2.28E-08	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	7.07E-10	
				Benzo(a)anthracene	4.00E-03	mg/L	2.03E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.48E-07	
				Benzo(a)pyrene	4.00E-03	mg/L	2.03E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.48E-06	
				Benzo(b)fluoranthene	6.50E-04	mg/L	3.29E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.41E-08	
				Benzo(g,h,i)perylene	3.00E-03	mg/L	1.52E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
				Benzo(k)fluoranthene	6.00E-03	mg/L	3.04E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.22E-08	

TABLE 7.3.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk			
							Value	Units	Value	Units				
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Carbazole	7.00E-03	mg/L	3.55E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	7.10E-09			
				Chrysene	5.00E-03	mg/L	2.53E-07	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	1.85E-09			
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	5.07E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.70E-07			
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	1.52E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.11E-07			
				Naphthalene	4.00E-03	mg/L	2.03E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Phenanthrene	1.00E-02	mg/L	5.07E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				alpha-Chlordane	3.00E-05	mg/L	1.52E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Dieldrin	2.40E-05	mg/L	1.22E-09	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.95E-08			
				Aroclor-1260	5.40E-04	mg/L	2.74E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.47E-08			
				Aluminum	9.10E+00	mg/L	4.61E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Arsenic	5.80E-02	mg/L	2.94E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	4.41E-06			
				Barium	8.10E-01	mg/L	4.11E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Cadmium	1.00E-02	mg/L	5.07E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Chromium (VI)	1.10E-01	mg/L	5.58E-06	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	2.79E-06			
				Copper	8.30E-01	mg/L	4.21E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Iron	5.40E+01	mg/L	2.74E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Lead	1.80E+00	mg/L	9.12E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Manganese	8.05E-01	mg/L	4.08E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Nickel	1.00E-01	mg/L	5.07E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Vanadium	1.00E-01	mg/L	5.07E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Zinc	5.30E+00	mg/L	2.69E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
			Exp. Route Total								9.44E-06			
			Exposure Point Total								7.51E-03			
			Exposure Medium Total								7.51E-03			
Medium Total										7.51E-03				
Groundwater	Groundwater	Groundwater (Tapwater)	Dermal Absorption	Aluminum	4.16E+00	mg/L	3.55E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Antimony	3.24E-03	mg/L	2.76E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Arsenic	2.17E-02	mg/L	1.85E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.77E-06			
				Chromium (VI)	5.93E-02	mg/L	1.01E-05	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	2.02E-04			
				Cobalt	1.14E-02	mg/L	3.89E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Iron	6.45E+00	mg/L	5.49E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Manganese	2.76E+00	mg/L	2.35E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Nickel	1.40E-01	mg/L	2.39E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
						Exp. Route Total								2.05E-04
			Direct Ingestion	Aluminum	4.16E+00	mg/L	7.35E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Antimony	3.24E-03	mg/L	5.73E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Arsenic	2.17E-02	mg/L	3.83E-04	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	5.74E-04			
				Chromium (VI)	5.93E-02	mg/L	1.05E-03	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	5.24E-04			
				Cobalt	1.14E-02	mg/L	2.01E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
Iron	6.45E+00	mg/L		1.14E-01	mg/kg-day	--	(mg/kg-day) ⁻¹	--						

TABLE 7.3.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk		
							Value	Units	Value	Units			
Groundwater	Groundwater	Groundwater (Tapwater)	Direct Ingestion	Manganese	2.76E+00	mg/L	4.88E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
				Nickel	1.40E-01	mg/L	2.48E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--		
			Exp. Route Total										1.10E-03
			Exposure Point Total										1.30E-03
Exposure Medium Total										1.30E-03			
Medium Total											1.30E-03		
										Total of Receptor Risks Across All Media	1.00E-02		

Footnotes:

- [a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.
- [b] Inputs were applied as follows:
 - Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
 - Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
 - Age 6 - 16 Adult IR/CR and BW; ED = 10; ADAF = 3
 - Age 16 - 30 Adult IR/CR and BW; ED = 14; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

On-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	1.12E+01	7.30E-01	3.12E-05	7.30E-01	7.08E-05	1.10E-04	1.54E-09
Benzo(a)pyrene	1.05E+01	7.30E+00	2.95E-04	7.30E+00	6.68E-04	1.10E-03	1.45E-08
Benzo(b)fluoranthene	1.56E+01	7.30E-01	4.35E-05	7.30E-01	9.86E-05	1.10E-04	2.14E-09
Benzo(k)fluoranthene	6.98E+00	7.00E-02	1.87E-06	7.00E-02	4.25E-06	1.10E-04	9.62E-10
Chrysene	1.17E+01	7.30E-03	3.28E-07	7.30E-03	7.42E-07	1.10E-05	1.61E-10
Dibenzo(a,h)anthracene	9.18E-01	7.30E+00	2.57E-05	7.30E+00	5.82E-05	1.20E-03	1.38E-09
Indeno(1,2,3-cd)pyrene	4.83E+00	7.30E-01	1.35E-05	7.30E-01	3.07E-05	1.10E-04	6.66E-10
Chromium (VI)	1.14E+03	2.00E+01	--	5.00E-01	4.96E-03	8.40E-02	1.20E-04

*Cancer Risk using ADAF

On-Site Leachate							
MMOA Chemical	CW (mg/L)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	4.00E-03	7.30E-01	8.52E-04	7.30E-01	7.30E-07	--	--
Benzo(a)pyrene	4.00E-03	7.30E+00	1.46E-02	7.30E+00	7.30E-06	--	--
Benzo(b)fluoranthene	6.50E-04	7.30E-01	2.41E-04	7.30E-01	1.19E-07	--	--
Benzo(k)fluoranthene	6.00E-03	7.00E-02	2.08E-04	7.00E-02	1.05E-07	--	--
Chrysene	5.00E-03	7.30E-03	1.07E-05	7.30E-03	9.13E-09	--	--
Dibenzo(a,h)anthracene	1.00E-03	7.30E+00	5.64E-03	7.30E+00	1.83E-06	--	--
Indeno(1,2,3-cd)pyrene	3.00E-03	7.30E-01	1.11E-03	7.30E-01	5.48E-07	--	--
Chromium (VI)	1.10E-01	2.00E+01	6.94E-04	5.00E-01	1.38E-05	--	--

*Cancer Risk using ADAF

Groundwater (Tap Water)							
MMOA Chemical	CW (mg/L)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Chromium (VI)	5.93E-02	2.00E+01	9.61E-04	5.00E-01	2.05E-03	--	--

TABLE 7.4.1 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Construction / Utility Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs)	Dermal Absorption	Acenaphthylene	4.18E-01	mg/kg	7.52E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.26E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.11E+01	mg/kg	1.99E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.45E-07	1.39E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.04E+01	mg/kg	1.86E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.36E-06	1.30E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.36E+01	mg/kg	2.45E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.79E-07	1.72E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.72E+00	mg/kg	6.69E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.68E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	4.54E+00	mg/kg	8.17E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	5.96E-09	5.72E-06	mg/kg-day	--	mg/kg-day	--
				Carbazole	1.36E+00	mg/kg	1.89E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	3.77E-10	1.32E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	8.31E-01	mg/kg	1.49E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.09E-07	1.05E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	1.84E-01	mg/kg	2.55E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.78E-07	mg/kg-day	1.00E-01	mg/kg-day	1.78E-06
				Di-n-octylphthalate	3.62E-01	mg/kg	5.01E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.51E-07	mg/kg-day	2.00E-02	mg/kg-day	1.75E-05
				Indeno(1,2,3-cd)pyrene	5.21E+00	mg/kg	9.37E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.84E-08	6.56E-06	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	1.37E+01	mg/kg	2.46E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.72E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.69E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	2.72E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.94E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.59E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	1.85E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	6.59E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.56E-01	mg/kg	6.90E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.38E-08	4.83E-07	mg/kg-day	5.00E-05	mg/kg-day	9.66E-03
				Aroclor-1260	4.17E+00	mg/kg	8.07E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.61E-07	5.65E-06	mg/kg-day	--	mg/kg-day	--
				Antimony	1.64E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.31E+00	mg/kg	3.86E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	5.80E-08	2.71E-06	mg/kg-day	3.00E-04	mg/kg-day	9.02E-03
				Chromium (VI)	8.77E+02	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-04	mg/kg-day	--
				Cobalt	1.04E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E-02	mg/kg-day	--
				Copper	1.44E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.06E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	9.18E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
Manganese	8.00E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Thallium	1.10E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	6.52E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.80E-04	mg/kg-day	--				
Exp. Route Total										2.10E-06					1.87E-02	
Soil	Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs)	Incidental Ingestion	Acenaphthylene	4.18E-01	mg/kg	1.93E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.35E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.11E+01	mg/kg	5.11E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.73E-07	3.57E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.04E+01	mg/kg	4.77E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.49E-06	3.34E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.36E+01	mg/kg	6.29E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.59E-07	4.40E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.72E+00	mg/kg	1.72E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.20E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	4.54E+00	mg/kg	2.10E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	1.53E-08	1.47E-05	mg/kg-day	--	mg/kg-day	--
				Carbazole	1.36E+00	mg/kg	6.29E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.26E-09	4.40E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	8.31E-01	mg/kg	3.83E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.80E-07	2.68E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	1.84E-01	mg/kg	8.49E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.94E-07	mg/kg-day	1.00E-01	mg/kg-day	5.94E-06
				Di-n-octylphthalate	3.62E-01	mg/kg	1.67E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-06	mg/kg-day	2.00E-02	mg/kg-day	5.84E-05
				Indeno(1,2,3-cd)pyrene	5.21E+00	mg/kg	2.40E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.75E-07	1.68E-05	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	1.37E+01	mg/kg	6.31E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.42E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.69E-02	mg/kg	7.80E-10	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.25E-08	5.46E-08	mg/kg-day	5.00E-05	mg/kg-day	1.09E-03
				Endosulfan II	2.72E-02	mg/kg	1.25E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.78E-08	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.94E-03	mg/kg	4.12E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.89E-08	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.59E-03	mg/kg	3.96E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.77E-08	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	1.85E-02	mg/kg	8.53E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.97E-08	mg/kg-day	--	mg/kg-day	--

TABLE 7.4.1 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations			
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs)	Incidental Ingestion	gamma-Chlordane	6.59E-03	mg/kg	3.04E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.13E-08	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.56E-01	mg/kg	1.64E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.28E-08	1.15E-06	mg/kg-day	5.00E-05	mg/kg-day	2.30E-02
				Aroclor-1260	4.17E+00	mg/kg	1.92E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.84E-07	1.35E-05	mg/kg-day	--	mg/kg-day	--
				Antimony	1.64E+01	mg/kg	7.58E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.31E-05	mg/kg-day	4.00E-04	mg/kg-day	1.33E-01
				Arsenic	9.31E+00	mg/kg	4.29E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	6.44E-07	3.01E-05	mg/kg-day	3.00E-04	mg/kg-day	1.00E-01
				Chromium (VI)	8.77E+02	mg/kg	4.04E-05	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	2.02E-05	2.83E-03	mg/kg-day	2.00E-02	mg/kg-day	1.42E-01
				Cobalt	1.04E+01	mg/kg	4.78E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.35E-05	mg/kg-day	1.00E-02	mg/kg-day	3.35E-03
				Copper	1.44E+03	mg/kg	6.63E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.64E-03	mg/kg-day	4.00E-02	mg/kg-day	1.16E-01
				Iron	4.06E+04	mg/kg	1.87E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.31E-01	mg/kg-day	7.00E-01	mg/kg-day	1.87E-01
				Lead	9.18E+02	mg/kg	4.23E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.96E-03	mg/kg-day	--	mg/kg-day	--
				Manganese	8.00E+02	mg/kg	3.69E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.58E-03	mg/kg-day	2.40E-02	mg/kg-day	1.08E-01
				Thallium	1.10E+00	mg/kg	5.07E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.55E-06	mg/kg-day	--	mg/kg-day	--
				Vanadium	6.52E+01	mg/kg	3.01E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.10E-04	mg/kg-day	7.00E-03	mg/kg-day	3.01E-02
				Exp. Route Total										2.61E-05		
Soil	Subsurface Soil (0-10ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	3.10E-07	mg/m ³	1.01E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	7.07E-08	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	8.20E-06	mg/m ³	2.67E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.94E-09	1.87E-06	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	7.67E-06	mg/m ³	2.50E-08	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	2.75E-08	1.75E-06	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	1.01E-05	mg/m ³	3.30E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	3.62E-09	2.31E-06	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	2.75E-06	mg/m ³	8.99E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	6.29E-07	mg/m ³	--	mg/m ³	--
				Benzo(k)fluoranthene	3.36E-06	mg/m ³	1.10E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.21E-09	7.68E-07	mg/m ³	--	mg/m ³	--
				Carbazole	1.01E-06	mg/m ³	3.29E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	2.31E-07	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	6.16E-07	mg/m ³	2.01E-09	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	2.41E-09	1.41E-07	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	1.36E-07	mg/m ³	4.45E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	3.11E-08	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	2.68E-07	mg/m ³	8.75E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	6.12E-08	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	3.86E-06	mg/m ³	1.26E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.38E-09	8.80E-07	mg/m ³	--	mg/m ³	--
				Phenanthrene	1.01E-05	mg/m ³	3.31E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	2.32E-06	mg/m ³	--	mg/m ³	--
				Dieldrin	1.25E-08	mg/m ³	4.08E-11	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	1.88E-10	2.86E-09	mg/m ³	--	mg/m ³	--
				Endosulfan II	2.01E-08	mg/m ³	6.57E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	4.60E-09	mg/m ³	--	mg/m ³	--
				Endosulfan sulfate	6.62E-09	mg/m ³	2.16E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.51E-09	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	6.36E-09	mg/m ³	2.08E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.45E-09	mg/m ³	--	mg/m ³	--
				Endrin ketone	1.37E-08	mg/m ³	4.47E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	3.13E-09	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	4.88E-09	mg/m ³	1.59E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.11E-09	mg/m ³	--	mg/m ³	--
				Aroclor-1254	2.64E-07	mg/m ³	8.60E-10	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	4.90E-10	6.02E-08	mg/m ³	--	mg/m ³	--
				Aroclor-1260	3.09E-06	mg/m ³	1.01E-08	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	5.74E-09	7.05E-07	mg/m ³	--	mg/m ³	--
				Antimony	1.22E-05	mg/m ³	3.97E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	2.78E-06	mg/m ³	--	mg/m ³	--
				Arsenic	6.90E-06	mg/m ³	2.25E-08	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	9.67E-08	1.57E-06	mg/m ³	1.50E-05	mg/m ³	1.05E-01
				Chromium (VI)	6.49E-04	mg/m ³	2.12E-06	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	1.78E-04	1.48E-04	mg/m ³	3.00E-04	mg/m ³	4.94E-01
				Cobalt	7.67E-06	mg/m ³	2.50E-08	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	2.25E-07	1.75E-06	mg/m ³	6.00E-06	mg/m ³	2.92E-01
				Copper	1.07E-03	mg/m ³	3.47E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	2.43E-04	mg/m ³	--	mg/m ³	--
				Iron	3.00E-02	mg/m ³	9.80E-05	mg/m ³	--	(µg/m ³) ⁻¹	--	6.86E-03	mg/m ³	--	mg/m ³	--
Lead	6.80E-04	mg/m ³	2.22E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	1.55E-04	mg/m ³	--	mg/m ³	--				
Manganese	5.93E-04	mg/m ³	1.93E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	1.35E-04	mg/m ³	5.00E-05	mg/m ³	2.71E+00				
Thallium	8.15E-07	mg/m ³	2.66E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	1.86E-07	mg/m ³	--	mg/m ³	--				
Vanadium	4.83E-05	mg/m ³	1.57E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	1.10E-05	mg/m ³	--	mg/m ³	--				
Exp. Route Total										1.78E-04				3.60E+00		
Exposure Point Total										2.06E-04					4.46E+00	
Exposure Medium Total										2.06E-04					4.46E+00	
Medium Total										2.06E-04					4.46E+00	
Groundwater	Groundwater	Shallow Groundwater in Excavations 10ft bgs	Dermal Absorption	Chloroform	4.50E-04	mg/L	1.10E-10	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	3.42E-12	7.72E-09	mg/kg-day	1.00E-02	mg/kg-day	7.72E-07
				Tetrachloroethene	5.30E-04	mg/L	8.51E-10	mg/kg-day	5.40E-01	(mg/kg-day) ⁻¹	4.59E-10	5.96E-08	mg/kg-day	1.00E-02	mg/kg-day	5.96E-06
				Benzo(a)anthracene	4.00E-03	mg/L	1.37E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	9.97E-08	9.56E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	4.00E-03	mg/L	2.34E-07	mg/kg-day	7.30E-00	(mg/kg-day) ⁻¹	1.71E-06	1.64E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	6.50E-04	mg/L	3.86E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.82E-08	2.70E-06	mg/kg-day	--	mg/kg-day	--

TABLE 7.4.1 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations			
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Groundwater	Shallow Groundwater in Excavations 10ft bgs	Dermal Absorption	Benzo(g,h,i)perylene	3.00E-03	mg/L	3.15E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.21E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	3.49E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.54E-08	2.44E-05	mg/kg-day	--	mg/kg-day	--
				Carbazole	7.00E-03	mg/L	1.78E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	3.57E-10	1.25E-06	mg/kg-day	--	mg/kg-day	--
				Chrysene	5.00E-03	mg/L	1.71E-07	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	1.25E-09	1.20E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	9.04E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	6.60E-07	6.33E-06	mg/kg-day	--	mg/kg-day	--
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	1.78E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.30E-07	1.25E-05	mg/kg-day	--	mg/kg-day	--
				Naphthalene	4.00E-03	mg/L	7.17E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.02E-07	mg/kg-day	6.00E-01	mg/kg-day	8.37E-07
				Phenanthrene	1.00E-02	mg/L	7.35E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.15E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	2.40E-05	mg/L	4.49E-11	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	7.19E-10	3.14E-09	mg/kg-day	5.00E-05	mg/kg-day	6.29E-05
				Endosulfan I	4.20E-04	mg/L	2.69E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.88E-08	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	7.30E-05	mg/L	2.42E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.69E-08	mg/kg-day	--	mg/kg-day	--
				Aroclor-1260	5.40E-04	mg/L	2.74E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.48E-07	1.92E-05	mg/kg-day	--	mg/kg-day	--
				Aluminum	2.61E+02	mg/L	4.81E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.37E-04	mg/kg-day	1.00E+00	mg/kg-day	3.37E-04
				Antimony	4.66E-02	mg/L	8.60E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.02E-08	mg/kg-day	6.00E-05	mg/kg-day	1.00E-03
				Arsenic	1.77E-01	mg/L	3.27E-09	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	4.90E-09	2.29E-07	mg/kg-day	3.00E-04	mg/kg-day	7.62E-04
				Barium	2.67E+00	mg/L	4.93E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.45E-06	mg/kg-day	4.90E-03	mg/kg-day	7.04E-04
				Beryllium	1.74E-02	mg/L	3.20E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.24E-08	mg/kg-day	3.50E-05	mg/kg-day	6.40E-04
				Cadmium	2.07E-02	mg/L	3.82E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.68E-08	mg/kg-day	2.50E-05	mg/kg-day	1.07E-03
				Chromium (VI)	2.11E+00	mg/L	7.77E-08	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	1.55E-06	5.44E-06	mg/kg-day	5.00E-04	mg/kg-day	1.09E-02
				Cobalt	2.37E-01	mg/L	1.75E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.22E-07	mg/kg-day	1.00E-02	mg/kg-day	1.22E-05
				Copper	1.07E+00	mg/L	1.98E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.39E-06	mg/kg-day	4.00E-02	mg/kg-day	3.46E-05
				Iron	1.05E+03	mg/L	1.94E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.36E-03	mg/kg-day	7.00E-01	mg/kg-day	1.94E-03
				Lead	4.07E-01	mg/L	7.50E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.25E-08	mg/kg-day	--	mg/kg-day	--
				Manganese	3.86E+01	mg/L	7.12E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.99E-05	mg/kg-day	9.60E-04	mg/kg-day	5.19E-02
				Mercury	9.25E-04	mg/L	1.71E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.19E-09	mg/kg-day	3.00E-03	mg/kg-day	3.98E-07
				Nickel	8.60E-01	mg/L	3.17E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.22E-07	mg/kg-day	8.00E-04	mg/kg-day	2.78E-04
				Silver	4.23E-02	mg/L	4.68E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.28E-08	mg/kg-day	2.00E-04	mg/kg-day	1.64E-04
Vanadium	2.76E-01	mg/L	5.09E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.56E-07	mg/kg-day	1.80E-04	mg/kg-day	1.98E-03				
Zinc	3.77E+00	mg/L	4.17E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.92E-06	mg/kg-day	3.00E-01	mg/kg-day	9.73E-06				
Exp. Route Total										4.76E-06					7.18E-02	
Exposure Point Total										4.76E-06						7.18E-02
Exposure Medium Total										4.76E-06						7.18E-02
Medium Total										4.76E-06						7.18E-02
Total of Receptor Risks Across All Media										2.11E-04	Total of Receptor Hazards Across All Media					4.53E+00

TABLE 7.5.1 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Receptor Population: Commercial / Industrial Worker
 Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations			
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	5.38E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.51E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	1.17E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.55E-07	3.28E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	1.11E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	8.07E-06	3.09E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	1.63E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.19E-06	4.57E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	3.71E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.04E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	7.33E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	5.35E-08	2.05E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	7.91E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	1.11E-08	2.21E-06	mg/kg-day	2.00E-02	mg/kg-day	1.11E-04
				Carbazole	1.03E+00	mg/kg	8.29E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.66E-09	2.32E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	1.23E-06	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	8.96E-09	3.44E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	9.63E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	7.03E-07	2.70E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	7.41E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.07E-07	mg/kg-day	1.00E-01	mg/kg-day	2.07E-06
				Di-n-octylphthalate	4.01E-01	mg/kg	3.24E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.06E-08	mg/kg-day	2.00E-02	mg/kg-day	4.53E-06
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	5.07E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.70E-07	1.42E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	5.14E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-07	mg/kg-day	2.00E-02	mg/kg-day	7.20E-06
				Phenanthrene	1.00E+01	mg/kg	1.05E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.94E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	4.09E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	8.18E-08	1.15E-07	mg/kg-day	2.00E-05	mg/kg-day	5.73E-03
				Aroclor-1260	4.51E+00	mg/kg	5.09E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.02E-06	1.43E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.04E+00	mg/kg	2.19E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	3.28E-07	6.13E-07	mg/kg-day	3.00E-04	mg/kg-day	2.04E-03
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	4.34E+00	mg/kg	3.50E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.80E-09	mg/kg-day	2.50E-05	mg/kg-day	3.92E-04
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--				
Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total										1.27E-05					8.29E-03	

TABLE 7.5.1 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	1.79E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.02E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	3.90E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.85E-06	1.09E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	3.68E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.69E-05	1.03E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	5.43E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.97E-06	1.52E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	1.23E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.46E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	2.44E-06	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	1.78E-07	6.83E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	3.42E-06	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	4.79E-08	9.58E-06	mg/kg-day	2.00E-02	mg/kg-day	4.79E-04
				Carbazole	1.03E+00	mg/kg	3.59E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	7.18E-09	1.00E-06	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	4.09E-06	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	2.98E-08	1.14E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	3.21E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.34E-06	8.98E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	3.21E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.98E-07	mg/kg-day	1.00E-01	mg/kg-day	8.98E-06
				Di-n-octylphthalate	4.01E-01	mg/kg	1.40E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.92E-07	mg/kg-day	2.00E-02	mg/kg-day	1.96E-05
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	1.69E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.23E-06	4.73E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	2.23E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.23E-07	mg/kg-day	2.00E-02	mg/kg-day	3.12E-05
				Phenanthrene	1.00E+01	mg/kg	3.50E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.79E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	4.19E-09	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	6.71E-08	1.17E-08	mg/kg-day	5.00E-05	mg/kg-day	2.35E-04
				Endosulfan II	3.43E-02	mg/kg	1.20E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.36E-08	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	2.89E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.10E-09	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	2.95E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.25E-09	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	8.81E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.47E-08	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	1.61E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.52E-09	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	1.27E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	2.53E-07	3.54E-07	mg/kg-day	2.00E-05	mg/kg-day	1.77E-02
				Aroclor-1260	4.51E+00	mg/kg	1.57E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.15E-06	4.41E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	3.66E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.02E-02	mg/kg-day	1.00E+00	mg/kg-day	1.02E-02
				Antimony	1.92E+01	mg/kg	6.70E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.88E-05	mg/kg-day	4.00E-04	mg/kg-day	4.69E-02
				Arsenic	9.04E+00	mg/kg	3.16E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	4.74E-06	8.85E-06	mg/kg-day	3.00E-04	mg/kg-day	2.95E-02
				Barium	4.17E+02	mg/kg	1.46E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.08E-04	mg/kg-day	2.00E-01	mg/kg-day	2.04E-03
				Cadmium	4.34E+00	mg/kg	1.51E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.24E-06	mg/kg-day	5.00E-04	mg/kg-day	8.48E-03
				Chromium (VI)	1.14E+03	mg/kg	3.99E-04	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	2.00E-04	1.12E-03	mg/kg-day	3.00E-03	mg/kg-day	3.72E-01
				Cobalt	1.01E+01	mg/kg	3.54E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.91E-06	mg/kg-day	3.00E-04	mg/kg-day	3.30E-02
				Copper	1.09E+03	mg/kg	3.82E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.07E-03	mg/kg-day	4.00E-02	mg/kg-day	2.67E-02
				Iron	4.42E+04	mg/kg	1.54E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.32E-02	mg/kg-day	7.00E-01	mg/kg-day	6.18E-02
				Lead	1.10E+03	mg/kg	3.84E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.08E-03	mg/kg-day	--	mg/kg-day	--
Manganese	7.47E+02	mg/kg	2.61E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.31E-04	mg/kg-day	2.40E-02	mg/kg-day	3.05E-02				
Mercury	5.38E-01	mg/kg	1.88E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.26E-07	mg/kg-day	3.00E-04	mg/kg-day	1.75E-03				
Nickel	8.48E+01	mg/kg	2.98E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.27E-05	mg/kg-day	3.00E-02	mg/kg-day	2.76E-03				
Silver	5.65E+00	mg/kg	1.97E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.53E-06	mg/kg-day	5.00E-03	mg/kg-day	1.11E-03				
Thallium	1.12E+00	mg/kg	3.90E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.09E-06	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	2.45E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.86E-05	mg/kg-day	5.00E-03	mg/kg-day	1.37E-02				
Zinc	1.38E+03	mg/kg	4.76E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.33E-03	mg/kg-day	3.00E-01	mg/kg-day	4.44E-03				
Exp. Route Total										2.45E-04					6.64E-01	

TABLE 7.5.1 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface Soil (0 - 2 ft)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	5.03E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.41E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	1.10E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.20E-10	3.07E-09	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.27E-08	mg/m ³	1.03E-09	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	1.14E-09	2.89E-09	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	1.53E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.68E-10	4.27E-09	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	3.47E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	9.71E-10	mg/m ³	--	mg/m ³	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	6.85E-10	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	7.54E-11	1.92E-09	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	9.61E-10	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	2.31E-12	2.69E-09	mg/m ³	--	mg/m ³	--
				Carbazole	1.24E-09	mg/m ³	1.01E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	2.82E-10	mg/m ³	--	mg/m ³	--
				Chrysene	1.41E-08	mg/m ³	1.15E-09	mg/m ³	1.10E-05	(µg/m ³) ⁻¹	1.26E-11	3.21E-09	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	9.01E-11	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	1.08E-10	2.52E-10	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	1.10E-09	mg/m ³	9.01E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	2.52E-10	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	3.93E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.10E-10	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	4.74E-10	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	5.22E-11	1.33E-09	mg/m ³	--	mg/m ³	--
				Naphthalene	7.67E-10	mg/m ³	6.25E-11	mg/m ³	3.40E-05	(µg/m ³) ⁻¹	2.13E-12	1.75E-10	mg/m ³	3.00E-03	mg/m ³	5.83E-08
				Phenanthrene	1.20E-08	mg/m ³	9.82E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	2.75E-09	mg/m ³	--	mg/m ³	--
				Dieldrin	1.44E-11	mg/m ³	1.18E-12	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	5.42E-12	3.30E-12	mg/m ³	--	mg/m ³	--
				Endosulfan II	4.13E-11	mg/m ³	3.37E-12	mg/m ³	--	(µg/m ³) ⁻¹	--	9.42E-12	mg/m ³	--	mg/m ³	--
				Endosulfan sulfate	9.96E-12	mg/m ³	8.12E-13	mg/m ³	--	(µg/m ³) ⁻¹	--	2.27E-12	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	1.01E-11	mg/m ³	8.27E-13	mg/m ³	--	(µg/m ³) ⁻¹	--	2.32E-12	mg/m ³	--	mg/m ³	--
				Endrin ketone	3.03E-11	mg/m ³	2.47E-12	mg/m ³	--	(µg/m ³) ⁻¹	--	6.92E-12	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	5.56E-12	mg/m ³	4.53E-13	mg/m ³	--	(µg/m ³) ⁻¹	--	1.27E-12	mg/m ³	--	mg/m ³	--
				Aroclor-1254	4.36E-10	mg/m ³	3.55E-11	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	2.02E-11	9.95E-11	mg/m ³	--	mg/m ³	--
				Aroclor-1260	5.42E-09	mg/m ³	4.42E-10	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	2.52E-10	1.24E-09	mg/m ³	--	mg/m ³	--
				Aluminum	1.26E-05	mg/m ³	1.03E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	2.88E-06	mg/m ³	5.00E-03	mg/m ³	5.75E-04
				Antimony	2.31E-08	mg/m ³	1.88E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	5.27E-09	mg/m ³	--	mg/m ³	--
				Arsenic	1.09E-08	mg/m ³	8.87E-10	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	3.81E-09	2.48E-09	mg/m ³	1.50E-05	mg/m ³	1.66E-04
				Barium	5.02E-07	mg/m ³	4.10E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	1.15E-07	mg/m ³	5.00E-04	mg/m ³	2.29E-04
				Cadmium	5.22E-09	mg/m ³	4.25E-10	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	7.66E-10	1.19E-09	mg/m ³	1.00E-05	mg/m ³	1.19E-04
				Chromium (VI)	1.37E-06	mg/m ³	1.12E-07	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	9.41E-06	3.14E-07	mg/m ³	1.00E-04	mg/m ³	3.14E-03
				Cobalt	1.22E-08	mg/m ³	9.94E-10	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	8.95E-09	2.78E-09	mg/m ³	6.00E-06	mg/m ³	4.64E-04
				Copper	1.32E-06	mg/m ³	1.07E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	3.00E-07	mg/m ³	--	mg/m ³	--
				Iron	5.32E-05	mg/m ³	4.34E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-05	mg/m ³	--	mg/m ³	--
				Lead	1.32E-06	mg/m ³	1.08E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	3.02E-07	mg/m ³	--	mg/m ³	--
				Manganese	8.99E-07	mg/m ³	7.33E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	2.05E-07	mg/m ³	5.00E-05	mg/m ³	4.11E-03
				Mercury	6.47E-10	mg/m ³	5.28E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.48E-10	mg/m ³	3.00E-04	mg/m ³	4.93E-07
				Nickel	1.02E-07	mg/m ³	8.30E-09	mg/m ³	2.60E-04	(µg/m ³) ⁻¹	2.16E-09	2.32E-08	mg/m ³	9.00E-05	mg/m ³	2.58E-04
				Silver	6.80E-09	mg/m ³	5.54E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	1.55E-09	mg/m ³	--	mg/m ³	--
				Thallium	1.34E-09	mg/m ³	1.10E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	3.07E-10	mg/m ³	--	mg/m ³	--
				Vanadium	8.43E-08	mg/m ³	6.88E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	1.93E-08	mg/m ³	--	mg/m ³	--
				Zinc	1.64E-06	mg/m ³	1.34E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	3.74E-07	mg/m ³	--	mg/m ³	--
							Exp. Route Total							9.43E-06		
			Exposure Point Total							2.67E-04			6.81E-01			
			Exposure Medium Total							2.67E-04			6.81E-01			
Medium Total													6.81E-01			

TABLE 7.5.1 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient			
							Value	Units	Value	Units		Value	Units	Value	Units				
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	6.90E-08	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	2.14E-09	1.93E-07	mg/kg-day	1.00E-02	mg/kg-day	1.93E-05			
				Benzo(a)anthracene	4.00E-03	mg/L	8.54E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.23E-05	2.39E-04	mg/kg-day	--	mg/kg-day	--			
				Benzo(a)pyrene	4.00E-03	mg/L	1.46E-04	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.07E-03	4.10E-04	mg/kg-day	--	mg/kg-day	--			
				Benzo(b)fluoranthene	6.50E-04	mg/L	2.41E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.76E-05	6.76E-05	mg/kg-day	--	mg/kg-day	--			
				Benzo(g,h,i)perylene	3.00E-03	mg/L	1.97E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.51E-04	mg/kg-day	--	mg/kg-day	--			
				Benzo(k)fluoranthene	6.00E-03	mg/L	2.18E-04	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	1.59E-05	6.10E-04	mg/kg-day	--	mg/kg-day	--			
				Carbazole	7.00E-03	mg/L	1.12E-05	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	2.23E-07	3.12E-05	mg/kg-day	--	mg/kg-day	--			
				Chrysene	5.00E-03	mg/L	1.07E-04	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	7.79E-07	2.99E-04	mg/kg-day	--	mg/kg-day	--			
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	5.65E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.12E-04	1.58E-04	mg/kg-day	--	mg/kg-day	--			
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	1.12E-04	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.14E-05	3.12E-04	mg/kg-day	--	mg/kg-day	--			
				Naphthalene	4.00E-03	mg/L	4.48E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.26E-05	mg/kg-day	2.00E-02	mg/kg-day	6.28E-04			
				Phenanthrene	1.00E-02	mg/L	4.59E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.29E-04	mg/kg-day	--	mg/kg-day	--			
				alpha-Chlordane	3.00E-05	mg/L	1.05E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.94E-07	mg/kg-day	--	mg/kg-day	--			
				Dieldrin	2.40E-05	mg/L	2.81E-08	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	4.49E-07	7.86E-08	mg/kg-day	5.00E-05	mg/kg-day	1.57E-03			
				Aroclor-1260	5.40E-04	mg/L	1.71E-04	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.42E-04	4.79E-04	mg/kg-day	--	mg/kg-day	--			
				Aluminum	9.10E+00	mg/L	1.05E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.94E-04	mg/kg-day	1.00E+00	mg/kg-day	2.94E-04			
				Arsenic	5.80E-02	mg/L	6.69E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.00E-06	1.87E-06	mg/kg-day	3.00E-04	mg/kg-day	6.24E-03			
				Barium	8.10E-01	mg/L	9.34E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.62E-05	mg/kg-day	1.40E-02	mg/kg-day	1.87E-03			
				Cadmium	1.00E-02	mg/L	1.15E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.23E-07	mg/kg-day	2.50E-05	mg/kg-day	1.29E-02			
				Chromium (VI)	1.10E-01	mg/L	2.54E-06	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	5.07E-05	7.10E-06	mg/kg-day	7.50E-05	mg/kg-day	9.47E-02			
				Copper	8.30E-01	mg/L	9.57E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.68E-05	mg/kg-day	4.00E-02	mg/kg-day	6.70E-04			
				Iron	5.40E+01	mg/L	6.23E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.74E-03	mg/kg-day	7.00E-01	mg/kg-day	2.49E-03			
				Lead	1.80E+00	mg/L	2.08E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.81E-06	mg/kg-day	--	mg/kg-day	--			
				Manganese	8.05E-01	mg/L	9.28E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.60E-05	mg/kg-day	9.60E-04	mg/kg-day	2.71E-02			
				Nickel	1.00E-01	mg/L	2.31E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.46E-07	mg/kg-day	1.20E-03	mg/kg-day	5.38E-04			
				Vanadium	1.00E-01	mg/L	1.15E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.23E-06	mg/kg-day	1.30E-04	mg/kg-day	2.48E-02			
				Zinc	5.30E+00	mg/L	3.67E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.03E-04	mg/kg-day	3.00E-01	mg/kg-day	3.42E-04			
				Exp. Route Total									2.05E-03						1.74E-01
							Incidental Ingestion	Chloroform	4.50E-04	mg/L	7.86E-09	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	2.44E-10	2.20E-08	mg/kg-day	1.00E-02	mg/kg-day
Benzo(a)anthracene	4.00E-03	mg/L	6.99E-08					mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.10E-08	1.96E-07	mg/kg-day	--	mg/kg-day	--			
Benzo(a)pyrene	4.00E-03	mg/L	6.99E-08					mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.10E-07	1.96E-07	mg/kg-day	--	mg/kg-day	--			
Benzo(b)fluoranthene	6.50E-04	mg/L	1.14E-08					mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.29E-09	3.18E-08	mg/kg-day	--	mg/kg-day	--			
Benzo(g,h,i)perylene	3.00E-03	mg/L	5.24E-08					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.47E-07	mg/kg-day	--	mg/kg-day	--			
Benzo(k)fluoranthene	6.00E-03	mg/L	1.05E-07					mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	7.65E-09	2.94E-07	mg/kg-day	--	mg/kg-day	--			
Carbazole	7.00E-03	mg/L	1.22E-07					mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	2.45E-09	3.42E-07	mg/kg-day	--	mg/kg-day	--			
Chrysene	5.00E-03	mg/L	8.74E-08					mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	6.38E-10	2.45E-07	mg/kg-day	--	mg/kg-day	--			
Dibenzo(a,h)anthracene	1.00E-03	mg/L	1.75E-08					mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.28E-07	4.89E-08	mg/kg-day	--	mg/kg-day	--			
Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	5.24E-08					mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.83E-08	1.47E-07	mg/kg-day	--	mg/kg-day	--			
Naphthalene	4.00E-03	mg/L	6.99E-08					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.96E-07	mg/kg-day	2.00E-02	mg/kg-day	9.78E-06			
Phenanthrene	1.00E-02	mg/L	1.75E-07					mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.89E-07	mg/kg-day	--	mg/kg-day	--			
alpha-Chlordane	3.00E-05	mg/L	5.24E-10					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.47E-09	mg/kg-day	--	mg/kg-day	--			
Dieldrin	2.40E-05	mg/L	4.19E-10					mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	6.71E-09	1.17E-09	mg/kg-day	5.00E-05	mg/kg-day	2.35E-05			
Aroclor-1260	5.40E-04	mg/L	9.44E-09					mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.89E-08	2.64E-08	mg/kg-day	--	mg/kg-day	--			
Aluminum	9.10E+00	mg/L	1.59E-04					mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.45E-04	mg/kg-day	1.00E+00	mg/kg-day	4.45E-04			
Arsenic	5.80E-02	mg/L	1.01E-06					mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.52E-06	2.84E-06	mg/kg-day	3.00E-04	mg/kg-day	9.46E-03			
Barium	8.10E-01	mg/L	1.42E-05					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.96E-05	mg/kg-day	2.00E-01	mg/kg-day	1.98E-04			
Cadmium	1.00E-02	mg/L	1.75E-07					mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.89E-07	mg/kg-day	5.00E-04	mg/kg-day	9.78E-04			
Chromium (VI)	1.10E-01	mg/L	1.92E-06					mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	9.61E-07	5.38E-06	mg/kg-day	3.00E-03	mg/kg-day	1.79E-03			

TABLE 7.5.1 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Copper	8.30E-01	mg/L	1.45E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.06E-05	mg/kg-day	4.00E-02	mg/kg-day	1.02E-03				
				Iron	5.40E+01	mg/L	9.44E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.64E-03	mg/kg-day	7.00E-01	mg/kg-day	3.77E-03				
				Lead	1.80E+00	mg/L	3.15E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.81E-05	mg/kg-day	--	mg/kg-day	--				
				Manganese	8.05E-01	mg/L	1.41E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.94E-05	mg/kg-day	2.40E-02	mg/kg-day	1.64E-03				
				Nickel	1.00E-01	mg/L	1.75E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.89E-06	mg/kg-day	3.00E-02	mg/kg-day	1.63E-04				
				Vanadium	1.00E-01	mg/L	1.75E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.89E-06	mg/kg-day	5.00E-03	mg/kg-day	9.78E-04				
				Zinc	5.30E+00	mg/L	9.26E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.59E-04	mg/kg-day	3.00E-01	mg/kg-day	8.64E-04				
				Exp. Route Total															2.13E-02	
				Exposure Point Total																1.96E-01
				Exposure Medium Total																1.96E-01
Medium Total																1.96E-01				
Total of Receptor Risks Across All Media										2.32E-03	Total of Receptor Hazards Across All Media					8.77E-01				

Table 7.6.1.RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil)	Incidental Ingestion	Iron	1.87E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.57E-02	mg/kg-day	7.00E-01	mg/kg-day	3.67E-02
				Lead	5.97E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.18E-03	mg/kg-day	--	mg/kg-day	--
				Manganese	5.83E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.99E-04	mg/kg-day	2.40E-02	mg/kg-day	3.33E-02
				Mercury	2.64E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.62E-07	mg/kg-day	3.00E-04	mg/kg-day	1.21E-03
				Zinc	1.57E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.15E-03	mg/kg-day	3.00E-01	mg/kg-day	7.17E-03
			Exp. Route Total												2.05E+00	
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil) Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.38E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.12E-11	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	2.03E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.95E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.84E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.77E-10	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	4.86E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.66E-10	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	1.05E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-10	mg/m ³	--	mg/m ³	--
				Carbazole	7.74E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.42E-11	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	9.49E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.10E-11	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	1.17E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.12E-10	mg/m ³	--	mg/m ³	--
				Phenanthrene	1.70E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.63E-10	mg/m ³	--	mg/m ³	--
				delta-BHC	4.33E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.15E-12	mg/m ³	--	mg/m ³	--
				Endosulfan II	1.48E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.42E-12	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	5.69E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.46E-12	mg/m ³	--	mg/m ³	--
				Endrin ketone	4.36E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.18E-12	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	2.20E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.11E-12	mg/m ³	--	mg/m ³	--
				Aroclor-1260	1.00E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.60E-11	mg/m ³	--	mg/m ³	--
				Aluminum	7.88E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.56E-06	mg/m ³	5.00E-03	mg/m ³	1.51E-03
				Antimony	6.61E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.34E-07	mg/m ³	--	mg/m ³	--
				Arsenic	8.05E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.72E-09	mg/m ³	1.50E-05	mg/m ³	5.14E-04
				Barium	6.45E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.18E-07	mg/m ³	5.00E-04	mg/m ³	1.24E-03
				Cadmium	1.67E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.60E-09	mg/m ³	1.00E-05	mg/m ³	1.60E-04
				Chromium (VI)	1.55E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.49E-08	mg/m ³	1.00E-04	mg/m ³	1.49E-04
				Cobalt	7.74E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.42E-09	mg/m ³	6.00E-06	mg/m ³	1.24E-03
				Copper	1.96E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.88E-07	mg/m ³	--	mg/m ³	--
Iron	2.26E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.16E-05	mg/m ³	--	mg/m ³	--				
Lead	7.19E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.89E-06	mg/m ³	--	mg/m ³	--				
Manganese	7.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.73E-07	mg/m ³	5.00E-05	mg/m ³	1.35E-02				
Mercury	3.18E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.05E-10	mg/m ³	3.00E-04	mg/m ³	1.02E-06				
Zinc	1.89E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.81E-06	mg/m ³	--	mg/m ³	--				
			Exp. Route Total												1.83E-02	
		Exposure Point Total													2.07E+00	
	Exposure Medium Total														2.07E+00	
Medium Total															2.07E+00	
Total of Receptor Risks Across All Media											Total of Receptor Hazards Across All Media					2.07E+00

Table 7.6.2.RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient	
							Value	Units	Value	Units		Value	Units	Value	Units		
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil)	Incidental Ingestion	Aroclor-1260	8.32E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.06E-06	mg/kg-day	--	mg/kg-day	--	
				Aluminum	6.55E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.37E-02	mg/kg-day	1.00E+00	mg/kg-day	8.37E-02	
				Antimony	5.49E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.02E-03	mg/kg-day	4.00E-04	mg/kg-day	1.76E+01	
				Arsenic	6.69E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.55E-05	mg/kg-day	3.00E-04	mg/kg-day	2.85E-01	
				Barium	5.36E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.85E-03	mg/kg-day	2.00E-01	mg/kg-day	3.42E-02	
				Cadmium	1.39E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.77E-05	mg/kg-day	5.00E-04	mg/kg-day	3.54E-02	
				Chromium (VI)	1.29E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.65E-04	mg/kg-day	3.00E-03	mg/kg-day	5.49E-02	
				Cobalt	6.43E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.22E-05	mg/kg-day	3.00E-04	mg/kg-day	2.74E-01	
				Copper	1.63E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.08E-03	mg/kg-day	4.00E-02	mg/kg-day	5.19E-02	
				Iron	1.87E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.40E-01	mg/kg-day	7.00E-01	mg/kg-day	3.42E-01	
				Lead	5.97E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.64E-02	mg/kg-day	--	mg/kg-day	--	
				Manganese	5.83E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.46E-03	mg/kg-day	2.40E-02	mg/kg-day	3.11E-01	
				Mercury	2.64E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.38E-06	mg/kg-day	3.00E-04	mg/kg-day	1.13E-02	
				Zinc	1.57E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.01E-02	mg/kg-day	3.00E-01	mg/kg-day	6.70E-02	
				Exp. Route Total													
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil)	Ambient Air	Inhalation	Acenaphthylene	6.38E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.12E-11	mg/m ³	--	mg/m ³	--
				(Fugitive Dust)	Benzo(a)anthracene	2.03E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.95E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.84E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.77E-10	mg/m ³	--	mg/m ³	--	
				Benzo(b)fluoranthene	4.86E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.66E-10	mg/m ³	--	mg/m ³	--	
				Benzo(g,h,i)perylene	1.05E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-10	mg/m ³	--	mg/m ³	--	
				Carbazole	7.74E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.42E-11	mg/m ³	--	mg/m ³	--	
				Dibenzo(a,h)anthracene	9.49E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.10E-11	mg/m ³	--	mg/m ³	--	
				Indeno(1,2,3-cd)pyrene	1.17E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.12E-10	mg/m ³	--	mg/m ³	--	
				Phenanthrene	1.70E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.63E-10	mg/m ³	--	mg/m ³	--	
				delta-BHC	4.33E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.15E-12	mg/m ³	--	mg/m ³	--	
				Endosulfan II	1.48E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.42E-12	mg/m ³	--	mg/m ³	--	
				Endrin aldehyde	5.69E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.46E-12	mg/m ³	--	mg/m ³	--	
				Endrin ketone	4.36E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.18E-12	mg/m ³	--	mg/m ³	--	
				gamma-Chlordane	2.20E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.11E-12	mg/m ³	--	mg/m ³	--	
				Aroclor-1260	1.00E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.60E-11	mg/m ³	--	mg/m ³	--	
				Aluminum	7.88E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.56E-06	mg/m ³	5.00E-03	mg/m ³	1.51E-03	
				Antimony	6.61E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.34E-07	mg/m ³	--	mg/m ³	--	
				Arsenic	8.05E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.72E-09	mg/m ³	1.50E-05	mg/m ³	5.14E-04	
				Barium	6.45E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.18E-07	mg/m ³	5.00E-04	mg/m ³	1.24E-03	
				Cadmium	1.67E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.60E-09	mg/m ³	1.00E-05	mg/m ³	1.60E-04	
				Chromium (VI)	1.55E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.49E-08	mg/m ³	1.00E-04	mg/m ³	1.49E-04	
				Cobalt	7.74E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.42E-09	mg/m ³	6.00E-06	mg/m ³	1.24E-03	
				Copper	1.96E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.88E-07	mg/m ³	--	mg/m ³	--	
Iron	2.26E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.16E-05	mg/m ³	--	mg/m ³	--					
Lead	7.19E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.89E-06	mg/m ³	--	mg/m ³	--					
Manganese	7.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.73E-07	mg/m ³	5.00E-05	mg/m ³	1.35E-02					
Mercury	3.18E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.05E-10	mg/m ³	3.00E-04	mg/m ³	1.02E-06					
Zinc	1.89E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.81E-06	mg/m ³	--	mg/m ³	--					
Exp. Route Total															1.83E-02		
Exposure Point Total																1.91E+01	
Exposure Medium Total																1.91E+01	
Medium Total																1.91E+01	
Total of Receptor Risks Across All Media										--	Total of Receptor Hazards Across All Media				1.91E+01		

Table 7.6.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Resident (off site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil)	Dermal Absorption	Acenaphthylene	5.30E-02	mg/kg	3.41E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.69E-01	mg/kg	1.09E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.93E-08
				Benzo(a)pyrene	1.53E-01	mg/kg	9.84E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	7.18E-07
				Benzo(b)fluoranthene	4.04E-01	mg/kg	2.60E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.90E-07
				Benzo(g,h,i)perylene	8.75E-02	mg/kg	5.63E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Carbazole	6.43E-02	mg/kg	3.18E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	6.36E-10
				Dibenzo(a,h)anthracene	7.89E-02	mg/kg	5.07E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.70E-07
				Indeno(1,2,3-cd)pyrene	9.70E-02	mg/kg	6.24E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.55E-08
				Phenanthrene	1.41E-01	mg/kg	9.06E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				delta-BHC	3.60E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan II	1.23E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	4.73E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	3.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	1.83E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1260	8.32E-02	mg/kg	5.76E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.15E-07
				Aluminum	6.55E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	5.49E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	6.69E+00	mg/kg	9.92E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.49E-06
				Barium	5.36E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.39E+00	mg/kg	6.85E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.29E+01	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	6.43E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	1.63E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Iron	1.87E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	5.97E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	5.83E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	2.64E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	1.57E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Exp. Route Total											3.01E-06
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil)	Incidental Ingestion	Acenaphthylene	5.30E-02	mg/kg	8.30E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.69E-01	mg/kg	2.65E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.93E-07
				Benzo(a)pyrene	1.53E-01	mg/kg	2.40E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.75E-06
				Benzo(b)fluoranthene	4.04E-01	mg/kg	6.33E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.62E-07
				Benzo(g,h,i)perylene	8.75E-02	mg/kg	1.37E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Carbazole	6.43E-02	mg/kg	1.01E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	2.01E-09
				Dibenzo(a,h)anthracene	7.89E-02	mg/kg	1.24E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	9.02E-07
Indeno(1,2,3-cd)pyrene	9.70E-02	mg/kg	1.52E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.11E-07				

Table 7.6.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil)	Incidental Ingestion	Phenanthrene	1.41E-01	mg/kg	2.21E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				delta-BHC	3.60E-03	mg/kg	5.64E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan II	1.23E-03	mg/kg	1.93E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	4.73E-03	mg/kg	7.41E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	3.62E-03	mg/kg	5.67E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	1.83E-03	mg/kg	2.87E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1260	8.32E-02	mg/kg	1.30E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	2.61E-07
				Aluminum	6.55E+03	mg/kg	1.03E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	5.49E+02	mg/kg	8.60E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	6.69E+00	mg/kg	1.05E-04	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.57E-05
				Barium	5.36E+02	mg/kg	8.39E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.39E+00	mg/kg	2.17E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.29E+01	mg/kg	2.02E-05	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	1.01E-05
				Cobalt	6.43E+00	mg/kg	1.01E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	1.63E+02	mg/kg	2.54E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	1.87E+04	mg/kg	2.93E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	5.97E+03	mg/kg	9.35E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	5.83E+02	mg/kg	9.13E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Mercury	2.64E-01	mg/kg	4.13E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.57E+03	mg/kg	2.46E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Exp. Route Total				2.95E-05							
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil) Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.38E-11	mg/m ³	2.62E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(a)anthracene	2.03E-10	mg/m ³	8.36E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	9.19E-12
				Benzo(a)pyrene	1.84E-10	mg/m ³	7.57E-11	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	8.32E-11
				Benzo(b)fluoranthene	4.86E-10	mg/m ³	2.00E-10	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.20E-11
				Benzo(g,h,i)perylene	1.05E-10	mg/m ³	4.33E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Carbazole	7.74E-11	mg/m ³	3.18E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Dibenzo(a,h)anthracene	9.49E-11	mg/m ³	3.90E-11	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	4.68E-11
				Indeno(1,2,3-cd)pyrene	1.17E-10	mg/m ³	4.80E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	5.28E-12
				Phenanthrene	1.70E-10	mg/m ³	6.97E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				delta-BHC	4.33E-12	mg/m ³	1.78E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endosulfan II	1.48E-12	mg/m ³	6.08E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin aldehyde	5.69E-12	mg/m ³	2.34E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	4.36E-12	mg/m ³	1.79E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	2.20E-12	mg/m ³	9.05E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1260	1.00E-10	mg/m ³	4.11E-11	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	2.35E-11
				Aluminum	7.88E-06	mg/m ³	3.24E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	6.61E-07	mg/m ³	2.72E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	8.05E-09	mg/m ³	3.31E-09	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	1.42E-08
				Barium	6.45E-07	mg/m ³	2.65E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Cadmium	1.67E-09	mg/m ³	6.85E-10	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	1.23E-09

Table 7.6.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk			
							Value	Units	Value	Units				
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil) Ambient Air	Inhalation (Fugitive Dust)	Chromium (VI)	1.55E-08	mg/m ³	6.37E-09	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	5.35E-07			
				Cobalt	7.74E-09	mg/m ³	3.18E-09	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	2.86E-08			
				Copper	1.96E-07	mg/m ³	8.04E-08	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Iron	2.26E-05	mg/m ³	9.27E-06	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Lead	7.19E-06	mg/m ³	2.95E-06	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Manganese	7.02E-07	mg/m ³	2.88E-07	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Mercury	3.18E-10	mg/m ³	1.31E-10	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Zinc	1.89E-06	mg/m ³	7.77E-07	mg/m ³	--	(µg/m ³) ⁻¹	--			
							Exp. Route Total							5.80E-07
							Exposure Point Total							3.31E-05
			Exposure Medium Total							3.31E-05				
Medium Total									3.31E-05					
			Total of Receptor Risks Across All Media						3.31E-05					

Footnotes:

- [a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.
- [b] Inputs were applied as follows:
 - Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
 - Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
 - Age 6 - 16 Adult IR/CR and BW; ED = 10; ADAF = 3
 - Age 16 - 30 Adult IR/CR and BW; ED = 14; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

Off-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	1.69E-01	7.30E-01	4.73E-07	7.30E-01	1.07E-06	1.10E-04	2.33E-11
Benzo(a)pyrene	1.53E-01	7.30E+00	4.28E-06	7.30E+00	9.71E-06	1.10E-03	2.11E-10
Benzo(b)fluoranthene	4.04E-01	7.30E-01	1.13E-06	7.30E-01	2.56E-06	1.10E-04	5.57E-11
Dibenzo(a,h)anthracene	7.89E-02	7.30E+00	2.21E-06	7.30E+00	5.01E-06	1.20E-03	1.19E-10
Indeno(1,2,3-cd)pyrene	9.70E-02	7.30E-01	2.72E-07	7.30E-01	6.15E-07	1.10E-04	1.34E-11
Chromium (VI)	1.29E+01	2.00E+01	--	5.00E-01	5.60E-05	8.40E-02	1.36E-06

*Cancer Risk using ADAF

TABLE 9.1.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Benzo(k)fluoranthene	--	--	--	--	--	--
			Bis(2-ethylhexyl)phthalate	Liver	--	7.67E-05	--	3.06E-05	1.07E-04
			Carbazole	--	--	--	--	--	--
			Chrysene	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Dimethylphthalate	--	--	1.44E-06	--	5.73E-07	2.01E-06
			Di-n-octylphthalate	Kidneys, Liver	--	3.14E-06	--	1.25E-06	4.39E-06
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Naphthalene	Body Weight	Respiratory Epithelium	4.99E-06	2.33E-09	1.99E-06	6.98E-06
			Phenanthrene	--	--	--	--	--	--
			Dieldrin	Liver	--	3.76E-05	--	--	3.76E-05
			Endosulfan II	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--
			Aroclor-1254	Eyes, Nails, Immune System	--	2.83E-03	--	1.58E-03	4.42E-03
			Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	1.64E-03	2.30E-05	--	1.66E-03
			Antimony	Longevity, Blood Glucose, Cholesterol	--	7.51E-03	--	--	7.51E-03
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	4.72E-03	6.62E-06	5.65E-04	5.29E-03
Barium	Kidneys	Developmental	3.27E-04	9.17E-06	--	3.36E-04			

TABLE 9.1.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient							
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Cadmium	Kidneys	Kidneys	1.36E-03	4.76E-06	1.08E-04	1.47E-03		
			Chromium (VI)	No Observed Effects	Lungs	5.96E-02	1.26E-04	--	5.97E-02		
			Cobalt	Iodine Uptake	Respiratory System	5.29E-03	1.86E-05	--	5.30E-03		
			Copper	Gastrointestinal System	--	4.28E-03	--	--	4.28E-03		
			Iron	Gastrointestinal System	--	9.88E-03	--	--	9.88E-03		
			Lead	--	--	--	--	--	--		
			Manganese	Central Nervous System	Central Nervous System	4.87E-03	1.64E-04	--	5.04E-03		
			Mercury	Immune System	Central Nervous System	2.81E-04	1.97E-08	--	2.81E-04		
			Nickel	Body Weight	Respiratory System	4.41E-04	1.03E-05	--	4.52E-04		
			Silver	Skin	--	1.77E-04	--	--	1.77E-04		
			Thallium	--	--	--	--	--	--		
			Vanadium	Decreased Hair Cystine	--	2.19E-03	--	--	2.19E-03		
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	7.10E-04	--	--	7.10E-04		
			Chemical Total					1.06E-01	3.62E-04	2.29E-03	1.09E-01
			Exposure Point Total								1.09E-01
Exposure Medium Total								1.09E-01			
Medium Total								1.09E-01			
Leachate	Leachate	On-Site Leachate Areas	Chloroform	Liver	Liver	3.52E-07	--	5.34E-06	5.69E-06		
			Benzo(a)anthracene	--	--	--	--	--	--		
			Benzo(a)pyrene	--	--	--	--	--	--		
			Benzo(b)fluoranthene	--	--	--	--	--	--		
			Benzo(g,h,i)perylene	--	--	--	--	--	--		
			Benzo(k)fluoranthene	--	--	--	--	--	--		
			Carbazole	--	--	--	--	--	--		
			Chrysene	--	--	--	--	--	--		
			Dibenzo(a,h)anthracene	--	--	--	--	--	--		
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--		
			Naphthalene	Body Weight	Respiratory Epithelium	1.57E-06	--	1.73E-04	1.75E-04		
			Phenanthrene	--	--	--	--	--	--		
			alpha-Chlordane	--	--	--	--	--	--		
			Dieldrin	Liver	--	3.76E-06	--	4.35E-04	4.38E-04		

TABLE 9.1.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Leachate	Leachate	On-Site Leachate Areas	Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	7.12E-05	--	8.12E-05	1.52E-04
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	1.51E-03	--	1.73E-03	3.24E-03
			Barium	Kidneys	Developmental	3.17E-05	--	5.16E-04	5.48E-04
			Cadmium	Kidneys	Kidneys	1.57E-04	--	3.57E-03	3.73E-03
			Chromium (VI)	No Observed Effects	Lungs	2.87E-04	--	2.62E-02	2.65E-02
			Copper	Gastrointestinal System	--	1.62E-04	--	1.85E-04	3.48E-04
			Iron	Gastrointestinal System	--	6.04E-04	--	6.88E-04	1.29E-03
			Lead	--	--	--	--	--	--
			Manganese	Central Nervous System	Central Nervous System	2.63E-04	--	7.48E-03	7.75E-03
			Nickel	Body Weight	Respiratory System	2.61E-05	--	1.49E-04	1.75E-04
			Vanadium	Decreased Hair Cystine	--	1.57E-04	--	6.86E-03	7.02E-03
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	1.38E-04	--	9.46E-05	2.33E-04
			Chemical Total					3.42E-03	--
Exposure Point Total									5.16E-02
Exposure Medium Total									5.16E-02
Medium Total									5.16E-02
								Receptor HI Total	1.60E-01

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	8.45E-03	--	Immune System	4.70E-03	--
Body Weight	7.98E-04	--	Iodine Uptake	5.29E-03	--
Cardiovascular System	--	6.62E-06	Kidneys	6.07E-03	4.76E-06
Central Nervous System	1.44E-02	2.17E-04	Liver	5.93E-04	--
Cholesterol	7.51E-03	--	Longevity	7.51E-03	--
Decreased Hair Cystine	9.22E-03	--	Respiratory System	--	1.54E-04
Developmental	--	1.58E-05	Nails	4.42E-03	--
Eyes	4.42E-03	--	Skin	8.70E-03	--
Gastrointestinal System	1.58E-02	--	No Observed Effects	8.61E-02	--

TABLE 9.1.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Benzo(k)fluoranthene	--	--	--	--	--	--
			Bis(2-ethylhexyl)phthalate	Liver	--	7.16E-04	--	2.00E-04	9.16E-04
			Carbazole	--	--	--	--	--	--
			Chrysene	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Dimethylphthalate	--	--	1.34E-05	--	3.76E-06	1.72E-05
			Di-n-octylphthalate	Kidneys, Liver	--	2.93E-05	--	8.20E-06	3.75E-05
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Naphthalene	Body Weight	Respiratory Epithelium	4.65E-05	2.33E-09	1.30E-05	5.96E-05
			Phenanthrene	--	--	--	--	--	--
			Dieldrin	Liver	--	3.51E-04	--	--	3.51E-04
			Endosulfan II	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--
			Aroclor-1254	Eyes, Nails, Immune System	--	2.64E-02	--	1.04E-02	3.68E-02
			Aroclor-1260	--	--	--	--	--	--
Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	1.53E-02	2.30E-05	--	1.53E-02			
Antimony	Longevity, Blood Glucose, Cholesterol	--	7.01E-02	--	--	7.01E-02			
Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	4.40E-02	6.62E-06	3.70E-03	4.77E-02			
Barium	Kidneys	Developmental	3.05E-03	9.17E-06	--	3.06E-03			
Cadmium	Kidneys	Kidneys	1.27E-02	4.76E-06	7.09E-04	1.34E-02			

TABLE 9.1.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient							
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Chromium (VI)	No Observed Effects	Lungs	5.56E-01	1.26E-04	--	5.56E-01		
			Cobalt	Iodine Uptake	Respiratory System	4.93E-02	1.86E-05	--	4.94E-02		
			Copper	Gastrointestinal System	--	3.99E-02	--	--	3.99E-02		
			Iron	Gastrointestinal System	--	9.23E-02	--	--	9.23E-02		
			Lead	--	--	--	--	--	--		
			Manganese	Central Nervous System	Central Nervous System	4.55E-02	1.64E-04	--	4.57E-02		
			Mercury	Immune System	Central Nervous System	2.62E-03	1.97E-08	--	2.62E-03		
			Nickel	Body Weight	Respiratory System	4.12E-03	1.03E-05	--	4.13E-03		
			Silver	Skin	--	1.65E-03	--	--	1.65E-03		
			Thallium	--	--	--	--	--	--		
			Vanadium	Decreased Hair Cystine	--	2.05E-02	--	--	2.05E-02		
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	6.63E-03	--	--	6.63E-03		
			Chemical Total					9.91E-01	3.62E-04	1.50E-02	1.01E+00
			Exposure Point Total								1.01E+00
Exposure Medium Total								1.01E+00			
Medium Total								1.01E+00			
Leachate	Leachate	On-Site Leachate Areas	Chloroform	Liver	Liver	1.64E-06	--	1.22E-05	1.39E-05		
			Benzo(a)anthracene	--	--	--	--	--	--		
			Benzo(a)pyrene	--	--	--	--	--	--		
			Benzo(b)fluoranthene	--	--	--	--	--	--		
			Benzo(g,h,i)perylene	--	--	--	--	--	--		
			Benzo(k)fluoranthene	--	--	--	--	--	--		
			Carbazole	--	--	--	--	--	--		
			Chrysene	--	--	--	--	--	--		
			Dibenzo(a,h)anthracene	--	--	--	--	--	--		
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--		
			Naphthalene	Body Weight	Respiratory Epithelium	7.31E-06	--	3.98E-04	4.05E-04		
			Phenanthrene	--	--	--	--	--	--		
			alpha-Chlordane	--	--	--	--	--	--		
			Dieldrin	Liver	--	1.75E-05	--	9.96E-04	1.01E-03		
Aroclor-1260	--	--	--	--	--	--					

TABLE 9.1.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient							
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Leachate	Leachate	On-Site Leachate Areas	Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	3.32E-04	--	1.86E-04	5.19E-04		
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	7.06E-03	--	3.95E-03	1.10E-02		
			Barium	Kidneys	Developmental	1.48E-04	--	1.18E-03	1.33E-03		
			Cadmium	Kidneys	Kidneys	7.31E-04	--	8.18E-03	8.91E-03		
			Chromium (VI)	No Observed Effects	Lungs	1.34E-03	--	6.00E-02	6.13E-02		
			Copper	Gastrointestinal System	--	7.58E-04	--	4.24E-04	1.18E-03		
			Iron	Gastrointestinal System	--	2.82E-03	--	1.58E-03	4.40E-03		
			Lead	--	--	--	--	--	--		
			Manganese	Central Nervous System	Central Nervous System	1.23E-03	--	1.72E-02	1.84E-02		
			Nickel	Body Weight	Respiratory System	1.22E-04	--	3.41E-04	4.63E-04		
			Vanadium	Decreased Hair Cystine	--	7.31E-04	--	1.57E-02	1.65E-02		
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	6.45E-04	--	2.17E-04	8.62E-04		
			Chemical Total					1.59E-02	--	1.10E-01	1.26E-01
			Exposure Point Total								
Exposure Medium Total									1.26E-01		
Medium Total									1.26E-01		
								Receptor HI Total	1.13E+00		

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	7.76E-02	--	Immune System	3.94E-02	--
Body Weight	5.05E-03	--	Iodine Uptake	4.93E-02	--
Cardiovascular System	--	6.62E-06	Kidneys	2.67E-02	4.76E-06
Central Nervous System	7.97E-02	2.17E-04	Liver	2.33E-03	--
Cholesterol	7.01E-02	--	Longevity	7.01E-02	--
Decreased Hair Cystine	3.69E-02	--	Respiratory System	--	1.54E-04
Developmental	--	1.58E-05	Nails	3.68E-02	--
Eyes	3.68E-02	--	Skin	6.04E-02	--
Gastrointestinal System	1.38E-01	--	No Observed Effects	6.18E-01	--

TABLE 9.1.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--
			Benzo(a)anthracene	8.09E-06	1.46E-11	3.57E-06	1.17E-05
			Benzo(a)pyrene	7.63E-05	1.38E-10	3.37E-05	1.10E-04
			Benzo(b)fluoranthene	1.13E-05	2.04E-11	4.98E-06	1.62E-05
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	4.85E-07	9.17E-12	2.14E-07	7.00E-07
			Bis(2-ethylhexyl)phthalate	2.45E-08	1.11E-13	7.75E-09	3.23E-08
			Carbazole	3.68E-09	--	1.16E-09	4.84E-09
			Chrysene	8.48E-08	1.54E-12	3.74E-08	1.22E-07
			Dibenzo(a,h)anthracene	6.66E-06	1.31E-11	2.94E-06	9.59E-06
			Dimethylphthalate	--	--	--	--
			Di-n-octylphthalate	--	--	--	--
			Indeno(1,2,3-cd)pyrene	3.50E-06	6.34E-12	1.55E-06	5.05E-06
			Naphthalene	--	1.02E-13	--	1.02E-13
			Phenanthrene	--	--	--	--
			Dieldrin	3.44E-08	2.60E-13	--	3.44E-08
			Endosulfan II	--	--	--	--
			Endosulfan sulfate	--	--	--	--
			Endrin aldehyde	--	--	--	--
			Endrin ketone	--	--	--	--
			gamma-Chlordane	--	--	--	--
Aroclor-1254	1.30E-07	9.72E-13	5.73E-08	1.87E-07			
Aroclor-1260	1.61E-06	1.21E-11	7.13E-07	2.33E-06			

TABLE 9.1.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Aluminum	--	--	--	--
			Antimony	--	--	--	--
			Arsenic	2.43E-06	1.83E-10	2.30E-07	2.66E-06
			Barium	--	--	--	--
			Cadmium	--	3.68E-11	--	3.68E-11
			Chromium (VI)	5.67E-04	1.14E-06	--	5.68E-04
			Cobalt	--	4.29E-10	--	4.29E-10
			Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Mercury	--	--	--	--
			Nickel	--	1.04E-10	--	1.04E-10
			Silver	--	--	--	--
			Thallium	--	--	--	--
			Vanadium	--	--	--	--
			Zinc	--	--	--	--
			Chemical Total	6.78E-04	1.15E-06	4.80E-05	7.27E-04
			Exposure Point Total				7.27E-04
			Exposure Medium Total				7.27E-04
			Medium Total				7.27E-04
Leachate	Leachate	On-Site Leachate Areas	Chloroform	8.08E-11	--	8.92E-10	9.73E-10
			Benzo(a)anthracene	8.35E-08	--	9.74E-05	9.75E-05
			Benzo(a)pyrene	8.35E-07	--	1.67E-03	1.67E-03
			Benzo(b)fluoranthene	1.36E-08	--	2.75E-05	2.75E-05
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	1.20E-08	--	2.38E-05	2.38E-05

TABLE 9.1.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Leachate	Leachate	On-Site Leachate Areas	Carbazole	8.11E-10	--	9.31E-08	9.39E-08
			Chrysene	1.04E-09	--	1.22E-06	1.22E-06
			Dibenzo(a,h)anthracene	2.09E-07	--	6.45E-04	6.45E-04
			Indeno(1,2,3-cd)pyrene	6.26E-08	--	1.27E-04	1.27E-04
			Naphthalene	--	--	--	--
			Phenanthrene	--	--	--	--
			alpha-Chlordane	--	--	--	--
			Dieldrin	2.22E-09	--	1.88E-07	1.90E-07
			Aroclor-1260	6.26E-09	--	1.43E-04	1.43E-04
			Aluminum	--	--	--	--
			Arsenic	5.04E-07	--	4.19E-07	9.23E-07
			Barium	--	--	--	--
			Cadmium	--	--	--	--
			Chromium (VI)	1.57E-06	--	7.93E-05	8.09E-05
			Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Nickel	--	--	--	--
			Vanadium	--	--	--	--
			Zinc	--	--	--	--
			Chemical Total	3.30E-06	--	2.81E-03	2.82E-03
			Exposure Point Total				2.82E-03
			Exposure Medium Total				2.82E-03
			Medium Total				2.82E-03
						Receptor Risk Total	3.54E-03

Note:

For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 9.2.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Recreator
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Benzo(k)fluoranthene	--	--	--	--	--	--
			Bis(2-ethylhexyl)phthalate	Liver	--	7.67E-05	--	3.06E-05	1.07E-04
			Carbazole	--	--	--	--	--	--
			Chrysene	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Dimethylphthalate	--	--	1.44E-06	--	5.73E-07	2.01E-06
			Di-n-octylphthalate	Kidneys, Liver	--	3.14E-06	--	1.25E-06	4.39E-06
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Naphthalene	Body Weight	Respiratory Epithelium	4.99E-06	2.33E-09	1.99E-06	6.98E-06
			Phenanthrene	--	--	--	--	--	--
			Dieldrin	Liver	--	3.76E-05	--	--	3.76E-05
			Endosulfan II	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--
			Aroclor-1254	Eyes, Nails, Immune System	--	2.83E-03	--	1.58E-03	4.42E-03
			Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	1.64E-03	2.30E-05	--	1.66E-03
			Antimony	Longevity, Blood Glucose, Cholesterol	--	7.51E-03	--	--	7.51E-03
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	4.72E-03	6.62E-06	5.65E-04	5.29E-03
Barium	Kidneys	Developmental	3.27E-04	9.17E-06	--	3.36E-04			
Cadmium	Kidneys	Kidneys	1.36E-03	4.76E-06	1.08E-04	1.47E-03			
Chromium (VI)	No Observed Effects	Lungs	5.96E-02	1.26E-04	--	5.97E-02			



TABLE 9.2.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient								
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total			
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Cobalt	Iodine Uptake	Respiratory System	5.29E-03	1.86E-05	--	5.30E-03			
			Copper	Gastrointestinal System	--	4.28E-03	--	--	4.28E-03			
			Iron	Gastrointestinal System	--	9.88E-03	--	--	9.88E-03			
			Lead	--	--	--	--	--	--			
			Manganese	Central Nervous System	Central Nervous System	4.87E-03	1.64E-04	--	5.04E-03			
			Mercury	Immune System	Central Nervous System	2.81E-04	1.97E-08	--	2.81E-04			
			Nickel	Body Weight	Respiratory System	4.41E-04	1.03E-05	--	4.52E-04			
			Silver	Skin	--	1.77E-04	--	--	1.77E-04			
			Thallium	--	--	--	--	--	--			
			Vanadium	Decreased Hair Cystine	--	2.19E-03	--	--	2.19E-03			
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	7.10E-04	--	--	7.10E-04			
			Chemical Total					1.06E-01	3.62E-04	2.29E-03	1.09E-01	
			Exposure Point Total									1.09E-01
			Exposure Medium Total									1.09E-01
Medium Total									1.09E-01			
Leachate	Leachate	On-Site Leachate Areas	Chloroform	Liver	Liver	3.52E-07	--	5.34E-06	5.69E-06			
			Benzo(a)anthracene	--	--	--	--	--	--			
			Benzo(a)pyrene	--	--	--	--	--	--			
			Benzo(b)fluoranthene	--	--	--	--	--	--			
			Benzo(g,h,i)perylene	--	--	--	--	--	--			
			Benzo(k)fluoranthene	--	--	--	--	--	--			
			Carbazole	--	--	--	--	--	--			
			Chrysene	--	--	--	--	--	--			
			Dibenzo(a,h)anthracene	--	--	--	--	--	--			
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--			
			Naphthalene	Body Weight	Respiratory Epithelium	1.57E-06	--	1.73E-04	1.75E-04			
			Phenanthrene	--	--	--	--	--	--			
			alpha-Chlordane	--	--	--	--	--	--			
			Dieldrin	Liver	--	3.76E-06	--	4.35E-04	4.38E-04			
Aroclor-1260	--	--	--	--	--	--						
Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	7.12E-05	--	8.12E-05	1.52E-04						

TABLE 9.2.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient							
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Leachate	Leachate	On-Site Leachate Areas	Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	1.51E-03	--	1.73E-03	3.24E-03		
			Barium	Kidneys	Developmental	3.17E-05	--	5.16E-04	5.48E-04		
			Cadmium	Kidneys	Kidneys	1.57E-04	--	3.57E-03	3.73E-03		
			Chromium (VI)	No Observed Effects	Lungs	2.87E-04	--	2.62E-02	2.65E-02		
			Copper	Gastrointestinal System	--	1.62E-04	--	1.85E-04	3.48E-04		
			Iron	Gastrointestinal System	--	6.04E-04	--	6.88E-04	1.29E-03		
			Lead	--	--	--	--	--	--		
			Manganese	Central Nervous System	Central Nervous System	2.63E-04	--	7.48E-03	7.75E-03		
			Nickel	Body Weight	Respiratory System	2.61E-05	--	1.49E-04	1.75E-04		
			Vanadium	Decreased Hair Cystine	--	1.57E-04	--	6.86E-03	7.02E-03		
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	1.38E-04	--	9.46E-05	2.33E-04		
			Chemical Total					3.42E-03	--	4.81E-02	5.16E-02
			Exposure Point Total								5.16E-02
			Exposure Medium Total								5.16E-02
Medium Total								5.16E-02			
Sediment	Sediment in Beer Kill	Beer Kill Creek	Benzo(a)pyrene	--	--	--	--	--	--		
			Phenanthrene	--	--	--	--	--	--		
			Endrin ketone	--	--	--	--	--	--		
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	2.77E-03	--	3.31E-04	3.10E-03		
			Chromium (VI)	No Observed Effects	Lungs	4.59E-04	--	--	4.59E-04		
			Cobalt	Iodine Uptake	Respiratory System	4.17E-03	--	--	4.17E-03		
			Iron	Gastrointestinal System	--	4.32E-03	--	--	4.32E-03		
			Manganese	Central Nervous System	Central Nervous System	6.51E-03	--	--	6.51E-03		
			Chemical Total					1.82E-02	--	3.31E-04	1.86E-02
Exposure Point Total								1.86E-02			
Exposure Medium Total								1.86E-02			
Medium Total								1.86E-02			

TABLE 9.2.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water in	Beer Kill Creek							
	No Chemicals met the COPC criteria for this medium.								
	Beer Kill								
			Chemical Total						--
			Exposure Point Total						--
	Exposure Medium Total							--	
Medium Total								--	
Receptor Total								Receptor HI Total	1.79E-01

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	8.45E-03	--	Immune System	4.70E-03	--
Body Weight	7.98E-04	--	Iodine Uptake	9.46E-03	--
Cardiovascular System	--	6.62E-06	Kidneys	6.07E-03	4.76E-06
Central Nervous System	2.09E-02	2.17E-04	Liver	5.93E-04	--
Cholesterol	7.51E-03	--	Longevity	7.51E-03	--
Decreased Hair Cystine	9.22E-03	--	Respiratory System	--	1.54E-04
Developmental	--	1.58E-05	Nails	4.42E-03	--
Eyes	4.42E-03	--	Skin	1.18E-02	--
Gastrointestinal System	2.01E-02	--	No Observed Effects	8.65E-02	--

TABLE 9.2.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Recreator
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0 - 2ft) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Benzo(k)fluoranthene	--	--	--	--	--	--
			Bis(2-ethylhexyl)phthalate	Liver	--	7.16E-04	--	2.00E-04	9.16E-04
			Carbazole	--	--	--	--	--	--
			Chrysene	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Dimethylphthalate	--	--	1.34E-05	--	3.76E-06	1.72E-05
			Di-n-octylphthalate	Kidneys, Liver	--	2.93E-05	--	8.20E-06	3.75E-05
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Naphthalene	Body Weight	Respiratory Epithelium	4.65E-05	2.33E-09	1.30E-05	5.96E-05
			Phenanthrene	--	--	--	--	--	--
			Dieldrin	Liver	--	3.51E-04	--	--	3.51E-04
			Endosulfan II	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
gamma-Chlordane	--	--	--	--	--	--			
Aroclor-1254	Eyes, Nails, Immune System	--	2.64E-02	--	1.04E-02	3.68E-02			
Aroclor-1260	--	--	--	--	--	--			
Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	1.53E-02	2.30E-05	--	1.53E-02			
Antimony	Longevity, Blood Guucose, Cholesterol	--	7.01E-02	--	--	7.01E-02			
Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	4.40E-02	6.62E-06	3.70E-03	4.77E-02			
Barium	Kidneys	Developmental	3.05E-03	9.17E-06	--	3.06E-03			
Cadmium	Kidneys	Kidneys	1.27E-02	4.76E-06	7.09E-04	1.34E-02			

TABLE 9.2.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient								
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total			
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0 - 2ft) & Ambient Air	Chromium (VI)	No Observed Effects	Lungs	5.56E-01	1.26E-04	--	5.56E-01			
			Cobalt	Iodine Uptake	Respiratory System	4.93E-02	1.86E-05	--	4.94E-02			
			Copper	Gastrointestinal System	--	3.99E-02	--	--	3.99E-02			
			Iron	Gastrointestinal System	--	9.23E-02	--	--	9.23E-02			
			Lead	--	--	--	--	--	--			
			Manganese	Central Nervous System	Central Nervous System	4.55E-02	1.64E-04	--	4.57E-02			
			Mercury	Immune System	Central Nervous System	2.62E-03	1.97E-08	--	2.62E-03			
			Nickel	Body Weight	Respiratory System	4.12E-03	1.03E-05	--	4.13E-03			
			Silver	Skin	--	1.65E-03	--	--	1.65E-03			
			Thallium	--	--	--	--	--	--			
			Vanadium	Decreased Hair Cystine	--	2.05E-02	--	--	2.05E-02			
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	6.63E-03	--	--	6.63E-03			
			Chemical Total					9.91E-01	3.62E-04	1.50E-02	1.01E+00	
			Exposure Point Total									1.01E+00
			Exposure Medium Total									1.01E+00
Medium Total									1.01E+00			
Leachate	Leachate	On-Site Leachate Areas	Chloroform	Liver	Liver	1.64E-06	--	1.22E-05	1.39E-05			
			Benzo(a)anthracene	--	--	--	--	--	--			
			Benzo(a)pyrene	--	--	--	--	--	--			
			Benzo(b)fluoranthene	--	--	--	--	--	--			
			Benzo(g,h,i)perylene	--	--	--	--	--	--			
			Benzo(k)fluoranthene	--	--	--	--	--	--			
			Carbazole	--	--	--	--	--	--			
			Chrysene	--	--	--	--	--	--			
			Dibenzo(a,h)anthracene	--	--	--	--	--	--			
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--			
			Naphthalene	Body Weight	Respiratory Epithelium	7.31E-06	--	3.98E-04	4.05E-04			
			Phenanthrene	--	--	--	--	--	--			
			alpha-Chlordane	--	--	--	--	--	--			
			Dieldrin	Liver	--	1.75E-05	--	9.96E-04	1.01E-03			
			Aroclor-1260	--	--	--	--	--	--			

TABLE 9.2.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient							
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Leachate	Leachate	On-Site Leachate Areas	Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	3.32E-04	--	1.86E-04	5.19E-04		
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	7.06E-03	--	3.95E-03	1.10E-02		
			Barium	Kidneys	Developmental	1.48E-04	--	1.18E-03	1.33E-03		
			Cadmium	Kidneys	Kidneys	7.31E-04	--	8.18E-03	8.91E-03		
			Chromium (VI)	No Observed Effects	Lungs	1.34E-03	--	6.00E-02	6.13E-02		
			Copper	Gastrointestinal System	--	7.58E-04	--	4.24E-04	1.18E-03		
			Iron	Gastrointestinal System	--	2.82E-03	--	1.58E-03	4.40E-03		
			Lead	--	--	--	--	--	--		
			Manganese	Central Nervous System	Central Nervous System	1.23E-03	--	1.72E-02	1.84E-02		
			Nickel	Body Weight	Respiratory System	1.22E-04	--	3.41E-04	4.63E-04		
			Vanadium	Decreased Hair Cystine	--	7.31E-04	--	1.57E-02	1.65E-02		
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	6.45E-04	--	2.17E-04	8.62E-04		
			Chemical Total					1.59E-02	--	1.10E-01	1.26E-01
			Exposure Point Total								1.26E-01
Exposure Medium Total								1.26E-01			
Medium Total								1.26E-01			
Sediment	Sediment in Beer Kill	Beer Kill Creek	Benzo(a)pyrene	--	--	--	--	--	--		
			Phenanthrene	--	--	--	--	--	--		
			Endrin ketone	--	--	--	--	--	--		
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	2.58E-02	--	2.17E-03	2.80E-02		
			Chromium (VI)	No Observed Effects	Lungs	4.29E-03	--	--	4.29E-03		
			Cobalt	Iodine Uptake	Respiratory System	3.90E-02	--	--	3.90E-02		
			Iron	Gastrointestinal System	--	4.03E-02	--	--	4.03E-02		
			Manganese	Central Nervous System	Central Nervous System	6.08E-02	--	--	6.08E-02		
Chemical Total					1.70E-01	--	2.17E-03	1.72E-01			
Exposure Point Total								1.72E-01			
Exposure Medium Total								1.72E-01			
Medium Total								1.72E-01			

TABLE 9.2.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water in	Beer Kill Creek							
	No Chemicals met the COPC criteria for this medium.								
	Beer Kill								
				Chemical Total					
			Exposure Point Total						
	Exposure Medium Total								--
Medium Total									--
Receptor Total								Receptor HI Total	1.31E+00

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	7.76E-02	--	Immune System	3.94E-02	--
Body Weight	5.05E-03	--	Iodine Uptake	8.83E-02	--
Cardiovascular System	--	6.62E-06	Kidneys	2.67E-02	4.76E-06
Central Nervous System	1.40E-01	2.17E-04	Liver	2.33E-03	--
Cholesterol	7.01E-02	--	Longevity	7.01E-02	--
Decreased Hair Cystine	3.69E-02	--	Respiratory System	--	1.54E-04
Developmental	--	1.58E-05	Nails	3.68E-02	--
Eyes	3.68E-02	--	Skin	8.84E-02	--
Gastrointestinal System	1.78E-01	--	No Observed Effects	6.22E-01	--

TABLE 9.2.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Recreator
Receptor Age: . Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--
			Benzo(a)anthracene	8.09E-06	1.46E-11	3.57E-06	1.17E-05
			Benzo(a)pyrene	7.63E-05	1.38E-10	3.37E-05	1.10E-04
			Benzo(b)fluoranthene	1.13E-05	2.04E-11	4.98E-06	1.62E-05
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	4.85E-07	9.17E-12	2.14E-07	7.00E-07
			Bis(2-ethylhexyl)phthalate	2.45E-08	1.11E-13	7.75E-09	3.23E-08
			Carbazole	3.68E-09	--	1.16E-09	4.84E-09
			Chrysene	8.48E-08	1.54E-12	3.74E-08	1.22E-07
			Dibenzo(a,h)anthracene	6.66E-06	1.31E-11	2.94E-06	9.59E-06
			Dimethylphthalate	--	--	--	--
			Di-n-octylphthalate	--	--	--	--
			Indeno(1,2,3-cd)pyrene	3.50E-06	6.34E-12	1.55E-06	5.05E-06
			Naphthalene	--	1.02E-13	--	1.02E-13
			Phenanthrene	--	--	--	--
			Dieldrin	3.44E-08	2.60E-13	--	3.44E-08
			Endosulfan II	--	--	--	--
			Endosulfan sulfate	--	--	--	--
			Endrin aldehyde	--	--	--	--
			Endrin ketone	--	--	--	--
gamma-Chlordane	--	--	--	--			
Aroclor-1254	1.30E-07	9.72E-13	5.73E-08	1.87E-07			
Aroclor-1260	1.61E-06	1.21E-11	7.13E-07	2.33E-06			

TABLE 9.2.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Aluminum	--	--	--	--
			Antimony	--	--	--	--
			Arsenic	2.43E-06	1.83E-10	2.30E-07	2.66E-06
			Barium	--	--	--	--
			Cadmium	--	3.68E-11	--	3.68E-11
			Chromium (VI)	5.67E-04	1.14E-06	--	5.68E-04
			Cobalt	--	4.29E-10	--	4.29E-10
			Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Mercury	--	--	--	--
			Nickel	--	1.04E-10	--	1.04E-10
			Silver	--	--	--	--
			Thallium	--	--	--	--
			Vanadium	--	--	--	--
			Zinc	--	--	--	--
						Chemical Total	6.78E-04
			Exposure Point Total				7.27E-04
			Exposure Medium Total				7.27E-04
Medium Total							7.27E-04
Leachate	Leachate	On-Site Leachate Areas	Chloroform	8.08E-11	--	8.92E-10	9.73E-10
			Benzo(a)anthracene	8.35E-08	--	9.74E-05	9.75E-05
			Benzo(a)pyrene	8.35E-07	--	1.67E-03	1.67E-03
			Benzo(b)fluoranthene	1.36E-08	--	2.75E-05	2.75E-05
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	1.20E-08	--	2.38E-05	2.38E-05

TABLE 9.2.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Leachate	Leachate	On-Site Leachate Areas	Carbazole	8.11E-10	--	9.31E-08	9.39E-08
			Chrysene	1.04E-09	--	1.22E-06	1.22E-06
			Dibenzo(a,h)anthracene	2.09E-07	--	6.45E-04	6.45E-04
			Indeno(1,2,3-cd)pyrene	6.26E-08	--	1.27E-04	1.27E-04
			Naphthalene	--	--	--	--
			Phenanthrene	--	--	--	--
			alpha-Chlordane	--	--	--	--
			Dieldrin	2.22E-09	--	1.88E-07	1.90E-07
			Aroclor-1260	6.26E-09	--	1.43E-04	1.43E-04
			Aluminum	--	--	--	--
			Arsenic	5.04E-07	--	4.19E-07	9.23E-07
			Barium	--	--	--	--
			Cadmium	--	--	--	--
			Chromium (VI)	1.57E-06	--	7.93E-05	8.09E-05
			Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Nickel	--	--	--	--
			Vanadium	--	--	--	--
			Zinc	--	--	--	--
			Chemical Total	3.30E-06	--	2.81E-03	2.82E-03
			Exposure Point Total				2.82E-03
			Exposure Medium Total				2.82E-03
			Medium Total				2.82E-03

TABLE 9.2.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment in Beer Kill	Beer Kill Creek	Benzo(a)pyrene	3.33E-07	--	1.47E-07	4.81E-07
			Phenanthrene	--	--	--	--
			Endrin ketone	--	--	--	--
			Arsenic	1.42E-06	--	1.35E-07	1.56E-06
			Chromium (VI)	4.37E-06	--	--	4.37E-06
			Cobalt	--	--	--	--
			Iron	--	--	--	--
			Manganese	--	--	--	--
			Chemical Total	6.13E-06	--	2.82E-07	6.41E-06
			Exposure Point Total				6.41E-06
Exposure Medium Total					6.41E-06		
Medium Total				6.41E-06			
Surface Water	Surface Water in Beer Kill Creek	No Chemicals met the COPC criteria for this medium.					
	Beer Kill	Chemical Total					--
		Exposure Point Total					--
	Exposure Medium Total					--	
Medium Total				--			
Receptor Total				Receptor Risk Total			3.55E-03

Note:

For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 9.3.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Benzo(k)fluoranthene	--	--	--	--	--	--
			Bis(2-ethylhexyl)phthalate	Liver	--	6.71E-04	--	2.68E-04	9.38E-04
			Carbazole	--	--	--	--	--	--
			Chrysene	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Dimethylphthalate	--	--	1.26E-05	--	5.02E-06	1.76E-05
			Di-n-octylphthalate	Kidneys, Liver	--	2.75E-05	--	1.10E-05	3.84E-05
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Naphthalene	Body Weight	Respiratory Epithelium	4.36E-05	2.45E-07	1.74E-05	6.13E-05
			Phenanthrene	--	--	--	--	--	--
			Dieldrin	Liver	--	3.29E-04	--	--	3.29E-04
			Endosulfan II	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--
			Aroclor-1254	Eyes, Nails, Immune System	--	2.48E-02	--	1.39E-02	3.86E-02
			Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	1.43E-02	2.42E-03	--	1.68E-02
			Antimony	Longevity, Blood Glucose, Cholesterol	--	6.57E-02	--	--	6.57E-02
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	4.13E-02	6.95E-04	4.94E-03	4.69E-02
			Barium	Kidneys	Developmental	2.86E-03	9.63E-04	--	3.82E-03
			Cadmium	Kidneys	Kidneys	1.19E-02	5.00E-04	9.48E-04	1.33E-02
			Chromium (VI)	No Observed Effects	Lungs	5.21E-01	1.32E-02	--	5.35E-01
			Cobalt	Iodine Uptake	Respiratory System	4.63E-02	1.95E-03	--	4.82E-02
Copper	Gastrointestinal System	--	3.74E-02	--	--	3.74E-02			

TABLE 9.3.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Iron	Gastrointestinal System	--	8.65E-02	--	--	8.65E-02
			Lead	--	--	--	--	--	
			Manganese	Central Nervous System	Central Nervous System	4.27E-02	1.72E-02	--	5.99E-02
			Mercury	Immune System	Central Nervous System	2.46E-03	2.07E-06	--	2.46E-03
			Nickel	Body Weight	Respiratory System	3.86E-03	1.08E-03	--	4.95E-03
			Silver	Skin	--	1.55E-03	--	--	1.55E-03
			Thallium	--	--	--	--	--	--
			Vanadium	Decreased Hair Cystine	--	1.92E-02	--	--	1.92E-02
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	6.21E-03	--	--	6.21E-03
			Chemical Total			9.29E-01	3.80E-02	2.00E-02	9.88E-01
			Exposure Point Total						9.88E-01
Exposure Medium Total						9.88E-01			
Medium Total						9.88E-01			
Leachate	Leachate	On-Site Leachate Areas	Chloroform	Liver	Liver	3.08E-06	--	4.67E-05	4.98E-05
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Benzo(k)fluoranthene	--	--	--	--	--	--
			Carbazole	--	--	--	--	--	--
			Chrysene	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Naphthalene	Body Weight	Respiratory Epithelium	1.37E-05	--	1.52E-03	1.53E-03
			Phenanthrene	--	--	--	--	--	--
			alpha-Chlordane	--	--	--	--	--	--
			Dieldrin	Liver	--	3.29E-05	--	3.80E-03	3.84E-03
			Aroclor-1260	--	--	--	--	--	--

TABLE 9.3.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient							
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Leachate	Leachate	On-Site Leachate Areas	Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	6.23E-04	--	7.11E-04	1.33E-03		
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	1.32E-02	--	1.51E-02	2.83E-02		
			Barium	Kidneys	Developmental	2.77E-04	--	4.52E-03	4.80E-03		
			Cadmium	Kidneys	Kidneys	1.37E-03	--	3.12E-02	3.26E-02		
			Chromium (VI)	No Observed Effects	Lungs	2.51E-03	--	2.29E-01	2.32E-01		
			Copper	Gastrointestinal System	--	1.42E-03	--	1.62E-03	3.04E-03		
			Iron	Gastrointestinal System	--	5.28E-03	--	6.02E-03	1.13E-02		
			Lead	--	--	--	--	--	--		
			Manganese	Central Nervous System	Central Nervous System	2.30E-03	--	6.55E-02	6.78E-02		
			Nickel	Body Weight	Respiratory System	2.28E-04	--	1.30E-03	1.53E-03		
			Vanadium	Decreased Hair Cystine	--	1.37E-03	--	6.01E-02	6.14E-02		
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	1.21E-03	--	8.28E-04	2.04E-03		
			Chemical Total					2.99E-02	--	4.21E-01	4.51E-01
			Exposure Point Total								4.51E-01
Exposure Medium Total								4.51E-01			
Medium Total								4.51E-01			
Groundwater	Groundwater	Groundwater (Tap Water)	Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	1.14E-01	--	5.95E-04	1.15E-01		
			Antimony	Longevity, Blood Glucose, Cholesterol	--	2.22E-01	--	7.73E-03	2.30E-01		
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	1.98E+00	--	1.03E-02	1.99E+00		
			Chromium (VI)	No Observed Effects	Lungs	5.41E-01	--	2.26E-01	7.67E-01		
			Cobalt	Iodine Uptake	Respiratory System	1.04E+00	--	2.17E-03	1.04E+00		
			Iron	Gastrointestinal System	--	2.52E-01	--	1.32E-03	2.54E-01		
			Manganese	Central Nervous System	Central Nervous System	3.16E+00	--	4.12E-01	3.57E+00		
			Nickel	Body Weight	Respiratory System	1.28E-01	--	3.34E-03	1.31E-01		
			Chemical Total					7.43E+00	--	6.63E-01	8.10E+00
			Exposure Point Total								8.10E+00
Exposure Medium Total								8.10E+00			
Medium Total								8.10E+00			
Receptor Total							Receptor HI Total	9.53E+00			

TABLE 9.3.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	3.04E-01	--	Immune System	4.11E-02	--
Body Weight	1.38E-01	--	Iodine Uptake	1.09E+00	--
Cardiovascular System	--	6.95E-04	Kidneys	5.31E-02	5.00E-04
Central Nervous System	3.81E+00	2.28E-02	Liver	5.19E-03	--
Cholesterol	2.96E-01	--	Longevity	2.96E-01	--
Decreased Hair Cystine	8.06E-02	--	Respiratory System	--	1.62E-02
Developmental	--	1.66E-03	Nails	3.86E-02	--
Eyes	3.86E-02	--	Skin	2.06E+00	--
Gastrointestinal System	3.92E-01	--	No Observed Effects	1.52E+00	--

TABLE 9.3.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Benzo(k)fluoranthene	--	--	--	--	--	--
			Bis(2-ethylhexyl)phthalate	Liver	--	6.26E-03	--	1.75E-03	8.01E-03
			Carbazole	--	--	--	--	--	--
			Chrysene	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Dimethylphthalate	--	--	1.17E-04	--	3.29E-05	1.50E-04
			Di-n-octylphthalate	Kidneys, Liver	--	2.56E-04	--	7.18E-05	3.28E-04
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Naphthalene	Body Weight	Respiratory Epithelium	4.07E-04	2.45E-07	1.14E-04	5.21E-04
			Phenanthrene	--	--	--	--	--	--
			Dieldrin	Liver	--	3.07E-03	--	--	3.07E-03
			Endosulfan II	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--
			Aroclor-1254	Eyes, Nails, Immune System	--	2.31E-01	--	9.07E-02	3.22E-01
			Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	1.34E-01	2.42E-03	--	1.36E-01
			Antimony	Longevity, Blood Glucose, Cholesterol	--	6.13E-01	--	--	6.13E-01
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	3.85E-01	6.95E-04	3.24E-02	4.18E-01
			Barium	Kidneys	Developmental	2.67E-02	9.63E-04	--	2.76E-02
			Cadmium	Kidneys	Kidneys	1.11E-01	5.00E-04	6.21E-03	1.18E-01

TABLE 9.3.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient							
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Chromium (VI)	No Observed Effects	Lungs	4.87E+00	1.32E-02	--	4.88E+00		
			Cobalt	Iodine Uptake	Respiratory System	4.32E-01	1.95E-03	--	4.34E-01		
			Copper	Gastrointestinal System	--	3.49E-01	--	--	3.49E-01		
			Iron	Gastrointestinal System	--	8.07E-01	--	--	8.07E-01		
			Lead	--	--	--	--	--	--		
			Manganese	Central Nervous System	Central Nervous System	3.98E-01	1.72E-02	--	4.15E-01		
			Mercury	Immune System	Central Nervous System	2.29E-02	2.07E-06	--	2.29E-02		
			Nickel	Body Weight	Respiratory System	3.60E-02	1.08E-03	--	3.71E-02		
			Silver	Skin	--	1.44E-02	--	--	1.44E-02		
			Thallium	--	--	--	--	--	--		
			Vanadium	Decreased Hair Cystine	--	1.79E-01	--	--	1.79E-01		
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	5.80E-02	--	--	5.80E-02		
			Chemical Total					8.68E+00	3.80E-02	1.31E-01	8.84E+00
			Exposure Point Total								
Exposure Medium Total									8.84E+00		
Medium Total									8.84E+00		
Leachate	Leachate	On-Site Leachate Areas	Chloroform	Liver	Liver	1.44E-05	--	1.07E-04	1.21E-04		
			Benzo(a)anthracene	--	--	--	--	--	--		
			Benzo(a)pyrene	--	--	--	--	--	--		
			Benzo(b)fluoranthene	--	--	--	--	--	--		
			Benzo(g,h,i)perylene	--	--	--	--	--	--		
			Benzo(k)fluoranthene	--	--	--	--	--	--		
			Carbazole	--	--	--	--	--	--		
			Chrysene	--	--	--	--	--	--		
			Dibenzo(a,h)anthracene	--	--	--	--	--	--		
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--		
			Naphthalene	Body Weight	Respiratory Epithelium	6.39E-05	--	3.48E-03	3.54E-03		
			Phenanthrene	--	--	--	--	--	--		
			alpha-Chlordane	--	--	--	--	--	--		
			Dieldrin	Liver	--	1.53E-04	--	8.72E-03	8.87E-03		
Aroclor-1260	--	--	--	--	--	--					

TABLE 9.3.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient							
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Leachate	Leachate	On-Site Leachate Areas	Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	2.91E-03	--	1.63E-03	4.54E-03		
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	6.18E-02	--	3.46E-02	9.64E-02		
			Barium	Kidneys	Developmental	1.29E-03	--	1.04E-02	1.17E-02		
			Cadmium	Kidneys	Kidneys	6.39E-03	--	7.16E-02	7.80E-02		
			Chromium (VI)	No Observed Effects	Lungs	1.17E-02	--	5.25E-01	5.37E-01		
			Copper	Gastrointestinal System	--	6.63E-03	--	3.71E-03	1.03E-02		
			Iron	Gastrointestinal System	--	2.47E-02	--	1.38E-02	3.85E-02		
			Lead	--	--	--	--	--	--		
			Manganese	Central Nervous System	Central Nervous System	1.07E-02	--	1.50E-01	1.61E-01		
			Nickel	Body Weight	Respiratory System	1.07E-03	--	2.98E-03	4.05E-03		
			Vanadium	Decreased Hair Cystine	--	6.39E-03	--	1.38E-01	1.44E-01		
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	5.65E-03	--	1.90E-03	7.54E-03		
			Chemical Total					1.39E-01	--	9.66E-01	1.11E+00
			Exposure Point Total								
Exposure Medium Total									1.11E+00		
Medium Total									1.11E+00		
Groundwater	Groundwater	Groundwater (Tapwater)	Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	3.99E-01	--	1.76E-03	4.01E-01		
			Antimony	Longevity, Blood Glucose, Cholesterol	--	7.78E-01	--	2.28E-02	8.00E-01		
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	6.92E+00	--	3.05E-02	6.95E+00		
			Chromium (VI)	No Observed Effects	Lungs	1.89E+00	--	6.67E-01	2.56E+00		
			Cobalt	Iodine Uptake	Respiratory System	3.64E+00	--	6.41E-03	3.65E+00		
			Iron	Gastrointestinal System	--	8.83E-01	--	3.89E-03	8.87E-01		
			Manganese	Central Nervous System	Central Nervous System	1.10E+01	--	1.21E+00	1.23E+01		
			Nickel	Body Weight	Respiratory System	4.48E-01	--	9.85E-03	4.58E-01		
			Chemical Total					2.60E+01	--	1.96E+00	2.80E+01
			Exposure Point Total								
Exposure Medium Total									2.80E+01		
Medium Total									2.80E+01		
Receptor Total									Receptor HI Total 3.79E+01		

TABLE 9.3.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	1.48E+00	--	Immune System	3.45E-01	--
Body Weight	5.02E-01	--	Iodine Uptake	4.08E+00	--
Cardiovascular System	--	6.95E-04	Kidneys	2.34E-01	5.00E-04
Central Nervous System	1.34E+01	2.28E-02	Liver	2.04E-02	--
Cholesterol	1.41E+00	--	Longevity	1.41E+00	--
Decreased Hair Cystine	3.23E-01	--	Respiratory System	--	1.62E-02
Developmental	--	1.66E-03	Nails	3.22E-01	--
Eyes	3.22E-01	--	Skin	7.48E+00	--
Gastrointestinal System	2.09E+00	--	No Observed Effects	7.96E+00	--

TABLE 9.3.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--
			Benzo(a)anthracene	7.08E-05	1.54E-09	3.12E-05	1.02E-04
			Benzo(a)pyrene	6.68E-04	1.45E-08	2.95E-04	9.63E-04
			Benzo(b)fluoranthene	9.86E-05	2.14E-09	4.35E-05	1.42E-04
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	4.25E-06	9.62E-10	1.87E-06	6.12E-06
			Bis(2-ethylhexyl)phthalate	2.15E-07	1.16E-11	6.78E-08	2.82E-07
			Carbazole	3.22E-08	--	1.02E-08	4.23E-08
			Chrysene	7.42E-07	1.61E-10	3.28E-07	1.07E-06
			Dibenzo(a,h)anthracene	5.82E-05	1.38E-09	2.57E-05	8.39E-05
			Dimethylphthalate	--	--	--	--
			Di-n-octylphthalate	--	--	--	--
			Indeno(1,2,3-cd)pyrene	3.07E-05	6.66E-10	1.35E-05	4.42E-05
			Naphthalene	--	1.07E-11	--	1.07E-11
			Phenanthrene	--	--	--	--
			Dieldrin	3.01E-07	2.73E-11	--	3.01E-07
			Endosulfan II	--	--	--	--
			Endosulfan sulfate	--	--	--	--
			Endrin aldehyde	--	--	--	--
			Endrin ketone	--	--	--	--
			gamma-Chlordane	--	--	--	--
Aroclor-1254	1.13E-06	1.02E-10	5.01E-07	1.63E-06			
Aroclor-1260	1.41E-05	1.27E-09	6.24E-06	2.03E-05			
Aluminum	--	--	--	--			

TABLE 9.3.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Antimony	--	--	--	--	
			Arsenic	2.12E-05	1.92E-08	2.01E-06	2.33E-05	
			Barium	--	--	--	--	
			Cadmium	--	3.86E-09	--	3.86E-09	
			Chromium (VI)	4.96E-03	1.20E-04	--	5.08E-03	
			Cobalt	--	4.51E-08	--	4.51E-08	
			Copper	--	--	--	--	
			Iron	--	--	--	--	
			Lead	--	--	--	--	
			Manganese	--	--	--	--	
			Mercury	--	--	--	--	
			Nickel	--	1.09E-08	--	1.09E-08	
			Silver	--	--	--	--	
			Thallium	--	--	--	--	
			Vanadium	--	--	--	--	
			Zinc	--	--	--	--	
						Chemical Total	5.93E-03	1.20E-04
		Exposure Point Total					6.47E-03	
Exposure Medium Total						6.47E-03		
Medium Total								6.47E-03
Leachate	Leachate	On-Site Leachate Areas	Chloroform	7.07E-10	--	7.81E-09	8.51E-09	
			Benzo(a)anthracene	7.30E-07	--	8.52E-04	8.53E-04	
			Benzo(a)pyrene	7.30E-06	--	1.46E-02	1.46E-02	

TABLE 9.3.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Leachate	Leachate	On-Site Leachate Areas	Benzo(b)fluoranthene	1.19E-07	--	2.41E-04	2.41E-04
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	1.05E-07	--	2.08E-04	2.09E-04
			Carbazole	7.10E-09	--	8.15E-07	8.22E-07
			Chrysene	9.13E-09	--	1.07E-05	1.07E-05
			Dibenzo(a,h)anthracene	1.83E-06	--	5.64E-03	5.64E-03
			Indeno(1,2,3-cd)pyrene	5.48E-07	--	1.11E-03	1.11E-03
			Naphthalene	--	--	--	--
			Phenanthrene	--	--	--	--
			alpha-Chlordane	--	--	--	--
			Dieldrin	1.95E-08	--	1.64E-06	1.66E-06
			Aroclor-1260	5.47E-08	--	1.25E-03	1.25E-03
			Aluminum	--	--	--	--
			Arsenic	4.41E-06	--	3.66E-06	8.07E-06
			Barium	--	--	--	--
			Cadmium	--	--	--	--
			Chromium (VI)	1.38E-05	--	6.94E-04	7.07E-04
			Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Nickel	--	--	--	--
			Vanadium	--	--	--	--
Zinc	--	--	--	--			
			Chemical Total	2.89E-05	--	2.46E-02	2.47E-02
			Exposure Point Total				2.47E-02
			Exposure Medium Total				2.47E-02
			Medium Total				2.47E-02

TABLE 9.3.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Groundwater (Tapwater)	Aluminum	--	--	--	--
			Antimony	--	--	--	--
			Arsenic	5.74E-04	--	2.77E-06	5.77E-04
			Chromium (VI)	2.05E-03	--	9.61E-04	3.01E-03
			Cobalt	--	--	--	--
			Iron	--	--	--	--
			Manganese	--	--	--	--
			Nickel	--	--	--	--
			Chemical Total	2.62E-03	--	9.64E-04	3.58E-03
			Exposure Point Total				3.58E-03
Exposure Medium Total				3.58E-03			
Medium Total				3.58E-03			
Receptor Total				Receptor Risk Total 3.47E-02			

Note:

For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 9.4.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: Construction / Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient						
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Soil	Subsurface Soil (0 - 10 ft)	On-Site Subsurface Soil (0-10ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--
			Benzo(a)anthracene	3.73E-07	2.94E-09	1.45E-07	5.21E-07	--	--	--	--	--	--	--
			Benzo(a)pyrene	3.49E-06	2.75E-08	1.36E-06	4.87E-06	--	--	--	--	--	--	--
			Benzo(b)fluoranthene	4.59E-07	3.62E-09	1.79E-07	6.42E-07	--	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--
			Benzo(k)fluoranthene	1.53E-08	1.21E-09	5.96E-09	2.25E-08	--	--	--	--	--	--	--
			Carbazole	1.26E-09	--	3.77E-10	1.63E-09	--	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	2.80E-07	2.41E-09	1.09E-07	3.91E-07	--	--	--	--	--	--	--
			Dimethylphthalate	--	--	--	--	--	--	5.94E-06	--	1.78E-06	--	7.72E-06
			Di-n-octylphthalate	--	--	--	--	Kidneys, Liver	--	5.84E-05	--	1.75E-05	--	7.60E-05
			Indeno(1,2,3-cd)pyrene	1.75E-07	1.38E-09	6.84E-08	2.45E-07	--	--	--	--	--	--	--
			Phenanthrene	--	--	--	--	--	--	--	--	--	--	--
			Dieldrin	1.25E-08	1.88E-10	--	1.27E-08	Liver	--	1.09E-03	--	--	--	1.09E-03
			Endosulfan II	--	--	--	--	--	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--	--	--	--	--	--
			Aroclor-1254	3.28E-08	4.90E-10	1.38E-08	4.71E-08	Eyes, Nails, Immune System	--	2.30E-02	--	9.66E-03	--	3.26E-02
			Aroclor-1260	3.84E-07	5.74E-09	1.61E-07	5.51E-07	--	--	--	--	--	--	--
			Antimony	--	--	--	--	Longevity, Blood Glucose, Cholesterol	--	1.33E-01	--	--	--	1.33E-01
			Arsenic	6.44E-07	9.67E-08	5.80E-08	7.99E-07	Skin	Developmental, Central Nervous System, Cardiovascular System	1.00E-01	1.05E-01	9.02E-03	--	2.14E-01
			Chromium (VI)	2.02E-05	1.78E-04	--	1.98E-04	No Observed Effects	Lungs	1.42E-01	4.94E-01	--	--	6.36E-01
			Cobalt	--	2.25E-07	--	2.25E-07	Iodine Uptake	Respiratory System	3.35E-03	2.92E-01	--	--	2.95E-01
			Copper	--	--	--	--	Gastrointestinal System	--	1.16E-01	--	--	--	1.16E-01
			Iron	--	--	--	--	Gastrointestinal System	--	1.87E-01	--	--	--	1.87E-01
			Lead	--	--	--	--	--	--	--	--	--	--	--
			Manganese	--	--	--	--	Central Nervous System	Central Nervous System	1.08E-01	2.71E+00	--	--	2.81E+00
Thallium	--	--	--	--	--	--	--	--	--	--	--			
Vanadium	--	--	--	--	Decreased Hair Cystine	--	3.01E-02	--	--	--	3.01E-02			
Chemical Total				2.61E-05	1.78E-04	2.10E-06	2.06E-04	--	--	8.43E-01	3.60E+00	1.87E-02	4.46E+00	
Exposure Point Total								2.1E-04					4.46E+00	
Exposure Medium Total								2.1E-04					4.46E+00	
Medium Total								2.1E-04					4.46E+00	
Groundwater	Groundwater	Shallow Groundwater in Excavations to 10ft bgs	Chloroform	--	--	3.42E-12	3.42E-12	Liver	Liver	--	--	7.72E-07	7.72E-07	
			Tetrachloroethene	--	--	4.59E-10	4.59E-10	Liver	Central Nervous System	--	--	5.96E-06	5.96E-06	
			Benzo(a)anthracene	--	--	9.97E-08	9.97E-08	--	--	--	--	--	--	
			Benzo(a)pyrene	--	--	1.71E-06	1.71E-06	--	--	--	--	--		



TABLE 9.4.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient								
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total			
Groundwater	Groundwater	Shallow Groundwater in Excavations to 10ft bgs	Benzo(b)fluoranthene	--	--	2.82E-08	2.82E-08	--	--	--	--	--	--			
			Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--		
			Benzo(k)fluoranthene	--	--	2.54E-08	2.54E-08	--	--	--	--	--	--	--		
			Carbazole	--	--	3.57E-10	3.57E-10	--	--	--	--	--	--	--		
			Chrysene	--	--	1.25E-09	1.25E-09	--	--	--	--	--	--	--		
			Dibenzo(a,h)anthracene	--	--	6.60E-07	6.60E-07	--	--	--	--	--	--	--		
			Indeno(1,2,3-cd)pyrene	--	--	1.30E-07	1.30E-07	--	--	--	--	--	--	--		
			Naphthalene	--	--	--	--	Body Weight	Respiratory Epithelium	--	--	8.37E-07	8.37E-07	--		
			Phenanthrene	--	--	--	--	--	--	--	--	--	--	--		
			Dieldrin	--	--	7.19E-10	7.19E-10	Liver	--	--	--	6.29E-05	6.29E-05	--		
			Endosulfan I	--	--	--	--	--	--	--	--	--	--	--		
			Endrin aldehyde	--	--	--	--	--	--	--	--	--	--	--		
			Aroclor-1260	--	--	5.48E-07	5.48E-07	--	--	--	--	--	--	--		
			Aluminum	--	--	--	--	Central Nervous System	Psychomotor, Cognitive Impairment	--	--	3.37E-04	3.37E-04	--		
			Antimony	--	--	--	--	Longevity, Blood Glucose, Cholesterol	--	--	--	1.00E-03	1.00E-03	--		
			Arsenic	--	--	4.90E-09	4.90E-09	Skin	Developmental, Central Nervous System, Cardiovascular System	--	--	7.62E-04	7.62E-04	--		
			Barium	--	--	--	--	Kidneys	Developmental	--	--	7.04E-04	7.04E-04	--		
			Beryllium	--	--	--	--	Small Intestine	--	--	--	6.40E-04	6.40E-04	--		
			Cadmium	--	--	--	--	Kidneys	Kidneys	--	--	1.07E-03	1.07E-03	--		
			Chromium (VI)	--	--	1.55E-06	1.55E-06	No Observed Effects	Lungs	--	--	1.09E-02	1.09E-02	--		
			Cobalt	--	--	--	--	Iodine Uptake	Respiratory System	--	--	1.22E-05	1.22E-05	--		
			Copper	--	--	--	--	Gastrointestinal System	--	--	--	3.46E-05	3.46E-05	--		
			Iron	--	--	--	--	Gastrointestinal System	--	--	--	1.94E-03	1.94E-03	--		
			Lead	--	--	--	--	--	--	--	--	--	--	--		
			Manganese	--	--	--	--	Central Nervous System	Central Nervous System	--	--	5.19E-02	5.19E-02	--		
			Mercury	--	--	--	--	Immune System	Central Nervous System	--	--	3.98E-07	3.98E-07	--		
			Nickel	--	--	--	--	Body Weight	Respiratory System	--	--	2.78E-04	2.78E-04	--		
			Silver	--	--	--	--	Skin	--	--	--	1.64E-04	1.64E-04	--		
			Vanadium	--	--	--	--	Decreased Hair Cystine	--	--	--	1.98E-03	1.98E-03	--		
			Zinc	--	--	--	--	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	--	--	9.73E-06	9.73E-06	--		
						Chemical Total	--	--	4.76E-06	4.76E-06			--	--	7.18E-02	7.18E-02
						Exposure Point Total				4.76E-06						7.18E-02
			Exposure Medium Total				4.76E-06						7.18E-02			
			Medium Total				4.76E-06						7.18E-02			
			Receptor Total				2.11E-04						4.53E+00			

TABLE 9.4.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient			
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation

Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	1.34E-01	--
Body Weight	2.78E-04	--
Cardiovascular System	--	1.05E-01
Central Nervous System	1.60E-01	2.81E+00
Cholesterol	1.34E-01	--
Decreased Hair Cystine	3.21E-02	--
Developmental	--	1.05E-01
Eyes	3.26E-02	--
Gastrointestinal System	3.06E-01	--

Target Organ	Oral / Dermal Risk	Inhalation Risk
Immune System	3.26E-02	--
Iodine Uptake	3.36E-03	--
Kidneys	1.85E-03	--
Liver	1.24E-03	--
Longevity	1.34E-01	--
Respiratory System	--	7.86E-01
Nails	3.26E-02	--
Skin	1.10E-01	--
No Observed Effects	1.52E-01	--

TABLE 9.5.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: Commercial / Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient									
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total				
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	--		
			Benzo(a)anthracene	2.85E-06	1.20E-10	8.55E-07	3.70E-06	--	--	--	--	--	--	--	--	--	
			Benzo(a)pyrene	2.69E-05	1.14E-09	8.07E-06	3.49E-05	--	--	--	--	--	--	--	--	--	
			Benzo(b)fluoranthene	3.97E-06	1.68E-10	1.19E-06	5.16E-06	--	--	--	--	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Benzo(k)fluoranthene	1.78E-07	7.54E-11	5.35E-08	2.32E-07	--	--	--	--	--	--	--	--	--	--
			Bis(2-ethylhexyl)phthalate	4.79E-08	2.31E-12	1.11E-08	5.90E-08	Liver	--	4.79E-04	--	--	1.11E-04	--	5.90E-04	--	--
			Carbazole	7.18E-09	--	1.66E-09	8.84E-09	--	--	--	--	--	--	--	--	--	--
			Chrysene	2.98E-08	1.26E-11	8.96E-09	3.88E-08	--	--	--	--	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	2.34E-06	1.08E-10	7.03E-07	3.05E-06	--	--	--	--	--	--	--	--	--	--
			Dimethylphthalate	--	--	--	--	--	--	8.98E-06	--	--	2.07E-06	--	1.11E-05	--	--
			Di-n-octylphthalate	--	--	--	--	Kidneys, Liver	--	1.96E-05	--	--	4.53E-06	--	2.42E-05	--	--
			Indeno(1,2,3-cd)pyrene	1.23E-06	5.22E-11	3.70E-07	1.60E-06	--	--	--	--	--	--	--	--	--	--
			Naphthalene	--	2.13E-12	--	2.13E-12	Body Weight	Respiratory Epithelium	3.12E-05	5.83E-08	7.20E-06	--	3.84E-05	--	--	--
			Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Dieldrin	6.71E-08	5.42E-12	--	6.71E-08	Liver	--	2.35E-04	--	--	--	--	2.35E-04	--	--
			Endosulfan II	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Aroclor-1254	2.53E-07	2.02E-11	8.18E-08	3.35E-07	Eyes, Nails, Immune System	--	1.77E-02	--	--	5.73E-03	--	2.34E-02	--	--
			Aroclor-1260	3.15E-06	2.52E-10	1.02E-06	4.17E-06	--	--	--	--	--	--	--	--	--	--
			Aluminum	--	--	--	--	Central Nervous System	Psychomotor, Cognitive Impairment	1.02E-02	5.75E-04	--	--	--	1.08E-02	--	--
			Antimony	--	--	--	--	Longevity, Blood Glucose, Cholesterol	--	4.69E-02	--	--	--	--	4.69E-02	--	--
			Arsenic	4.74E-06	3.81E-09	3.28E-07	5.07E-06	Skin	Developmental, Central Nervous System, Cardiovascular System	2.95E-02	1.66E-04	2.04E-03	--	3.17E-02	--	--	--
			Barium	--	--	--	--	Kidneys	Developmental	2.04E-03	2.29E-04	--	--	2.27E-03	--	--	--
			Cadmium	--	7.66E-10	--	7.66E-10	Kidneys	Kidneys	8.48E-03	1.19E-04	3.92E-04	--	8.99E-03	--	--	--
			Chromium (VI)	2.00E-04	9.41E-06	--	2.09E-04	No Observed Effects	Lungs	3.72E-01	3.14E-03	--	--	3.76E-01	--	--	--
			Cobalt	--	8.95E-09	--	8.95E-09	Iodine Uptake	Respiratory System	3.30E-02	4.64E-04	--	--	3.35E-02	--	--	--
			Copper	--	--	--	--	Gastrointestinal System	--	2.67E-02	--	--	--	2.67E-02	--	--	--
			Iron	--	--	--	--	Gastrointestinal System	--	6.18E-02	--	--	--	6.18E-02	--	--	--
			Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Lead	--	--	--	--	--	--	--	--	--	--	--
Manganese	--	--				--	--	Central Nervous System	Central Nervous System	3.05E-02	4.11E-03	--	3.46E-02	--	--		
Mercury	--	--				--	--	Immune System	Central Nervous System	1.75E-03	4.93E-07	--	1.76E-03	--	--		
Nickel	--	2.16E-09				--	2.16E-09	Body Weight	Respiratory System	2.76E-03	2.58E-04	--	3.02E-03	--	--		
Silver	--	--				--	--	Skin	--	1.11E-03	--	--	1.11E-03	--	--		
Thallium	--	--				--	--	--	--	--	--	--	--	--	--	--	--

TABLE 9.5.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	On-Site Surface Soil (0 - 2 ft bgs) & Ambient Air	Vanadium	--	--	--	--	Decreased Hair Cystine	--	1.37E-02	--	--	1.37E-02
			Zinc	--	--	--	--	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	4.44E-03	--	--	4.44E-03
			Chemical Total	2.45E-04	9.43E-06	1.27E-05	2.67E-04			6.64E-01	9.06E-03	8.29E-03	6.81E-01
		Exposure Point Total				2.67E-04						6.81E-01	
	Exposure Medium Total				2.67E-04						6.81E-01		
Medium Total					2.67E-04						6.81E-01		
Leachate	Leachate	On-Site Leachate Areas	Chloroform	2.44E-10	--	2.14E-09	2.38E-09	Liver	Liver	2.20E-06	--	1.93E-05	2.15E-05
			Benzo(a)anthracene	5.10E-08	--	6.23E-05	6.24E-05	--	--	--	--	--	--
			Benzo(a)pyrene	5.10E-07	--	1.07E-03	1.07E-03	--	--	--	--	--	--
			Benzo(b)fluoranthene	8.29E-09	--	1.76E-05	1.76E-05	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--
			Benzo(k)fluoranthene	7.65E-09	--	1.59E-05	1.59E-05	--	--	--	--	--	--
			Carbazole	2.45E-09	--	2.23E-07	2.26E-07	--	--	--	--	--	--
			Chrysene	6.38E-10	--	7.79E-07	7.80E-07	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	1.28E-07	--	4.12E-04	4.13E-04	--	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	3.83E-08	--	8.14E-05	8.15E-05	--	--	--	--	--	--
			Naphthalene	--	--	--	--	Body Weight	Respiratory Epithelium	9.78E-06	--	6.28E-04	6.38E-04
			Phenanthrene	--	--	--	--	--	--	--	--	--	--
			alpha-Chlordane	--	--	--	--	--	--	--	--	--	--
			Dieldrin	6.71E-09	--	4.49E-07	4.56E-07	Liver	--	2.35E-05	--	1.57E-03	1.60E-03
			Aroclor-1260	1.89E-08	--	3.42E-04	3.43E-04	--	--	--	--	--	--
			Aluminum	--	--	--	--	Central Nervous System	Psychomotor, Cognitive Impairment	4.45E-04	--	2.94E-04	7.39E-04
			Arsenic	1.52E-06	--	1.00E-06	2.52E-06	Skin	Developmental, Central Nervous System, Cardiovascular System	9.46E-03	--	6.24E-03	1.57E-02
			Barium	--	--	--	--	Kidneys	Developmental	1.98E-04	--	1.87E-03	2.07E-03
			Cadmium	--	--	--	--	Kidneys	Kidneys	9.78E-04	--	1.29E-02	1.39E-02
			Chromium (VI)	9.61E-07	--	5.07E-05	5.17E-05	No Observed Effects	Lungs	1.79E-03	--	9.47E-02	9.65E-02
Copper	--	--	--	--	Gastrointestinal System	--	1.02E-03	--	6.70E-04	1.69E-03			
Iron	--	--	--	--	Gastrointestinal System	--	3.77E-03	--	2.49E-03	6.27E-03			
Leachate	Leachate	On-Site Leachate Areas	Lead	--	--	--	--	--	--	--	--	--	
			Manganese	--	--	--	--	Central Nervous System	Central Nervous System	1.64E-03	--	2.71E-02	2.87E-02
			Nickel	--	--	--	--	Body Weight	Respiratory System	1.63E-04	--	5.38E-04	7.01E-04
			Vanadium	--	--	--	--	Decreased Hair Cystine	--	9.78E-04	--	2.48E-02	2.58E-02
			Zinc	--	--	--	--	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	8.64E-04	--	3.42E-04	1.21E-03
	Chemical Total	3.25E-06	--	2.05E-03	2.06E-03			2.13E-02	--	1.74E-01	1.96E-01		
	Exposure Point Total				2.06E-03						1.96E-01		
	Exposure Medium Total				2.06E-03						1.96E-01		
Medium Total					2.06E-03						1.96E-01		
Receptor Total					Receptor Risk Total						Receptor HI Total	8.77E-01	

TABLE 9.5.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient			
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation

Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	5.26E-02	3.95E-04
Body Weight	4.14E-03	1.66E-04
Cardiovascular System	--	4.44E-03
Central Nervous System	7.02E-02	5.42E-03
Cholesterol	4.69E-02	5.75E-04
Decreased Hair Cystine	3.95E-02	--
Developmental	--	3.95E-04
Eyes	2.34E-02	--
Gastrointestinal System	9.65E-02	--

Target Organ	Oral / Dermal Risk	Inhalation Risk
Immune System	2.52E-02	--
Iodine Uptake	3.30E-02	1.19E-04
Kidneys	2.69E-02	1.19E-04
Liver	2.47E-03	--
Longevity	4.69E-02	3.14E-03
Respiratory System	--	4.58E-03
Nails	2.34E-02	5.75E-04
Skin	4.83E-02	--
No Observed Effects	4.69E-01	--

TABLE 9.6.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Off-Site Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Carbazole	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Phenanthrene	--	--	--	--	--	--
			delta-BHC	--	--	--	--	--	--
			Endosulfan II	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--
			Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	8.97E-03	1.51E-03	--	1.05E-02
			Antimony	Longevity, Blood Guucose, Cholesterol	--	1.88E+00	--	--	1.88E+00
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	3.05E-02	5.14E-04	3.66E-03	3.47E-02
			Barium	Kidneys	Developmental	3.67E-03	1.24E-03	--	4.91E-03
			Cadmium	Kidneys	Kidneys	3.79E-03	1.60E-04	3.03E-04	4.26E-03
			Chromium (VI)	No Observed Effects	Lungs	5.89E-03	1.49E-04	--	6.03E-03
			Cobalt	Iodine Uptake	Respiratory System	2.94E-02	1.24E-03	--	3.06E-02
			Copper	Gastrointestinal System	--	5.57E-03	--	--	5.57E-03
			Iron	Gastrointestinal System	--	3.67E-02	--	--	3.67E-02
Lead	--	--	--	--	--	--			
Manganese	Central Nervous System	Central Nervous System	3.33E-02	1.35E-02	--	4.67E-02			
Mercury	Immune System	Central Nervous System	1.21E-03	1.02E-06	--	1.21E-03			

TABLE 9.6.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil) & Ambient Air	Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	7.17E-03	--	--	7.17E-03
			Chemical Total		2.05E+00	1.83E-02	3.96E-03	2.07E+00	
			Exposure Point Total					2.07E+00	
			Exposure Medium Total					2.07E+00	
Medium Total								2.07E+00	
Receptor Total							Receptor HI Total	2.07E+00	

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	1.89E+00	--	Immune System	1.21E-03	--
Body Weight	--	--	Iodine Uptake	2.94E-02	--
Cardiovascular System	--	5.14E-04	Kidneys	7.77E-03	1.60E-04
Central Nervous System	4.23E-02	1.70E-02	Liver	--	--
Cholesterol	1.88E+00	--	Longevity	1.88E+00	--
Decreased Hair Cystine	--	--	Respiratory System	--	1.38E-03
Developmental	--	1.75E-03	Nails	--	--
Eyes	--	--	Skin	3.42E-02	--
Gastrointestinal System	4.22E-02	--	No Observed Effects	5.89E-03	--

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TABLE 9.6.1 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total

TABLE 9.6.2 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Off-Site Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Carbazole	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Phenanthrene	--	--	--	--	--	--
			delta-BHC	--	--	--	--	--	--
			Endosulfan II	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--
			Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	8.37E-02	1.51E-03	--	8.52E-02
			Antimony	Longevity, Blood Glucose, Cholesterol	--	1.76E+01	--	--	1.76E+01
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	2.85E-01	5.14E-04	2.39E-02	3.09E-01
			Barium	Kidneys	Developmental	3.42E-02	1.24E-03	--	3.55E-02
			Cadmium	Kidneys	Kidneys	3.54E-02	1.60E-04	1.98E-03	3.76E-02
			Chromium (VI)	No Observed Effects	Lungs	5.49E-02	1.49E-04	--	5.51E-02
			Cobalt	Iodine Uptake	Respiratory System	2.74E-01	1.24E-03	--	2.75E-01
			Copper	Gastrointestinal System	--	5.19E-02	--	--	5.19E-02
Iron	Gastrointestinal System	--	3.42E-01	--	--	3.42E-01			
Lead	--	--	--	--	--	--			
Manganese	Central Nervous System	Central Nervous System	3.11E-01	1.35E-02	--	3.24E-01			
Mercury	Immune System	Central Nervous System	1.13E-02	1.02E-06	--	1.13E-02			

TABLE 9.6.2 RME
 SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil) & Ambient Air	Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	6.70E-02	--	--	6.70E-02
			Chemical Total			1.91E+01	1.83E-02	2.59E-02	1.91E+01
		Exposure Point Total							1.91E+01
	Exposure Medium Total								1.91E+01
	Medium Total								1.91E+01
	Receptor Total							Receptor HI Total	1.91E+01

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	1.76E+01	--	Immune System	1.13E-02	--
Body Weight	--	--	Iodine Uptake	2.74E-01	--
Cardiovascular System	--	5.14E-04	Kidneys	7.16E-02	1.60E-04
Central Nervous System	3.94E-01	1.70E-02	Liver	--	--
Cholesterol	1.76E+01	--	Longevity	1.76E+01	--
Decreased Hair Cystine	--	--	Respiratory System	--	1.38E-03
Developmental	--	1.75E-03	Nails	--	--
Eyes	--	--	Skin	3.09E-01	--
Gastrointestinal System	3.94E-01	--	No Observed Effects	5.49E-02	--

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TABLE 9.6.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Off-Site Resident
Receptor Age: Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil) & Ambient Air	Acenaphthylene	--	--	--	--
			Benzo(a)anthracene	1.07E-06	2.33E-11	4.73E-07	1.55E-06
			Benzo(a)pyrene	9.71E-06	2.11E-10	4.28E-06	1.40E-05
			Benzo(b)fluoranthene	2.56E-06	5.57E-11	1.13E-06	3.69E-06
			Benzo(g,h,i)perylene	--	--	--	--
			Carbazole	2.01E-09	--	6.36E-10	2.65E-09
			Dibenzo(a,h)anthracene	5.01E-06	1.19E-10	2.21E-06	7.21E-06
			Indeno(1,2,3-cd)pyrene	6.15E-07	1.34E-11	2.72E-07	8.87E-07
			Phenanthrene	--	--	--	--
			delta-BHC	--	--	--	--
			Endosulfan II	--	--	--	--
			Endrin aldehyde	--	--	--	--
			Endrin ketone	--	--	--	--
			gamma-Chlordane	--	--	--	--
			Aroclor-1260	2.61E-07	2.35E-11	1.15E-07	3.76E-07
			Aluminum	--	--	--	--
			Antimony	--	--	--	--
			Arsenic	1.57E-05	1.42E-08	1.49E-06	1.72E-05
			Barium	--	--	--	--
			Cadmium	--	1.23E-09	--	1.23E-09
Chromium (VI)	5.60E-05	1.36E-06	--	5.74E-05			
Cobalt	--	2.86E-08	--	2.86E-08			

TABLE 9.6.3 RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil) & Ambient Air	Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Mercury	--	--	--	--
			Zinc	--	--	--	--
			Chemical Total	9.09E-05	1.40E-06	9.97E-06	1.02E-04
			Exposure Point Total				1.02E-04
Exposure Medium Total				1.02E-04			
Medium Total				1.02E-04			
Receptor Total				Receptor Risk Total	1.02E-04		

Note:

For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 10.1.1 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air							
			Chemical Total			1.06E-01	3.62E-04	2.29E-03	1.09E-01
	Exposure Point Total							1.09E-01	
	Exposure Medium Total							1.09E-01	
Medium Total									1.09E-01
Leachate	Leachate	On-Site Leachate Areas							
			Chemical Total			3.42E-03	--	4.81E-02	5.16E-02
	Exposure Point Total							5.16E-02	
	Exposure Medium Total							5.16E-02	
Medium Total									5.16E-02
								Receptor HI Total	1.60E-01

TABLE 10.1.2 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	On-Site Surface Soil (0 to 2ft bgs)	Surface Soil (0 - 2 ft)							
			Chemical Total			9.91E-01	3.62E-04	1.50E-02	1.01E+00
	Exposure Point Total							1.01E+00	
	Exposure Medium Total							1.01E+00	
Medium Total									1.01E+00
Leachate	Leachate	On-Site Leachate Areas							
			Chemical Total			1.59E-02	--	1.10E-01	1.26E-01
	Exposure Point Total							1.26E-01	
	Exposure Medium Total							1.26E-01	
Medium Total									1.26E-01
								Receptor HI Total	1.13E+00

TABLE 10.1.3 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Benzo(a)anthracene	8.09E-06	1.46E-11	3.57E-06	1.17E-05
			Benzo(a)pyrene	7.63E-05	1.38E-10	3.37E-05	1.10E-04
			Benzo(b)fluoranthene	1.13E-05	2.04E-11	4.98E-06	1.62E-05
			Dibenzo(a,h)anthracene	6.66E-06	1.31E-11	2.94E-06	9.59E-06
			Indeno(1,2,3-cd)pyrene	3.50E-06	6.34E-12	1.55E-06	5.05E-06
			Aroclor-1260	1.61E-06	1.21E-11	7.13E-07	2.33E-06
			Arsenic	2.43E-06	1.83E-10	2.30E-07	2.66E-06
			Chromium (VI)	5.67E-04	1.14E-06	--	5.68E-04
			Chemical Total	6.78E-04	1.15E-06	4.80E-05	7.27E-04
			Exposure Point Total				7.27E-04
Exposure Medium				7.27E-04			
Medium Total				7.27E-04			
Leachate	Leachate	On-Site Leachate Areas	Benzo(a)anthracene	8.35E-08	--	9.74E-05	9.75E-05
			Benzo(a)pyrene	8.35E-07	--	1.67E-03	1.67E-03
			Benzo(b)fluoranthene	1.36E-08	--	2.75E-05	2.75E-05
			Benzo(k)fluoranthene	1.20E-08	--	2.38E-05	2.38E-05
			Chrysene	1.04E-09	--	1.22E-06	1.22E-06
			Dibenzo(a,h)anthracene	2.09E-07	--	6.45E-04	6.45E-04
			Indeno(1,2,3-cd)pyrene	6.26E-08	--	1.27E-04	1.27E-04
			Aroclor-1260	6.26E-09	--	1.43E-04	1.43E-04
			Chromium (VI)	1.57E-06	--	7.93E-05	8.09E-05
			Chemical Total	3.30E-06	--	2.81E-03	2.82E-03
Exposure Point Total				2.82E-03			
Exposure Medium Total				2.82E-03			
Medium Total				2.82E-03			
Receptor Risk Total							3.54E-03

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 10.2.1 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Recreator
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Chemical Total			1.06E-01	3.62E-04	2.29E-03	1.09E-01
		Exposure Point Total							
	Exposure Medium Total								1.09E-01
	Medium Total								1.09E-01
Leachate	Leachate	On-Site Leachate Areas	Chemical Total			3.42E-03	--	4.81E-02	5.16E-02
		Exposure Point Total							
	Exposure Medium Total								5.16E-02
	Medium Total								5.16E-02
Sediment	Sediment in Beer Kill	Beer Kill Creek	Chemical Total			1.82E-02	--	3.31E-04	1.86E-02
		Exposure Point Total							
	Exposure Medium Total								1.86E-02
	Medium Total								1.86E-02
Surface Water	Surface Water in Beer Kill	Beer Kill Creek	Chemical Total						--
		Exposure Point Total							
	Exposure Medium Total								--
	Medium Total								--
								Receptor HI Total	1.79E-01

TABLE 10.2.2 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Recreator
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0 - 2ft)							
		& Ambient Air	Chemical Total			9.91E-01	3.62E-04	1.50E-02	1.01E+00
		Exposure Point Total						1.01E+00	
		Exposure Medium Total						1.01E+00	
Medium Total									1.01E+00
Leachate	Leachate	On-Site Leachate Areas							
			Chemical Total			1.59E-02	--	1.10E-01	1.26E-01
		Exposure Point Total						1.26E-01	
		Exposure Medium Total						1.26E-01	
Medium Total									1.26E-01
Sediment	Sediment in Beer Kill	Beer Kill Creek							
			Chemical Total			1.70E-01	--	2.17E-03	1.72E-01
		Exposure Point Total						1.72E-01	
		Exposure Medium Total						1.72E-01	
Medium Total									1.72E-01
Surface Water (Beer Kill)	Surface Water in Beer Kill Creek	Beer Kill Creek							
			Chemical Total						--
		Exposure Point Total						--	
		Exposure Medium Total						--	
Medium Total									--
Receptor Total								Receptor HI Total	1.31E+00

TABLE 10.2.3 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future

Receptor Population: Recreator

Receptor Age: Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Benzo(a)anthracene	8.09E-06	1.46E-11	3.57E-06	1.17E-05
			Benzo(a)pyrene	7.63E-05	1.38E-10	3.37E-05	1.10E-04
			Benzo(b)fluoranthene	1.13E-05	2.04E-11	4.98E-06	1.62E-05
			Dibenzo(a,h)anthracene	6.66E-06	1.31E-11	2.94E-06	9.59E-06
			Indeno(1,2,3-cd)pyrene	3.50E-06	6.34E-12	1.55E-06	5.05E-06
			Aroclor-1260	1.61E-06	1.21E-11	7.13E-07	2.33E-06
			Arsenic	2.43E-06	1.83E-10	2.30E-07	2.66E-06
			Chromium (VI)	5.67E-04	1.14E-06	--	5.68E-04
			Chemical Total	6.78E-04	1.15E-06	4.80E-05	7.27E-04
			Exposure Point Total				7.27E-04
Exposure Medium Total					7.27E-04		
Medium Total							7.27E-04
Leachate	Leachate	On-Site Leachate Areas	Benzo(a)anthracene	8.35E-08	--	9.74E-05	9.75E-05
			Benzo(a)pyrene	8.35E-07	--	1.67E-03	1.67E-03
			Benzo(b)fluoranthene	1.36E-08	--	2.75E-05	2.75E-05
			Benzo(k)fluoranthene	1.20E-08	--	2.38E-05	2.38E-05
			Chrysene	1.04E-09	--	1.22E-06	1.22E-06
			Dibenzo(a,h)anthracene	2.09E-07	--	6.45E-04	6.45E-04
			Indeno(1,2,3-cd)pyrene	6.26E-08	--	1.27E-04	1.27E-04
			Aroclor-1260	6.26E-09	--	1.43E-04	1.43E-04

TABLE 10.2.3 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
		Leachate Areas	Chromium (VI)	1.57E-06	--	7.93E-05	8.09E-05
			Chemical Total	3.30E-06	--	2.81E-03	2.82E-03
		Exposure Point Total					2.82E-03
		Exposure Medium Total					2.82E-03
Medium Total							2.82E-03
Sediment	Sediment in Beer Kill	Beer Kill Creek	Chemical Total	6.13E-06	--	2.82E-07	6.41E-06
			Exposure Point Total				6.41E-06
		Exposure Medium Total					6.41E-06
		Medium Total					
Surface Water (Beer Kill)	Surface Water in Beer Kill Creek	No Chemicals met the COPC criteria for this medium.					
		Beer Kill Creek Beer Kill	Chemical Total	--	--	--	--
	Exposure Point Total					--	
	Exposure Medium Total					--	
Medium Total							--
Receptor Total						Receptor Risk Total	3.55E-03

Note:

For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 10.3.1 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Groundwater (Tap Water)	Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	1.14E-01	--	5.95E-04	1.15E-01
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	1.98E+00	--	1.03E-02	1.99E+00
			Cobalt	Iodine Uptake	Respiratory System	1.04E+00	--	2.17E-03	1.04E+00
			Manganese	Central Nervous System	Central Nervous System	3.16E+00	--	4.12E-01	3.57E+00
			Chemical Total			7.43E+00	--	6.63E-01	8.10E+00
			Exposure Point Total						8.10E+00
	Exposure Medium Total						8.10E+00		
Medium Total									8.10E+00
								Receptor HI Total	9.53E+00

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	--	--	Immune System	--	--
Body Weight	--	--	Iodine Uptake	1.04E+00	--
Cardiovascular System	--	--	Kidneys	--	--
Central Nervous System	3.68E+00	--	Liver	--	--
Cholesterol	--	--	Longevity	--	--
Decreased Hair Cystine	--	--	Respiratory System	--	--
Developmental	--	--	Nails	--	--
Eyes	--	--	Skin	1.99E+00	--
Gastrointestinal System	--	--	No Observed Effects	--	--

TABLE 10.3.2 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: . Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Chromium (VI)	No Observed Effects	Lungs	4.87E+00	1.32E-02	--	4.88E+00
			Copper	Gastrointestinal System	--	3.49E-01	--	--	3.49E-01
			Iron	Gastrointestinal System	--	8.07E-01	--	--	8.07E-01
			Chemical Total			8.68E+00	3.80E-02	1.31E-01	8.84E+00
			Exposure Point Total						8.84E+00
	Exposure Medium Total						8.84E+00		
Medium Total									8.84E+00
Groundwater	Groundwater	Groundwater (Tapwater)	Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	3.99E-01	--	1.76E-03	4.01E-01
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	6.92E+00	--	3.05E-02	6.95E+00
			Chromium (VI)	No Observed Effects	Lungs	1.89E+00	--	6.67E-01	2.56E+00
			Cobalt	Iodine Uptake	Respiratory System	3.64E+00	--	6.41E-03	3.65E+00
			Manganese	Central Nervous System	Central Nervous System	1.10E+01	--	1.21E+00	1.23E+01
			Chemical Total			2.60E+01	--	1.96E+00	2.80E+01
			Exposure Point Total						2.80E+01
	Exposure Medium Total						2.80E+01		
Medium Total									2.80E+01
Receptor Total								Receptor HI Total	3.79E+01

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	8.00E-01	--	Immune System	--	--
Body Weight	4.58E-01	--	Iodine Uptake	3.65E+00	--
Cardiovascular System	--	--	Kidneys	--	--
Central Nervous System	1.27E+01	--	Liver	--	--
Cholesterol	8.00E-01	--	Longevity	8.00E-01	--
Decreased Hair Cystine	--	--	Respiratory System	--	--
Developmental	--	--	Nails	--	--
Eyes	--	--	Skin	6.95E+00	--
Gastrointestinal System	2.04E+00	--	No Observed Effects	7.43E+00	--

TABLE 10.3.3 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: On-Site Resident
Receptor Age: Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Benzo(a)anthracene	7.08E-05	1.54E-09	3.12E-05	1.02E-04
			Benzo(a)pyrene	6.68E-04	1.45E-08	2.95E-04	9.63E-04
			Benzo(b)fluoranthene	9.86E-05	2.14E-09	4.35E-05	1.42E-04
			Benzo(k)fluoranthene	4.25E-06	9.62E-10	1.87E-06	6.12E-06
			Chrysene	7.42E-07	1.61E-10	3.28E-07	1.07E-06
			Dibenzo(a,h)anthracene	5.82E-05	1.38E-09	2.57E-05	8.39E-05
			Indeno(1,2,3-cd)pyrene	3.07E-05	6.66E-10	1.35E-05	4.42E-05
			Aroclor-1254	1.13E-06	1.02E-10	5.01E-07	1.63E-06
			Aroclor-1260	1.41E-05	1.27E-09	6.24E-06	2.03E-05
			Arsenic	2.12E-05	1.92E-08	2.01E-06	2.33E-05
			Chromium (VI)	4.96E-03	1.20E-04	--	5.08E-03
			Chemical Total	5.93E-03	1.20E-04	4.20E-04	6.47E-03
			Exposure Point Total			6.47E-03	
Exposure Medium Total			6.47E-03				
Medium Total			6.47E-03				
Leachate	Leachate	On-Site Leachate Areas	Benzo(a)anthracene	7.30E-07	--	8.52E-04	8.53E-04
			Benzo(a)pyrene	7.30E-06	--	1.46E-02	1.46E-02
			Benzo(b)fluoranthene	1.19E-07	--	2.41E-04	2.41E-04
			Benzo(k)fluoranthene	1.05E-07	--	2.08E-04	2.09E-04
			Chrysene	9.13E-09	--	1.07E-05	1.07E-05
			Dibenzo(a,h)anthracene	1.83E-06	--	5.64E-03	5.64E-03
			Indeno(1,2,3-cd)pyrene	5.48E-07	--	1.11E-03	1.11E-03

TABLE 10.3.3 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Leachate	Leachate	On-Site Leachate Areas	Dieldrin	1.95E-08	--	1.64E-06	1.66E-06
			Aroclor-1260	5.47E-08	--	1.25E-03	1.25E-03
			Arsenic	4.41E-06	--	3.66E-06	8.07E-06
			Chromium (VI)	1.38E-05	--	6.94E-04	7.07E-04
			Chemical Total	2.89E-05	--	2.46E-02	2.47E-02
		Exposure Point Total				2.47E-02	
Exposure Medium Total						2.47E-02	
Medium Total							2.47E-02
Groundwater	Groundwater	Groundwater (Tapwater)	Arsenic	5.74E-04	--	2.77E-06	5.77E-04
			Chromium (VI)	2.05E-03	--	9.61E-04	3.01E-03
			Chemical Total	2.62E-03	--	9.64E-04	3.58E-03
		Exposure Point Total				3.58E-03	
Exposure Medium Total						3.58E-03	
Medium Total							3.58E-03
Receptor Total						Receptor Risk Total	3.47E-02

Note:

For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 10.4.1 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: Construction / Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil (0 - 10 ft)	On-Site Subsurface Soil (0-10ft bgs) & Ambient Air	Benzo(a)pyrene	3.49E-06	2.75E-08	1.36E-06	4.87E-06	--	--	--	--	--	--
			Arsenic	--	--	--	--	Skin	Developmental, Central Nervous System, Cardiovascular System	1.00E-01	1.05E-01	9.02E-03	2.14E-01
			Chromium (VI)	2.02E-05	1.78E-04	--	1.98E-04	--	--	--	--	--	--
			Manganese	--	--	--	--	Central Nervous System	Central Nervous System	1.08E-01	2.71E+00	--	2.81E+00
			Chemical Total	2.61E-05	1.78E-04	2.10E-06	2.06E-04			8.43E-01	3.60E+00	1.87E-02	4.46E+00
		Exposure Point Total									2.1E-04	4.46E+00	
		Exposure Medium Total									2.1E-04	4.46E+00	
Medium Total											2.1E-04	4.46E+00	
Groundwater	Groundwater	Shallow Groundwater in Excavations to 10ft	Chemical Total	--	--	4.76E-06	4.76E-06			--	--	7.18E-02	7.18E-02
			Exposure Point Total				4.76E-06						7.18E-02
			Exposure Medium Total				4.76E-06						7.18E-02
Medium Total							4.76E-06				7.18E-02		
Receptor Total							2.11E-04					Receptor HI Total 4.53E+00	

Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	--	--
Body Weight	--	--
Cardiovascular System	--	--
Central Nervous System	--	2.81E+00
Cholesterol	--	--
Decreased Hair Cystine	--	--
Developmental	--	--
Eyes	--	--
Gastrointestinal System	--	--

Target Organ	Oral / Dermal Risk	Inhalation Risk
Immune System	--	--
Iodine Uptake	--	--
Kidneys	--	--
Liver	--	--
Longevity	--	--
Respiratory System	--	--
Nails	--	--
Skin	--	--
No Observed Effects	--	--

TABLE 10.5.1 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: Commercial / Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Benzo(a)anthracene	2.85E-06	1.20E-10	8.55E-07	3.70E-06	--	--	--	--	--	--
			Benzo(a)pyrene	2.69E-05	1.14E-09	8.07E-06	3.49E-05	--	--	--	--	--	--
			Benzo(b)fluoranthene	3.97E-06	1.68E-10	1.19E-06	5.16E-06	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	2.34E-06	1.08E-10	7.03E-07	3.05E-06	--	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	1.23E-06	5.22E-11	3.70E-07	1.60E-06	--	--	--	--	--	--
			Aroclor-1260	3.15E-06	2.52E-10	1.02E-06	4.17E-06	--	--	--	--	--	--
			Arsenic	4.74E-06	3.81E-09	3.28E-07	5.07E-06	--	--	--	--	--	--
			Chromium (VI)	2.00E-04	9.41E-06	--	2.09E-04	--	--	--	--	--	--
			Chemical Total	2.45E-04	9.43E-06	1.27E-05	2.67E-04			6.64E-01	9.06E-03	8.29E-03	6.81E-01
			Exposure Point Total				2.67E-04						6.81E-01
Exposure Medium Total				2.67E-04						6.81E-01			
Medium Total				2.67E-04						6.81E-01			
Leachate	Leachate	On-Site Leachate Areas	Benzo(a)anthracene	5.10E-08	--	6.23E-05	6.24E-05	--	--	--	--	--	
			Benzo(a)pyrene	5.10E-07	--	1.07E-03	1.07E-03	--	--	--	--	--	
			Benzo(b)fluoranthene	8.29E-09	--	1.76E-05	1.76E-05	--	--	--	--	--	
			Benzo(k)fluoranthene	7.65E-09	--	1.59E-05	1.59E-05	--	--	--	--	--	
			Dibenzo(a,h)anthracene	1.28E-07	--	4.12E-04	4.13E-04	--	--	--	--	--	
			Indeno(1,2,3-cd)pyrene	3.83E-08	--	8.14E-05	8.15E-05	--	--	--	--	--	
			Aroclor-1260	1.89E-08	--	3.42E-04	3.43E-04	--	--	--	--	--	
			Arsenic	1.52E-06	--	1.00E-06	2.52E-06	--	--	--	--	--	
			Chromium (VI)	9.61E-07	--	5.07E-05	5.17E-05	--	--	--	--	--	
			Chemical Total	3.25E-06	--	2.05E-03	2.06E-03			2.13E-02	--	1.74E-01	1.96E-01
Exposure Point Total				2.06E-03						1.96E-01			
Exposure Medium Total				2.06E-03						1.96E-01			
Medium Total				2.06E-03						1.96E-01			
Receptor Total				2.32E-03					Receptor HI Total	8.77E-01			

TABLE 10.6.1 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Off-Site Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0-2ft)	Residential Parcels A-1 (Soil 0-2ft, off-site) & Ambient Air	Antimony	Longevity, Blood Glucose, Cholesterol	--	1.88E+00	--	--	1.88E+00
			Chemical Total			2.05E+00	1.83E-02	3.96E-03	2.07E+00
		Exposure Point Total							2.07E+00
		Exposure Medium Total							2.07E+00
Medium Total								2.07E+00	
Receptor Total							Receptor HI Total	2.07E+00	

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	1.88E+00	--	Immune System	--	--
Body Weight	--	--	Iodine Uptake	--	--
Cardiovascular System	--	--	Kidneys	--	--
Central Nervous System	--	--	Liver	--	--
Cholesterol	1.88E+00	--	Longevity	1.88E+00	--
Decreased Hair Cystine	--	--	Respiratory System	--	--
Developmental	--	--	Nails	--	--
Eyes	--	--	Skin	--	--
Gastrointestinal System	--	--	No Observed Effects	--	--

TABLE 10.6.2 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Off-Site Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (Soil 0-2 ft, off-site) & Ambient Air	Antimony	Longevity, Blood Guucose, Cholesterol	--	1.76E+01	--	--	1.76E+01
			Chemical Total			1.91E+01	1.83E-02	2.59E-02	1.91E+01
		Exposure Point Total							1.91E+01
		Exposure Medium Total							1.91E+01
Medium Total								1.91E+01	
Receptor Total							Receptor HI Total	1.91E+01	

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	1.76E+01	--	Immune System	--	--
Body Weight	--	--	Iodine Uptake	--	--
Cardiovascular System	--	--	Kidneys	--	--
Central Nervous System	--	--	Liver	--	--
Cholesterol	1.76E+01	--	Longevity	1.76E+01	--
Decreased Hair Cystine	--	--	Respiratory System	--	--
Developmental	--	--	Nails	--	--
Eyes	--	--	Skin	--	--
Gastrointestinal System	--	--	No Observed Effects	--	--

TABLE 10.6.3 RME
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Current / Future
Receptor Population: Off-Site Resident
Receptor Age: Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface soil (0-2 ft)	Residential Parcels A - I (0 - 2ft, off-site soil) & Ambient Air	Benzo(a)anthracene	1.07E-06	2.33E-11	4.73E-07	1.55E-06
			Benzo(a)pyrene	9.71E-06	2.11E-10	4.28E-06	1.40E-05
			Benzo(b)fluoranthene	2.56E-06	5.57E-11	1.13E-06	3.69E-06
			Dibenzo(a,h)anthracene	5.01E-06	1.19E-10	2.21E-06	7.21E-06
			Arsenic	1.57E-05	1.42E-08	1.49E-06	1.72E-05
			Chromium (VI)	5.60E-05	1.36E-06	--	5.74E-05
			Chemical Total	9.09E-05	1.40E-06	9.97E-06	1.02E-04
			Exposure Point Total				1.02E-04
Exposure Medium Total				1.02E-04			
Medium Total				1.02E-04			
Receptor Total				Receptor Risk Total	1.02E-04		

Note:

For MMOA chemicals, aggregate risks from Table 7s were imported above.

ATTACHMENT B
AOC Analysis

As part of the HHRA, site-wide soil data assessed for the Ellenville Site was segregated by potential area of concern (AOC) for a supplemental analysis. The remedial investigation identified varying types, concentrations and combinations of contaminants across the site. The site has been divided into five on-site Areas of Concern (AOCs) in order to facilitate development and evaluation of remedial alternatives based on the nature and extent of contamination. The on-site AOCs are depicted on Figure B-1, and described below:

AOC 1 - Landfill Area – Up gradient Area of the site adjacent to Cape Avenue where majority of site operations were conducted. Solid waste (scrap metal, wood, concrete, glass, plastic, and construction and demolition debris) were deposited in this area to a depth of greater than 12 feet. SVOCs, metals, PCBs and pesticides were detected in the soil samples.

AOC 2 - Debris Pile Area – This area of concern is adjacent to the southern boundary on the landfill area, on the lower plateau area of the site. The area was used for debris piles (scrap metal, pallets, rail road ties, tires, transite, batteries). The debris piles were removed in 2005 by NYSDEC. The area is characterized by debris mixed into the surface soils and a leachate seep from the landfill area. SVOCs, metals, PCBs and pesticides were detected in the soil within the area.

AOC 3 - Dumpster Staging Area – This area of concern is located adjacent to and south of the landfill area. The area was used for the storage of solid waste dumpsters. SVOCs, metals, and PCBs were detected in the soils within the area. This area can be separated from the debris pile area because of differences in the amount of the surficial debris observed in the area.

AOC 4 - Scattered Debris Area – This area of concern is located along the southern boundary of the site and extends along the Beer Kill and to the north of the landfill area. The area is vegetated with older growth trees, scattered debris and isolated debris piles (drums, scrap metal, ties). The drums and some of the debris were removed by NYSDEC in 2005. SVOCs, pesticides, and metals were detected in the soils.

AOC 5 - Battery Disposal Area – This area of concern is located adjacent to and east of the landfill area (34 Cape Avenue residence). Battery casing were disposed of on the hillside behind the residence. Hand removal of a portion of the battery casing from the surface of the hillside was completed by NYSDEC in 2005. SVOCs, PCBs, and metals were detected in the soils within the area.

Table B-1 provides a breakdown of the soil samples (0-2 ft bgs, 0-10 ft bgs) used for the AOC analysis. RAGS Table 2s and 3s were generated for each AOC for purposes of identifying soil COPCs in each area, and to develop EPCs. A Summary of the COPCs identified for the AOCs is also provided on Table B-1. The RAGS tables developed for the AOC analysis are included in Appendix B-1.

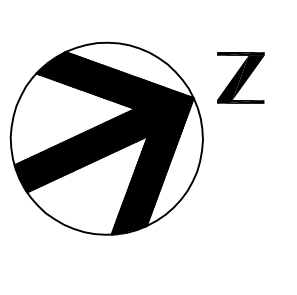
Noncancer hazards and cancer risks (RME) were then calculated for each AOC for the following receptors:

- Future On-Site Residents (child, adult)
- Future Construction /Utility Worker

A summary of risks and hazards by media is provided in Table B-2. The highest risks and noncancer hazards were identified in AOC-1, the upper plateau area of the Site associated with historic debris placement and landfilling. The risks estimated in AOC-1 for residential receptors and the construction work receptor generally exceeded the site wide risks estimated for the same scenarios. Out of the five AOCs, the lowest risk estimates were identified in AOC-4, located along the southern boundary of the Site and extending along the Beer Kill and to the north of the landfill area. This area is vegetated with older growth trees, and was known to contain scattered debris and isolated debris piles (drums, scrap metal, ties). The drums and some of the debris were removed by NYSDEC in 2005. The risks for AOC-4 were generally lower than the site-wide risk estimates for both the residential soil (0-2 ft bgs) and subsurface soil (0-10 ft bgs) data sets. This also appears to be the case for AOC-5, particularly for the residential scenario. Table B-2 includes a risk summary of the AOC analysis. The calculated soil risk estimates that are less than the corresponding site-wide values are highlighted on the Table. Table B-3 includes a summary of the COCs identified for the AOCs, utilizing the rationales employed for the site wide assessment.

Supporting information for this AOC analysis is provided in the following Appendices:

- Appendix B-2: RAGS Table 7s
- Appendix B-3: ProUCL sheets (for AOCs with >10 soil samples)



- LEGEND:**
- SITE BOUNDARY
 - DIRT ACCESS ROADS
 - AOC-1 - LANDFILL AREA - 6.01 ACRES
 - AOC-2 - DEBRIS PILE AREA - 4.12 ACRES
 - AOC-3 - DUMPSTER STAGING AREA - 1.38 ACRES
 - AOC-4 - SCATTERED DEBRIS AREA - 10.29 ACRES
 - AOC-5 - BATTERY DISPOSAL AREA - 0.24 ACRES

NOTES:

1. HISTORIC FEATURES SHOWN ARE BASED ON MAP BY WESTON TITLED "FIGURE 3 SAMPLE LOCATION MAP" AND ON MAP BY TERRA TECH EC, INC. TITLED "SITE PLAN".

SURVEY NOTES:

SOURCE: SURVEYED BY BANC 3 INC., P.C. ON MARCH 25, 2008 UNDER TERRA TECH, INC. RAC FOR EPA. HORIZONTAL DATUM: NEW YORK STATE PLANE (EAST)-NORTH AMERICAN DATUM (NAD83/FEET)

1	02/19/2010	DRAFT ISSUE
2	07/01/2010	FINAL ISSUE

PROJECT NUMBER	114488
PROJECT MANAGER	E.S.
LEAD DESIGN PROF.	T.M.C.
DESIGN ENGINEER	J.J.
DRAWN BY	J.W.
PROGRAM MANAGER	B.W.
QUALITY ASSURANCE MGR.	R.M.

PROJECT MANAGER	E.S.
LEAD DESIGN PROF.	T.M.C.
DESIGN ENGINEER	J.J.
DRAWN BY	J.W.
PROGRAM MANAGER	B.W.
QUALITY ASSURANCE MGR.	R.M.

**ELLENVILLE SCRAP IRON AND METAL SITE
VILLAGE OF ELLENVILLE,
TOWN OF WAWARSSING,
ULSTER COUNTY, NEW YORK**

**UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
CONTRACT NO. EP-W-09-009
WORK ASSIGNMENT NO.
008-RICO-02LX**

AREAS OF CONCERN

0 50 100 200
1" = 100'

FILENAME: -
SCALE: 1" = 100'

SHEET
B-1

DRAFT Table B-1
List of Samples and COPCs by AOC
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Soil 0-2 ft Sample Locations

	AOC-1	AOC-2	AOC-3	AOC-4	AOC-5
1	DP-022	SS-016	DP-002	DP-004	DP-021
2	DP-026	SS-017	SS-013	SS-028	SS-011
3	DP-029	SS-018	SS-014	SS-029	SS-012
4	SS-001	SS-019	SS-015	SS-038	SS-044
5	SS-002	SS-020	SS-053	SS-040	SS-10W
6	SS-003	SS-021	SS-09W	SS-041	
7	SS-004	SS-022	SS-15W	SS-042	
8	SS-005	SS-023		SS-043	
9	SS-006	SS-024		SS-045	
10	SS-007	SS-025		SS-048	
11	SS-008	SS-026		SS-049	
12	SS-009	SS-027		SS-050	
13	SS-010	SS-030		SS-051	
14	SS-046	SS-035		SS-052	
15	SS-047	SS-031		SS-16W	
16	SS-03W	SS-032		SS-17W	
17	SS-06W	SS-036		SS-18W	
18	SS-07W	SS-037		SWSD-01	
19	SS-11W	SS-02W		SWSD-02	
20	SS-12W	SS-039			
21	SS-20W	SS-13W			
22	SS-21W	SS-01W			
23	TP-07	SS-033			
24	TP-09	SS-034			
25	SWSD-03	SS-04W			
26		SS-05W			
27		SS-08W			
28		SS-14W			
29		SS-19W			
30		SWSD-04			
Total Number of Samples					
	35	33	7	19	5

Chemicals of Potential Concern

	AOC-1	AOC-2	AOC-3	AOC-4	AOC-5
	38 COPCs	36 COPCs	33 COPCs	24 COPCs	19 COPCs
1	Acenaphthylene	Acenaphthylene	Acenaphthylene	Bis(2-ethylhexyl)phthalate	Acenaphthylene
2	Bis(2-ethylhexyl)phthalate	Bis(2-ethylhexyl)phthalate	Bis(2-ethylhexyl)phthalate	Benzo(a)anthracene	Bis(2-ethylhexyl)phthalate
3	Benzo(a)anthracene	Benzo(a)anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(a)anthracene
4	Benzo(a)pyrene	Benzo(a)pyrene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(a)pyrene
5	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(b)fluoranthene
6	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Carbazole	Benzo(g,h,i)perylene
7	Benzo(k)fluoranthene	Benzo(k)fluoranthene	Benzo(k)fluoranthene	Di-n-octylphthalate	Indeno(1,2,3-cd)pyrene
8	Carbazole	Carbazole	Carbazole	Dibenzo(a,h)anthracene	Phenanthrene
9	Chrysene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Aroclor-1260
10	Di-n-octylphthalate	Di-n-octylphthalate	Dimethylphthalate	Phenanthrene	Aluminum
11	Dibenzo(a,h)anthracene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Endrin aldehyde	Antimony
12	Dimethylphthalate	Dimethylphthalate	Phenanthrene	Endrin ketone	Arsenic
13	Indeno(1,2,3-cd)pyrene	Indeno(1,2,3-cd)pyrene	Endosulfan sulfate	Endosulfan II	Chromium
14	Phenanthrene	Naphthalene	Dieldrin	gamma-Chlordane	Cobalt
15	Endosulfan sulfate	Phenanthrene	Endrin ketone	Aluminum	Copper
16	Dieldrin	Endosulfan sulfate	gamma-Chlordane	Antimony	Iron
17	Endrin aldehyde	Dieldrin	Aroclor-1254	Arsenic	Lead
18	Endrin ketone	Endrin aldehyde	Aroclor-1260	Chromium	Manganese
19	Endosulfan II	Endrin ketone	Aluminum	Cobalt	Thallium
20	gamma-Chlordane	Endosulfan II	Antimony	Copper	
21	Aroclor-1254	gamma-Chlordane	Arsenic	Iron	
22	Aroclor-1260	Aroclor-1254	Barium	Lead	
23	Aluminum	Aroclor-1260	Cadmium	Manganese	
24	Antimony	Aluminum	Chromium	Thallium	
25	Arsenic	Antimony	Cobalt		
26	Barium	Arsenic	Copper		
27	Cadmium	Chromium	Iron		
28	Chromium	Cobalt	Lead		
29	Cobalt	Copper	Manganese		
30	Copper	Iron	Silver		
31	Iron	Lead	Thallium		
32	Lead	Manganese	Vanadium		
33	Manganese	Mercury	Zinc		
34	Mercury	Thallium			
35	Nickel	Vanadium			
36	Thallium	Zinc			
37	Vanadium				
38	Zinc				

DRAFT Table B-1
List of Samples and COPCs by AOC
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Soil 0-10 ft Sample Locations

	AOC-1	AOC-2	AOC-3	AOC-4	AOC-5
1	DP-022	DP-009	DP-001	DP-004	DP-021
2	DP-023	DP-011	DP-002	DP-005	SS-011
3	DP-024	DP-012	DP-003	DP-006	SS-012
4	DP-025	DP-014	SS-013	DP-007	SS-044
5	DP-026	DP-015	SS-014	DP-008	SS-10W
6	DP-027	DP-016	SS-015	DP-010	
7	DP-028	DP-017	SS-053	SS-028	
8	DP-029	DP-019	SS-09W	SS-029	
9	DP-030	DP-020	SS-15W	SS-038	
10	SS-001	SS-016		SS-040	
11	SS-002	SS-017		SS-041	
12	SS-003	SS-018		SS-042	
13	SS-004	SS-019		SS-043	
14	SS-005	SS-020		SS-045	
15	SS-006	SS-021		SS-048	
16	SS-007	SS-022		SS-049	
17	SS-008	SS-023		SS-050	
18	SS-009	SS-024		SS-051	
19	SS-010	SS-025		SS-052	
20	SS-046	SS-026		SWSD-01	
21	SS-047	SS-027		SWSD-02	
22	SWSD-03	SS-030		SS-16W	
23	TP-01	SS-031		SS-17W	
24	TP-02	SS-032		SS-18W	
25	TP-03	SS-033			
26	TP-04	SS-034			
27	TP-05	SS-035			
28	TP-06	SS-036			
29	TP-07	SS-037			
30	TP-08	SS-039			
31	TP-09	SWSD-04			
32	TP-10	SS-13W			
33	SS-11W	SS-01W			
34	SS-03W	SS-02W			
35	SS-06W	SS-04W			
36	SS-07W	SS-05W			
37	SS-12W	SS-08W			
38	SS-20W	SS-14W			
39	SS-21W	SS-19W			
Total Number of Samples					
	48	42	9	24	5

Chemicals of Potential Concern

	AOC-1	AOC-2	AOC-3	AOC-4	AOC-5
	30 COPCs	23 COPCs	19 COPCs	15 COPCs	9 COPCs
1	Acenaphthylene	Acenaphthylene	Acenaphthylene	Benzo(a)pyrene	Acenaphthylene
2	Benzo(a)anthracene	Benzo(a)anthracene	Benzo(a)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene
3	Benzo(a)pyrene	Benzo(a)pyrene	Benzo(a)pyrene	Carbazole	Benzo(g,h,i)perylene
4	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Benzo(b)fluoranthene	Di-n-octylphthalate	Phenanthrene
5	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Benzo(g,h,i)perylene	Dibenzo(a,h)anthracene	Antimony
6	Benzo(k)fluoranthene	Carbazole	Carbazole	Phenanthrene	Arsenic
7	Carbazole	Di-n-octylphthalate	Dibenzo(a,h)anthracene	Endrin aldehyde	Chromium
8	Di-n-octylphthalate	Dibenzo(a,h)anthracene	Dimethylphthalate	Endrin ketone	Lead
9	Dibenzo(a,h)anthracene	Dimethylphthalate	Phenanthrene	Endosulfan II	Thallium
10	Dimethylphthalate	Indeno(1,2,3-cd)pyrene	Endosulfan sulfate	gamma-Chlordane	
11	Indeno(1,2,3-cd)pyrene	Phenanthrene	Endrin ketone	Antimony	
12	Phenanthrene	Endosulfan sulfate	gamma-Chlordane	Arsenic	
13	Endosulfan sulfate	Dieldrin	Aroclor-1260	Chromium	
14	Dieldrin	Endrin aldehyde	Antimony	Lead	
15	Endrin aldehyde	Endrin ketone	Arsenic	Thallium	
16	Endrin ketone	Endosulfan II	Chromium		
17	Endosulfan II	gamma-Chlordane	Copper		
18	gamma-Chlordane	Aroclor-1254	Lead		
19	Aroclor-1254	Aroclor-1260	Thallium		
20	Aroclor-1260	Arsenic			
21	Antimony	Chromium			
22	Arsenic	Lead			
23	Chromium	Thallium			
24	Cobalt				
25	Copper				
26	Iron				
27	Lead				
28	Manganese				
29	Thallium				
30	Vanadium				

Table B-2
 Summary of Non-Cancer HIs and Cancer Risks
 Areas of Concern 1 through 5
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Receptor, Age, Media	Route	Cancer Risk				
		AOC-1	AOC-2	AOC-3	AOC-4	AOC-5
On-Site Resident Child-Adult Aggregate On-Site Soil (0 - 2ft bgs)	Ingestion	7.94E-02	2.06E-03	7.73E-04	2.00E-04	1.60E-04
	Dermal Absorption	1.06E-03	5.93E-04	2.18E-04	5.98E-05	2.53E-05
	Inhalation (Fugitive Dust)	3.19E-04	3.19E-05	6.06E-06	1.31E-06	1.99E-06
	Total:	8.07E-02	2.69E-03	9.97E-04	2.61E-04	1.87E-04
Construction / Utility Worker On-Site Soil (0 - 10ft bgs)	Ingestion	1.02E-04	9.61E-06	8.29E-06	1.32E-06	1.70E-04
	Dermal Absorption	5.20E-06	2.40E-06	2.47E-06	2.66E-07	6.57E-05
	Inhalation (Fugitive Dust)	7.74E-04	2.67E-05	1.17E-05	2.59E-06	5.14E-06
	Total:	8.81E-04	3.87E-05	2.24E-05	4.18E-06	2.41E-04

* MMOA contributions to risk are reflected in above values where applicable.

Receptor, Age, Media	Route	Non-Cancer HI				
		AOC-1	AOC-2	AOC-3	AOC-4	AOC-5
On-Site Resident Adult On-Site Soil (0 - 2ft bgs)	Ingestion	3.31E+00	3.99E-01	1.38E+00	2.95E-01	4.43E-01
	Dermal Absorption	4.48E-02	5.39E-02	3.82E-02	3.69E-03	7.06E-03
	Inhalation (Fugitive Dust)	9.29E-02	2.44E-02	6.75E-02	2.63E-02	2.06E-02
	Total:	3.45E+00	4.77E-01	1.48E+00	3.25E-01	4.71E-01
On-Site Resident Child On-Site Soil (0 - 2ft bgs)	Ingestion	3.09E+01	3.73E+00	1.29E+01	2.76E+00	4.14E+00
	Dermal Absorption	2.93E-01	3.53E-01	2.50E-01	2.42E-02	4.63E-02
	Inhalation (Fugitive Dust)	9.29E-02	2.44E-02	6.75E-02	2.63E-02	2.06E-02
	Total:	3.13E+01	4.10E+00	1.32E+01	2.81E+00	4.20E+00
Construction / Utility Worker On-Site Soil (0 - 10ft bgs)	Ingestion	1.50E+00	1.61E-01	1.89E+00	6.98E-01	5.49E-01
	Dermal Absorption	3.84E-02	2.95E-02	1.74E-02	6.47E-03	1.25E-02
	Inhalation (Fugitive Dust)	5.68E+00	1.66E-01	2.35E-01	8.21E-02	1.56E-01
	Total:	7.22E+00	3.57E-01	2.14E+00	7.87E-01	7.17E-01

bold Indicates HI > 1.0 or ELCR 1x10⁻⁴

Table B-3
AOC CHEMICALS OF CONCERN
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

AOC-1		AOC-2		AOC-3	
Soil (0 - 2ft)	Soil (0 - 10ft)	Soil (0 - 2ft)	Soil (0 - 10ft)	Soil (0 - 2ft)	Soil (0 - 10ft)
Benzo(a)anthracene	Benzo(a)pyrene	Benzo(a)anthracene	Lead *	Benzo(a)anthracene	Lead *
Benzo(a)pyrene	Chromium (VI)	Benzo(a)pyrene		Benzo(a)pyrene	
Benzo(b)fluoranthene	Manganese	Benzo(b)fluoranthene		Benzo(b)fluoranthene	
Benzo(k)fluoranthene	Lead *	Benzo(k)fluoranthene		Benzo(k)fluoranthene	
Chrysene		Dibenzo(a,h)anthracene		Dibenzo(a,h)anthracene	
Dibenzo(a,h)anthracene		Chrysene		Indeno(1,2,3,-cd)perylene	
Indeno(1,2,3,-cd)perylene		Indeno(1,2,3,-cd)perylene		Dieldrin	
Phenanthrene		Aroclor 1254		Aroclor 1254	
Aroclor 1254		Aroclor 1260		Aroclor 1260	
Aroclor 1260		Arsenic		Antimony	
Antimony		Chromium (VI)		Arsenic	
Arsenic		Lead *		Chromium (VI)	
Chromium (VI)				Copper	
Iron				Manganese	
Lead *				Lead *	

AOC-4		AOC-5	
Soil (0 - 2ft)	Soil (0 - 10ft)	Soil (0 - 2ft)	Soil (0 - 10ft)
Benzo(a)anthracene	Lead *	Benzo(a)anthracene	Benzo(a)pyrene
Benzo(a)pyrene		Benzo(a)pyrene	Lead *
Benzo(b)fluoranthene		Benzo(b)fluoranthene	
Dibenzo(a,h)anthracene		Indeno(1,2,3,-cd)perylene	
Indeno(1,2,3,-cd)perylene		Antimony	
Chromium (VI)		Chromium (VI)	
Lead *		Lead *	

Note:

* Lead was identified as a COPC in several of the on-site media, and is included in the above COC inventory since no further quantitative assessment of lead was conducted.

TABLE B-2.1.1
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: AOC-1 Surface soil (0 - 2ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Residential Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
	7439-96-5	Manganese	2.83E+02 (J)	1.13E+03	(mg/kg)	SS-001	25 of 25	----	1.13E+03	6.04E+02 (J)	1.80E+02 n	2,000	Y	Max > RSL
	7439-97-6	Mercury (b)	1.40E-01	2.60E+00 (J)	(mg/kg)	SS-009	23 of 25	0.11 U - 0.12 U	2.60E+00	2.40E-01	7.80E-01 n	0.81	Y	Max > RSL
	7440-02-0	Nickel	1.49E+01	4.81E+02	(mg/kg)	SS-06(W)	25 of 25	----	4.81E+02	1.69E+01	1.50E+02 n	140	Y	Max > RSL
	7440-09-7	Potassium	2.21E+02 (J)	1.25E+03	(mg/kg)	SS-009	25 of 25	----	1.25E+03	6.89E+02	nsI	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	5.90E-01 (BJ)	3.40E+00 (J)	(mg/kg)	SS-001	12 of 25	3.9 U - 4.8 U	3.40E+00	5.20E+00 (U)	3.90E+01 n	36	N	Max < RSL
	7440-22-4	Silver	3.00E-01 (BJ)	3.58E+01 (J)	(mg/kg)	SS-20(W)	20 of 25	1.1 U - 1.4 U	3.58E+01	3.70E-01 (J)	3.90E+01 n	36	N	Max < RSL
	7440-23-5	Sodium	1.29E+02 (J)	1.89E+03	(mg/kg)	SS-009	12 of 25	542 U - 803 U	1.89E+03	1.96E+02 (J)	nsI	Not Available	N	Essential Nutrient
	7440-28-0	Thallium	7.20E-01 (J)	4.60E+00	(mg/kg)	SS-06(W)	8 of 25	2.8 U - 3.4 U	4.60E+00	3.70E+00 (U)	nsI	Not Available	Y	No Screening Criteria
	No CAS	Vanadium (c)	9.20E+00	8.41E+02	(mg/kg)	SS-007	25 of 25	----	8.41E+02	1.49E+01	3.90E+01 n	Not Available	Y	Max > RSL
	7440-66-6	Zinc	7.57E+01	5.08E+03	(mg/kg)	SS-009	25 of 25	----	5.08E+03	2.92E+02	2.30E+03 n	2,200	Y	Max > RSL

Footnotes:

- (1) Minimum / Maximum detected concentration
- (2) Maximum detected concentration used as screening value
- (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
- (4) US EPA Region 9 Master RSL Table December 2009 - Residential Soils
- (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Residential site use.
- (6) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Low detection freq: analyte detected in less than 5% of samples in data set of at least 20 samples.
- (a) Cr(VI) value used for screening of chromium data.
- (b) Methylmercury value used for screening of mercury data.
- (c) Vanadium and Compounds screening level used for Vanadium.
- (d) Xylene, Mixture screening level used.
- Note:** Residential Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ = 0.1).
- L based on EPA's IEUBK Model for Lead in Children
- m Concentration may exceed ceiling limit
- s Concentration may exceed Csat
- nsI No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyted Found in Associated Blank
- NA Not Available
- mg/kg milligram per kilogram
- ARAR Aplicable or Relevant and Appropriate Requirements

TABLE B-2.2.1
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: AOC-2 Surface soil (0 - 2ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Residential Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N) (6)	Rationale for Selection or Deletion (6)
On-Site AOC-2 Soil (0-2ft bgs)	12789-03-6	alpha-Chlordane	1.20E-02 (NJ)	5.40E-02	(mg/kg)	SS-02(W)	3 of 29	0.0019 U - 0.0037 U	5.40E-02	NA	1.60E+00 c*	0.91	N	Max < RSL
	33213-65-9	Endosulfan II	1.30E-02 (J)	6.70E-01 (J)	(mg/kg)	SS-019	6 of 31	0.0037 U - 0.0073 U	6.70E-01	NA	nsI	4.8	Y	No Screening Criteria
	5566-34-7	gamma-Chlordane	1.90E-03 (J)	3.20E-02 (NJ)	(mg/kg)	SS-017	3 of 29	0.0024 U - 0.0028 U	3.20E-02	NA	nsI	Not Available	Y	No Screening Criteria
	12674-11-2	Aroclor-1016	8.80E-01 (J)	8.80E-01 (J)	(mg/kg)	SS-016	1 of 33	0.033 U - 0.055 U	8.80E-01	NA	3.90E-01 n	1	N	Low Detection Freq.
	12672-29-6	Aroclor-1248	9.70E-02 (J)	9.70E-02 (J)	(mg/kg)	SWSD-04	1 of 33	0.033 U - 0.055 U	9.70E-02	NA	2.20E-01 c	1	N	Low Detection Freq.
	11097-69-1	Aroclor-1254	1.40E-01	2.30E+00 (J)	(mg/kg)	SS-02(W)	4 of 33	0.033 U - 0.055 U	2.30E+00	NA	1.10E-01 n	1	Y	Max > RSL
	11096-82-5	Aroclor-1260	5.00E-02 (J)	1.30E+01 (D)	(mg/kg)	SS-13(W)	16 of 33	0.033 U - 0.055 U	1.30E+01	NA	2.20E-01 c	1	Y	Max > RSL
METALS														
On-Site AOC-2 Soil (0-2ft bgs)	7429-90-5	Aluminum	7.50E+01 (J)	1.31E+04 (J)	(mg/kg)	SWSD-04	33 of 33	---	1.31E+04	8.50E+03	7.70E+03 n	Not Available	Y	Max > RSL
	7440-36-0	Antimony	4.30E-01 (J)	1.08E+01 (B)	(mg/kg)	SS-02(W)	25 of 33	6.6 U - 8.3 U	1.08E+01	8.80E+00 (U)	3.10E+00 n	Not Available	Y	Max > RSL
	7440-38-2	Arsenic	3.60E+00	1.41E+01	(mg/kg)	SS-033	33 of 33	---	1.41E+01	7.40E+00	3.90E-01 c*	16	Y	Max > RSL
	7440-39-3	Barium	5.01E+01 (J)	1.18E+03	(mg/kg)	SS-02(W)	33 of 33	---	1.18E+03	1.48E+02	1.50E+03 n	350	N	Max < RSL
	7440-41-7	Beryllium	2.30E-01 (J)	6.90E-01 (J)	(mg/kg)	SWSD-04	33 of 33	---	6.90E-01	5.10E-01 (J)	1.60E+01 n	14	N	Max < RSL
	7440-43-9	Cadmium	2.60E-01 (B)	4.30E+00	(mg/kg)	SS-018	20 of 33	0.54 U - 0.56 U	4.30E+00	1.20E+00	7.00E+00 n	2.5	N	Max < RSL
	7440-70-2	Calcium	6.54E+02	7.80E+04	(mg/kg)	SS-016	32 of 32	---	7.80E+04	3.27E+04	nsI	Not Available	N	Essential Nutrient
	7440-47-3	Chromium (a)	1.26E+01 (J)	6.22E+02 (J)	(mg/kg)	SS-02(W)	32 of 32	---	6.22E+02	2.22E+01	2.90E-01 c	22	Y	Max > RSL
	7440-48-4	Cobalt	6.90E+00	1.60E+01 (B)	(mg/kg)	SS-02(W)	33 of 33	---	1.60E+01	7.00E+00	2.30E+00 n	Not Available	Y	Max > RSL
	7440-50-8	Copper	3.42E+01 (J)	4.71E+02	(mg/kg)	SS-02(W)	17 of 17	---	4.71E+02	2.58E+01	3.10E+02 n	270	Y	Max > RSL
	57-12-5	Cyanide	6.90E-01 (J)	6.90E-01 (J)	(mg/kg)	SWSD-04	1 of 25	2.9 U - 3.5 U	6.90E-01	3.70E+00	1.60E+02 n	27	N	Max < RSL
	7439-89-6	Iron	4.50E+03	6.15E+04	(mg/kg)	SWSD-04	33 of 33	---	6.15E+04	1.79E+04	5.50E+03 n	Not Available	Y	Max > RSL
	7439-92-1	Lead	4.13E+01 (J)	2.36E+03	(mg/kg)	SS-02(W)	18 of 18	---	2.36E+03	6.67E+02 (J)	4.00E+02 nL	400	Y	Max > RSL
	7439-95-4	Magnesium	2.13E+03	1.13E+04	(mg/kg)	SWSD-04	33 of 33	---	1.13E+04	3.12E+03	nsI	Not Available	N	Essential Nutrient
	7439-96-5	Manganese	3.24E+02 (J)	1.49E+03 (J)	(mg/kg)	SS-031	33 of 33	---	1.49E+03	6.04E+02 (J)	1.80E+02 n	2,000	Y	Max > RSL
	7439-97-6	Mercury (b)	6.60E-02 (J)	1.90E+00 (J)	(mg/kg)	SS-018	15 of 18	0.11 U - 0.12 U	1.90E+00	2.40E-01	7.80E-01 n	0.81	Y	Max > RSL
	7440-02-0	Nickel	1.75E+01	9.14E+01 (J)	(mg/kg)	SWSD-04	33 of 33	---	9.14E+01	1.69E+01	1.50E+02 n	140	N	Max < RSL
	7440-09-7	Potassium	4.23E+02 (J)	1.26E+03	(mg/kg)	SWSD-04	33 of 33	---	1.26E+03	6.89E+02	nsI	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	3.50E-01 (J)	1.70E+00 (J)	(mg/kg)	SS-018	21 of 33	---	1.70E+00	5.20E+00 (U)	3.90E+01 n	36	N	Max < RSL
	7440-22-4	Silver	1.10E-01 (J)	2.10E+00	(mg/kg)	SS-016	28 of 33	1.1 U - 1.4 U	2.10E+00	3.70E-01 (J)	3.90E+01 n	36	N	Max < RSL
	7440-23-5	Sodium	8.22E+01 (J)	4.62E+02 (BJ)	(mg/kg)	SS-01(W)	10 of 33	542 U - 803 U	4.62E+02	1.96E+02 (J)	nsI	Not Available	N	Essential Nutrient
	7440-28-0	Thallium	5.40E-01 (J)	2.20E+00 (J)	(mg/kg)	SS-016	21 of 33	2.8 U - 3.4 U	2.20E+00	3.70E+00 (U)	nsI	Not Available	Y	No Screening Criteria
	No CAS	Vanadium (c)	1.08E+01	2.21E+02	(mg/kg)	SS-02(W)	33 of 33	---	2.21E+02	1.49E+01	3.90E+01 n	Not Available	Y	Max > RSL
	7440-66-6	Zinc	6.76E+01	3.04E+03	(mg/kg)	SS-02(W)	33 of 33	---	3.04E+03	2.92E+02	2.30E+03 n	2,200	Y	Max > RSL

Footnotes:

- Minimum / Maximum detected concentration
- Maximum detected concentration used as screening value
- Based on available background soil sampling conducted. Maximum detected background concentration used.
- US EPA Region 9 Master RSL Table December 2009 - Residential Soils
- NYSDEC Part 375 Soil Clean-up Objective (SCO) for Residential site use.
- Rationales for Selection or Deletion Definitions:
 Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 Low detection freq: analyte detected in less than 5% of samples in data set of at least 20 samples.
- Cr(VI) value used for screening of chromium data.
- Methylmercury value used for screening of mercury data.
- Vanadium and Compounds screening level used for Vanadium.

Note: Residential Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.

(W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ=0.1).
- L based on EPA's IEUBK Model for Lead in Children
- m Concentration may exceed ceiling limit
- s Concentration may exceed Csat
- nsI No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyte Detected in Blank
- NA Not Available
- mg/kg milligram per kilogram
- ARAR Applicable or Relevant and Appropriate Requirements

TABLE B-2.3.1
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: AOC-3 Surface soil (0 - 2ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Residential Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
	7440-41-7	Beryllium	3.50E-01 (B)	6.10E-01 (J)	(mg/kg)	SS-013	6 of 7	0.56 U - 0.8 U	6.10E-01	5.10E-01 (J)	1.60E+01 n	14	N	Max < RSL
	7440-43-9	Cadmium	5.00E-01 (J)	1.49E+01	(mg/kg)	SS-015	7 of 7	0.54 U - 0.56 U	1.49E+01	1.20E+00	7.00E+00 n	2.5	Y	Max > RSL
	7440-70-2	Calcium	1.79E+03 (J)	1.60E+04	(mg/kg)	SS-09(W)	7 of 7	---	1.60E+04	3.27E+04	nsI	Not Available	N	Essential Nutrient
	7440-47-3	Chromium (a)	1.29E+01 (J)	5.62E+01	(mg/kg)	SS-014	7 of 7	---	5.62E+01	2.22E+01	2.90E-01 c	Not Available	Y	Max > RSL
	7440-48-4	Cobalt	8.10E+00 (J)	1.57E+01	(mg/kg)	SS-015	7 of 7	---	1.57E+01	7.00E+00	2.30E+00 n	Not Available	Y	Max > RSL
	7440-50-8	Copper	2.04E+01	1.04E+04 (J)	(mg/kg)	SS-09(W)	7 of 7	---	1.04E+04	2.58E+01	3.10E+02 n	270	Y	Max > RSL
	57-12-5	Cyanide	7.80E-01 (J)	9.80E-01 (J)	(mg/kg)	SS-015	2 of 4	2.9 U - 3.5 U	9.80E-01	3.70E+00	1.60E+02 n	27	N	Max < RSL
	7439-89-6	Iron	2.21E+04 (J)	4.38E+04	(mg/kg)	SS-015	6 of 6	---	4.38E+04	1.79E+04	5.50E+03 n	Not Available	Y	Max > RSL
	7439-92-1	Lead	1.39E+01 (J)	1.82E+04	(mg/kg)	SS-09(W)	7 of 7	---	1.82E+04	6.67E+02 (J)	4.00E+02 nL	400	Y	Max > RSL
	7439-95-4	Magnesium	2.39E+03	4.03E+03	(mg/kg)	SS-15(W)	4 of 4	---	4.03E+03	3.12E+03	nsI	Not Available	N	Essential Nutrient
	7439-96-5	Manganese	5.43E+02 (J)	2.01E+03 (J)	(mg/kg)	DP-002	7 of 7	---	2.01E+03	6.04E+02 (J)	1.80E+02 n	2000	Y	Max > RSL
	7439-97-6	Mercury (b)	1.90E-01 (J)	5.20E-01	(mg/kg)	SS-013	6 of 7	0.11 U - 0.12 U	5.20E-01	2.40E-01	7.80E-01 n	0.81	N	Max < RSL
	7440-02-0	Nickel	1.82E+01	1.15E+02	(mg/kg)	SS-015	7 of 7	---	1.15E+02	1.69E+01	1.50E+02 n	140	N	Max < RSL
	7440-09-7	Potassium	5.27E+02 (J)	1.04E+03	(mg/kg)	SS-015	7 of 7	---	1.04E+03	6.89E+02	nsI	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	1.80E+00	3.30E+00 (J)	(mg/kg)	SS-015	4 of 7	3.9 U - 4.8 U	3.30E+00	5.20E+00 (U)	3.90E+01 n	36	N	Max < RSL
	7440-22-4	Silver	1.20E+00 (J)	6.14E+01	(mg/kg)	SS-09(W)	5 of 7	1.1 U - 1.4 U	6.14E+01	3.70E-01 (J)	3.90E+01 n	36	Y	Max > RSL
	7440-23-5	Sodium	8.65E+01 (B)	4.98E+02 (J)	(mg/kg)	DP-002	3 of 7	542 U - 803 U	4.98E+02	1.96E+02 (J)	nsI	Not Available	N	Essential Nutrient
	7440-28-0	Thallium	4.20E+00 (J)	4.20E+00 (J)	(mg/kg)	DP-002	1 of 7	2.8 U - 3.4 U	4.20E+00	3.70E+00 (U)	nsI	Not Available	Y	No Screening Criteria
	No CAS	Vanadium (c)	1.10E+01	2.04E+02	(mg/kg)	SS-014	7 of 7	---	2.04E+02	1.49E+01	3.90E+01 n	Not Available	Y	Max > RSL
	7440-66-6	Zinc	5.46E+01 (J)	1.60E+04	(mg/kg)	SS-09(W)	7 of 7	---	1.60E+04	2.92E+02	2.30E+03 n	2200	Y	Max > RSL

Footnotes:

- (1) Minimum / Maximum detected concentration
 - (2) Maximum detected concentration used as screening value
 - (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
 - (4) US EPA Region 9 Master RSL Table December 2009 - Residential Soils
 - (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Residential site use.
 - (6) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Low detection freq: analyte detected in less than 5% of samples in data set of at least 20 samples.
 - (a) Cr(VI) value used for screening of chromium data.
 - (b) Methylmercury value used for screening of mercury data.
 - (c) Vanadium and Compounds screening level used for Vanadium.
- Note:** Residential Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ = 0.1).
- L based on EPA's IEUBK Model for Lead in Children
- s Concentration may exceed Csat
- nsI No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank
- NA Not Available
- mg/kg milligram per kilogram
- ARAR Applicable or Relevant and Appropriate Requirements

TABLE B-2.4.1
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: AOC-4 Surface soil (0 - 2ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Residential Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N) (6)	Rationale for Selection or Deletion (6)
	7440-38-2	Arsenic	3.50E+00	1.09E+01 (J)	(mg/kg)	SS-18(W)	19 of 19	---	1.09E+01	7.40E+00	3.90E-01 c*	16	Y	Max > RSL
	7440-39-3	Barium	2.77E+01 (J)	3.19E+02 (J)	(mg/kg)	SS-16(W)	19 of 19	---	3.19E+02	1.48E+02	1.50E+03 n	350	N	Max < RSL
	7440-41-7	Beryllium	1.70E-01 (J)	6.20E-01 (J)	(mg/kg)	SS-049	18 of 19	0.56 U - 0.8 U	6.20E-01	5.10E-01 (J)	1.60E+01 n	14	N	Max < RSL
	7440-43-9	Cadmium	2.10E-01 (J)	3.50E+00	(mg/kg)	SS-052	16 of 19	0.54 U - 0.56 U	3.50E+00	1.20E+00	7.00E+00 n	2.5	N	Max < RSL
	7440-70-2	Calcium	6.29E+02	1.42E+04 (J)	(mg/kg)	SS-16(W)	19 of 19	---	1.42E+04	3.27E+04	nsI	Not Available	N	Essential Nutrient
	7440-47-3	Chromium (a)	6.80E+00 (J)	1.84E+01 (J)	(mg/kg)	SS-038	17 of 17	---	1.84E+01	2.22E+01	2.90E-01 c	22	Y	Max > RSL
	7440-48-4	Cobalt	2.90E+00 (BJ)	8.60E+00	(mg/kg)	SS-028	19 of 19	---	8.60E+00	7.00E+00	2.30E+00 n	Not Available	Y	Max > RSL
	7440-50-8	Copper	8.70E+00	8.53E+02	(mg/kg)	SS-052	15 of 15	---	8.53E+02	2.58E+01	3.10E+02 n	270	Y	Max > RSL
	57-12-5	Cyanide	2.50E-01 (J)	2.50E-01 (J)	(mg/kg)	SS-048	1 of 16	2.9 U - 3.5 U	2.50E-01	3.70E+00	1.60E+02 n	27	N	Max < RSL
	7439-89-6	Iron	8.39E+03	4.07E+04 (J)	(mg/kg)	SS-052	19 of 19	---	4.07E+04	1.79E+04	5.50E+03 n	Not Available	Y	Max > RSL
	7439-92-1	Lead	1.09E+01	1.46E+04 (J)	(mg/kg)	SS-16(W)	17 of 17	---	1.46E+04	6.67E+02 (J)	4.00E+02 nL	400	Y	Max > RSL
	7439-95-4	Magnesium	1.30E+03	4.91E+03	(mg/kg)	SS-17(W)	14 of 14	---	4.91E+03	3.12E+03	nsI	Not Available	N	Essential Nutrient
	7439-96-5	Manganese	1.66E+02 (J)	1.64E+03	(mg/kg)	SS-043	19 of 19	---	1.64E+03	6.04E+02 (J)	1.80E+02 n	2,000	Y	Max > RSL
	7439-97-6	Mercury (b)	5.90E-02 (J)	2.70E-01	(mg/kg)	SS-043	10 of 17	0.11 U - 0.12 U	2.70E-01	2.40E-01	7.80E-01 n	0.81	N	Max < RSL
	7440-02-0	Nickel	9.20E+00	2.80E+01	(mg/kg)	SS-052	19 of 19	---	2.80E+01	1.69E+01	1.50E+02 n	140	N	Max < RSL
	7440-09-7	Potassium	2.03E+02 (J)	1.10E+03 (BJ)	(mg/kg)	SS-16(W)	19 of 19	---	1.10E+03	6.89E+02	nsI	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	5.20E-01 (J)	1.40E+00 (J)	(mg/kg)	SS-043	7 of 19	3.9 U - 4.8 U	1.40E+00	5.20E+00 (U)	3.90E+01 n	36	N	Max < RSL
	7440-22-4	Silver	1.90E-01 (J)	1.70E+00	(mg/kg)	SS-028	8 of 19	1.1 U - 1.4 U	1.70E+00	3.70E-01 (J)	3.90E+01 n	36	N	Max < RSL
	7440-23-5	Sodium	9.15E+01 (B)	2.25E+02	(mg/kg)	DP-004	5 of 19	542 U - 803 U	2.25E+02	1.96E+02 (J)	nsI	Not Available	N	Essential Nutrient
	7440-28-0	Thallium	7.60E-01 (J)	7.70E-01 (J)	(mg/kg)	SS-038	2 of 19	2.8 U - 3.4 U	7.70E-01	3.70E+00 (U)	nsI	Not Available	Y	No Screening Criteria
	No CAS	Vanadium (c)	8.40E+00 (J)	1.73E+01	(mg/kg)	SS-048	19 of 19	---	1.73E+01	1.49E+01	3.90E+01 n	Not Available	N	Max < RSL
	7440-66-6	Zinc	5.69E+01	1.91E+03	(mg/kg)	SS-052	19 of 19	---	1.91E+03	2.92E+02	2.30E+03 n	2,200	N	Max < RSL

Footnotes:

- (1) Minimum / Maximum detected concentration
 - (2) Maximum detected concentration used as screening value
 - (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
 - (4) US EPA Region 9 Master RSL Table December 2009 - Residential Soils
 - (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Residential site use.
 - (6) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Low detection freq: analyte detected in less than 5% of samples in data set of at least 20 samples.
 - (a) Cr(VI) value used for screening of chromium data.
 - (b) Methylmercury value used for screening of mercury data.
 - (c) Vanadium and Compounds screening level used for Vanadium.
- Note:** Residential Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ = 0.1).
- L based on EPA's IEUBK Model for Lead in Children
- m Concentration may exceed ceiling limit
- s Concentration may exceed Csat
- nsI No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank
- NA Not Available
- mg/kg milligram per kilogram
- ARAR Applicable or Relevant and Appropriate Requirements

TABLE B-2.5.1
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-5 Surface soil (0 - 2ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Residential Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
AOC-5 Soil (0-2ft bgs)	7440-28-0	Thallium	6.50E-01 (J)	2.00E+00 (J)	(mg/kg)	SS-012	3 of 5	2.8 U - 3.4 U	2.00E+00	3.70E+00 (U)	nsi	Not Available	Y	No Screening Criteria
	No CAS	Vanadium (c)	1.08E+01 (B)	2.29E+01	(mg/kg)	SS-012	4 of 5	---	2.29E+01	1.49E+01	3.90E+01 n	Not Available	N	Max < RSL
	7440-66-6	Zinc	3.36E+01	1.08E+03	(mg/kg)	SS-012	5 of 5	---	1.08E+03	2.92E+02	2.30E+03 n	2,200	N	Max < RSL

Footnotes:

- (1) Minimum / Maximum detected concentration
 - (2) Maximum detected concentration used as screening value
 - (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
 - (4) US EPA Region 9 Master RSL Table December 2009 - Residential Soils
 - (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Residential site use.
 - (6) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Low detection freq.: analyte detected in less than 5% of samples in data set of at least 20 samples.
 - (a) Cr(VI) value used for screening of chromium data.
 - (b) Methylmercury value used for screening of mercury data.
 - (c) Vanadium and Compounds screening level used for Vanadium.
- Note:** Residential Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
 - c cancer
 - * where n SL < 100x c SL
 - ** where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ = 0.1).
 - L based on EPA's IEUBK Model for Lead in Children
 - m Concentration may exceed ceiling limit
 - s Concentration may exceed Csat
-
- nsi No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank
- NA Not Available
- mg/kg milligram per kilogram
- ARAR Applicable or Relevant and Appropriate Requirements

TABLE B-3.1.1.RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-1 Surface soil (0-2ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
SEMI-VOLATILE ORGANICS									
AOC-1 Soil 0-2ft bgs	Acenaphthylene	(mg/kg)	3.88E-01	4.77E-01 (NP)	1.90E+00 (J)	4.77E-01	(mg/kg)	95% KM (t)	(2)
	Bis(2-ethylhexyl)phthalate	(mg/kg)	5.11E+00	1.14E+01 (NP)	3.00E+01	1.14E+01	(mg/kg)	95% KM (Chebyshev)	(2)
	Benzo(a)anthracene	(mg/kg)	5.66E+00	2.41E+01 (NP)	3.00E+01 (D)	2.41E+01	(mg/kg)	99% KM (Chebyshev)	(2)
	Benzo(a)pyrene	(mg/kg)	5.87E+00	2.59E+01 (NP)	3.40E+01 (D)	2.59E+01	(mg/kg)	99% KM (Chebyshev)	(2)
	Benzo(b)fluoranthene	(mg/kg)	7.68E+00	1.85E+01 (NP)	4.00E+01 (D)	1.85E+01	(mg/kg)	95% KM (Chebyshev)	(2)
	Benzo(g,h,i)perylene	(mg/kg)	2.13E+00	1.05E+01 (NP)	1.60E+01	1.05E+01	(mg/kg)	99% KM (Chebyshev)	(2)
	Benzo(k)fluoranthene	(mg/kg)	3.67E+00	1.71E+01 (NP)	2.80E+01 (D)	1.71E+01	(mg/kg)	99% KM (Chebyshev)	(2)
	Carbazole	(mg/kg)	1.14E+00	5.15E+00 (NP)	7.30E+00	5.15E+00	(mg/kg)	99% KM (Chebyshev)	(2)
	Chrysene	(mg/kg)	5.65E+00	2.45E+01 (NP)	3.10E+01 (D)	2.45E+01	(mg/kg)	99% KM (Chebyshev)	(2)
	Di-n-octylphthalate	(mg/kg)	7.12E-01	1.40E+00 (NP)	5.00E+00	1.40E+00	(mg/kg)	95% KM (BCA)	(2)
	Dibenzo(a,h)anthracene	(mg/kg)	1.18E+00	5.86E+00 (NP)	7.40E+00	5.86E+00	(mg/kg)	99% KM (Chebyshev)	(2)
	Dimethylphthalate	(mg/kg)	5.47E-01	3.58E-01 (NP)	1.30E+00	3.58E-01	(mg/kg)	95% KM (t)	(2)
	Indeno(1,2,3-cd)pyrene	(mg/kg)	2.90E+00	1.33E+01 (NP)	2.00E+01 (J)	1.33E+01	(mg/kg)	99% KM (Chebyshev)	(3)
	Phenanthrene	(mg/kg)	6.20E+00	1.45E+01 (NP)	2.60E+01 (D)	1.45E+01	(mg/kg)	95% KM (Chebyshev)	(2)
PESTICIDES / PCBs									
AOC-1 Soil 0-2ft bgs	Endosulfan sulfate	(mg/kg)	*	--	5.70E-02 (NJ)	5.70E-02	(mg/kg)	--	(1)
	Dieldrin	(mg/kg)	1.21E-02	1.56E-02 (NP)	3.80E-02 (J)	1.56E-02	(mg/kg)	95% KM (Percentile Bootstrap)	(2)
	Endrin aldehyde	(mg/kg)	1.22E-02	9.60E-02 (NP)	9.60E-02	9.60E-02	(mg/kg)	95% KM (BCA)	(2)

TABLE B-3.1.1.RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-1 Surface soil (0-2ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
AOC-1 Soil 0-2ft bgs	Endrin ketone	(mg/kg)	1.75E-02	8.70E-02 (NP)	1.20E-01 (D)	8.70E-02	(mg/kg)	95% KM (Percentile Bootstrap) UCL	(2)
	Endosulfan II	(mg/kg)	2.12E-02	5.94E-02 (NP)	1.50E-01 (J)	5.94E-02	(mg/kg)	95% KM (Percentile Bootstrap)	(2)
	gamma-Chlordane	(mg/kg)	8.93E-03	--	3.80E-02 (J)	3.80E-02	(mg/kg)	--	(1)
	Aroclor-1254	(mg/kg)	5.04E-01	9.32E-01 (NP)	4.80E+00	9.32E-01	(mg/kg)	95% KM (t) UCL	(2)
	Aroclor-1260	(mg/kg)	9.90E-01	2.39E+00 (NP)	7.60E+00	2.39E+00	(mg/kg)	95% KM (Chebyshev)	(2)
METALS									
AOC-1 Soil 0-2ft bgs	Aluminum	(mg/kg)	1.01E+04	1.74E+04 (NP)	4.39E+04	1.74E+04	(mg/kg)	95% Chebyshev (Mean, Sd)	(3)
	Antimony	(mg/kg)	1.09E+01	3.27E+01 (NP)	7.67E+01	3.27E+01	(mg/kg)	97.5% KM (Chebyshev)	(2)
	Arsenic	(mg/kg)	1.04E+01	1.24E+01 (NP)	2.63E+01	1.24E+01	(mg/kg)	95% KM (t)	(2)
	Barium	(mg/kg)	2.80E+02	3.82E+02 (G)	1.79E+03	3.82E+02	(mg/kg)	95% Approximate Gamma	(6)
	Cadmium	(mg/kg)	4.52E+00	9.10E+00 (NP)	1.86E+01 (J)	9.10E+00	(mg/kg)	95% KM (Chebyshev)	(2)
	Chromium	(mg/kg)	7.42E+02	5.74E+03 (NP)	1.21E+04 (J)	5.74E+03	(mg/kg)	99% Chebyshev (Mean, Sd)	(3)
	Cobalt	(mg/kg)	1.14E+01	1.31E+01 (G)	2.85E+01	1.31E+01	(mg/kg)	95% Approximate Gamma	(6)
	Copper	(mg/kg)	1.14E+03	3.03E+03 (NP)	7.46E+03 (J)	3.03E+03	(mg/kg)	95% Chebyshev (MVUE)	(3)
	Iron	(mg/kg)	5.24E+04	6.84E+04 (LN)	2.24E+05	6.84E+04	(mg/kg)	95% H_UCL	(4)
	Lead	(mg/kg)	9.75E+02	--	3.03E+03 (J)	9.75E+02	(mg/kg)	Arithmetic Mean	(5)
	Manganese	(mg/kg)	5.75E+02	6.65E+02 (G)	1.13E+03	6.65E+02	(mg/kg)	95% Approximate Gamma	(6)

TABLE B-3.1.1.RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-1 Surface soil (0-2ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
AOC-1 Soil 0-2ft bgs	Mercury	(mg/kg)	6.85E-01	1.23E+00 (NP)	2.60E+00 (J)	1.23E+00	(mg/kg)	95% KM (Chebyshev)	(2)
	Nickel	(mg/kg)	1.08E+02	1.46E+02 (G)	4.81E+02	1.46E+02	(mg/kg)	95% Approximate Gamma	(6)
	Thallium	(mg/kg)	1.18E+00	1.25E+00 (NP)	4.60E+00	1.25E+00	(mg/kg)	95% KM (% Bootstrap)	(2)
	Vanadium	(mg/kg)	1.07E+02	1.75E+02 (LN)	8.41E+02	1.75E+02	(mg/kg)	95% H_UCL	(4)
	Zinc	(mg/kg)	1.35E+03	1.86E+03 (G)	5.08E+03	1.86E+03	(mg/kg)	95% Approximate Gamma	(6)

Footnotes:

- * Insufficient number of detected concentrations (less than three) to permit calculation of arithmetic mean.
- (1) Mean using DL/2, calculated by ProUCL 4.00.04
- (2) Upper Confidence Limit Statistic calculated by ProUCL 4.00.04
- (3) Statistic Used to determine Exposure Point Concentration

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- D Dilution
- J Estimated Value
- N presumptively Present

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because data have fewer than four detected concentrations. (2) Data have multiple DLs, Use of Kaplan-Meier method recommended by ProUCL 4.00.04. (3) Data do not follow a discernable distribution [ProUCL 4.00.04], nonparametric UCL recommended. (4) Data follow approximate lognormal distribution at 5% significance level. (5) Arithmetic mean used for EPC for lead. (6) Data follow a gamma distribution [ProUCL 4.00.04].

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

Note: No volatile organic compounds were determined to be chemicals of potential concern.



TABLE B-3-2-1 RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-2 Surface soil (0-2ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
SEMI-VOLATILE ORGANICS									
AOC-2 Soil (0 - 2ft bgs)	Acenaphthylene	(mg/kg)	7.32E-01	1.02E+00 (NP)	3.90E+00	1.02E+00	(mg/kg)	95% KM (BCA)	(2)
	Bis(2-ethylhexyl)phthalate	(mg/kg)	5.66E+00	1.57E+01 (NP)	6.20E+01 (D)	1.57E+01	(mg/kg)	95% KM (Chebyshev)	(2)
	Benzo(a)anthracene	(mg/kg)	8.88E+00	1.74E+01 (NP)	4.20E+01	1.74E+01	(mg/kg)	95% KM (Chebyshev)	(2)
	Benzo(a)pyrene	(mg/kg)	7.85E+00	1.53E+01 (NP)	3.80E+01	1.53E+01	(mg/kg)	95% KM (Chebyshev)	(2)
	Benzo(b)fluoranthene	(mg/kg)	1.24E+01	2.49E+01 (NP)	5.40E+01	2.49E+01	(mg/kg)	95% KM (Chebyshev)	(2)
	Benzo(g,h,i)perylene	(mg/kg)	2.51E+00	4.64E+00 (NP)	9.90E+00	4.64E+00	(mg/kg)	95% KM (Chebyshev)	(2)
	Benzo(k)fluoranthene	(mg/kg)	5.25E+00	1.03E+01 (NP)	2.00E+01	1.03E+01	(mg/kg)	95% KM (Chebyshev)	(2)
	Carbazole	(mg/kg)	1.10E+00	1.74E+00 (NP)	9.30E+00	1.74E+00	(mg/kg)	95% KM (BCA)	(2)
	Chrysene	(mg/kg)	9.56E+00	1.87E+01 (NP)	4.00E+01	1.87E+01	(mg/kg)	95% KM (Chebyshev)	(2)
	Di-n-octylphthalate	(mg/kg)	4.08E-01	4.99E-01 (NP)	2.50E+00 (J)	4.99E-01	(mg/kg)	95% KM (t)	(2)
	Dibenzo(a,h)anthracene	(mg/kg)	8.42E-01	1.16E+00 (NP)	4.10E+00	1.16E+00	(mg/kg)	95% KM (Percentile Bootstrap)	(2)
	Dimethylphthalate	(mg/kg)	2.62E-01	5.46E-01 (NP)	6.30E-01	5.46E-01	(mg/kg)	95% KM (Percentile Bootstrap)	(2)
	Indeno(1,2,3-cd)pyrene	(mg/kg)	3.51E+00	6.66E+00 (NP)	1.40E+01	6.66E+00	(mg/kg)	95% KM (Chebyshev)	(2)
	Naphthalene	(mg/kg)	6.45E-01	2.67E+00 (NP)	1.10E+01	2.67E+00	(mg/kg)	97.5% KM (Chebyshev)	(2)
	Phenanthrene	(mg/kg)	8.51E+00	1.97E+01 (NP)	7.30E+01	1.97E+01	(mg/kg)	95% KM (Chebyshev)	(2)
PESTICIDES / PCBs									
AOC-2 Soil (0 - 2ft bgs)	Endosulfan sulfate	(mg/kg)	6.53E-03	5.12E-03 (NP)	2.90E-02 (J)	5.12E-03	(mg/kg)	95% KM (t)	(2)
	Dieldrin	(mg/kg)	1.37E-02	2.35E-02 (NP)	1.20E-01 (NJ)	2.35E-02	(mg/kg)	95% KM (t)	(2)
	Endrin aldehyde	(mg/kg)	*	--	5.20E-02 (J)	5.20E-02	(mg/kg)	--	(1)
	Endrin ketone	(mg/kg)	1.65E-02	4.81E-02 (NP)	8.90E-02 (J)	4.81E-02	(mg/kg)	95% KM (Percentile Bootstrap)	(2)
	Endosulfan II	(mg/kg)	3.81E-02	8.52E-02 (NP)	6.70E-01 (J)	8.52E-02	(mg/kg)	95% KM (t)	(2)
	gamma-Chlordane	(mg/kg)	4.04E-03	--	3.20E-02 (NJ)	3.20E-02	(mg/kg)	--	(1)
	Aroclor-1254	(mg/kg)	1.50E-01	1.27E+00 (NP)	2.30E+00 (J)	1.27E+00	(mg/kg)	95% KM (Percentile Bootstrap)	(2)
	Aroclor-1260	(mg/kg)	6.51E-01	1.35E+00 (NP)	1.30E+01 (D)	1.35E+00	(mg/kg)	95% KM (t)	(2)

TABLE B-3-2-1 RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-2 Surface soil (0-2ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
METALS									
AOC-2 Soil (0 - 2ft bgs)	Aluminum	(mg/kg)	7.81E+03	9.33E+03 (NP)	1.31E+04 (J)	9.33E+03	(mg/kg)	95% Chebyshev (Mean, Sd)	(3)
	Antimony	(mg/kg)	2.47E+00	2.82E+00 (NP)	1.08E+01 (B)	2.82E+00	(mg/kg)	95% KM (BCA)	(2)
	Arsenic	(mg/kg)	8.11E+00	8.89E+00 (G)	1.41E+01	8.89E+00	(mg/kg)	95% Approximate Gamma	(5)
	Chromium	(mg/kg)	7.17E+01	1.62E+02 (NP)	6.22E+02 (J)	1.62E+02	(mg/kg)	95% Chebyshev (Mean, Sd)	(3)
	Cobalt	(mg/kg)	9.17E+00	9.68E+00 (G)	1.60E+01 (B)	9.68E+00	(mg/kg)	95% Approximate Gamma	(5)
	Copper	(mg/kg)	1.57E+02	3.03E+02 (NP)	4.71E+02	3.03E+02	(mg/kg)	95% Chebyshev (Mean, Sd)	(3)
	Iron	(mg/kg)	2.57E+04	2.88E+04 (G)	6.15E+04	2.88E+04	(mg/kg)	95% Approximate Gamma	(5)
	Lead	(mg/kg)	4.62E+02	--	2.36E+03	4.62E+02	(mg/kg)	Arithmetic Mean	(4)
	Manganese	(mg/kg)	6.87E+02	7.73E+02 (G)	1.49E+03 (J)	7.73E+02	(mg/kg)	95% Approximate Gamma	(5)
	Mercury	(mg/kg)	5.40E-01	1.41E+00 (NP)	1.90E+00 (J)	1.41E+00	(mg/kg)	97.5% KM (Chebyshev)	(2)
	Thallium	(mg/kg)	9.87E-01	1.08E+00 (NP)	2.20E+00 (J)	9.87E-01	(mg/kg)	95% KM (Percentile Bootstrap)	(2)
	Vanadium	(mg/kg)	3.44E+01	6.61E+01 (NP)	2.21E+02	3.44E+01	(mg/kg)	95% Chebyshev (Mean, Sd)	(3)
	Zinc	(mg/kg)	6.06E+02	7.96E+02 (G)	3.04E+03	6.06E+02	(mg/kg)	95% Approximate Gamma	(5)

Footnotes:

- * Insufficient data to compute arithmetic mean.
- (1) Raw data mean using DL/2, calculated by ProUCL 4.00.04
- (2) Upper Confidence Limit Statistic calculated by ProUCL 4.00.04
- (3) Statistic Used to determine Exposure Point Concentration

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because data have fewer than four detected concentrations. (2) Data have multiple DLs, Use of Kaplan-Meier method recommended by ProUCL 4.00.04. (3) Data do not follow a discernable distribution [ProUCL 4.00.04], nonparametric UCL recommended. (4) Arithmetic mean used for EPC for lead. (5) Data follow a gamma distribution.

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

Note: No volatile organic compounds were determined to be chemicals of potential concern.



TABLE B-3.3.1 RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-3 Surface soil (0 - 2ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution) (1)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (2)	Rationale
SEMI-VOLATILE ORGANICS									
AOC-3 Soil (0-2ft bgs)	Acenaphthylene	(mg/kg)	2.95E-01	---	4.90E-01 (J)	4.90E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Bis(2-ethylhexyl)phthalate	(mg/kg)	2.48E+00	---	7.40E+00	7.40E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(a)anthracene	(mg/kg)	2.11E+00	---	5.40E+00	5.40E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(a)pyrene	(mg/kg)	1.36E+00	---	3.30E+00 (J)	3.30E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(b)fluoranthene	(mg/kg)	2.80E+00	---	1.00E+01 (J)	1.00E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(g,h,i)perylene	(mg/kg)	6.95E-01	---	1.60E+00 (J)	1.60E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(k)fluoranthene	(mg/kg)	1.02E+00	---	2.30E+00 (J)	2.30E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Carbazole	(mg/kg)	2.88E-01	---	5.20E-01	5.20E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Dibenzo(a,h)anthracene	(mg/kg)	2.67E-01	---	4.60E-01 (J)	4.60E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Dimethylphthalate	(mg/kg)	8.90E-02	---	8.90E-02 (J)	8.90E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Indeno(1,2,3-cd)pyrene	(mg/kg)	7.42E-01	---	1.50E+00 (J)	1.50E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Phenanthrene	(mg/kg)	1.42E+00	---	2.80E+00	2.80E+00	(mg/kg)	Maximum Detected Concentration	(1)
PESTICIDES / PCBs									
AOC-3 Soil (0-2ft bgs)	Endosulfan sulfate	(mg/kg)	1.60E-02	---	1.60E-02	1.60E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Dieldrin	(mg/kg)	3.88E-02	---	6.80E-02 (J)	6.80E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Endrin ketone	(mg/kg)	2.70E-02	---	2.70E-02	2.70E-02	(mg/kg)	Maximum Detected Concentration	(1)
	gamma-Chlordane	(mg/kg)	1.10E-03	---	1.10E-03 (J)	1.10E-03	(mg/kg)	Maximum Detected Concentration	(1)
	Aroclor-1254	(mg/kg)	6.50E-01	---	6.50E-01 (J)	6.50E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Aroclor-1260	(mg/kg)	1.15E+01	---	4.30E+01 (J)	4.30E+01	(mg/kg)	Maximum Detected Concentration	(1)
METALS									
AOC-3 Soil (0-2ft bgs)	Aluminum	(mg/kg)	9.13E+03	---	1.09E+04	1.09E+04	(mg/kg)	Maximum Detected Concentration	(1)
	Antimony	(mg/kg)	2.41E+01	---	1.05E+02	1.05E+02	(mg/kg)	Maximum Detected Concentration	(1)
	Arsenic	(mg/kg)	9.64E+00	---	1.80E+01 (J)	1.80E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Barium	(mg/kg)	9.05E+02	---	5130	5.13E+03	(mg/kg)	Maximum Detected Concentration	(1)
	Cadmium	(mg/kg)	6.01E+00	---	1.49E+01	1.49E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Chromium	(mg/kg)	3.42E+01	---	5.62E+01	5.62E+01	(mg/kg)	Maximum Detected Concentration	(1)

TABLE B-3.3.1 RME
 EXPOSURE POINT CONCENTRATION SUMMARY
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: AOC-3 Surface soil (0 - 2ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution) (1)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (2)	Rationale
AOC-3 Soil (0-2ft bgs)	Cobalt	(mg/kg)	1.11E+01	---	1.57E+01	1.57E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Copper	(mg/kg)	1.65E+03	---	1.04E+04 (J)	1.04E+04	(mg/kg)	Maximum Detected Concentration	(1)
	Iron	(mg/kg)	3.08E+04	---	4.38E+04	4.38E+04	(mg/kg)	Maximum Detected Concentration	(1)
	Lead	(mg/kg)	3.33E+03	---	1.82E+04	1.82E+04	(mg/kg)	Maximum Detected Concentration	(1)
	Manganese	(mg/kg)	9.36E+02	---	2.01E+03 (J)	2.01E+03	(mg/kg)	Maximum Detected Concentration	(1)
	Silver	(mg/kg)	1.51E+01	---	6.14E+01	6.14E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Thallium	(mg/kg)	4.20E+00	---	4.20E+00 (J)	4.20E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Vanadium	(mg/kg)	6.22E+01	---	2.04E+02	2.04E+02	(mg/kg)	Maximum Detected Concentration	(1)
	Zinc	(mg/kg)	3.82E+03	---	1.60E+04	1.60E+04	(mg/kg)	Maximum Detected Concentration	(1)

Footnotes:

- (1) Upper Confidence Limit Statistic calculated by ProUCL software
- (2) Statistic Used to determine Exposure Point Concentration

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- J Estimated Value

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because the dataset has fewer than ten samples.

Note: No volatile organic compounds were determined to be chemicals of potential concern.

TABLE 3.4.1 RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-4 Surface soil (0 - 2ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
SEMI-VOLATILE ORGANICS									
AOC-4 Soil (0-2ft bgs)	Bis(2-ethylhexyl)phthalate	(mg/kg)	1.42E-01	2.04E-01 (NP)	8.00E-01 (J)	2.04E-01	(mg/kg)	95% KM (t)	(2)
	Benzo(a)anthracene	(mg/kg)	1.75E-01	2.66E-01 (NP)	1.30E+00 (J)	2.66E-01	(mg/kg)	95% KM (t)	(2)
	Benzo(a)pyrene	(mg/kg)	2.07E-01	3.68E-01 (NP)	1.70E+00 (J)	3.68E-01	(mg/kg)	95% KM (t)	(2)
	Benzo(b)fluoranthene	(mg/kg)	2.25E-01	--	2.00E+00 (J)	2.00E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(g,h,i)perylene	(mg/kg)	*	--	6.90E-02 (J)	6.90E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Carbazole	(mg/kg)	*	--	7.10E-03 (J)	7.10E-03	(mg/kg)	Maximum Detected Concentration	(1)
	Di-n-octylphthalate	(mg/kg)	*	--	2.20E-01	2.20E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Dibenzo(a,h)anthracene	(mg/kg)	*	--	1.40E+00 (J)	1.40E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Indeno(1,2,3-cd)pyrene	(mg/kg)	*	--	8.80E-01 (J)	8.80E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Phenanthrene	(mg/kg)	1.98E-01	3.09E-01 (NP)	1.60E+00 (J)	3.09E-01	(mg/kg)	95% KM (t)	(2)
PESTICIDES / PCBs									
AOC-4 Soil (0-2ft bgs)	Endrin aldehyde	(mg/kg)	*	--	1.10E-02 (J)	1.10E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Endrin ketone	(mg/kg)	*	--	1.40E-02 (NJ)	1.40E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Endosulfan II	(mg/kg)	*	--	2.60E-03 (J)	2.60E-03	(mg/kg)	Maximum Detected Concentration	(1)
	gamma-Chlordane	(mg/kg)	*	--	1.20E-03 (J)	1.20E-03	(mg/kg)	Maximum Detected Concentration	(1)
METALS									
AOC-4 Soil (0-2ft bgs)	Aluminum	(mg/kg)	6.60E+03	7.20E+03 (N)	8.24E+03	7.20E+03	(mg/kg)	95% Student's-t	(4)
	Antimony	(mg/kg)	1.46E+01	2.82E+01 (NP)	1.15E+02 (J)	2.82E+01	(mg/kg)	95% KM (t)	(2)
	Arsenic	(mg/kg)	5.94E+00	6.73E+00 (N)	1.09E+01 (J)	6.73E+00	(mg/kg)	95% Student's-t	(4)
	Chromium	(mg/kg)	1.06E+01	1.20E+01 (N)	1.84E+01 (J)	1.20E+01	(mg/kg)	95% Student's-t	(4)
	Cobalt	(mg/kg)	6.93E+00	7.77E+00 (N)	8.60E+00	7.77E+00	(mg/kg)	95% Student's-t	(4)
	Copper	(mg/kg)	8.30E+01	6.39E+02 (NP)	8.53E+02	6.39E+02	(mg/kg)	99% Chebyshev (Mean, Sd)	(3)
	Iron	(mg/kg)	1.75E+04	2.03E+04 (G)	4.07E+04 (J)	2.03E+04	(mg/kg)	95% Approximate Gamma	(6)
	Lead	(mg/kg)	9.82E+02	--	1.46E+04 (J)	9.82E+02	(mg/kg)	Arithmetic Mean	(5)
	Manganese	(mg/kg)	8.18E+02	9.75E+02 (N)	1.64E+03	9.75E+02	(mg/kg)	95% Student's-t	(4)
	Thallium	(mg/kg)	*	--	7.70E-01 (J)	7.70E-01	(mg/kg)	Maximum Detected Concentration	(1)

Footnotes:

- * Insufficient data to compute arithmetic mean.
- (1) Mean using DL/2, calculated by ProUCL 4.00.04
- (2) Upper Confidence Limit Statistic calculated by ProUCL 4.00.04
- (3) Statistic Used to determine Exposure Point Concentration

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- J Estimated Value
- N Presumptively Present

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because data have fewer than four detected concentrations. (2) Data have multiple DLs. Use of Kaplan-Meier method recommended by ProUCL 4.00.04. (3) Data do not follow a discernable distribution [ProUCL 4.00.04], nonparametric UCL recommended. (4) Data appear normally distributed. (5) Arithmetic mean conventionally used for EPC for lead. (6) Data follow a gamma distribution [ProUCL 4.00.04].

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

Note: No volatile organic compounds were determined to be chemicals of potential concern.

TABLE B-3.5.1 RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron Metal Facility
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-5 Surface soil (0 - 2ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution) (1)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (2)	Rationale
SEMI-VOLATILE ORGANICS									
AOC-5 Soil (0-2ft bgs)	Acenaphthylene	(mg/kg)	7.20E-02	--	7.20E-02 (J)	7.20E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Bis(2-ethylhexyl)phthalate	(mg/kg)	4.90E-01	--	4.90E-01 (J)	4.90E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(a)anthracene	(mg/kg)	2.87E-01	--	5.10E-01	5.10E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(a)pyrene	(mg/kg)	2.83E-01	--	5.00E-01 (J)	5.00E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(b)fluoranthene	(mg/kg)	3.14E-01	--	7.00E-01 (J)	7.00E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(g,h,i)perylene	(mg/kg)	9.05E-02	--	1.10E-01 (J)	1.10E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Indeno(1,2,3-cd)pyrene	(mg/kg)	1.60E-01	--	1.60E-01 (J)	1.60E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Phenanthrene	(mg/kg)	2.27E-01	--	5.20E-01	5.20E-01	(mg/kg)	Maximum Detected Concentration	(1)
PESTICIDES / PCBs									
AOC-5 Soil (0-2ft bgs)	Aroclor-1260	(mg/kg)	2.13E-01	--	4.00E-01	4.00E-01	(mg/kg)	Maximum Detected Concentration	(1)
METALS									
AOC-5 Soil (0-2ft bgs)	Aluminum	(mg/kg)	6.78E+03	--	1.06E+04 (J)	1.06E+04	(mg/kg)	Maximum Detected Concentration	(1)
	Antimony	(mg/kg)	2.57E+01	--	5.04E+01 (J)	5.04E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Arsenic	(mg/kg)	6.82E+00	--	1.29E+01	1.29E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Chromium	(mg/kg)	1.15E+01	--	1.81E+01 (J)	1.81E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Cobalt	(mg/kg)	9.53E+00	--	1.37E+01	1.37E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Copper	(mg/kg)	1.55E+02	--	4.69E+02	4.69E+02	(mg/kg)	Maximum Detected Concentration	(1)
	Iron	(mg/kg)	2.31E+04	--	3.82E+04	3.82E+04	(mg/kg)	Maximum Detected Concentration	(1)
	Lead	(mg/kg)	1.31E+03	--	3.28E+03	3.28E+03	(mg/kg)	Maximum Detected Concentration	(1)
	Manganese	(mg/kg)	4.22E+02	--	6.20E+02	6.20E+02	(mg/kg)	Maximum Detected Concentration	(1)
	Thallium	(mg/kg)	1.28E+00	--	2.00E+00 (J)	2.00E+00	(mg/kg)	Maximum Detected Concentration	(1)

Footnotes:

- (1) Upper Confidence Limit Statistic calculated by ProUCL software
- (2) Statistic Used to determine Exposure Point Concentration

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- J Estimated Value

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because the dataset has fewer than ten samples.

Note: No volatile organic compounds were determined to be chemicals of potential concern.

	A	B	C	D	E	F	G	H	I	J	K	L						
1				General UCL Statistics for Data Sets with Non-Detects														
2	User Selected Options																	
3	From File			\\prl-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProUCL_042														
4	Full Precision			OFF														
5	Confidence Coefficient			95%														
6	Number of Bootstrap Operations			2000														
7																		
8																		
9	Acenaphthylene																	
10																		
11	General Statistics																	
12	Number of Valid Data				23				Number of Detected Data				10					
13	Number of Distinct Detected Data				10				Number of Non-Detect Data				13					
14									Percent Non-Detects				56.52%					
15																		
16	Raw Statistics						Log-transformed Statistics											
17	Minimum Detected				0.059				Minimum Detected				-2.83					
18	Maximum Detected				1.9				Maximum Detected				0.642					
19	Mean of Detected				0.553				Mean of Detected				-1.148					
20	SD of Detected				0.586				SD of Detected				1.196					
21	Minimum Non-Detect				0.19				Minimum Non-Detect				-1.661					
22	Maximum Non-Detect				2.7				Maximum Non-Detect				0.993					
23																		
24	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						23					
25	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0					
26	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%					
27																		
28	UCL Statistics																	
29	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only											
30	Shapiro Wilk Test Statistic				0.815				Shapiro Wilk Test Statistic				0.936					
31	5% Shapiro Wilk Critical Value				0.842				5% Shapiro Wilk Critical Value				0.842					
32	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level											
33																		
34	Assuming Normal Distribution						Assuming Lognormal Distribution											
35	DL/2 Substitution Method								DL/2 Substitution Method									
36	Mean				0.388				Mean				-1.529					
37	SD				0.484				SD				1.053					
38	95% DL/2 (t) UCL				0.561				95% H-Stat (DL/2) UCL				0.638					
39																		
40	Maximum Likelihood Estimate(MLE) Method				N/A				Log ROS Method									
41	MLE method failed to converge properly						Mean in Log Scale						-1.871					
42							SD in Log Scale						1.061					
43							Mean in Original Scale						0.295					
44							SD in Original Scale						0.441					
45							95% Percentile Bootstrap UCL						0.461					
46							95% BCA Bootstrap UCL						0.523					
47																		
48	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only											
49	k star (bias corrected)				0.791				Data appear Gamma Distributed at 5% Significance Level									
50	Theta Star				0.7													
51	nu star				15.81													
52																		
53	A-D Test Statistic				0.271				Nonparametric Statistics									

	A	B	C	D	E	F	G	H	I	J	K	L
54	5% A-D Critical Value				0.748	Kaplan-Meier (KM) Method						
55	K-S Test Statistic				0.748	Mean						0.302
56	5% K-S Critical Value				0.274	SD						0.446
57	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						0.102
58						95% KM (t) UCL						0.477
59	Assuming Gamma Distribution					95% KM (z) UCL						0.469
60	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						0.472
61	Minimum				0.059	95% KM (bootstrap t) UCL						0.634
62	Maximum				1.9	95% KM (BCA) UCL						0.496
63	Mean				0.55	95% KM (Percentile Bootstrap) UCL						0.495
64	Median				0.541	95% KM (Chebyshev) UCL						0.746
65	SD				0.375	97.5% KM (Chebyshev) UCL						0.937
66	k star				1.959	99% KM (Chebyshev) UCL						1.314
67	Theta star				0.281							
68	Nu star				90.1	Potential UCLs to Use						
69	AppChi2				69.22	95% KM (t) UCL						0.477
70	95% Gamma Approximate UCL				0.716							
71	95% Adjusted Gamma UCL				0.73							
72	Note: DL/2 is not a recommended method.											
73												
74												
75	Benzo(a)anthracene											
76												
77	General Statistics											
78	Number of Valid Data				23	Number of Detected Data				21		
79	Number of Distinct Detected Data				18	Number of Non-Detect Data				2		
80						Percent Non-Detects				8.70%		
81												
82	Raw Statistics					Log-transformed Statistics						
83	Minimum Detected				0.063	Minimum Detected				-2.765		
84	Maximum Detected				30	Maximum Detected				3.401		
85	Mean of Detected				6.162	Mean of Detected				0.478		
86	SD of Detected				9.113	SD of Detected				1.855		
87	Minimum Non-Detect				0.19	Minimum Non-Detect				-1.661		
88	Maximum Non-Detect				1.3	Maximum Non-Detect				0.262		
89												
90	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				13		
91	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				10		
92	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				56.52%		
93												
94	UCL Statistics											
95	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
96	Shapiro Wilk Test Statistic				0.702	Shapiro Wilk Test Statistic				0.953		
97	5% Shapiro Wilk Critical Value				0.908	5% Shapiro Wilk Critical Value				0.908		
98	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
99												
100	Assuming Normal Distribution					Assuming Lognormal Distribution						
101	DL/2 Substitution Method					DL/2 Substitution Method						
102	Mean				5.658	Mean				0.315		
103	SD				8.848	SD				1.871		
104	95% DL/2 (t) UCL				8.826	95% H-Stat (DL/2) UCL				35.27		
105												
106	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						

A	B	C	D	E	F	G	H	I	J	K	L
107	MLE yields a negative mean					Mean in Log Scale					0.296
108						SD in Log Scale					1.882
109						Mean in Original Scale					5.648
110						SD in Original Scale					8.854
111						95% Percentile Bootstrap UCL					8.708
112						95% BCA Bootstrap UCL					9.337
113											
114	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
115	k star (bias corrected)			0.441		Data appear Lognormal at 5% Significance Level					
116	Theta Star			13.98							
117	nu star			18.52							
118											
119	A-D Test Statistic			0.888		Nonparametric Statistics					
120	5% A-D Critical Value			0.81		Kaplan-Meier (KM) Method					
121	K-S Test Statistic			0.81		Mean					5.654
122	5% K-S Critical Value			0.201		SD					8.656
123	Data not Gamma Distributed at 5% Significance Level					SE of Mean					1.85
124						95% KM (t) UCL					8.83
125	Assuming Gamma Distribution					95% KM (z) UCL					8.696
126	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					8.823
127	Minimum			1E-09		95% KM (bootstrap t) UCL					10.08
128	Maximum			30		95% KM (BCA) UCL					8.66
129	Mean			5.626		95% KM (Percentile Bootstrap) UCL					8.764
130	Median			1.2		95% KM (Chebyshev) UCL					13.72
131	SD			8.868		97.5% KM (Chebyshev) UCL					17.2
132	k star			0.231		99% KM (Chebyshev) UCL					24.06
133	Theta star			24.35							
134	Nu star			10.63		Potential UCLs to Use					
135	AppChi2			4.338		99% KM (Chebyshev) UCL					24.06
136	95% Gamma Approximate UCL			13.78							
137	95% Adjusted Gamma UCL			14.76							
138	Note: DL/2 is not a recommended method.										
139											
140											
141	Benzo(a)pyrene										
142											
143	General Statistics										
144	Number of Valid Data			23		Number of Detected Data			20		
145	Number of Distinct Detected Data			18		Number of Non-Detect Data			3		
146						Percent Non-Detects			13.04%		
147											
148	Raw Statistics					Log-transformed Statistics					
149	Minimum Detected			0.084		Minimum Detected			-2.477		
150	Maximum Detected			34		Maximum Detected			3.526		
151	Mean of Detected			6.695		Mean of Detected			0.627		
152	SD of Detected			10.09		SD of Detected			1.793		
153	Minimum Non-Detect			0.19		Minimum Non-Detect			-1.661		
154	Maximum Non-Detect			1.3		Maximum Non-Detect			0.262		
155											
156	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					12
157	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					11
158	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					52.17%
159											

A	B	C	D	E	F	G	H	I	J	K	L
160	UCL Statistics										
161	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
162	Shapiro Wilk Test Statistic				0.687	Shapiro Wilk Test Statistic				0.949	
163	5% Shapiro Wilk Critical Value				0.905	5% Shapiro Wilk Critical Value				0.905	
164	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
165											
166	Assuming Normal Distribution					Assuming Lognormal Distribution					
167	DL/2 Substitution Method					DL/2 Substitution Method					
168	Mean				5.867	Mean				0.373	
169	SD				9.628	SD				1.82	
170	95% DL/2 (t) UCL				9.315	95% H-Stat (DL/2) UCL				34.48	
171											
172	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
173	MLE yields a negative mean					Mean in Log Scale				0.325	
174						SD in Log Scale				1.861	
175						Mean in Original Scale				5.85	
176						SD in Original Scale				9.638	
177						95% Percentile Bootstrap UCL				9.435	
178						95% BCA Bootstrap UCL				10.01	
179											
180	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
181	k star (bias corrected)				0.457	Data appear Lognormal at 5% Significance Level					
182	Theta Star				14.64						
183	nu star				18.29						
184											
185	A-D Test Statistic				0.908	Nonparametric Statistics					
186	5% A-D Critical Value				0.803	Kaplan-Meier (KM) Method					
187	K-S Test Statistic				0.803	Mean				5.858	
188	5% K-S Critical Value				0.205	SD				9.422	
189	Data not Gamma Distributed at 5% Significance Level					SE of Mean				2.016	
190						95% KM (t) UCL				9.319	
191	Assuming Gamma Distribution					95% KM (z) UCL				9.173	
192	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				9.307	
193	Minimum				1E-09	95% KM (bootstrap t) UCL				11.15	
194	Maximum				34	95% KM (BCA) UCL				9.308	
195	Mean				5.822	95% KM (Percentile Bootstrap) UCL				9.269	
196	Median				1.2	95% KM (Chebyshev) UCL				14.64	
197	SD				9.655	97.5% KM (Chebyshev) UCL				18.45	
198	k star				0.194	99% KM (Chebyshev) UCL				25.91	
199	Theta star				30.06						
200	Nu star				8.908	Potential UCLs to Use					
201	AppChi2				3.272	99% KM (Chebyshev) UCL				25.91	
202	95% Gamma Approximate UCL				15.85						
203	95% Adjusted Gamma UCL				17.13						
204	Note: DL/2 is not a recommended method.										
205											
206											
207	Benzo(b)fluoranthene										
208											
209	General Statistics										
210	Number of Valid Data				23	Number of Detected Data				20	
211	Number of Distinct Detected Data				19	Number of Non-Detect Data				3	
212						Percent Non-Detects				13.04%	

	A	B	C	D	E	F	G	H	I	J	K	L
213												
214	Raw Statistics						Log-transformed Statistics					
215	Minimum Detected				0.088		Minimum Detected				-2.43	
216	Maximum Detected				40		Maximum Detected				3.689	
217	Mean of Detected				8.78		Mean of Detected				1.025	
218	SD of Detected				12.41		SD of Detected				1.756	
219	Minimum Non-Detect				0.19		Minimum Non-Detect				-1.661	
220	Maximum Non-Detect				1.3		Maximum Non-Detect				0.262	
221												
222	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				8	
223	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				15	
224	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				34.78%	
225												
226	UCL Statistics											
227	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
228	Shapiro Wilk Test Statistic				0.706		Shapiro Wilk Test Statistic				0.961	
229	5% Shapiro Wilk Critical Value				0.905		5% Shapiro Wilk Critical Value				0.905	
230	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
231												
232	Assuming Normal Distribution						Assuming Lognormal Distribution					
233	DL/2 Substitution Method						DL/2 Substitution Method					
234	Mean				7.681		Mean				0.718	
235	SD				11.89		SD				1.845	
236	95% DL/2 (t) UCL				11.94		95% H-Stat (DL/2) UCL				50.7	
237												
238	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
239	Mean				4.029		Mean in Log Scale				0.685	
240	SD				15.53		SD in Log Scale				1.867	
241	95% MLE (t) UCL				9.591		Mean in Original Scale				7.664	
242	95% MLE (Tiku) UCL				10.03		SD in Original Scale				11.9	
243							95% Percentile Bootstrap UCL				11.96	
244							95% BCA Bootstrap UCL				12.94	
245												
246	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
247	k star (bias corrected)				0.497		Data appear Gamma Distributed at 5% Significance Level					
248	Theta Star				17.65							
249	nu star				19.9							
250												
251	A-D Test Statistic				0.584		Nonparametric Statistics					
252	5% A-D Critical Value				0.798		Kaplan-Meier (KM) Method					
253	K-S Test Statistic				0.798		Mean				7.664	
254	5% K-S Critical Value				0.204		SD				11.64	
255	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				2.491	
256							95% KM (t) UCL				11.94	
257	Assuming Gamma Distribution						95% KM (z) UCL				11.76	
258	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				11.93	
259	Minimum				1E-09		95% KM (bootstrap t) UCL				14.09	
260	Maximum				40		95% KM (BCA) UCL				11.75	
261	Mean				7.635		95% KM (Percentile Bootstrap) UCL				12.16	
262	Median				2.2		95% KM (Chebyshev) UCL				18.52	
263	SD				11.92		97.5% KM (Chebyshev) UCL				23.22	
264	k star				0.196		99% KM (Chebyshev) UCL				32.45	
265	Theta star				38.87							

	A	B	C	D	E	F	G	H	I	J	K	L	
266					Nu star	9.035	Potential UCLs to Use						
267					AppChi2	3.348	95% KM (Chebyshev) UCL					18.52	
268					95% Gamma Approximate UCL	20.6							
269					95% Adjusted Gamma UCL	22.25							
270	Note: DL/2 is not a recommended method.												
271													
272													
273	Benzo(g,h,i)perylene												
274													
275	General Statistics												
276					Number of Valid Data	22					Number of Detected Data	18	
277					Number of Distinct Detected Data	15					Number of Non-Detect Data	4	
278											Percent Non-Detects	18.18%	
279													
280	Raw Statistics						Log-transformed Statistics						
281					Minimum Detected	0.12					Minimum Detected	-2.12	
282					Maximum Detected	16					Maximum Detected	2.773	
283					Mean of Detected	2.537					Mean of Detected	-0.42	
284					SD of Detected	4.248					SD of Detected	1.686	
285					Minimum Non-Detect	0.19					Minimum Non-Detect	-1.661	
286					Maximum Non-Detect	1.3					Maximum Non-Detect	0.262	
287													
288	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	16
289	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	6
290	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	72.73%
291													
292	UCL Statistics												
293	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
294					Shapiro Wilk Test Statistic	0.643					Shapiro Wilk Test Statistic	0.805	
295					5% Shapiro Wilk Critical Value	0.897					5% Shapiro Wilk Critical Value	0.897	
296	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
297													
298	Assuming Normal Distribution						Assuming Lognormal Distribution						
299					DL/2 Substitution Method						DL/2 Substitution Method		
300					Mean	2.128					Mean	-0.629	
301					SD	3.926					SD	1.622	
302					95% DL/2 (t) UCL	3.568					95% H-Stat (DL/2) UCL	7.179	
303													
304					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
305	MLE yields a negative mean											Mean in Log Scale	-0.673
306											SD in Log Scale	1.631	
307											Mean in Original Scale	2.11	
308											SD in Original Scale	3.934	
309											95% Percentile Bootstrap UCL	3.574	
310											95% BCA Bootstrap UCL	4.117	
311													
312	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
313					k star (bias corrected)	0.432	Data do not follow a Discernable Distribution (0.05)						
314					Theta Star	5.872							
315					nu star	15.56							
316													
317					A-D Test Statistic	1.86	Nonparametric Statistics						
318					5% A-D Critical Value	0.806	Kaplan-Meier (KM) Method						

A	B	C	D	E	F	G	H	I	J	K	L
319	K-S Test Statistic				0.806	Mean				2.11	
320	5% K-S Critical Value				0.216	SD				3.843	
321	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.843	
322						95% KM (t) UCL				3.561	
323	Assuming Gamma Distribution					95% KM (z) UCL				3.497	
324	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				3.554	
325	Minimum				1E-09	95% KM (bootstrap t) UCL				4.72	
326	Maximum				16	95% KM (BCA) UCL				3.743	
327	Mean				2.173	95% KM (Percentile Bootstrap) UCL				3.551	
328	Median				0.24	95% KM (Chebyshev) UCL				5.786	
329	SD				3.909	97.5% KM (Chebyshev) UCL				7.376	
330	k star				0.304	99% KM (Chebyshev) UCL				10.5	
331	Theta star				7.141						
332	Nu star				13.39	Potential UCLs to Use					
333	AppChi2				6.156	99% KM (Chebyshev) UCL				10.5	
334	95% Gamma Approximate UCL				4.727						
335	95% Adjusted Gamma UCL				5.024						
336	Note: DL/2 is not a recommended method.										
337											
338											
339	Benzo(k)fluoranthene										
340											
341	General Statistics										
342	Number of Valid Data				23	Number of Detected Data				20	
343	Number of Distinct Detected Data				19	Number of Non-Detect Data				3	
344						Percent Non-Detects				13.04%	
345											
346	Raw Statistics					Log-transformed Statistics					
347	Minimum Detected				0.069	Minimum Detected				-2.674	
348	Maximum Detected				28	Maximum Detected				3.332	
349	Mean of Detected				4.169	Mean of Detected				0.23	
350	SD of Detected				6.79	SD of Detected				1.689	
351	Minimum Non-Detect				0.19	Minimum Non-Detect				-1.661	
352	Maximum Non-Detect				1.3	Maximum Non-Detect				0.262	
353											
354	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				15	
355	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				8	
356	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				65.22%	
357											
358	UCL Statistics										
359	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
360	Shapiro Wilk Test Statistic				0.636	Shapiro Wilk Test Statistic				0.961	
361	5% Shapiro Wilk Critical Value				0.905	5% Shapiro Wilk Critical Value				0.905	
362	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
363											
364	Assuming Normal Distribution					Assuming Lognormal Distribution					
365	DL/2 Substitution Method					DL/2 Substitution Method					
366	Mean				3.671	Mean				0.0271	
367	SD				6.446	SD				1.684	
368	95% DL/2 (t) UCL				5.979	95% H-Stat (DL/2) UCL				16.57	
369											
370	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
371	MLE yields a negative mean					Mean in Log Scale				-0.00421	

	A	B	C	D	E	F	G	H	I	J	K	L
372											SD in Log Scale	1.702
373											Mean in Original Scale	3.658
374											SD in Original Scale	6.453
375											95% Percentile Bootstrap UCL	5.955
376											95% BCA Bootstrap UCL	6.568
377												
378	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
379					k star (bias corrected)	0.481	Data appear Lognormal at 5% Significance Level					
380					Theta Star	8.677						
381					nu star	19.22						
382												
383					A-D Test Statistic	0.857	Nonparametric Statistics					
384					5% A-D Critical Value	0.8	Kaplan-Meier (KM) Method					
385					K-S Test Statistic	0.8	Mean					
386					5% K-S Critical Value	0.205	SD					
387	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
388							95% KM (t) UCL					
389	Assuming Gamma Distribution						95% KM (z) UCL					
390	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
391					Minimum	1E-09	95% KM (bootstrap t) UCL					
392					Maximum	28	95% KM (BCA) UCL					
393					Mean	3.658	95% KM (Percentile Bootstrap) UCL					
394					Median	0.78	95% KM (Chebyshev) UCL					
395					SD	6.454	97.5% KM (Chebyshev) UCL					
396					k star	0.242	99% KM (Chebyshev) UCL					
397					Theta star	15.13						
398					Nu star	11.12	Potential UCLs to Use					
399					AppChi2	4.656	99% KM (Chebyshev) UCL					
400					95% Gamma Approximate UCL	8.739						
401					95% Adjusted Gamma UCL	9.342						
402	Note: DL/2 is not a recommended method.											
403												
404												
405	Bis(2-ethylhexyl)phthalate											
406												
407	General Statistics											
408					Number of Valid Data	23					Number of Detected Data	21
409					Number of Distinct Detected Data	20					Number of Non-Detect Data	2
410											Percent Non-Detects	8.70%
411												
412	Raw Statistics						Log-transformed Statistics					
413					Minimum Detected	0.16					Minimum Detected	-1.833
414					Maximum Detected	30					Maximum Detected	3.401
415					Mean of Detected	5.562					Mean of Detected	0.932
416					SD of Detected	7.044					SD of Detected	1.428
417					Minimum Non-Detect	0.19					Minimum Non-Detect	-1.661
418					Maximum Non-Detect	1.3					Maximum Non-Detect	0.262
419												
420	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
421	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
422	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
423												
424	UCL Statistics											

A	B	C	D	E	F	G	H	I	J	K	L
425	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
426	Shapiro Wilk Test Statistic				0.734	Shapiro Wilk Test Statistic				0.97	
427	5% Shapiro Wilk Critical Value				0.908	5% Shapiro Wilk Critical Value				0.908	
428	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
429											
430	Assuming Normal Distribution					Assuming Lognormal Distribution					
431	DL/2 Substitution Method					DL/2 Substitution Method					
432	Mean				5.111	Mean				0.73	
433	SD				6.882	SD				1.544	
434	95% DL/2 (t) UCL				7.575	95% H-Stat (DL/2) UCL				18.1	
435											
436	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
437	Mean				3.135	Mean in Log Scale				0.731	
438	SD				8.932	SD in Log Scale				1.525	
439	95% MLE (t) UCL				6.333	Mean in Original Scale				5.104	
440	95% MLE (Tiku) UCL				6.588	SD in Original Scale				6.886	
441						95% Percentile Bootstrap UCL				7.522	
442						95% BCA Bootstrap UCL				8.456	
443											
444	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
445	k star (bias corrected)				0.685	Data appear Gamma Distributed at 5% Significance Level					
446	Theta Star				8.125						
447	nu star				28.75						
448											
449	A-D Test Statistic				0.234	Nonparametric Statistics					
450	5% A-D Critical Value				0.782	Kaplan-Meier (KM) Method					
451	K-S Test Statistic				0.782	Mean				5.106	
452	5% K-S Critical Value				0.197	SD				6.734	
453	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				1.439	
454						95% KM (t) UCL				7.577	
455	Assuming Gamma Distribution					95% KM (z) UCL				7.473	
456	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				7.566	
457	Minimum				1E-09	95% KM (bootstrap t) UCL				9.047	
458	Maximum				30	95% KM (BCA) UCL				7.932	
459	Mean				5.079	95% KM (Percentile Bootstrap) UCL				7.572	
460	Median				2.3	95% KM (Chebyshev) UCL				11.38	
461	SD				6.905	97.5% KM (Chebyshev) UCL				14.09	
462	k star				0.265	99% KM (Chebyshev) UCL				19.42	
463	Theta star				19.13						
464	Nu star				12.21	Potential UCLs to Use					
465	AppChi2				5.367	95% KM (Chebyshev) UCL				11.38	
466	95% Gamma Approximate UCL				11.56						
467	95% Adjusted Gamma UCL				12.3						
468	Note: DL/2 is not a recommended method.										
469											
470											
471	Carbazole										
472											
473	General Statistics										
474	Number of Valid Data				23	Number of Detected Data				17	
475	Number of Distinct Detected Data				15	Number of Non-Detect Data				6	
476						Percent Non-Detects				26.09%	
477											

A	B	C	D	E	F	G	H	I	J	K	L
478	Raw Statistics					Log-transformed Statistics					
479	Minimum Detected				0.016	Minimum Detected				-4.135	
480	Maximum Detected				7.3	Maximum Detected				1.988	
481	Mean of Detected				1.465	Mean of Detected				-0.937	
482	SD of Detected				2.148	SD of Detected				1.832	
483	Minimum Non-Detect				0.19	Minimum Non-Detect				-1.661	
484	Maximum Non-Detect				1.3	Maximum Non-Detect				0.262	
485											
486	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				17	
487	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				6	
488	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				73.91%	
489											
490	UCL Statistics										
491	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
492	Shapiro Wilk Test Statistic				0.718	Shapiro Wilk Test Statistic				0.935	
493	5% Shapiro Wilk Critical Value				0.892	5% Shapiro Wilk Critical Value				0.892	
494	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
495											
496	Assuming Normal Distribution					Assuming Lognormal Distribution					
497	DL/2 Substitution Method					DL/2 Substitution Method					
498	Mean				1.141	Mean				-1.166	
499	SD				1.917	SD				1.657	
500	95% DL/2 (t) UCL				1.828	95% H-Stat (DL/2) UCL				4.149	
501											
502	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
503	MLE yields a negative mean					Mean in Log Scale				-1.279	
504						SD in Log Scale				1.681	
505						Mean in Original Scale				1.112	
506						SD in Original Scale				1.93	
507						95% Percentile Bootstrap UCL				1.797	
508						95% BCA Bootstrap UCL				1.978	
509											
510	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
511	k star (bias corrected)				0.438	Data appear Lognormal at 5% Significance Level					
512	Theta Star				3.345						
513	nu star				14.89						
514											
515	A-D Test Statistic				0.878	Nonparametric Statistics					
516	5% A-D Critical Value				0.801	Kaplan-Meier (KM) Method					
517	K-S Test Statistic				0.801	Mean				1.112	
518	5% K-S Critical Value				0.221	SD				1.888	
519	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.406	
520						95% KM (t) UCL				1.809	
521	Assuming Gamma Distribution					95% KM (z) UCL				1.78	
522	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				1.804	
523	Minimum				0.016	95% KM (bootstrap t) UCL				2.248	
524	Maximum				7.3	95% KM (BCA) UCL				1.828	
525	Mean				1.375	95% KM (Percentile Bootstrap) UCL				1.794	
526	Median				0.802	95% KM (Chebyshev) UCL				2.881	
527	SD				1.841	97.5% KM (Chebyshev) UCL				3.647	
528	k star				0.571	99% KM (Chebyshev) UCL				5.15	
529	Theta star				2.407						
530	Nu star				26.27	Potential UCLs to Use					

A	B	C	D	E	F	G	H	I	J	K	L
531	AppChi2				15.59	99% KM (Chebyshev) UCL				5.15	
532	95% Gamma Approximate UCL				2.317						
533	95% Adjusted Gamma UCL				2.409						
534	Note: DL/2 is not a recommended method.										
535											
536											
537	Chrysene										
538											
539	General Statistics										
540	Number of Valid Data				23	Number of Detected Data				22	
541	Number of Distinct Detected Data				21	Number of Non-Detect Data				1	
542						Percent Non-Detects				4.35%	
543											
544	Raw Statistics					Log-transformed Statistics					
545	Minimum Detected				0.085	Minimum Detected				-2.465	
546	Maximum Detected				31	Maximum Detected				3.434	
547	Mean of Detected				5.898	Mean of Detected				0.431	
548	SD of Detected				9.19	SD of Detected				1.801	
549	Minimum Non-Detect				0.19	Minimum Non-Detect				-1.661	
550	Maximum Non-Detect				0.19	Maximum Non-Detect				-1.661	
551											
552											
553	UCL Statistics										
554	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
555	Shapiro Wilk Test Statistic				0.673	Shapiro Wilk Test Statistic				0.945	
556	5% Shapiro Wilk Critical Value				0.911	5% Shapiro Wilk Critical Value				0.911	
557	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
558											
559	Assuming Normal Distribution					Assuming Lognormal Distribution					
560	DL/2 Substitution Method					DL/2 Substitution Method					
561	Mean				5.645	Mean				0.31	
562	SD				9.059	SD				1.853	
563	95% DL/2 (t) UCL				8.889	95% H-Stat (DL/2) UCL				29.7	
564											
565	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
566	Mean				4.833	Mean in Log Scale				0.294	
567	SD				9.763	SD in Log Scale				1.878	
568	95% MLE (t) UCL				8.328	Mean in Original Scale				5.644	
569	95% MLE (Tiku) UCL				8.163	SD in Original Scale				9.06	
570						95% Percentile Bootstrap UCL				8.921	
571						95% BCA Bootstrap UCL				9.773	
572											
573	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
574	k star (bias corrected)				0.442	Data appear Lognormal at 5% Significance Level					
575	Theta Star				13.35						
576	nu star				19.44						
577											
578	A-D Test Statistic				1.063	Nonparametric Statistics					
579	5% A-D Critical Value				0.809	Kaplan-Meier (KM) Method					
580	K-S Test Statistic				0.809	Mean				5.645	
581	5% K-S Critical Value				0.196	SD				8.86	
582	Data not Gamma Distributed at 5% Significance Level					SE of Mean				1.891	
583						95% KM (t) UCL				8.892	

A	B	C	D	E	F	G	H	I	J	K	L
584	Assuming Gamma Distribution					95% KM (z) UCL					8.756
585	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					8.889
586	Minimum			1E-09		95% KM (bootstrap t) UCL					10.21
587	Maximum			31		95% KM (BCA) UCL					9.39
588	Mean			5.641		95% KM (Percentile Bootstrap) UCL					8.97
589	Median			1.2		95% KM (Chebyshev) UCL					13.89
590	SD			9.062		97.5% KM (Chebyshev) UCL					17.45
591	k star			0.298		99% KM (Chebyshev) UCL					24.46
592	Theta star			18.93							
593	Nu star			13.7		Potential UCLs to Use					
594	AppChi2			6.369		99% KM (Chebyshev) UCL					24.46
595	95% Gamma Approximate UCL			12.14							
596	95% Adjusted Gamma UCL			12.87							
597	Note: DL/2 is not a recommended method.										
598											
599											
600	Dibenzo(a,h)anthracene										
601											
602	General Statistics										
603	Number of Valid Data			18		Number of Detected Data			14		
604	Number of Distinct Detected Data			13		Number of Non-Detect Data			4		
605						Percent Non-Detects			22.22%		
606											
607	Raw Statistics					Log-transformed Statistics					
608	Minimum Detected			0.053		Minimum Detected			-2.937		
609	Maximum Detected			7.4		Maximum Detected			2.001		
610	Mean of Detected			1.434		Mean of Detected			-1.081		
611	SD of Detected			2.186		SD of Detected			1.902		
612	Minimum Non-Detect			0.19		Minimum Non-Detect			-1.661		
613	Maximum Non-Detect			1.3		Maximum Non-Detect			0.262		
614											
615	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect			13		
616	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected			5		
617	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage			72.22%		
618											
619	UCL Statistics										
620	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
621	Shapiro Wilk Test Statistic			0.707		Shapiro Wilk Test Statistic			0.821		
622	5% Shapiro Wilk Critical Value			0.874		5% Shapiro Wilk Critical Value			0.874		
623	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
624											
625	Assuming Normal Distribution					Assuming Lognormal Distribution					
626	DL/2 Substitution Method					DL/2 Substitution Method					
627	Mean			1.179		Mean			-1.189		
628	SD			1.976		SD			1.721		
629	95% DL/2 (t) UCL			1.989		95% H-Stat (DL/2) UCL			6.822		
630											
631	Maximum Likelihood Estimate(MLE) Method			N/A		Log ROS Method					
632	MLE yields a negative mean					Mean in Log Scale			-1.339		
633						SD in Log Scale			1.738		
634						Mean in Original Scale			1.139		
635						SD in Original Scale			1.994		
636						95% Percentile Bootstrap UCL			1.923		

A	B	C	D	E	F	G	H	I	J	K	L
637						95% BCA Bootstrap UCL					2.178
638											
639	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
640	k star (bias corrected)				0.4	Data do not follow a Discernable Distribution (0.05)					
641	Theta Star				3.584						
642	nu star				11.2						
643											
644	A-D Test Statistic				1.138	Nonparametric Statistics					
645	5% A-D Critical Value				0.803	Kaplan-Meier (KM) Method					
646	K-S Test Statistic				0.803	Mean					1.136
647	5% K-S Critical Value				0.243	SD					1.939
648	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.475
649						95% KM (t) UCL					1.962
650	Assuming Gamma Distribution					95% KM (z) UCL					1.917
651	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					1.955
652	Minimum				0.053	95% KM (bootstrap t) UCL					2.599
653	Maximum				7.4	95% KM (BCA) UCL					1.982
654	Mean				1.27	95% KM (Percentile Bootstrap) UCL					1.949
655	Median				0.53	95% KM (Chebyshev) UCL					3.205
656	SD				1.938	97.5% KM (Chebyshev) UCL					4.1
657	k star				0.486	99% KM (Chebyshev) UCL					5.858
658	Theta star				2.611						
659	Nu star				17.51	Potential UCLs to Use					
660	AppChi2				9.036	99% KM (Chebyshev) UCL					5.858
661	95% Gamma Approximate UCL				2.461						
662	95% Adjusted Gamma UCL				2.63						
663	Note: DL/2 is not a recommended method.										
664											
665											
666	Dimethylphthalate										
667											
668	General Statistics										
669	Number of Valid Data				23	Number of Detected Data				7	
670	Number of Distinct Detected Data				7	Number of Non-Detect Data				16	
671						Percent Non-Detects				69.57%	
672											
673	Raw Statistics					Log-transformed Statistics					
674	Minimum Detected				0.092	Minimum Detected				-2.386	
675	Maximum Detected				1.3	Maximum Detected				0.262	
676	Mean of Detected				0.389	Mean of Detected				-1.308	
677	SD of Detected				0.416	SD of Detected				0.874	
678	Minimum Non-Detect				0.19	Minimum Non-Detect				-1.661	
679	Maximum Non-Detect				5.4	Maximum Non-Detect				1.686	
680											
681	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				23	
682	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				0	
683	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				100.00%	
684											
685	Warning: There are only 7 Detected Values in this data										
686	Note: It should be noted that even though bootstrap may be performed on this data set										
687	the resulting calculations may not be reliable enough to draw conclusions										
688											
689	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										

	A	B	C	D	E	F	G	H	I	J	K	L	
690													
691													
692	UCL Statistics												
693	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
694	Shapiro Wilk Test Statistic					0.697	Shapiro Wilk Test Statistic					0.941	
695	5% Shapiro Wilk Critical Value					0.803	5% Shapiro Wilk Critical Value					0.803	
696	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
697													
698	Assuming Normal Distribution						Assuming Lognormal Distribution						
699	DL/2 Substitution Method						DL/2 Substitution Method						
700	Mean					0.547	Mean					-1.187	
701	SD					0.64	SD					1.096	
702	95% DL/2 (t) UCL					0.776	95% H-Stat (DL/2) UCL					1.253	
703													
704	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
705	MLE method failed to converge properly						Mean in Log Scale					-1.809	
706							SD in Log Scale					0.627	
707							Mean in Original Scale					0.214	
708							SD in Original Scale					0.25	
709							95% Percentile Bootstrap UCL					0.31	
710							95% BCA Bootstrap UCL					0.369	
711													
712	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
713	k star (bias corrected)					0.965	Data appear Gamma Distributed at 5% Significance Level						
714	Theta Star					0.403							
715	nu star					13.52							
716													
717	A-D Test Statistic					0.458	Nonparametric Statistics						
718	5% A-D Critical Value					0.721	Kaplan-Meier (KM) Method						
719	K-S Test Statistic					0.721	Mean					0.234	
720	5% K-S Critical Value					0.317	SD					0.275	
721	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0719	
722							95% KM (t) UCL					0.358	
723	Assuming Gamma Distribution						95% KM (z) UCL					0.353	
724	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.354	
725	Minimum					0.092	95% KM (bootstrap t) UCL					0.498	
726	Maximum					1.3	95% KM (BCA) UCL					0.401	
727	Mean					0.429	95% KM (Percentile Bootstrap) UCL					0.372	
728	Median					0.387	95% KM (Chebyshev) UCL					0.548	
729	SD					0.246	97.5% KM (Chebyshev) UCL					0.683	
730	k star					3.141	99% KM (Chebyshev) UCL					0.95	
731	Theta star					0.137							
732	Nu star					144.5	Potential UCLs to Use						
733	AppChi2					117.7	95% KM (t) UCL					0.358	
734	95% Gamma Approximate UCL					0.526							
735	95% Adjusted Gamma UCL					0.534							
736	Note: DL/2 is not a recommended method.												
737													
738													
739	Di-n-octylphthalate												
740													
741	General Statistics												
742	Number of Valid Data					13	Number of Detected Data					5	

	A	B	C	D	E	F	G	H	I	J	K	L
743	Number of Distinct Detected Data					5	Number of Non-Detect Data					8
744							Percent Non-Detects					61.54%
745												
746	Raw Statistics						Log-transformed Statistics					
747	Minimum Detected					0.2	Minimum Detected					-1.609
748	Maximum Detected					5	Maximum Detected					1.609
749	Mean of Detected					1.24	Mean of Detected					-0.671
750	SD of Detected					2.104	SD of Detected					1.304
751	Minimum Non-Detect					0.19	Minimum Non-Detect					-1.661
752	Maximum Non-Detect					2.1	Maximum Non-Detect					0.742
753												
754	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					12
755	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
756	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					92.31%
757												
758	Warning: There are only 5 Detected Values in this data											
759	Note: It should be noted that even though bootstrap may be performed on this data set											
760	the resulting calculations may not be reliable enough to draw conclusions											
761												
762	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
763												
764												
765	UCL Statistics											
766	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
767	Shapiro Wilk Test Statistic					0.589	Shapiro Wilk Test Statistic					0.745
768	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762
769	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
770												
771	Assuming Normal Distribution						Assuming Lognormal Distribution					
772	DL/2 Substitution Method						DL/2 Substitution Method					
773	Mean					0.712	Mean					-1.118
774	SD					1.319	SD					1.142
775	95% DL/2 (t) UCL					1.364	95% H-Stat (DL/2) UCL					2.24
776												
777	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
778	MLE method failed to converge properly						Mean in Log Scale					-2.026
779							SD in Log Scale					1.477
780							Mean in Original Scale					0.523
781							SD in Original Scale					1.351
782							95% Percentile Bootstrap UCL					1.253
783							95% BCA Bootstrap UCL					1.634
784												
785	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
786	k star (bias corrected)					0.407	Data do not follow a Discernable Distribution (0.05)					
787	Theta Star					3.047						
788	nu star					4.069						
789												
790	A-D Test Statistic					0.951	Nonparametric Statistics					
791	5% A-D Critical Value					0.702	Kaplan-Meier (KM) Method					
792	K-S Test Statistic					0.702	Mean					0.615
793	5% K-S Critical Value					0.368	SD					1.268
794	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.393
795							95% KM (t) UCL					1.317

A	B	C	D	E	F	G	H	I	J	K	L
796	Assuming Gamma Distribution					95% KM (z) UCL					1.263
797	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					1.243
798	Minimum			0.2		95% KM (bootstrap t) UCL					10.71
799	Maximum			5		95% KM (BCA) UCL					1.399
800	Mean			1.186		95% KM (Percentile Bootstrap) UCL					1.365
801	Median			1.024		95% KM (Chebyshev) UCL					2.331
802	SD			1.23		97.5% KM (Chebyshev) UCL					3.073
803	k star			1.241		99% KM (Chebyshev) UCL					4.531
804	Theta star			0.956							
805	Nu star			32.26		Potential UCLs to Use					
806	AppChi2			20.28		95% KM (BCA) UCL					1.399
807	95% Gamma Approximate UCL			1.886							
808	95% Adjusted Gamma UCL			2.02							
809	Note: DL/2 is not a recommended method.										
810											
811											
812	Indeno(1,2,3-cd)pyrene										
813											
814	General Statistics										
815	Number of Valid Data			22		Number of Detected Data			19		
816	Number of Distinct Detected Data			19		Number of Non-Detect Data			3		
817						Percent Non-Detects			13.64%		
818											
819	Raw Statistics					Log-transformed Statistics					
820	Minimum Detected			0.088		Minimum Detected			-2.43		
821	Maximum Detected			20		Maximum Detected			2.996		
822	Mean of Detected			3.304		Mean of Detected			0.0632		
823	SD of Detected			5.161		SD of Detected			1.564		
824	Minimum Non-Detect			0.19		Minimum Non-Detect			-1.661		
825	Maximum Non-Detect			1.3		Maximum Non-Detect			0.262		
826											
827	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect			16		
828	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected			6		
829	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage			72.73%		
830											
831	UCL Statistics										
832	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
833	Shapiro Wilk Test Statistic			0.662		Shapiro Wilk Test Statistic			0.912		
834	5% Shapiro Wilk Critical Value			0.901		5% Shapiro Wilk Critical Value			0.901		
835	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
836											
837	Assuming Normal Distribution					Assuming Lognormal Distribution					
838	DL/2 Substitution Method					DL/2 Substitution Method					
839	Mean			2.901		Mean			-0.126		
840	SD			4.89		SD			1.556		
841	95% DL/2 (t) UCL			4.695		95% H-Stat (DL/2) UCL			9.14		
842											
843	Maximum Likelihood Estimate(MLE) Method			N/A		Log ROS Method					
844	MLE yields a negative mean					Mean in Log Scale			-0.176		
845						SD in Log Scale			1.61		
846						Mean in Original Scale			2.888		
847						SD in Original Scale			4.897		
848						95% Percentile Bootstrap UCL			4.655		

A	B	C	D	E	F	G	H	I	J	K	L
849						95% BCA Bootstrap UCL					5.319
850											
851	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
852	k star (bias corrected)				0.5	Data appear Lognormal at 5% Significance Level					
853	Theta Star				6.603						
854	nu star				19.02						
855											
856	A-D Test Statistic				1.393	Nonparametric Statistics					
857	5% A-D Critical Value				0.798	Kaplan-Meier (KM) Method					
858	K-S Test Statistic				0.798	Mean					2.891
859	5% K-S Critical Value				0.209	SD					4.783
860	Data not Gamma Distributed at 5% Significance Level					SE of Mean					1.048
861						95% KM (t) UCL					4.694
862	Assuming Gamma Distribution					95% KM (z) UCL					4.615
863	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					4.683
864	Minimum				1E-09	95% KM (bootstrap t) UCL					6.021
865	Maximum				20	95% KM (BCA) UCL					4.736
866	Mean				2.907	95% KM (Percentile Bootstrap) UCL					4.777
867	Median				0.645	95% KM (Chebyshev) UCL					7.458
868	SD				4.891	97.5% KM (Chebyshev) UCL					9.435
869	k star				0.243	99% KM (Chebyshev) UCL					13.32
870	Theta star				11.96						
871	Nu star				10.7	Potential UCLs to Use					
872	AppChi2				4.382	99% KM (Chebyshev) UCL					13.32
873	95% Gamma Approximate UCL				7.096						
874	95% Adjusted Gamma UCL				7.615						
875	Note: DL/2 is not a recommended method.										
876											
877											
878	Phenanthrene										
879											
880	General Statistics										
881	Number of Valid Data				23	Number of Detected Data				21	
882	Number of Distinct Detected Data				21	Number of Non-Detect Data				2	
883						Percent Non-Detects				8.70%	
884											
885	Raw Statistics					Log-transformed Statistics					
886	Minimum Detected				0.079	Minimum Detected				-2.538	
887	Maximum Detected				26	Maximum Detected				3.258	
888	Mean of Detected				6.766	Mean of Detected				0.556	
889	SD of Detected				9.332	SD of Detected				1.934	
890	Minimum Non-Detect				0.19	Minimum Non-Detect				-1.661	
891	Maximum Non-Detect				0.61	Maximum Non-Detect				-0.494	
892											
893	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				8	
894	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				15	
895	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				34.78%	
896											
897	UCL Statistics										
898	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
899	Shapiro Wilk Test Statistic				0.711	Shapiro Wilk Test Statistic				0.934	
900	5% Shapiro Wilk Critical Value				0.908	5% Shapiro Wilk Critical Value				0.908	
901	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					

A	B	C	D	E	F	G	H	I	J	K	L
902											
903	Assuming Normal Distribution					Assuming Lognormal Distribution					
904	DL/2 Substitution Method					DL/2 Substitution Method					
905	Mean				6.195	Mean				0.354	
906	SD				9.097	SD				1.969	
907	95% DL/2 (t) UCL				9.452	95% H-Stat (DL/2) UCL				50.23	
908											
909	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
910	Mean				3.299	Mean in Log Scale				0.329	
911	SD				12.06	SD in Log Scale				1.994	
912	95% MLE (t) UCL				7.618	Mean in Original Scale				6.189	
913	95% MLE (Tiku) UCL				7.966	SD in Original Scale				9.101	
914						95% Percentile Bootstrap UCL				9.405	
915						95% BCA Bootstrap UCL				9.535	
916											
917	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
918	k star (bias corrected)				0.437	Data Follow Appr. Gamma Distribution at 5% Significance Level					
919	Theta Star				15.49						
920	nu star				18.34						
921											
922	A-D Test Statistic				0.816	Nonparametric Statistics					
923	5% A-D Critical Value				0.811	Kaplan-Meier (KM) Method					
924	K-S Test Statistic				0.811	Mean				6.191	
925	5% K-S Critical Value				0.201	SD				8.9	
926	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean				1.902	
927						95% KM (t) UCL				9.456	
928	Assuming Gamma Distribution					95% KM (z) UCL				9.319	
929	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				9.449	
930	Minimum				1E-09	95% KM (bootstrap t) UCL				10.44	
931	Maximum				26	95% KM (BCA) UCL				9.399	
932	Mean				6.177	95% KM (Percentile Bootstrap) UCL				9.436	
933	Median				1.1	95% KM (Chebyshev) UCL				14.48	
934	SD				9.109	97.5% KM (Chebyshev) UCL				18.07	
935	k star				0.23	99% KM (Chebyshev) UCL				25.11	
936	Theta star				26.88						
937	Nu star				10.57	Potential UCLs to Use					
938	AppChi2				4.301	95% KM (Chebyshev) UCL				14.48	
939	95% Gamma Approximate UCL				15.18						
940	95% Adjusted Gamma UCL				16.27						
941	Note: DL/2 is not a recommended method.										
942											
943											
944	Dieldrin										
945											
946	General Statistics										
947	Number of Valid Data				22	Number of Detected Data				9	
948	Number of Distinct Detected Data				9	Number of Non-Detect Data				13	
949						Percent Non-Detects				59.09%	
950											
951	Raw Statistics					Log-transformed Statistics					
952	Minimum Detected				0.0046	Minimum Detected				-5.382	
953	Maximum Detected				0.038	Maximum Detected				-3.27	
954	Mean of Detected				0.0161	Mean of Detected				-4.32	

A	B	C	D	E	F	G	H	I	J	K	L
955	SD of Detected				0.0105	SD of Detected				0.665	
956	Minimum Non-Detect				0.0036	Minimum Non-Detect				-5.627	
957	Maximum Non-Detect				0.025	Maximum Non-Detect				-3.689	
958											
959	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				21	
960	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				1	
961	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				95.45%	
962											
963	Warning: There are only 9 Detected Values in this data										
964	Note: It should be noted that even though bootstrap may be performed on this data set										
965	the resulting calculations may not be reliable enough to draw conclusions										
966											
967	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
968											
969											
970	UCL Statistics										
971	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
972	Shapiro Wilk Test Statistic				0.908	Shapiro Wilk Test Statistic				0.988	
973	5% Shapiro Wilk Critical Value				0.829	5% Shapiro Wilk Critical Value				0.829	
974	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
975											
976	Assuming Normal Distribution					Assuming Lognormal Distribution					
977	DL/2 Substitution Method					DL/2 Substitution Method					
978	Mean				0.0121	Mean				-4.638	
979	SD				0.00798	SD				0.764	
980	95% DL/2 (t) UCL				0.0151	95% H-Stat (DL/2) UCL				0.0204	
981											
982	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
983	MLE method failed to converge properly					Mean in Log Scale				-4.8	
984						SD in Log Scale				0.687	
985						Mean in Original Scale				0.0105	
986						SD in Original Scale				0.00842	
987						95% Percentile Bootstrap UCL				0.0136	
988						95% BCA Bootstrap UCL				0.0144	
989											
990	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
991	k star (bias corrected)				1.935	Data appear Normal at 5% Significance Level					
992	Theta Star				0.00831						
993	nu star				34.83						
994											
995	A-D Test Statistic				0.162	Nonparametric Statistics					
996	5% A-D Critical Value				0.727	Kaplan-Meier (KM) Method					
997	K-S Test Statistic				0.727	Mean				0.0113	
998	5% K-S Critical Value				0.282	SD				0.00837	
999	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.00217	
1000						95% KM (t) UCL				0.0151	
1001	Assuming Gamma Distribution					95% KM (z) UCL				0.0149	
1002	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.0148	
1003	Minimum				0.0046	95% KM (bootstrap t) UCL				0.0157	
1004	Maximum				0.038	95% KM (BCA) UCL				0.0167	
1005	Mean				0.0152	95% KM (Percentile Bootstrap) UCL				0.0156	
1006	Median				0.0145	95% KM (Chebyshev) UCL				0.0208	
1007	SD				0.00895	97.5% KM (Chebyshev) UCL				0.0249	

A	B	C	D	E	F	G	H	I	J	K	L
1008				k star	2.5	99% KM (Chebyshev) UCL				0.0329	
1009				Theta star	0.00609						
1010				Nu star	110	Potential UCLs to Use					
1011				AppChi2	86.8	95% KM (t) UCL				0.0151	
1012				95% Gamma Approximate UCL	0.0193	95% KM (Percentile Bootstrap) UCL				0.0156	
1013				95% Adjusted Gamma UCL	0.0196						
1014	Note: DL/2 is not a recommended method.										
1015											
1016											
1017	Endosulfan II										
1018											
1019	General Statistics										
1020	Number of Valid Data				24	Number of Detected Data				6	
1021	Number of Distinct Detected Data				6	Number of Non-Detect Data				18	
1022						Percent Non-Detects				75.00%	
1023											
1024	Raw Statistics					Log-transformed Statistics					
1025	Minimum Detected				0.011	Minimum Detected				-4.51	
1026	Maximum Detected				0.15	Maximum Detected				-1.897	
1027	Mean of Detected				0.0688	Mean of Detected				-3.065	
1028	SD of Detected				0.055	SD of Detected				1.068	
1029	Minimum Non-Detect				0.0036	Minimum Non-Detect				-5.627	
1030	Maximum Non-Detect				0.025	Maximum Non-Detect				-3.689	
1031											
1032	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				20	
1033	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				4	
1034	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				83.33%	
1035											
1036	Warning: There are only 6 Detected Values in this data										
1037	Note: It should be noted that even though bootstrap may be performed on this data set										
1038	the resulting calculations may not be reliable enough to draw conclusions										
1039											
1040	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
1041											
1042											
1043	UCL Statistics										
1044	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1045	Shapiro Wilk Test Statistic				0.911	Shapiro Wilk Test Statistic				0.901	
1046	5% Shapiro Wilk Critical Value				0.788	5% Shapiro Wilk Critical Value				0.788	
1047	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1048											
1049	Assuming Normal Distribution					Assuming Lognormal Distribution					
1050	DL/2 Substitution Method					DL/2 Substitution Method					
1051	Mean				0.0212	Mean				-4.952	
1052	SD				0.0383	SD				1.41	
1053	95% DL/2 (t) UCL				0.0346	95% H-Stat (DL/2) UCL				0.0319	
1054											
1055	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
1056	Mean				0.102	Mean in Log Scale				-5.811	
1057	SD				0.0386	SD in Log Scale				1.807	
1058	95% MLE (t) UCL				0.115	Mean in Original Scale				0.0184	
1059	95% MLE (Tiku) UCL				0.134	SD in Original Scale				0.0393	
1060						95% Percentile Bootstrap UCL				0.0319	

A	B	C	D	E	F	G	H	I	J	K	L
1061									95% BCA Bootstrap UCL		0.038
1062											
1063	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1064				k star (bias corrected)	0.825	Data appear Normal at 5% Significance Level					
1065				Theta Star	0.0834						
1066				nu star	9.901						
1067											
1068				A-D Test Statistic	0.358	Nonparametric Statistics					
1069				5% A-D Critical Value	0.709	Kaplan-Meier (KM) Method					
1070				K-S Test Statistic	0.709	Mean					
1071				5% K-S Critical Value	0.338	SD					
1072	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					
1073						95% KM (t) UCL					
1074	Assuming Gamma Distribution					95% KM (z) UCL					
1075	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					
1076				Minimum	0.011	95% KM (bootstrap t) UCL					
1077				Maximum	0.15	95% KM (BCA) UCL					
1078				Mean	0.0713	95% KM (Percentile Bootstrap) UCL					
1079				Median	0.0733	95% KM (Chebyshev) UCL					
1080				SD	0.0302	97.5% KM (Chebyshev) UCL					
1081				k star	3.774	99% KM (Chebyshev) UCL					
1082				Theta star	0.0189						
1083				Nu star	181.1	Potential UCLs to Use					
1084				AppChi2	151	95% KM (t) UCL					
1085				95% Gamma Approximate UCL	0.0856	95% KM (Percentile Bootstrap) UCL					
1086				95% Adjusted Gamma UCL	0.0867						
1087	Note: DL/2 is not a recommended method.										
1088											
1089											
1090	Endrin aldehyde										
1091											
1092	General Statistics										
1093				Number of Valid Data	22				Number of Detected Data		4
1094				Number of Distinct Detected Data	4				Number of Non-Detect Data		18
1095									Percent Non-Detects		81.82%
1096											
1097	Raw Statistics					Log-transformed Statistics					
1098				Minimum Detected	0.011				Minimum Detected		-4.51
1099				Maximum Detected	0.096				Maximum Detected		-2.343
1100				Mean of Detected	0.0338				Mean of Detected		-3.849
1101				SD of Detected	0.0415				SD of Detected		1.012
1102				Minimum Non-Detect	0.0038				Minimum Non-Detect		-5.573
1103				Maximum Non-Detect	0.025				Maximum Non-Detect		-3.689
1104											
1105	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					
1106	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					
1107	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					
1108											
1109	Warning: There are only 4 Distinct Detected Values in this data										
1110	Note: It should be noted that even though bootstrap may be performed on this data set										
1111	the resulting calculations may not be reliable enough to draw conclusions										
1112											
1113	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										

A	B	C	D	E	F	G	H	I	J	K	L
1114											
1115											
1116	UCL Statistics										
1117	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1118	Shapiro Wilk Test Statistic				0.667	Shapiro Wilk Test Statistic				0.745	
1119	5% Shapiro Wilk Critical Value				0.748	5% Shapiro Wilk Critical Value				0.748	
1120	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1121											
1122	Assuming Normal Distribution					Assuming Lognormal Distribution					
1123	DL/2 Substitution Method					DL/2 Substitution Method					
1124	Mean				0.0122	Mean				-4.978	
1125	SD				0.0194	SD				1.044	
1126	95% DL/2 (t) UCL				0.0193	95% H-Stat (DL/2) UCL				0.0209	
1127											
1128	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
1129	MLE method failed to converge properly					Mean in Log Scale				-5.873	
1130						SD in Log Scale				1.262	
1131						Mean in Original Scale				0.00815	
1132						SD in Original Scale				0.0201	
1133						95% Percentile Bootstrap UCL				0.0163	
1134						95% BCA Bootstrap UCL				0.021	
1135											
1136	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1137	k star (bias corrected)				0.473	Data do not follow a Discernable Distribution (0.05)					
1138	Theta Star				0.0713						
1139	nu star				3.786						
1140											
1141	A-D Test Statistic				0.765	Nonparametric Statistics					
1142	5% A-D Critical Value				0.665	Kaplan-Meier (KM) Method					
1143	K-S Test Statistic				0.665	Mean				0.0154	
1144	5% K-S Critical Value				0.401	SD				0.0176	
1145	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.00435	
1146						95% KM (t) UCL				0.0229	
1147	Assuming Gamma Distribution					95% KM (z) UCL				0.0225	
1148	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.0212	
1149	Minimum				1E-09	95% KM (bootstrap t) UCL				0.0662	
1150	Maximum				0.096	95% KM (BCA) UCL				0.096	
1151	Mean				0.0244	95% KM (Percentile Bootstrap) UCL				0.0273	
1152	Median				0.0199	95% KM (Chebyshev) UCL				0.0343	
1153	SD				0.0243	97.5% KM (Chebyshev) UCL				0.0426	
1154	k star				0.223	99% KM (Chebyshev) UCL				0.0587	
1155	Theta star				0.11						
1156	Nu star				9.791	Potential UCLs to Use					
1157	AppChi2				3.811	95% KM (BCA) UCL				0.096	
1158	95% Gamma Approximate UCL				0.0628						
1159	95% Adjusted Gamma UCL				N/A						
1160	Note: DL/2 is not a recommended method.										
1161											
1162											
1163	Endrin ketone										
1164											
1165	General Statistics										
1166	Number of Valid Data				23	Number of Detected Data				4	

A	B	C	D	E	F	G	H	I	J	K	L
1167	Number of Distinct Detected Data				4	Number of Non-Detect Data				19	
1168						Percent Non-Detects				82.61%	
1169											
1170	Raw Statistics					Log-transformed Statistics					
1171	Minimum Detected				0.015	Minimum Detected				-4.2	
1172	Maximum Detected				0.12	Maximum Detected				-2.12	
1173	Mean of Detected				0.0673	Mean of Detected				-2.944	
1174	SD of Detected				0.0446	SD of Detected				0.904	
1175	Minimum Non-Detect				0.0036	Minimum Non-Detect				-5.627	
1176	Maximum Non-Detect				0.025	Maximum Non-Detect				-3.689	
1177											
1178	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				20	
1179	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				3	
1180	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				86.96%	
1181											
1182	Warning: There are only 4 Distinct Detected Values in this data										
1183	Note: It should be noted that even though bootstrap may be performed on this data set										
1184	the resulting calculations may not be reliable enough to draw conclusions										
1185											
1186	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
1187											
1188											
1189	UCL Statistics										
1190	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1191	Shapiro Wilk Test Statistic				0.999	Shapiro Wilk Test Statistic				0.924	
1192	5% Shapiro Wilk Critical Value				0.748	5% Shapiro Wilk Critical Value				0.748	
1193	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1194											
1195	Assuming Normal Distribution					Assuming Lognormal Distribution					
1196	DL/2 Substitution Method					DL/2 Substitution Method					
1197	Mean				0.0175	Mean				-4.882	
1198	SD				0.0289	SD				1.269	
1199	95% DL/2 (t) UCL				0.0279	95% H-Stat (DL/2) UCL				0.0248	
1200											
1201	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
1202	MLE yields a negative mean					Mean in Log Scale				-6.034	
1203						SD in Log Scale				1.688	
1204						Mean in Original Scale				0.0132	
1205						SD in Original Scale				0.0303	
1206						95% Percentile Bootstrap UCL				0.0239	
1207						95% BCA Bootstrap UCL				0.0285	
1208											
1209	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1210	k star (bias corrected)				0.715	Data appear Normal at 5% Significance Level					
1211	Theta Star				0.0941						
1212	nu star				5.719						
1213											
1214	A-D Test Statistic				0.254	Nonparametric Statistics					
1215	5% A-D Critical Value				0.66	Kaplan-Meier (KM) Method					
1216	K-S Test Statistic				0.66	Mean				0.0241	
1217	5% K-S Critical Value				0.398	SD				0.0255	
1218	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.00615	
1219						95% KM (t) UCL				0.0346	

A	B	C	D	E	F	G	H	I	J	K	L
1220	Assuming Gamma Distribution					95% KM (z) UCL					0.0342
1221	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.0475
1222	Minimum			0.015		95% KM (bootstrap t) UCL					0.0317
1223	Maximum			0.12		95% KM (BCA) UCL					0.12
1224	Mean			0.0699		95% KM (Percentile Bootstrap) UCL					0.087
1225	Median			0.0667		95% KM (Chebyshev) UCL					0.0509
1226	SD			0.0225		97.5% KM (Chebyshev) UCL					0.0625
1227	k star			6.868		99% KM (Chebyshev) UCL					0.0852
1228	Theta star			0.0102							
1229	Nu star			315.9		Potential UCLs to Use					
1230	AppChi2			275.7		95% KM (t) UCL					0.0346
1231	95% Gamma Approximate UCL			0.0801		95% KM (Percentile Bootstrap) UCL					0.087
1232	95% Adjusted Gamma UCL			N/A							
1233	Note: DL/2 is not a recommended method.										
1234											
1235											
1236	gamma-Chlordane										
1237											
1238	General Statistics										
1239	Number of Valid Data			21		Number of Detected Data			5		
1240	Number of Distinct Detected Data			5		Number of Non-Detect Data			16		
1241						Percent Non-Detects			76.19%		
1242											
1243	Raw Statistics					Log-transformed Statistics					
1244	Minimum Detected			0.0027		Minimum Detected			-5.915		
1245	Maximum Detected			0.038		Maximum Detected			-3.27		
1246	Mean of Detected			0.0243		Mean of Detected			-4.024		
1247	SD of Detected			0.0142		SD of Detected			1.094		
1248	Minimum Non-Detect			0.0018		Minimum Non-Detect			-6.32		
1249	Maximum Non-Detect			0.013		Maximum Non-Detect			-4.343		
1250											
1251	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect			17		
1252	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected			4		
1253	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage			80.95%		
1254											
1255	Warning: There are only 5 Detected Values in this data										
1256	Note: It should be noted that even though bootstrap may be performed on this data set										
1257	the resulting calculations may not be reliable enough to draw conclusions										
1258											
1259	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
1260											
1261											
1262	UCL Statistics										
1263	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1264	Shapiro Wilk Test Statistic			0.914		Shapiro Wilk Test Statistic			0.757		
1265	5% Shapiro Wilk Critical Value			0.762		5% Shapiro Wilk Critical Value			0.762		
1266	Data appear Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1267											
1268	Assuming Normal Distribution					Assuming Lognormal Distribution					
1269	DL/2 Substitution Method					DL/2 Substitution Method					
1270	Mean			0.00893		Mean			-5.358		
1271	SD			0.0111		SD			1.179		
1272	95% DL/2 (t) UCL			0.0131		95% H-Stat (DL/2) UCL			0.0139		

A	B	C	D	E	F	G	H	I	J	K	L	
1273												
1274	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1275	Mean				0.0302		Mean in Log Scale				-6.713	
1276	SD				0.00736		SD in Log Scale				1.8	
1277	95% MLE (t) UCL				0.033		Mean in Original Scale				0.00639	
1278	95% MLE (Tiku) UCL				0.0365		SD in Original Scale				0.0121	
1279							95% Percentile Bootstrap UCL				0.0109	
1280							95% BCA Bootstrap UCL				0.0122	
1281												
1282	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1283	k star (bias corrected)				0.841		Data appear Normal at 5% Significance Level					
1284	Theta Star				0.0289							
1285	nu star				8.413							
1286												
1287	A-D Test Statistic				0.585		Nonparametric Statistics					
1288	5% A-D Critical Value				0.685		Kaplan-Meier (KM) Method					
1289	K-S Test Statistic				0.685		Mean				0.00785	
1290	5% K-S Critical Value				0.361		SD				0.0111	
1291	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				0.00271	
1292							95% KM (t) UCL				0.0125	
1293	Assuming Gamma Distribution						95% KM (z) UCL				0.0123	
1294	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.0172	
1295	Minimum				1E-09		95% KM (bootstrap t) UCL				0.0111	
1296	Maximum				0.038		95% KM (BCA) UCL				0.0332	
1297	Mean				0.0058		95% KM (Percentile Bootstrap) UCL				0.033	
1298	Median				1E-09		95% KM (Chebyshev) UCL				0.0197	
1299	SD				0.0124		97.5% KM (Chebyshev) UCL				0.0248	
1300	k star				0.0941		99% KM (Chebyshev) UCL				0.0348	
1301	Theta star				0.0616							
1302	Nu star				3.951		Potential UCLs to Use					
1303	AppChi2				0.702		95% KM (t) UCL				0.0125	
1304	95% Gamma Approximate UCL				0.0326		95% KM (Percentile Bootstrap) UCL				0.033	
1305	95% Adjusted Gamma UCL				0.0377							
1306	Note: DL/2 is not a recommended method.											
1307												
1308												
1309	Aroclor-1254											
1310												
1311	General Statistics											
1312	Number of Valid Data				24		Number of Detected Data				9	
1313	Number of Distinct Detected Data				9		Number of Non-Detect Data				15	
1314							Percent Non-Detects				62.50%	
1315												
1316	Raw Statistics						Log-transformed Statistics					
1317	Minimum Detected				0.051		Minimum Detected				-2.976	
1318	Maximum Detected				4.8		Maximum Detected				1.569	
1319	Mean of Detected				1.31		Mean of Detected				-0.43	
1320	SD of Detected				1.588		SD of Detected				1.383	
1321	Minimum Non-Detect				0.036		Minimum Non-Detect				-3.324	
1322	Maximum Non-Detect				0.045		Maximum Non-Detect				-3.101	
1323												
1324	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				15	
1325	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				9	

A	B	C	D	E	F	G	H	I	J	K	L
1326	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					62.50%
1327											
1328	Warning: There are only 9 Detected Values in this data										
1329	Note: It should be noted that even though bootstrap may be performed on this data set										
1330	the resulting calculations may not be reliable enough to draw conclusions										
1331											
1332	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
1333											
1334											
1335	UCL Statistics										
1336	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1337	Shapiro Wilk Test Statistic				0.753	Shapiro Wilk Test Statistic				0.965	
1338	5% Shapiro Wilk Critical Value				0.829	5% Shapiro Wilk Critical Value				0.829	
1339	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1340											
1341	Assuming Normal Distribution					Assuming Lognormal Distribution					
1342	DL/2 Substitution Method					DL/2 Substitution Method					
1343	Mean				0.504	Mean				-2.611	
1344	SD				1.133	SD				1.909	
1345	95% DL/2 (t) UCL				0.9	95% H-Stat (DL/2) UCL				0.741	
1346											
1347	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
1348	MLE yields a negative mean					Mean in Log Scale				-3.114	
1349											
1350											
1351											
1352											
1353											
1354											
1355	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1356	k star (bias corrected)				0.636	Data appear Gamma Distributed at 5% Significance Level					
1357	Theta Star				2.061						
1358	nu star				11.44						
1359											
1360	A-D Test Statistic				0.296	Nonparametric Statistics					
1361	5% A-D Critical Value				0.749	Kaplan-Meier (KM) Method					
1362	K-S Test Statistic				0.749	Mean				0.523	
1363	5% K-S Critical Value				0.288	SD				1.101	
1364	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.238	
1365											
1366	Assuming Gamma Distribution					95% KM (z) UCL					
1367	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.871	
1368	Minimum				0.051	95% KM (bootstrap t) UCL				1.684	
1369	Maximum				4.8	95% KM (BCA) UCL				1.238	
1370	Mean				1.308	95% KM (Percentile Bootstrap) UCL				1.042	
1371	Median				1.12	95% KM (Chebyshev) UCL				1.562	
1372	SD				1.066	97.5% KM (Chebyshev) UCL				2.012	
1373	k star				1.418	99% KM (Chebyshev) UCL				2.895	
1374	Theta star				0.922						
1375	Nu star				68.08	Potential UCLs to Use					
1376	AppChi2				50.09	95% KM (t) UCL				0.932	
1377	95% Gamma Approximate UCL				1.778						
1378	95% Adjusted Gamma UCL				1.817						

	A	B	C	D	E	F	G	H	I	J	K	L
1379	Note: DL/2 is not a recommended method.											
1380												
1381												
1382	Aroclor-1260											
1383												
1384	General Statistics											
1385	Number of Valid Data				25		Number of Detected Data				20	
1386	Number of Distinct Detected Data				19		Number of Non-Detect Data				5	
1387									Percent Non-Detects		20.00%	
1388												
1389	Raw Statistics						Log-transformed Statistics					
1390	Minimum Detected			0.051			Minimum Detected			-2.976		
1391	Maximum Detected			7.6			Maximum Detected			2.028		
1392	Mean of Detected			1.232			Mean of Detected			-0.412		
1393	SD of Detected			1.702			SD of Detected			1.183		
1394	Minimum Non-Detect			0.04			Minimum Non-Detect			-3.219		
1395	Maximum Non-Detect			0.048			Maximum Non-Detect			-3.037		
1396												
1397	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect			5		
1398	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected			20		
1399	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage			20.00%		
1400												
1401	UCL Statistics											
1402	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1403	Shapiro Wilk Test Statistic			0.613			Shapiro Wilk Test Statistic			0.963		
1404	5% Shapiro Wilk Critical Value			0.905			5% Shapiro Wilk Critical Value			0.905		
1405	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1406												
1407	Assuming Normal Distribution						Assuming Lognormal Distribution					
1408	DL/2 Substitution Method						DL/2 Substitution Method					
1409	Mean			0.99			Mean			-1.094		
1410	SD			1.593			SD			1.746		
1411	95% DL/2 (t) UCL			1.535			95% H-Stat (DL/2) UCL			3.23		
1412												
1413	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1414	Mean			0.749			Mean in Log Scale			-0.935		
1415	SD			1.823			SD in Log Scale			1.502		
1416	95% MLE (t) UCL			1.373			Mean in Original Scale			0.995		
1417	95% MLE (Tiku) UCL			1.364			SD in Original Scale			1.59		
1418							95% Percentile Bootstrap UCL			1.568		
1419							95% BCA Bootstrap UCL			1.836		
1420												
1421	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1422	k star (bias corrected)			0.831			Data appear Gamma Distributed at 5% Significance Level					
1423	Theta Star			1.483								
1424	nu star			33.22								
1425												
1426	A-D Test Statistic			0.637			Nonparametric Statistics					
1427	5% A-D Critical Value			0.771			Kaplan-Meier (KM) Method					
1428	K-S Test Statistic			0.771			Mean			0.995		
1429	5% K-S Critical Value			0.2			SD			1.557		
1430	Data appear Gamma Distributed at 5% Significance Level						SE of Mean			0.32		
1431							95% KM (t) UCL			1.542		

A	B	C	D	E	F	G	H	I	J	K	L
1432	Assuming Gamma Distribution					95% KM (z) UCL					1.521
1433	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					1.535
1434		Minimum		1E-09	95% KM (bootstrap t) UCL					2.146	
1435		Maximum		7.6	95% KM (BCA) UCL					1.584	
1436		Mean		0.985	95% KM (Percentile Bootstrap) UCL					1.627	
1437		Median		0.52	95% KM (Chebyshev) UCL					2.388	
1438		SD		1.596	97.5% KM (Chebyshev) UCL					2.991	
1439		k star		0.176	99% KM (Chebyshev) UCL					4.175	
1440		Theta star		5.609							
1441		Nu star		8.782	Potential UCLs to Use						
1442		AppChi2		3.196	95% KM (Chebyshev) UCL					2.388	
1443		95% Gamma Approximate UCL			2.707						
1444		95% Adjusted Gamma UCL			2.913						
1445	Note: DL/2 is not a recommended method.										
1446											
1447											
1448	Aluminum										
1449											
1450	General Statistics										
1451	Number of Valid Observations				25	Number of Distinct Observations				25	
1452											
1453	Raw Statistics					Log-transformed Statistics					
1454		Minimum		3320	Minimum of Log Data					8.108	
1455		Maximum		43900	Maximum of Log Data					10.69	
1456		Mean		10085	Mean of log Data					9.035	
1457		Median		8080	SD of log Data					0.554	
1458		SD		8413							
1459		Coefficient of Variation			0.834						
1460		Skewness			3.233						
1461											
1462	Relevant UCL Statistics										
1463	Normal Distribution Test					Lognormal Distribution Test					
1464		Shapiro Wilk Test Statistic			0.597	Shapiro Wilk Test Statistic				0.901	
1465		Shapiro Wilk Critical Value			0.918	Shapiro Wilk Critical Value				0.918	
1466	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1467											
1468	Assuming Normal Distribution					Assuming Lognormal Distribution					
1469		95% Student's-t UCL			12964	95% H-UCL				12283	
1470	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					14651
1471		95% Adjusted-CLT UCL			14015	97.5% Chebyshev (MVUE) UCL				16785	
1472		95% Modified-t UCL			13145	99% Chebyshev (MVUE) UCL				20975	
1473											
1474	Gamma Distribution Test					Data Distribution					
1475		k star (bias corrected)			2.564	Data do not follow a Discernable Distribution (0.05)					
1476		Theta Star			3934						
1477		MLE of Mean			10085						
1478		MLE of Standard Deviation			6299						
1479		nu star			128.2						
1480		Approximate Chi Square Value (.05)			103	Nonparametric Statistics					
1481		Adjusted Level of Significance			0.0395	95% CLT UCL				12853	
1482		Adjusted Chi Square Value			101.5	95% Jackknife UCL				12964	
1483						95% Standard Bootstrap UCL				12839	
1484		Anderson-Darling Test Statistic			1.533	95% Bootstrap-t UCL				17844	

A	B	C	D	E	F	G	H	I	J	K	L
1485	Anderson-Darling 5% Critical Value				0.752	95% Hall's Bootstrap UCL				27721	
1486	Kolmogorov-Smirnov Test Statistic				0.214	95% Percentile Bootstrap UCL				12896	
1487	Kolmogorov-Smirnov 5% Critical Value				0.176	95% BCA Bootstrap UCL				14243	
1488	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				17419	
1489						97.5% Chebyshev(Mean, Sd) UCL				20593	
1490	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				26827	
1491	95% Approximate Gamma UCL				12547						
1492	95% Adjusted Gamma UCL				12737						
1493											
1494	Potential UCL to Use					Use 95% Chebyshev (Mean, Sd) UCL				17419	
1495											
1496											
1497	Antimony										
1498											
1499	General Statistics										
1500	Number of Valid Data				25	Number of Detected Data				19	
1501	Number of Distinct Detected Data				16	Number of Non-Detect Data				6	
1502						Percent Non-Detects				24.00%	
1503											
1504	Raw Statistics					Log-transformed Statistics					
1505	Minimum Detected				2.5	Minimum Detected				0.916	
1506	Maximum Detected				76.7	Maximum Detected				4.34	
1507	Mean of Detected				13.34	Mean of Detected				1.976	
1508	SD of Detected				19.32	SD of Detected				1.019	
1509	Minimum Non-Detect				0.66	Minimum Non-Detect				-0.416	
1510	Maximum Non-Detect				7.2	Maximum Non-Detect				1.974	
1511											
1512	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				17	
1513	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				8	
1514	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				68.00%	
1515											
1516	UCL Statistics										
1517	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1518	Shapiro Wilk Test Statistic				0.604	Shapiro Wilk Test Statistic				0.866	
1519	5% Shapiro Wilk Critical Value				0.901	5% Shapiro Wilk Critical Value				0.901	
1520	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1521											
1522	Assuming Normal Distribution					Assuming Lognormal Distribution					
1523	DL/2 Substitution Method					DL/2 Substitution Method					
1524	Mean				10.85	Mean				1.706	
1525	SD				17.34	SD				1.1	
1526	95% DL/2 (t) UCL				16.78	95% H-Stat (DL/2) UCL				17.16	
1527											
1528	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
1529	MLE yields a negative mean					Mean in Log Scale				1.737	
1530						SD in Log Scale				1.034	
1531						Mean in Original Scale				10.89	
1532						SD in Original Scale				17.33	
1533						95% Percentile Bootstrap UCL				16.8	
1534						95% BCA Bootstrap UCL				19.15	
1535											
1536	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1537	k star (bias corrected)				0.831	Data do not follow a Discernable Distribution (0.05)					

A	B	C	D	E	F	G	H	I	J	K	L
1538				Theta Star	16.06						
1539				nu star	31.56						
1540											
1541				A-D Test Statistic	1.701	Nonparametric Statistics					
1542				5% A-D Critical Value	0.771	Kaplan-Meier (KM) Method					
1543				K-S Test Statistic	0.771					Mean	10.98
1544				5% K-S Critical Value	0.205					SD	16.93
1545	Data not Gamma Distributed at 5% Significance Level									SE of Mean	3.481
1546										95% KM (t) UCL	16.94
1547	Assuming Gamma Distribution									95% KM (z) UCL	16.71
1548	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	16.9
1549				Minimum	1E-09					95% KM (bootstrap t) UCL	26.48
1550				Maximum	76.7					95% KM (BCA) UCL	16.99
1551				Mean	12.17					95% KM (Percentile Bootstrap) UCL	17.05
1552				Median	5.1					95% KM (Chebyshev) UCL	26.15
1553				SD	17.09					97.5% KM (Chebyshev) UCL	32.72
1554				k star	0.434					99% KM (Chebyshev) UCL	45.62
1555				Theta star	28.02						
1556				Nu star	21.72	Potential UCLs to Use					
1557				AppChi2	12.13					97.5% KM (Chebyshev) UCL	32.72
1558				95% Gamma Approximate UCL	21.8						
1559				95% Adjusted Gamma UCL	22.71						
1560	Note: DL/2 is not a recommended method.										
1561											
1562											
1563	Arsenic										
1564											
1565	General Statistics										
1566				Number of Valid Data	25					Number of Detected Data	24
1567				Number of Distinct Detected Data	23					Number of Non-Detect Data	1
1568										Percent Non-Detects	4.00%
1569											
1570	Raw Statistics					Log-transformed Statistics					
1571				Minimum Detected	3					Minimum Detected	1.099
1572				Maximum Detected	26.3					Maximum Detected	3.27
1573				Mean of Detected	10.77					Mean of Detected	2.242
1574				SD of Detected	5.654					SD of Detected	0.547
1575				Minimum Non-Detect	0.48					Minimum Non-Detect	-0.734
1576				Maximum Non-Detect	0.48					Maximum Non-Detect	-0.734
1577											
1578											
1579	UCL Statistics										
1580	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1581				Shapiro Wilk Test Statistic	0.935					Shapiro Wilk Test Statistic	0.982
1582				5% Shapiro Wilk Critical Value	0.916					5% Shapiro Wilk Critical Value	0.916
1583	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1584											
1585	Assuming Normal Distribution					Assuming Lognormal Distribution					
1586				DL/2 Substitution Method						DL/2 Substitution Method	
1587				Mean	10.35					Mean	2.095
1588				SD	5.922					SD	0.908
1589				95% DL/2 (t) UCL	12.38					95% H-Stat (DL/2) UCL	16.46
1590											

A	B	C	D	E	F	G	H	I	J	K	L	
1591	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
1592	Mean				10.26	Mean in Log Scale						2.187
1593	SD				5.992	SD in Log Scale						0.6
1594	95% MLE (t) UCL				12.31	Mean in Original Scale						10.44
1595	95% MLE (Tiku) UCL				12.3	SD in Original Scale						5.782
1596						95% Percentile Bootstrap UCL						12.32
1597						95% BCA Bootstrap UCL						12.6
1598												
1599	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1600	k star (bias corrected)				3.405	Data appear Normal at 5% Significance Level						
1601	Theta Star				3.164							
1602	nu star				163.4							
1603												
1604	A-D Test Statistic				0.146	Nonparametric Statistics						
1605	5% A-D Critical Value				0.749	Kaplan-Meier (KM) Method						
1606	K-S Test Statistic				0.749	Mean						10.46
1607	5% K-S Critical Value				0.179	SD						5.633
1608	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						1.151
1609						95% KM (t) UCL						12.43
1610	Assuming Gamma Distribution					95% KM (z) UCL						12.35
1611	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						12.41
1612	Minimum				1E-09	95% KM (bootstrap t) UCL						12.73
1613	Maximum				26.3	95% KM (BCA) UCL						12.34
1614	Mean				10.34	95% KM (Percentile Bootstrap) UCL						12.47
1615	Median				9.1	95% KM (Chebyshev) UCL						15.48
1616	SD				5.939	97.5% KM (Chebyshev) UCL						17.65
1617	k star				0.562	99% KM (Chebyshev) UCL						21.91
1618	Theta star				18.39							
1619	Nu star				28.12	Potential UCLs to Use						
1620	AppChi2				17.02	95% KM (t) UCL						12.43
1621	95% Gamma Approximate UCL				17.08	95% KM (Percentile Bootstrap) UCL						12.47
1622	95% Adjusted Gamma UCL				17.69							
1623	Note: DL/2 is not a recommended method.											
1624												
1625												
1626	Barium											
1627												
1628	General Statistics											
1629	Number of Valid Observations				25	Number of Distinct Observations						25
1630												
1631	Raw Statistics					Log-transformed Statistics						
1632	Minimum				37	Minimum of Log Data						3.611
1633	Maximum				1790	Maximum of Log Data						7.49
1634	Mean				279.9	Mean of log Data						5.261
1635	Median				214	SD of log Data						0.84
1636	SD				340.7							
1637	Coefficient of Variation				1.217							
1638	Skewness				3.896							
1639												
1640	Relevant UCL Statistics											
1641	Normal Distribution Test					Lognormal Distribution Test						
1642	Shapiro Wilk Test Statistic				0.553	Shapiro Wilk Test Statistic						0.965
1643	Shapiro Wilk Critical Value				0.918	Shapiro Wilk Critical Value						0.918

A	B	C	D	E	F	G	H	I	J	K	L	
1644	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1645												
1646	Assuming Normal Distribution					Assuming Lognormal Distribution						
1647	95% Student's-t UCL				396.5	95% H-UCL				406.5		
1648	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL				486.3		
1649	95% Adjusted-CLT UCL				448.7	97.5% Chebyshev (MVUE) UCL				580.3		
1650	95% Modified-t UCL				405.3	99% Chebyshev (MVUE) UCL				765		
1651												
1652	Gamma Distribution Test					Data Distribution						
1653	k star (bias corrected)				1.331	Data appear Gamma Distributed at 5% Significance Level						
1654	Theta Star				210.3							
1655	MLE of Mean				279.9							
1656	MLE of Standard Deviation				242.6							
1657	nu star				66.56							
1658	Approximate Chi Square Value (.05)				48.78	Nonparametric Statistics						
1659	Adjusted Level of Significance				0.0395	95% CLT UCL				392		
1660	Adjusted Chi Square Value				47.75	95% Jackknife UCL				396.5		
1661						95% Standard Bootstrap UCL				391.4		
1662	Anderson-Darling Test Statistic				0.723	95% Bootstrap-t UCL				559.9		
1663	Anderson-Darling 5% Critical Value				0.762	95% Hall's Bootstrap UCL				849.8		
1664	Kolmogorov-Smirnov Test Statistic				0.137	95% Percentile Bootstrap UCL				403.7		
1665	Kolmogorov-Smirnov 5% Critical Value				0.178	95% BCA Bootstrap UCL				482.6		
1666	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				576.9		
1667						97.5% Chebyshev(Mean, Sd) UCL				705.4		
1668	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				957.9		
1669	95% Approximate Gamma UCL				381.9							
1670	95% Adjusted Gamma UCL				390.2							
1671												
1672	Potential UCL to Use					Use 95% Approximate Gamma UCL				381.9		
1673												
1674												
1675	Cadmium											
1676												
1677	General Statistics											
1678	Number of Valid Data				25	Number of Detected Data				23		
1679	Number of Distinct Detected Data				21	Number of Non-Detect Data				2		
1680						Percent Non-Detects				8.00%		
1681												
1682	Raw Statistics					Log-transformed Statistics						
1683	Minimum Detected				0.35	Minimum Detected				-1.05		
1684	Maximum Detected				18.6	Maximum Detected				2.923		
1685	Mean of Detected				4.894	Mean of Detected				0.983		
1686	SD of Detected				5.298	SD of Detected				1.203		
1687	Minimum Non-Detect				0.09	Minimum Non-Detect				-2.408		
1688	Maximum Non-Detect				0.6	Maximum Non-Detect				-0.511		
1689												
1690	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				5		
1691	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				20		
1692	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				20.00%		
1693												
1694	UCL Statistics											
1695	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1696	Shapiro Wilk Test Statistic				0.791	Shapiro Wilk Test Statistic				0.957		

A	B	C	D	E	F	G	H	I	J	K	L
1697	5% Shapiro Wilk Critical Value				0.914	5% Shapiro Wilk Critical Value				0.914	
1698	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1699											
1700	Assuming Normal Distribution					Assuming Lognormal Distribution					
1701	DL/2 Substitution Method					DL/2 Substitution Method					
1702	Mean			4.516	Mean			0.732			
1703	SD			5.239	SD			1.468			
1704	95% DL/2 (t) UCL			6.309	95% H-Stat (DL/2) UCL			13.61			
1705											
1706	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
1707	Mean			3.813	Mean in Log Scale			0.782			
1708	SD			6.01	SD in Log Scale			1.353			
1709	95% MLE (t) UCL			5.869	Mean in Original Scale			4.522			
1710	95% MLE (Tiku) UCL			5.867	SD in Original Scale			5.234			
1711						95% Percentile Bootstrap UCL			6.35		
1712						95% BCA Bootstrap UCL			6.48		
1713											
1714	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1715	k star (bias corrected)			0.863	Data appear Gamma Distributed at 5% Significance Level						
1716	Theta Star			5.672							
1717	nu star			39.69							
1718											
1719	A-D Test Statistic			0.415	Nonparametric Statistics						
1720	5% A-D Critical Value			0.771	Kaplan-Meier (KM) Method						
1721	K-S Test Statistic			0.771	Mean			4.532			
1722	5% K-S Critical Value			0.187	SD			5.119			
1723	Data appear Gamma Distributed at 5% Significance Level					SE of Mean			1.047		
1724						95% KM (t) UCL			6.323		
1725	Assuming Gamma Distribution					95% KM (z) UCL			6.254		
1726	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL			6.32		
1727	Minimum			1E-09	95% KM (bootstrap t) UCL			6.98			
1728	Maximum			18.6	95% KM (BCA) UCL			6.352			
1729	Mean			4.502	95% KM (Percentile Bootstrap) UCL			6.322			
1730	Median			1.8	95% KM (Chebyshev) UCL			9.096			
1731	SD			5.251	97.5% KM (Chebyshev) UCL			11.07			
1732	k star			0.295	99% KM (Chebyshev) UCL			14.95			
1733	Theta star			15.28							
1734	Nu star			14.74	Potential UCLs to Use						
1735	AppChi2			7.078	95% KM (Chebyshev) UCL			9.096			
1736	95% Gamma Approximate UCL			9.373							
1737	95% Adjusted Gamma UCL			9.876							
1738	Note: DL/2 is not a recommended method.										
1739											
1740											
1741	Chromium										
1742											
1743	General Statistics										
1744	Number of Valid Observations				24	Number of Distinct Observations				23	
1745											
1746	Raw Statistics					Log-transformed Statistics					
1747	Minimum			12.5	Minimum of Log Data			2.526			
1748	Maximum			12100	Maximum of Log Data			9.401			
1749	Mean			742	Mean of log Data			4.874			

	A	B	C	D	E	F	G	H	I	J	K	L	
1750					Median	123					SD of log Data	1.511	
1751					SD	2462							
1752					Coefficient of Variation	3.318							
1753					Skewness	4.644							
1754													
1755					Relevant UCL Statistics								
1756					Normal Distribution Test				Lognormal Distribution Test				
1757					Shapiro Wilk Test Statistic	0.306				Shapiro Wilk Test Statistic	0.881		
1758					Shapiro Wilk Critical Value	0.916				Shapiro Wilk Critical Value	0.916		
1759					Data not Normal at 5% Significance Level				Data not Lognormal at 5% Significance Level				
1760													
1761					Assuming Normal Distribution				Assuming Lognormal Distribution				
1762					95% Student's-t UCL	1603				95% H-UCL	1156		
1763					95% UCLs (Adjusted for Skewness)				95% Chebyshev (MVUE) UCL				991.9
1764					95% Adjusted-CLT UCL	2078				97.5% Chebyshev (MVUE) UCL	1259		
1765					95% Modified-t UCL	1683				99% Chebyshev (MVUE) UCL	1784		
1766													
1767					Gamma Distribution Test				Data Distribution				
1768					k star (bias corrected)	0.362				Data do not follow a Discernable Distribution (0.05)			
1769					Theta Star	2050							
1770					MLE of Mean	742							
1771					MLE of Standard Deviation	1233							
1772					nu star	17.38							
1773					Approximate Chi Square Value (.05)	8.941				Nonparametric Statistics			
1774					Adjusted Level of Significance	0.0392				95% CLT UCL	1569		
1775					Adjusted Chi Square Value	8.517				95% Jackknife UCL	1603		
1776										95% Standard Bootstrap UCL	1538		
1777					Anderson-Darling Test Statistic	3.5				95% Bootstrap-t UCL	5406		
1778					Anderson-Darling 5% Critical Value	0.833				95% Hall's Bootstrap UCL	5480		
1779					Kolmogorov-Smirnov Test Statistic	0.381				95% Percentile Bootstrap UCL	1688		
1780					Kolmogorov-Smirnov 5% Critical Value	0.191				95% BCA Bootstrap UCL	2249		
1781					Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL	2933		
1782										97.5% Chebyshev(Mean, Sd) UCL	3881		
1783					Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL	5743		
1784					95% Approximate Gamma UCL	1442							
1785					95% Adjusted Gamma UCL	1514							
1786													
1787					Potential UCL to Use					Use 99% Chebyshev (Mean, Sd) UCL	5743		
1788													
1789													
1790	Cobalt												
1791													
1792					General Statistics								
1793					Number of Valid Observations	25				Number of Distinct Observations	25		
1794													
1795					Raw Statistics				Log-transformed Statistics				
1796					Minimum	5.5				Minimum of Log Data	1.705		
1797					Maximum	28.5				Maximum of Log Data	3.35		
1798					Mean	11.37				Mean of log Data	2.351		
1799					Median	10.2				SD of log Data	0.391		
1800					SD	5.194							
1801					Coefficient of Variation	0.457							
1802					Skewness	1.835							

A	B	C	D	E	F	G	H	I	J	K	L	
1803												
1804	Relevant UCL Statistics											
1805	Normal Distribution Test					Lognormal Distribution Test						
1806	Shapiro Wilk Test Statistic				0.832	Shapiro Wilk Test Statistic				0.964		
1807	Shapiro Wilk Critical Value				0.918	Shapiro Wilk Critical Value				0.918		
1808	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1809												
1810	Assuming Normal Distribution					Assuming Lognormal Distribution						
1811	95% Student's-t UCL				13.15	95% H-UCL				13.17		
1812	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL				15.25		
1813	95% Adjusted-CLT UCL				13.49	97.5% Chebyshev (MVUE) UCL				16.96		
1814	95% Modified-t UCL				13.21	99% Chebyshev (MVUE) UCL				20.32		
1815												
1816	Gamma Distribution Test					Data Distribution						
1817	k star (bias corrected)				5.671	Data appear Gamma Distributed at 5% Significance Level						
1818	Theta Star				2.005							
1819	MLE of Mean				11.37							
1820	MLE of Standard Deviation				4.775							
1821	nu star				283.6							
1822	Approximate Chi Square Value (.05)				245.6	Nonparametric Statistics						
1823	Adjusted Level of Significance				0.0395	95% CLT UCL				13.08		
1824	Adjusted Chi Square Value				243.2	95% Jackknife UCL				13.15		
1825						95% Standard Bootstrap UCL				13.07		
1826	Anderson-Darling Test Statistic				0.547	95% Bootstrap-t UCL				13.89		
1827	Anderson-Darling 5% Critical Value				0.746	95% Hall's Bootstrap UCL				14.12		
1828	Kolmogorov-Smirnov Test Statistic				0.154	95% Percentile Bootstrap UCL				13.08		
1829	Kolmogorov-Smirnov 5% Critical Value				0.175	95% BCA Bootstrap UCL				13.59		
1830	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				15.9		
1831						97.5% Chebyshev(Mean, Sd) UCL				17.86		
1832	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						21.71
1833	95% Approximate Gamma UCL				13.13							
1834	95% Adjusted Gamma UCL				13.26							
1835												
1836	Potential UCL to Use					Use 95% Approximate Gamma UCL						13.13
1837												
1838												
1839	Copper											
1840												
1841	General Statistics											
1842	Number of Valid Observations				24	Number of Distinct Observations				24		
1843												
1844	Raw Statistics					Log-transformed Statistics						
1845	Minimum				19	Minimum of Log Data				2.944		
1846	Maximum				7460	Maximum of Log Data				8.917		
1847	Mean				1142	Mean of log Data				6.148		
1848	Median				387	SD of log Data				1.424		
1849	SD				1761							
1850	Coefficient of Variation				1.541							
1851	Skewness				2.568							
1852												
1853	Relevant UCL Statistics											
1854	Normal Distribution Test					Lognormal Distribution Test						
1855	Shapiro Wilk Test Statistic				0.633	Shapiro Wilk Test Statistic				0.971		

A	B	C	D	E	F	G	H	I	J	K	L
1856	Shapiro Wilk Critical Value				0.916	Shapiro Wilk Critical Value				0.916	
1857	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1858											
1859	Assuming Normal Distribution					Assuming Lognormal Distribution					
1860	95% Student's-t UCL			1758	95% H-UCL			3291			
1861	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL			3031		
1862	95% Adjusted-CLT UCL			1935	97.5% Chebyshev (MVUE) UCL			3827			
1863	95% Modified-t UCL			1790	99% Chebyshev (MVUE) UCL			5388			
1864											
1865	Gamma Distribution Test					Data Distribution					
1866	k star (bias corrected)			0.622	Data appear Lognormal at 5% Significance Level						
1867	Theta Star			1835							
1868	MLE of Mean			1142							
1869	MLE of Standard Deviation			1448							
1870	nu star			29.88							
1871	Approximate Chi Square Value (.05)			18.4	Nonparametric Statistics						
1872	Adjusted Level of Significance			0.0392	95% CLT UCL			1734			
1873	Adjusted Chi Square Value			17.76	95% Jackknife UCL			1758			
1874					95% Standard Bootstrap UCL			1717			
1875	Anderson-Darling Test Statistic			0.883	95% Bootstrap-t UCL			2223			
1876	Anderson-Darling 5% Critical Value			0.789	95% Hall's Bootstrap UCL			2536			
1877	Kolmogorov-Smirnov Test Statistic			0.19	95% Percentile Bootstrap UCL			1779			
1878	Kolmogorov-Smirnov 5% Critical Value			0.186	95% BCA Bootstrap UCL			1941			
1879	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL			2709		
1880					97.5% Chebyshev(Mean, Sd) UCL			3387			
1881	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL			4719		
1882	95% Approximate Gamma UCL			1855							
1883	95% Adjusted Gamma UCL			1922							
1884											
1885	Potential UCL to Use					Use 95% Chebyshev (MVUE) UCL			3031		
1886											
1887											
1888	Iron										
1889											
1890	General Statistics										
1891	Number of Valid Observations			23	Number of Distinct Observations			23			
1892											
1893	Raw Statistics				Log-transformed Statistics						
1894	Minimum			17100	Minimum of Log Data			9.747			
1895	Maximum			224000	Maximum of Log Data			12.32			
1896	Mean			52413	Mean of log Data			10.64			
1897	Median			41900	SD of log Data			0.64			
1898	SD			45101							
1899	Coefficient of Variation			0.86							
1900	Skewness			2.792							
1901											
1902	Relevant UCL Statistics										
1903	Normal Distribution Test					Lognormal Distribution Test					
1904	Shapiro Wilk Test Statistic			0.686	Shapiro Wilk Test Statistic			0.946			
1905	Shapiro Wilk Critical Value			0.914	Shapiro Wilk Critical Value			0.914			
1906	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1907											
1908	Assuming Normal Distribution					Assuming Lognormal Distribution					

A	B	C	D	E	F	G	H	I	J	K	L	
1909	95% Student's-t UCL				68561	95% H-UCL						68356
1910	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						82115
1911	95% Adjusted-CLT UCL				73731	97.5% Chebyshev (MVUE) UCL						95683
1912	95% Modified-t UCL				69474	99% Chebyshev (MVUE) UCL						122335
1913												
1914	Gamma Distribution Test					Data Distribution						
1915	k star (bias corrected)				2.082	Data appear Lognormal at 5% Significance Level						
1916	Theta Star				25171							
1917	MLE of Mean				52413							
1918	MLE of Standard Deviation				36322							
1919	nu star				95.78							
1920	Approximate Chi Square Value (.05)				74.21	Nonparametric Statistics						
1921	Adjusted Level of Significance				0.0389	95% CLT UCL						67882
1922	Adjusted Chi Square Value				72.83	95% Jackknife UCL						68561
1923						95% Standard Bootstrap UCL						67563
1924	Anderson-Darling Test Statistic				0.794	95% Bootstrap-t UCL						80697
1925	Anderson-Darling 5% Critical Value				0.753	95% Hall's Bootstrap UCL						130745
1926	Kolmogorov-Smirnov Test Statistic				0.186	95% Percentile Bootstrap UCL						68517
1927	Kolmogorov-Smirnov 5% Critical Value				0.183	95% BCA Bootstrap UCL						74809
1928	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL						93405
1929						97.5% Chebyshev(Mean, Sd) UCL						111142
1930	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						145984
1931	95% Approximate Gamma UCL				67650							
1932	95% Adjusted Gamma UCL				68928							
1933												
1934	Potential UCL to Use					Use 95% H-UCL						68356
1935												
1936												
1937	Lead											
1938												
1939	General Statistics											
1940	Number of Valid Observations				25	Number of Distinct Observations						25
1941												
1942	Raw Statistics					Log-transformed Statistics						
1943	Minimum				36.8	Minimum of Log Data						3.605
1944	Maximum				3030	Maximum of Log Data						8.016
1945	Mean				974.9	Mean of log Data						6.424
1946	Median				617	SD of log Data						1.102
1947	SD				854							
1948	Coefficient of Variation				0.876							
1949	Skewness				1.093							
1950												
1951	Relevant UCL Statistics											
1952	Normal Distribution Test					Lognormal Distribution Test						
1953	Shapiro Wilk Test Statistic				0.867	Shapiro Wilk Test Statistic						0.952
1954	Shapiro Wilk Critical Value				0.918	Shapiro Wilk Critical Value						0.918
1955	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1956												
1957	Assuming Normal Distribution					Assuming Lognormal Distribution						
1958	95% Student's-t UCL				1267	95% H-UCL						2043
1959	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						2304
1960	95% Adjusted-CLT UCL				1296	97.5% Chebyshev (MVUE) UCL						2828
1961	95% Modified-t UCL				1273	99% Chebyshev (MVUE) UCL						3859

A	B	C	D	E	F	G	H	I	J	K	L
1962											
1963	Gamma Distribution Test					Data Distribution					
1964	k star (bias corrected)				1.111	Data appear Gamma Distributed at 5% Significance Level					
1965	Theta Star				877.7						
1966	MLE of Mean				974.9						
1967	MLE of Standard Deviation				925						
1968	nu star				55.54						
1969	Approximate Chi Square Value (.05)				39.41	Nonparametric Statistics					
1970	Adjusted Level of Significance				0.0395	95% CLT UCL				1256	
1971	Adjusted Chi Square Value				38.49	95% Jackknife UCL				1267	
1972						95% Standard Bootstrap UCL				1253	
1973	Anderson-Darling Test Statistic				0.245	95% Bootstrap-t UCL				1342	
1974	Anderson-Darling 5% Critical Value				0.768	95% Hall's Bootstrap UCL				1289	
1975	Kolmogorov-Smirnov Test Statistic				0.103	95% Percentile Bootstrap UCL				1270	
1976	Kolmogorov-Smirnov 5% Critical Value				0.179	95% BCA Bootstrap UCL				1305	
1977	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				1719	
1978						97.5% Chebyshev(Mean, Sd) UCL				2041	
1979	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				2674	
1980	95% Approximate Gamma UCL				1374						
1981	95% Adjusted Gamma UCL				1407						
1982											
1983	Potential UCL to Use					Use 95% Approximate Gamma UCL				1374	
1984											
1985											
1986	Manganese										
1987											
1988	General Statistics										
1989	Number of Valid Observations				25	Number of Distinct Observations				24	
1990											
1991	Raw Statistics					Log-transformed Statistics					
1992	Minimum				283	Minimum of Log Data				5.645	
1993	Maximum				1130	Maximum of Log Data				7.03	
1994	Mean				574.9	Mean of log Data				6.272	
1995	Median				537	SD of log Data				0.407	
1996	SD				248.7						
1997	Coefficient of Variation				0.433						
1998	Skewness				1.003						
1999											
2000	Relevant UCL Statistics										
2001	Normal Distribution Test					Lognormal Distribution Test					
2002	Shapiro Wilk Test Statistic				0.883	Shapiro Wilk Test Statistic				0.948	
2003	Shapiro Wilk Critical Value				0.918	Shapiro Wilk Critical Value				0.918	
2004	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
2005											
2006	Assuming Normal Distribution					Assuming Lognormal Distribution					
2007	95% Student's-t UCL				660	95% H-UCL				672.7	
2008	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL				782	
2009	95% Adjusted-CLT UCL				667.3	97.5% Chebyshev (MVUE) UCL				872.4	
2010	95% Modified-t UCL				661.6	99% Chebyshev (MVUE) UCL				1050	
2011											
2012	Gamma Distribution Test					Data Distribution					
2013	k star (bias corrected)				5.53	Data appear Gamma Distributed at 5% Significance Level					
2014	Theta Star				104						

	A	B	C	D	E	F	G	H	I	J	K	L
2015	MLE of Mean					574.9						
2016	MLE of Standard Deviation					244.5						
2017	nu star					276.5						
2018	Approximate Chi Square Value (.05)					239	Nonparametric Statistics					
2019	Adjusted Level of Significance					0.0395	95% CLT UCL					656.7
2020	Adjusted Chi Square Value					236.6	95% Jackknife UCL					660
2021							95% Standard Bootstrap UCL					655.9
2022	Anderson-Darling Test Statistic					0.569	95% Bootstrap-t UCL					669.9
2023	Anderson-Darling 5% Critical Value					0.746	95% Hall's Bootstrap UCL					670
2024	Kolmogorov-Smirnov Test Statistic					0.155	95% Percentile Bootstrap UCL					660.2
2025	Kolmogorov-Smirnov 5% Critical Value					0.175	95% BCA Bootstrap UCL					670.3
2026	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					791.7
2027							97.5% Chebyshev(Mean, Sd) UCL					885.5
2028	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					1070
2029	95% Approximate Gamma UCL					665.1						
2030	95% Adjusted Gamma UCL					671.8						
2031												
2032	Potential UCL to Use						Use 95% Approximate Gamma UCL					665.1
2033												
2034												
2035	Mercury											
2036												
2037	General Statistics											
2038	Number of Valid Data					25	Number of Detected Data					23
2039	Number of Distinct Detected Data					19	Number of Non-Detect Data					2
2040							Percent Non-Detects					8.00%
2041												
2042	Raw Statistics						Log-transformed Statistics					
2043	Minimum Detected					0.14	Minimum Detected					-1.966
2044	Maximum Detected					2.6	Maximum Detected					0.956
2045	Mean of Detected					0.739	Mean of Detected					-0.595
2046	SD of Detected					0.622	SD of Detected					0.79
2047	Minimum Non-Detect					0.11	Minimum Non-Detect					-2.207
2048	Maximum Non-Detect					0.12	Maximum Non-Detect					-2.12
2049												
2050	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					2
2051	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					23
2052	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					8.00%
2053												
2054	UCL Statistics											
2055	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2056	Shapiro Wilk Test Statistic					0.801	Shapiro Wilk Test Statistic					0.969
2057	5% Shapiro Wilk Critical Value					0.914	5% Shapiro Wilk Critical Value					0.914
2058	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2059												
2060	Assuming Normal Distribution						Assuming Lognormal Distribution					
2061	DL/2 Substitution Method						DL/2 Substitution Method					
2062	Mean					0.685	Mean					-0.776
2063	SD					0.624	SD					0.982
2064	95% DL/2 (t) UCL					0.898	95% H-Stat (DL/2) UCL					1.021
2065												
2066	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
2067	Mean					0.661	Mean in Log Scale					-0.743

A	B	C	D	E	F	G	H	I	J	K	L	
2121	Assuming Normal Distribution					Assuming Lognormal Distribution						
2122	95% Student's-t UCL				144.6	95% H-UCL					163.5	
2123	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						195.1
2124	95% Adjusted-CLT UCL				154.3	97.5% Chebyshev (MVUE) UCL					233.4	
2125	95% Modified-t UCL				146.3	99% Chebyshev (MVUE) UCL					308.7	
2126												
2127	Gamma Distribution Test					Data Distribution						
2128	k star (bias corrected)				1.369	Data appear Gamma Distributed at 5% Significance Level						
2129	Theta Star				78.66							
2130	MLE of Mean				107.7							
2131	MLE of Standard Deviation				92.02							
2132	nu star				68.43							
2133	Approximate Chi Square Value (.05)				50.39	Nonparametric Statistics						
2134	Adjusted Level of Significance				0.0395	95% CLT UCL					143.2	
2135	Adjusted Chi Square Value				49.34	95% Jackknife UCL					144.6	
2136						95% Standard Bootstrap UCL					141.7	
2137	Anderson-Darling Test Statistic				0.495	95% Bootstrap-t UCL					179.5	
2138	Anderson-Darling 5% Critical Value				0.761	95% Hall's Bootstrap UCL					330.3	
2139	Kolmogorov-Smirnov Test Statistic				0.152	95% Percentile Bootstrap UCL					146.2	
2140	Kolmogorov-Smirnov 5% Critical Value				0.178	95% BCA Bootstrap UCL					159	
2141	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL					201.8	
2142						97.5% Chebyshev(Mean, Sd) UCL					242.5	
2143	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						322.5
2144	95% Approximate Gamma UCL				146.2							
2145	95% Adjusted Gamma UCL				149.3							
2146												
2147	Potential UCL to Use					Use 95% Approximate Gamma UCL					146.2	
2148												
2149												
2150	Thallium											
2151												
2152	General Statistics											
2153	Number of Valid Data				25	Number of Detected Data				8		
2154	Number of Distinct Detected Data				6	Number of Non-Detect Data				17		
2155						Percent Non-Detects				68.00%		
2156												
2157	Raw Statistics					Log-transformed Statistics						
2158	Minimum Detected				0.72	Minimum Detected				-0.329		
2159	Maximum Detected				4.6	Maximum Detected				1.526		
2160	Mean of Detected				1.296	Mean of Detected				0.0149		
2161	SD of Detected				1.339	SD of Detected				0.623		
2162	Minimum Non-Detect				0.79	Minimum Non-Detect				-0.236		
2163	Maximum Non-Detect				3.3	Maximum Non-Detect				1.194		
2164												
2165	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				24		
2166	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				1		
2167	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				96.00%		
2168												
2169	Warning: There are only 8 Detected Values in this data											
2170	Note: It should be noted that even though bootstrap may be performed on this data set											
2171	the resulting calculations may not be reliable enough to draw conclusions											
2172												
2173	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											

	A	B	C	D	E	F	G	H	I	J	K	L	
2174													
2175													
2176	UCL Statistics												
2177	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2178	Shapiro Wilk Test Statistic					0.487	Shapiro Wilk Test Statistic					0.593	
2179	5% Shapiro Wilk Critical Value					0.818	5% Shapiro Wilk Critical Value					0.818	
2180	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
2181													
2182	Assuming Normal Distribution						Assuming Lognormal Distribution						
2183	DL/2 Substitution Method						DL/2 Substitution Method						
2184	Mean					1.184	Mean					-0.00515	
2185	SD					0.84	SD					0.584	
2186	95% DL/2 (t) UCL					1.471	95% H-Stat (DL/2) UCL					1.825	
2187													
2188	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
2189	MLE method failed to converge properly						Mean in Log Scale					-0.153	
2190							SD in Log Scale					0.381	
2191							Mean in Original Scale					0.961	
2192							SD in Original Scale					0.768	
2193							95% Percentile Bootstrap UCL					1.269	
2194							95% BCA Bootstrap UCL					1.441	
2195													
2196	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2197	k star (bias corrected)					1.456	Data do not follow a Discernable Distribution (0.05)						
2198	Theta Star					0.89							
2199	nu star					23.3							
2200													
2201	A-D Test Statistic					1.774	Nonparametric Statistics						
2202	5% A-D Critical Value					0.723	Kaplan-Meier (KM) Method						
2203	K-S Test Statistic					0.723	Mean					0.946	
2204	5% K-S Critical Value					0.297	SD					0.751	
2205	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.162	
2206							95% KM (t) UCL					1.223	
2207	Assuming Gamma Distribution						95% KM (z) UCL						1.213
2208	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.211	
2209	Minimum					0.72	95% KM (bootstrap t) UCL					2.325	
2210	Maximum					4.6	95% KM (BCA) UCL					1.228	
2211	Mean					1.372	95% KM (Percentile Bootstrap) UCL					1.254	
2212	Median					1.322	95% KM (Chebyshev) UCL					1.652	
2213	SD					0.759	97.5% KM (Chebyshev) UCL					1.958	
2214	k star					4.982	99% KM (Chebyshev) UCL					2.558	
2215	Theta star					0.275							
2216	Nu star					249.1	Potential UCLs to Use						
2217	AppChi2					213.5	95% KM (t) UCL					1.223	
2218	95% Gamma Approximate UCL					1.601	95% KM (% Bootstrap) UCL					1.254	
2219	95% Adjusted Gamma UCL					1.618							
2220	Note: DL/2 is not a recommended method.												
2221													
2222													
2223	Vanadium												
2224													
2225	General Statistics												
2226	Number of Valid Observations					25	Number of Distinct Observations					25	

A	B	C	D	E	F	G	H	I	J	K	L	
2227												
2228	Raw Statistics					Log-transformed Statistics						
2229					Minimum	9.2					Minimum of Log Data	2.219
2230					Maximum	841					Maximum of Log Data	6.735
2231					Mean	106.9					Mean of log Data	4.11
2232					Median	70.7					SD of log Data	1.025
2233					SD	166.4						
2234					Coefficient of Variation	1.556						
2235					Skewness	3.935						
2236												
2237	Relevant UCL Statistics											
2238	Normal Distribution Test					Lognormal Distribution Test						
2239					Shapiro Wilk Test Statistic	0.505					Shapiro Wilk Test Statistic	0.962
2240					Shapiro Wilk Critical Value	0.918					Shapiro Wilk Critical Value	0.918
2241	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
2242												
2243	Assuming Normal Distribution					Assuming Lognormal Distribution						
2244					95% Student's-t UCL	163.8					95% H-UCL	174.7
2245	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						201.9
2246					95% Adjusted-CLT UCL	189.6					97.5% Chebyshev (MVUE) UCL	245.9
2247					95% Modified-t UCL	168.2					99% Chebyshev (MVUE) UCL	332.6
2248												
2249	Gamma Distribution Test					Data Distribution						
2250					k star (bias corrected)	0.928	Data appear Lognormal at 5% Significance Level					
2251					Theta Star	115.2						
2252					MLE of Mean	106.9						
2253					MLE of Standard Deviation	111						
2254					nu star	46.41						
2255	Approximate Chi Square Value (.05)					31.78	Nonparametric Statistics					
2256					Adjusted Level of Significance	0.0395					95% CLT UCL	161.7
2257					Adjusted Chi Square Value	30.95					95% Jackknife UCL	163.8
2258											95% Standard Bootstrap UCL	161.4
2259					Anderson-Darling Test Statistic	0.992					95% Bootstrap-t UCL	290.3
2260					Anderson-Darling 5% Critical Value	0.773					95% Hall's Bootstrap UCL	394.6
2261					Kolmogorov-Smirnov Test Statistic	0.231					95% Percentile Bootstrap UCL	165.5
2262					Kolmogorov-Smirnov 5% Critical Value	0.179					95% BCA Bootstrap UCL	195.4
2263	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL						252
2264						97.5% Chebyshev(Mean, Sd) UCL						314.7
2265	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						438
2266					95% Approximate Gamma UCL	156.2						
2267					95% Adjusted Gamma UCL	160.3						
2268												
2269	Potential UCL to Use					Use 95% H-UCL						174.7
2270												
2271												
2272	Zinc											
2273												
2274	General Statistics											
2275					Number of Valid Observations	25					Number of Distinct Observations	25
2276												
2277	Raw Statistics					Log-transformed Statistics						
2278					Minimum	76					Minimum of Log Data	4.331
2279					Maximum	5080					Maximum of Log Data	8.533

	A	B	C	D	E	F	G	H	I	J	K	L
2280					Mean	1349					Mean of log Data	6.803
2281					Median	955					SD of log Data	1.012
2282					SD	1189						
2283					Coefficient of Variation	0.882						
2284					Skewness	1.61						
2285												
2286	Relevant UCL Statistics											
2287	Normal Distribution Test						Lognormal Distribution Test					
2288					Shapiro Wilk Test Statistic	0.848					Shapiro Wilk Test Statistic	0.963
2289					Shapiro Wilk Critical Value	0.918					Shapiro Wilk Critical Value	0.918
2290	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2291												
2292	Assuming Normal Distribution						Assuming Lognormal Distribution					
2293					95% Student's-t UCL	1756					95% H-UCL	2525
2294	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					
2295					95% Adjusted-CLT UCL	1822					97.5% Chebyshev (MVUE) UCL	3561
2296					95% Modified-t UCL	1768					99% Chebyshev (MVUE) UCL	4808
2297												
2298	Gamma Distribution Test						Data Distribution					
2299					k star (bias corrected)	1.242					Data appear Gamma Distributed at 5% Significance Level	
2300					Theta Star	1086						
2301					MLE of Mean	1349						
2302					MLE of Standard Deviation	1210						
2303					nu star	62.1						
2304					Approximate Chi Square Value (.05)	44.97					Nonparametric Statistics	
2305					Adjusted Level of Significance	0.0395					95% CLT UCL	1740
2306					Adjusted Chi Square Value	43.98					95% Jackknife UCL	1756
2307											95% Standard Bootstrap UCL	1732
2308					Anderson-Darling Test Statistic	0.184					95% Bootstrap-t UCL	1845
2309					Anderson-Darling 5% Critical Value	0.764					95% Hall's Bootstrap UCL	1939
2310					Kolmogorov-Smirnov Test Statistic	0.0799					95% Percentile Bootstrap UCL	1742
2311					Kolmogorov-Smirnov 5% Critical Value	0.178					95% BCA Bootstrap UCL	1802
2312	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					
2313											97.5% Chebyshev(Mean, Sd) UCL	2834
2314	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					
2315					95% Approximate Gamma UCL	1862						
2316					95% Adjusted Gamma UCL	1904						
2317												
2318	Potential UCL to Use						Use 95% Approximate Gamma UCL					
2319												

	A	B	C	D	E	F	G	H	I	J	K	L												
1				General UCL Statistics for Data Sets with Non-Detects																				
2	User Selected Options																							
3	From File			\\prl-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProUCL_042																				
4	Full Precision			OFF																				
5	Confidence Coefficient			95%																				
6	Number of Bootstrap Operations			2000																				
7																								
8																								
9	Acenaphthylene																							
10																								
11	General Statistics																							
12	Number of Valid Data				33				Number of Detected Data				20											
13	Number of Distinct Detected Data				17				Number of Non-Detect Data				13											
14									Percent Non-Detects				39.39%											
15																								
16	Raw Statistics						Log-transformed Statistics																	
17	Minimum Detected				0.055				Minimum Detected				-2.9											
18	Maximum Detected				3.9				Maximum Detected				1.361											
19	Mean of Detected				1.081				Mean of Detected				-0.467											
20	SD of Detected				1.029				SD of Detected				1.22											
21	Minimum Non-Detect				0.18				Minimum Non-Detect				-1.715											
22	Maximum Non-Detect				1.9				Maximum Non-Detect				0.642											
23																								
24	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						30											
25	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						3											
26	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						90.91%											
27																								
28	UCL Statistics																							
29	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only																	
30	Shapiro Wilk Test Statistic				0.858				Shapiro Wilk Test Statistic				0.946											
31	5% Shapiro Wilk Critical Value				0.905				5% Shapiro Wilk Critical Value				0.905											
32	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level																	
33																								
34	Assuming Normal Distribution						Assuming Lognormal Distribution																	
35	DL/2 Substitution Method								DL/2 Substitution Method															
36	Mean				0.732				Mean				-1.039											
37	SD				0.918				SD				1.246											
38	95% DL/2 (t) UCL				1.002				95% H-Stat (DL/2) UCL				1.011											
39																								
40	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method											
41	MLE yields a negative mean												Mean in Log Scale						-1.117					
42													SD in Log Scale						1.28					
43													Mean in Original Scale						0.708					
44													SD in Original Scale						0.923					
45													95% Percentile Bootstrap UCL						0.969					
46													95% BCA Bootstrap UCL						1.026					
47																								
48	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only																	
49	k star (bias corrected)				0.928				Data appear Gamma Distributed at 5% Significance Level															
50	Theta Star				1.165																			
51	nu star				37.11																			
52																								
53	A-D Test Statistic				0.208				Nonparametric Statistics															

	A	B	C	D	E	F	G	H	I	J	K	L
54	5% A-D Critical Value				0.767	Kaplan-Meier (KM) Method						
55	K-S Test Statistic				0.767	Mean						0.709
56	5% K-S Critical Value				0.199	SD						0.914
57	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						0.164
58						95% KM (t) UCL						0.987
59	Assuming Gamma Distribution					95% KM (z) UCL						0.979
60	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						0.985
61	Minimum				0.055	95% KM (bootstrap t) UCL						1.063
62	Maximum				3.9	95% KM (BCA) UCL						1.015
63	Mean				0.999	95% KM (Percentile Bootstrap) UCL						0.989
64	Median				0.91	95% KM (Chebyshev) UCL						1.425
65	SD				0.841	97.5% KM (Chebyshev) UCL						1.735
66	k star				1.314	99% KM (Chebyshev) UCL						2.344
67	Theta star				0.76							
68	Nu star				86.74	Potential UCLs to Use						
69	AppChi2				66.27	95% KM (BCA) UCL						1.015
70	95% Gamma Approximate UCL				1.307							
71	95% Adjusted Gamma UCL				1.326							
72	Note: DL/2 is not a recommended method.											
73												
74												
75	Benzo(a)anthracene											
76												
77	General Statistics											
78	Number of Valid Data				33	Number of Detected Data				30		
79	Number of Distinct Detected Data				28	Number of Non-Detect Data				3		
80						Percent Non-Detects				9.09%		
81												
82	Raw Statistics					Log-transformed Statistics						
83	Minimum Detected				0.092	Minimum Detected				-2.386		
84	Maximum Detected				42	Maximum Detected				3.738		
85	Mean of Detected				9.726	Mean of Detected				1.102		
86	SD of Detected				11.48	SD of Detected				1.95		
87	Minimum Non-Detect				0.21	Minimum Non-Detect				-1.561		
88	Maximum Non-Detect				1.9	Maximum Non-Detect				0.642		
89												
90	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				13		
91	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				20		
92	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				39.39%		
93												
94	UCL Statistics											
95	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
96	Shapiro Wilk Test Statistic				0.815	Shapiro Wilk Test Statistic				0.904		
97	5% Shapiro Wilk Critical Value				0.927	5% Shapiro Wilk Critical Value				0.927		
98	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
99												
100	Assuming Normal Distribution					Assuming Lognormal Distribution						
101	DL/2 Substitution Method					DL/2 Substitution Method						
102	Mean				8.877	Mean				0.865		
103	SD				11.26	SD				2.031		
104	95% DL/2 (t) UCL				12.2	95% H-Stat (DL/2) UCL				67.48		
105												
106	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						

	A	B	C	D	E	F	G	H	I	J	K	L	
107					Mean	5.021				Mean in Log Scale		0.843	
108					SD	15.57				SD in Log Scale		2.042	
109					95% MLE (t) UCL	9.612				Mean in Original Scale		8.86	
110					95% MLE (Tiku) UCL	10.16				SD in Original Scale		11.27	
111										95% Percentile Bootstrap UCL		12.07	
112										95% BCA Bootstrap UCL		12.96	
113													
114	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
115					k star (bias corrected)	0.505	Data appear Gamma Distributed at 5% Significance Level						
116					Theta Star	19.27							
117					nu star	30.28							
118													
119					A-D Test Statistic	0.546	Nonparametric Statistics						
120					5% A-D Critical Value	0.806	Kaplan-Meier (KM) Method						
121					K-S Test Statistic	0.806				Mean		8.857	
122					5% K-S Critical Value	0.169				SD		11.1	
123	Data appear Gamma Distributed at 5% Significance Level									SE of Mean		1.966	
124										95% KM (t) UCL		12.19	
125	Assuming Gamma Distribution										95% KM (z) UCL		12.09
126	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		12.18
127					Minimum	1E-09				95% KM (bootstrap t) UCL		12.96	
128					Maximum	42				95% KM (BCA) UCL		12.31	
129					Mean	8.842				95% KM (Percentile Bootstrap) UCL		12.14	
130					Median	4.2				95% KM (Chebyshev) UCL		17.43	
131					SD	11.29				97.5% KM (Chebyshev) UCL		21.13	
132					k star	0.233				99% KM (Chebyshev) UCL		28.42	
133					Theta star	37.89							
134					Nu star	15.4	Potential UCLs to Use						
135					AppChi2	7.54				95% KM (Chebyshev) UCL		17.43	
136					95% Gamma Approximate UCL	18.06							
137					95% Adjusted Gamma UCL	18.76							
138	Note: DL/2 is not a recommended method.												
139													
140													
141	Benzo(a)pyrene												
142													
143	General Statistics												
144					Number of Valid Data	33				Number of Detected Data		30	
145					Number of Distinct Detected Data	28				Number of Non-Detect Data		3	
146										Percent Non-Detects		9.09%	
147													
148	Raw Statistics						Log-transformed Statistics						
149					Minimum Detected	0.1				Minimum Detected		-2.303	
150					Maximum Detected	38				Maximum Detected		3.638	
151					Mean of Detected	8.596				Mean of Detected		1.016	
152					SD of Detected	10.05				SD of Detected		1.916	
153					Minimum Non-Detect	0.21				Minimum Non-Detect		-1.561	
154					Maximum Non-Detect	1.9				Maximum Non-Detect		0.642	
155													
156	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		14
157	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		19
158	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		42.42%
159													

A	B	C	D	E	F	G	H	I	J	K	L
160	UCL Statistics										
161	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
162	Shapiro Wilk Test Statistic				0.816	Shapiro Wilk Test Statistic				0.9	
163	5% Shapiro Wilk Critical Value				0.927	5% Shapiro Wilk Critical Value				0.927	
164	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
165											
166	Assuming Normal Distribution					Assuming Lognormal Distribution					
167	DL/2 Substitution Method					DL/2 Substitution Method					
168	Mean				7.85	Mean				0.787	
169	SD				9.866	SD				1.992	
170	95% DL/2 (t) UCL				10.76	95% H-Stat (DL/2) UCL				55.87	
171											
172	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
173	Mean				4.003	Mean in Log Scale				0.773	
174	SD				14.13	SD in Log Scale				1.992	
175	95% MLE (t) UCL				8.169	Mean in Original Scale				7.835	
176	95% MLE (Tiku) UCL				8.782	SD in Original Scale				9.877	
177						95% Percentile Bootstrap UCL				10.82	
178						95% BCA Bootstrap UCL				10.85	
179											
180	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
181	k star (bias corrected)				0.518	Data appear Gamma Distributed at 5% Significance Level					
182	Theta Star				16.59						
183	nu star				31.1						
184											
185	A-D Test Statistic				0.559	Nonparametric Statistics					
186	5% A-D Critical Value				0.805	Kaplan-Meier (KM) Method					
187	K-S Test Statistic				0.805	Mean				7.833	
188	5% K-S Critical Value				0.169	SD				9.728	
189	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				1.722	
190						95% KM (t) UCL				10.75	
191	Assuming Gamma Distribution					95% KM (z) UCL				10.67	
192	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				10.75	
193	Minimum				1E-09	95% KM (bootstrap t) UCL				11.48	
194	Maximum				38	95% KM (BCA) UCL				10.9	
195	Mean				7.815	95% KM (Percentile Bootstrap) UCL				10.79	
196	Median				3.8	95% KM (Chebyshev) UCL				15.34	
197	SD				9.893	97.5% KM (Chebyshev) UCL				18.59	
198	k star				0.236	99% KM (Chebyshev) UCL				24.97	
199	Theta star				33.1						
200	Nu star				15.58	Potential UCLs to Use					
201	AppChi2				7.666	95% KM (Chebyshev) UCL				15.34	
202	95% Gamma Approximate UCL				15.88						
203	95% Adjusted Gamma UCL				16.5						
204	Note: DL/2 is not a recommended method.										
205											
206											
207	Benzo(b)fluoranthene										
208											
209	General Statistics										
210	Number of Valid Data				33	Number of Detected Data				32	
211	Number of Distinct Detected Data				29	Number of Non-Detect Data				1	
212						Percent Non-Detects				3.03%	

A	B	C	D	E	F	G	H	I	J	K	L
213											
214	Raw Statistics					Log-transformed Statistics					
215	Minimum Detected				0.082	Minimum Detected				-2.501	
216	Maximum Detected				54	Maximum Detected				3.989	
217	Mean of Detected				12.78	Mean of Detected				1.251	
218	SD of Detected				16.58	SD of Detected				2.016	
219	Minimum Non-Detect				0.21	Minimum Non-Detect				-1.561	
220	Maximum Non-Detect				0.21	Maximum Non-Detect				-1.561	
221											
222											
223	UCL Statistics										
224	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
225	Shapiro Wilk Test Statistic				0.744	Shapiro Wilk Test Statistic				0.915	
226	5% Shapiro Wilk Critical Value				0.93	5% Shapiro Wilk Critical Value				0.93	
227	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
228											
229	Assuming Normal Distribution					Assuming Lognormal Distribution					
230	DL/2 Substitution Method					DL/2 Substitution Method					
231	Mean				12.4	Mean				1.145	
232	SD				16.46	SD				2.075	
233	95% DL/2 (t) UCL				17.25	95% H-Stat (DL/2) UCL				112.8	
234											
235	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
236	Mean				11.09	Mean in Log Scale				1.147	
237	SD				17.81	SD in Log Scale				2.071	
238	95% MLE (t) UCL				16.34	Mean in Original Scale				12.4	
239	95% MLE (Tiku) UCL				16.13	SD in Original Scale				16.46	
240						95% Percentile Bootstrap UCL				17.21	
241						95% BCA Bootstrap UCL				18.1	
242											
243	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
244	k star (bias corrected)				0.466	Data appear Gamma Distributed at 5% Significance Level					
245	Theta Star				27.44						
246	nu star				29.81						
247											
248	A-D Test Statistic				0.648	Nonparametric Statistics					
249	5% A-D Critical Value				0.812	Kaplan-Meier (KM) Method					
250	K-S Test Statistic				0.812	Mean				12.4	
251	5% K-S Critical Value				0.165	SD				16.21	
252	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				2.867	
253						95% KM (t) UCL				17.26	
254	Assuming Gamma Distribution					95% KM (z) UCL					
255	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				17.25	
256	Minimum				1E-09	95% KM (bootstrap t) UCL				18.59	
257	Maximum				54	95% KM (BCA) UCL				16.91	
258	Mean				12.4	95% KM (Percentile Bootstrap) UCL				17.26	
259	Median				5.9	95% KM (Chebyshev) UCL				24.9	
260	SD				16.47	97.5% KM (Chebyshev) UCL				30.31	
261	k star				0.337	99% KM (Chebyshev) UCL				40.93	
262	Theta star				36.8						
263	Nu star				22.23	Potential UCLs to Use					
264	AppChi2				12.51	95% KM (Chebyshev) UCL				24.9	
265	95% Gamma Approximate UCL				22.03						

A	B	C	D	E	F	G	H	I	J	K	L	
266	95% Adjusted Gamma UCL				22.71							
267	Note: DL/2 is not a recommended method.											
268												
269												
270	Benzo(g,h,i)perylene											
271												
272	General Statistics											
273	Number of Valid Data				31	Number of Detected Data				24		
274	Number of Distinct Detected Data				24	Number of Non-Detect Data				7		
275						Percent Non-Detects				22.58%		
276												
277	Raw Statistics					Log-transformed Statistics						
278	Minimum Detected				0.065	Minimum Detected				-2.733		
279	Maximum Detected				9.9	Maximum Detected				2.293		
280	Mean of Detected				3.18	Mean of Detected				0.547		
281	SD of Detected				2.736	SD of Detected				1.422		
282	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715		
283	Maximum Non-Detect				1.9	Maximum Non-Detect				0.642		
284												
285	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				17		
286	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				14		
287	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				54.84%		
288												
289	UCL Statistics											
290	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
291	Shapiro Wilk Test Statistic				0.915	Shapiro Wilk Test Statistic				0.884		
292	5% Shapiro Wilk Critical Value				0.916	5% Shapiro Wilk Critical Value				0.916		
293	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
294												
295	Assuming Normal Distribution					Assuming Lognormal Distribution						
296	DL/2 Substitution Method					DL/2 Substitution Method						
297	Mean				2.513	Mean				-0.0198		
298	SD				2.709	SD				1.682		
299	95% DL/2 (t) UCL				3.338	95% H-Stat (DL/2) UCL				6.918		
300												
301	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
302	Mean				1.436	Mean in Log Scale				0.062		
303	SD				3.917	SD in Log Scale				1.556		
304	95% MLE (t) UCL				2.629	Mean in Original Scale				2.512		
305	95% MLE (Tiku) UCL				2.994	SD in Original Scale				2.706		
306						95% Percentile Bootstrap UCL				3.295		
307						95% BCA Bootstrap UCL				3.421		
308												
309	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
310	k star (bias corrected)				0.86	Data appear Gamma Distributed at 5% Significance Level						
311	Theta Star				3.698							
312	nu star				41.29							
313												
314	A-D Test Statistic				0.344	Nonparametric Statistics						
315	5% A-D Critical Value				0.774	Kaplan-Meier (KM) Method						
316	K-S Test Statistic				0.774	Mean				2.5		
317	5% K-S Critical Value				0.183	SD				2.675		
318	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.491		

	A	B	C	D	E	F	G	H	I	J	K	L
319							95% KM (t) UCL					3.334
320	Assuming Gamma Distribution						95% KM (z) UCL					3.308
321	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3.33
322	Minimum					0.0444	95% KM (bootstrap t) UCL					3.445
323	Maximum					9.9	95% KM (BCA) UCL					3.403
324	Mean					2.631	95% KM (Percentile Bootstrap) UCL					3.302
325	Median					1.793	95% KM (Chebyshev) UCL					4.641
326	SD					2.626	97.5% KM (Chebyshev) UCL					5.568
327	k star					0.745	99% KM (Chebyshev) UCL					7.388
328	Theta star					3.529						
329	Nu star					46.21	Potential UCLs to Use					
330	AppChi2					31.61	95% KM (Chebyshev) UCL					4.641
331	95% Gamma Approximate UCL					3.845						
332	95% Adjusted Gamma UCL					3.929						
333	Note: DL/2 is not a recommended method.											
334												
335												
336	Benzo(k)fluoranthene											
337												
338	General Statistics											
339	Number of Valid Data					33	Number of Detected Data					30
340	Number of Distinct Detected Data					23	Number of Non-Detect Data					3
341							Percent Non-Detects					9.09%
342												
343	Raw Statistics						Log-transformed Statistics					
344	Minimum Detected					0.072	Minimum Detected					-2.631
345	Maximum Detected					20	Maximum Detected					2.996
346	Mean of Detected					5.734	Mean of Detected					0.56
347	SD of Detected					6.745	SD of Detected					1.929
348	Minimum Non-Detect					0.21	Minimum Non-Detect					-1.561
349	Maximum Non-Detect					1.9	Maximum Non-Detect					0.642
350												
351	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					15
352	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					18
353	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					45.45%
354												
355	UCL Statistics											
356	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
357	Shapiro Wilk Test Statistic					0.779	Shapiro Wilk Test Statistic					0.886
358	5% Shapiro Wilk Critical Value					0.927	5% Shapiro Wilk Critical Value					0.927
359	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
360												
361	Assuming Normal Distribution						Assuming Lognormal Distribution					
362	DL/2 Substitution Method						DL/2 Substitution Method					
363	Mean					5.248	Mean					0.373
364	SD					6.609	SD					1.958
365	95% DL/2 (t) UCL					7.197	95% H-Stat (DL/2) UCL					34.04
366												
367	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
368	Mean					2.601	Mean in Log Scale					0.375
369	SD					9.533	SD in Log Scale					1.931
370	95% MLE (t) UCL					5.412	Mean in Original Scale					5.234
371	95% MLE (Tiku) UCL					5.912	SD in Original Scale					6.619

A	B	C	D	E	F	G	H	I	J	K	L
372									95% Percentile Bootstrap UCL		7.13
373									95% BCA Bootstrap UCL		7.386
374											
375	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
376				k star (bias corrected)	0.5	Data Follow Appr. Gamma Distribution at 5% Significance Level					
377				Theta Star	11.47						
378				nu star	29.99						
379											
380				A-D Test Statistic	0.822	Nonparametric Statistics					
381				5% A-D Critical Value	0.807	Kaplan-Meier (KM) Method					
382				K-S Test Statistic	0.807	Mean					5.231
383				5% K-S Critical Value	0.169	SD					6.521
384	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean					1.155
385						95% KM (t) UCL					7.187
386	Assuming Gamma Distribution					95% KM (z) UCL					7.13
387	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					7.184
388				Minimum	1E-09	95% KM (bootstrap t) UCL					7.572
389				Maximum	20	95% KM (BCA) UCL					7.087
390				Mean	5.213	95% KM (Percentile Bootstrap) UCL					7.169
391				Median	2.5	95% KM (Chebyshev) UCL					10.26
392				SD	6.636	97.5% KM (Chebyshev) UCL					12.44
393				k star	0.235	99% KM (Chebyshev) UCL					16.72
394				Theta star	22.14						
395				Nu star	15.54	Potential UCLs to Use					
396				AppChi2	7.64	95% KM (Chebyshev) UCL					10.26
397				95% Gamma Approximate UCL	10.6						
398				95% Adjusted Gamma UCL	11.02						
399	Note: DL/2 is not a recommended method.										
400											
401											
402	Bis(2-ethylhexyl)phthalate										
403											
404	General Statistics										
405				Number of Valid Data	33				Number of Detected Data		27
406				Number of Distinct Detected Data	24				Number of Non-Detect Data		6
407									Percent Non-Detects		18.18%
408											
409	Raw Statistics					Log-transformed Statistics					
410				Minimum Detected	0.08				Minimum Detected		-2.526
411				Maximum Detected	62				Maximum Detected		4.127
412				Mean of Detected	6.881				Mean of Detected		0.36
413				SD of Detected	14.38				SD of Detected		1.884
414				Minimum Non-Detect	0.21				Minimum Non-Detect		-1.561
415				Maximum Non-Detect	0.9				Maximum Non-Detect		-0.105
416											
417	Note: Data have multiple DLs - Use of KM Method is recommended								Number treated as Non-Detect		18
418	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected		15
419	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage		54.55%
420											
421	UCL Statistics										
422	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
423				Shapiro Wilk Test Statistic	0.514				Shapiro Wilk Test Statistic		0.952
424				5% Shapiro Wilk Critical Value	0.923				5% Shapiro Wilk Critical Value		0.923

A	B	C	D	E	F	G	H	I	J	K	L
425	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
426											
427	Assuming Normal Distribution					Assuming Lognormal Distribution					
428	DL/2 Substitution Method					DL/2 Substitution Method					
429	Mean				5.663	Mean				-0.0456	
430	SD				13.22	SD				1.924	
431	95% DL/2 (t) UCL				9.561	95% H-Stat (DL/2) UCL				13.29	
432											
433	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
434	MLE yields a negative mean					Mean in Log Scale				-0.0619	
435						SD in Log Scale				1.941	
436						Mean in Original Scale				5.659	
437						SD in Original Scale				13.22	
438						95% Percentile Bootstrap UCL				9.882	
439						95% BCA Bootstrap UCL				11.33	
440											
441	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
442	k star (bias corrected)				0.395	Data Follow Appr. Gamma Distribution at 5% Significance Level					
443	Theta Star				17.41						
444	nu star				21.34						
445											
446	A-D Test Statistic				1.217	Nonparametric Statistics					
447	5% A-D Critical Value				0.826	Kaplan-Meier (KM) Method					
448	K-S Test Statistic				0.826	Mean				5.661	
449	5% K-S Critical Value				0.18	SD				13.02	
450	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean				2.31	
451						95% KM (t) UCL				9.573	
452	Assuming Gamma Distribution					95% KM (z) UCL				9.46	
453	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				9.56	
454	Minimum				1E-09	95% KM (bootstrap t) UCL				15.76	
455	Maximum				62	95% KM (BCA) UCL				9.928	
456	Mean				5.63	95% KM (Percentile Bootstrap) UCL				9.73	
457	Median				0.79	95% KM (Chebyshev) UCL				15.73	
458	SD				13.24	97.5% KM (Chebyshev) UCL				20.08	
459	k star				0.155	99% KM (Chebyshev) UCL				28.64	
460	Theta star				36.37						
461	Nu star				10.22	Potential UCLs to Use					
462	AppChi2				4.078	95% KM (Chebyshev) UCL				15.73	
463	95% Gamma Approximate UCL				14.11						
464	95% Adjusted Gamma UCL				14.83						
465	Note: DL/2 is not a recommended method.										
466											
467											
468	Carbazole										
469											
470	General Statistics										
471	Number of Valid Data				33	Number of Detected Data				20	
472	Number of Distinct Detected Data				17	Number of Non-Detect Data				13	
473						Percent Non-Detects				39.39%	
474											
475	Raw Statistics					Log-transformed Statistics					
476	Minimum Detected				0.18	Minimum Detected				-1.715	
477	Maximum Detected				9.3	Maximum Detected				2.23	

	A	B	C	D	E	F	G	H	I	J	K	L
478	Mean of Detected				1.694	Mean of Detected				0.0103		
479	SD of Detected				2.12	SD of Detected				1.013		
480	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715		
481	Maximum Non-Detect				1.9	Maximum Non-Detect				0.642		
482												
483	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				28	
484	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				5	
485	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				84.85%	
486												
487	UCL Statistics											
488	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
489	Shapiro Wilk Test Statistic				0.668	Shapiro Wilk Test Statistic				0.977		
490	5% Shapiro Wilk Critical Value				0.905	5% Shapiro Wilk Critical Value				0.905		
491	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
492												
493	Assuming Normal Distribution						Assuming Lognormal Distribution					
494	DL/2 Substitution Method					DL/2 Substitution Method						
495	Mean				1.102	Mean				-0.757		
496	SD				1.801	SD				1.302		
497	95% DL/2 (t) UCL				1.633	95% H-Stat (DL/2) UCL				1.33		
498												
499	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
500	MLE yields a negative mean						Mean in Log Scale				-0.831	
501							SD in Log Scale				1.363	
502							Mean in Original Scale				1.081	
503							SD in Original Scale				1.807	
504							95% Percentile Bootstrap UCL				1.645	
505							95% BCA Bootstrap UCL				1.869	
506												
507	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
508	k star (bias corrected)				0.973	Data appear Gamma Distributed at 5% Significance Level						
509	Theta Star				1.741							
510	nu star				38.9							
511												
512	A-D Test Statistic				0.547	Nonparametric Statistics						
513	5% A-D Critical Value				0.766	Kaplan-Meier (KM) Method						
514	K-S Test Statistic				0.766	Mean				1.112		
515	5% K-S Critical Value				0.199	SD				1.765		
516	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				0.316	
517							95% KM (t) UCL				1.647	
518	Assuming Gamma Distribution						95% KM (z) UCL				1.631	
519	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				1.607	
520	Minimum				1E-09	95% KM (bootstrap t) UCL				2.108		
521	Maximum				9.3	95% KM (BCA) UCL				1.744		
522	Mean				1.38	95% KM (Percentile Bootstrap) UCL				1.714		
523	Median				0.98	95% KM (Chebyshev) UCL				2.488		
524	SD				1.758	97.5% KM (Chebyshev) UCL				3.084		
525	k star				0.369	99% KM (Chebyshev) UCL				4.253		
526	Theta star				3.737							
527	Nu star				24.38	Potential UCLs to Use						
528	AppChi2				14.14	95% KM (BCA) UCL				1.744		
529	95% Gamma Approximate UCL				2.38							
530	95% Adjusted Gamma UCL				2.45							

A	B	C	D	E	F	G	H	I	J	K	L
531	Note: DL/2 is not a recommended method.										
532											
533											
534	Chrysene										
535											
536	General Statistics										
537	Number of Valid Data				33		Number of Detected Data				32
538	Number of Distinct Detected Data				30		Number of Non-Detect Data				1
539									Percent Non-Detects		3.03%
540											
541	Raw Statistics					Log-transformed Statistics					
542	Minimum Detected			0.066		Minimum Detected			-2.718		
543	Maximum Detected			40		Maximum Detected			3.689		
544	Mean of Detected			9.851		Mean of Detected			1		
545	SD of Detected			12.17		SD of Detected			2.011		
546	Minimum Non-Detect			0.21		Minimum Non-Detect			-1.561		
547	Maximum Non-Detect			0.21		Maximum Non-Detect			-1.561		
548											
549											
550	UCL Statistics										
551	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
552	Shapiro Wilk Test Statistic			0.78		Shapiro Wilk Test Statistic			0.906		
553	5% Shapiro Wilk Critical Value			0.93		5% Shapiro Wilk Critical Value			0.93		
554	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
555											
556	Assuming Normal Distribution					Assuming Lognormal Distribution					
557	DL/2 Substitution Method					DL/2 Substitution Method					
558	Mean			9.556		Mean			0.902		
559	SD			12.1		SD			2.059		
560	95% DL/2 (t) UCL			13.12		95% H-Stat (DL/2) UCL			84.88		
561											
562	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
563	Mean			7.999		Mean in Log Scale			0.912		
564	SD			13.83		SD in Log Scale			2.043		
565	95% MLE (t) UCL			12.08		Mean in Original Scale			9.557		
566	95% MLE (Tiku) UCL			12.04		SD in Original Scale			12.1		
567						95% Percentile Bootstrap UCL			13.17		
568						95% BCA Bootstrap UCL			13.31		
569											
570	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
571	k star (bias corrected)			0.469		Data appear Gamma Distributed at 5% Significance Level					
572	Theta Star			21.01							
573	nu star			30.01							
574											
575	A-D Test Statistic			0.753		Nonparametric Statistics					
576	5% A-D Critical Value			0.812		Kaplan-Meier (KM) Method					
577	K-S Test Statistic			0.812		Mean			9.557		
578	5% K-S Critical Value			0.164		SD			11.91		
579	Data appear Gamma Distributed at 5% Significance Level					SE of Mean			2.107		
580						95% KM (t) UCL			13.13		
581	Assuming Gamma Distribution					95% KM (z) UCL			13.02		
582	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL			13.12		
583	Minimum			1E-09		95% KM (bootstrap t) UCL			13.56		

A	B	C	D	E	F	G	H	I	J	K	L
584				Maximum	40				95% KM (BCA) UCL		13.17
585				Mean	9.553				95% KM (Percentile Bootstrap) UCL		13.13
586				Median	4.2				95% KM (Chebyshev) UCL		18.74
587				SD	12.1				97.5% KM (Chebyshev) UCL		22.71
588				k star	0.339				99% KM (Chebyshev) UCL		30.52
589				Theta star	28.15						
590				Nu star	22.4				Potential UCLs to Use		
591				AppChi2	12.64				95% KM (Chebyshev) UCL		18.74
592				95% Gamma Approximate UCL	16.93						
593				95% Adjusted Gamma UCL	17.45						
594	Note: DL/2 is not a recommended method.										
595											
596											
597	Dibenzo(a,h)anthracene										
598											
599	General Statistics										
600				Number of Valid Data	31				Number of Detected Data		21
601				Number of Distinct Detected Data	18				Number of Non-Detect Data		10
602									Percent Non-Detects		32.26%
603											
604	Raw Statistics					Log-transformed Statistics					
605				Minimum Detected	0.084				Minimum Detected		-2.477
606				Maximum Detected	4.1				Maximum Detected		1.411
607				Mean of Detected	1.144				Mean of Detected		-0.349
608				SD of Detected	1.082				SD of Detected		1.106
609				Minimum Non-Detect	0.18				Minimum Non-Detect		-1.715
610				Maximum Non-Detect	1.9				Maximum Non-Detect		0.642
611											
612	Note: Data have multiple DLs - Use of KM Method is recommended								Number treated as Non-Detect		27
613	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected		4
614	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage		87.10%
615											
616	UCL Statistics										
617	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
618				Shapiro Wilk Test Statistic	0.848				Shapiro Wilk Test Statistic		0.965
619				5% Shapiro Wilk Critical Value	0.908				5% Shapiro Wilk Critical Value		0.908
620	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
621											
622	Assuming Normal Distribution					Assuming Lognormal Distribution					
623				DL/2 Substitution Method					DL/2 Substitution Method		
624				Mean	0.842				Mean		-0.854
625				SD	0.999				SD		1.234
626				95% DL/2 (t) UCL	1.146				95% H-Stat (DL/2) UCL		1.151
627											
628				Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
629	MLE yields a negative mean								Mean in Log Scale		-0.868
630									SD in Log Scale		1.206
631									Mean in Original Scale		0.824
632									SD in Original Scale		1.001
633									95% Percentile Bootstrap UCL		1.136
634									95% BCA Bootstrap UCL		1.16
635											
636	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					

A	B	C	D	E	F	G	H	I	J	K	L	
637	k star (bias corrected)			1.037	Data appear Gamma Distributed at 5% Significance Level							
638	Theta Star			1.102								
639	nu star			43.57								
640												
641	A-D Test Statistic			0.143	Nonparametric Statistics							
642	5% A-D Critical Value			0.766	Kaplan-Meier (KM) Method							
643	K-S Test Statistic			0.766	Mean							0.824
644	5% K-S Critical Value			0.194	SD							0.991
645	Data appear Gamma Distributed at 5% Significance Level				SE of Mean							0.183
646					95% KM (t) UCL							1.135
647	Assuming Gamma Distribution				95% KM (z) UCL							1.126
648	Gamma ROS Statistics using Extrapolated Data				95% KM (jackknife) UCL							1.133
649	Minimum			1E-09	95% KM (bootstrap t) UCL							1.236
650	Maximum			4.1	95% KM (BCA) UCL							1.142
651	Mean			0.957	95% KM (Percentile Bootstrap) UCL							1.155
652	Median			0.664	95% KM (Chebyshev) UCL							1.623
653	SD			0.955	97.5% KM (Chebyshev) UCL							1.968
654	k star			0.548	99% KM (Chebyshev) UCL							2.647
655	Theta star			1.746								
656	Nu star			33.97	Potential UCLs to Use							
657	AppChi2			21.64	95% KM (Percentile Bootstrap) UCL							1.155
658	95% Gamma Approximate UCL			1.502								
659	95% Adjusted Gamma UCL			1.541								
660	Note: DL/2 is not a recommended method.											
661												
662												
663	Dimethylphthalate											
664												
665	General Statistics											
666	Number of Valid Data			33	Number of Detected Data			4				
667	Number of Distinct Detected Data			4	Number of Non-Detect Data			29				
668					Percent Non-Detects			87.88%				
669												
670	Raw Statistics				Log-transformed Statistics							
671	Minimum Detected			0.047	Minimum Detected			-3.058				
672	Maximum Detected			0.63	Maximum Detected			-0.462				
673	Mean of Detected			0.384	Mean of Detected			-1.319				
674	SD of Detected			0.26	SD of Detected			1.195				
675	Minimum Non-Detect			0.18	Minimum Non-Detect			-1.715				
676	Maximum Non-Detect			2	Maximum Non-Detect			0.693				
677												
678	Note: Data have multiple DLs - Use of KM Method is recommended				Number treated as Non-Detect			33				
679	For all methods (except KM, DL/2, and ROS Methods),				Number treated as Detected			0				
680	Observations < Largest ND are treated as NDs				Single DL Non-Detect Percentage			100.00%				
681												
682	Warning: There are only 4 Distinct Detected Values in this data											
683	Note: It should be noted that even though bootstrap may be performed on this data set											
684	the resulting calculations may not be reliable enough to draw conclusions											
685												
686	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
687												
688												
689	UCL Statistics											

A	B	C	D	E	F	G	H	I	J	K	L
690	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
691	Shapiro Wilk Test Statistic				0.945	Shapiro Wilk Test Statistic				0.818	
692	5% Shapiro Wilk Critical Value				0.748	5% Shapiro Wilk Critical Value				0.748	
693	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
694											
695	Assuming Normal Distribution					Assuming Lognormal Distribution					
696	DL/2 Substitution Method					DL/2 Substitution Method					
697	Mean			0.262	Mean			-1.696			
698	SD			0.27	SD			0.788			
699	95% DL/2 (t) UCL				0.341	95% H-Stat (DL/2) UCL				0.333	
700											
701	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
702	MLE method failed to converge properly					Mean in Log Scale				-2.748	
703						SD in Log Scale				0.816	
704						Mean in Original Scale				0.099	
705						SD in Original Scale				0.137	
706						95% Percentile Bootstrap UCL				0.141	
707						95% BCA Bootstrap UCL				0.151	
708											
709	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
710	k star (bias corrected)				0.548	Data appear Normal at 5% Significance Level					
711	Theta Star				0.701						
712	nu star				4.384						
713											
714	A-D Test Statistic				0.436	Nonparametric Statistics					
715	5% A-D Critical Value				0.662	Kaplan-Meier (KM) Method					
716	K-S Test Statistic				0.662	Mean			0.0988		
717	5% K-S Critical Value				0.399	SD			0.147		
718	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.033	
719						95% KM (t) UCL				0.155	
720	Assuming Gamma Distribution					95% KM (z) UCL				0.153	
721	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.266	
722	Minimum				0.047	95% KM (bootstrap t) UCL				0.125	
723	Maximum				0.63	95% KM (BCA) UCL				N/A	
724	Mean				0.387	95% KM (Percentile Bootstrap) UCL				0.546	
725	Median				0.387	95% KM (Chebyshev) UCL				0.243	
726	SD				0.08	97.5% KM (Chebyshev) UCL				0.305	
727	k star				10.47	99% KM (Chebyshev) UCL				0.427	
728	Theta star				0.037						
729	Nu star				690.9	Potential UCLs to Use					
730	AppChi2				630.9	95% KM (t) UCL				0.155	
731	95% Gamma Approximate UCL				0.424	95% KM (Percentile Bootstrap) UCL				0.546	
732	95% Adjusted Gamma UCL				N/A						
733	Note: DL/2 is not a recommended method.										
734											
735											
736	Di-n-octylphthalate										
737											
738	General Statistics										
739	Number of Valid Data				24	Number of Detected Data				7	
740	Number of Distinct Detected Data				7	Number of Non-Detect Data				17	
741						Percent Non-Detects				70.83%	
742											

A	B	C	D	E	F	G	H	I	J	K	L
743	Raw Statistics					Log-transformed Statistics					
744	Minimum Detected				0.053	Minimum Detected				-2.937	
745	Maximum Detected				2.5	Maximum Detected				0.916	
746	Mean of Detected				0.828	Mean of Detected				-0.638	
747	SD of Detected				0.792	SD of Detected				1.183	
748	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715	
749	Maximum Non-Detect				2	Maximum Non-Detect				0.693	
750											
751	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				23	
752	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				1	
753	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				95.83%	
754											
755	Warning: There are only 7 Detected Values in this data										
756	Note: It should be noted that even though bootstrap may be performed on this data set										
757	the resulting calculations may not be reliable enough to draw conclusions										
758											
759	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
760											
761											
762	UCL Statistics										
763	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
764	Shapiro Wilk Test Statistic				0.799	Shapiro Wilk Test Statistic				0.9	
765	5% Shapiro Wilk Critical Value				0.803	5% Shapiro Wilk Critical Value				0.803	
766	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
767											
768	Assuming Normal Distribution					Assuming Lognormal Distribution					
769	DL/2 Substitution Method					DL/2 Substitution Method					
770	Mean				0.408	Mean				-1.462	
771	SD				0.543	SD				1.011	
772	95% DL/2 (t) UCL				0.598	95% H-Stat (DL/2) UCL				0.497	
773											
774	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
775	MLE method failed to converge properly					Mean in Log Scale				-2.111	
776						SD in Log Scale				1.23	
777						Mean in Original Scale				0.295	
778						SD in Original Scale				0.535	
779						95% Percentile Bootstrap UCL				0.49	
780						95% BCA Bootstrap UCL				0.574	
781											
782	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
783	k star (bias corrected)				0.813	Data appear Gamma Distributed at 5% Significance Level					
784	Theta Star				1.018						
785	nu star				11.38						
786											
787	A-D Test Statistic				0.316	Nonparametric Statistics					
788	5% A-D Critical Value				0.724	Kaplan-Meier (KM) Method					
789	K-S Test Statistic				0.724	Mean				0.295	
790	5% K-S Critical Value				0.318	SD				0.531	
791	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.119	
792						95% KM (t) UCL				0.499	
793	Assuming Gamma Distribution					95% KM (z) UCL				0.49	
794	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.505	
795	Minimum				0.053	95% KM (bootstrap t) UCL				0.575	

A	B	C	D	E	F	G	H	I	J	K	L
796				Maximum	2.5				95% KM (BCA) UCL		0.9
797				Mean	0.736				95% KM (Percentile Bootstrap) UCL		0.731
798				Median	0.676				95% KM (Chebyshev) UCL		0.813
799				SD	0.462				97.5% KM (Chebyshev) UCL		1.037
800				k star	2.535				99% KM (Chebyshev) UCL		1.478
801				Theta star	0.29						
802				Nu star	121.7				Potential UCLs to Use		
803				AppChi2	97.21				95% KM (t) UCL		0.499
804				95% Gamma Approximate UCL	0.921						
805				95% Adjusted Gamma UCL	0.935						
806	Note: DL/2 is not a recommended method.										
807											
808											
809	Indeno(1,2,3-cd)pyrene										
810											
811	General Statistics										
812				Number of Valid Data	32				Number of Detected Data		28
813				Number of Distinct Detected Data	27				Number of Non-Detect Data		4
814									Percent Non-Detects		12.50%
815											
816	Raw Statistics					Log-transformed Statistics					
817				Minimum Detected	0.083				Minimum Detected		-2.489
818				Maximum Detected	14				Maximum Detected		2.639
819				Mean of Detected	3.968				Mean of Detected		0.48
820				SD of Detected	4.162				SD of Detected		1.68
821				Minimum Non-Detect	0.2				Minimum Non-Detect		-1.609
822				Maximum Non-Detect	1.9				Maximum Non-Detect		0.642
823											
824	Note: Data have multiple DLs - Use of KM Method is recommended								Number treated as Non-Detect		16
825	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected		16
826	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage		50.00%
827											
828	UCL Statistics										
829	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
830				Shapiro Wilk Test Statistic	0.844				Shapiro Wilk Test Statistic		0.891
831				5% Shapiro Wilk Critical Value	0.924				5% Shapiro Wilk Critical Value		0.924
832	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
833											
834	Assuming Normal Distribution					Assuming Lognormal Distribution					
835				DL/2 Substitution Method					DL/2 Substitution Method		
836				Mean	3.511				Mean		0.207
837				SD	4.075				SD		1.765
838				95% DL/2 (t) UCL	4.733				95% H-Stat (DL/2) UCL		12.63
839											
840				Maximum Likelihood Estimate(MLE) Method					Log ROS Method		
841				Mean	1.816				Mean in Log Scale		0.234
842				SD	5.96				SD in Log Scale		1.706
843				95% MLE (t) UCL	3.603				Mean in Original Scale		3.501
844				95% MLE (Tiku) UCL	4.018				SD in Original Scale		4.082
845									95% Percentile Bootstrap UCL		4.684
846									95% BCA Bootstrap UCL		4.912
847											
848	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					

A	B	C	D	E	F	G	H	I	J	K	L	
849	k star (bias corrected)			0.628	Data appear Gamma Distributed at 5% Significance Level							
850	Theta Star			6.321								
851	nu star			35.15								
852												
853	A-D Test Statistic			0.511	Nonparametric Statistics							
854	5% A-D Critical Value			0.792	Kaplan-Meier (KM) Method							
855	K-S Test Statistic			0.792	Mean							3.498
856	5% K-S Critical Value			0.173	SD							4.021
857	Data appear Gamma Distributed at 5% Significance Level				SE of Mean							0.724
858												
859	Assuming Gamma Distribution				95% KM (t) UCL							4.726
860	Gamma ROS Statistics using Extrapolated Data				95% KM (z) UCL							4.69
861	Minimum			1E-09	95% KM (jackknife) UCL							4.723
862	Maximum			14	95% KM (bootstrap t) UCL							5.076
863	Mean			3.495	95% KM (BCA) UCL							4.746
864	Median			1.85	95% KM (Percentile Bootstrap) UCL							4.695
865	SD			4.089	95% KM (Chebyshev) UCL							6.655
866	k star			0.251	97.5% KM (Chebyshev) UCL							8.021
867	Theta star			13.9	99% KM (Chebyshev) UCL							10.7
868	Nu star			16.09	Potential UCLs to Use							
869	AppChi2			8.027	95% KM (Chebyshev) UCL							6.655
870	95% Gamma Approximate UCL			7.006								
871	95% Adjusted Gamma UCL			7.282								
872	Note: DL/2 is not a recommended method.											
873												
874												
875	Naphthalene											
876												
877	General Statistics											
878	Number of Valid Data			33	Number of Detected Data			19				
879	Number of Distinct Detected Data			17	Number of Non-Detect Data			14				
880	Percent Non-Detects											42.42%
881												
882	Raw Statistics				Log-transformed Statistics							
883	Minimum Detected			0.055	Minimum Detected			-2.9				
884	Maximum Detected			11	Maximum Detected			2.398				
885	Mean of Detected			0.931	Mean of Detected			-1.14				
886	SD of Detected			2.454	SD of Detected			1.243				
887	Minimum Non-Detect			0.18	Minimum Non-Detect			-1.715				
888	Maximum Non-Detect			2	Maximum Non-Detect			0.693				
889												
890	Note: Data have multiple DLs - Use of KM Method is recommended				Number treated as Non-Detect			32				
891	For all methods (except KM, DL/2, and ROS Methods),				Number treated as Detected			1				
892	Observations < Largest ND are treated as NDs				Single DL Non-Detect Percentage			96.97%				
893												
894	UCL Statistics											
895	Normal Distribution Test with Detected Values Only				Lognormal Distribution Test with Detected Values Only							
896	Shapiro Wilk Test Statistic			0.338	Shapiro Wilk Test Statistic			0.909				
897	5% Shapiro Wilk Critical Value			0.901	5% Shapiro Wilk Critical Value			0.901				
898	Data not Normal at 5% Significance Level				Data appear Lognormal at 5% Significance Level							
899												
900	Assuming Normal Distribution				Assuming Lognormal Distribution							
901	DL/2 Substitution Method			DL/2 Substitution Method								

A	B	C	D	E	F	G	H	I	J	K	L	
902				Mean	0.645					Mean	-1.397	
903				SD	1.881					SD	1.102	
904				95% DL/2 (t) UCL	1.2					95% H-Stat (DL/2) UCL	0.707	
905												
906				Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
907				MLE method failed to converge properly						Mean in Log Scale	-1.567	
908										SD in Log Scale	1.103	
909										Mean in Original Scale	0.591	
910										SD in Original Scale	1.884	
911										95% Percentile Bootstrap UCL	1.237	
912										95% BCA Bootstrap UCL	1.616	
913												
914				Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only		
915				k star (bias corrected)	0.525					Data appear Lognormal at 5% Significance Level		
916				Theta Star	1.775							
917				nu star	19.93							
918												
919				A-D Test Statistic	1.905					Nonparametric Statistics		
920				5% A-D Critical Value	0.795					Kaplan-Meier (KM) Method		
921				K-S Test Statistic	0.795					Mean	0.595	
922				5% K-S Critical Value	0.209					SD	1.856	
923				Data not Gamma Distributed at 5% Significance Level						SE of Mean	0.332	
924										95% KM (t) UCL	1.158	
925				Assuming Gamma Distribution						95% KM (z) UCL	1.141	
926				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	1.151	
927				Minimum	0.055					95% KM (bootstrap t) UCL	3.867	
928				Maximum	11					95% KM (BCA) UCL	1.295	
929				Mean	0.925					95% KM (Percentile Bootstrap) UCL	1.241	
930				Median	0.611					95% KM (Chebyshev) UCL	2.043	
931				SD	1.85					97.5% KM (Chebyshev) UCL	2.67	
932				k star	0.853					99% KM (Chebyshev) UCL	3.9	
933				Theta star	1.084							
934				Nu star	56.3					Potential UCLs to Use		
935				AppChi2	40.05					97.5% KM (Chebyshev) UCL	2.67	
936				95% Gamma Approximate UCL	1.3							
937				95% Adjusted Gamma UCL	1.323							
938	Note: DL/2 is not a recommended method.											
939												
940												
941	Phenanthrene											
942												
943				General Statistics								
944				Number of Valid Data	33					Number of Detected Data	29	
945				Number of Distinct Detected Data	26					Number of Non-Detect Data	4	
946										Percent Non-Detects	12.12%	
947												
948				Raw Statistics				Log-transformed Statistics				
949				Minimum Detected	0.047					Minimum Detected	-3.058	
950				Maximum Detected	73					Maximum Detected	4.29	
951				Mean of Detected	9.635					Mean of Detected	0.927	
952				SD of Detected	15.45					SD of Detected	1.979	
953				Minimum Non-Detect	0.21					Minimum Non-Detect	-1.561	
954				Maximum Non-Detect	1.9					Maximum Non-Detect	0.642	

A	B	C	D	E	F	G	H	I	J	K	L
955											
956	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					14
957	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					19
958	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					42.42%
959											
960	UCL Statistics										
961	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
962	Shapiro Wilk Test Statistic				0.648	Shapiro Wilk Test Statistic				0.957	
963	5% Shapiro Wilk Critical Value				0.926	5% Shapiro Wilk Critical Value				0.926	
964	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
965											
966	Assuming Normal Distribution					Assuming Lognormal Distribution					
967	DL/2 Substitution Method					DL/2 Substitution Method					
968	Mean				8.506	Mean				0.611	
969	SD				14.78	SD				2.07	
970	95% DL/2 (t) UCL				12.86	95% H-Stat (DL/2) UCL				53.37	
971											
972	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
973	Mean				2.085	Mean in Log Scale				0.581	
974	SD				20.97	SD in Log Scale				2.087	
975	95% MLE (t) UCL				8.268	Mean in Original Scale				8.487	
976	95% MLE (Tiku) UCL				9.18	SD in Original Scale				14.79	
977						95% Percentile Bootstrap UCL				13.04	
978						95% BCA Bootstrap UCL				14.62	
979											
980	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
981	k star (bias corrected)				0.451	Data appear Gamma Distributed at 5% Significance Level					
982	Theta Star				21.35						
983	nu star				26.18						
984											
985	A-D Test Statistic				0.364	Nonparametric Statistics					
986	5% A-D Critical Value				0.816	Kaplan-Meier (KM) Method					
987	K-S Test Statistic				0.816	Mean				8.487	
988	5% K-S Critical Value				0.173	SD				14.57	
989	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				2.581	
990						95% KM (t) UCL				12.86	
991	Assuming Gamma Distribution					95% KM (z) UCL				12.73	
992	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				12.85	
993	Minimum				1E-09	95% KM (bootstrap t) UCL				15.56	
994	Maximum				73	95% KM (BCA) UCL				13.18	
995	Mean				8.467	95% KM (Percentile Bootstrap) UCL				12.96	
996	Median				2.5	95% KM (Chebyshev) UCL				19.74	
997	SD				14.8	97.5% KM (Chebyshev) UCL				24.6	
998	k star				0.196	99% KM (Chebyshev) UCL				34.16	
999	Theta star				43.27						
1000	Nu star				12.91	Potential UCLs to Use					
1001	AppChi2				5.835	95% KM (Chebyshev) UCL				19.74	
1002	95% Gamma Approximate UCL				18.74						
1003	95% Adjusted Gamma UCL				19.56						
1004	Note: DL/2 is not a recommended method.										
1005											
1006											
1007	Dieldrin										

A	B	C	D	E	F	G	H	I	J	K	L	
1008												
1009	General Statistics											
1010	Number of Valid Data				29		Number of Detected Data				7	
1011	Number of Distinct Detected Data				7		Number of Non-Detect Data				22	
1012							Percent Non-Detects				75.86%	
1013												
1014	Raw Statistics					Log-transformed Statistics						
1015	Minimum Detected				0.0086		Minimum Detected				-4.756	
1016	Maximum Detected				0.12		Maximum Detected				-2.12	
1017	Mean of Detected				0.0389		Mean of Detected				-3.572	
1018	SD of Detected				0.0377		SD of Detected				0.854	
1019	Minimum Non-Detect				0.0035		Minimum Non-Detect				-5.655	
1020	Maximum Non-Detect				0.026		Maximum Non-Detect				-3.65	
1021												
1022	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect						25
1023	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected						4
1024	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage						86.21%
1025												
1026	Warning: There are only 7 Detected Values in this data											
1027	Note: It should be noted that even though bootstrap may be performed on this data set											
1028	the resulting calculations may not be reliable enough to draw conclusions											
1029												
1030	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1031												
1032												
1033	UCL Statistics											
1034	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1035	Shapiro Wilk Test Statistic				0.742		Shapiro Wilk Test Statistic				0.957	
1036	5% Shapiro Wilk Critical Value				0.803		5% Shapiro Wilk Critical Value				0.803	
1037	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1038												
1039	Assuming Normal Distribution					Assuming Lognormal Distribution						
1040	DL/2 Substitution Method						DL/2 Substitution Method					
1041	Mean				0.0137		Mean				-5.084	
1042	SD				0.0231		SD				1.224	
1043	95% DL/2 (t) UCL				0.021		95% H-Stat (DL/2) UCL				0.0154	
1044												
1045	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
1046	Mean				0.0741		Mean in Log Scale				-5.703	
1047	SD				0.036		SD in Log Scale				1.405	
1048	95% MLE (t) UCL				0.0854		Mean in Original Scale				0.011	
1049	95% MLE (Tiku) UCL				0.104		SD in Original Scale				0.0237	
1050							95% Percentile Bootstrap UCL				0.0185	
1051							95% BCA Bootstrap UCL				0.023	
1052												
1053	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1054	k star (bias corrected)				1.056		Data appear Gamma Distributed at 5% Significance Level					
1055	Theta Star				0.0369							
1056	nu star				14.78							
1057												
1058	A-D Test Statistic				0.389		Nonparametric Statistics					
1059	5% A-D Critical Value				0.719		Kaplan-Meier (KM) Method					
1060	K-S Test Statistic				0.719		Mean				0.0162	

A	B	C	D	E	F	G	H	I	J	K	L		
1061	5% K-S Critical Value				0.316						SD	0.0215	
1062	Data appear Gamma Distributed at 5% Significance Level										SE of Mean	0.00432	
1063											95% KM (t) UCL	0.0235	
1064	Assuming Gamma Distribution										95% KM (z) UCL	0.0233	
1065	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.0222	
1066	Minimum					0.00527						95% KM (bootstrap t) UCL	0.0312
1067	Maximum					0.12						95% KM (BCA) UCL	0.0409
1068	Mean					0.0352						95% KM (Percentile Bootstrap) UCL	0.0313
1069	Median					0.035						95% KM (Chebyshev) UCL	0.035
1070	SD					0.0214						97.5% KM (Chebyshev) UCL	0.0432
1071	k star					2.816						99% KM (Chebyshev) UCL	0.0592
1072	Theta star					0.0125							
1073	Nu star					163.3						Potential UCLs to Use	
1074	AppChi2					134.8						95% KM (t) UCL	0.0235
1075	95% Gamma Approximate UCL					0.0427							
1076	95% Adjusted Gamma UCL					0.0432							
1077	Note: DL/2 is not a recommended method.												
1078													
1079													
1080	Endosulfan II												
1081													
1082	General Statistics												
1083	Number of Valid Data				31	Number of Detected Data				6			
1084	Number of Distinct Detected Data				6	Number of Non-Detect Data				25			
1085						Percent Non-Detects				80.65%			
1086													
1087	Raw Statistics					Log-transformed Statistics							
1088	Minimum Detected				0.013	Minimum Detected				-4.343			
1089	Maximum Detected				0.67	Maximum Detected				-0.4			
1090	Mean of Detected				0.179	Mean of Detected				-2.579			
1091	SD of Detected				0.25	SD of Detected				1.528			
1092	Minimum Non-Detect				0.0035	Minimum Non-Detect				-5.655			
1093	Maximum Non-Detect				0.026	Maximum Non-Detect				-3.65			
1094													
1095	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					27		
1096	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					4		
1097	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					87.10%		
1098													
1099	Warning: There are only 6 Detected Values in this data												
1100	Note: It should be noted that even though bootstrap may be performed on this data set												
1101	the resulting calculations may not be reliable enough to draw conclusions												
1102													
1103	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
1104													
1105													
1106	UCL Statistics												
1107	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
1108	Shapiro Wilk Test Statistic				0.727	Shapiro Wilk Test Statistic				0.938			
1109	5% Shapiro Wilk Critical Value				0.788	5% Shapiro Wilk Critical Value				0.788			
1110	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
1111													
1112	Assuming Normal Distribution					Assuming Lognormal Distribution							
1113	DL/2 Substitution Method					DL/2 Substitution Method							

	A	B	C	D	E	F	G	H	I	J	K	L
1114					Mean	0.0381					Mean	-5.163
1115					SD	0.124					SD	1.567
1116					95% DL/2 (t) UCL	0.0759					95% H-Stat (DL/2) UCL	0.0349
1117												
1118					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
1119					MLE yields a negative mean						Mean in Log Scale	-7.674
1120											SD in Log Scale	2.889
1121											Mean in Original Scale	0.0349
1122											SD in Original Scale	0.125
1123											95% Percentile Bootstrap UCL	0.0772
1124											95% BCA Bootstrap UCL	0.0987
1125												
1126					Gamma Distribution Test with Detected Values Only			Data Distribution Test with Detected Values Only				
1127					k star (bias corrected)	0.462	Data appear Gamma Distributed at 5% Significance Level					
1128					Theta Star	0.388						
1129					nu star	5.548						
1130												
1131					A-D Test Statistic	0.308	Nonparametric Statistics					
1132					5% A-D Critical Value	0.724	Kaplan-Meier (KM) Method					
1133					K-S Test Statistic	0.724					Mean	0.0452
1134					5% K-S Critical Value	0.344					SD	0.12
1135					Data appear Gamma Distributed at 5% Significance Level						SE of Mean	0.0236
1136											95% KM (t) UCL	0.0852
1137					Assuming Gamma Distribution						95% KM (z) UCL	0.084
1138					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	0.081
1139					Minimum	1E-09					95% KM (bootstrap t) UCL	0.159
1140					Maximum	0.67					95% KM (BCA) UCL	0.196
1141					Mean	0.195					95% KM (Percentile Bootstrap) UCL	0.124
1142					Median	0.159					95% KM (Chebyshev) UCL	0.148
1143					SD	0.173					97.5% KM (Chebyshev) UCL	0.193
1144					k star	0.314					99% KM (Chebyshev) UCL	0.28
1145					Theta star	0.619						
1146					Nu star	19.49	Potential UCLs to Use					
1147					AppChi2	10.47					95% KM (t) UCL	0.0852
1148					95% Gamma Approximate UCL	0.362						
1149					95% Adjusted Gamma UCL	0.375						
1150	Note: DL/2 is not a recommended method.											
1151												
1152												
1153	Endosulfan sulfate											
1154												
1155	General Statistics											
1156					Number of Valid Data	28					Number of Detected Data	4
1157					Number of Distinct Detected Data	4					Number of Non-Detect Data	24
1158											Percent Non-Detects	85.71%
1159												
1160	Raw Statistics						Log-transformed Statistics					
1161					Minimum Detected	0.0018					Minimum Detected	-6.32
1162					Maximum Detected	0.029					Maximum Detected	-3.54
1163					Mean of Detected	0.0103					Mean of Detected	-5.095
1164					SD of Detected	0.0126					SD of Detected	1.152
1165					Minimum Non-Detect	0.0035					Minimum Non-Detect	-5.655
1166					Maximum Non-Detect	0.026					Maximum Non-Detect	-3.65

A	B	C	D	E	F	G	H	I	J	K	L
1167											
1168	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					27
1169	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					1
1170	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					96.43%
1171											
1172	Warning: There are only 4 Distinct Detected Values in this data										
1173	Note: It should be noted that even though bootstrap may be performed on this data set										
1174	the resulting calculations may not be reliable enough to draw conclusions										
1175											
1176	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
1177											
1178											
1179	UCL Statistics										
1180	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1181	Shapiro Wilk Test Statistic				0.745	Shapiro Wilk Test Statistic				0.936	
1182	5% Shapiro Wilk Critical Value				0.748	5% Shapiro Wilk Critical Value				0.748	
1183	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1184											
1185	Assuming Normal Distribution					Assuming Lognormal Distribution					
1186	DL/2 Substitution Method					DL/2 Substitution Method					
1187	Mean				0.00653	Mean				-5.431	
1188	SD				0.00634	SD				0.89	
1189	95% DL/2 (t) UCL				0.00857	95% H-Stat (DL/2) UCL				0.00872	
1190											
1191	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
1192	MLE method failed to converge properly					Mean in Log Scale				-6.275	
1193						SD in Log Scale				0.728	
1194						Mean in Original Scale				0.00291	
1195						SD in Original Scale				0.00524	
1196						95% Percentile Bootstrap UCL				0.0048	
1197						95% BCA Bootstrap UCL				0.00602	
1198											
1199	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1200	k star (bias corrected)				0.441	Data appear Gamma Distributed at 5% Significance Level					
1201	Theta Star				0.0233						
1202	nu star				3.53						
1203											
1204	A-D Test Statistic				0.439	Nonparametric Statistics					
1205	5% A-D Critical Value				0.666	Kaplan-Meier (KM) Method					
1206	K-S Test Statistic				0.666	Mean				0.00319	
1207	5% K-S Critical Value				0.402	SD				0.00509	
1208	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.00113	
1209						95% KM (t) UCL				0.00512	
1210	Assuming Gamma Distribution					95% KM (z) UCL				0.00505	
1211	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.00537	
1212	Minimum				1E-09	95% KM (bootstrap t) UCL				0.00671	
1213	Maximum				0.029	95% KM (BCA) UCL				0.029	
1214	Mean				0.00147	95% KM (Percentile Bootstrap) UCL				0.0084	
1215	Median				1E-09	95% KM (Chebyshev) UCL				0.00812	
1216	SD				0.00557	97.5% KM (Chebyshev) UCL				0.0103	
1217	k star				0.0869	99% KM (Chebyshev) UCL				0.0144	
1218	Theta star				0.0169						
1219	Nu star				4.866	Potential UCLs to Use					

A	B	C	D	E	F	G	H	I	J	K	L
1220				AppChi2	1.091					95% KM (t) UCL	0.00512
1221				95% Gamma Approximate UCL	0.00656						
1222				95% Adjusted Gamma UCL	N/A						
1223	Note: DL/2 is not a recommended method.										
1224											
1225											
1226	Endrin ketone										
1227											
1228	General Statistics										
1229				Number of Valid Data	33					Number of Detected Data	7
1230				Number of Distinct Detected Data	7					Number of Non-Detect Data	26
1231										Percent Non-Detects	78.79%
1232											
1233	Raw Statistics					Log-transformed Statistics					
1234				Minimum Detected	0.027					Minimum Detected	-3.612
1235				Maximum Detected	0.089					Maximum Detected	-2.419
1236				Mean of Detected	0.0569					Mean of Detected	-2.947
1237				SD of Detected	0.0232					SD of Detected	0.445
1238				Minimum Non-Detect	0.0035					Minimum Non-Detect	-5.655
1239				Maximum Non-Detect	0.026					Maximum Non-Detect	-3.65
1240											
1241	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect	26
1242	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected	7
1243	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage	78.79%
1244											
1245	Warning: There are only 7 Detected Values in this data										
1246	Note: It should be noted that even though bootstrap may be performed on this data set										
1247	the resulting calculations may not be reliable enough to draw conclusions										
1248											
1249	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
1250											
1251											
1252	UCL Statistics										
1253	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1254				Shapiro Wilk Test Statistic	0.935					Shapiro Wilk Test Statistic	0.922
1255				5% Shapiro Wilk Critical Value	0.803					5% Shapiro Wilk Critical Value	0.803
1256	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1257											
1258	Assuming Normal Distribution					Assuming Lognormal Distribution					
1259				DL/2 Substitution Method						DL/2 Substitution Method	
1260				Mean	0.0165					Mean	-4.996
1261				SD	0.0239					SD	1.328
1262				95% DL/2 (t) UCL	0.0235					95% H-Stat (DL/2) UCL	0.0181
1263											
1264	Maximum Likelihood Estimate(MLE) Method									Log ROS Method	
1265	MLE yields a negative mean									Mean in Log Scale	-4.374
1266										SD in Log Scale	0.849
1267										Mean in Original Scale	0.0193
1268										SD in Original Scale	0.0224
1269										95% Percentile Bootstrap UCL	0.026
1270										95% BCA Bootstrap UCL	0.0274
1271											
1272	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					

A	B	C	D	E	F	G	H	I	J	K	L	
1273	k star (bias corrected)			3.757	Data appear Normal at 5% Significance Level							
1274	Theta Star			0.0151								
1275	nu star			52.6								
1276												
1277	A-D Test Statistic			0.353	Nonparametric Statistics							
1278	5% A-D Critical Value			0.709	Kaplan-Meier (KM) Method							
1279	K-S Test Statistic			0.709	Mean						0.0333	
1280	5% K-S Critical Value			0.313	SD						0.0157	
1281	Data appear Gamma Distributed at 5% Significance Level				SE of Mean						0.00295	
1282					95% KM (t) UCL						0.0383	
1283	Assuming Gamma Distribution				95% KM (z) UCL						0.0382	
1284	Gamma ROS Statistics using Extrapolated Data				95% KM (jackknife) UCL						0.0399	
1285	Minimum			0.027	95% KM (bootstrap t) UCL						0.0391	
1286	Maximum			0.089	95% KM (BCA) UCL						0.0639	
1287	Mean			0.0568	95% KM (Percentile Bootstrap) UCL						0.0481	
1288	Median			0.0567	95% KM (Chebyshev) UCL						0.0462	
1289	SD			0.0101	97.5% KM (Chebyshev) UCL						0.0518	
1290	k star			26.79	99% KM (Chebyshev) UCL						0.0627	
1291	Theta star			0.00212								
1292	Nu star			1768	Potential UCLs to Use							
1293	AppChi2			1672	95% KM (t) UCL						0.0383	
1294	95% Gamma Approximate UCL			0.0601	95% KM (Percentile Bootstrap) UCL						0.0481	
1295	95% Adjusted Gamma UCL			0.0602								
1296	Note: DL/2 is not a recommended method.											
1297												
1298												
1299	Aroclor-1254											
1300												
1301	General Statistics											
1302	Number of Valid Data			33	Number of Detected Data			4				
1303	Number of Distinct Detected Data			4	Number of Non-Detect Data			29				
1304					Percent Non-Detects			87.88%				
1305												
1306	Raw Statistics				Log-transformed Statistics							
1307	Minimum Detected			0.14	Minimum Detected			-1.966				
1308	Maximum Detected			2.3	Maximum Detected			0.833				
1309	Mean of Detected			1.08	Mean of Detected			-0.334				
1310	SD of Detected			0.921	SD of Detected			1.196				
1311	Minimum Non-Detect			0.035	Minimum Non-Detect			-3.352				
1312	Maximum Non-Detect			0.08	Maximum Non-Detect			-2.526				
1313												
1314	Note: Data have multiple DLs - Use of KM Method is recommended				Number treated as Non-Detect			29				
1315	For all methods (except KM, DL/2, and ROS Methods),				Number treated as Detected			4				
1316	Observations < Largest ND are treated as NDs				Single DL Non-Detect Percentage			87.88%				
1317												
1318	Warning: There are only 4 Distinct Detected Values in this data											
1319	Note: It should be noted that even though bootstrap may be performed on this data set											
1320	the resulting calculations may not be reliable enough to draw conclusions											
1321												
1322	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1323												
1324												
1325	UCL Statistics											

A	B	C	D	E	F	G	H	I	J	K	L	
1326	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1327	Shapiro Wilk Test Statistic				0.97	Shapiro Wilk Test Statistic				0.949		
1328	5% Shapiro Wilk Critical Value				0.748	5% Shapiro Wilk Critical Value				0.748		
1329	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1330												
1331	Assuming Normal Distribution					Assuming Lognormal Distribution						
1332	DL/2 Substitution Method					DL/2 Substitution Method						
1333	Mean				0.15	Mean				-3.424		
1334	SD				0.45	SD				1.232		
1335	95% DL/2 (t) UCL				0.283	95% H-Stat (DL/2) UCL				0.0833		
1336												
1337	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
1338	MLE yields a negative mean					Mean in Log Scale				-6.235		
1339						SD in Log Scale				2.821		
1340						Mean in Original Scale				0.134		
1341						SD in Original Scale				0.455		
1342						95% Percentile Bootstrap UCL				0.273		
1343						95% BCA Bootstrap UCL				0.324		
1344												
1345	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1346	k star (bias corrected)				0.506	Data appear Normal at 5% Significance Level						
1347	Theta Star				2.133							
1348	nu star				4.051							
1349												
1350	A-D Test Statistic				0.21	Nonparametric Statistics						
1351	5% A-D Critical Value				0.664	Kaplan-Meier (KM) Method						
1352	K-S Test Statistic				0.664	Mean				0.254		
1353	5% K-S Critical Value				0.4	SD				0.414		
1354	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.0832		
1355						95% KM (t) UCL				0.395		
1356	Assuming Gamma Distribution					95% KM (z) UCL				0.391		
1357	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.599		
1358	Minimum				0.14	95% KM (bootstrap t) UCL				0.393		
1359	Maximum				2.3	95% KM (BCA) UCL				1.3		
1360	Mean				1	95% KM (Percentile Bootstrap) UCL				1.267		
1361	Median				1.047	95% KM (Chebyshev) UCL				0.617		
1362	SD				0.408	97.5% KM (Chebyshev) UCL				0.773		
1363	k star				4.449	99% KM (Chebyshev) UCL				1.082		
1364	Theta star				0.225							
1365	Nu star				293.7	Potential UCLs to Use						
1366	AppChi2				255	95% KM (t) UCL				0.395		
1367	95% Gamma Approximate UCL				1.152	95% KM (Percentile Bootstrap) UCL				1.267		
1368	95% Adjusted Gamma UCL				N/A							
1369	Note: DL/2 is not a recommended method.											
1370												
1371												
1372	Aroclor-1260											
1373												
1374	General Statistics											
1375	Number of Valid Data				33	Number of Detected Data				16		
1376	Number of Distinct Detected Data				15	Number of Non-Detect Data				17		
1377						Percent Non-Detects				51.52%		
1378												

A	B	C	D	E	F	G	H	I	J	K	L
1379	Raw Statistics					Log-transformed Statistics					
1380	Minimum Detected				0.05	Minimum Detected				-2.996	
1381	Maximum Detected				13	Maximum Detected				2.565	
1382	Mean of Detected				1.321	Mean of Detected				-0.999	
1383	SD of Detected				3.175	SD of Detected				1.492	
1384	Minimum Non-Detect				0.035	Minimum Non-Detect				-3.352	
1385	Maximum Non-Detect				0.055	Maximum Non-Detect				-2.9	
1386											
1387	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				18	
1388	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				15	
1389	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				54.55%	
1390											
1391	UCL Statistics										
1392	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1393	Shapiro Wilk Test Statistic				0.42	Shapiro Wilk Test Statistic				0.943	
1394	5% Shapiro Wilk Critical Value				0.887	5% Shapiro Wilk Critical Value				0.887	
1395	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1396											
1397	Assuming Normal Distribution					Assuming Lognormal Distribution					
1398	DL/2 Substitution Method					DL/2 Substitution Method					
1399	Mean				0.651	Mean				-2.489	
1400	SD				2.271	SD				1.789	
1401	95% DL/2 (t) UCL				1.321	95% H-Stat (DL/2) UCL				0.57	
1402											
1403	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
1404	MLE yields a negative mean					Mean in Log Scale				-3.116	
1405						SD in Log Scale				2.387	
1406						Mean in Original Scale				0.644	
1407						SD in Original Scale				2.273	
1408						95% Percentile Bootstrap UCL				1.415	
1409						95% BCA Bootstrap UCL				1.905	
1410											
1411	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1412	k star (bias corrected)				0.446	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1413	Theta Star				2.961						
1414	nu star				14.27						
1415											
1416	A-D Test Statistic				1.204	Nonparametric Statistics					
1417	5% A-D Critical Value				0.797	Kaplan-Meier (KM) Method					
1418	K-S Test Statistic				0.797	Mean				0.666	
1419	5% K-S Critical Value				0.227	SD				2.232	
1420	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean				0.401	
1421						95% KM (t) UCL				1.346	
1422	Assuming Gamma Distribution					95% KM (z) UCL				1.326	
1423	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				1.329	
1424	Minimum				0.05	95% KM (bootstrap t) UCL				4.207	
1425	Maximum				13	95% KM (BCA) UCL				1.547	
1426	Mean				1.321	95% KM (Percentile Bootstrap) UCL				1.451	
1427	Median				1.292	95% KM (Chebyshev) UCL				2.416	
1428	SD				2.174	97.5% KM (Chebyshev) UCL				3.173	
1429	k star				0.874	99% KM (Chebyshev) UCL				4.66	
1430	Theta star				1.512						
1431	Nu star				57.66	Potential UCLs to Use					

A	B	C	D	E	F	G	H	I	J	K	L	
1432				AppChi2	41.21					95% KM (t) UCL	1.346	
1433				95% Gamma Approximate UCL	1.848							
1434				95% Adjusted Gamma UCL	1.881							
1435	Note: DL/2 is not a recommended method.											
1436												
1437												
1438	Aluminum											
1439												
1440	General Statistics											
1441	Number of Valid Observations				33	Number of Distinct Observations				31		
1442												
1443	Raw Statistics					Log-transformed Statistics						
1444	Minimum				75	Minimum of Log Data				4.317		
1445	Maximum				13100	Maximum of Log Data				9.48		
1446	Mean				7814	Mean of log Data				8.838		
1447	Median				7990	SD of log Data				0.83		
1448	SD				1997							
1449	Coefficient of Variation				0.256							
1450	Skewness				-1.357							
1451												
1452	Relevant UCL Statistics											
1453	Normal Distribution Test					Lognormal Distribution Test						
1454	Shapiro Wilk Test Statistic				0.84	Shapiro Wilk Test Statistic				0.355		
1455	Shapiro Wilk Critical Value				0.931	Shapiro Wilk Critical Value				0.931		
1456	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1457												
1458	Assuming Normal Distribution					Assuming Lognormal Distribution						
1459	95% Student's-t UCL				8403	95% H-UCL				13519		
1460	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						16318
1461	95% Adjusted-CLT UCL				8299	97.5% Chebyshev (MVUE) UCL				19230		
1462	95% Modified-t UCL				8390	99% Chebyshev (MVUE) UCL				24948		
1463												
1464	Gamma Distribution Test					Data Distribution						
1465	k star (bias corrected)				3.77	Data do not follow a Discernable Distribution (0.05)						
1466	Theta Star				2073							
1467	MLE of Mean				7814							
1468	MLE of Standard Deviation				4025							
1469	nu star				248.8							
1470	Approximate Chi Square Value (.05)				213.3	Nonparametric Statistics						
1471	Adjusted Level of Significance				0.0419	95% CLT UCL				8386		
1472	Adjusted Chi Square Value				211.6	95% Jackknife UCL				8403		
1473						95% Standard Bootstrap UCL				8379		
1474	Anderson-Darling Test Statistic				5.503	95% Bootstrap-t UCL				8326		
1475	Anderson-Darling 5% Critical Value				0.751	95% Hall's Bootstrap UCL				8360		
1476	Kolmogorov-Smirnov Test Statistic				0.34	95% Percentile Bootstrap UCL				8366		
1477	Kolmogorov-Smirnov 5% Critical Value				0.154	95% BCA Bootstrap UCL				8307		
1478	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL						9330
1479						97.5% Chebyshev(Mean, Sd) UCL				9986		
1480	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						11274
1481	95% Approximate Gamma UCL				9116							
1482	95% Adjusted Gamma UCL				9189							
1483												
1484	Potential UCL to Use					Use 95% Chebyshev (Mean, Sd) UCL						9330

	A	B	C	D	E	F	G	H	I	J	K	L		
1485														
1486														
1487	Antimony													
1488														
1489	General Statistics													
1490	Number of Valid Data					33		Number of Detected Data					25	
1491	Number of Distinct Detected Data					23		Number of Non-Detect Data					8	
1492								Percent Non-Detects					24.24%	
1493														
1494	Raw Statistics						Log-transformed Statistics							
1495	Minimum Detected					0.43		Minimum Detected					-0.844	
1496	Maximum Detected					10.8		Maximum Detected					2.38	
1497	Mean of Detected					2.29		Mean of Detected					0.39	
1498	SD of Detected					2.405		SD of Detected					0.94	
1499	Minimum Non-Detect					0.65		Minimum Non-Detect					-0.431	
1500	Maximum Non-Detect					8.9		Maximum Non-Detect					2.186	
1501														
1502	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						32	
1503	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						1	
1504	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						96.97%	
1505														
1506	UCL Statistics													
1507	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1508	Shapiro Wilk Test Statistic					0.752		Shapiro Wilk Test Statistic					0.926	
1509	5% Shapiro Wilk Critical Value					0.918		5% Shapiro Wilk Critical Value					0.918	
1510	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1511														
1512	Assuming Normal Distribution						Assuming Lognormal Distribution							
1513	DL/2 Substitution Method							DL/2 Substitution Method						
1514	Mean					2.474		Mean					0.484	
1515	SD					2.251		SD					0.977	
1516	95% DL/2 (t) UCL					3.138		95% H-Stat (DL/2) UCL					5.595	
1517														
1518	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
1519	MLE method failed to converge properly						Mean in Log Scale					0.307		
1520							SD in Log Scale					0.848		
1521							Mean in Original Scale					2.004		
1522							SD in Original Scale					2.151		
1523							95% Percentile Bootstrap UCL					2.668		
1524							95% BCA Bootstrap UCL					2.838		
1525														
1526	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1527	k star (bias corrected)					1.153		Data appear Lognormal at 5% Significance Level						
1528	Theta Star					1.986								
1529	nu star					57.67								
1530														
1531	A-D Test Statistic					0.927		Nonparametric Statistics						
1532	5% A-D Critical Value					0.767		Kaplan-Meier (KM) Method						
1533	K-S Test Statistic					0.767		Mean					2.102	
1534	5% K-S Critical Value					0.179		SD					2.204	
1535	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.414		
1536							95% KM (t) UCL					2.804		
1537	Assuming Gamma Distribution						95% KM (z) UCL					2.783		

A	B	C	D	E	F	G	H	I	J	K	L	
1538	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					2.803	
1539				Minimum	1E-09	95% KM (bootstrap t) UCL					3.032	
1540				Maximum	10.8	95% KM (BCA) UCL					2.815	
1541				Mean	2.205	95% KM (Percentile Bootstrap) UCL					2.859	
1542				Median	2	95% KM (Chebyshev) UCL					3.907	
1543				SD	2.144	97.5% KM (Chebyshev) UCL					4.689	
1544				k star	0.592	99% KM (Chebyshev) UCL					6.223	
1545				Theta star	3.723							
1546				Nu star	39.08	Potential UCLs to Use						
1547				AppChi2	25.76	95% KM (BCA) UCL					2.815	
1548	95% Gamma Approximate UCL					3.344						
1549	95% Adjusted Gamma UCL					3.418						
1550	Note: DL/2 is not a recommended method.											
1551												
1552												
1553	Arsenic											
1554												
1555	General Statistics											
1556	Number of Valid Observations				33	Number of Distinct Observations				25		
1557												
1558	Raw Statistics					Log-transformed Statistics						
1559				Minimum	3.6	Minimum of Log Data					1.281	
1560				Maximum	14.1	Maximum of Log Data					2.646	
1561				Mean	8.106	Mean of log Data					2.047	
1562				Median	7.8	SD of log Data					0.306	
1563				SD	2.537							
1564				Coefficient of Variation	0.313							
1565				Skewness	0.887							
1566												
1567	Relevant UCL Statistics											
1568	Normal Distribution Test					Lognormal Distribution Test						
1569	Shapiro Wilk Test Statistic				0.926	Shapiro Wilk Test Statistic				0.975		
1570	Shapiro Wilk Critical Value				0.931	Shapiro Wilk Critical Value				0.931		
1571	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1572												
1573	Assuming Normal Distribution					Assuming Lognormal Distribution						
1574	95% Student's-t UCL				8.854	95% H-UCL				8.948		
1575	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						10.02
1576	95% Adjusted-CLT UCL				8.906	97.5% Chebyshev (MVUE) UCL					10.85	
1577	95% Modified-t UCL				8.866	99% Chebyshev (MVUE) UCL					12.48	
1578												
1579	Gamma Distribution Test					Data Distribution						
1580	k star (bias corrected)				10.17	Data appear Gamma Distributed at 5% Significance Level						
1581	Theta Star				0.797							
1582	MLE of Mean				8.106							
1583	MLE of Standard Deviation				2.542							
1584	nu star				670.9							
1585	Approximate Chi Square Value (.05)				611.8	Nonparametric Statistics						
1586	Adjusted Level of Significance				0.0419	95% CLT UCL					8.833	
1587	Adjusted Chi Square Value				608.9	95% Jackknife UCL					8.854	
1588						95% Standard Bootstrap UCL					8.815	
1589	Anderson-Darling Test Statistic				0.364	95% Bootstrap-t UCL					8.944	
1590	Anderson-Darling 5% Critical Value				0.747	95% Hall's Bootstrap UCL					8.963	

A	B	C	D	E	F	G	H	I	J	K	L
1591	Kolmogorov-Smirnov Test Statistic				0.109	95% Percentile Bootstrap UCL				8.848	
1592	Kolmogorov-Smirnov 5% Critical Value				0.153	95% BCA Bootstrap UCL				8.888	
1593	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				10.03	
1594						97.5% Chebyshev(Mean, Sd) UCL				10.86	
1595	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				12.5	
1596	95% Approximate Gamma UCL				8.889						
1597	95% Adjusted Gamma UCL				8.931						
1598											
1599	Potential UCL to Use					Use 95% Approximate Gamma UCL				8.889	
1600											
1601											
1602	Chromium										
1603											
1604	General Statistics										
1605	Number of Valid Observations				32	Number of Distinct Observations				32	
1606											
1607	Raw Statistics					Log-transformed Statistics					
1608	Minimum				12.6	Minimum of Log Data				2.534	
1609	Maximum				622	Maximum of Log Data				6.433	
1610	Mean				71.72	Mean of log Data				3.7	
1611	Median				33.7	SD of log Data				0.94	
1612	SD				116.7						
1613	Coefficient of Variation				1.627						
1614	Skewness				3.861						
1615											
1616	Relevant UCL Statistics										
1617	Normal Distribution Test					Lognormal Distribution Test					
1618	Shapiro Wilk Test Statistic				0.506	Shapiro Wilk Test Statistic				0.892	
1619	Shapiro Wilk Critical Value				0.93	Shapiro Wilk Critical Value				0.93	
1620	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1621											
1622	Assuming Normal Distribution					Assuming Lognormal Distribution					
1623	95% Student's-t UCL				106.7	95% H-UCL				93.77	
1624	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL				112.6	
1625	95% Adjusted-CLT UCL				120.7	97.5% Chebyshev (MVUE) UCL				134.7	
1626	95% Modified-t UCL				109	99% Chebyshev (MVUE) UCL				177.9	
1627											
1628	Gamma Distribution Test					Data Distribution					
1629	k star (bias corrected)				0.934	Data do not follow a Discernable Distribution (0.05)					
1630	Theta Star				76.83						
1631	MLE of Mean				71.72						
1632	MLE of Standard Deviation				74.23						
1633	nu star				59.75						
1634	Approximate Chi Square Value (.05)				42.97	Nonparametric Statistics					
1635	Adjusted Level of Significance				0.0416	95% CLT UCL				105.7	
1636	Adjusted Chi Square Value				42.21	95% Jackknife UCL				106.7	
1637						95% Standard Bootstrap UCL				104.9	
1638	Anderson-Darling Test Statistic				2.39	95% Bootstrap-t UCL				165.6	
1639	Anderson-Darling 5% Critical Value				0.775	95% Hall's Bootstrap UCL				251.1	
1640	Kolmogorov-Smirnov Test Statistic				0.268	95% Percentile Bootstrap UCL				109.4	
1641	Kolmogorov-Smirnov 5% Critical Value				0.16	95% BCA Bootstrap UCL				126.9	
1642	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				161.6	
1643						97.5% Chebyshev(Mean, Sd) UCL				200.6	

A	B	C	D	E	F	G	H	I	J	K	L
1644	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					277
1645	95% Approximate Gamma UCL			99.72							
1646	95% Adjusted Gamma UCL			101.5							
1647											
1648	Potential UCL to Use					Use 95% Chebyshev (Mean, Sd) UCL					161.6
1649											
1650											
1651	Cobalt										
1652											
1653	General Statistics										
1654	Number of Valid Observations			33		Number of Distinct Observations					25
1655											
1656	Raw Statistics					Log-transformed Statistics					
1657	Minimum			6.9		Minimum of Log Data					1.932
1658	Maximum			16		Maximum of Log Data					2.773
1659	Mean			9.167		Mean of log Data					2.2
1660	Median			8.8		SD of log Data					0.176
1661	SD			1.791							
1662	Coefficient of Variation			0.195							
1663	Skewness			1.877							
1664											
1665	Relevant UCL Statistics										
1666	Normal Distribution Test					Lognormal Distribution Test					
1667	Shapiro Wilk Test Statistic			0.856		Shapiro Wilk Test Statistic					0.932
1668	Shapiro Wilk Critical Value			0.931		Shapiro Wilk Critical Value					0.931
1669	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1670											
1671	Assuming Normal Distribution					Assuming Lognormal Distribution					
1672	95% Student's-t UCL			9.695		95% H-UCL					9.669
1673	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					10.39
1674	95% Adjusted-CLT UCL			9.788		97.5% Chebyshev (MVUE) UCL					10.92
1675	95% Modified-t UCL			9.712		99% Chebyshev (MVUE) UCL					11.96
1676											
1677	Gamma Distribution Test					Data Distribution					
1678	k star (bias corrected)			28.66		Data appear Gamma Distributed at 5% Significance Level					
1679	Theta Star			0.32							
1680	MLE of Mean			9.167							
1681	MLE of Standard Deviation			1.712							
1682	nu star			1891							
1683	Approximate Chi Square Value (.05)			1791		Nonparametric Statistics					
1684	Adjusted Level of Significance			0.0419		95% CLT UCL					9.68
1685	Adjusted Chi Square Value			1786		95% Jackknife UCL					9.695
1686						95% Standard Bootstrap UCL					9.667
1687	Anderson-Darling Test Statistic			0.711		95% Bootstrap-t UCL					9.851
1688	Anderson-Darling 5% Critical Value			0.745		95% Hall's Bootstrap UCL					10.02
1689	Kolmogorov-Smirnov Test Statistic			0.125		95% Percentile Bootstrap UCL					9.706
1690	Kolmogorov-Smirnov 5% Critical Value			0.153		95% BCA Bootstrap UCL					9.779
1691	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL					10.53
1692						97.5% Chebyshev(Mean, Sd) UCL					11.11
1693	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					12.27
1694	95% Approximate Gamma UCL			9.678							
1695	95% Adjusted Gamma UCL			9.706							
1696											

A	B	C	D	E	F	G	H	I	J	K	L		
1697	Potential UCL to Use					Use 95% Approximate Gamma UCL					9.678		
1698													
1699													
1700	Copper												
1701													
1702	General Statistics												
1703	Number of Valid Observations				17		Number of Distinct Observations				17		
1704													
1705	Raw Statistics					Log-transformed Statistics							
1706				Minimum		34.2					Minimum of Log Data		3.532
1707				Maximum		471					Maximum of Log Data		6.155
1708				Mean		156.8					Mean of log Data		4.665
1709				Median		61.7					SD of log Data		0.92
1710				SD		137.8							
1711				Coefficient of Variation		0.879							
1712				Skewness		0.923							
1713													
1714	Relevant UCL Statistics												
1715	Normal Distribution Test					Lognormal Distribution Test							
1716				Shapiro Wilk Test Statistic		0.815					Shapiro Wilk Test Statistic		0.86
1717				Shapiro Wilk Critical Value		0.892					Shapiro Wilk Critical Value		0.892
1718	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
1719													
1720	Assuming Normal Distribution					Assuming Lognormal Distribution							
1721				95% Student's-t UCL		215.2					95% H-UCL		291.6
1722	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						323.4	
1723				95% Adjusted-CLT UCL		219.8					97.5% Chebyshev (MVUE) UCL		395.5
1724				95% Modified-t UCL		216.4					99% Chebyshev (MVUE) UCL		537.1
1725													
1726	Gamma Distribution Test					Data Distribution							
1727				k star (bias corrected)		1.214					Data do not follow a Discernable Distribution (0.05)		
1728				Theta Star		129.1							
1729				MLE of Mean		156.8							
1730				MLE of Standard Deviation		142.3							
1731				nu star		41.29							
1732				Approximate Chi Square Value (.05)		27.56					Nonparametric Statistics		
1733				Adjusted Level of Significance		0.0346					95% CLT UCL		211.8
1734				Adjusted Chi Square Value		26.39					95% Jackknife UCL		215.2
1735											95% Standard Bootstrap UCL		210.5
1736				Anderson-Darling Test Statistic		1.174					95% Bootstrap-t UCL		223.9
1737				Anderson-Darling 5% Critical Value		0.757					95% Hall's Bootstrap UCL		215
1738				Kolmogorov-Smirnov Test Statistic		0.277					95% Percentile Bootstrap UCL		212.7
1739				Kolmogorov-Smirnov 5% Critical Value		0.213					95% BCA Bootstrap UCL		225.8
1740	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL						302.5	
1741						97.5% Chebyshev(Mean, Sd) UCL						365.5	
1742	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						489.3	
1743				95% Approximate Gamma UCL		234.9							
1744				95% Adjusted Gamma UCL		245.4							
1745													
1746	Potential UCL to Use					Use 95% Chebyshev (Mean, Sd) UCL						302.5	
1747													
1748													
1749	Iron												

A	B	C	D	E	F	G	H	I	J	K	L	
1750												
1751	General Statistics											
1752	Number of Valid Observations					33	Number of Distinct Observations					31
1753												
1754	Raw Statistics					Log-transformed Statistics						
1755					Minimum	4500					Minimum of Log Data	8.412
1756					Maximum	61500					Maximum of Log Data	11.03
1757					Mean	25718					Mean of log Data	10.09
1758					Median	23700					SD of log Data	0.403
1759					SD	9281						
1760					Coefficient of Variation	0.361						
1761					Skewness	1.625						
1762												
1763	Relevant UCL Statistics											
1764	Normal Distribution Test					Lognormal Distribution Test						
1765					Shapiro Wilk Test Statistic	0.862					Shapiro Wilk Test Statistic	0.819
1766					Shapiro Wilk Critical Value	0.931					Shapiro Wilk Critical Value	0.931
1767	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1768												
1769	Assuming Normal Distribution					Assuming Lognormal Distribution						
1770					95% Student's-t UCL	28455					95% H-UCL	29804
1771	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						34230
1772					95% Adjusted-CLT UCL	28864					97.5% Chebyshev (MVUE) UCL	37779
1773					95% Modified-t UCL	28531					99% Chebyshev (MVUE) UCL	44752
1774												
1775	Gamma Distribution Test					Data Distribution						
1776					k star (bias corrected)	6.974	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1777					Theta Star	3688						
1778					MLE of Mean	25718						
1779					MLE of Standard Deviation	9739						
1780					nu star	460.3						
1781					Approximate Chi Square Value (.05)	411.5	Nonparametric Statistics					
1782					Adjusted Level of Significance	0.0419					95% CLT UCL	28376
1783					Adjusted Chi Square Value	409.2					95% Jackknife UCL	28455
1784											95% Standard Bootstrap UCL	28369
1785					Anderson-Darling Test Statistic	1.145					95% Bootstrap-t UCL	29217
1786					Anderson-Darling 5% Critical Value	0.748					95% Hall's Bootstrap UCL	30160
1787					Kolmogorov-Smirnov Test Statistic	0.153					95% Percentile Bootstrap UCL	28500
1788					Kolmogorov-Smirnov 5% Critical Value	0.153					95% BCA Bootstrap UCL	28864
1789	Data follow Appr. Gamma Distribution at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL						32760
1790											97.5% Chebyshev(Mean, Sd) UCL	35808
1791	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						41793
1792					95% Approximate Gamma UCL	28764						
1793					95% Adjusted Gamma UCL	28931						
1794												
1795	Potential UCL to Use					Use 95% Approximate Gamma UCL						28764
1796												
1797												
1798	Lead											
1799												
1800	General Statistics											
1801	Number of Valid Observations					18	Number of Distinct Observations					18
1802												

A	B	C	D	E	F	G	H	I	J	K	L	
1803	Raw Statistics					Log-transformed Statistics						
1804				Minimum	41.3				Minimum of Log Data	3.721		
1805				Maximum	2360				Maximum of Log Data	7.766		
1806				Mean	461.6				Mean of log Data	5.657		
1807				Median	296				SD of log Data	1.033		
1808				SD	531.3							
1809				Coefficient of Variation	1.151							
1810				Skewness	2.897							
1811												
1812	Relevant UCL Statistics											
1813	Normal Distribution Test					Lognormal Distribution Test						
1814				Shapiro Wilk Test Statistic	0.669				Shapiro Wilk Test Statistic	0.967		
1815				Shapiro Wilk Critical Value	0.897				Shapiro Wilk Critical Value	0.897		
1816	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1817												
1818	Assuming Normal Distribution					Assuming Lognormal Distribution						
1819				95% Student's-t UCL	679.4				95% H-UCL	955.9		
1820	95% UCLs (Adjusted for Skewness)								95% Chebyshev (MVUE) UCL	1021		
1821				95% Adjusted-CLT UCL	759				97.5% Chebyshev (MVUE) UCL	1260		
1822				95% Modified-t UCL	693.7				99% Chebyshev (MVUE) UCL	1730		
1823												
1824	Gamma Distribution Test					Data Distribution						
1825				k star (bias corrected)	1.024				Data appear Gamma Distributed at 5% Significance Level			
1826				Theta Star	450.6							
1827				MLE of Mean	461.6							
1828				MLE of Standard Deviation	456							
1829				nu star	36.88							
1830				Approximate Chi Square Value (.05)	23.98				Nonparametric Statistics			
1831				Adjusted Level of Significance	0.0357				95% CLT UCL	667.6		
1832				Adjusted Chi Square Value	22.98				95% Jackknife UCL	679.4		
1833									95% Standard Bootstrap UCL	663.3		
1834				Anderson-Darling Test Statistic	0.376				95% Bootstrap-t UCL	862.9		
1835				Anderson-Darling 5% Critical Value	0.763				95% Hall's Bootstrap UCL	1532		
1836				Kolmogorov-Smirnov Test Statistic	0.144				95% Percentile Bootstrap UCL	679.8		
1837				Kolmogorov-Smirnov 5% Critical Value	0.209				95% BCA Bootstrap UCL	790.4		
1838	Data appear Gamma Distributed at 5% Significance Level								95% Chebyshev(Mean, Sd) UCL	1007		
1839									97.5% Chebyshev(Mean, Sd) UCL	1244		
1840	Assuming Gamma Distribution								99% Chebyshev(Mean, Sd) UCL	1708		
1841				95% Approximate Gamma UCL	709.9							
1842				95% Adjusted Gamma UCL	740.7							
1843												
1844	Potential UCL to Use								Use 95% Approximate Gamma UCL	709.9		
1845												
1846												
1847	Manganese											
1848												
1849	General Statistics											
1850				Number of Valid Observations	33				Number of Distinct Observations	33		
1851												
1852	Raw Statistics					Log-transformed Statistics						
1853				Minimum	324				Minimum of Log Data	5.781		
1854				Maximum	1490				Maximum of Log Data	7.307		
1855				Mean	686.8				Mean of log Data	6.458		

	A	B	C	D	E	F	G	H	I	J	K	L
1856					Median	617					SD of log Data	0.387
1857					SD	284.4						
1858					Coefficient of Variation	0.414						
1859					Skewness	1.272						
1860												
1861	Relevant UCL Statistics											
1862	Normal Distribution Test						Lognormal Distribution Test					
1863					Shapiro Wilk Test Statistic	0.894				Shapiro Wilk Test Statistic	0.975	
1864					Shapiro Wilk Critical Value	0.931				Shapiro Wilk Critical Value	0.931	
1865	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1866												
1867	Assuming Normal Distribution						Assuming Lognormal Distribution					
1868					95% Student's-t UCL	770.7				95% H-UCL	779.7	
1869	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					
1870					95% Adjusted-CLT UCL	780				97.5% Chebyshev (MVUE) UCL	981.4	
1871					95% Modified-t UCL	772.5				99% Chebyshev (MVUE) UCL	1157	
1872												
1873	Gamma Distribution Test						Data Distribution					
1874					k star (bias corrected)	6.267				Data appear Gamma Distributed at 5% Significance Level		
1875					Theta Star	109.6						
1876					MLE of Mean	686.8						
1877					MLE of Standard Deviation	274.4						
1878					nu star	413.6						
1879					Approximate Chi Square Value (.05)	367.5				Nonparametric Statistics		
1880					Adjusted Level of Significance	0.0419				95% CLT UCL	768.3	
1881					Adjusted Chi Square Value	365.3				95% Jackknife UCL	770.7	
1882										95% Standard Bootstrap UCL	767.8	
1883					Anderson-Darling Test Statistic	0.308				95% Bootstrap-t UCL	787.3	
1884					Anderson-Darling 5% Critical Value	0.748				95% Hall's Bootstrap UCL	791	
1885					Kolmogorov-Smirnov Test Statistic	0.0928				95% Percentile Bootstrap UCL	768.6	
1886					Kolmogorov-Smirnov 5% Critical Value	0.153				95% BCA Bootstrap UCL	783	
1887	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					
1888										97.5% Chebyshev(Mean, Sd) UCL	996	
1889	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					
1890					95% Approximate Gamma UCL	773.1						
1891					95% Adjusted Gamma UCL	777.8						
1892												
1893	Potential UCL to Use						Use 95% Approximate Gamma UCL					
1894												
1895												
1896	Mercury											
1897												
1898	General Statistics											
1899					Number of Valid Data	18				Number of Detected Data	15	
1900					Number of Distinct Detected Data	14				Number of Non-Detect Data	3	
1901										Percent Non-Detects	16.67%	
1902												
1903	Raw Statistics						Log-transformed Statistics					
1904					Minimum Detected	0.066				Minimum Detected	-2.718	
1905					Maximum Detected	1.9				Maximum Detected	0.642	
1906					Mean of Detected	0.642				Mean of Detected	-1.032	
1907					SD of Detected	0.597				SD of Detected	1.236	
1908					Minimum Non-Detect	0.06				Minimum Non-Detect	-2.813	

A	B	C	D	E	F	G	H	I	J	K	L
1909	Maximum Non-Detect				0.06	Maximum Non-Detect				-2.813	
1910											
1911											
1912	UCL Statistics										
1913	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1914	Shapiro Wilk Test Statistic				0.856	Shapiro Wilk Test Statistic				0.855	
1915	5% Shapiro Wilk Critical Value				0.881	5% Shapiro Wilk Critical Value				0.881	
1916	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1917											
1918	Assuming Normal Distribution					Assuming Lognormal Distribution					
1919	DL/2 Substitution Method					DL/2 Substitution Method					
1920	Mean				0.54	Mean				-1.444	
1921	SD				0.591	SD				1.469	
1922	95% DL/2 (t) UCL				0.782	95% H-Stat (DL/2) UCL				2.127	
1923											
1924	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
1925	Mean				0.479	Mean in Log Scale				-1.498	
1926	SD				0.654	SD in Log Scale				1.561	
1927	95% MLE (t) UCL				0.747	Mean in Original Scale				0.539	
1928	95% MLE (Tiku) UCL				0.744	SD in Original Scale				0.592	
1929						95% Percentile Bootstrap UCL				0.78	
1930						95% BCA Bootstrap UCL				0.798	
1931											
1932	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1933	k star (bias corrected)				0.831	Data do not follow a Discernable Distribution (0.05)					
1934	Theta Star				0.773						
1935	nu star				24.93						
1936											
1937	A-D Test Statistic				0.937	Nonparametric Statistics					
1938	5% A-D Critical Value				0.764	Kaplan-Meier (KM) Method					
1939	K-S Test Statistic				0.764	Mean				0.546	
1940	5% K-S Critical Value				0.228	SD				0.569	
1941	Data not Gamma Distributed at 5% Significance Level					SE of Mean					
1942						95% KM (t) UCL				0.787	
1943	Assuming Gamma Distribution					95% KM (z) UCL					
1944	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					
1945	Minimum				1E-09	95% KM (bootstrap t) UCL				0.828	
1946	Maximum				1.9	95% KM (BCA) UCL				0.78	
1947	Mean				0.535	95% KM (Percentile Bootstrap) UCL				0.773	
1948	Median				0.15	95% KM (Chebyshev) UCL				1.151	
1949	SD				0.595	97.5% KM (Chebyshev) UCL				1.413	
1950	k star				0.203	99% KM (Chebyshev) UCL				1.927	
1951	Theta star				2.63						
1952	Nu star				7.322	Potential UCLs to Use					
1953	AppChi2				2.349	97.5% KM (Chebyshev) UCL				1.413	
1954	95% Gamma Approximate UCL				1.668						
1955	95% Adjusted Gamma UCL				1.876						
1956	Note: DL/2 is not a recommended method.										
1957											
1958											
1959	Nickel										
1960											
1961	General Statistics										

	A	B	C	D	E	F	G	H	I	J	K	L	
1962	Number of Valid Observations					33	Number of Distinct Observations					30	
1963													
1964	Raw Statistics						Log-transformed Statistics						
1965	Minimum					17.5	Minimum of Log Data					2.862	
1966	Maximum					91.4	Maximum of Log Data					4.515	
1967	Mean					35.72	Mean of log Data					3.451	
1968	Median					26.3	SD of log Data					0.484	
1969	SD					20.04							
1970	Coefficient of Variation					0.561							
1971	Skewness					1.362							
1972													
1973	Relevant UCL Statistics												
1974	Normal Distribution Test						Lognormal Distribution Test						
1975	Shapiro Wilk Test Statistic					0.796	Shapiro Wilk Test Statistic					0.877	
1976	Shapiro Wilk Critical Value					0.931	Shapiro Wilk Critical Value					0.931	
1977	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1978													
1979	Assuming Normal Distribution						Assuming Lognormal Distribution						
1980	95% Student's-t UCL					41.63	95% H-UCL					41.77	
1981	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						48.81
1982	95% Adjusted-CLT UCL					42.35	97.5% Chebyshev (MVUE) UCL					54.66	
1983	95% Modified-t UCL					41.77	99% Chebyshev (MVUE) UCL					66.14	
1984													
1985	Gamma Distribution Test						Data Distribution						
1986	k star (bias corrected)					3.808	Data do not follow a Discernable Distribution (0.05)						
1987	Theta Star					9.382							
1988	MLE of Mean					35.72							
1989	MLE of Standard Deviation					18.31							
1990	nu star					251.3							
1991	Approximate Chi Square Value (.05)					215.6	Nonparametric Statistics						
1992	Adjusted Level of Significance					0.0419	95% CLT UCL					41.46	
1993	Adjusted Chi Square Value					213.9	95% Jackknife UCL					41.63	
1994							95% Standard Bootstrap UCL					41.39	
1995	Anderson-Darling Test Statistic					1.92	95% Bootstrap-t UCL					43.12	
1996	Anderson-Darling 5% Critical Value					0.751	95% Hall's Bootstrap UCL					41.78	
1997	Kolmogorov-Smirnov Test Statistic					0.251	95% Percentile Bootstrap UCL					41.79	
1998	Kolmogorov-Smirnov 5% Critical Value					0.154	95% BCA Bootstrap UCL					41.96	
1999	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						50.93
2000							97.5% Chebyshev(Mean, Sd) UCL						57.51
2001	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						70.44
2002	95% Approximate Gamma UCL					41.64							
2003	95% Adjusted Gamma UCL					41.97							
2004													
2005	Potential UCL to Use						Use 95% Student's-t UCL						41.63
2006							or 95% Modified-t UCL						41.77
2007													
2008													
2009	Thallium												
2010													
2011	General Statistics												
2012	Number of Valid Data					33	Number of Detected Data					21	
2013	Number of Distinct Detected Data					17	Number of Non-Detect Data					12	
2014							Percent Non-Detects					36.36%	

	A	B	C	D	E	F	G	H	I	J	K	L
2015												
2016	Raw Statistics						Log-transformed Statistics					
2017	Minimum Detected					0.54	Minimum Detected					-0.616
2018	Maximum Detected					2.2	Maximum Detected					0.788
2019	Mean of Detected					1.04	Mean of Detected					-0.0129
2020	SD of Detected					0.375	SD of Detected					0.323
2021	Minimum Non-Detect					0.81	Minimum Non-Detect					-0.211
2022	Maximum Non-Detect					3.7	Maximum Non-Detect					1.308
2023												
2024	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					33
2025	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
2026	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
2027												
2028	UCL Statistics											
2029	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2030	Shapiro Wilk Test Statistic					0.86	Shapiro Wilk Test Statistic					0.959
2031	5% Shapiro Wilk Critical Value					0.908	5% Shapiro Wilk Critical Value					0.908
2032	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2033												
2034	Assuming Normal Distribution						Assuming Lognormal Distribution					
2035	DL/2 Substitution Method						DL/2 Substitution Method					
2036	Mean					0.987	Mean					-0.127
2037	SD					0.474	SD					0.491
2038	95% DL/2 (t) UCL					1.126	95% H-Stat (DL/2) UCL					1.499
2039												
2040	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2041	MLE method failed to converge properly						Mean in Log Scale					-0.114
2042							SD in Log Scale					0.304
2043							Mean in Original Scale					0.937
2044							SD in Original Scale					0.335
2045							95% Percentile Bootstrap UCL					1.034
2046							95% BCA Bootstrap UCL					1.063
2047												
2048	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2049	k star (bias corrected)					8.316	Data Follow Appr. Gamma Distribution at 5% Significance Level					
2050	Theta Star					0.125						
2051	nu star					349.3						
2052												
2053	A-D Test Statistic					0.583	Nonparametric Statistics					
2054	5% A-D Critical Value					0.743	Kaplan-Meier (KM) Method					
2055	K-S Test Statistic					0.743	Mean					0.95
2056	5% K-S Critical Value					0.189	SD					0.353
2057	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.0691
2058							95% KM (t) UCL					1.067
2059	Assuming Gamma Distribution						95% KM (z) UCL					1.064
2060	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.067
2061	Minimum					0.54	95% KM (bootstrap t) UCL					1.096
2062	Maximum					2.2	95% KM (BCA) UCL					1.087
2063	Mean					1.024	95% KM (Percentile Bootstrap) UCL					1.077
2064	Median					0.94	95% KM (Chebyshev) UCL					1.251
2065	SD					0.325	97.5% KM (Chebyshev) UCL					1.381
2066	k star					10.77	99% KM (Chebyshev) UCL					1.637
2067	Theta star					0.0951						

A	B	C	D	E	F	G	H	I	J	K	L	
2068				Nu star	710.6	Potential UCLs to Use						
2069				AppChi2	649.8	95% KM (Percentile Bootstrap) UCL					1.077	
2070				95% Gamma Approximate UCL	1.12							
2071				95% Adjusted Gamma UCL	1.125							
2072	Note: DL/2 is not a recommended method.											
2073												
2074												
2075	Vanadium											
2076												
2077	General Statistics											
2078				Number of Valid Observations	33				Number of Distinct Observations	31		
2079												
2080	Raw Statistics					Log-transformed Statistics						
2081				Minimum	10.8				Minimum of Log Data	2.38		
2082				Maximum	221				Maximum of Log Data	5.398		
2083				Mean	34.4				Mean of log Data	3.175		
2084				Median	17.9				SD of log Data	0.749		
2085				SD	41.75							
2086				Coefficient of Variation	1.214							
2087				Skewness	3.267							
2088												
2089	Relevant UCL Statistics											
2090	Normal Distribution Test					Lognormal Distribution Test						
2091				Shapiro Wilk Test Statistic	0.574				Shapiro Wilk Test Statistic	0.832		
2092				Shapiro Wilk Critical Value	0.931				Shapiro Wilk Critical Value	0.931		
2093	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
2094												
2095	Assuming Normal Distribution					Assuming Lognormal Distribution						
2096				95% Student's-t UCL	46.71				95% H-UCL	42.16		
2097	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						50.83
2098				95% Adjusted-CLT UCL	50.77				97.5% Chebyshev (MVUE) UCL	59.27		
2099				95% Modified-t UCL	47.4				99% Chebyshev (MVUE) UCL	75.85		
2100												
2101	Gamma Distribution Test					Data Distribution						
2102				k star (bias corrected)	1.403	Data do not follow a Discernable Distribution (0.05)						
2103				Theta Star	24.51							
2104				MLE of Mean	34.4							
2105				MLE of Standard Deviation	29.04							
2106				nu star	92.63							
2107				Approximate Chi Square Value (.05)	71.43	Nonparametric Statistics						
2108				Adjusted Level of Significance	0.0419				95% CLT UCL	46.36		
2109				Adjusted Chi Square Value	70.48				95% Jackknife UCL	46.71		
2110									95% Standard Bootstrap UCL	46.33		
2111				Anderson-Darling Test Statistic	3.084				95% Bootstrap-t UCL	55.68		
2112				Anderson-Darling 5% Critical Value	0.765				95% Hall's Bootstrap UCL	89.19		
2113				Kolmogorov-Smirnov Test Statistic	0.258				95% Percentile Bootstrap UCL	46.72		
2114				Kolmogorov-Smirnov 5% Critical Value	0.156				95% BCA Bootstrap UCL	51.82		
2115	Data not Gamma Distributed at 5% Significance Level								95% Chebyshev(Mean, Sd) UCL	66.08		
2116									97.5% Chebyshev(Mean, Sd) UCL	79.79		
2117	Assuming Gamma Distribution								99% Chebyshev(Mean, Sd) UCL	106.7		
2118				95% Approximate Gamma UCL	44.61							
2119				95% Adjusted Gamma UCL	45.21							
2120												

A	B	C	D	E	F	G	H	I	J	K	L	
2121	Potential UCL to Use					Use 95% Chebyshev (Mean, Sd) UCL					66.08	
2122												
2123												
2124	Zinc											
2125												
2126	General Statistics											
2127	Number of Valid Observations				33	Number of Distinct Observations				32		
2128												
2129	Raw Statistics					Log-transformed Statistics						
2130				Minimum	68				Minimum of Log Data	4.22		
2131				Maximum	3040				Maximum of Log Data	8.02		
2132				Mean	605.9				Mean of log Data	6.004		
2133				Median	384				SD of log Data	0.919		
2134				SD	603.9							
2135				Coefficient of Variation	0.997							
2136				Skewness	2.314							
2137												
2138	Relevant UCL Statistics											
2139	Normal Distribution Test					Lognormal Distribution Test						
2140				Shapiro Wilk Test Statistic	0.766				Shapiro Wilk Test Statistic	0.976		
2141				Shapiro Wilk Critical Value	0.931				Shapiro Wilk Critical Value	0.931		
2142	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
2143												
2144	Assuming Normal Distribution					Assuming Lognormal Distribution						
2145				95% Student's-t UCL	784				95% H-UCL	904.6		
2146	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						1088
2147				95% Adjusted-CLT UCL	824.1				97.5% Chebyshev (MVUE) UCL	1296		
2148				95% Modified-t UCL	791				99% Chebyshev (MVUE) UCL	1704		
2149												
2150	Gamma Distribution Test					Data Distribution						
2151				k star (bias corrected)	1.28	Data appear Gamma Distributed at 5% Significance Level						
2152				Theta Star	473.3							
2153				MLE of Mean	605.9							
2154				MLE of Standard Deviation	535.5							
2155				nu star	84.49							
2156				Approximate Chi Square Value (.05)	64.31	Nonparametric Statistics						
2157				Adjusted Level of Significance	0.0419				95% CLT UCL	778.8		
2158				Adjusted Chi Square Value	63.4				95% Jackknife UCL	784		
2159									95% Standard Bootstrap UCL	776.5		
2160				Anderson-Darling Test Statistic	0.576				95% Bootstrap-t UCL	863.6		
2161				Anderson-Darling 5% Critical Value	0.768				95% Hall's Bootstrap UCL	937.3		
2162				Kolmogorov-Smirnov Test Statistic	0.133				95% Percentile Bootstrap UCL	777.7		
2163				Kolmogorov-Smirnov 5% Critical Value	0.156				95% BCA Bootstrap UCL	840		
2164	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL						1064
2165						97.5% Chebyshev(Mean, Sd) UCL						1262
2166	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						1652
2167				95% Approximate Gamma UCL	796.1							
2168				95% Adjusted Gamma UCL	807.5							
2169												
2170	Potential UCL to Use					Use 95% Approximate Gamma UCL						796.1
2171												

A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects							
2	User Selected Options										
3	From File			\\prl-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProUCL_042							
4	Full Precision			OFF							
5	Confidence Coefficient			95%							
6	Number of Bootstrap Operations			2000							
7											
8											
9	Benzo(a)anthracene										
10											
11	General Statistics										
12	Number of Valid Data			19		Number of Detected Data			6		
13	Number of Distinct Detected Data			6		Number of Non-Detect Data			13		
14						Percent Non-Detects			68.42%		
15											
16	Raw Statistics					Log-transformed Statistics					
17	Minimum Detected		0.023		Minimum Detected		-3.772				
18	Maximum Detected		1.3		Maximum Detected		0.262				
19	Mean of Detected		0.281		Mean of Detected		-2.255				
20	SD of Detected		0.502		SD of Detected		1.387				
21	Minimum Non-Detect		0.19		Minimum Non-Detect		-1.661				
22	Maximum Non-Detect		0.41		Maximum Non-Detect		-0.892				
23											
24	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect			18		
25	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected			1		
26	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage			94.74%		
27											
28	Warning: There are only 6 Detected Values in this data										
29	Note: It should be noted that even though bootstrap may be performed on this data set										
30	the resulting calculations may not be reliable enough to draw conclusions										
31											
32	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
33											
34											
35	UCL Statistics										
36	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
37	Shapiro Wilk Test Statistic		0.578		Shapiro Wilk Test Statistic		0.896				
38	5% Shapiro Wilk Critical Value		0.788		5% Shapiro Wilk Critical Value		0.788				
39	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
40											
41	Assuming Normal Distribution					Assuming Lognormal Distribution					
42	DL/2 Substitution Method				DL/2 Substitution Method						
43	Mean		0.175		Mean		-2.157				
44	SD		0.277		SD		0.773				
45	95% DL/2 (t) UCL		0.285		95% H-Stat (DL/2) UCL		0.301				
46											
47	Maximum Likelihood Estimate(MLE) Method			N/A		Log ROS Method					
48	MLE method failed to converge properly					Mean in Log Scale			-2.548		
49						SD in Log Scale			0.883		
50						Mean in Original Scale			0.142		
51						SD in Original Scale			0.283		
52						95% Percentile Bootstrap UCL			0.267		
53						95% BCA Bootstrap UCL			0.345		

A	B	C	D	E	F	G	H	I	J	K	L		
54	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
55						Data Follow Appr. Gamma Distribution at 5% Significance Level							
56	k star (bias corrected)				0.423								
57	Theta Star				0.662								
58	nu star				5.081								
59													
60	A-D Test Statistic				0.76	Nonparametric Statistics							
61	5% A-D Critical Value				0.728	Kaplan-Meier (KM) Method							
62	K-S Test Statistic				0.728	Mean							
63	5% K-S Critical Value				0.346	SD							
64	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean							
65						95% KM (t) UCL							
66	Assuming Gamma Distribution					95% KM (z) UCL							
67	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL							
68	Minimum				0.023	95% KM (bootstrap t) UCL							
69	Maximum				1.3	95% KM (BCA) UCL							
70	Mean				0.282	95% KM (Percentile Bootstrap) UCL							
71	Median				0.208	95% KM (Chebyshev) UCL							
72	SD				0.272	97.5% KM (Chebyshev) UCL							
73	k star				1.409	99% KM (Chebyshev) UCL							
74	Theta star				0.2								
75	Nu star				53.55	Potential UCLs to Use							
76	AppChi2				37.74	95% KM (t) UCL							
77	95% Gamma Approximate UCL				0.4								
78	95% Adjusted Gamma UCL				0.413								
79	Note: DL/2 is not a recommended method.												
80													
81													
82	Benzo(a)pyrene												
83													
84	General Statistics												
85	Number of Valid Data				18	Number of Detected Data				4			
86	Number of Distinct Detected Data				4	Number of Non-Detect Data				14			
87						Percent Non-Detects				77.78%			
88													
89	Raw Statistics					Log-transformed Statistics							
90	Minimum Detected				0.045	Minimum Detected				-3.101			
91	Maximum Detected				1.7	Maximum Detected				0.531			
92	Mean of Detected				0.496	Mean of Detected				-1.758			
93	SD of Detected				0.805	SD of Detected				1.624			
94	Minimum Non-Detect				0.19	Minimum Non-Detect				-1.661			
95	Maximum Non-Detect				0.41	Maximum Non-Detect				-0.892			
96													
97	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				17			
98	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				1			
99	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				94.44%			
100													
101	Warning: There are only 4 Distinct Detected Values in this data												
102	Note: It should be noted that even though bootstrap may be performed on this data set												
103	the resulting calculations may not be reliable enough to draw conclusions												
104													
105	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
106													

A	B	C	D	E	F	G	H	I	J	K	L	
107												
108	UCL Statistics											
109	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
110	Shapiro Wilk Test Statistic				0.686	Shapiro Wilk Test Statistic				0.888		
111	5% Shapiro Wilk Critical Value				0.748	5% Shapiro Wilk Critical Value				0.748		
112	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
113												
114	Assuming Normal Distribution					Assuming Lognormal Distribution						
115	DL/2 Substitution Method					DL/2 Substitution Method						
116	Mean				0.207	Mean				-2.041		
117	SD				0.375	SD				0.744		
118	95% DL/2 (t) UCL				0.361	95% H-Stat (DL/2) UCL				0.276		
119												
120	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
121	MLE method failed to converge properly					Mean in Log Scale						-2.307
122						SD in Log Scale						0.932
123						Mean in Original Scale						0.189
124						SD in Original Scale						0.381
125						95% Percentile Bootstrap UCL						0.367
126						95% BCA Bootstrap UCL						0.463
127												
128	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
129	k star (bias corrected)				0.313	Data appear Gamma Distributed at 5% Significance Level						
130	Theta Star				1.582							
131	nu star				2.507							
132												
133	A-D Test Statistic				0.526	Nonparametric Statistics						
134	5% A-D Critical Value				0.677	Kaplan-Meier (KM) Method						
135	K-S Test Statistic				0.677	Mean						0.184
136	5% K-S Critical Value				0.408	SD						0.372
137	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						0.106
138						95% KM (t) UCL						0.368
139	Assuming Gamma Distribution					95% KM (z) UCL						0.358
140	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						0.356
141	Minimum				0.045	95% KM (bootstrap t) UCL						0.77
142	Maximum				1.7	95% KM (BCA) UCL						0.439
143	Mean				0.475	95% KM (Percentile Bootstrap) UCL						0.446
144	Median				0.538	95% KM (Chebyshev) UCL						0.645
145	SD				0.386	97.5% KM (Chebyshev) UCL						0.844
146	k star				1.322	99% KM (Chebyshev) UCL						1.236
147	Theta star				0.359							
148	Nu star				47.6	Potential UCLs to Use						
149	AppChi2				32.76	95% KM (t) UCL						0.368
150	95% Gamma Approximate UCL				0.69							
151	95% Adjusted Gamma UCL				N/A							
152	Note: DL/2 is not a recommended method.											
153												
154												
155	Benzo(g,h,i)perylene											
156												
157	General Statistics											
158	Number of Valid Data				18	Number of Detected Data				1		
159	Number of Distinct Detected Data				1	Number of Non-Detect Data				17		

A	B	C	D	E	F	G	H	I	J	K	L
160									Percent Non-Detects		94.44%
161											
162	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!										
163	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).										
164											
165	The data set for variable Benzo(g,h,i)perylene was not processed!										
166											
167											
168											
169	Benzo(k)fluoranthene										
170											
171	General Statistics										
172	Number of Valid Data				18		Number of Detected Data				4
173	Number of Distinct Detected Data				4		Number of Non-Detect Data				14
174							Percent Non-Detects				77.78%
175											
176	Raw Statistics					Log-transformed Statistics					
177	Minimum Detected				0.026		Minimum Detected				-3.65
178	Maximum Detected				1.1		Maximum Detected				0.0953
179	Mean of Detected				0.319		Mean of Detected				-2.193
180	SD of Detected				0.522		SD of Detected				1.605
181	Minimum Non-Detect				0.19		Minimum Non-Detect				-1.661
182	Maximum Non-Detect				0.41		Maximum Non-Detect				-0.892
183											
184	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					17
185	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					1
186	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					94.44%
187											
188	Warning: There are only 4 Distinct Detected Values in this data										
189	Note: It should be noted that even though bootstrap may be performed on this data set										
190	the resulting calculations may not be reliable enough to draw conclusions										
191											
192	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
193											
194											
195	UCL Statistics										
196	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
197	Shapiro Wilk Test Statistic				0.672		Shapiro Wilk Test Statistic				0.881
198	5% Shapiro Wilk Critical Value				0.748		5% Shapiro Wilk Critical Value				0.748
199	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
200											
201	Assuming Normal Distribution					Assuming Lognormal Distribution					
202	DL/2 Substitution Method						DL/2 Substitution Method				
203	Mean				0.168		Mean				-2.138
204	SD				0.237		SD				0.721
205	95% DL/2 (t) UCL				0.265		95% H-Stat (DL/2) UCL				0.28
206											
207	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method				
208	MLE method failed to converge properly					Mean in Log Scale				-2.732	
209							SD in Log Scale				0.917
210							Mean in Original Scale				0.122
211							SD in Original Scale				0.247
212							95% Percentile Bootstrap UCL				0.236

A	B	C	D	E	F	G	H	I	J	K	L
213									95% BCA Bootstrap UCL		0.293
214											
215	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
216				k star (bias corrected)	0.314	Data appear Gamma Distributed at 5% Significance Level					
217				Theta Star	1.014						
218				nu star	2.514						
219											
220				A-D Test Statistic	0.581	Nonparametric Statistics					
221				5% A-D Critical Value	0.677	Kaplan-Meier (KM) Method					
222				K-S Test Statistic	0.677	Mean					
223				5% K-S Critical Value	0.408	SD					
224	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					
225						95% KM (t) UCL					
226	Assuming Gamma Distribution					95% KM (z) UCL					
227	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					
228				Minimum	0.026	95% KM (bootstrap t) UCL					
229				Maximum	1.1	95% KM (BCA) UCL					
230				Mean	0.304	95% KM (Percentile Bootstrap) UCL					
231				Median	0.348	95% KM (Chebyshev) UCL					
232				SD	0.255	97.5% KM (Chebyshev) UCL					
233				k star	1.19	99% KM (Chebyshev) UCL					
234				Theta star	0.255						
235				Nu star	42.84	Potential UCLs to Use					
236				AppChi2	28.84	95% KM (t) UCL					
237				95% Gamma Approximate UCL	0.452						
238				95% Adjusted Gamma UCL	N/A						
239	Note: DL/2 is not a recommended method.										
240											
241											
242	Bis(2-ethylhexyl)phthalate										
243											
244	General Statistics										
245				Number of Valid Data	19				Number of Detected Data		7
246				Number of Distinct Detected Data	7				Number of Non-Detect Data		12
247									Percent Non-Detects		63.16%
248											
249	Raw Statistics					Log-transformed Statistics					
250				Minimum Detected	0.052				Minimum Detected		-2.957
251				Maximum Detected	0.8				Maximum Detected		-0.223
252				Mean of Detected	0.202				Mean of Detected		-2.078
253				SD of Detected	0.268				SD of Detected		0.933
254				Minimum Non-Detect	0.19				Minimum Non-Detect		-1.661
255				Maximum Non-Detect	0.23				Maximum Non-Detect		-1.47
256											
257	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					
258	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					
259	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					
260											
261	Warning: There are only 7 Detected Values in this data										
262	Note: It should be noted that even though bootstrap may be performed on this data set										
263	the resulting calculations may not be reliable enough to draw conclusions										
264											
265	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										

A	B	C	D	E	F	G	H	I	J	K	L
266											
267											
268	UCL Statistics										
269	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
270	Shapiro Wilk Test Statistic				0.607	Shapiro Wilk Test Statistic				0.853	
271	5% Shapiro Wilk Critical Value				0.803	5% Shapiro Wilk Critical Value				0.803	
272	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
273											
274	Assuming Normal Distribution					Assuming Lognormal Distribution					
275	DL/2 Substitution Method					DL/2 Substitution Method					
276	Mean				0.142	Mean				-2.181	
277	SD				0.162	SD				0.548	
278	95% DL/2 (t) UCL				0.206	95% H-Stat (DL/2) UCL				0.163	
279											
280	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
281	MLE method failed to converge properly					Mean in Log Scale				-2.3	
282						SD in Log Scale				0.651	
283						Mean in Original Scale				0.134	
284						SD in Original Scale				0.166	
285						95% Percentile Bootstrap UCL				0.206	
286						95% BCA Bootstrap UCL				0.254	
287											
288	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
289	k star (bias corrected)				0.774	Data appear Lognormal at 5% Significance Level					
290	Theta Star				0.261						
291	nu star				10.83						
292											
293	A-D Test Statistic				0.815	Nonparametric Statistics					
294	5% A-D Critical Value				0.725	Kaplan-Meier (KM) Method					
295	K-S Test Statistic				0.725	Mean				0.131	
296	5% K-S Critical Value				0.319	SD				0.163	
297	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.0419	
298						95% KM (t) UCL				0.204	
299	Assuming Gamma Distribution					95% KM (z) UCL				0.2	
300	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.201	
301	Minimum				0.052	95% KM (bootstrap t) UCL				0.344	
302	Maximum				0.8	95% KM (BCA) UCL				0.206	
303	Mean				0.21	95% KM (Percentile Bootstrap) UCL				0.203	
304	Median				0.15	95% KM (Chebyshev) UCL				0.314	
305	SD				0.167	97.5% KM (Chebyshev) UCL				0.393	
306	k star				2.083	99% KM (Chebyshev) UCL				0.548	
307	Theta star				0.101						
308	Nu star				79.15	Potential UCLs to Use					
309	AppChi2				59.65	95% KM (t) UCL				0.204	
310	95% Gamma Approximate UCL				0.278	95% KM (% Bootstrap) UCL				0.203	
311	95% Adjusted Gamma UCL				0.285						
312	Note: DL/2 is not a recommended method.										
313											
314											
315	Carbazole										
316											
317	General Statistics										
318	Number of Valid Data				19	Number of Detected Data				1	

A	B	C	D	E	F	G	H	I	J	K	L
319	Number of Distinct Detected Data				1	Number of Non-Detect Data				18	
320						Percent Non-Detects				94.74%	
321											
322	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!										
323	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).										
324											
325	The data set for variable Carbazole was not processed!										
326											
327											
328											
329	Phenanthrene										
330											
331	General Statistics										
332	Number of Valid Data				19	Number of Detected Data				5	
333	Number of Distinct Detected Data				5	Number of Non-Detect Data				14	
334						Percent Non-Detects				73.68%	
335											
336	Raw Statistics					Log-transformed Statistics					
337	Minimum Detected			0.015	Minimum Detected			-4.2			
338	Maximum Detected			1.6	Maximum Detected			0.47			
339	Mean of Detected			0.402	Mean of Detected			-2.038			
340	SD of Detected			0.674	SD of Detected			1.712			
341	Minimum Non-Detect			0.19	Minimum Non-Detect			-1.661			
342	Maximum Non-Detect			0.41	Maximum Non-Detect			-0.892			
343											
344	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				18	
345	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				1	
346	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				94.74%	
347											
348	Warning: There are only 5 Detected Values in this data										
349	Note: It should be noted that even though bootstrap may be performed on this data set										
350	the resulting calculations may not be reliable enough to draw conclusions										
351											
352	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
353											
354											
355	UCL Statistics										
356	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
357	Shapiro Wilk Test Statistic			0.655	Shapiro Wilk Test Statistic			0.973			
358	5% Shapiro Wilk Critical Value			0.762	5% Shapiro Wilk Critical Value			0.762			
359	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
360											
361	Assuming Normal Distribution					Assuming Lognormal Distribution					
362	DL/2 Substitution Method					DL/2 Substitution Method					
363	Mean			0.198	Mean			-2.103			
364	SD			0.344	SD			0.845			
365	95% DL/2 (t) UCL			0.334	95% H-Stat (DL/2) UCL			0.328			
366											
367	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
368	MLE method failed to converge properly					Mean in Log Scale			-2.814		
369						SD in Log Scale			1.086		
370						Mean in Original Scale			0.146		
371						SD in Original Scale			0.356		

A	B	C	D	E	F	G	H	I	J	K	L	
372									95% Percentile Bootstrap UCL		0.301	
373									95% BCA Bootstrap UCL		0.398	
374												
375	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
376				k star (bias corrected)	0.355	Data appear Gamma Distributed at 5% Significance Level						
377				Theta Star	1.132							
378				nu star	3.552							
379												
380				A-D Test Statistic	0.42	Nonparametric Statistics						
381				5% A-D Critical Value	0.708	Kaplan-Meier (KM) Method						
382				K-S Test Statistic	0.708	Mean					0.152	
383				5% K-S Critical Value	0.371	SD					0.345	
384	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					0.0903	
385						95% KM (t) UCL					0.309	
386	Assuming Gamma Distribution					95% KM (z) UCL					0.301	
387	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.299	
388				Minimum	0.015	95% KM (bootstrap t) UCL					0.705	
389				Maximum	1.6	95% KM (BCA) UCL					0.395	
390				Mean	0.401	95% KM (Percentile Bootstrap) UCL					0.321	
391				Median	0.241	95% KM (Chebyshev) UCL					0.546	
392				SD	0.369	97.5% KM (Chebyshev) UCL					0.716	
393				k star	1.203	99% KM (Chebyshev) UCL					1.05	
394				Theta star	0.334							
395				Nu star	45.71	Potential UCLs to Use						
396				AppChi2	31.2	95% KM (t) UCL					0.309	
397				95% Gamma Approximate UCL	0.588							
398				95% Adjusted Gamma UCL	0.608							
399	Note: DL/2 is not a recommended method.											
400												
401												
402	Aluminum											
403												
404	General Statistics											
405	Number of Valid Observations					19	Number of Distinct Observations					19
406												
407	Raw Statistics					Log-transformed Statistics						
408				Minimum	2920	Minimum of Log Data					7.979	
409				Maximum	8240	Maximum of Log Data					9.017	
410				Mean	6597	Mean of log Data					8.761	
411				Median	7010	SD of log Data					0.287	
412				SD	1510							
413				Coefficient of Variation	0.229							
414				Skewness	-1.426							
415												
416	Relevant UCL Statistics											
417	Normal Distribution Test					Lognormal Distribution Test						
418				Shapiro Wilk Test Statistic	0.824	Shapiro Wilk Test Statistic					0.744	
419				Shapiro Wilk Critical Value	0.901	Shapiro Wilk Critical Value					0.901	
420	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
421												
422	Assuming Normal Distribution					Assuming Lognormal Distribution						
423				95% Student's-t UCL	7197	95% H-UCL					7526	
424	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					8559	

A	B	C	D	E	F	G	H	I	J	K	L
425	95% Adjusted-CLT UCL			7045	97.5% Chebyshev (MVUE) UCL			9392			
426	95% Modified-t UCL			7179	99% Chebyshev (MVUE) UCL			11029			
427											
428	Gamma Distribution Test					Data Distribution					
429	k star (bias corrected)			12.79	Data do not follow a Discernable Distribution (0.05)						
430	Theta Star			515.9							
431	MLE of Mean			6597							
432	MLE of Standard Deviation			1845							
433	nu star			485.9							
434	Approximate Chi Square Value (.05)			435.8	Nonparametric Statistics						
435	Adjusted Level of Significance			0.0369	95% CLT UCL			7167			
436	Adjusted Chi Square Value			431.6	95% Jackknife UCL			7197			
437					95% Standard Bootstrap UCL			7163			
438	Anderson-Darling Test Statistic			1.804	95% Bootstrap-t UCL			7092			
439	Anderson-Darling 5% Critical Value			0.741	95% Hall's Bootstrap UCL			7060			
440	Kolmogorov-Smirnov Test Statistic			0.281	95% Percentile Bootstrap UCL			7137			
441	Kolmogorov-Smirnov 5% Critical Value			0.198	95% BCA Bootstrap UCL			7044			
442	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL			8107		
443						97.5% Chebyshev(Mean, Sd) UCL			8760		
444	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL			10043		
445	95% Approximate Gamma UCL			7355							
446	95% Adjusted Gamma UCL			7426							
447											
448	Potential UCL to Use					Use 95% Student's-t UCL			7197		
449						or 95% Modified-t UCL			7179		
450											
451											
452	Antimony										
453											
454	General Statistics										
455	Number of Valid Data			19	Number of Detected Data			8			
456	Number of Distinct Detected Data			7	Number of Non-Detect Data			11			
457					Percent Non-Detects			57.89%			
458											
459	Raw Statistics					Log-transformed Statistics					
460	Minimum Detected			0.3	Minimum Detected			-1.204			
461	Maximum Detected			115	Maximum Detected			4.745			
462	Mean of Detected			29.85	Mean of Detected			1.109			
463	SD of Detected			52.57	SD of Detected			2.421			
464	Minimum Non-Detect			0.63	Minimum Non-Detect			-0.462			
465	Maximum Non-Detect			9.9	Maximum Non-Detect			2.293			
466											
467	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect			17		
468	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected			2		
469	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage			89.47%		
470											
471	Warning: There are only 8 Detected Values in this data										
472	Note: It should be noted that even though bootstrap may be performed on this data set										
473	the resulting calculations may not be reliable enough to draw conclusions										
474											
475	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
476											
477											

A	B	C	D	E	F	G	H	I	J	K	L
478	UCL Statistics										
479	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
480	Shapiro Wilk Test Statistic				0.586	Shapiro Wilk Test Statistic				0.833	
481	5% Shapiro Wilk Critical Value				0.818	5% Shapiro Wilk Critical Value				0.818	
482	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
483											
484	Assuming Normal Distribution					Assuming Lognormal Distribution					
485	DL/2 Substitution Method					DL/2 Substitution Method					
486	Mean			14.61	Mean			1.111			
487	SD			35.41	SD			1.613			
488	95% DL/2 (t) UCL			28.69	95% H-Stat (DL/2) UCL			57.04			
489											
490	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
491	MLE method failed to converge properly					Mean in Log Scale			0.411		
492											
493											
494											
495											
496											
497											
498	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
499	k star (bias corrected)			0.272	Data Follow Appr. Gamma Distribution at 5% Significance Level						
500	Theta Star			109.9							
501	nu star			4.346							
502											
503	A-D Test Statistic			0.997	Nonparametric Statistics						
504	5% A-D Critical Value			0.797	Kaplan-Meier (KM) Method						
505	K-S Test Statistic			0.797	Mean			13.28			
506	5% K-S Critical Value			0.317	SD			34.92			
507	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean			8.572		
508											
509	Assuming Gamma Distribution					95% KM (z) UCL			27.38		
510	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL			27.57		
511	Minimum			0.3	95% KM (bootstrap t) UCL			236.5			
512	Maximum			115	95% KM (BCA) UCL			26.45			
513	Mean			23.97	95% KM (Percentile Bootstrap) UCL			26.44			
514	Median			18.67	95% KM (Chebyshev) UCL			50.65			
515	SD			33.71	97.5% KM (Chebyshev) UCL			66.81			
516	k star			0.544	99% KM (Chebyshev) UCL			98.57			
517	Theta star			44.1							
518	Nu star			20.66	Potential UCLs to Use						
519	AppChi2			11.34	95% KM (t) UCL			28.15			
520	95% Gamma Approximate UCL			43.68							
521	95% Adjusted Gamma UCL			46.13							
522	Note: DL/2 is not a recommended method.										
523											
524											
525	Arsenic										
526											
527	General Statistics										
528	Number of Valid Observations				19	Number of Distinct Observations				18	
529											
530	Raw Statistics					Log-transformed Statistics					

A	B	C	D	E	F	G	H	I	J	K	L
531				Minimum	2.3				Minimum of Log Data		0.833
532				Maximum	10.9				Maximum of Log Data		2.389
533				Mean	5.942				Mean of log Data		1.726
534				Median	5.6				SD of log Data		0.355
535				SD	1.971						
536				Coefficient of Variation	0.332						
537				Skewness	0.538						
538											
539	Relevant UCL Statistics										
540	Normal Distribution Test					Lognormal Distribution Test					
541				Shapiro Wilk Test Statistic	0.972				Shapiro Wilk Test Statistic		0.964
542				Shapiro Wilk Critical Value	0.901				Shapiro Wilk Critical Value		0.901
543	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
544											
545	Assuming Normal Distribution					Assuming Lognormal Distribution					
546				95% Student's-t UCL	6.726				95% H-UCL		7.007
547	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					8.12
548				95% Adjusted-CLT UCL	6.745				97.5% Chebyshev (MVUE) UCL		9.053
549				95% Modified-t UCL	6.736				99% Chebyshev (MVUE) UCL		10.89
550											
551	Gamma Distribution Test					Data Distribution					
552				k star (bias corrected)	7.723				Data appear Normal at 5% Significance Level		
553				Theta Star	0.769						
554				MLE of Mean	5.942						
555				MLE of Standard Deviation	2.138						
556				nu star	293.5						
557				Approximate Chi Square Value (.05)	254.8				Nonparametric Statistics		
558				Adjusted Level of Significance	0.0369				95% CLT UCL		6.686
559				Adjusted Chi Square Value	251.6				95% Jackknife UCL		6.726
560									95% Standard Bootstrap UCL		6.673
561				Anderson-Darling Test Statistic	0.214				95% Bootstrap-t UCL		6.827
562				Anderson-Darling 5% Critical Value	0.741				95% Hall's Bootstrap UCL		6.887
563				Kolmogorov-Smirnov Test Statistic	0.104				95% Percentile Bootstrap UCL		6.679
564				Kolmogorov-Smirnov 5% Critical Value	0.199				95% BCA Bootstrap UCL		6.726
565	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL					7.913
566									97.5% Chebyshev(Mean, Sd) UCL		8.766
567	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					10.44
568				95% Approximate Gamma UCL	6.844						
569				95% Adjusted Gamma UCL	6.93						
570											
571	Potential UCL to Use					Use 95% Student's-t UCL					6.726
572											
573											
574	Chromium										
575											
576	General Statistics										
577				Number of Valid Observations	17				Number of Distinct Observations		16
578											
579	Raw Statistics					Log-transformed Statistics					
580				Minimum	6.8				Minimum of Log Data		1.917
581				Maximum	18.4				Maximum of Log Data		2.912
582				Mean	10.58				Mean of log Data		2.318
583				Median	10.4				SD of log Data		0.289

A	B	C	D	E	F	G	H	I	J	K	L
637	Relevant UCL Statistics										
638	Normal Distribution Test					Lognormal Distribution Test					
639	Shapiro Wilk Test Statistic				0.736	Shapiro Wilk Test Statistic				0.707	
640	Shapiro Wilk Critical Value				0.901	Shapiro Wilk Critical Value				0.901	
641	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
642											
643	Assuming Normal Distribution					Assuming Lognormal Distribution					
644	95% Student's-t UCL				7.769	95% H-UCL				8.365	
645	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL				9.766	
646	95% Adjusted-CLT UCL				7.595	97.5% Chebyshev (MVUE) UCL				10.97	
647	95% Modified-t UCL				7.749	99% Chebyshev (MVUE) UCL				13.32	
648											
649	Gamma Distribution Test					Data Distribution					
650	k star (bias corrected)				7.094	Data do not follow a Discernable Distribution (0.05)					
651	Theta Star				0.976						
652	MLE of Mean				6.926						
653	MLE of Standard Deviation				2.601						
654	nu star				269.6						
655	Approximate Chi Square Value (.05)				232.5	Nonparametric Statistics					
656	Adjusted Level of Significance				0.0369	95% CLT UCL				7.726	
657	Adjusted Chi Square Value				229.5	95% Jackknife UCL				7.769	
658						95% Standard Bootstrap UCL				7.73	
659	Anderson-Darling Test Statistic				2.532	95% Bootstrap-t UCL				7.69	
660	Anderson-Darling 5% Critical Value				0.742	95% Hall's Bootstrap UCL				7.572	
661	Kolmogorov-Smirnov Test Statistic				0.311	95% Percentile Bootstrap UCL				7.668	
662	Kolmogorov-Smirnov 5% Critical Value				0.199	95% BCA Bootstrap UCL				7.6	
663	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				9.045	
664						97.5% Chebyshev(Mean, Sd) UCL				9.961	
665	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				11.76	
666	95% Approximate Gamma UCL				8.029						
667	95% Adjusted Gamma UCL				8.134						
668											
669	Potential UCL to Use					Use 95% Student's-t UCL				7.769	
670						or 95% Modified-t UCL				7.749	
671											
672											
673	Copper										
674											
675	General Statistics										
676	Number of Valid Observations				15	Number of Distinct Observations				15	
677											
678	Raw Statistics					Log-transformed Statistics					
679	Minimum			8.7	Minimum of Log Data			2.163			
680	Maximum			853	Maximum of Log Data			6.749			
681	Mean			82.97	Mean of log Data			3.197			
682	Median			17.1	SD of log Data			1.215			
683	SD			216.3							
684	Coefficient of Variation			2.608							
685	Skewness			3.689							
686											
687	Relevant UCL Statistics										
688	Normal Distribution Test					Lognormal Distribution Test					
689	Shapiro Wilk Test Statistic				0.377	Shapiro Wilk Test Statistic				0.71	

A	B	C	D	E	F	G	H	I	J	K	L
690	Shapiro Wilk Critical Value				0.881	Shapiro Wilk Critical Value				0.881	
691	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
692											
693	Assuming Normal Distribution					Assuming Lognormal Distribution					
694	95% Student's-t UCL			181.4	95% H-UCL			140			
695	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL			119.8		
696	95% Adjusted-CLT UCL			231.7	97.5% Chebyshev (MVUE) UCL			151.1			
697	95% Modified-t UCL			190.2	99% Chebyshev (MVUE) UCL			212.7			
698											
699	Gamma Distribution Test					Data Distribution					
700	k star (bias corrected)			0.458	Data do not follow a Discernable Distribution (0.05)						
701	Theta Star			181.1							
702	MLE of Mean			82.97							
703	MLE of Standard Deviation			122.6							
704	nu star			13.75							
705	Approximate Chi Square Value (.05)			6.398	Nonparametric Statistics						
706	Adjusted Level of Significance			0.0324	95% CLT UCL			174.8			
707	Adjusted Chi Square Value			5.791	95% Jackknife UCL			181.4			
708					95% Standard Bootstrap UCL			167.9			
709	Anderson-Darling Test Statistic			2.922	95% Bootstrap-t UCL			1602			
710	Anderson-Darling 5% Critical Value			0.792	95% Hall's Bootstrap UCL			1262			
711	Kolmogorov-Smirnov Test Statistic			0.42	95% Percentile Bootstrap UCL			193.1			
712	Kolmogorov-Smirnov 5% Critical Value			0.234	95% BCA Bootstrap UCL			251.4			
713	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL			326.5		
714					97.5% Chebyshev(Mean, Sd) UCL			431.8			
715	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL			638.8		
716	95% Approximate Gamma UCL			178.3							
717	95% Adjusted Gamma UCL			197							
718											
719	Potential UCL to Use					Use 99% Chebyshev (Mean, Sd) UCL			638.8		
720											
721											
722	Lead										
723											
724	General Statistics										
725	Number of Valid Observations			17	Number of Distinct Observations			17			
726											
727	Raw Statistics				Log-transformed Statistics						
728	Minimum		10.9	Minimum of Log Data			2.389				
729	Maximum		14600	Maximum of Log Data			9.589				
730	Mean		982.3	Mean of log Data			4.424				
731	Median		56.1	SD of log Data			1.726				
732	SD		3517								
733	Coefficient of Variation		3.58								
734	Skewness		4.093								
735											
736	Relevant UCL Statistics										
737	Normal Distribution Test				Lognormal Distribution Test						
738	Shapiro Wilk Test Statistic			0.299	Shapiro Wilk Test Statistic			0.824			
739	Shapiro Wilk Critical Value			0.892	Shapiro Wilk Critical Value			0.892			
740	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
741											
742	Assuming Normal Distribution					Assuming Lognormal Distribution					

A	B	C	D	E	F	G	H	I	J	K	L
743	95% Student's-t UCL				2472	95% H-UCL				1981	
744	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					975.4
745	95% Adjusted-CLT UCL				3290	97.5% Chebyshev (MVUE) UCL					1264
746	95% Modified-t UCL				2613	99% Chebyshev (MVUE) UCL					1830
747											
748	Gamma Distribution Test					Data Distribution					
749	k star (bias corrected)				0.272	Data do not follow a Discernable Distribution (0.05)					
750	Theta Star				3614						
751	MLE of Mean				982.3						
752	MLE of Standard Deviation				1884						
753	nu star				9.241						
754	Approximate Chi Square Value (.05)				3.473	Nonparametric Statistics					
755	Adjusted Level of Significance				0.0346	95% CLT UCL					2385
756	Adjusted Chi Square Value				3.111	95% Jackknife UCL					2472
757						95% Standard Bootstrap UCL					2345
758	Anderson-Darling Test Statistic				3.223	95% Bootstrap-t UCL					41445
759	Anderson-Darling 5% Critical Value				0.849	95% Hall's Bootstrap UCL					31973
760	Kolmogorov-Smirnov Test Statistic				0.375	95% Percentile Bootstrap UCL					2674
761	Kolmogorov-Smirnov 5% Critical Value				0.228	95% BCA Bootstrap UCL					3588
762	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL					4700
763						97.5% Chebyshev(Mean, Sd) UCL					6309
764	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					9469
765	95% Approximate Gamma UCL				2614						
766	95% Adjusted Gamma UCL				2917						
767											
768	Potential UCL to Use					Use 99% Chebyshev (Mean, Sd) UCL					9469
769											
770											
771	Manganese										
772											
773	General Statistics										
774	Number of Valid Observations				19	Number of Distinct Observations				19	
775											
776	Raw Statistics					Log-transformed Statistics					
777	Minimum				166	Minimum of Log Data					5.112
778	Maximum				1640	Maximum of Log Data					7.402
779	Mean				818.2	Mean of log Data					6.545
780	Median				820	SD of log Data					0.664
781	SD				393.8						
782	Coefficient of Variation				0.481						
783	Skewness				0.0672						
784											
785	Relevant UCL Statistics										
786	Normal Distribution Test					Lognormal Distribution Test					
787	Shapiro Wilk Test Statistic				0.938	Shapiro Wilk Test Statistic					0.822
788	Shapiro Wilk Critical Value				0.901	Shapiro Wilk Critical Value					0.901
789	Data appear Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
790											
791	Assuming Normal Distribution					Assuming Lognormal Distribution					
792	95% Student's-t UCL				974.8	95% H-UCL					1220
793	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					1457
794	95% Adjusted-CLT UCL				968.2	97.5% Chebyshev (MVUE) UCL					1717
795	95% Modified-t UCL				975.1	99% Chebyshev (MVUE) UCL					2229

A	B	C	D	E	F	G	H	I	J	K	L	
796												
797	Gamma Distribution Test					Data Distribution						
798	k star (bias corrected)				2.762	Data appear Normal at 5% Significance Level						
799	Theta Star				296.3							
800	MLE of Mean				818.2							
801	MLE of Standard Deviation				492.3							
802	nu star				104.9							
803	Approximate Chi Square Value (.05)				82.3	Nonparametric Statistics						
804	Adjusted Level of Significance				0.0369	95% CLT UCL				966.8		
805	Adjusted Chi Square Value				80.55	95% Jackknife UCL				974.8		
806						95% Standard Bootstrap UCL				962.9		
807	Anderson-Darling Test Statistic				1.106	95% Bootstrap-t UCL				986.8		
808	Anderson-Darling 5% Critical Value				0.747	95% Hall's Bootstrap UCL				979.6		
809	Kolmogorov-Smirnov Test Statistic				0.256	95% Percentile Bootstrap UCL				959.3		
810	Kolmogorov-Smirnov 5% Critical Value				0.2	95% BCA Bootstrap UCL				957.6		
811	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				1212		
812						97.5% Chebyshev(Mean, Sd) UCL				1382		
813	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				1717		
814	95% Approximate Gamma UCL				1043							
815	95% Adjusted Gamma UCL				1066							
816												
817	Potential UCL to Use					Use 95% Student's-t UCL				974.8		
818												
819												
820	Thallium											
821												
822	General Statistics											
823	Number of Valid Data				19	Number of Detected Data				2		
824	Number of Distinct Detected Data				2	Number of Non-Detect Data				17		
825						Percent Non-Detects				89.47%		
826												
827	Raw Statistics					Log-transformed Statistics						
828	Minimum Detected				0.76	Minimum Detected				-0.274		
829	Maximum Detected				0.77	Maximum Detected				-0.261		
830	Mean of Detected				0.765	Mean of Detected				-0.268		
831	SD of Detected				0.00707	SD of Detected				0.00924		
832	Minimum Non-Detect				0.84	Minimum Non-Detect				-0.174		
833	Maximum Non-Detect				4.1	Maximum Non-Detect				1.411		
834												
835	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				19		
836	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				0		
837	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				100.00%		
838												
839	Warning: Data set has only 2 Distinct Detected Values.											
840	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
841	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
842												
843	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
844												
845	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
846	Those methods will return a 'N/A' value on your output display!											
847												
848	It is necessary to have 4 or more Distinct Values for bootstrap methods.											

A	B	C	D	E	F	G	H	I	J	K	L
849	However, results obtained using 4 to 9 distinct values may not be reliable.										
850	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.										
851											
852											
853	UCL Statistics										
854	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
855	Shapiro Wilk Test Statistic				N/A	Shapiro Wilk Test Statistic				N/A	
856	5% Shapiro Wilk Critical Value				N/A	5% Shapiro Wilk Critical Value				N/A	
857	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
858											
859	Assuming Normal Distribution					Assuming Lognormal Distribution					
860	DL/2 Substitution Method					DL/2 Substitution Method					
861	Mean				1.371	Mean				0.258	
862	SD				0.406	SD				0.382	
863	95% DL/2 (t) UCL				1.532	95% H-Stat (DL/2) UCL				2.065	
864											
865	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
866	MLE method failed to converge properly					Mean in Log Scale				N/A	
867											
868											
869											
870											
871											
872											
873	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
874	k star (bias corrected)				N/A	Data do not follow a Discernable Distribution (0.05)					
875	Theta Star				N/A						
876	nu star				N/A						
877											
878	A-D Test Statistic				N/A	Nonparametric Statistics					
879	5% A-D Critical Value				N/A	Kaplan-Meier (KM) Method					
880	K-S Test Statistic				N/A	Mean				0.765	
881	5% K-S Critical Value				N/A	SD				0.005	
882	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.005	
883											
884	Assuming Gamma Distribution					95% KM (z) UCL					
885	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					
886	Minimum				N/A	95% KM (bootstrap t) UCL				0.78	
887	Maximum				N/A	95% KM (BCA) UCL				0.77	
888	Mean				N/A	95% KM (Percentile Bootstrap) UCL				N/A	
889	Median				N/A	95% KM (Chebyshev) UCL				0.787	
890	SD				N/A	97.5% KM (Chebyshev) UCL				0.796	
891	k star				N/A	99% KM (Chebyshev) UCL				0.815	
892	Theta star				N/A						
893	Nu star				N/A	Potential UCLs to Use					
894	AppChi2				N/A	95% KM (t) UCL				0.774	
895	95% Gamma Approximate UCL				N/A	95% KM (% Bootstrap) UCL				N/A	
896	95% Adjusted Gamma UCL				N/A						
897	Warning: Recommended UCL exceeds the maximum observation										
898	Note: DL/2 is not a recommended method.										
899											

TABLE B-7.1.1 RME
CALCULATION OF CHEMICAL NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site - AOC 1
008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-1	Dermal Absorption	Acenaphthylene	4.77E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.39E-07	mg/kg-day	--	mg/kg-day	--				
				Benzo(a)anthracene	2.41E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.71E-05	mg/kg-day	--	mg/kg-day	--				
				Benzo(a)pyrene	2.59E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.84E-05	mg/kg-day	--	mg/kg-day	--				
				Benzo(b)fluoranthene	1.85E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.32E-05	mg/kg-day	--	mg/kg-day	--				
				Benzo(g,h,i)perylene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.46E-06	mg/kg-day	--	mg/kg-day	--				
				Benzo(k)fluoranthene	1.71E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.21E-05	mg/kg-day	--	mg/kg-day	--				
				Bis(2-ethylhexyl)phthalate	1.14E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.22E-06	mg/kg-day	2.00E-02	mg/kg-day	3.11E-04				
				Carbazole	5.15E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.81E-06	mg/kg-day	--	mg/kg-day	--				
				Chrysene	2.45E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.74E-05	mg/kg-day	--	mg/kg-day	--				
				Dibenzo(a,h)anthracene	5.86E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.16E-06	mg/kg-day	--	mg/kg-day	--				
				Dimethylphthalate	3.58E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.96E-07	mg/kg-day	1.00E-01	mg/kg-day	1.96E-06				
				Di-n-octylphthalate	1.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.65E-07	mg/kg-day	2.00E-02	mg/kg-day	3.82E-05				
				Indeno(1,2,3-cd)pyrene	1.33E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.46E-06	mg/kg-day	--	mg/kg-day	--				
				Phenanthrene	1.45E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.03E-05	mg/kg-day	--	mg/kg-day	--				
				Dieldrin	1.56E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--				
				Endosulfan II	5.94E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
				Endosulfan sulfate	5.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
				Endrin aldehyde	9.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
				Endrin ketone	8.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
				gamma-Chlordane	3.80E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
				Aroclor-1254	9.32E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.13E-07	mg/kg-day	2.00E-05	mg/kg-day	3.57E-02				
				Aroclor-1260	2.39E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.83E-06	mg/kg-day	--	mg/kg-day	--				
				Aluminum	1.74E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--				
				Antimony	3.27E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--				
Arsenic	1.24E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.04E-06	mg/kg-day	3.00E-04	mg/kg-day	6.79E-03								
Barium	3.82E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--								
Cadmium	9.10E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.97E-08	mg/kg-day	2.50E-05	mg/kg-day	1.99E-03								
Chromium (VI)	5.74E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--								
Cobalt	1.31E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--								
Copper	3.03E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--								
Iron	6.84E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--								
Lead	9.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--								
Manganese	6.65E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--								
Mercury	1.23E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--								
Nickel	1.46E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--								
Thallium	1.25E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--								
Vanadium	1.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--								
Zinc	1.86E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--								
Exp. Route Total																				4.48E-02
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-1	Incidental Ingestion	Acenaphthylene	4.77E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.53E-07	mg/kg-day	--	mg/kg-day	--				
				Benzo(a)anthracene	2.41E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.30E-05	mg/kg-day	--	mg/kg-day	--				
				Benzo(a)pyrene	2.59E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.55E-05	mg/kg-day	--	mg/kg-day	--				
				Benzo(b)fluoranthene	1.85E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.54E-05	mg/kg-day	--	mg/kg-day	--				
				Benzo(g,h,i)perylene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-05	mg/kg-day	--	mg/kg-day	--				
				Benzo(k)fluoranthene	1.71E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.34E-05	mg/kg-day	--	mg/kg-day	--				
				Bis(2-ethylhexyl)phthalate	1.14E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.56E-05	mg/kg-day	2.00E-02	mg/kg-day	7.79E-04				
				Carbazole	5.15E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.05E-06	mg/kg-day	--	mg/kg-day	--				
				Chrysene	2.45E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.35E-05	mg/kg-day	--	mg/kg-day	--				
				Dibenzo(a,h)anthracene	5.86E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.02E-06	mg/kg-day	--	mg/kg-day	--				
				Dimethylphthalate	3.58E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.90E-07	mg/kg-day	1.00E-01	mg/kg-day	4.90E-06				
				Di-n-octylphthalate	1.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.92E-06	mg/kg-day	2.00E-02	mg/kg-day	9.58E-05				

TABLE B-7.1.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Indeno(1,2,3-cd)pyrene	1.33E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.82E-05	mg/kg-day	--	mg/kg-day	--				
				Phenanthrene	1.45E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.98E-05	mg/kg-day	--	mg/kg-day	--				
				Dieldrin	1.56E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.14E-08	mg/kg-day	5.00E-05	mg/kg-day	4.27E-04				
				Endosulfan II	5.94E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.14E-08	mg/kg-day	--	mg/kg-day	--				
				Endosulfan sulfate	5.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.81E-08	mg/kg-day	--	mg/kg-day	--				
				Endrin aldehyde	9.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.32E-07	mg/kg-day	--	mg/kg-day	--				
				Endrin ketone	8.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.19E-07	mg/kg-day	--	mg/kg-day	--				
				gamma-Chlordane	3.80E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.21E-08	mg/kg-day	--	mg/kg-day	--				
				Aroclor-1254	9.32E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.28E-06	mg/kg-day	2.00E-05	mg/kg-day	6.38E-02				
				Aroclor-1260	2.39E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.27E-06	mg/kg-day	--	mg/kg-day	--				
				Aluminum	1.74E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.39E-02	mg/kg-day	1.00E+00	mg/kg-day	2.39E-02				
				Antimony	3.27E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.48E-05	mg/kg-day	4.00E-04	mg/kg-day	1.12E-01				
				Arsenic	1.24E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.70E-05	mg/kg-day	3.00E-04	mg/kg-day	5.68E-02				
				Barium	3.82E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.23E-04	mg/kg-day	2.00E-01	mg/kg-day	2.62E-03				
				Cadmium	9.10E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.25E-05	mg/kg-day	5.00E-04	mg/kg-day	2.49E-02				
				Chromium (VI)	5.74E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.87E-03	mg/kg-day	3.00E-03	mg/kg-day	2.62E+00				
				Cobalt	1.31E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.80E-05	mg/kg-day	3.00E-04	mg/kg-day	6.00E-02				
				Copper	3.03E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.15E-03	mg/kg-day	4.00E-02	mg/kg-day	1.04E-01				
				Iron	6.84E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.36E-02	mg/kg-day	7.00E-01	mg/kg-day	1.34E-01				
				Lead	9.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.34E-03	mg/kg-day	--	mg/kg-day	--				
				Manganese	6.65E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.11E-04	mg/kg-day	2.40E-02	mg/kg-day	3.80E-02				
				Mercury	1.23E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.69E-06	mg/kg-day	3.00E-04	mg/kg-day	5.62E-03				
				Nickel	1.46E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.00E-04	mg/kg-day	3.00E-02	mg/kg-day	6.68E-03				
				Thallium	1.25E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.72E-06	mg/kg-day	--	mg/kg-day	--				
				Vanadium	1.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.39E-04	mg/kg-day	5.00E-03	mg/kg-day	4.79E-02				
				Zinc	1.86E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.55E-03	mg/kg-day	3.00E-01	mg/kg-day	8.50E-03				
							Exp. Route Total											3.31E+00		
				Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-1	Inhalation (Fugitive Dust)	Acenaphthylene	5.74E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.50E-10	mg/m ³	--	mg/m ³	--
								Benzo(a)anthracene	2.90E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.78E-08	mg/m ³	--	mg/m ³	--
								Benzo(a)pyrene	3.12E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.99E-08	mg/m ³	--	mg/m ³	--
								Benzo(b)fluoranthene	2.23E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.14E-08	mg/m ³	--	mg/m ³	--
								Benzo(g,h,i)perylene	1.26E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-08	mg/m ³	--	mg/m ³	--
Benzo(k)fluoranthene	2.06E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.97E-08	mg/m ³	--	mg/m ³	--				
Bis(2-ethylhexyl)phthalate	1.37E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.31E-08	mg/m ³	--	mg/m ³	--				
Carbazole	6.20E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	5.94E-09	mg/m ³	--	mg/m ³	--				
Chrysene	2.94E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	2.82E-08	mg/m ³	--	mg/m ³	--				
Dibenzo(a,h)anthracene	7.05E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	6.76E-09	mg/m ³	--	mg/m ³	--				
Dimethylphthalate	4.31E-10	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	4.13E-10	mg/m ³	--	mg/m ³	--				
Di-n-octylphthalate	1.68E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.61E-09	mg/m ³	--	mg/m ³	--				
Indeno(1,2,3-cd)pyrene	1.60E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.54E-08	mg/m ³	--	mg/m ³	--				
Phenanthrene	1.74E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.67E-08	mg/m ³	--	mg/m ³	--				
Dieldrin	1.88E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.80E-11	mg/m ³	--	mg/m ³	--				
Endosulfan II	7.15E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	6.85E-11	mg/m ³	--	mg/m ³	--				
Endosulfan sulfate	6.86E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	6.58E-11	mg/m ³	--	mg/m ³	--				
Endrin aldehyde	1.16E-10	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.11E-10	mg/m ³	--	mg/m ³	--				
Endrin ketone	1.05E-10	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.00E-10	mg/m ³	--	mg/m ³	--				
gamma-Chlordane	4.57E-11	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	4.38E-11	mg/m ³	--	mg/m ³	--				
Aroclor-1254	1.12E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.08E-09	mg/m ³	--	mg/m ³	--				
Aroclor-1260	2.87E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	2.76E-09	mg/m ³	--	mg/m ³	--				
Aluminum	2.10E-05	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	2.01E-05	mg/m ³	5.00E-03	mg/m ³	4.02E-03				
Antimony	3.94E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	3.78E-08	mg/m ³	--	mg/m ³	--				
Arsenic	1.50E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.43E-08	mg/m ³	1.50E-05	mg/m ³	9.56E-04				
Barium	4.60E-07	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	4.41E-07	mg/m ³	5.00E-04	mg/m ³	8.81E-04				
Cadmium	1.09E-08	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	1.05E-08	mg/m ³	1.00E-05	mg/m ³	1.05E-03				
Chromium (VI)	6.91E-06	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	6.63E-06	mg/m ³	1.00E-04	mg/m ³	6.63E-02				

TABLE B-7.1.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient			
							Value	Units	Value	Units		Value	Units						
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-1	Inhalation (Fugitive Dust)	Cobalt	1.58E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.52E-08	mg/m ³	6.00E-06	mg/m ³	2.53E-03			
				Copper	3.65E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.50E-06	mg/m ³	--	mg/m ³	--			
				Iron	8.23E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.89E-05	mg/m ³	--	mg/m ³	--			
				Lead	1.17E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.12E-06	mg/m ³	--	mg/m ³	--			
				Manganese	8.00E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.67E-07	mg/m ³	5.00E-05	mg/m ³	1.53E-02			
				Mercury	1.48E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.42E-09	mg/m ³	3.00E-04	mg/m ³	4.73E-06			
				Nickel	1.76E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.69E-07	mg/m ³	9.00E-05	mg/m ³	1.87E-03			
				Thallium	1.51E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.45E-09	mg/m ³	--	mg/m ³	--			
				Vanadium	2.10E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.02E-07	mg/m ³	--	mg/m ³	--			
				Zinc	2.24E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.15E-06	mg/m ³	--	mg/m ³	--			
				Exp. Route Total															9.29E-02
				Exposure Point Total															3.45E+00
				Exposure Medium Total															3.45E+00
Medium Total															3.45E+00				
Total of Receptor Risks Across All Media										--	Total of Receptor Hazards Across All Media				3.45E+00				

TABLE B-7.1.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Scenario Timeframe: Future
 Receptor Population: Resident (on-site)
 Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-1	Dermal Absorption	Acenaphthylene	4.77E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.22E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	2.41E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.12E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	2.59E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.21E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.85E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.62E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.89E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	1.71E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.95E-05	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	1.14E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.07E-05	mg/kg-day	2.00E-02	mg/kg-day	2.04E-03
				Carbazole	5.15E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.84E-05	mg/kg-day	--	mg/kg-day	--
				Chrysene	2.45E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.14E-04	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	5.86E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.73E-05	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	3.58E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.28E-06	mg/kg-day	1.00E-01	mg/kg-day	1.28E-05
				Di-n-octylphthalate	1.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.01E-06	mg/kg-day	2.00E-02	mg/kg-day	2.50E-04
				Indeno(1,2,3-cd)pyrene	1.33E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.20E-05	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	1.45E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.74E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.56E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	5.94E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	5.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	9.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	8.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	3.80E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	9.32E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.67E-06	mg/kg-day	2.00E-05	mg/kg-day	2.34E-01
				Aroclor-1260	2.39E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.20E-05	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.74E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	3.27E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	1.24E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.33E-05	mg/kg-day	3.00E-04	mg/kg-day	4.45E-02
				Barium	3.82E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	9.10E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.26E-07	mg/kg-day	2.50E-05	mg/kg-day	1.30E-02
Chromium (VI)	5.74E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--				
Cobalt	1.31E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
Copper	3.03E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--				
Iron	6.84E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--				
Lead	9.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Manganese	6.65E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Mercury	1.23E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
Nickel	1.46E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--				
Thallium	1.25E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	1.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.86E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total															2.93E-01	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-1	Incidental Ingestion	Acenaphthylene	4.77E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.10E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	2.41E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.08E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	2.59E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.31E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.85E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.37E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.34E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	1.71E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.19E-04	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	1.14E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.45E-04	mg/kg-day	2.00E-02	mg/kg-day	7.27E-03
				Carbazole	5.15E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.58E-05	mg/kg-day	--	mg/kg-day	--
				Chrysene	2.45E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.13E-04	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	5.86E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.49E-05	mg/kg-day	--	mg/kg-day	--

TABLE B-7.1.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-1	Incidental Ingestion	Dimethylphthalate	3.58E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.58E-06	mg/kg-day	1.00E-01	mg/kg-day	4.58E-05
				Di-n-octylphthalate	1.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.79E-05	mg/kg-day	2.00E-02	mg/kg-day	8.94E-04
				Indeno(1,2,3-cd)pyrene	1.33E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.70E-04	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	1.45E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.85E-04	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.56E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.99E-07	mg/kg-day	5.00E-05	mg/kg-day	3.99E-03
				Endosulfan II	5.94E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.59E-07	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	5.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.29E-07	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	9.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.23E-06	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	8.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.11E-06	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	3.80E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.86E-07	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	9.32E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.19E-05	mg/kg-day	2.00E-05	mg/kg-day	5.96E-01
				Aroclor-1260	2.39E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.05E-05	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.74E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.23E-01	mg/kg-day	1.00E+00	mg/kg-day	2.23E-01
				Antimony	3.27E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.18E-04	mg/kg-day	4.00E-04	mg/kg-day	1.05E+00
				Arsenic	1.24E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.59E-04	mg/kg-day	3.00E-04	mg/kg-day	5.30E-01
				Barium	3.82E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.88E-03	mg/kg-day	2.00E-01	mg/kg-day	2.44E-02
				Cadmium	9.10E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.16E-04	mg/kg-day	5.00E-04	mg/kg-day	2.33E-01
				Chromium (VI)	5.74E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.34E-02	mg/kg-day	3.00E-03	mg/kg-day	2.45E+01
				Cobalt	1.31E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.68E-04	mg/kg-day	3.00E-04	mg/kg-day	5.60E-01
				Copper	3.03E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.88E-02	mg/kg-day	4.00E-02	mg/kg-day	9.69E-01
				Iron	6.84E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.74E-01	mg/kg-day	7.00E-01	mg/kg-day	1.25E+00
				Lead	9.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.25E-02	mg/kg-day	--	mg/kg-day	--
				Manganese	6.65E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.50E-03	mg/kg-day	2.40E-02	mg/kg-day	3.54E-01
				Mercury	1.23E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.57E-05	mg/kg-day	3.00E-04	mg/kg-day	5.25E-02
				Nickel	1.46E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.87E-03	mg/kg-day	3.00E-02	mg/kg-day	6.23E-02
				Thallium	1.25E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.60E-05	mg/kg-day	--	mg/kg-day	--
				Vanadium	1.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.23E-03	mg/kg-day	5.00E-03	mg/kg-day	4.47E-01
Zinc	1.86E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.38E-02	mg/kg-day	3.00E-01	mg/kg-day	7.94E-02				
Exp. Route Total																3.09E+01
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-1	Inhalation (Fugitive Dust)	Acenaphthylene	5.74E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.50E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	2.90E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.78E-08	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	3.12E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.99E-08	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	2.23E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.14E-08	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	1.26E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-08	mg/m ³	--	mg/m ³	--
				Benzo(k)fluoranthene	2.06E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.97E-08	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	1.37E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.31E-08	mg/m ³	--	mg/m ³	--
				Carbazole	6.20E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.94E-09	mg/m ³	--	mg/m ³	--
				Chrysene	2.94E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.82E-08	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	7.05E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.76E-09	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	4.31E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.13E-10	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	1.68E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.61E-09	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	1.60E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.54E-08	mg/m ³	--	mg/m ³	--
				Phenanthrene	1.74E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.67E-08	mg/m ³	--	mg/m ³	--
				Dieldrin	1.88E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.80E-11	mg/m ³	--	mg/m ³	--
				Endosulfan II	7.15E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.85E-11	mg/m ³	--	mg/m ³	--
				Endosulfan sulfate	6.86E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.58E-11	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	1.16E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.11E-10	mg/m ³	--	mg/m ³	--
				Endrin ketone	1.05E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.00E-10	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	4.57E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.38E-11	mg/m ³	--	mg/m ³	--
Aroclor-1254	1.12E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.08E-09	mg/m ³	--	mg/m ³	--				
Aroclor-1260	2.87E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.76E-09	mg/m ³	--	mg/m ³	--				
Aluminum	2.10E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.01E-05	mg/m ³	5.00E-03	mg/m ³	4.02E-03				
Antimony	3.94E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.78E-08	mg/m ³	--	mg/m ³	--				

TABLE B-7.1.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-1	Inhalation (Fugitive Dust)	Arsenic	1.50E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.43E-08	mg/m ³	1.50E-05	mg/m ³	9.56E-04				
				Barium	4.60E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.41E-07	mg/m ³	5.00E-04	mg/m ³	8.81E-04				
				Cadmium	1.09E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.05E-08	mg/m ³	1.00E-05	mg/m ³	1.05E-03				
				Chromium (VI)	6.91E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.63E-06	mg/m ³	1.00E-04	mg/m ³	6.63E-02				
				Cobalt	1.58E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.52E-08	mg/m ³	6.00E-06	mg/m ³	2.53E-03				
				Copper	3.65E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.50E-06	mg/m ³	--	mg/m ³	--				
				Iron	8.23E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.89E-05	mg/m ³	--	mg/m ³	--				
				Lead	1.17E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.12E-06	mg/m ³	--	mg/m ³	--				
				Manganese	8.00E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.67E-07	mg/m ³	5.00E-05	mg/m ³	1.53E-02				
				Mercury	1.48E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.42E-09	mg/m ³	3.00E-04	mg/m ³	4.73E-06				
				Nickel	1.76E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.69E-07	mg/m ³	9.00E-05	mg/m ³	1.87E-03				
				Thallium	1.51E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.45E-09	mg/m ³	--	mg/m ³	--				
				Vanadium	2.10E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.02E-07	mg/m ³	--	mg/m ³	--				
				Zinc	2.24E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.15E-06	mg/m ³	--	mg/m ³	--				
							Exp. Route Total												9.29E-02	
						Exposure Point Total														3.13E+01
					Exposure Medium Total															3.13E+01
Medium Total																3.13E+01				
																Total of Receptor Risks Across All Media				
																Total of Receptor Hazards Across All Media				
																3.13E+01				

TABLE B-7.1.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-1	Dermal Absorption	Acenaphthylene	4.77E-01	mg/kg	3.07E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	2.41E+01	mg/kg	1.55E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.13E-05
				Benzo(a)pyrene	2.59E+01	mg/kg	1.67E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.22E-04
				Benzo(b)fluoranthene	1.85E+01	mg/kg	1.19E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.69E-06
				Benzo(g,h,i)perylene	1.05E+01	mg/kg	6.75E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	1.71E+01	mg/kg	1.10E-05	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	8.02E-07
				Bis(2-ethylhexyl)phthalate	1.14E+01	mg/kg	5.63E-06	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	7.88E-08
				Carbazole	5.15E+00	mg/kg	2.55E-06	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	5.09E-08
				Chrysene	2.45E+01	mg/kg	1.57E-05	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	1.15E-07
				Dibenzo(a,h)anthracene	5.86E+00	mg/kg	3.77E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.75E-05
				Dimethylphthalate	3.58E-01	mg/kg	1.77E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	1.40E+00	mg/kg	6.92E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	1.33E+01	mg/kg	8.56E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.25E-06
				Phenanthrene	1.45E+01	mg/kg	9.31E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.56E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--
				Endosulfan II	5.94E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	5.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	9.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	8.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	3.80E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	9.32E-01	mg/kg	6.45E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.29E-06
				Aroclor-1260	2.39E+00	mg/kg	1.65E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.31E-06
				Aluminum	1.74E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	3.27E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	1.24E+01	mg/kg	1.84E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.77E-06
				Barium	3.82E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	9.10E+00	mg/kg	4.50E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	5.74E+03	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	1.31E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	3.03E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	6.84E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	9.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	6.65E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Mercury	1.23E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	1.46E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Thallium	1.25E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Vanadium	1.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	1.86E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Exp. Route Total										1.84E-04	

TABLE B-7.1.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-1	Incidental Ingestion	Acenaphthylene	4.77E-01	mg/kg	7.51E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	2.41E+01	mg/kg	3.79E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.76E-05
				Benzo(a)pyrene	2.59E+01	mg/kg	4.08E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.98E-04
				Benzo(b)fluoranthene	1.85E+01	mg/kg	2.91E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.13E-05
				Benzo(g,h,i)perylene	1.05E+01	mg/kg	1.65E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	1.71E+01	mg/kg	2.69E-05	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	1.96E-06
				Bis(2-ethylhexyl)phthalate	1.14E+01	mg/kg	1.79E-05	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	2.51E-07
				Carbazole	5.15E+00	mg/kg	8.11E-06	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.62E-07
				Chrysene	2.45E+01	mg/kg	3.85E-05	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	2.81E-07
				Dibenzo(a,h)anthracene	5.86E+00	mg/kg	9.22E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	6.73E-05
				Dimethylphthalate	3.58E-01	mg/kg	5.63E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	1.40E+00	mg/kg	2.20E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	1.33E+01	mg/kg	2.10E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.53E-05
				Phenanthrene	1.45E+01	mg/kg	2.28E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.56E-02	mg/kg	2.46E-08	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	3.93E-07
				Endosulfan II	5.94E-02	mg/kg	9.35E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	5.70E-02	mg/kg	8.97E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	9.60E-02	mg/kg	1.51E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	8.70E-02	mg/kg	1.37E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	3.80E-02	mg/kg	5.98E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	9.32E-01	mg/kg	1.47E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	2.93E-06
				Aroclor-1260	2.39E+00	mg/kg	3.76E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	7.52E-06
				Aluminum	1.74E+04	mg/kg	2.74E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	3.27E+01	mg/kg	5.15E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	1.24E+01	mg/kg	1.96E-05	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.93E-05
				Barium	3.82E+02	mg/kg	6.01E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	9.10E+00	mg/kg	1.43E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	5.74E+03	mg/kg	9.04E-03	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	4.52E-03
				Cobalt	1.31E+01	mg/kg	2.07E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	3.03E+03	mg/kg	4.77E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	6.84E+04	mg/kg	1.08E-01	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	9.75E+02	mg/kg	1.53E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	6.65E+02	mg/kg	1.05E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Mercury	1.23E+00	mg/kg	1.94E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	1.46E+02	mg/kg	2.30E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Thallium	1.25E+00	mg/kg	1.97E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Vanadium	1.75E+02	mg/kg	2.75E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	1.86E+03	mg/kg	2.93E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Exp. Route Total											4.99E-03
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Inhalation of Dust	Acenaphthylene	5.74E-10	mg/m ³	2.36E-10	mg/m ³	--	(μg/m ³) ⁻¹	--
				Benzo(a)anthracene	2.90E-08	mg/m ³	1.19E-08	mg/m ³	1.10E-04	(μg/m ³) ⁻¹	1.31E-09

TABLE B-7.1.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-1	Inhalation of Dust	Benzo(a)pyrene	3.12E-08	mg/m ³	1.28E-08	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	1.41E-08
				Benzo(b)fluoranthene	2.23E-08	mg/m ³	9.16E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.01E-09
				Benzo(g,h,i)perylene	1.26E-08	mg/m ³	5.19E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(k)fluoranthene	2.06E-08	mg/m ³	8.45E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	9.30E-10
				Bis(2-ethylhexyl)phthalate	1.37E-08	mg/m ³	5.63E-09	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	1.35E-11
				Carbazole	6.20E-09	mg/m ³	2.55E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Chrysene	2.94E-08	mg/m ³	1.21E-08	mg/m ³	1.10E-05	(µg/m ³) ⁻¹	1.33E-10
				Dibenzo(a,h)anthracene	7.05E-09	mg/m ³	2.90E-09	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	3.48E-09
				Dimethylphthalate	4.31E-10	mg/m ³	1.77E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Di-n-octylphthalate	1.68E-09	mg/m ³	6.92E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	1.60E-08	mg/m ³	6.59E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	7.25E-10
				Phenanthrene	1.74E-08	mg/m ³	7.16E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Dieldrin	1.88E-11	mg/m ³	7.71E-12	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	3.55E-11
				Endosulfan II	7.15E-11	mg/m ³	2.94E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endosulfan sulfate	6.86E-11	mg/m ³	2.82E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin aldehyde	1.16E-10	mg/m ³	4.75E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	1.05E-10	mg/m ³	4.30E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	4.57E-11	mg/m ³	1.88E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1254	1.12E-09	mg/m ³	4.61E-10	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	2.63E-10
				Aroclor-1260	2.87E-09	mg/m ³	1.18E-09	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	6.73E-10
				Aluminum	2.10E-05	mg/m ³	8.61E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	3.94E-08	mg/m ³	1.62E-08	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	1.50E-08	mg/m ³	6.15E-09	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	2.64E-08
				Barium	4.60E-07	mg/m ³	1.89E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Cadmium	1.09E-08	mg/m ³	4.50E-09	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	8.10E-09
				Chromium (VI)	6.91E-06	mg/m ³	2.84E-06	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	2.39E-04
				Cobalt	1.58E-08	mg/m ³	6.49E-09	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	5.84E-08
				Copper	3.65E-06	mg/m ³	1.50E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Iron	8.23E-05	mg/m ³	3.38E-05	mg/m ³	--	(µg/m ³) ⁻¹	--
				Lead	1.17E-06	mg/m ³	4.82E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Manganese	8.00E-07	mg/m ³	3.29E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Mercury	1.48E-09	mg/m ³	6.09E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Nickel	1.76E-07	mg/m ³	7.23E-08	mg/m ³	2.60E-04	(µg/m ³) ⁻¹	1.88E-08
Thallium	1.51E-09	mg/m ³	6.20E-10	mg/m ³	--	(µg/m ³) ⁻¹	--				
Vanadium	2.10E-07	mg/m ³	8.64E-08	mg/m ³	--	(µg/m ³) ⁻¹	--				
Zinc	2.24E-06	mg/m ³	9.21E-07	mg/m ³	--	(µg/m ³) ⁻¹	--				
			Exp. Route Total								2.39E-04
			Exposure Point Total								5.41E-03
			Exposure Medium Total								5.41E-03
Medium Total										5.41E-03	
Total of Receptor Risks Across All Media										5.41E-03	

TABLE B-7.1.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

Footnotes:

[a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.

[b] Inputs were applied as follows:

Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10

Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3

Age 6 - 16 Adult IR/CR and BW; ED = 10; ADAF = 3

Age 16 - 30 Adult IR/CR and BW; ED = 14; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

On-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	2.41E+01	7.30E-01	6.74E-05	7.30E-01	1.53E-04	1.10E-04	3.32E-09
Benzo(a)pyrene	2.59E+01	7.30E+00	7.25E-04	7.30E+00	1.64E-03	1.10E-03	3.57E-08
Benzo(b)fluoranthene	1.85E+01	7.30E-01	5.19E-05	7.30E-01	1.17E-04	1.10E-04	2.55E-09
Benzo(k)fluoranthene	1.71E+01	7.00E-02	4.59E-06	7.00E-02	1.04E-05	1.10E-04	2.36E-09
Chrysene	2.45E+01	7.30E-03	6.85E-07	7.30E-03	1.55E-06	1.10E-05	3.37E-10
Dibenzo(a,h)anthracene	5.86E+00	7.30E+00	1.64E-04	7.30E+00	3.72E-04	1.20E-03	8.81E-09
Indeno(1,2,3-cd)pyrene	1.33E+01	7.30E-01	3.73E-05	7.30E-01	8.45E-05	1.10E-04	1.84E-09
Chromium (VI)	5.74E+03	2.00E+01	--	5.00E-01	2.50E-02	8.40E-02	3.19E-04

*Cancer Risk using ADAF

TABLE B-7.2.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 2
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-2	Dermal Absorption	Acenaphthylene	1.02E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.21E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.74E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.24E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.53E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.09E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	2.49E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.77E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	4.64E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.30E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	1.03E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.29E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	1.57E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.60E-06	mg/kg-day	2.00E-02	mg/kg-day	4.30E-04
				Carbazole	1.74E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.53E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.87E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.33E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.16E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.21E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	5.46E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.98E-07	mg/kg-day	1.00E-01	mg/kg-day	2.98E-06
				Di-n-octylphthalate	4.99E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.73E-07	mg/kg-day	2.00E-02	mg/kg-day	1.36E-05
				Indeno(1,2,3-cd)pyrene	6.66E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.73E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	2.67E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-06	mg/kg-day	2.00E-02	mg/kg-day	7.30E-05
				Phenanthrene	1.97E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.40E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	2.35E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	8.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	5.12E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	5.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	4.81E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	3.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	1.27E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.70E-07	mg/kg-day	2.00E-05	mg/kg-day	4.85E-02
				Aroclor-1260	1.35E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.03E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	9.33E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	2.82E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	8.89E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-06	mg/kg-day	3.00E-04	mg/kg-day	4.86E-03
				Chromium (VI)	1.62E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	9.68E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	3.03E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	2.88E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	4.62E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Manganese	7.73E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--
				Mercury	1.41E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
Thallium	9.87E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	3.44E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	6.06E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total															5.39E-02	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-2	Incidental Ingestion	Acenaphthylene	1.02E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.39E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.74E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.39E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.53E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.10E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	2.49E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.41E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	4.64E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.36E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	1.03E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-05	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	1.57E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.15E-05	mg/kg-day	2.00E-02	mg/kg-day	1.08E-03
				Carbazole	1.74E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.39E-06	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.87E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.57E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.16E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.58E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	5.46E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.48E-07	mg/kg-day	1.00E-01	mg/kg-day	7.48E-06
				Di-n-octylphthalate	4.99E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.84E-07	mg/kg-day	2.00E-02	mg/kg-day	3.42E-05

TABLE B-7.2.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 2
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations						
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient		
							Value	Units	Value	Units		Value	Units	Value	Units			
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-2	Inhalation (Fugitive Dust)	Copper	3.64E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.49E-07	mg/m ³	--	mg/m ³	--		
				Iron	3.46E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.32E-05	mg/m ³	--	mg/m ³	--		
				Lead	5.55E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.33E-07	mg/m ³	--	mg/m ³	--		
				Manganese	9.30E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.92E-07	mg/m ³	5.00E-05	mg/m ³	1.78E-02		
				Mercury	1.70E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.63E-09	mg/m ³	3.00E-04	mg/m ³	5.43E-06		
				Thallium	1.19E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.14E-09	mg/m ³	--	mg/m ³	--		
				Vanadium	4.14E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.97E-08	mg/m ³	--	mg/m ³	--		
				Zinc	7.29E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.99E-07	mg/m ³	--	mg/m ³	--		
				Exp. Route Total														2.44E-02
				Exposure Point Total														
Exposure Medium Total															4.77E-01			
Medium Total															4.77E-01			
Total of Receptor Risks Across All Media										--	Total of Receptor Hazards Across All Media				4.77E-01			

TABLE B-7.2.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 2
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-2	Dermal Absorption	Acenaphthylene	1.02E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.72E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.74E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.11E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.53E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.14E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	2.49E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.16E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	4.64E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.16E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	1.03E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.77E-05	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	1.57E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.63E-05	mg/kg-day	2.00E-02	mg/kg-day	2.82E-03
				Carbazole	1.74E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.24E-06	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.87E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.72E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.16E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.38E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	5.46E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.95E-06	mg/kg-day	1.00E-01	mg/kg-day	1.95E-05
				Di-n-octylphthalate	4.99E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.79E-06	mg/kg-day	2.00E-02	mg/kg-day	8.93E-05
				Indeno(1,2,3-cd)pyrene	6.66E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.10E-05	mg/kg-day	--	mg/kg-day	--
				Naphthalene	2.67E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.56E-06	mg/kg-day	2.00E-02	mg/kg-day	4.78E-04
				Phenanthrene	1.97E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.19E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	2.35E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	8.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	5.12E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	5.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	4.81E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	3.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	1.27E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.35E-06	mg/kg-day	2.00E-05	mg/kg-day	3.18E-01
				Aroclor-1260	1.35E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.75E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	9.33E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	2.82E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	8.89E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.55E-06	mg/kg-day	3.00E-04	mg/kg-day	3.18E-02
				Chromium (VI)	1.62E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	9.68E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	3.03E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	2.88E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	4.62E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Manganese	7.73E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--
				Mercury	1.41E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
Thallium	9.87E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	3.44E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	6.06E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
			Exp. Route Total											3.53E-01		
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-2	Incidental Ingestion	Acenaphthylene	1.02E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.30E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.74E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.23E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.53E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.96E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	2.49E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.18E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	4.64E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.93E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	1.03E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.31E-04	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	1.57E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.01E-04	mg/kg-day	2.00E-02	mg/kg-day	1.01E-02
				Carbazole	1.74E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.23E-05	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.87E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.40E-04	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.16E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.48E-05	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	5.46E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.98E-06	mg/kg-day	1.00E-01	mg/kg-day	6.98E-05
				Di-n-octylphthalate	4.99E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.38E-06	mg/kg-day	2.00E-02	mg/kg-day	3.19E-04

TABLE B-7.2.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 2
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations						
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient		
							Value	Units	Value	Units		Value	Units	Value	Units			
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-2	Inhalation (Fugitive Dust)	Copper	3.64E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.49E-07	mg/m ³	--	mg/m ³	--		
				Iron	3.46E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.32E-05	mg/m ³	--	mg/m ³	--		
				Lead	5.55E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.33E-07	mg/m ³	--	mg/m ³	--		
				Manganese	9.30E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.92E-07	mg/m ³	5.00E-05	mg/m ³	1.78E-02		
				Mercury	1.70E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.63E-09	mg/m ³	3.00E-04	mg/m ³	5.43E-06		
				Thallium	1.19E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.14E-09	mg/m ³	--	mg/m ³	--		
				Vanadium	4.14E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.97E-08	mg/m ³	--	mg/m ³	--		
				Zinc	7.29E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.99E-07	mg/m ³	--	mg/m ³	--		
				Exp. Route Total														2.44E-02
				Exposure Point Total														
Exposure Medium Total															4.10E+00			
Medium Total															4.10E+00			
Total of Receptor Risks Across All Media										--	Total of Receptor Hazards Across All Media				4.10E+00			

TABLE B-7.2.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 2
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-2	Dermal Absorption	Acenaphthylene	1.02E+00	mg/kg	6.53E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.74E+01	mg/kg	1.12E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.18E-06
				Benzo(a)pyrene	1.53E+01	mg/kg	9.86E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	7.20E-05
				Benzo(b)fluoranthene	2.49E+01	mg/kg	1.60E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.17E-05
				Benzo(g,h,i)perylene	4.64E+00	mg/kg	2.98E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	1.03E+01	mg/kg	6.60E-06	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	4.82E-07
				Bis(2-ethylhexyl)phthalate	1.57E+01	mg/kg	7.78E-06	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	1.09E-07
				Carbazole	1.74E+00	mg/kg	8.62E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.72E-08
				Chrysene	1.87E+01	mg/kg	1.20E-05	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	8.79E-08
				Dibenzo(a,h)anthracene	1.16E+00	mg/kg	7.43E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.42E-06
				Dimethylphthalate	5.46E-01	mg/kg	2.70E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.99E-01	mg/kg	2.47E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	6.66E+00	mg/kg	4.28E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.12E-06
				Naphthalene	2.67E+00	mg/kg	1.32E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.97E+01	mg/kg	1.27E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	2.35E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--
				Endosulfan II	8.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	5.12E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	5.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	4.81E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	3.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	1.27E+00	mg/kg	8.77E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.75E-06
				Aroclor-1260	1.35E+00	mg/kg	9.32E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.86E-06
				Aluminum	9.33E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	2.82E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	8.89E+00	mg/kg	1.32E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.98E-06
				Chromium (VI)	1.62E+02	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	9.68E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	3.03E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	2.88E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	4.62E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	7.73E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Mercury	1.41E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Thallium	9.87E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Vanadium	3.44E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	6.06E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Exp. Route Total											1.07E-04

TABLE B-7.2.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 2
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-2	Incidental Ingestion	Acenaphthylene	1.02E+00	mg/kg	1.60E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.74E+01	mg/kg	2.74E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.00E-05
				Benzo(a)pyrene	1.53E+01	mg/kg	2.41E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.76E-04
				Benzo(b)fluoranthene	2.49E+01	mg/kg	3.92E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.86E-05
				Benzo(g,h,i)perylene	4.64E+00	mg/kg	7.30E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	1.03E+01	mg/kg	1.61E-05	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	1.18E-06
				Bis(2-ethylhexyl)phthalate	1.57E+01	mg/kg	2.48E-05	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	3.47E-07
				Carbazole	1.74E+00	mg/kg	2.75E-06	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	5.49E-08
				Chrysene	1.87E+01	mg/kg	2.95E-05	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	2.15E-07
				Dibenzo(a,h)anthracene	1.16E+00	mg/kg	1.82E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.33E-05
				Dimethylphthalate	5.46E-01	mg/kg	8.59E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.99E-01	mg/kg	7.85E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	6.66E+00	mg/kg	1.05E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.65E-06
				Naphthalene	2.67E+00	mg/kg	4.20E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.97E+01	mg/kg	3.11E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	2.35E-02	mg/kg	3.70E-08	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	5.92E-07
				Endosulfan II	8.52E-02	mg/kg	1.34E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	5.12E-03	mg/kg	8.06E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	5.20E-02	mg/kg	8.18E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	4.81E-02	mg/kg	7.57E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	3.20E-02	mg/kg	5.04E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	1.27E+00	mg/kg	1.99E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.99E-06
				Aroclor-1260	1.35E+00	mg/kg	2.12E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	4.24E-06
				Aluminum	9.33E+03	mg/kg	1.47E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	2.82E+00	mg/kg	4.43E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	8.89E+00	mg/kg	1.40E-05	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.10E-05
				Chromium (VI)	1.62E+02	mg/kg	2.54E-04	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	1.27E-04
				Cobalt	9.68E+00	mg/kg	1.52E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	3.03E+02	mg/kg	4.76E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	2.88E+04	mg/kg	4.53E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	4.62E+02	mg/kg	7.27E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	7.73E+02	mg/kg	1.22E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Mercury	1.41E+00	mg/kg	2.22E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Thallium	9.87E-01	mg/kg	1.55E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Vanadium	3.44E+01	mg/kg	5.41E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	6.06E+02	mg/kg	9.54E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Exp. Route Total											4.05E-04
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Inhalation of Dust	Acenaphthylene	1.22E-09	mg/m ³	5.02E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(a)anthracene	2.10E-08	mg/m ³	8.62E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	9.48E-10

TABLE B-7.2.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site - AOC 2
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-2	Inhalation of Dust	Benzo(a)pyrene	1.85E-08	mg/m ³	7.59E-09	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	8.34E-09
				Benzo(b)fluoranthene	3.00E-08	mg/m ³	1.23E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.35E-09
				Benzo(g,h,i)perylene	5.58E-09	mg/m ³	2.30E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(k)fluoranthene	1.23E-08	mg/m ³	5.07E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	5.58E-10
				Bis(2-ethylhexyl)phthalate	1.89E-08	mg/m ³	7.78E-09	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	1.87E-11
				Carbazole	2.10E-09	mg/m ³	8.62E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Chrysene	2.26E-08	mg/m ³	9.27E-09	mg/m ³	1.10E-05	(µg/m ³) ⁻¹	1.02E-10
				Dibenzo(a,h)anthracene	1.39E-09	mg/m ³	5.71E-10	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	6.85E-10
				Dimethylphthalate	6.57E-10	mg/m ³	2.70E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Di-n-octylphthalate	6.00E-10	mg/m ³	2.47E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	8.01E-09	mg/m ³	3.29E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	3.62E-10
				Naphthalene	3.21E-09	mg/m ³	1.32E-09	mg/m ³	3.40E-05	(µg/m ³) ⁻¹	4.49E-11
				Phenanthrene	2.38E-08	mg/m ³	9.76E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Dieldrin	2.83E-11	mg/m ³	1.16E-11	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	5.35E-11
				Endosulfan II	1.03E-10	mg/m ³	4.21E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endosulfan sulfate	6.16E-12	mg/m ³	2.53E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin aldehyde	6.26E-11	mg/m ³	2.57E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	5.79E-11	mg/m ³	2.38E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	3.85E-11	mg/m ³	1.58E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1254	1.52E-09	mg/m ³	6.27E-10	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	3.57E-10
				Aroclor-1260	1.62E-09	mg/m ³	6.66E-10	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	3.79E-10
				Aluminum	1.12E-05	mg/m ³	4.61E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	3.39E-09	mg/m ³	1.39E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	1.07E-08	mg/m ³	4.40E-09	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	1.89E-08
				Barium	1.94E-07	mg/m ³	7.99E-08	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	6.71E-06
				Cadmium	1.16E-08	mg/m ³	4.79E-09	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	4.31E-08
				Chromium (VI)	3.64E-07	mg/m ³	1.50E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Cobalt	3.46E-05	mg/m ³	1.42E-05	mg/m ³	--	(µg/m ³) ⁻¹	--
				Copper	5.55E-07	mg/m ³	2.28E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Iron	9.30E-07	mg/m ³	3.82E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Lead	1.70E-09	mg/m ³	6.99E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Manganese	1.19E-09	mg/m ³	4.88E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Mercury	4.14E-08	mg/m ³	1.70E-08	mg/m ³	--	(µg/m ³) ⁻¹	--
Nickel	7.29E-07	mg/m ³	3.00E-07	mg/m ³	--	(µg/m ³) ⁻¹	--				
			Exp. Route Total								6.79E-06
			Exposure Point Total								5.18E-04
			Exposure Medium Total								5.18E-04
Medium Total										5.18E-04	
Total of Receptor Risks Across All Media										5.18E-04	

TABLE B-7.2.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 2
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

Footnotes:

[a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.

[b] Inputs were applied as follows:

- Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
- Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
- Age 6 - 16 Adult IR/CR and BW; ED = 10; ADAF = 3
- Age 16 - 30 Adult IR/CR and BW; ED = 14; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

On-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	1.74E+01	7.30E-01	4.88E-05	7.30E-01	1.11E-04	1.10E-04	2.40E-09
Benzo(a)pyrene	1.53E+01	7.30E+00	4.29E-04	7.30E+00	9.73E-04	1.10E-03	2.11E-08
Benzo(b)fluoranthene	2.49E+01	7.30E-01	6.97E-05	7.30E-01	1.58E-04	1.10E-04	3.43E-09
Benzo(k)fluoranthene	1.03E+01	7.30E-02	2.87E-06	7.30E-02	6.51E-06	1.10E-04	1.41E-09
Chrysene	1.87E+01	7.30E-03	5.25E-07	7.30E-03	1.19E-06	1.10E-05	2.58E-10
Dibenzo(a,h)anthracene	1.16E+00	7.30E+00	3.23E-05	7.30E+00	7.33E-05	1.20E-03	1.74E-09
Chromium (VI)	1.62E+02	2.00E+01	--	5.00E-01	7.02E-04	8.40E-02	3.18E-05

TABLE B-7.3.1 RME
CALCULATION OF CHEMICAL NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site - AOC 3
008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations			
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-3	Dermal Absorption	Acenaphthylene	4.90E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	3.48E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	5.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	3.84E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	3.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	2.34E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	7.11E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.60E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	1.14E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	2.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	1.63E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	7.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	4.04E-06	mg/kg-day	2.00E-02	mg/kg-day	2.02E-04
				Carbazole	5.20E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	2.84E-07	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	4.60E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	3.27E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	8.90E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	4.86E-08	mg/kg-day	1.00E-01	mg/kg-day	4.86E-07
				Indeno(1,2,3-cd)pyrene	1.50E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	1.07E-06	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	2.80E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	1.99E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	6.80E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan sulfate	1.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	1.10E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	6.50E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	4.97E-07	mg/kg-day	2.00E-05	mg/kg-day	2.49E-02
				Aroclor-1260	4.30E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	3.29E-05	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.09E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.05E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	1.80E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	2.95E-06	mg/kg-day	3.00E-04	mg/kg-day	9.84E-03
				Barium	5.13E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	1.49E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	8.14E-08	mg/kg-day	2.50E-05	mg/kg-day	3.26E-03
				Chromium (VI)	5.62E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.57E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.04E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.38E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.82E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	--	mg/kg-day	--
				Manganese	2.01E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--
				Silver	6.14E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--
Thallium	4.20E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	2.04E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.60E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total															3.82E-02	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-3	Incidental Ingestion	Acenaphthylene	4.90E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	6.71E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	5.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	7.40E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	3.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	4.52E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	1.37E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.60E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	2.19E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	2.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	3.15E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	7.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	1.01E-05	mg/kg-day	2.00E-02	mg/kg-day	5.07E-04
				Carbazole	5.20E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	7.12E-07	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	4.60E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	6.30E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	8.90E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	1.22E-07	mg/kg-day	1.00E-01	mg/kg-day	1.22E-06
				Indeno(1,2,3-cd)pyrene	1.50E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	2.05E-06	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	2.80E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	3.84E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	6.80E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	9.32E-08	mg/kg-day	5.00E-05	mg/kg-day	1.86E-03
				Endosulfan sulfate	1.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	2.19E-08	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	3.70E-08	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	1.10E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	1.51E-09	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	6.50E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	8.90E-07	mg/kg-day	2.00E-05	mg/kg-day	4.45E-02
				Aroclor-1260	4.30E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ¹	--	5.89E-05	mg/kg-day	--	mg/kg-day	--

TABLE B-7.3.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 3
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient			
							Value	Units	Value	Units		Value	Units	Value	Units				
					Value	Units	Value	Units	Value	Units	Value	Units	Value	Units	Value	Units			
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-3	Incidental Ingestion	Aluminum	1.09E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.49E-02	mg/kg-day	1.00E+00	mg/kg-day	1.49E-02			
				Antimony	1.05E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-04	mg/kg-day	4.00E-04	mg/kg-day	3.60E-01			
				Arsenic	1.80E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.47E-05	mg/kg-day	3.00E-04	mg/kg-day	8.22E-02			
				Barium	5.13E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.03E-03	mg/kg-day	2.00E-01	mg/kg-day	3.51E-02			
				Cadmium	1.49E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.04E-05	mg/kg-day	5.00E-04	mg/kg-day	4.08E-02			
				Chromium (VI)	5.62E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.70E-05	mg/kg-day	3.00E-03	mg/kg-day	2.57E-02			
				Cobalt	1.57E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.15E-05	mg/kg-day	3.00E-04	mg/kg-day	7.17E-02			
				Copper	1.04E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.42E-02	mg/kg-day	4.00E-02	mg/kg-day	3.56E-01			
				Iron	4.38E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.00E-02	mg/kg-day	7.00E-01	mg/kg-day	8.57E-02			
				Lead	1.82E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.49E-02	mg/kg-day	--	mg/kg-day	--			
				Manganese	2.01E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.75E-03	mg/kg-day	2.40E-02	mg/kg-day	1.15E-01			
				Silver	6.14E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.41E-05	mg/kg-day	5.00E-03	mg/kg-day	1.68E-02			
				Thallium	4.20E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.75E-06	mg/kg-day	--	mg/kg-day	--			
				Vanadium	2.04E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.79E-04	mg/kg-day	5.00E-03	mg/kg-day	5.59E-02			
				Zinc	1.60E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.19E-02	mg/kg-day	3.00E-01	mg/kg-day	7.31E-02			
				Exp. Route Total															
				Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-3	Inhalation (Fugitive Dust)	Acenaphthylene	5.90E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.65E-10	mg/m ³	--	mg/m ³
Benzo(a)anthracene	6.50E-09	mg/m ³	--					mg/m ³	--	(µg/m ³) ⁻¹	--	6.23E-09	mg/m ³	--	mg/m ³	--			
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-3	Inhalation (Fugitive Dust)	Benzo(a)pyrene	3.97E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.81E-09	mg/m ³	--	mg/m ³	--			
				Benzo(b)fluoranthene	1.20E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.15E-08	mg/m ³	--	mg/m ³	--			
Exp. Route Total																			
Exposure Point Total																			
Exposure Medium Total																			
Medium Total																			
Total of Receptor Risks Across All Media											Total of Receptor Hazards Across All Media								

TABLE B-7.3.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 3
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-3	Dermal Absorption	Acenaphthylene	4.90E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.28E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	5.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.51E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	3.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.54E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.65E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.60E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.45E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	2.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.07E-05	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	7.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.65E-05	mg/kg-day	2.00E-02	mg/kg-day	1.32E-03
				Carbazole	5.20E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.86E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	4.60E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.14E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	8.90E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.19E-07	mg/kg-day	1.00E-01	mg/kg-day	3.19E-06
				Indeno(1,2,3-cd)pyrene	1.50E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.98E-06	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	2.80E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.30E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	6.80E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan sulfate	1.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	1.10E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	6.50E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.26E-06	mg/kg-day	2.00E-05	mg/kg-day	1.63E-01
				Aroclor-1260	4.30E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.16E-04	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.09E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.05E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	1.80E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.93E-05	mg/kg-day	3.00E-04	mg/kg-day	6.44E-02
				Barium	5.13E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	1.49E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.33E-07	mg/kg-day	2.50E-05	mg/kg-day	2.13E-02
				Chromium (VI)	5.62E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.57E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.04E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.38E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.82E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Manganese	2.01E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--
				Silver	6.14E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--
Thallium	4.20E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	2.04E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.60E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total																
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-3	Incidental Ingestion	Acenaphthylene	4.90E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.26E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	5.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.90E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	3.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.22E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.28E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.60E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	2.30E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.94E-05	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	7.40E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.46E-05	mg/kg-day	2.00E-02	mg/kg-day	4.73E-03
				Carbazole	5.20E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.65E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	4.60E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.88E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	8.90E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.14E-06	mg/kg-day	1.00E-01	mg/kg-day	1.14E-05
				Indeno(1,2,3-cd)pyrene	1.50E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.92E-05	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	2.80E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.58E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	6.80E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.69E-07	mg/kg-day	5.00E-05	mg/kg-day	1.74E-02
				Endosulfan sulfate	1.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-07	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.45E-07	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	1.10E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-08	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	6.50E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.31E-06	mg/kg-day	2.00E-05	mg/kg-day	4.16E-01
				Aroclor-1260	4.30E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.50E-04	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.09E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.39E-01	mg/kg-day	1.00E+00	mg/kg-day	1.39E-01

TABLE 7.3.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 3
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-3	Dermal Absorption	Acenaphthylene	4.90E-01	mg/kg	3.15E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	5.40E+00	mg/kg	3.47E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.53E-06
				Benzo(a)pyrene	3.30E+00	mg/kg	2.12E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.55E-05
				Benzo(b)fluoranthene	1.00E+01	mg/kg	6.43E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.69E-06
				Benzo(g,h,i)perylene	1.60E+00	mg/kg	1.03E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	2.30E+00	mg/kg	1.48E-06	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	1.08E-07
				Bis(2-ethylhexyl)phthalate	7.40E+00	mg/kg	3.66E-06	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	5.12E-08
				Carbazole	5.20E-01	mg/kg	2.57E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	5.14E-09
				Dibenzo(a,h)anthracene	4.60E-01	mg/kg	2.96E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.16E-06
				Dimethylphthalate	8.90E-02	mg/kg	4.40E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	1.50E+00	mg/kg	9.64E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.04E-07
				Phenanthrene	2.80E+00	mg/kg	1.80E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	6.80E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	1.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	1.10E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	6.50E-01	mg/kg	4.50E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	9.00E-07
				Aroclor-1260	4.30E+01	mg/kg	2.98E-05	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.95E-05
				Aluminum	1.09E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.05E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	1.80E+01	mg/kg	2.67E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	4.01E-06
				Barium	5.13E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.49E+01	mg/kg	7.37E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	5.62E+01	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	1.57E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	1.04E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	4.38E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Lead	1.82E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	2.01E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Silver	6.14E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Thallium	4.20E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Vanadium	2.04E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	1.60E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Exp. Route Total											9.02E-05
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-3	Incidental	Acenaphthylene	4.90E-01	mg/kg	7.71E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Ingestion	Benzo(a)anthracene	5.40E+00	mg/kg	8.50E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.20E-06
				Benzo(a)pyrene	3.30E+00	mg/kg	5.19E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.79E-05
				Benzo(b)fluoranthene	1.00E+01	mg/kg	1.57E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.15E-05

TABLE 7.3.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 3
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-3	Incidental Ingestion	Benzo(g,h,i)perylene	1.60E+00	mg/kg	2.52E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	2.30E+00	mg/kg	3.62E-06	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.64E-07
				Bis(2-ethylhexyl)phthalate	7.40E+00	mg/kg	1.16E-05	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	1.63E-07
				Carbazole	5.20E-01	mg/kg	8.18E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.64E-08
				Dibenzo(a,h)anthracene	4.60E-01	mg/kg	7.24E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.29E-06
				Dimethylphthalate	8.90E-02	mg/kg	1.40E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	1.50E+00	mg/kg	2.36E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.72E-06
				Phenanthrene	2.80E+00	mg/kg	4.41E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	6.80E-02	mg/kg	1.07E-07	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.71E-06
				Endosulfan sulfate	1.60E-02	mg/kg	2.52E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.70E-02	mg/kg	4.25E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	1.10E-03	mg/kg	1.73E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	6.50E-01	mg/kg	1.02E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	2.05E-06
				Aroclor-1260	4.30E+01	mg/kg	6.77E-05	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.35E-04
				Aluminum	1.09E+04	mg/kg	1.72E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.05E+02	mg/kg	1.65E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	1.80E+01	mg/kg	2.83E-05	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	4.25E-05
				Barium	5.13E+03	mg/kg	8.07E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.49E+01	mg/kg	2.35E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	5.62E+01	mg/kg	8.85E-05	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	4.42E-05
				Cobalt	1.57E+01	mg/kg	2.47E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	1.04E+04	mg/kg	1.64E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	4.38E+04	mg/kg	6.89E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	1.82E+04	mg/kg	2.86E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	2.01E+03	mg/kg	3.16E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Silver	6.14E+01	mg/kg	9.66E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Thallium	4.20E+00	mg/kg	6.61E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Vanadium	2.04E+02	mg/kg	3.21E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	1.60E+04	mg/kg	2.52E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Exp. Route Total				2.89E-04							
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Inhalation of Dust	Acenaphthylene	5.90E-10	mg/m ³	2.42E-10	mg/m ³	--	(μg/m ³) ⁻¹	--
				Benzo(a)anthracene	6.50E-09	mg/m ³	2.67E-09	mg/m ³	1.10E-04	(μg/m ³) ⁻¹	2.94E-10
				Benzo(a)pyrene	3.97E-09	mg/m ³	1.63E-09	mg/m ³	1.10E-03	(μg/m ³) ⁻¹	1.80E-09
				Benzo(b)fluoranthene	1.20E-08	mg/m ³	4.95E-09	mg/m ³	1.10E-04	(μg/m ³) ⁻¹	5.44E-10
				Benzo(g,h,i)perylene	1.93E-09	mg/m ³	7.91E-10	mg/m ³	--	(μg/m ³) ⁻¹	--
				Benzo(k)fluoranthene	2.77E-09	mg/m ³	1.14E-09	mg/m ³	1.10E-04	(μg/m ³) ⁻¹	1.25E-10
				Bis(2-ethylhexyl)phthalate	8.90E-09	mg/m ³	3.66E-09	mg/m ³	2.40E-06	(μg/m ³) ⁻¹	8.78E-12
				Carbazole	6.26E-10	mg/m ³	2.57E-10	mg/m ³	--	(μg/m ³) ⁻¹	--
				Dibenzo(a,h)anthracene	5.54E-10	mg/m ³	2.27E-10	mg/m ³	1.20E-03	(μg/m ³) ⁻¹	2.73E-10
				Dimethylphthalate	1.07E-10	mg/m ³	4.40E-11	mg/m ³	--	(μg/m ³) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	1.81E-09	mg/m ³	7.42E-10	mg/m ³	1.10E-04	(μg/m ³) ⁻¹	8.16E-11
				Phenanthrene	3.37E-09	mg/m ³	1.38E-09	mg/m ³	--	(μg/m ³) ⁻¹	--

**TABLE 7.3.3 RME
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site - AOC 3
008-RICO-02LX**

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-3	Inhalation of Dust	Dieldrin	8.18E-11	mg/m ³	3.36E-11	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	1.55E-10
				Endosulfan sulfate	1.93E-11	mg/m ³	7.91E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	3.25E-11	mg/m ³	1.34E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	1.32E-12	mg/m ³	5.44E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1254	7.82E-10	mg/m ³	3.21E-10	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.83E-10
				Aroclor-1260	5.17E-08	mg/m ³	2.13E-08	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.21E-08
				Aluminum	1.31E-05	mg/m ³	5.39E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	1.26E-07	mg/m ³	5.19E-08	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	2.17E-08	mg/m ³	8.90E-09	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	3.83E-08
				Barium	6.17E-06	mg/m ³	2.54E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Cadmium	1.79E-08	mg/m ³	7.37E-09	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	1.33E-08
				Chromium (VI)	6.76E-08	mg/m ³	2.78E-08	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	2.33E-06
				Cobalt	1.89E-08	mg/m ³	7.76E-09	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	6.99E-08
				Copper	1.25E-05	mg/m ³	5.14E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Iron	5.27E-05	mg/m ³	2.17E-05	mg/m ³	--	(µg/m ³) ⁻¹	--
				Lead	2.19E-05	mg/m ³	9.00E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Manganese	2.42E-06	mg/m ³	9.94E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Silver	7.39E-08	mg/m ³	3.04E-08	mg/m ³	--	(µg/m ³) ⁻¹	--
				Thallium	5.05E-09	mg/m ³	2.08E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Vanadium	2.45E-07	mg/m ³	1.01E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Zinc	1.93E-05	mg/m ³	7.91E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
			Exp. Route Total								2.47E-06
			Exposure Point Total								3.82E-04
			Exposure Medium Total								3.82E-04
Medium Total										3.82E-04	
										Total of Receptor Risks Across All Media	3.82E-04

Footnotes:

- [a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.
- [b] Inputs were applied as follows:
 - Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
 - Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
 - Age 6 - 16 Adult IR/CR and BW; ED = 10; ADAF = 3
 - Age 16 - 30 Adult IR/CR and BW; ED = 14; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

MMOA Chemical	CS (mg/kg)	On-Site Surface Soil					
		Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	5.40E+00	7.30E-01	1.51E-05	7.30E-01	3.43E-05	1.10E-04	7.44E-10
Benzo(a)pyrene	3.30E+00	7.30E+00	9.24E-05	7.30E+00	2.09E-04	1.10E-03	4.55E-09
Benzo(b)fluoranthene	1.00E+01	7.30E-01	2.80E-05	7.30E-01	6.34E-05	1.10E-04	1.38E-09
Benzo(k)fluoranthene	2.30E+00	7.30E-02	6.44E-07	7.30E-02	1.46E-06	1.10E-04	3.17E-10
Dibenzo(a,h)anthracene	4.60E-01	7.30E+00	1.29E-05	7.30E+00	2.92E-05	1.20E-03	6.92E-10
Indeno(1,2,3-cd)pyrene	1.50E+00	7.30E-01	4.20E-06	7.30E-01	9.52E-06	1.10E-04	2.07E-10
Chromium (VI)	5.62E+01	2.00E+01	--	5.00E-01	2.44E-04	8.40E-02	5.91E-06

*Cancer Risk using ADAF

TABLE B-7.4.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 4
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-4	Inhalation (Fugitive Dust)	Benzo(a)anthracene	3.20E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.07E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	4.43E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.25E-10	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	2.41E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.31E-09	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	8.30E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.96E-11	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	2.45E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.35E-10	mg/m ³	--	mg/m ³	--
				Carbazole	8.54E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.19E-12	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	1.68E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.62E-09	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	2.65E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.54E-10	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	1.06E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.02E-09	mg/m ³	--	mg/m ³	--
				Phenanthrene	3.72E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.57E-10	mg/m ³	--	mg/m ³	--
				Endosulfan II	3.13E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.00E-12	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	1.32E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.27E-11	mg/m ³	--	mg/m ³	--
				Endrin ketone	1.68E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.62E-11	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	1.44E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.38E-12	mg/m ³	--	mg/m ³	--
				Aluminum	8.66E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.30E-06	mg/m ³	5.00E-03	mg/m ³	1.66E-03
				Antimony	3.39E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.25E-08	mg/m ³	--	mg/m ³	--
				Arsenic	8.09E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.76E-09	mg/m ³	1.50E-05	mg/m ³	5.17E-04
				Chromium (VI)	1.44E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.38E-08	mg/m ³	1.00E-04	mg/m ³	1.38E-04
				Cobalt	9.35E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.96E-09	mg/m ³	6.00E-06	mg/m ³	1.49E-03
				Copper	7.69E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.37E-07	mg/m ³	--	mg/m ³	--
Iron	2.44E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.34E-05	mg/m ³	--	mg/m ³	--				
Lead	1.18E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.13E-06	mg/m ³	--	mg/m ³	--				
Manganese	1.17E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.12E-06	mg/m ³	5.00E-05	mg/m ³	2.25E-02				
Thallium	9.27E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.89E-10	mg/m ³	--	mg/m ³	--				
			Exp. Route Total								--				2.63E-02	
			Exposure Point Total								--				3.25E-01	
			Exposure Medium Total								--				3.25E-01	
Medium Total										--				3.25E-01		
Total of Receptor Risks Across All Media										--	Total of Receptor Hazards Across All Media				3.25E-01	

TABLE B-7.4.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 4
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units			
					Value	Units	Value	Units	Value	Units	Value	Units	Value	Units		
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-4	Inhalation (Fugitive Dust)	Benzo(b)fluoranthene	2.41E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.31E-09	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	8.30E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.96E-11	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	2.45E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.35E-10	mg/m ³	--	mg/m ³	--
				Carbazole	8.54E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.19E-12	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	1.68E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.62E-09	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	2.65E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.54E-10	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	1.06E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.02E-09	mg/m ³	--	mg/m ³	--
				Phenanthrene	3.72E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.57E-10	mg/m ³	--	mg/m ³	--
				Endosulfan II	3.13E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.00E-12	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	1.32E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.27E-11	mg/m ³	--	mg/m ³	--
				Endrin ketone	1.68E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.62E-11	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	1.44E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.38E-12	mg/m ³	--	mg/m ³	--
				Aluminum	8.66E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.30E-06	mg/m ³	5.00E-03	mg/m ³	1.66E-03
				Antimony	3.39E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.25E-08	mg/m ³	--	mg/m ³	--
				Arsenic	8.09E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.76E-09	mg/m ³	1.50E-05	mg/m ³	5.17E-04
				Chromium (VI)	1.44E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.38E-08	mg/m ³	1.00E-04	mg/m ³	1.38E-04
				Cobalt	9.35E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.96E-09	mg/m ³	6.00E-06	mg/m ³	1.49E-03
				Copper	7.69E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.37E-07	mg/m ³	--	mg/m ³	--
				Iron	2.44E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.34E-05	mg/m ³	--	mg/m ³	--
				Lead	1.18E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.13E-06	mg/m ³	--	mg/m ³	--
				Manganese	1.17E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.12E-06	mg/m ³	5.00E-05	mg/m ³	2.25E-02
Thallium	9.27E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.89E-10	mg/m ³	--	mg/m ³	--				
			Exp. Route Total			--		--		--				2.63E-02		
			Exposure Point Total			--		--		--					2.81E+00	
			Exposure Medium Total			--		--		--					2.81E+00	
Medium Total					--		--		--						2.81E+00	
										Total of Receptor Risks Across All Media		--	Total of Receptor Hazards Across All Media		2.81E+00	

TABLE B-7.4.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 4
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-4	Dermal Absorption	Benzo(a)anthracene	2.66E-01	mg/kg	1.71E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.25E-07
				Benzo(a)pyrene	3.68E-01	mg/kg	2.37E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.73E-06
				Benzo(b)fluoranthene	2.00E+00	mg/kg	1.29E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	9.39E-07
				Benzo(g,h,i)perylene	6.90E-02	mg/kg	4.44E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Bis(2-ethylhexyl)phthalate	2.04E-01	mg/kg	1.01E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	1.41E-09
				Carbazole	7.10E-03	mg/kg	3.51E-09	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	7.02E-11
				Dibenzo(a,h)anthracene	1.40E+00	mg/kg	9.00E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	6.57E-06
				Di-n-octylphthalate	2.20E-01	mg/kg	1.09E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	8.80E-01	mg/kg	5.66E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.13E-07
				Phenanthrene	3.09E-01	mg/kg	1.99E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan II	2.60E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	1.10E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	1.40E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	1.20E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aluminum	7.20E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	2.82E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	6.73E+00	mg/kg	9.98E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.50E-06
				Chromium (VI)	1.20E+01	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	7.77E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	6.39E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	2.03E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Lead	9.82E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	9.75E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Thallium	7.70E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Exp. Route Total											1.13E-05
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-4	Incidental Ingestion	Benzo(a)anthracene	2.66E-01	mg/kg	4.19E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.06E-07
				Benzo(a)pyrene	3.68E-01	mg/kg	5.79E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.23E-06
				Benzo(b)fluoranthene	2.00E+00	mg/kg	3.15E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.30E-06
				Benzo(g,h,i)perylene	6.90E-02	mg/kg	1.09E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Bis(2-ethylhexyl)phthalate	2.04E-01	mg/kg	3.21E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	4.50E-09
				Carbazole	7.10E-03	mg/kg	1.12E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	2.24E-10
				Dibenzo(a,h)anthracene	1.40E+00	mg/kg	2.20E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.61E-05
				Di-n-octylphthalate	2.20E-01	mg/kg	3.46E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	8.80E-01	mg/kg	1.39E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.01E-06
				Phenanthrene	3.09E-01	mg/kg	4.86E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan II	2.60E-03	mg/kg	4.09E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	1.10E-02	mg/kg	1.73E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--

TABLE B-7.4.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 4
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk				
							Value	Units	Value	Units					
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-4	Incidental Ingestion	Endrin ketone	1.40E-02	mg/kg	2.20E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
				gamma-Chlordane	1.20E-03	mg/kg	1.89E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
				Aluminum	7.20E+03	mg/kg	1.13E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
				Antimony	2.82E+01	mg/kg	4.43E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
				Arsenic	6.73E+00	mg/kg	1.06E-05	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.59E-05				
				Chromium (VI)	1.20E+01	mg/kg	1.88E-05	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	9.41E-06				
				Cobalt	7.77E+00	mg/kg	1.22E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
				Copper	6.39E+02	mg/kg	1.01E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
				Iron	2.03E+04	mg/kg	3.20E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
				Lead	9.82E+02	mg/kg	1.55E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
				Manganese	9.75E+02	mg/kg	1.53E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
				Thallium	7.70E-01	mg/kg	1.21E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
				Exp. Route Total											4.92E-05
				Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-4	Inhalation of Dust	Benzo(a)anthracene	3.20E-10	mg/m ³	1.32E-10	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.45E-11
Benzo(a)pyrene	4.43E-10	mg/m ³	1.82E-10					mg/m ³	1.10E-03	(µg/m ³) ⁻¹	2.00E-10				
Benzo(b)fluoranthene	2.41E-09	mg/m ³	9.89E-10					mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.09E-10				
Benzo(g,h,i)perylene	8.30E-11	mg/m ³	3.41E-11					mg/m ³	--	(µg/m ³) ⁻¹	--				
Bis(2-ethylhexyl)phthalate	2.45E-10	mg/m ³	1.01E-10					mg/m ³	2.40E-06	(µg/m ³) ⁻¹	2.42E-13				
Carbazole	8.54E-12	mg/m ³	3.51E-12					mg/m ³	--	(µg/m ³) ⁻¹	--				
Dibenzo(a,h)anthracene	1.68E-09	mg/m ³	6.92E-10					mg/m ³	1.20E-03	(µg/m ³) ⁻¹	8.31E-10				
Di-n-octylphthalate	2.65E-10	mg/m ³	1.09E-10					mg/m ³	--	(µg/m ³) ⁻¹	--				
Indeno(1,2,3-cd)pyrene	1.06E-09	mg/m ³	4.35E-10					mg/m ³	1.10E-04	(µg/m ³) ⁻¹	4.79E-11				
Phenanthrene	3.72E-10	mg/m ³	1.53E-10					mg/m ³	--	(µg/m ³) ⁻¹	--				
Endosulfan II	3.13E-12	mg/m ³	1.29E-12					mg/m ³	--	(µg/m ³) ⁻¹	--				
Endrin aldehyde	1.32E-11	mg/m ³	5.44E-12					mg/m ³	--	(µg/m ³) ⁻¹	--				
Endrin ketone	1.68E-11	mg/m ³	6.92E-12					mg/m ³	--	(µg/m ³) ⁻¹	--				
gamma-Chlordane	1.44E-12	mg/m ³	5.93E-13					mg/m ³	--	(µg/m ³) ⁻¹	--				
Aluminum	8.66E-06	mg/m ³	3.56E-06					mg/m ³	--	(µg/m ³) ⁻¹	--				
Antimony	3.39E-08	mg/m ³	1.39E-08					mg/m ³	--	(µg/m ³) ⁻¹	--				
Arsenic	8.09E-09	mg/m ³	3.33E-09					mg/m ³	4.30E-03	(µg/m ³) ⁻¹	1.43E-08				
Chromium (VI)	1.44E-08	mg/m ³	5.91E-09					mg/m ³	8.40E-02	(µg/m ³) ⁻¹	4.97E-07				
Cobalt	9.35E-09	mg/m ³	3.84E-09					mg/m ³	9.00E-03	(µg/m ³) ⁻¹	3.46E-08				
Copper	7.69E-07	mg/m ³	3.16E-07					mg/m ³	--	(µg/m ³) ⁻¹	--				
Iron	2.44E-05	mg/m ³	1.00E-05					mg/m ³	--	(µg/m ³) ⁻¹	--				
Lead	1.18E-06	mg/m ³	4.86E-07					mg/m ³	--	(µg/m ³) ⁻¹	--				
Manganese	1.17E-06	mg/m ³	4.82E-07					mg/m ³	--	(µg/m ³) ⁻¹	--				
Thallium	9.27E-10	mg/m ³	3.81E-10					mg/m ³	--	(µg/m ³) ⁻¹	--				
Exp. Route Total											5.47E-07				
		Exposure Point Total									6.10E-05				
		Exposure Medium Total									6.10E-05				
Medium Total											6.10E-05				
										Total of Receptor Risks Across All Media	6.10E-05				

TABLE B-7.4.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 4
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

Footnotes:

[a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.

[b] Inputs were applied as follows:

- Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
- Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
- Age 6 - 16 Adult IR/CR and BW; ED = 10; ADAF = 3
- Age 16 - 30 Adult IR/CR and BW; ED = 14; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

On-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	2.66E-01	7.30E-01	7.45E-07	7.30E-01	1.69E-06	1.10E-04	3.67E-11
Benzo(a)pyrene	3.68E-01	7.30E+00	1.03E-05	7.30E+00	2.33E-05	1.10E-03	5.07E-10
Benzo(b)fluoranthene	2.00E+00	7.30E-01	5.60E-06	7.30E-01	1.27E-05	1.10E-04	2.76E-10
Dibenzo(a,h)anthracene	1.40E+00	7.30E+00	3.92E-05	7.30E+00	8.88E-05	1.20E-03	2.10E-09
Indeno(1,2,3-cd)pyrene	8.80E-01	7.30E-01	2.46E-06	7.30E-01	5.58E-06	1.10E-04	1.21E-10
Chromium (VI)	1.20E+01	2.00E+01	--	5.00E-01	5.20E-05	8.40E-02	1.26E-06

*Cancer Risk using ADAF

TABLE B-7.5.1 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 5
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient			
							Value	Units	Value	Units		Value	Units	Value	Units				
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-5	Inhalation (Fugitive Dust)	Aluminum	1.28E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.22E-05	mg/m ³	5.00E-03	mg/m ³	2.45E-03			
				Antimony	6.06E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.82E-08	mg/m ³	--	mg/m ³	--			
				Arsenic	1.55E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.49E-08	mg/m ³	1.50E-05	mg/m ³	9.92E-04			
				Chromium (VI)	2.18E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.09E-08	mg/m ³	1.00E-04	mg/m ³	2.09E-04			
				Cobalt	1.65E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.58E-08	mg/m ³	6.00E-06	mg/m ³	2.63E-03			
				Copper	5.64E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.41E-07	mg/m ³	--	mg/m ³	--			
				Iron	4.60E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.41E-05	mg/m ³	--	mg/m ³	--			
				Lead	3.95E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.78E-06	mg/m ³	--	mg/m ³	--			
				Manganese	7.46E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.15E-07	mg/m ³	5.00E-05	mg/m ³	1.43E-02			
				Thallium	2.41E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.31E-09	mg/m ³	--	mg/m ³	--			
							Exp. Route Total												2.06E-02
						Exposure Point Total													4.71E-01
				Exposure Medium Total														4.71E-01	
Medium Total															4.71E-01				
																Total of Receptor Risks Across All Media			
																Total of Receptor Hazards Across All Media			
																4.71E-01			

TABLE B-7.5.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 5
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-5	Dermal Absorption	Acenaphthylene	7.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.35E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	5.10E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.37E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	5.00E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.33E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	7.00E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.26E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.10E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.12E-07	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	4.90E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.75E-06	mg/kg-day	2.00E-02	mg/kg-day	8.77E-05
				Indeno(1,2,3-cd)pyrene	1.60E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.45E-07	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	5.20E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.42E-06	mg/kg-day	--	mg/kg-day	--
				Aroclor-1260	4.00E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.00E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.06E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	5.04E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	1.29E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.39E-05	mg/kg-day	3.00E-04	mg/kg-day	4.62E-02
				Chromium (VI)	1.81E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.37E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	4.69E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	3.82E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	3.28E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Manganese	6.20E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--
				Thallium	2.00E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Exp. Route Total												
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-5	Incidental Ingestion	Acenaphthylene	7.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.21E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	5.10E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.52E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	5.00E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.39E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	7.00E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.95E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.10E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	4.90E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.26E-06	mg/kg-day	2.00E-02	mg/kg-day	3.13E-04
				Indeno(1,2,3-cd)pyrene	1.60E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-06	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	5.20E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.65E-06	mg/kg-day	--	mg/kg-day	--
				Aroclor-1260	4.00E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.11E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.06E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.36E-01	mg/kg-day	1.00E+00	mg/kg-day	1.36E-01
				Antimony	5.04E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.44E-04	mg/kg-day	4.00E-04	mg/kg-day	1.61E+00
				Arsenic	1.29E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.65E-04	mg/kg-day	3.00E-04	mg/kg-day	5.50E-01
				Chromium (VI)	1.81E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.31E-04	mg/kg-day	3.00E-03	mg/kg-day	7.71E-02
				Cobalt	1.37E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.75E-04	mg/kg-day	3.00E-04	mg/kg-day	5.84E-01
				Copper	4.69E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.00E-03	mg/kg-day	4.00E-02	mg/kg-day	1.50E-01
				Iron	3.82E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.88E-01	mg/kg-day	7.00E-01	mg/kg-day	6.98E-01
				Lead	3.28E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.19E-02	mg/kg-day	--	mg/kg-day	--
				Manganese	6.20E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.93E-03	mg/kg-day	2.40E-02	mg/kg-day	3.30E-01
				Thallium	2.00E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.56E-05	mg/kg-day	--	mg/kg-day	--
				Exp. Route Total												
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-5	Inhalation (Fugitive Dust)	Acenaphthylene	8.66E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.31E-11	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	6.14E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.88E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	6.02E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.77E-10	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	8.42E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.08E-10	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	1.32E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.27E-10	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	5.90E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.65E-10	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	1.93E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.85E-10	mg/m ³	--	mg/m ³	--
				Phenanthrene	6.26E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.00E-10	mg/m ³	--	mg/m ³	--
				Aroclor-1260	4.81E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.62E-10	mg/m ³	--	mg/m ³	--

TABLE B-7.5.2 RME
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 5
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient			
							Value	Units	Value	Units		Value	Units	Value	Units				
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air AOC-5	Inhalation (Fugitive Dust)	Aluminum	1.28E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.22E-05	mg/m ³	5.00E-03	mg/m ³	2.45E-03			
				Antimony	6.06E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.82E-08	mg/m ³	--	mg/m ³	--			
				Arsenic	1.55E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.49E-08	mg/m ³	1.50E-05	mg/m ³	9.92E-04			
				Chromium (VI)	2.18E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.09E-08	mg/m ³	1.00E-04	mg/m ³	2.09E-04			
				Cobalt	1.65E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.58E-08	mg/m ³	6.00E-06	mg/m ³	2.63E-03			
				Copper	5.64E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.41E-07	mg/m ³	--	mg/m ³	--			
				Iron	4.60E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.41E-05	mg/m ³	--	mg/m ³	--			
				Lead	3.95E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.78E-06	mg/m ³	--	mg/m ³	--			
				Manganese	7.46E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.15E-07	mg/m ³	5.00E-05	mg/m ³	1.43E-02			
				Thallium	2.41E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.31E-09	mg/m ³	--	mg/m ³	--			
							Exp. Route Total												2.06E-02
						Exposure Point Total													4.20E+00
				Exposure Medium Total														4.20E+00	
Medium Total															4.20E+00				
																Total of Receptor Risks Across All Media			
																Total of Receptor Hazards Across All Media			
																4.20E+00			

TABLE B-7.5.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 5
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-5	Dermal Absorption	Acenaphthylene	7.20E-02	mg/kg	4.63E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	5.10E-01	mg/kg	3.28E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.39E-07
				Benzo(a)pyrene	5.00E-01	mg/kg	3.21E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.35E-06
				Benzo(b)fluoranthene	7.00E-01	mg/kg	4.50E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.29E-07
				Benzo(g,h,i)perylene	1.10E-01	mg/kg	7.07E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Bis(2-ethylhexyl)phthalate	4.90E-01	mg/kg	2.42E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	3.39E-09
				Indeno(1,2,3-cd)pyrene	1.60E-01	mg/kg	1.03E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.51E-08
				Phenanthrene	5.20E-01	mg/kg	3.34E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1260	4.00E-01	mg/kg	2.77E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.54E-07
				Aluminum	1.06E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	5.04E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	1.29E+01	mg/kg	1.91E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.87E-06
				Chromium (VI)	1.81E+01	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	1.37E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	4.69E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	3.82E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	3.28E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	6.20E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Thallium	2.00E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Exp. Route Total							
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-5	Incidental Ingestion	Acenaphthylene	7.20E-02	mg/kg	1.13E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	5.10E-01	mg/kg	8.03E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.86E-07
			Benzo(a)pyrene	5.00E-01	mg/kg	7.87E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.75E-06	
			Benzo(b)fluoranthene	7.00E-01	mg/kg	1.10E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.04E-07	
			Benzo(g,h,i)perylene	1.10E-01	mg/kg	1.73E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
			Bis(2-ethylhexyl)phthalate	4.90E-01	mg/kg	7.71E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	1.08E-08	
			Indeno(1,2,3-cd)pyrene	1.60E-01	mg/kg	2.52E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.84E-07	
			Phenanthrene	5.20E-01	mg/kg	8.18E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
			Aroclor-1260	4.00E-01	mg/kg	6.30E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.26E-06	
			Aluminum	1.06E+04	mg/kg	1.67E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
			Antimony	5.04E+01	mg/kg	7.93E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
			Arsenic	1.29E+01	mg/kg	2.03E-05	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	3.05E-05	
			Chromium (VI)	1.81E+01	mg/kg	2.85E-05	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	1.42E-05	
			Cobalt	1.37E+01	mg/kg	2.16E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
			Copper	4.69E+02	mg/kg	7.38E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
			Iron	3.82E+04	mg/kg	6.01E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
Lead	3.28E+03	mg/kg	5.16E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

TABLE B-7.5.3 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 5
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
					Value	Units	Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-5	Incidental	Manganese	6.20E+02	mg/kg	9.76E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Ingestion	Thallium	2.00E+00	mg/kg	3.15E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								5.33E-05
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) AOC-5	Inhalation of Dust	Acenaphthylene	8.66E-11	mg/m ³	3.56E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(a)anthracene	6.14E-10	mg/m ³	2.52E-10	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.77E-11
				Benzo(a)pyrene	6.02E-10	mg/m ³	2.47E-10	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	2.72E-10
				Benzo(b)fluoranthene	8.42E-10	mg/m ³	3.46E-10	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	3.81E-11
				Benzo(g,h,i)perylene	1.32E-10	mg/m ³	5.44E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Bis(2-ethylhexyl)phthalate	5.90E-10	mg/m ³	2.42E-10	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	5.82E-13
				Indeno(1,2,3-cd)pyrene	1.93E-10	mg/m ³	7.91E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	8.70E-12
				Phenanthrene	6.26E-10	mg/m ³	2.57E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1260	4.81E-10	mg/m ³	1.98E-10	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.13E-10
				Aluminum	1.28E-05	mg/m ³	5.24E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	6.06E-08	mg/m ³	2.49E-08	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	1.55E-08	mg/m ³	6.38E-09	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	2.74E-08
				Chromium (VI)	2.18E-08	mg/m ³	8.95E-09	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	7.52E-07
				Cobalt	1.65E-08	mg/m ³	6.78E-09	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	6.10E-08
				Copper	5.64E-07	mg/m ³	2.32E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Iron	4.60E-05	mg/m ³	1.89E-05	mg/m ³	--	(µg/m ³) ⁻¹	--
				Lead	3.95E-06	mg/m ³	1.62E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Manganese	7.46E-07	mg/m ³	3.07E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
Thallium	2.41E-09	mg/m ³	9.89E-10	mg/m ³	--	(µg/m ³) ⁻¹	--				
			Exp. Route Total								8.41E-07
		Exposure Point Total									6.05E-05
		Exposure Medium Total									6.05E-05
Medium Total										6.05E-05	
Total of Receptor Risks Across All Media											6.05E-05

Footnotes:

[a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.

[b] Inputs were applied as follows:

- Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
- Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
- Age 6 - 16 Adult IR/CR and BW; ED = 10; ADAF = 3
- Age 16 - 30 Adult IR/CR and BW; ED = 14; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

MMOA Chemical	CS (mg/kg)	On-Site Surface Soil					
		Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	5.10E-01	7.30E-01	1.43E-06	7.30E-01	3.24E-06	1.10E-04	7.03E-11
Benzo(a)pyrene	5.00E-01	7.30E+00	1.40E-05	7.30E+00	3.17E-05	1.10E-03	6.89E-10
Benzo(b)fluoranthene	7.00E-01	7.30E-01	1.96E-06	7.30E-01	4.44E-06	1.10E-04	9.65E-11
Indeno(1,2,3-cd)pyrene	1.60E-01	7.30E+00	4.48E-06	7.30E+00	1.01E-05	1.20E-03	2.41E-10
Chromium (VI)	1.81E+01	2.00E+01	--	5.00E-01	7.86E-05	8.40E-02	1.90E-06

*Cancer Risk using ADAF



TABLE B-2.1.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-1 Subsurface soil (0 - 10ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Industrial Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N)
On Site Soil (0-10 ft)	7440-09-7	Potassium	2.21E+02 (J)	1.31E+03 (J)	(mg/kg)	TP-03	37 of 38	--	1.31E+03	6.89E+02	nsf	Not Available	N
	7782-49-2	Selenium	5.90E-01 (BJ)	1.64E+01	(mg/kg)	DP-025	14 of 38	3.5U-4.8U	1.64E+01	5.20E+00 (U)	5.10E+02 n	6,800	N
	7440-22-4	Silver	3.00E-01 (BJ)	3.58E+01 (J)	(mg/kg)	SS09 (W)	30 of 38	--	3.58E+01	3.70E-01 (J)	5.10E+02 n	6,800	N
	7440-23-5	Sodium	6.08E+01 (J)	1.89E+03	(mg/kg)	SS-009	18 of 38	504U-803U	1.89E+03	1.96E+02 (J)	nsf	Not Available	N
	7440-28-0	Thallium	7.20E-01 (J)	4.60E+00	(mg/kg)	SS06 (W)	8 of 38	2.5U-3.4U	4.60E+00	3.70E+00 (U)	nsf	Not Available	Y
	No CAS	Vanadium (c)	8.90E+00	8.41E+02	(mg/kg)	SS-007	38 of 38	--	8.41E+02	1.49E+01	5.20E+01 n	Not Available	Y
	7440-66-6	Zinc	5.94E+01	5.08E+03	(mg/kg)	SS09 (W)	38 of 38	--	5.08E+03	2.92E+02	3.10E+04 nm	10,000	N

Footnotes:

- (1) Minimum / Maximum detected concentration
 - (2) Maximum detected concentration used as screening value
 - (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
 - (4) US EPA Region 9 Master RSL Table December 2009 - Industrial Soils
 - (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Industrial site use.
 - (6) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Low detection freq: analyte detected in less than 5% of samples in data set of at least 20 samples.
 - (a) Cr(VI) value used for screening of chromium data.
 - (b) Methylmercury value used for screening of mercury data.
 - (c) Vanadium and Compounds screening level used for Vanadium.
 - (d) Xylene, Mixture screening value used.
- Note:** Industrial Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- | | |
|-----|---|
| n | non-cancer |
| c | cancer |
| * | where n SL < 100x c SL |
| ** | where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ = 0.1). |
| L | based on EPA's Adult Lead Model (ALM) |
| m | Concentration may exceed ceiling limit |
| s | Concentration may exceed Csat |
| nsf | No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009) |

Definitions:

- | | |
|--------|---|
| RSL | Regional Screening Level |
| CAS | Chemical Abstracts |
| ft bgs | Feet below ground |
| D | Dilution |
| J | Estimated Value |
| N | Presumptively Not Available |
| B | Analyte Found |
| mg/kg | milligrams per kilogram |
| ARAR | Applicable or Inapplicable Requirements |

TABLE B-2.1.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Rationale for Selection or Deletion (6)
Max < RSL No Screening Criteria
Max < RSL Max < RSL
Max < RSL Max < RSL Max < RSL No Screening Criteria Max < RSL Max < RSL Max > RSL Max < RSL No Screening Criteria No Screening Criteria Max < RSL Max < RSL Max < RSL Max < RSL Max < RSL Max < RSL No Screening Criteria Low Detection Freq. No Screening Criteria Low Detection Freq. Low Detection Freq. Max > RSL Max > RSL
Max < RSL Max > RSL Max > RSL Max < RSL Max < RSL Max < RSL Essential Nutrient Max > RSL Max > RSL Max > RSL Max < RSL Max > RSL Max > RSL Essential Nutrient Max > RSL Max < RSL Max < RSL

TABLE B-2.1.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Rationale for Selection or Deletion (6)
Essential Nutrient Max < RSL Max < RSL
Essential Nutrient No Screening Criteria Max > RSL Max < RSL

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TABLE B-2.2.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: AOC-2 Subsurface soil (0 - 10ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Industrial Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N) (6)	Rationale for Selection or Deletion (6)
On Site Soil (0-10 ft)	5566-34-7	gamma-Chlordane	1.90E-03	3.20E-02 (NJ)	(mg/kg)	SS-017	3 of 38	0.0018 U-0.0073 U	3.20E-02	NA	nsI	Not Available	Y	No Screening Criteria
	12674-11-2	Aroclor-1016	8.80E-01 (J)	8.80E-01 (J)	(mg/kg)	SS-016	1 of 42	0.033 U-1.9 U	8.80E-01	NA	3.7 n c**	25	N	Max < RSL
	12672-29-6	Aroclor-1248	1.40E-02 (J)	9.70E-02 (J)	(mg/kg)	SWSD-04	2 of 42	0.033 U-1.9 U	9.70E-02	NA	7.40E-01 c	25	N	Low Detection Freq.
	11097-69-1	Aroclor-1254	2.00E-02 (J)	2.30E+00 (D)	(mg/kg)	SS-02(W)	5 of 42	0.033 U-1.9 U	2.30E+00	NA	7.40E-01 c*	25	Y	Max > RSL
	11096-82-5	Aroclor-1260	2.10E-02 (J)	1.30E+01 (D)	(mg/kg)	SS-13(W)	20 of 42	0.033 U-1.9 U	1.30E+01	NA	7.40E-01 c	25	Y	Max > RSL
METALS														
On Site Soil (0-10 ft)	7429-90-5	Aluminum	7.50E+01 (J)	1.31E+04 (J)	(mg/kg)	SWSD-04	42 of 42	--	1.31E+04	8.50E+03	9.90E+04 nm	Not Available	N	Max < RSL
	7440-36-0	Antimony	4.30E-01 (J)	1.08E+01 (B)	(mg/kg)	SS-02(W)	31 of 42	0.0081 U-8 U	1.08E+01	8.80E+00 (U)	4.10E+01 n	Not Available	N	Max < RSL
	7440-38-2	Arsenic	3.30E+00	1.41E+01	(mg/kg)	SS-033	42 of 42	0-0.0081 U	1.41E+01	7.40E+00	1.60E+00 c	16	Y	Max > RSL
	7440-39-3	Barium	4.01E+01 (J)	1.18E+03	(mg/kg)	SS-02(W)	42 of 42	--	1.18E+03	1.48E+02	1.90E+04 nm	10,000	N	Max < RSL
	7440-41-7	Beryllium	2.30E-01 (J)	6.90E-01 (J)	(mg/kg)	SWSD-04	35 of 42	0.53 U-0.8 U	6.90E-01	5.10E-01 (J)	2.00E+02 n	2,700	N	Max < RSL
	7440-43-9	Cadmium	1.00E-01 (J)	4.30E+00	(mg/kg)	SS-018	22 of 42	0.53 U-0.68 U	4.30E+00	1.20E+00	8.00E+01 n	60	N	Max < RSL
	7440-70-2	Calcium	4.62E+02 (J)	7.80E+04	(mg/kg)	SS-016	41 of 41	--	7.80E+04	3.27E+04	nsI	Not Available	N	Essential Nutrient
	7440-47-3	Chromium (a)	9.30E+00 (J)	6.22E+02 (J)	(mg/kg)	SS-02(W)	41 of 41	--	6.22E+02	2.22E+01	5.60E+00 c	800	Y	Max > RSL
	7440-48-4	Cobalt	5.70E+00	1.60E+01	(mg/kg)	SS-02(W)	42 of 42	--	1.60E+01	7.00E+00	3.00E+01 n	Not Available	N	Max < RSL
	7440-50-8	Copper	5.30E+00	4.71E+02 (J)	(mg/kg)	SS-02(W)	26 of 26	5.6 U-8 U	4.71E+02	2.58E+01	4.10E+03 n	10,000	N	Max < RSL
	57-12-5	Cyanide	1.00E-01 (J)	6.90E-01 (J)	(mg/kg)	SWSD-04	2 of 34	0.009 U-3.5 U	6.90E-01	3.70E+00	2.00E+03 n	10,000	N	Max < RSL
	7439-89-6	Iron	4.50E+03	6.15E+04 (J)	(mg/kg)	SWSD-04	42 of 42	--	6.15E+04	1.79E+04	7.20E+04 nm	Not Available	N	Max < RSL
	7439-92-1	Lead	2.50E+00	2.36E+03	(mg/kg)	SS-02(W)	27 of 27	--	2.36E+03	6.67E+02 (J)	8.00E+02 nL	3,900	Y	Max > RSL
	7439-95-4	Magnesium	2.13E+03	1.13E+04	(mg/kg)	SWSD-04	42 of 42	--	1.13E+04	3.12E+03	nsI	Not Available	N	Essential Nutrient
	7439-96-5	Manganese	3.24E+02 (J)	1.49E+03 (J)	(mg/kg)	SS-031	42 of 42	--	1.49E+03	6.04E+02 (J)	2.30E+03 n	10,000	N	Max < RSL
	7439-97-6	Mercury (b)	3.30E-02 (J)	1.90E+00 (J)	(mg/kg)	SS-018	18 of 27	0.1 U-0.12 U	1.90E+00	2.40E-01	1.00E+01 n	5.7	N	Max < RSL
	7440-02-0	Nickel	1.33E+01 (J)	9.14E+01 (J)	(mg/kg)	SWSD-04	42 of 42	--	9.14E+01	1.69E+01	2.00E+03 n	10,000	N	Max < RSL
	7440-09-7	Potassium	2.35E+02 (J)	1.26E+03	(mg/kg)	SWSD-04	40 of 42	--	1.26E+03	6.89E+02	nsI	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	3.50E-01 (J)	3.00E+00 (J)	(mg/kg)	DP-019	23 of 42	3.5 U-4.8 U	3.00E+00	5.20E+00 (U)	5.10E+02 n	6,800	N	Max < RSL
	7440-22-4	Silver	1.10E-01 (J)	2.10E+00	(mg/kg)	SS-016	35 of 42	--	2.10E+00	3.70E-01 (J)	5.10E+02 n	6,800	N	Max < RSL
	7440-23-5	Sodium	8.22E+01 (B)	4.62E+02 (BJ)	(mg/kg)	SS-01(W)	16 of 42	504 U-803 U	4.62E+02	1.96E+02 (J)	nsI	Not Available	N	Essential Nutrient
	7440-28-0	Thallium	5.40E-01 (J)	2.20E+00 (J)	(mg/kg)	SS-016	21 of 42	2.5 U-3.4 U	2.20E+00	3.70E+00 (U)	nsI	Not Available	Y	No Screening Criteria
	No CAS	Vanadium	8.60E+00	2.21E+02	(mg/kg)	SS-02(W)	42 of 42	--	2.21E+02	1.49E+01	5.20E+02 n	Not Available	N	Max < RSL
	7440-66-6	Zinc	3.80E+01	3.04E+03	(mg/kg)	SS-02(W)	42 of 42	--	3.04E+03	2.92E+02	3.10E+04 nm	10,000	N	Max < RSL

Footnotes:

- (1) Minimum / Maximum detected concentration
- (2) Maximum detected concentration used as screening value
- (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
- (4) US EPA Region 9 Master RSL Table December 2009 - Industrial Soils
- (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Industrial site use.
- (6) Rationales for Selection or Deletion Definitions:
 Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 Low detection freq: analyte detected in less than 5% of samples in data set of at least 20 samples.
 (a) Cr(VI) value used for screening of chromium data.
 (b) Methylmercury value used for screening of mercury data.
 (c) Vanadium and Compounds screening level used for Vanadium.
- Note: Industrial Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ= 0.1).
- L based on EPA's Adult Lead Model (ALM)
- m Concentration may exceed ceiling limit
- s Concentration may exceed Csat
- nsI No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank
- mg/kg milligrams per kilogram
- ARAR Applicable or Relevant and Appropriate Requirements

TABLE B-2.3.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: AOC-3 Subsurface soil (0 - 10 ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Industrial Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N) (6)	Rationale for Selection or Deletion (6)
On Site Soil (0-10 ft)	7429-90-5	Aluminum	7.46E+03	1.09E+04	(mg/kg)	SS-015	9 of 9	--	1.09E+04	8.50E+03	9.90E+04 nm	Not Available	N	Max < RSL
	7440-36-0	Antimony	1.60E+00 (J)	1.05E+02	(mg/kg)	SS-09(W)	7 of 9	0.0081 U-8 U	1.05E+02	8.80E+00 (U)	4.10E+01 n	Not Available	Y	Max > RSL
	7440-38-2	Arsenic	3.60E+00 (J)	1.80E+01 (J)	(mg/kg)	SS-09(W)	9 of 9	0-0.0081 U	1.80E+01	7.40E+00	1.60E+00 c	16	Y	Max > RSL
	7440-39-3	Barium	8.08E+01 (J)	5.13E+03	(mg/kg)	SS-09(W)	9 of 9	--	5.13E+03	1.48E+02	1.90E+04 nm	10,000	N	Max < RSL
On Site Soil (0-10 ft)	7440-41-7	Beryllium	3.50E-01 (B)	6.10E-01 (J)	(mg/kg)	SS-013	6 of 9	0.53 U-0.8U	6.10E-01	5.10E-01 (J)	2.00E+02 n	2,700	N	Max < RSL
	7440-43-9	Cadmium	2.80E-01 (J)	1.49E+01	(mg/kg)	SS-015	9 of 9	0.53 U-0.68U	1.49E+01	1.20E+00	8.00E+01 n	60	N	Max < RSL
	7440-70-2	Calcium	8.44E+02 (J)	1.60E+04	(mg/kg)	SS-09(W)	9 of 9	--	1.60E+04	3.27E+04	nsf	Not Available	N	Essential Nutrient
	7440-47-3	Chromium (a)	1.19E+01 (J)	5.62E+01	(mg/kg)	SS-014	9 of 9	--	5.62E+01	2.22E+01	5.60E+00 c	800	Y	Max > RSL
	7440-48-4	Cobalt	7.40E+00 (J)	1.57E+01	(mg/kg)	SS-015	9 of 9	--	1.57E+01	7.00E+00	3.00E+01 n	Not Available	N	Max < RSL
	7440-50-8	Copper	1.49E+01	1.04E+04 (J)	(mg/kg)	SS-09(W)	9 of 9	5.6U-8U	1.04E+04	2.58E+01	4.10E+03 n	10,000	Y	Max > RSL
	57-12-5	Cyanide	7.80E-01 (J)	9.80E-01 (J)	(mg/kg)	SS-015	2 of 5	0.009U-3.5U	9.80E-01	3.70E+00	2.00E+03 n	10,000	N	Max < RSL
	7439-89-6	Iron	2.21E+04 (J)	4.38E+04	(mg/kg)	SS-015	7 of 7	--	4.38E+04	1.79E+04	7.20E+04 nm	Not Available	N	Max < RSL
	7439-92-1	Lead	9.30E+00	1.82E+04	(mg/kg)	SS-09(W)	9 of 9	--	1.82E+04	6.67E+02 (J)	8.00E+02 nL	3,900	Y	Max > RSL
	7439-95-4	Magnesium	2.39E+03	4.03E+03	(mg/kg)	SS-19(W)	6 of 6	--	4.03E+03	3.12E+03	nsf	Not Available	N	Essential Nutrient
	7439-96-5	Manganese	5.43E+02 (J)	2.01E+03 (J)	(mg/kg)	DP-002	9 of 9	--	2.01E+03	6.04E+02 (J)	2.30E+03 n	10,000	N	Max < RSL
	7439-97-6	Mercury (b)	1.90E-01 (J)	5.20E-01	(mg/kg)	SS-013	6 of 9	0.1U-0.12U	5.20E-01	2.40E-01	1.00E+01 n	5.7	N	Max < RSL
	7440-02-0	Nickel	1.82E+01	1.15E+02	(mg/kg)	SS-015	9 of 9	--	1.15E+02	1.69E+01	2.00E+03 n	10,000	N	Max < RSL
	7440-09-7	Potassium	5.01E+02 (J)	1.04E+03	(mg/kg)	SS-015	9 of 9	--	1.04E+03	6.89E+02	nsf	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	1.80E+00	3.30E+00 (J)	(mg/kg)	SS-015	4 of 9	3.5U-4.8U	3.30E+00	5.20E+00 (U)	5.10E+02 n	6,800	N	Max < RSL
	7440-22-4	Silver	1.10E+00 (J)	6.14E+01	(mg/kg)	SS-09(W)	7 of 9	--	6.14E+01	3.70E-01 (J)	5.10E+02 n	6,800	N	Max < RSL
	7440-23-5	Sodium	8.65E+01 (B)	4.98E+02 (J)	(mg/kg)	DP-002	5 of 9	504U-803U	4.98E+02	1.96E+02 (J)	nsf	Not Available	N	Essential Nutrient
	7440-28-0	Thallium	3.10E+00 (J)	4.20E+00 (J)	(mg/kg)	DP-002	2 of 9	2.5U-3.4U	4.20E+00	3.70E+00 (U)	nsf	Not Available	Y	No Screening Criteria
	No CAS	Vanadium (c)	1.10E+01	2.04E+02	(mg/kg)	SS-014	9 of 9	--	2.04E+02	1.49E+01	5.20E+02 n	Not Available	N	Max < RSL
	7440-66-6	Zinc	5.46E+01 (J)	1.60E+04	(mg/kg)	SS-09(W)	9 of 9	--	1.60E+04	2.92E+02	3.10E+04 nm	10,000	N	Max < RSL

Footnotes:

- (1) Minimum / Maximum detected concentration
 - (2) Maximum detected concentration used as screening value
 - (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
 - (4) US EPA Region 9 Master RSL Table December 2009 - Industrial Soils
 - (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Industrial site use.
 - (6) Rationales for Selection or Deletion Definitions:
 Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 Low detection freq: analyte detected in less than 5% of samples in data set of at least 20 samples.
 - (a) Cr(VI) value used for screening of chromium data.
 - (b) Methylmercury value used for screening of mercury data.
 - (c) Vanadium and Compounds screening level used for Vanadium.
- Note:** Industrial Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ = 0.1).
- L based on EPA's Adult Lead Model (ALM)
- m Concentration may exceed ceiling limit
- s Concentration may exceed Csat
- nsf No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank
- mg/kg milligrams per kilogram
- ARAR Applicable or Relevant and Appropriate Requirements

TABLE B-2.4.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: AOC-4 Subsurface soil (0 - 10 ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Industrial Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
On Site Soil (0-10 ft)	7440-48-4	Cobalt	2.90E+00 (BJ)	9.10E+00	(mg/kg)	DP-007	24 of 24	--	9.10E+00	7.00E+00	3.00E+01 n	Not Available	N	Max < RSL
	7440-50-8	Copper	4.30E+00	8.53E+02	(mg/kg)	SS-052	20 of 20	5.6 U-8 U	8.53E+02	2.58E+01	4.10E+03 n	10,000	N	Max < RSL
	57-12-5	Cyanide	1.30E-01 (J)	2.50E-01 (J)	(mg/kg)	SS-048	2 of 21	0.009 U-3.5 U	2.50E-01	3.70E+00	2.00E+03 n	10,000	N	Max < RSL
	7439-89-6	Iron	7.61E+03	4.07E+04 (J)	(mg/kg)	SS-052	24 of 24	--	4.07E+04	1.79E+04	7.20E+04 nm	Not Available	N	Max < RSL
	7439-92-1	Lead	3.80E+00	1.46E+04 (J)	(mg/kg)	SS-16(W)	22 of 22	--	1.46E+04	6.67E+02 (J)	8.00E+02 nL	3,900	Y	Max > RSL
	7439-95-4	Magnesium	1.30E+03	4.91E+03	(mg/kg)	SS-17(W)	19 of 19	--	4.91E+03	3.12E+03	nsI	Not Available	N	Essential Nutrient
	7439-96-5	Manganese	1.66E+02 (J)	1.64E+03	(mg/kg)	SS-043	24 of 24	--	1.64E+03	6.04E+02 (J)	2.30E+03 n	10,000	N	Max < RSL
	7439-97-6	Mercury (b)	5.90E-02 (J)	2.70E-01	(mg/kg)	SWS0-01	10 of 22	0.1 U-0.12 U	2.70E-01	2.40E-01	1.00E+01 n	5.7	N	Max < RSL
	7440-02-0	Nickel	9.20E+00	2.80E+01	(mg/kg)	SS-052	24 of 24	--	2.80E+01	1.69E+01	2.00E+03 n	10,000	N	Max < RSL
	7440-09-7	Potassium	2.03E+02 (J)	1.10E+03 (BJ)	(mg/kg)	SS-16(W)	18 of 24	--	1.10E+03	6.89E+02	nsI	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	5.20E-01 (J)	1.40E+00 (J)	(mg/kg)	SS-043	7 of 24	3.5 U-4.8 U	1.40E+00	5.20E+00 (U)	5.10E+02 n	6,800	N	Max < RSL
	7440-22-4	Silver	1.90E-01 (J)	1.70E+00	(mg/kg)	SS-028	12 of 24	--	1.70E+00	3.70E-01 (J)	5.10E+02 n	6,800	N	Max < RSL
	7440-23-5	Sodium	9.15E+01 (B)	2.51E+02 (J)	(mg/kg)	DP-007	10 of 24	504 U-803 U	2.51E+02	1.96E+02 (J)	nsI	Not Available	N	Essential Nutrient
	7440-28-0	Thallium	7.60E-01 (J)	7.70E-01 (J)	(mg/kg)	SS-038	2 of 24	2.5U-3.4U	7.70E-01	3.70E+00 (U)	nsI	Not Available	Y	No Screening Criteria
	No CAS	Vanadium (c)	5.70E+00 (J)	1.73E+01	(mg/kg)	SS-048	24 of 24	--	1.73E+01	1.49E+01	5.20E+02 n	Not Available	N	Max < RSL
	7440-66-6	Zinc	4.29E+01	1.91E+03	(mg/kg)	SS-052	24 of 24	--	1.91E+03	2.92E+02	3.10E+04 nm	10,000	N	Max < RSL

Footnotes:

- (1) Minimum / Maximum detected concentration
 - (2) Maximum detected concentration used as screening value
 - (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
 - (4) US EPA Region 9 Master RSL Table December 2009 - Industrial Soils
 - (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Industrial site use.
 - (6) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Low detection freq: analyte detected in less than 5% of samples in data set of at least 20 samples.
 - (a) Cr(VI) value used for screening of chromium data.
 - (b) Methylmercury value used for screening of mercury data.
 - (c) Vanadium and Compounds screening level used for Vanadium.
- Note:** Industrial Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ = 0.1).
- L based on EPA's Adult Lead Model (ALM)
- m Concentration may exceed ceiling limit
- s Concentration may exceed Csat
- nsI No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank
- mg/kg milligrams per kilogram
- ARAR Applicable or Relevant and Appropriate Requirements

TABLE B-2.5.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Medium: Soil
 Exposure Medium: AOC-5 Subsurface soil (0 - 10ft bgs)

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Industrial Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N) (6)	Rationale for Selection or Deletion (6)
VOLATILE ORGANICS														
On Site Soil (0-10 ft)	79-20-9	Methyl Acetate	1.60E-02	1.60E-02	(mg/kg)	SS-012	1 of 5	0.0051 U-1.1 U	1.60E-02	NA	1.00E+05 nms	Not Available	N	Max < RSL
SEMI-VOLATILE ORGANICS														
On Site Soil (0-10 ft)	208-96-8	Acenaphthylene	7.20E-02 (J)	7.20E-02 (J)	(mg/kg)	SS-012	1 of 5	0.18 U-13 U	7.20E-02	NA	nsl	1,000	Y	No Screening Criteria
	120-12-7	Anthracene	9.60E-02 (J)	9.60E-02 (J)	(mg/kg)	SS-012	1 of 5	0.18 U-1.3 U	9.60E-02	NA	1.70E+04 nm	1,000	N	Max < RSL
	117-81-7	Bis(2-ethylhexyl)phthalate	4.90E-01 (J)	4.90E-01 (J)	(mg/kg)	SS-10(W)	1 of 5	0.18 U-13 U	4.90E-01	NA	1.20E+02 c	Not Available	N	Max < RSL
	100-52-7	Benzaldehyde	6.20E-02 (J)	1.20E-01 (J)	(mg/kg)	SS-10(W)	2 of 5	0.18 U-13 U	1.20E-01	NA	1.00E+04 nms	Not Available	N	Max < RSL
	56-55-3	Benzo(a)anthracene	6.40E-02 (J)	5.10E-01	(mg/kg)	SS-012	2 of 4	0.18 U-13 U	5.10E-01	NA	2.10E+00 c	11	N	Max < RSL
	50-32-8	Benzo(a)pyrene	6.60E-02 (J)	5.00E-01 (J)	(mg/kg)	SS-012	2 of 4	0.18 U-1.3 U	5.00E-01	NA	2.10E-01 c	1.1	Y	Max > RSL
	205-99-2	Benzo(b)fluoranthene	9.10E-02 (J)	7.00E-01 (J)	(mg/kg)	SS-012	3 of 5	0.18 U-1.3 U	7.00E-01	NA	2.10E+00 c	11	N	Max < RSL
	191-24-2	Benzo(g,h,i)perylene	7.10E-02 (J)	1.10E-01 (J)	(mg/kg)	SS-10(W)	2 of 4	0.19 U-1.3 U	1.10E-01	NA	nsl	1,000	Y	No Screening Criteria
	207-08-9	Benzo(k)fluoranthene	3.10E-01 (J)	3.10E-01 (J)	(mg/kg)	SS-012	1 of 4	0.18 U-1.3 U	3.10E-01	NA	2.10E+01 c	110	N	Max < RSL
	85-68-7	Butylbenzylphthalate	2.60E-02 (J)	2.60E-02 (J)	(mg/kg)	DP-021	1 of 4	0.18 U-13 U	2.60E-02	NA	9.10E+02 c	Not Available	N	Max < RSL
	105-60-2	Caprolactam	4.60E-04 (J)	4.60E-04 (J)	(mg/kg)	SS-10(W)	1 of 5	0.18 U-13 U	4.60E-04	NA	3.10E+04 nm	Not Available	N	Max < RSL
	218-01-9	Chrysene	9.00E-02 (J)	5.40E-01	(mg/kg)	SS-012	3 of 5	0.18 U-1 U	5.40E-01	NA	2.10E+02 c	110	N	Max < RSL
	84-74-2	Di-n-butylphthalate	1.40E-01 (J)	1.60E-01 (J)	(mg/kg)	SS-011	2 of 5	0.18 U-13 U	1.60E-01	NA	6.20E+03 n	Not Available	N	Max < RSL
	206-44-0	Fluoranthene	9.80E-02 (J)	9.30E-01	(mg/kg)	SS-012	3 of 5	0.18 U-0.93 U	9.30E-01	NA	2.20E+03 n	1,000	N	Max < RSL
	193-39-5	Indeno(1,2,3-cd)pyrene	1.60E-01 (J)	1.60E-01 (J)	(mg/kg)	SS-012	1 of 4	0.18 U-1.3 U	1.60E-01	NA	2.10E+00 c	11	N	Max < RSL
	85-01-8	Phenanthrene	6.80E-02 (J)	5.20E-01 (J)	(mg/kg)	SS-012	3 of 5	0.19 U-0.61 U	5.20E-01	NA	nsl	1,000	Y	No Screening Criteria
	129-00-0	Pyrene	1.10E-01 (J)	1.10E+00	(mg/kg)	SS-012	3 of 5	0.18 U-1.1 U	1.10E+00	NA	1.70E+03 n	1,000	N	Max < RSL
PESTICIDES / PCBs														
On Site Soil (0-10 ft)	72-55-9	4,4'-DDE	5.50E-03	1.00E-02 (J)	(mg/kg)	SS-10(W)	2 of 5	0.0034 U-0.0055 U	1.00E-02	NA	5.10E+00 c	120	N	Max < RSL
	50-29-3	4,4'-DDT	1.60E-02 (NJ)	3.70E-02	(mg/kg)	SS-011	2 of 5	0.0034 U-0.0055 U	3.70E-02	NA	7.00E+00 c*	94	N	Max < RSL
	60-57-1	Dieldrin	2.80E-03 (J)	2.80E-03 (J)	(mg/kg)	SS-10(W)	1 of 5	0.0034 U-0.0055 U	2.80E-03	NA	1.10E-01 c	2.8	N	Max < RSL
	72-20-8	Endrin	3.90E-02 (J)	3.90E-02 (J)	(mg/kg)	SS-012	1 of 4	0.0034 U-0.0055 U	3.90E-02	NA	1.80E+01 n	410	N	Max < RSL
	11096-82-5	Aroclor-1260	5.00E-02	4.00E-01	(mg/kg)	SS-012	3 of 5	0.033 U-1.9 U	4.00E-01	NA	7.40E-01 c	25	N	Max < RSL
METALS														
On Site Soil (0-10 ft)	7429-90-5	Aluminum	4.47E+03	1.06E+04 (J)	(mg/kg)	DP-021	5 of 5	--	1.06E+04	8.50E+03	9.90E+04 nm	Not Available	N	Max < RSL
	7440-36-0	Antimony	9.40E-01 (B)	5.04E+01 (J)	(mg/kg)	SS-012	2 of 5	0.0081 U-8 U	5.04E+01	8.80E+00 (U)	4.10E+01 n	Not Available	Y	Max > RSL
	7440-38-2	Arsenic	3.00E+00	1.29E+01	(mg/kg)	DP-021	5 of 5	0-0.0081 U	1.29E+01	7.40E+00	1.60E+00 c	16	Y	Max > RSL
	7440-39-3	Barium	5.20E+01 (J)	1.51E+02	(mg/kg)	SS-011	4 of 5	--	1.51E+02	1.48E+02	1.90E+04 nm	10,000	N	Max < RSL
	7440-41-7	Beryllium	2.90E-01 (B)	2.90E-01 (B)	(mg/kg)	SS-10(W)	1 of 5	0.53 U-0.8 U	2.90E-01	5.10E-01 (J)	2.00E+02 n	2,700	N	Max < RSL
	7440-43-9	Cadmium	1.20E+00 (B)	5.50E+00	(mg/kg)	SS-012	3 of 5	0.53 U-0.68 U	5.50E+00	1.20E+00	8.00E+01 n	60	N	Max < RSL
	7440-70-2	Calcium	2.87E+02 (J)	6.97E+03	(mg/kg)	SS-10(W)	5 of 5	--	6.97E+03	3.27E+04	nsl	Not Available	N	Essential Nutrient
	7440-47-3	Chromium (a)	3.60E+00	1.81E+01 (J)	(mg/kg)	DP-021	5 of 5	--	1.81E+01	2.22E+01	5.60E+00 c	800	Y	Max > RSL
	7440-48-4	Cobalt	4.90E+00 (B)	1.37E+01	(mg/kg)	SS-012	3 of 5	--	1.37E+01	7.00E+00	3.00E+01 n	Not Available	N	Max < RSL
	7440-50-8	Copper	8.60E+00	4.69E+02	(mg/kg)	SS-011	5 of 5	5.6 U- 8 U	4.69E+02	2.58E+01	4.10E+03 n	10,000	N	Max < RSL
	57-12-5	Cyanide	5.50E+00 (J)	5.50E+00 (J)	(mg/kg)	SS-012	1 of 4	0.009 U-3.5 U	5.50E+00	3.70E+00	2.00E+03 n	10,000	N	Max < RSL
	7439-89-6	Iron	8.90E+03	3.82E+04	(mg/kg)	SS-012	5 of 5	--	3.82E+04	1.79E+04	7.20E+04 nm	Not Available	N	Max < RSL
	7439-92-1	Lead	2.93E+01 (J)	3.28E+03	(mg/kg)	SS-011	5 of 5	--	3.28E+03	6.67E+02 (J)	8.00E+02 nL	3,900	Y	Max > RSL
	7439-95-4	Magnesium	1.74E+03 (B)	3.57E+03 (J)	(mg/kg)	DP-021	2 of 2	--	3.57E+03	3.12E+03	nsl	Not Available	N	Essential Nutrient
	7439-96-5	Manganese	2.39E+02	6.20E+02	(mg/kg)	SS-011	5 of 5	--	6.20E+02	6.04E+02 (J)	2.30E+03 n	10,000	N	Max < RSL
	7439-97-6	Mercury (b)	8.40E-02 (J)	4.10E-01	(mg/kg)	SS-012	3 of 5	0.1 U-0.12 U	4.10E-01	2.40E-01	1.00E+01 n	5.7	N	Max < RSL
	7440-02-0	Nickel	1.00E-01	2.64E+01	(mg/kg)	SS-012	5 of 5	--	2.64E+01	1.69E+01	2.00E+03 n	10,000	N	Max < RSL
	7440-09-7	Potassium	4.92E+02 (J)	7.51E+02	(mg/kg)	SS-012	3 of 5	--	7.51E+02	6.89E+02	nsl	Not Available	N	Essential Nutrient
	7782-49-2	Selenium	7.40E-01 (J)	2.40E+00 (J)	(mg/kg)	SS-012	3 of 5	3.5 U-4.8 U	2.40E+00	5.20E+00 (U)	5.10E+02 n	6,800	N	Max < RSL
	7440-22-4	Silver	2.90E-01 (J)	3.30E+00 (J)	(mg/kg)	DP-021	3 of 5	--	3.30E+00	3.70E-01 (J)	5.10E+02 n	6,800	N	Max < RSL

TABLE B-2.5.2
 OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Point	CAS Number	Chemical	Minimum Concentration (Qualifier) (1)	Maximum Concentration (Qualifier) (1)	Units	Location of Maximum Concentration (Sample ID)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening (2)	Background Value (3)	Industrial Screening Toxicity Value (N/C) (4)	Potential ARAR (5)	COPC Flag (Y/N)	Rationale for Selection or Deletion (6)
On Site Soil (0-10 ft)	7440-23-5	Sodium	1.01E+02 (B)	1.01E+02 (B)	(mg/kg)	SS-10(W)	1 of 5	504 U-803 U	1.01E+02	1.96E+02 (J)	nsl	Not Available	N	Essential Nutrient
	7440-28-0	Thallium	6.50E-01 (J)	2.00E+00 (J)	(mg/kg)	SS-012	3 of 5	2.5 U-3.4 U	2.00E+00	3.70E+00 (U)	nsl	Not Available	Y	No Screening Criteria
	No CAS	Vanadium (c)	1.08E+01 (B)	2.29E+01	(mg/kg)	SS-012	4 of 5	--	2.29E+01	1.49E+01	5.20E+02 n	Not Available	N	Max < RSL
	7440-66-6	Zinc	3.36E+01	1.08E+03	(mg/kg)	SS-012	5 of 5	--	1.08E+03	2.92E+02	3.10E+04 nm	10,000	N	Max < RSL

Footnotes:

- (1) Minimum / Maximum detected concentration
 - (2) Maximum detected concentration used as screening value
 - (3) Based on available background soil sampling conducted. Maximum detected background concentration used.
 - (4) US EPA Region 9 Master RSL Table December 2009 - Industrial Soils
 - (5) NYSDEC Part 375 Soil Clean-up Objective (SCO) for Industrial site use.
 - (6) Rationales for Selection or Deletion Definitions:
 - Max > RSL: Max concentration is greater than the Region 9 Regional Screening Level
 - Low detection freq: analyte detected in less than 5% of samples in data set of at least 20 samples.
 - (a) Cr(VI) value used for screening of chromium data.
 - (b) Methylmercury value used for screening of mercury data.
 - (c) Vanadium and Compounds screening level used for Vanadium.
- Note:** Industrial Soil RSL for non-cancer health effects based on HQ=0.1 and ELCR of 1x10⁻⁶.
- (W) Indicates sample ID from Weston Sampling Event (2000); other data are from Tetra Tech Sampling Events

Screening Toxicity Value Codes

- n non-cancer
- c cancer
- * where n SL < 100x c SL
- ** where n SL < 10x c SL. Screening values for potential non-cancer effects used (HQ = 0.1).
- L based on EPA's Adult Lead Model (ALM)
- m Concentration may exceed ceiling limit
- s Concentration may exceed Csat
- nsl No Screening Toxicity Level indicated by USEPA on RSL Master Table (December 2009)

Definitions:

- RSL Regional Screening Level
- CAS Chemical Abstracts Service
- ft bgs Feet below ground surface
- D Dilution
- J Estimated Value
- N Presumptively Present
- B Analyte Found in Associated Blank
- mg/kg milligrams per kilogram
- ARAR Applicable or Relevant and Appropriate Requirements

TABLE B-3.1.2 RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-1 Subsurface soil (0 - 10ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
SEMI-VOLATILE ORGANICS									
On Site Soil (0-10 ft)	Acenaphthylene	(mg/kg)	5.94E-01	3.96E-01 (NP)	1.90E+00 (J)	3.96E-01	(mg/kg)	95% KM (t)	(1)
	Benzo(a)anthracene	(mg/kg)	7.75E+00	1.74E+01 (NP)	5.00E+01	1.74E+01	(mg/kg)	95% KM (Chebyshev)	(1)
	Benzo(a)pyrene	(mg/kg)	7.60E+00	2.86E+01 (NP)	4.30E+01	2.86E+01	(mg/kg)	99% KM (Chebyshev)	(1)
	Benzo(b)fluoranthene	(mg/kg)	8.63E+00	1.83E+01 (NP)	4.10E+01	1.83E+01	(mg/kg)	95% KM (Chebyshev)	(1)
	Benzo(g,h,i)perylene	(mg/kg)	2.83E+00	1.17E+01 (NP)	2.40E+01	1.17E+01	(mg/kg)	99% KM (Chebyshev)	(1)
	Benzo(k)fluoranthene	(mg/kg)	5.73E+00	2.29E+01 (NP)	3.80E+01	2.29E+01	(mg/kg)	99% KM (Chebyshev)	(1)
	Carbazole	(mg/kg)	2.02E+00	3.14E+00 (NP)	1.80E+01	3.14E+00	(mg/kg)	95% KM (BCA)	(1)
	Di-n-octylphthalate	(mg/kg)	9.29E-01	9.38E-01 (NP)	5.00E+00	9.38E-01	(mg/kg)	95% KM (t)	(1)
	Dibenzo(a,h)anthracene	(mg/kg)	1.39E+00	1.80E+00 (NP)	7.40E+00	1.80E+00	(mg/kg)	95% KM (BCA)	(1)
	Dimethylphthalate	(mg/kg)	6.94E-01	3.75E-01 (NP)	1.60E+00 (J)	3.75E-01	(mg/kg)	95% KM (t)	(1)
	Indeno(1,2,3-cd)pyrene	(mg/kg)	4.08E+00	1.61E+01 (NP)	2.80E+01	1.61E+01	(mg/kg)	99% KM (Chebyshev)	(1)
Phenanthrene	(mg/kg)	1.02E+01	2.39E+01 (NP)	8.00E+01	2.39E+01	(mg/kg)	95% KM (Chebyshev)	(1)	
PESTICIDES / PCBs									
On Site Soil (0-10 ft)	Endosulfan sulfate	(mg/kg)	1.04E-02	3.09E-02 (NP)	5.70E-02 (NJ)	3.09E-02	(mg/kg)	95% KM (Percentile Bootstrap)	(1)
	Dieldrin	(mg/kg)	2.42E-02	3.87E-02 (NP)	2.90E-01 (JN)	3.87E-02	(mg/kg)	95% KM (t)	(1)
	Endrin aldehyde	(mg/kg)	1.59E-02	2.69E-02 (NP)	1.10E-01 (J)	2.69E-02	(mg/kg)	95% KM (% Bootstrap)	(1)
	Endrin ketone	(mg/kg)	1.64E-02	3.02E-02 (NP)	1.20E-01 (D)	3.02E-02	(mg/kg)	95% KM (Percentile Bootstrap)	(1)
	Endosulfan II	(mg/kg)	1.60E-02	3.05E-02 (NP)	1.50E-01 (J)	3.05E-02	(mg/kg)	95% KM (Percentile Bootstrap)	(1)
	gamma-Chlordane	(mg/kg)	1.27E-02	2.59E-02 (NP)	6.50E-02 (J)	2.59E-02	(mg/kg)	95% KM (Percentile Bootstrap)	(1)
	Aroclor-1254	(mg/kg)	5.57E-01	9.39E-01 (NP)	5.70E+00	9.39E-01	(mg/kg)	95% KM (t)	(1)
	Aroclor-1260	(mg/kg)	1.54E+00	9.77E+00 (NP)	3.00E+01	9.77E+00	(mg/kg)	99% KM (Chebyshev)	(1)
METALS									
On Site Soil (0-10 ft)	Antimony	(mg/kg)	1.18E+01	2.84E+01 (NP)	7.67E+01	2.84E+01	(mg/kg)	97.5% KM (Chebyshev)	(1)
	Arsenic	(mg/kg)	1.10E+01	1.33E+01 (NP)	3.74E+01 (J)	1.33E+01	(mg/kg)	95% KM (BCA)	(1)
	Chromium	(mg/kg)	5.38E+02	3.81E+03 (NP)	1.21E+04 (J)	3.81E+03	(mg/kg)	99% Chebyshev (Mean, Sd)	(2)
	Cobalt	(mg/kg)	1.17E+01	1.36E+01 (N)	3.62E+01 (J)	1.36E+01	(mg/kg)	or 95% Modified-t	(4)
	Copper	(mg/kg)	9.46E+02	1.41E+03 (G)	7.46E+03 (J)	1.41E+03	(mg/kg)	95% Approximate Gamma	(7)

TABLE B-3.1.2 RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-1 Subsurface soil (0 - 10ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
On Site Soil (0-10 ft)	Iron	(mg/kg)	4.76E+04	8.25E+04 (NP)	2.24E+05	8.25E+04	(mg/kg)	95% Chebyshev (Mean, Sd)	(2)
	Lead	(mg/kg)	9.93E+02	--	3.84E+03 (J)	9.93E+02	(mg/kg)	Arithmetic Mean	(5)
	Manganese	(mg/kg)	7.36E+02	8.87E+02 (G)	3.26E+03 (J)	8.87E+02	(mg/kg)	95% Approximate Gamma	(7)
	Thallium	(mg/kg)	1.28E+00	1.09E+00 (NP)	4.60E+00	1.09E+00	(mg/kg)	95% KM (% Bootstrap)	(1)
	Vanadium	(mg/kg)	9.39E+01	1.37E+02 (LN)	8.41E+02	1.37E+02	(mg/kg)	95% H-UCL	(3)

Footnotes:

- (1) Mean using DL/2, calculated by ProUCL 4.00.04
- (2) Recommended Upper Confidence Limit Statistic calculated by ProUCL 4.00.04
- (3) Statistic Used to determine Exposure Point Concentration

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- D Dilution
- J Estimated Value
- N Presumptively Present

Codes: Rationale Codes: (1) Data have multiple DLs, Use of Kaplan-Meier method recommended by ProUCL 4.00.04. (2) Data do not follow a discernable distribution [ProUCL 4.00.04], nonparametric UCL recommended. (3) Data follow approximate lognormal distribution at 5% significance level. (4) Statistic for normal distribution recommended by ProUCL 4.00.04. (5) Arithmetic mean used as EPC for lead. (6) Nonparametric UCL recommended by ProUCL 4.00.04. (7) Data follow a gamma distribution [ProUCL 4.00.04].

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

Note: No volatile organic compounds were determined to be chemicals of potential concern.

TABLE B-3.2.2 RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-2 Soil 0-10ft bgs

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (3)	Rationale
SEMI-VOLATILE ORGANICS									
On Site Soil (0-10 ft)	Acenaphthylene	(mg/kg)	5.94E-01	7.97E-01 (NP)	3.90E+00	7.97E-01	(mg/kg)	95% KM (t) UCL	(1)
	Benzo(a)anthracene	(mg/kg)	6.99E+00	1.41E+01 (NP)	4.20E+01	1.41E+01	(mg/kg)	95% KM (Chebyshev) UCL	(1)
	Benzo(a)pyrene	(mg/kg)	6.19E+00	1.25E+01 (NP)	3.80E+01	1.25E+01	(mg/kg)	95% KM (Chebyshev) UCL	(1)
	Benzo(b)fluoranthene	(mg/kg)	9.76E+00	2.02E+01 (NP)	5.40E+01	2.02E+01	(mg/kg)	95% KM (Chebyshev) UCL	(1)
	Benzo(g,h,i)perylene	(mg/kg)	1.97E+00	2.69E+00 (NP)	9.90E+00	2.69E+00	(mg/kg)	95% KM (BCA) UCL	(1)
	Carbazole	(mg/kg)	8.85E-01	1.34E+00 (NP)	9.30E+00	1.34E+00	(mg/kg)	95% KM (t) UCL	(1)
	Di-n-octylphthalate	(mg/kg)	3.21E-01	3.75E-01 (NP)	2.50E+00 (J)	3.75E-01	(mg/kg)	95% KM (t) UCL	(1)
	Dibenzo(a,h)anthracene	(mg/kg)	6.73E-01	9.12E-01 (NP)	4.10E+00	9.12E-01	(mg/kg)	95% KM (t) UCL	(1)
	Dimethylphthalate	(mg/kg)	2.25E-01	5.47E-01 (NP)	6.30E-01 (J)	5.47E-01	(mg/kg)	95% KM (Percentile Bootstrap) UCL	(1)
	Indeno(1,2,3-cd)pyrene	(mg/kg)	2.76E+00	5.40E+00 (NP)	1.40E+01	5.40E+00	(mg/kg)	95% KM (Chebyshev) UCL	(1)
	Phenanthrene	(mg/kg)	6.70E+00	1.58E+01 (NP)	7.30E+01	1.58E+01	(mg/kg)	95% KM (Chebyshev) UCL	(1)
PESTICIDES / PCBs									
On Site Soil (0-10 ft)	Endosulfan sulfate	(mg/kg)	5.36E-03	4.25E-03 (NP)	2.90E-02 (J)	4.25E-03	(mg/kg)	95% KM (t) UCL	(1)
	Dieldrin	(mg/kg)	1.08E-02	1.46E-02 (NP)	1.20E-01 (J)	1.46E-02	(mg/kg)	95% KM (t) UCL	(1)
	Endrin aldehyde	(mg/kg)	6.35E-03	6.50E-03 (NP)	5.20E-02 (J)	6.50E-03	(mg/kg)	95% KM (t) UCL	(1)
	Endrin ketone	(mg/kg)	1.33E-02	4.21E-02 (NP)	8.90E-02 (J)	4.21E-02	(mg/kg)	95% KM (Percentile Bootstrap) UCL	(1)
	Endosulfan II	(mg/kg)	2.99E-02	6.90E-02 (NP)	6.70E-01 (J)	6.90E-02	(mg/kg)	95% KM (t) UCL	(1)
	gamma-Chlordane	(mg/kg)	3.30E-03	4.64E-03 (NP)	3.20E-02 (NJ)	4.64E-03	(mg/kg)	95% KM (t) UCL	(1)
	Aroclor-1254	(mg/kg)	1.22E-01	7.94E-01 (NP)	2.30E+00 (D)	7.94E-01	(mg/kg)	95% KM (Percentile Bootstrap) UCL	(1)
	Aroclor-1260	(mg/kg)	5.21E-01	1.05E+00 (NP)	1.30E+01 (D)	1.05E+00	(mg/kg)	95% KM (t) UCL	(1)
METALS									
On Site Soil (0-10 ft)	Arsenic	(mg/kg)	7.48E+00	8.18E+00 (G)	1.41E+01	8.18E+00	(mg/kg)	95% Approximate Gamma UCL	(2)
	Chromium	(mg/kg)	5.89E+01	1.31E+02 (NP)	6.22E+02 (J)	1.31E+02	(mg/kg)	95% Chebyshev (Mean, Sd) UCL	(3)
	Lead	(mg/kg)	3.10E+02	--	2.36E+03	3.10E+02	(mg/kg)	Arithmetic Mean	(1)
	Thallium	(mg/kg)	1.06E+00	1.07E+00 (NP)	2.20E+00 (J)	1.07E+00	(mg/kg)	95% KM (t) UCL	(1)

TABLE B-3.2.2 RME
 EXPOSURE POINT CONCENTRATION SUMMARY
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Footnotes:

- (1) Mean using DL/2, calculated by ProUCL 4.00.04
- (2) Upper Confidence Limit calculated by ProUCL 4.00.04
- (3) Statistic Used to determine Exposure Point Concentration

Definitions:

Sd	Standard Deviation
ft bgs	Feet below ground surface
mg/kg	milligrams per kilogram
D	Dilution
J	Estimated Value
N	Presumptively Present

Codes: Rationale Codes: (1) Data have multiple DLs, Use of Kaplan-Meier method recommended by ProUCL 4.00.04. (2) Data follow gamma distribution at 5% significance level, 95% approximate gamma recommended by ProUCL 4.00.04. (3) Data do not follow a discernable distribution [ProUCL 4.00.04], nonparametric UCL recommended. (4) Arithmetic mean conventionally used for EPC for lead.

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

Note: No volatile organic compounds were determined to be chemicals of potential concern.

TABLE B-3.3.2 RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC 3 Subsurface soil (0-10 ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution) (1)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (2)	Rationale
SEMI-VOLATILE ORGANICS									
On-Site (0-10ft bgs)	Acenaphthylene	(mg/kg)	2.95E-01	--	4.90E-01 (J)	4.90E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(a)anthracene	(mg/kg)	2.11E+00	--	5.40E+00	5.40E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(a)pyrene	(mg/kg)	1.36E+00	--	3.30E+00 (J)	3.30E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(b)fluoranthene	(mg/kg)	2.80E+00	--	1.00E+01 (J)	1.00E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(g,h,i)perylene	(mg/kg)	6.95E-01	--	1.60E+00 (J)	1.60E+00	(mg/kg)	Maximum Detected Concentration	(1)
	Carbazole	(mg/kg)	2.88E-01	--	5.20E-01	5.20E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Dibenzo(a,h)anthracene	(mg/kg)	2.67E-01	--	4.60E-01 (J)	4.60E-01	(mg/kg)	Maximum Detected Concentration	(1)
	Dimethylphthalate	(mg/kg)	8.90E-02	--	8.90E-02 (J)	8.90E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Phenanthrene	(mg/kg)	1.42E+00	--	2.80E+00	2.80E+00	(mg/kg)	Maximum Detected Concentration	(1)
PESTICIDES / PCBs									
On-Site (0-10ft bgs)	Endosulfan sulfate	(mg/kg)	1.60E-02	--	1.60E-02	1.60E-02	(mg/kg)	Maximum Detected Concentration	(1)
	Endrin ketone	(mg/kg)	2.70E-02	--	2.70E-02	2.70E-02	(mg/kg)	Maximum Detected Concentration	(1)
	gamma-Chlordane	(mg/kg)	1.10E-03	--	1.10E-03 (J)	1.10E-03	(mg/kg)	Maximum Detected Concentration	(1)
	Aroclor-1260	(mg/kg)	9.57E+00	--	4.30E+01 (J)	4.30E+01	(mg/kg)	Maximum Detected Concentration	(1)
METALS									
On-Site (0-10ft bgs)	Antimony	(mg/kg)	1.78E+01	--	1.05E+02	1.05E+02	(mg/kg)	Maximum Detected Concentration	(1)
	Arsenic	(mg/kg)	8.91E+00	--	1.80E+01 (J)	1.80E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Chromium	(mg/kg)	2.96E+01	--	5.62E+01	5.62E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Copper	(mg/kg)	1.29E+03	--	1.04E+04 (J)	1.04E+04	(mg/kg)	Maximum Detected Concentration	(1)
	Lead	(mg/kg)	2.59E+03	--	1.82E+04	1.82E+04	(mg/kg)	Maximum Detected Concentration	(1)
	Thallium	(mg/kg)	3.65E+00	--	4.20E+00 (J)	4.20E+00	(mg/kg)	Maximum Detected Concentration	(1)

Footnotes:

- (1) Upper Confidence Limit Statistic calculated by ProUCL software
- (2) Statistic Used to determine Exposure Point Concentration

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- J Estimated Value

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because the dataset has fewer than ten samples.

Note: No volatile organic compounds were determined to be chemicals of potential concern.



TABLE B-3.4.2 RME
EXPOSURE POINT CONCENTRATION SUMMARY
REASONABLE MAXIMUM EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-4 Soil 0-10ft bgs

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean (1)	95% UCL (Distribution) (2)	Maximum Concentration (Qualifier)	Exposure Point Concentration				
						Value	Units	Statistic (3)	Rationale	
SEMI-VOLATILE ORGANICS										
On-Site Soil (0-10 ft)	Benzo(a)pyrene	(mg/kg)	1.82E-01	3.12E-01 (NP)	1.70E+00 (J)	3.12E-01	(mg/kg)	95% KM (t)	(2)	
	Benzo(g,h,i)perylene	(mg/kg)	*	--	6.90E-02 (J)	6.90E-02	(mg/kg)	Maximum Detected Concentration	(1)	
	Carbazole	(mg/kg)	*	--	7.10E-03 (J)	7.10E-03	(mg/kg)	Maximum Detected Concentration	(1)	
	Di-n-octylphthalate	(mg/kg)	*	--	2.20E-01	2.20E-01	(mg/kg)	Maximum Detected Concentration	(1)	
	Dibenzo(a,h)anthracene	(mg/kg)	*	--	1.40E+00 (J)	1.40E+00	(mg/kg)	Maximum Detected Concentration	(1)	
	Phenanthrene	(mg/kg)	1.75E-01	2.58E-01 (NP)	1.60E+00 (J)	2.58E-01	(mg/kg)	95% KM (t)	(2)	
PESTICIDES / PCBs										
On-Site Soil (0-10 ft)	Endrin aldehyde	(mg/kg)	2.53E-03	--	1.10E-02 (J)	1.10E-02	(mg/kg)	Maximum Detected Concentration	(1)	
	Endrin ketone	(mg/kg)	*	--	1.40E-02 (NJ)	1.40E-02	(mg/kg)	Maximum Detected Concentration	(1)	
	Endosulfan II	(mg/kg)	*	--	2.60E-03 (J)	2.60E-03	(mg/kg)	Maximum Detected Concentration	(1)	
	gamma-Chlordane	(mg/kg)	*	--	1.20E-03 (J)	1.20E-03	(mg/kg)	Maximum Detected Concentration	(1)	
METALS										
On-Site Soil (0-10 ft)	Antimony	(mg/kg)	1.20E+01	7.74E+01 (NP)	1.15E+02 (J)	7.74E+01	(mg/kg)	99% KM (Chebyshev)	(2)	
	Arsenic	(mg/kg)	5.95E+00	6.66E+00 (N)	1.09E+01 (J)	6.66E+00	(mg/kg)	95% Student's-t	(3)	
	Chromium	(mg/kg)	1.12E+01	1.24E+01 (N)	1.84E+01 (J)	1.24E+01	(mg/kg)	95% Student's-t	(3)	
	Lead	(mg/kg)	7.60E+02	--	1.46E+04 (J)	7.60E+02	(mg/kg)	Arithmetic Mean	(4)	
	Thallium	(mg/kg)	*	--	7.70E-01 (J)	7.70E-01	(mg/kg)	Maximum Detected Concentration	(1)	

Footnotes:

- * Insufficient data to compute arithmetic mean.
- (1) Raw data mean using DL/2, calculated by ProUCL 4.00.04
- (2) Upper Confidence Limit Statistic calculated by ProUCL 4.00.04
- (3) Statistic Used to determine Exposure Point Concentration

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- J Estimated Value
- N Presumptively Present

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because data have fewer than four detected concentrations. (2) Data have multiple DLs, Use of Kaplan-Meier method recommended by ProUCL 4.00.04. (3) Data appear normally distributed. (4) Arithmetic mean used for EPC for lead.

Distribution Codes: (G) Gamma Distribution, (LN) Lognormal Distribution, (N) Normal Distribution, (NP) Nonparametric Distribution

Note: No volatile organic compounds were determined to be chemicals of potential concern.

TABLE B-3.5.2 RME
 EXPOSURE POINT CONCENTRATION SUMMARY
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: AOC-5 Subsurface soil (0 - 10 ft bgs)

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution) (1)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic (2)	Rationale
SEMI-VOLATILE ORGANICS									
On-Site Soil (0-10 ft)	Acenaphthylene	(mg/kg)	7.20E-02	--	7.20E+01 (J)	7.20E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(a)pyrene	(mg/kg)	2.83E-01	--	5.00E+02 (J)	5.00E+02	(mg/kg)	Maximum Detected Concentration	(1)
	Benzo(g,h,i)perylene	(mg/kg)	9.05E-02	--	1.10E+02 (J)	1.10E+02	(mg/kg)	Maximum Detected Concentration	(1)
	Phenanthrene	(mg/kg)	2.27E-01	--	5.20E+02	5.20E+02	(mg/kg)	Maximum Detected Concentration	(1)
METALS									
On-Site (0-10ft bgs)	Antimony	(mg/kg)	2.57E+01	--	5.04E+01 (J)	5.04E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Arsenic	(mg/kg)	6.82E+00	--	1.29E+01	1.29E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Chromium	(mg/kg)	1.15E+01	--	1.81E+01 (J)	1.81E+01	(mg/kg)	Maximum Detected Concentration	(1)
	Lead	(mg/kg)	1.31E+03	--	3.28E+03	3.28E+03	(mg/kg)	Maximum Detected Concentration	(1)
	Thallium	(mg/kg)	1.28E+00	--	2.00E+00 (J)	2.00E+00	(mg/kg)	Maximum Detected Concentration	(1)

Footnotes:

- (1) Upper Confidence Limit Statistic calculated by ProUCL software
- (2) Statistic Used to determine Exposure Point Concentration

Definitions:

- Sd Standard Deviation
- ft bgs Feet below ground surface
- mg/kg milligrams per kilogram
- J Estimated Value

Codes: Rationale Codes: (1) Maximum detected concentration is used as the EPC because the dataset has fewer than ten samples.

Note: No volatile organic compounds were determined to be chemicals of potential concern.

A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects							
2	User Selected Options										
3	From File		\\Pri-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProUCL_042								
4	Full Precision		OFF								
5	Confidence Coefficient		95%								
6	Number of Bootstrap Operations		2000								
7											
8											
9	Acenaphthylene										
10											
11	General Statistics										
12	Number of Valid Data			36		Number of Detected Data			12		
13	Number of Distinct Detected Data			12		Number of Non-Detect Data			24		
14						Percent Non-Detects			66.67%		
15											
16	Raw Statistics					Log-transformed Statistics					
17	Minimum Detected			0.059		Minimum Detected			-2.83		
18	Maximum Detected			1.9		Maximum Detected			0.642		
19	Mean of Detected			0.544		Mean of Detected			-1.074		
20	SD of Detected			0.53		SD of Detected			1.096		
21	Minimum Non-Detect			0.18		Minimum Non-Detect			-1.715		
22	Maximum Non-Detect			13		Maximum Non-Detect			2.565		
23											
24	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect			36		
25	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected			0		
26	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage			100.00%		
27											
28	UCL Statistics										
29	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
30	Shapiro Wilk Test Statistic			0.806		Shapiro Wilk Test Statistic			0.924		
31	5% Shapiro Wilk Critical Value			0.859		5% Shapiro Wilk Critical Value			0.859		
32	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
33											
34	Assuming Normal Distribution					Assuming Lognormal Distribution					
35	DL/2 Substitution Method					DL/2 Substitution Method					
36	Mean			0.594		Mean			-1.298		
37	SD			1.111		SD			1.166		
38	95% DL/2 (t) UCL			0.907		95% H-Stat (DL/2) UCL			0.814		
39											
40	Maximum Likelihood Estimate(MLE) Method			N/A		Log ROS Method					
41	MLE method failed to converge properly					Mean in Log Scale			-1.898		
42						SD in Log Scale			0.927		
43						Mean in Original Scale			0.253		
44						SD in Original Scale			0.364		
45						95% Percentile Bootstrap UCL			0.357		
46						95% BCA Bootstrap UCL			0.396		
47											
48	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
49	k star (bias corrected)			0.967		Data appear Gamma Distributed at 5% Significance Level					
50	Theta Star			0.562							
51	nu star			23.22							
52											
53	A-D Test Statistic			0.336		Nonparametric Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L
54	5% A-D Critical Value				0.752	Kaplan-Meier (KM) Method						
55	K-S Test Statistic				0.752	Mean						0.27
56	5% K-S Critical Value				0.251	SD						0.389
57	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						0.0743
58						95% KM (t) UCL						0.396
59	Assuming Gamma Distribution					95% KM (z) UCL						0.392
60	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						0.393
61	Minimum				0.059	95% KM (bootstrap t) UCL						0.478
62	Maximum				1.9	95% KM (BCA) UCL						0.454
63	Mean				0.556	95% KM (Percentile Bootstrap) UCL						0.413
64	Median				0.574	95% KM (Chebyshev) UCL						0.594
65	SD				0.299	97.5% KM (Chebyshev) UCL						0.734
66	k star				3.097	99% KM (Chebyshev) UCL						1.009
67	Theta star				0.18							
68	Nu star				223	Potential UCLs to Use						
69	AppChi2				189.4	95% KM (t) UCL						0.396
70	95% Gamma Approximate UCL				0.655							
71	95% Adjusted Gamma UCL				0.66							
72	Note: DL/2 is not a recommended method.											
73												
74												
75	Benzo(a)anthracene											
76												
77	General Statistics											
78	Number of Valid Data				36	Number of Detected Data				29		
79	Number of Distinct Detected Data				26	Number of Non-Detect Data				7		
80						Percent Non-Detects				19.44%		
81												
82	Raw Statistics					Log-transformed Statistics						
83	Minimum Detected				0.056	Minimum Detected				-2.882		
84	Maximum Detected				50	Maximum Detected				3.912		
85	Mean of Detected				9.557	Mean of Detected				0.775		
86	SD of Detected				14.16	SD of Detected				2.037		
87	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715		
88	Maximum Non-Detect				1.3	Maximum Non-Detect				0.262		
89												
90	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				20		
91	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				16		
92	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				55.56%		
93												
94	UCL Statistics											
95	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
96	Shapiro Wilk Test Statistic				0.709	Shapiro Wilk Test Statistic				0.95		
97	5% Shapiro Wilk Critical Value				0.926	5% Shapiro Wilk Critical Value				0.926		
98	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
99												
100	Assuming Normal Distribution					Assuming Lognormal Distribution						
101	DL/2 Substitution Method					DL/2 Substitution Method						
102	Mean				7.753	Mean				0.307		
103	SD				13.2	SD				2.098		
104	95% DL/2 (t) UCL				11.47	95% H-Stat (DL/2) UCL				42.07		
105												
106	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						

A	B	C	D	E	F	G	H	I	J	K	L
107	MLE yields a negative mean					Mean in Log Scale					0.212
108						SD in Log Scale					2.185
109						Mean in Original Scale					7.727
110						SD in Original Scale					13.21
111						95% Percentile Bootstrap UCL					11.43
112						95% BCA Bootstrap UCL					12.35
113											
114	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
115	k star (bias corrected)			0.415		Data appear Gamma Distributed at 5% Significance Level					
116	Theta Star			23.01							
117	nu star			24.09							
118											
119	A-D Test Statistic			0.808		Nonparametric Statistics					
120	5% A-D Critical Value			0.825		Kaplan-Meier (KM) Method					
121	K-S Test Statistic			0.825		Mean					7.733
122	5% K-S Critical Value			0.174		SD					13.03
123	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					2.209
124						95% KM (t) UCL					11.47
125	Assuming Gamma Distribution					95% KM (z) UCL					11.37
126	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					11.45
127	Minimum			1E-09		95% KM (bootstrap t) UCL					12.82
128	Maximum			50		95% KM (BCA) UCL					12.07
129	Mean			7.704		95% KM (Percentile Bootstrap) UCL					11.43
130	Median			1.15		95% KM (Chebyshev) UCL					17.36
131	SD			13.23		97.5% KM (Chebyshev) UCL					21.53
132	k star			0.161		99% KM (Chebyshev) UCL					29.72
133	Theta star			47.81							
134	Nu star			11.6		Potential UCLs to Use					
135	AppChi2			4.966		95% KM (Chebyshev) UCL					17.36
136	95% Gamma Approximate UCL			18							
137	95% Adjusted Gamma UCL			18.74							
138	Note: DL/2 is not a recommended method.										
139											
140											
141	Benzo(a)pyrene										
142											
143	General Statistics										
144	Number of Valid Data				36		Number of Detected Data				29
145	Number of Distinct Detected Data				25		Number of Non-Detect Data				7
146							Percent Non-Detects				19.44%
147											
148	Raw Statistics					Log-transformed Statistics					
149	Minimum Detected			0.028		Minimum Detected			-3.576		
150	Maximum Detected			43		Maximum Detected			3.761		
151	Mean of Detected			9.354		Mean of Detected			0.743		
152	SD of Detected			13.54		SD of Detected			2.092		
153	Minimum Non-Detect			0.18		Minimum Non-Detect			-1.715		
154	Maximum Non-Detect			1.3		Maximum Non-Detect			0.262		
155											
156	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					19
157	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					17
158	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					52.78%
159											

A	B	C	D	E	F	G	H	I	J	K	L
160	UCL Statistics										
161	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
162	Shapiro Wilk Test Statistic				0.705	Shapiro Wilk Test Statistic				0.947	
163	5% Shapiro Wilk Critical Value				0.926	5% Shapiro Wilk Critical Value				0.926	
164	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
165											
166	Assuming Normal Distribution					Assuming Lognormal Distribution					
167	DL/2 Substitution Method					DL/2 Substitution Method					
168	Mean			7.596	Mean			0.314			
169	SD			12.64	SD			2.103			
170	95% DL/2 (t) UCL			11.16	95% H-Stat (DL/2) UCL			37.45			
171											
172	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
173	MLE yields a negative mean					Mean in Log Scale			0.204		
174						SD in Log Scale			2.193		
175						Mean in Original Scale			7.565		
176						SD in Original Scale			12.66		
177						95% Percentile Bootstrap UCL			11.18		
178						95% BCA Bootstrap UCL			11.74		
179											
180	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
181	k star (bias corrected)			0.413	Data appear Lognormal at 5% Significance Level						
182	Theta Star			22.66							
183	nu star			23.95							
184											
185	A-D Test Statistic			0.869	Nonparametric Statistics						
186	5% A-D Critical Value			0.826	Kaplan-Meier (KM) Method						
187	K-S Test Statistic			0.826	Mean			7.572			
188	5% K-S Critical Value			0.174	SD			12.48			
189	Data not Gamma Distributed at 5% Significance Level					SE of Mean			2.117		
190						95% KM (t) UCL			11.15		
191	Assuming Gamma Distribution					95% KM (z) UCL			11.05		
192	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL			11.14		
193	Minimum			1E-09	95% KM (bootstrap t) UCL			12.18			
194	Maximum			43	95% KM (BCA) UCL			11.48			
195	Mean			7.535	95% KM (Percentile Bootstrap) UCL			11.2			
196	Median			1.2	95% KM (Chebyshev) UCL			16.8			
197	SD			12.68	97.5% KM (Chebyshev) UCL			20.79			
198	k star			0.149	99% KM (Chebyshev) UCL			28.63			
199	Theta star			50.65							
200	Nu star			10.71	Potential UCLs to Use						
201	AppChi2			4.392	99% KM (Chebyshev) UCL			28.63			
202	95% Gamma Approximate UCL			18.38							
203	95% Adjusted Gamma UCL			19.18							
204	Note: DL/2 is not a recommended method.										
205											
206											
207	Benzo(b)fluoranthene										
208											
209	General Statistics										
210	Number of Valid Data			36	Number of Detected Data			28			
211	Number of Distinct Detected Data			26	Number of Non-Detect Data			8			
212						Percent Non-Detects			22.22%		

	A	B	C	D	E	F	G	H	I	J	K	L
213												
214	Raw Statistics						Log-transformed Statistics					
215	Minimum Detected					0.062	Minimum Detected					-2.781
216	Maximum Detected					41	Maximum Detected					3.714
217	Mean of Detected					11.02	Mean of Detected					1.185
218	SD of Detected					14.14	SD of Detected					1.899
219	Minimum Non-Detect					0.18	Minimum Non-Detect					-1.715
220	Maximum Non-Detect					1.3	Maximum Non-Detect					0.262
221												
222	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					15
223	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					21
224	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					41.67%
225												
226	UCL Statistics											
227	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
228	Shapiro Wilk Test Statistic					0.741	Shapiro Wilk Test Statistic					0.938
229	5% Shapiro Wilk Critical Value					0.924	5% Shapiro Wilk Critical Value					0.924
230	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
231												
232	Assuming Normal Distribution						Assuming Lognormal Distribution					
233	DL/2 Substitution Method						DL/2 Substitution Method					
234	Mean					8.634	Mean					0.572
235	SD					13.22	SD					2.072
236	95% DL/2 (t) UCL					12.36	95% H-Stat (DL/2) UCL					41.78
237												
238	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
239	Mean					2.979	Mean in Log Scale					0.497
240	SD					18.99	SD in Log Scale					2.133
241	95% MLE (t) UCL					8.326	Mean in Original Scale					8.608
242	95% MLE (Tiku) UCL					9.068	SD in Original Scale					13.24
243							95% Percentile Bootstrap UCL					12.34
244							95% BCA Bootstrap UCL					12.79
245												
246	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
247	k star (bias corrected)					0.488	Data Follow Appr. Gamma Distribution at 5% Significance Level					
248	Theta Star					22.59						
249	nu star					27.32						
250												
251	A-D Test Statistic					0.717	Nonparametric Statistics					
252	5% A-D Critical Value					0.808	Kaplan-Meier (KM) Method					
253	K-S Test Statistic					0.808	Mean					8.605
254	5% K-S Critical Value					0.175	SD					13.06
255	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					2.216
256							95% KM (t) UCL					12.35
257	Assuming Gamma Distribution						95% KM (z) UCL					12.25
258	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					12.33
259	Minimum					1E-09	95% KM (bootstrap t) UCL					13.08
260	Maximum					41	95% KM (BCA) UCL					12.24
261	Mean					8.571	95% KM (Percentile Bootstrap) UCL					12.34
262	Median					2.05	95% KM (Chebyshev) UCL					18.26
263	SD					13.26	97.5% KM (Chebyshev) UCL					22.44
264	k star					0.141	99% KM (Chebyshev) UCL					30.65
265	Theta star					60.66						

A	B	C	D	E	F	G	H	I	J	K	L
266				Nu star	10.17	Potential UCLs to Use					
267				AppChi2	4.05	95% KM (Chebyshev) UCL					18.26
268				95% Gamma Approximate UCL	21.53						
269				95% Adjusted Gamma UCL	22.5						
270	Note: DL/2 is not a recommended method.										
271											
272											
273	Benzo(g,h,i)perylene										
274											
275	General Statistics										
276				Number of Valid Data	35				Number of Detected Data		26
277				Number of Distinct Detected Data	20				Number of Non-Detect Data		9
278									Percent Non-Detects		25.71%
279											
280	Raw Statistics					Log-transformed Statistics					
281				Minimum Detected	0.029				Minimum Detected		-3.54
282				Maximum Detected	24				Maximum Detected		3.178
283				Mean of Detected	3.723				Mean of Detected		-0.0961
284				SD of Detected	5.836				SD of Detected		1.881
285				Minimum Non-Detect	0.18				Minimum Non-Detect		-1.715
286				Maximum Non-Detect	1.3				Maximum Non-Detect		0.262
287											
288	Note: Data have multiple DLs - Use of KM Method is recommended								Number treated as Non-Detect		24
289	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected		11
290	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage		68.57%
291											
292	UCL Statistics										
293	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
294				Shapiro Wilk Test Statistic	0.682				Shapiro Wilk Test Statistic		0.907
295				5% Shapiro Wilk Critical Value	0.92				5% Shapiro Wilk Critical Value		0.92
296	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
297											
298	Assuming Normal Distribution					Assuming Lognormal Distribution					
299				DL/2 Substitution Method					DL/2 Substitution Method		
300				Mean	2.834				Mean		-0.497
301				SD	5.235				SD		1.804
302				95% DL/2 (t) UCL	4.33				95% H-Stat (DL/2) UCL		6.846
303											
304				Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
305	MLE yields a negative mean								Mean in Log Scale		-0.66
306									SD in Log Scale		1.914
307									Mean in Original Scale		2.797
308									SD in Original Scale		5.253
309									95% Percentile Bootstrap UCL		4.23
310									95% BCA Bootstrap UCL		4.649
311											
312	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
313				k star (bias corrected)	0.43	Data do not follow a Discernable Distribution (0.05)					
314				Theta Star	8.664						
315				nu star	22.34						
316											
317				A-D Test Statistic	1.395	Nonparametric Statistics					
318				5% A-D Critical Value	0.818	Kaplan-Meier (KM) Method					

A	B	C	D	E	F	G	H	I	J	K	L
319	K-S Test Statistic				0.818	Mean				2.805	
320	5% K-S Critical Value				0.182	SD				5.173	
321	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.892	
322						95% KM (t) UCL				4.313	
323	Assuming Gamma Distribution					95% KM (z) UCL				4.272	
324	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				4.305	
325	Minimum				1E-09	95% KM (bootstrap t) UCL				5.514	
326	Maximum				24	95% KM (BCA) UCL				4.418	
327	Mean				2.985	95% KM (Percentile Bootstrap) UCL				4.312	
328	Median				0.516	95% KM (Chebyshev) UCL				6.692	
329	SD				5.177	97.5% KM (Chebyshev) UCL				8.374	
330	k star				0.285	99% KM (Chebyshev) UCL				11.68	
331	Theta star				10.47						
332	Nu star				19.96	Potential UCLs to Use					
333	AppChi2				10.82	99% KM (Chebyshev) UCL				11.68	
334	95% Gamma Approximate UCL				5.505						
335	95% Adjusted Gamma UCL				5.673						
336	Note: DL/2 is not a recommended method.										
337											
338											
339	Benzo(k)fluoranthene										
340											
341	General Statistics										
342	Number of Valid Data				36	Number of Detected Data				28	
343	Number of Distinct Detected Data				27	Number of Non-Detect Data				8	
344						Percent Non-Detects				22.22%	
345											
346	Raw Statistics					Log-transformed Statistics					
347	Minimum Detected				0.057	Minimum Detected				-2.865	
348	Maximum Detected				38	Maximum Detected				3.638	
349	Mean of Detected				7.29	Mean of Detected				0.586	
350	SD of Detected				11.24	SD of Detected				1.919	
351	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715	
352	Maximum Non-Detect				1.3	Maximum Non-Detect				0.262	
353											
354	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				22	
355	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				14	
356	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				61.11%	
357											
358	UCL Statistics										
359	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
360	Shapiro Wilk Test Statistic				0.673	Shapiro Wilk Test Statistic				0.955	
361	5% Shapiro Wilk Critical Value				0.924	5% Shapiro Wilk Critical Value				0.924	
362	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
363											
364	Assuming Normal Distribution					Assuming Lognormal Distribution					
365	DL/2 Substitution Method					DL/2 Substitution Method					
366	Mean				5.733	Mean				0.106	
367	SD				10.31	SD				1.957	
368	95% DL/2 (t) UCL				8.636	95% H-Stat (DL/2) UCL				20.06	
369											
370	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
371	MLE yields a negative mean					Mean in Log Scale				0.0225	

	A	B	C	D	E	F	G	H	I	J	K	L
372											SD in Log Scale	2.019
373											Mean in Original Scale	5.707
374											SD in Original Scale	10.32
375											95% Percentile Bootstrap UCL	8.677
376											95% BCA Bootstrap UCL	9.388
377												
378	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
379					k star (bias corrected)	0.434	Data appear Lognormal at 5% Significance Level					
380					Theta Star	16.79						
381					nu star	24.32						
382												
383					A-D Test Statistic	0.891	Nonparametric Statistics					
384					5% A-D Critical Value	0.819	Kaplan-Meier (KM) Method					
385					K-S Test Statistic	0.819	Mean					
386					5% K-S Critical Value	0.176	SD					
387	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
388							95% KM (t) UCL					
389	Assuming Gamma Distribution						95% KM (z) UCL					
390	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
391					Minimum	1E-09	95% KM (bootstrap t) UCL					
392					Maximum	38	95% KM (BCA) UCL					
393					Mean	5.706	95% KM (Percentile Bootstrap) UCL					
394					Median	0.94	95% KM (Chebyshev) UCL					
395					SD	10.32	97.5% KM (Chebyshev) UCL					
396					k star	0.178	99% KM (Chebyshev) UCL					
397					Theta star	32.05						
398					Nu star	12.82	Potential UCLs to Use					
399					AppChi2	5.772	99% KM (Chebyshev) UCL					
400					95% Gamma Approximate UCL	12.67						
401					95% Adjusted Gamma UCL	13.16						
402	Note: DL/2 is not a recommended method.											
403												
404												
405	Carbazole											
406												
407	General Statistics											
408					Number of Valid Data	36					Number of Detected Data	23
409					Number of Distinct Detected Data	21					Number of Non-Detect Data	13
410											Percent Non-Detects	36.11%
411												
412	Raw Statistics						Log-transformed Statistics					
413					Minimum Detected	0.016					Minimum Detected	-4.135
414					Maximum Detected	18					Maximum Detected	2.89
415					Mean of Detected	3.03					Mean of Detected	-0.36
416					SD of Detected	4.863					SD of Detected	1.989
417					Minimum Non-Detect	0.18					Minimum Non-Detect	-1.715
418					Maximum Non-Detect	1.3					Maximum Non-Detect	0.262
419												
420	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
421	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
422	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
423												
424	UCL Statistics											

A	B	C	D	E	F	G	H	I	J	K	L
425	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
426	Shapiro Wilk Test Statistic				0.666	Shapiro Wilk Test Statistic				0.96	
427	5% Shapiro Wilk Critical Value				0.914	5% Shapiro Wilk Critical Value				0.914	
428	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
429											
430	Assuming Normal Distribution					Assuming Lognormal Distribution					
431	DL/2 Substitution Method					DL/2 Substitution Method					
432	Mean				2.019	Mean				-0.872	
433	SD				4.092	SD				1.78	
434	95% DL/2 (t) UCL				3.171	95% H-Stat (DL/2) UCL				4.353	
435											
436	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
437	MLE yields a negative mean					Mean in Log Scale				-1.038	
438						SD in Log Scale				1.858	
439						Mean in Original Scale				1.98	
440						SD in Original Scale				4.108	
441						95% Percentile Bootstrap UCL				3.208	
442						95% BCA Bootstrap UCL				3.46	
443											
444	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
445	k star (bias corrected)				0.412	Data appear Gamma Distributed at 5% Significance Level					
446	Theta Star				7.346						
447	nu star				18.97						
448											
449	A-D Test Statistic				0.66	Nonparametric Statistics					
450	5% A-D Critical Value				0.818	Kaplan-Meier (KM) Method					
451	K-S Test Statistic				0.818	Mean				1.982	
452	5% K-S Critical Value				0.193	SD				4.05	
453	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.69	
454						95% KM (t) UCL				3.148	
455	Assuming Gamma Distribution					95% KM (z) UCL				3.117	
456	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				3.139	
457	Minimum				0.016	95% KM (bootstrap t) UCL				4.109	
458	Maximum				18	95% KM (BCA) UCL				3.142	
459	Mean				2.576	95% KM (Percentile Bootstrap) UCL				3.159	
460	Median				1.564	95% KM (Chebyshev) UCL				4.991	
461	SD				3.932	97.5% KM (Chebyshev) UCL				6.293	
462	k star				0.576	99% KM (Chebyshev) UCL				8.85	
463	Theta star				4.471						
464	Nu star				41.49	Potential UCLs to Use					
465	AppChi2				27.72	95% KM (BCA) UCL				3.142	
466	95% Gamma Approximate UCL				3.855						
467	95% Adjusted Gamma UCL				3.927						
468	Note: DL/2 is not a recommended method.										
469											
470											
471	Dibenzo(a,h)anthracene										
472											
473	General Statistics										
474	Number of Valid Data				31	Number of Detected Data				19	
475	Number of Distinct Detected Data				18	Number of Non-Detect Data				12	
476						Percent Non-Detects				38.71%	
477											

A	B	C	D	E	F	G	H	I	J	K	L
478	Raw Statistics					Log-transformed Statistics					
479	Minimum Detected				0.053	Minimum Detected				-2.937	
480	Maximum Detected				7.4	Maximum Detected				2.001	
481	Mean of Detected				1.78	Mean of Detected				-0.679	
482	SD of Detected				2.274	SD of Detected				1.872	
483	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715	
484	Maximum Non-Detect				13	Maximum Non-Detect				2.565	
485											
486	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				31	
487	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				0	
488	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				100.00%	
489											
490	UCL Statistics										
491	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
492	Shapiro Wilk Test Statistic				0.784	Shapiro Wilk Test Statistic				0.861	
493	5% Shapiro Wilk Critical Value				0.901	5% Shapiro Wilk Critical Value				0.901	
494	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
495											
496	Assuming Normal Distribution					Assuming Lognormal Distribution					
497	DL/2 Substitution Method					DL/2 Substitution Method					
498	Mean				1.39	Mean				-0.953	
499	SD				2.135	SD				1.683	
500	95% DL/2 (t) UCL				2.041	95% H-Stat (DL/2) UCL				3.814	
501											
502	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
503	MLE method failed to converge properly					Mean in Log Scale				-1.264	
504						SD in Log Scale				1.667	
505						Mean in Original Scale				1.141	
506						SD in Original Scale				1.943	
507						95% Percentile Bootstrap UCL				1.709	
508						95% BCA Bootstrap UCL				1.888	
509											
510	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
511	k star (bias corrected)				0.46	Data Follow Appr. Gamma Distribution at 5% Significance Level					
512	Theta Star				3.868						
513	nu star				17.49						
514											
515	A-D Test Statistic				0.978	Nonparametric Statistics					
516	5% A-D Critical Value				0.802	Kaplan-Meier (KM) Method					
517	K-S Test Statistic				0.802	Mean				1.164	
518	5% K-S Critical Value				0.21	SD				1.94	
519	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean				0.364	
520						95% KM (t) UCL				1.782	
521	Assuming Gamma Distribution					95% KM (z) UCL				1.763	
522	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				1.776	
523	Minimum				0.053	95% KM (bootstrap t) UCL				2.083	
524	Maximum				7.4	95% KM (BCA) UCL				1.797	
525	Mean				1.642	95% KM (Percentile Bootstrap) UCL				1.799	
526	Median				1.51	95% KM (Chebyshev) UCL				2.751	
527	SD				1.79	97.5% KM (Chebyshev) UCL				3.438	
528	k star				0.702	99% KM (Chebyshev) UCL				4.787	
529	Theta star				2.338						
530	Nu star				43.55	Potential UCLs to Use					

A	B	C	D	E	F	G	H	I	J	K	L
531				AppChi2	29.42				95% KM (BCA) UCL		1.797
532				95% Gamma Approximate UCL	2.431						
533				95% Adjusted Gamma UCL	2.486						
534	Note: DL/2 is not a recommended method.										
535											
536											
537	Dimethylphthalate										
538											
539	General Statistics										
540				Number of Valid Data	36				Number of Detected Data		9
541				Number of Distinct Detected Data	9				Number of Non-Detect Data		27
542									Percent Non-Detects		75.00%
543											
544	Raw Statistics					Log-transformed Statistics					
545				Minimum Detected	0.092				Minimum Detected		-2.386
546				Maximum Detected	1.6				Maximum Detected		0.47
547				Mean of Detected	0.525				Mean of Detected		-1.067
548				SD of Detected	0.541				SD of Detected		0.96
549				Minimum Non-Detect	0.18				Minimum Non-Detect		-1.715
550				Maximum Non-Detect	13				Maximum Non-Detect		2.565
551											
552	Note: Data have multiple DLs - Use of KM Method is recommended								Number treated as Non-Detect		36
553	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected		0
554	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage		100.00%
555											
556	Warning: There are only 9 Detected Values in this data										
557	Note: It should be noted that even though bootstrap may be performed on this data set										
558	the resulting calculations may not be reliable enough to draw conclusions										
559											
560	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
561											
562											
563	UCL Statistics										
564	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
565				Shapiro Wilk Test Statistic	0.743				Shapiro Wilk Test Statistic		0.931
566				5% Shapiro Wilk Critical Value	0.829				5% Shapiro Wilk Critical Value		0.829
567	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
568											
569	Assuming Normal Distribution					Assuming Lognormal Distribution					
570				DL/2 Substitution Method					DL/2 Substitution Method		
571				Mean	0.694				Mean		-1.089
572				SD	1.148				SD		1.158
573				95% DL/2 (t) UCL	1.017				95% H-Stat (DL/2) UCL		1.231
574											
575				Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
576	MLE method failed to converge properly								Mean in Log Scale		-1.851
577									SD in Log Scale		0.72
578									Mean in Original Scale		0.227
579									SD in Original Scale		0.314
580									95% Percentile Bootstrap UCL		0.32
581									95% BCA Bootstrap UCL		0.362
582											
583	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					

A	B	C	D	E	F	G	H	I	J	K	L	
584	k star (bias corrected)			0.959	Data appear Gamma Distributed at 5% Significance Level							
585	Theta Star			0.547								
586	nu star			17.27								
587												
588	A-D Test Statistic			0.554	Nonparametric Statistics							
589	5% A-D Critical Value			0.737	Kaplan-Meier (KM) Method							
590	K-S Test Statistic			0.737	Mean							0.257
591	5% K-S Critical Value			0.285	SD							0.344
592	Data appear Gamma Distributed at 5% Significance Level				SE of Mean							0.07
593												
594	Assuming Gamma Distribution				95% KM (t) UCL							0.375
595	Gamma ROS Statistics using Extrapolated Data				95% KM (z) UCL							0.372
596	Minimum			1E-09	95% KM (jackknife) UCL							0.373
597	Maximum			1.6	95% KM (bootstrap t) UCL							0.531
598	Mean			0.63	95% KM (BCA) UCL							0.44
599	Median			0.723	95% KM (Percentile Bootstrap) UCL							0.406
600	SD			0.369	95% KM (Chebyshev) UCL							0.562
601	k star			0.769	97.5% KM (Chebyshev) UCL							0.694
602	Theta star			0.819	99% KM (Chebyshev) UCL							0.953
603	Nu star			55.37	Potential UCLs to Use							
604	AppChi2			39.27	95% KM (t) UCL							0.375
605	95% Gamma Approximate UCL			0.888								
606	95% Adjusted Gamma UCL			0.903								
607	Note: DL/2 is not a recommended method.											
608												
609												
610	Di-n-octylphthalate											
611												
612	General Statistics											
613	Number of Valid Data			26	Number of Detected Data			10				
614	Number of Distinct Detected Data			9	Number of Non-Detect Data			16				
615	Percent Non-Detects											61.54%
616												
617	Raw Statistics				Log-transformed Statistics							
618	Minimum Detected			0.021	Minimum Detected			-3.863				
619	Maximum Detected			5	Maximum Detected			1.609				
620	Mean of Detected			1.192	Mean of Detected			-0.687				
621	SD of Detected			1.568	SD of Detected			1.562				
622	Minimum Non-Detect			0.18	Minimum Non-Detect			-1.715				
623	Maximum Non-Detect			13	Maximum Non-Detect			2.565				
624												
625	Note: Data have multiple DLs - Use of KM Method is recommended				Number treated as Non-Detect			26				
626	For all methods (except KM, DL/2, and ROS Methods),				Number treated as Detected			0				
627	Observations < Largest ND are treated as NDs				Single DL Non-Detect Percentage			100.00%				
628												
629	UCL Statistics											
630	Normal Distribution Test with Detected Values Only				Lognormal Distribution Test with Detected Values Only							
631	Shapiro Wilk Test Statistic			0.743	Shapiro Wilk Test Statistic			0.943				
632	5% Shapiro Wilk Critical Value			0.842	5% Shapiro Wilk Critical Value			0.842				
633	Data not Normal at 5% Significance Level				Data appear Lognormal at 5% Significance Level							
634												
635	Assuming Normal Distribution				Assuming Lognormal Distribution							
636	DL/2 Substitution Method			DL/2 Substitution Method								

A	B	C	D	E	F	G	H	I	J	K	L
637				Mean	0.929					Mean	-0.996
638				SD	1.551					SD	1.371
639				95% DL/2 (t) UCL	1.449					95% H-Stat (DL/2) UCL	2.441
640											
641				Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
642				MLE method failed to converge properly						Mean in Log Scale	-2.088
643										SD in Log Scale	1.572
644										Mean in Original Scale	0.498
645										SD in Original Scale	1.095
646										95% Percentile Bootstrap UCL	0.895
647										95% BCA Bootstrap UCL	1.01
648											
649				Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only	
650				k star (bias corrected)	0.557					Data appear Gamma Distributed at 5% Significance Level	
651				Theta Star	2.14						
652				nu star	11.14						
653											
654				A-D Test Statistic	0.385					Nonparametric Statistics	
655				5% A-D Critical Value	0.761					Kaplan-Meier (KM) Method	
656				K-S Test Statistic	0.761					Mean	0.54
657				5% K-S Critical Value	0.277					SD	1.094
658				Data appear Gamma Distributed at 5% Significance Level						SE of Mean	0.233
659										95% KM (t) UCL	0.938
660				Assuming Gamma Distribution						95% KM (z) UCL	0.924
661				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	0.884
662				Minimum	1E-09					95% KM (bootstrap t) UCL	1.368
663				Maximum	5					95% KM (BCA) UCL	1.121
664				Mean	1.329					95% KM (Percentile Bootstrap) UCL	0.954
665				Median	1.051					95% KM (Chebyshev) UCL	1.557
666				SD	1.191					97.5% KM (Chebyshev) UCL	1.998
667				k star	0.477					99% KM (Chebyshev) UCL	2.863
668				Theta star	2.787						
669				Nu star	24.79					Potential UCLs to Use	
670				AppChi2	14.45					95% KM (t) UCL	0.938
671				95% Gamma Approximate UCL	2.28						
672				95% Adjusted Gamma UCL	2.365						
673	Note: DL/2 is not a recommended method.										
674											
675											
676	Indeno(1,2,3-cd)pyrene										
677											
678	General Statistics										
679				Number of Valid Data	35					Number of Detected Data	27
680				Number of Distinct Detected Data	26					Number of Non-Detect Data	8
681										Percent Non-Detects	22.86%
682											
683	Raw Statistics					Log-transformed Statistics					
684				Minimum Detected	0.028					Minimum Detected	-3.576
685				Maximum Detected	28					Maximum Detected	3.332
686				Mean of Detected	5.201					Mean of Detected	0.319
687				SD of Detected	7.773					SD of Detected	1.84
688				Minimum Non-Detect	0.18					Minimum Non-Detect	-1.715
689				Maximum Non-Detect	1.3					Maximum Non-Detect	0.262

A	B	C	D	E	F	G	H	I	J	K	L
690											
691	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					24
692	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					11
693	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					68.57%
694											
695	UCL Statistics										
696	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
697	Shapiro Wilk Test Statistic				0.699	Shapiro Wilk Test Statistic				0.944	
698	5% Shapiro Wilk Critical Value				0.923	5% Shapiro Wilk Critical Value				0.923	
699	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
700											
701	Assuming Normal Distribution					Assuming Lognormal Distribution					
702	DL/2 Substitution Method					DL/2 Substitution Method					
703	Mean				4.077	Mean				-0.114	
704	SD				7.113	SD				1.844	
705	95% DL/2 (t) UCL				6.11	95% H-Stat (DL/2) UCL				11.87	
706											
707	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
708	MLE yields a negative mean					Mean in Log Scale				-0.268	
709						SD in Log Scale				1.993	
710						Mean in Original Scale				4.046	
711						SD in Original Scale				7.13	
712						95% Percentile Bootstrap UCL				6.105	
713						95% BCA Bootstrap UCL				6.527	
714											
715	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
716	k star (bias corrected)				0.452	Data appear Lognormal at 5% Significance Level					
717	Theta Star				11.51						
718	nu star				24.4						
719											
720	A-D Test Statistic				1.218	Nonparametric Statistics					
721	5% A-D Critical Value				0.812	Kaplan-Meier (KM) Method					
722	K-S Test Statistic				0.812	Mean				4.055	
723	5% K-S Critical Value				0.178	SD				7.023	
724	Data not Gamma Distributed at 5% Significance Level					SE of Mean				1.21	
725						95% KM (t) UCL				6.101	
726	Assuming Gamma Distribution					95% KM (z) UCL				6.045	
727	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				6.092	
728	Minimum				1E-09	95% KM (bootstrap t) UCL				6.796	
729	Maximum				28	95% KM (BCA) UCL				6.101	
730	Mean				4.198	95% KM (Percentile Bootstrap) UCL				6.03	
731	Median				0.67	95% KM (Chebyshev) UCL				9.328	
732	SD				7.064	97.5% KM (Chebyshev) UCL				11.61	
733	k star				0.209	99% KM (Chebyshev) UCL				16.09	
734	Theta star				20.05						
735	Nu star				14.65	Potential UCLs to Use					
736	AppChi2				7.022	99% KM (Chebyshev) UCL				16.09	
737	95% Gamma Approximate UCL				8.761						
738	95% Adjusted Gamma UCL				9.085						
739	Note: DL/2 is not a recommended method.										
740											
741											
742	Phenanthrene										

	A	B	C	D	E	F	G	H	I	J	K	L		
743														
744	General Statistics													
745	Number of Valid Data					36		Number of Detected Data					31	
746	Number of Distinct Detected Data					31		Number of Non-Detect Data					5	
747								Percent Non-Detects					13.89%	
748														
749	Raw Statistics						Log-transformed Statistics							
750	Minimum Detected					0.079		Minimum Detected					-2.538	
751	Maximum Detected					80		Maximum Detected					4.382	
752	Mean of Detected					11.84		Mean of Detected					0.945	
753	SD of Detected					19.83		SD of Detected					2.045	
754	Minimum Non-Detect					0.18		Minimum Non-Detect					-1.715	
755	Maximum Non-Detect					0.61		Maximum Non-Detect					-0.494	
756														
757	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						12	
758	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						24	
759	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						33.33%	
760														
761	UCL Statistics													
762	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
763	Shapiro Wilk Test Statistic					0.641		Shapiro Wilk Test Statistic					0.954	
764	5% Shapiro Wilk Critical Value					0.929		5% Shapiro Wilk Critical Value					0.929	
765	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
766														
767	Assuming Normal Distribution						Assuming Lognormal Distribution							
768	DL/2 Substitution Method							DL/2 Substitution Method						
769	Mean					10.22		Mean					0.516	
770	SD					18.81		SD					2.188	
771	95% DL/2 (t) UCL					15.52		95% H-Stat (DL/2) UCL					69.63	
772														
773	Maximum Likelihood Estimate(MLE) Method						Log ROS Method							
774	Mean					4.264		Mean in Log Scale					0.503	
775	SD					24.52		SD in Log Scale					2.205	
776	95% MLE (t) UCL					11.17		Mean in Original Scale					10.22	
777	95% MLE (Tiku) UCL					11.62		SD in Original Scale					18.81	
778								95% Percentile Bootstrap UCL					16.06	
779								95% BCA Bootstrap UCL					17.15	
780														
781	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
782	k star (bias corrected)					0.407		Data appear Gamma Distributed at 5% Significance Level						
783	Theta Star					29.13								
784	nu star					25.21								
785														
786	A-D Test Statistic					0.71		Nonparametric Statistics						
787	5% A-D Critical Value					0.826		Kaplan-Meier (KM) Method						
788	K-S Test Statistic					0.826		Mean					10.21	
789	5% K-S Critical Value					0.168		SD					18.55	
790	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						3.143	
791								95% KM (t) UCL					15.52	
792	Assuming Gamma Distribution						95% KM (z) UCL						15.38	
793	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						15.51	
794	Minimum					1E-09		95% KM (bootstrap t) UCL					18.73	
795	Maximum					80		95% KM (BCA) UCL					15.69	

	A	B	C	D	E	F	G	H	I	J	K	L	
796					Mean	10.2				95% KM (Percentile Bootstrap) UCL		15.78	
797					Median	1.5				95% KM (Chebyshev) UCL		23.92	
798					SD	18.82				97.5% KM (Chebyshev) UCL		29.84	
799					k star	0.176				99% KM (Chebyshev) UCL		41.49	
800					Theta star	57.98							
801					Nu star	12.67				Potential UCLs to Use			
802					AppChi2	5.669				95% KM (Chebyshev) UCL		23.92	
803					95% Gamma Approximate UCL	22.79							
804					95% Adjusted Gamma UCL	23.68							
805	Note: DL/2 is not a recommended method.												
806													
807													
808	Dieldrin												
809													
810	General Statistics												
811					Number of Valid Data	34				Number of Detected Data		17	
812					Number of Distinct Detected Data	15				Number of Non-Detect Data		17	
813										Percent Non-Detects		50.00%	
814													
815	Raw Statistics						Log-transformed Statistics						
816					Minimum Detected	0.0046				Minimum Detected		-5.382	
817					Maximum Detected	0.29				Maximum Detected		-1.238	
818					Mean of Detected	0.0407				Mean of Detected		-3.82	
819					SD of Detected	0.0671				SD of Detected		1.031	
820					Minimum Non-Detect	0.0036				Minimum Non-Detect		-5.627	
821					Maximum Non-Detect	0.025				Maximum Non-Detect		-3.689	
822													
823	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						28
824	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						6
825	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						82.35%
826													
827	UCL Statistics												
828	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
829					Shapiro Wilk Test Statistic	0.507				Shapiro Wilk Test Statistic		0.954	
830					5% Shapiro Wilk Critical Value	0.892				5% Shapiro Wilk Critical Value		0.892	
831	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
832													
833	Assuming Normal Distribution						Assuming Lognormal Distribution						
834					DL/2 Substitution Method					DL/2 Substitution Method			
835					Mean	0.0242				Mean		-4.51	
836					SD	0.0498				SD		1.19	
837					95% DL/2 (t) UCL	0.0386				95% H-Stat (DL/2) UCL		0.0398	
838													
839					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
840	MLE yields a negative mean						Mean in Log Scale						-4.731
841							SD in Log Scale						1.282
842							Mean in Original Scale						0.0227
843							SD in Original Scale						0.0503
844							95% Percentile Bootstrap UCL						0.0384
845							95% BCA Bootstrap UCL						0.0474
846													
847	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
848					k star (bias corrected)	0.813	Data Follow Appr. Gamma Distribution at 5% Significance Level						

A	B	C	D	E	F	G	H	I	J	K	L
849				Theta Star	0.0501						
850				nu star	27.63						
851											
852				A-D Test Statistic	0.927	Nonparametric Statistics					
853				5% A-D Critical Value	0.769	Kaplan-Meier (KM) Method					
854				K-S Test Statistic	0.769					Mean	0.0239
855				5% K-S Critical Value	0.216					SD	0.0491
856	Data follow Appr. Gamma Distribution at 5% Significance Level									SE of Mean	0.00871
857										95% KM (t) UCL	0.0387
858	Assuming Gamma Distribution									95% KM (z) UCL	0.0383
859	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	0.0379
860				Minimum	0.0046					95% KM (bootstrap t) UCL	0.0662
861				Maximum	0.29					95% KM (BCA) UCL	0.0411
862				Mean	0.0402					95% KM (Percentile Bootstrap) UCL	0.0404
863				Median	0.0377					95% KM (Chebyshev) UCL	0.0619
864				SD	0.0468					97.5% KM (Chebyshev) UCL	0.0783
865				k star	1.622					99% KM (Chebyshev) UCL	0.111
866				Theta star	0.0248						
867				Nu star	110.3	Potential UCLs to Use					
868				AppChi2	87.04					95% KM (t) UCL	0.0387
869				95% Gamma Approximate UCL	0.0509						
870				95% Adjusted Gamma UCL	0.0515						
871	Note: DL/2 is not a recommended method.										
872											
873											
874	Endosulfan II										
875											
876	General Statistics										
877				Number of Valid Data	34					Number of Detected Data	8
878				Number of Distinct Detected Data	7					Number of Non-Detect Data	26
879										Percent Non-Detects	76.47%
880											
881	Raw Statistics					Log-transformed Statistics					
882				Minimum Detected	0.0083					Minimum Detected	-4.791
883				Maximum Detected	0.15					Maximum Detected	-1.897
884				Mean of Detected	0.054					Mean of Detected	-3.462
885				SD of Detected	0.054					SD of Detected	1.166
886				Minimum Non-Detect	0.0036					Minimum Non-Detect	-5.627
887				Maximum Non-Detect	0.025					Maximum Non-Detect	-3.689
888											
889	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect	30
890	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected	4
891	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage	88.24%
892											
893	Warning: There are only 8 Detected Values in this data										
894	Note: It should be noted that even though bootstrap may be performed on this data set										
895	the resulting calculations may not be reliable enough to draw conclusions										
896											
897	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
898											
899											
900	UCL Statistics										
901	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					

A	B	C	D	E	F	G	H	I	J	K	L
902	Shapiro Wilk Test Statistic				0.826	Shapiro Wilk Test Statistic				0.871	
903	5% Shapiro Wilk Critical Value				0.818	5% Shapiro Wilk Critical Value				0.818	
904	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
905											
906	Assuming Normal Distribution					Assuming Lognormal Distribution					
907	DL/2 Substitution Method					DL/2 Substitution Method					
908	Mean				0.016	Mean				-5.237	
909	SD				0.033	SD				1.309	
910	95% DL/2 (t) UCL				0.0256	95% H-Stat (DL/2) UCL				0.0162	
911											
912	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
913	Mean				0.102	Mean in Log Scale				-6.509	
914	SD				0.0386	SD in Log Scale				1.982	
915	95% MLE (t) UCL				0.114	Mean in Original Scale				0.0134	
916	95% MLE (Tiku) UCL				0.135	SD in Original Scale				0.0338	
917						95% Percentile Bootstrap UCL				0.0232	
918						95% BCA Bootstrap UCL				0.0262	
919											
920	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
921	k star (bias corrected)				0.743	Data appear Normal at 5% Significance Level					
922	Theta Star				0.0727						
923	nu star				11.89						
924											
925	A-D Test Statistic				0.576	Nonparametric Statistics					
926	5% A-D Critical Value				0.735	Kaplan-Meier (KM) Method					
927	K-S Test Statistic				0.735	Mean				0.0192	
928	5% K-S Critical Value				0.301	SD				0.0312	
929	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.00573	
930						95% KM (t) UCL				0.0288	
931	Assuming Gamma Distribution					95% KM (z) UCL				0.0286	
932	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.0272	
933	Minimum				0.0083	95% KM (bootstrap t) UCL				0.0344	
934	Maximum				0.15	95% KM (BCA) UCL				0.0345	
935	Mean				0.055	95% KM (Percentile Bootstrap) UCL				0.0305	
936	Median				0.0532	95% KM (Chebyshev) UCL				0.0441	
937	SD				0.0267	97.5% KM (Chebyshev) UCL				0.0549	
938	k star				3.346	99% KM (Chebyshev) UCL				0.0761	
939	Theta star				0.0164						
940	Nu star				227.6	Potential UCLs to Use					
941	AppChi2				193.6	95% KM (t) UCL				0.0288	
942	95% Gamma Approximate UCL				0.0646	95% KM (Percentile Bootstrap) UCL				0.0305	
943	95% Adjusted Gamma UCL				0.0651						
944	Note: DL/2 is not a recommended method.										
945											
946											
947	Endosulfan sulfate										
948											
949	General Statistics										
950	Number of Valid Data				34	Number of Detected Data				6	
951	Number of Distinct Detected Data				6	Number of Non-Detect Data				28	
952						Percent Non-Detects				82.35%	
953											
954	Raw Statistics					Log-transformed Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L
955				Minimum Detected		0.01				Minimum Detected		-4.605
956				Maximum Detected		0.057				Maximum Detected		-2.865
957				Mean of Detected		0.0333				Mean of Detected		-3.56
958				SD of Detected		0.0184				SD of Detected		0.661
959				Minimum Non-Detect		0.0036				Minimum Non-Detect		-5.627
960				Maximum Non-Detect		0.025				Maximum Non-Detect		-3.689
961												
962	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect				30
963	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected				4
964	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage				88.24%
965												
966	Warning: There are only 6 Detected Values in this data											
967	Note: It should be noted that even though bootstrap may be performed on this data set											
968	the resulting calculations may not be reliable enough to draw conclusions											
969												
970	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
971												
972												
973	UCL Statistics											
974	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
975				Shapiro Wilk Test Statistic		0.957				Shapiro Wilk Test Statistic		0.942
976				5% Shapiro Wilk Critical Value		0.788				5% Shapiro Wilk Critical Value		0.788
977	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
978												
979	Assuming Normal Distribution						Assuming Lognormal Distribution					
980				DL/2 Substitution Method						DL/2 Substitution Method		
981				Mean		0.0104				Mean		-5.216
982				SD		0.0136				SD		1.128
983				95% DL/2 (t) UCL		0.0144				95% H-Stat (DL/2) UCL		0.0145
984												
985	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
986				Mean		0.0456				Mean in Log Scale		-5.718
987				SD		0.0116				SD in Log Scale		1.191
988				95% MLE (t) UCL		0.0489				Mean in Original Scale		0.00794
989				95% MLE (Tiku) UCL		0.0552				SD in Original Scale		0.014
990										95% Percentile Bootstrap UCL		0.0122
991										95% BCA Bootstrap UCL		0.0131
992												
993	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
994				k star (bias corrected)		1.759	Data appear Normal at 5% Significance Level					
995				Theta Star		0.0189						
996				nu star		21.11						
997												
998				A-D Test Statistic		0.219	Nonparametric Statistics					
999				5% A-D Critical Value		0.701	Kaplan-Meier (KM) Method					
1000				K-S Test Statistic		0.701				Mean		0.0142
1001				5% K-S Critical Value		0.334				SD		0.0113
1002	Data appear Gamma Distributed at 5% Significance Level									SE of Mean		0.00214
1003										95% KM (t) UCL		0.0179
1004	Assuming Gamma Distribution									95% KM (z) UCL		0.0178
1005	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL		0.0194
1006				Minimum		0.01				95% KM (bootstrap t) UCL		0.0178
1007				Maximum		0.057				95% KM (BCA) UCL		0.0371

	A	B	C	D	E	F	G	H	I	J	K	L	
1008					Mean	0.034				95% KM (Percentile Bootstrap) UCL		0.0309	
1009					Median	0.034				95% KM (Chebyshev) UCL		0.0236	
1010					SD	0.00764				97.5% KM (Chebyshev) UCL		0.0276	
1011					k star	14.78				99% KM (Chebyshev) UCL		0.0356	
1012					Theta star	0.0023							
1013					Nu star	1005				Potential UCLs to Use			
1014					AppChi2	932.7				95% KM (t) UCL		0.0179	
1015					95% Gamma Approximate UCL	0.0366				95% KM (Percentile Bootstrap) UCL		0.0309	
1016					95% Adjusted Gamma UCL	0.0368							
1017	Note: DL/2 is not a recommended method.												
1018													
1019													
1020	Endrin aldehyde												
1021													
1022	General Statistics												
1023					Number of Valid Data	32				Number of Detected Data		10	
1024					Number of Distinct Detected Data	8				Number of Non-Detect Data		22	
1025										Percent Non-Detects		68.75%	
1026													
1027	Raw Statistics						Log-transformed Statistics						
1028					Minimum Detected	0.011				Minimum Detected		-4.51	
1029					Maximum Detected	0.11				Maximum Detected		-2.207	
1030					Mean of Detected	0.0368				Mean of Detected		-3.701	
1031					SD of Detected	0.0376				SD of Detected		0.886	
1032					Minimum Non-Detect	0.0036				Minimum Non-Detect		-5.627	
1033					Maximum Non-Detect	0.025				Maximum Non-Detect		-3.689	
1034													
1035	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						29
1036	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						3
1037	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						90.63%
1038													
1039	UCL Statistics												
1040	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1041					Shapiro Wilk Test Statistic	0.707				Shapiro Wilk Test Statistic		0.789	
1042					5% Shapiro Wilk Critical Value	0.842				5% Shapiro Wilk Critical Value		0.842	
1043	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1044													
1045	Assuming Normal Distribution						Assuming Lognormal Distribution						
1046					DL/2 Substitution Method					DL/2 Substitution Method			
1047					Mean	0.0159				Mean		-4.886	
1048					SD	0.0251				SD		1.204	
1049					95% DL/2 (t) UCL	0.0234				95% H-Stat (DL/2) UCL		0.0244	
1050													
1051					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1052	MLE yields a negative mean						Mean in Log Scale						-5.146
1053							SD in Log Scale						1.215
1054							Mean in Original Scale						0.0141
1055							SD in Original Scale						0.0256
1056							95% Percentile Bootstrap UCL						0.0221
1057							95% BCA Bootstrap UCL						0.0248
1058													
1059	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1060					k star (bias corrected)	1.045				Data do not follow a Discernable Distribution (0.05)			

	A	B	C	D	E	F	G	H	I	J	K	L
1061					Theta Star	0.0352						
1062					nu star	20.9						
1063												
1064					A-D Test Statistic	1.19	Nonparametric Statistics					
1065					5% A-D Critical Value	0.741	Kaplan-Meier (KM) Method					
1066					K-S Test Statistic	0.741					Mean	0.0193
1067					5% K-S Critical Value	0.272					SD	0.0232
1068	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.00432
1069											95% KM (t) UCL	0.0267
1070	Assuming Gamma Distribution										95% KM (z) UCL	0.0264
1071	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	0.0256
1072					Minimum	0.011					95% KM (bootstrap t) UCL	0.0363
1073					Maximum	0.11					95% KM (BCA) UCL	0.0285
1074					Mean	0.0393					95% KM (Percentile Bootstrap) UCL	0.0269
1075					Median	0.0368					95% KM (Chebyshev) UCL	0.0382
1076					SD	0.0214					97.5% KM (Chebyshev) UCL	0.0463
1077					k star	3.442					99% KM (Chebyshev) UCL	0.0623
1078					Theta star	0.0114						
1079					Nu star	220.3	Potential UCLs to Use					
1080					AppChi2	186.9					95% KM (t) UCL	0.0267
1081					95% Gamma Approximate UCL	0.0463					95% KM (% Bootstrap) UCL	0.0269
1082					95% Adjusted Gamma UCL	0.0467						
1083	Note: DL/2 is not a recommended method.											
1084												
1085												
1086	Endrin ketone											
1087												
1088	General Statistics											
1089					Number of Valid Data	35					Number of Detected Data	10
1090					Number of Distinct Detected Data	10					Number of Non-Detect Data	25
1091											Percent Non-Detects	71.43%
1092												
1093	Raw Statistics					Log-transformed Statistics						
1094					Minimum Detected	0.011					Minimum Detected	-4.51
1095					Maximum Detected	0.12					Maximum Detected	-2.12
1096					Mean of Detected	0.043					Mean of Detected	-3.413
1097					SD of Detected	0.0345					SD of Detected	0.767
1098					Minimum Non-Detect	0.0036					Minimum Non-Detect	-5.627
1099					Maximum Non-Detect	0.025					Maximum Non-Detect	-3.689
1100												
1101	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect	29
1102	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	6
1103	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	82.86%
1104												
1105	UCL Statistics											
1106	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1107					Shapiro Wilk Test Statistic	0.846					Shapiro Wilk Test Statistic	0.972
1108					5% Shapiro Wilk Critical Value	0.842					5% Shapiro Wilk Critical Value	0.842
1109	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1110												
1111	Assuming Normal Distribution					Assuming Lognormal Distribution						
1112					DL/2 Substitution Method						DL/2 Substitution Method	
1113					Mean	0.0164					Mean	-4.924

A	B	C	D	E	F	G	H	I	J	K	L
1167	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					22
1168	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					9
1169	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					70.97%
1170											
1171	UCL Statistics										
1172	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1173	Shapiro Wilk Test Statistic			0.957		Shapiro Wilk Test Statistic			0.795		
1174	5% Shapiro Wilk Critical Value			0.85		5% Shapiro Wilk Critical Value			0.85		
1175	Data appear Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1176											
1177	Assuming Normal Distribution					Assuming Lognormal Distribution					
1178	DL/2 Substitution Method					DL/2 Substitution Method					
1179	Mean			0.0127		Mean			-5.245		
1180	SD			0.0164		SD			1.415		
1181	95% DL/2 (t) UCL			0.0177		95% H-Stat (DL/2) UCL			0.025		
1182											
1183	Maximum Likelihood Estimate(MLE) Method			N/A		Log ROS Method					
1184	MLE yields a negative mean					Mean in Log Scale			-5.563		
1185						SD in Log Scale			1.531		
1186						Mean in Original Scale			0.0116		
1187						SD in Original Scale			0.0169		
1188						95% Percentile Bootstrap UCL			0.0169		
1189						95% BCA Bootstrap UCL			0.0178		
1190											
1191	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1192	k star (bias corrected)			1.328		Data appear Normal at 5% Significance Level					
1193	Theta Star			0.0221							
1194	nu star			29.22							
1195											
1196	A-D Test Statistic			0.716		Nonparametric Statistics					
1197	5% A-D Critical Value			0.741		Kaplan-Meier (KM) Method					
1198	K-S Test Statistic			0.741		Mean			0.0122		
1199	5% K-S Critical Value			0.259		SD			0.0163		
1200	Data appear Gamma Distributed at 5% Significance Level					SE of Mean			0.00307		
1201						95% KM (t) UCL			0.0174		
1202	Assuming Gamma Distribution					95% KM (z) UCL			0.0172		
1203	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL			0.0169		
1204	Minimum			0.0027		95% KM (bootstrap t) UCL			0.0185		
1205	Maximum			0.065		95% KM (BCA) UCL			0.0278		
1206	Mean			0.0293		95% KM (Percentile Bootstrap) UCL			0.0259		
1207	Median			0.0274		95% KM (Chebyshev) UCL			0.0256		
1208	SD			0.0134		97.5% KM (Chebyshev) UCL			0.0314		
1209	k star			3.009		99% KM (Chebyshev) UCL			0.0427		
1210	Theta star			0.00974							
1211	Nu star			186.6		Potential UCLs to Use					
1212	AppChi2			156		95% KM (t) UCL			0.0174		
1213	95% Gamma Approximate UCL			0.0351		95% KM (Percentile Bootstrap) UCL			0.0259		
1214	95% Adjusted Gamma UCL			0.0354							
1215	Note: DL/2 is not a recommended method.										
1216											
1217											
1218	Aroclor-1254										
1219											

	A	B	C	D	E	F	G	H	I	J	K	L
1220	General Statistics											
1221	Number of Valid Data					36	Number of Detected Data					15
1222	Number of Distinct Detected Data					15	Number of Non-Detect Data					21
1223							Percent Non-Detects					58.33%
1224												
1225	Raw Statistics						Log-transformed Statistics					
1226	Minimum Detected					0.051	Minimum Detected					-2.976
1227	Maximum Detected					5.7	Maximum Detected					1.74
1228	Mean of Detected					1.297	Mean of Detected					-0.492
1229	SD of Detected					1.769	SD of Detected					1.286
1230	Minimum Non-Detect					0.036	Minimum Non-Detect					-3.324
1231	Maximum Non-Detect					0.38	Maximum Non-Detect					-0.968
1232												
1233	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					27
1234	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					9
1235	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					75.00%
1236												
1237	UCL Statistics											
1238	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1239	Shapiro Wilk Test Statistic					0.672	Shapiro Wilk Test Statistic					0.963
1240	5% Shapiro Wilk Critical Value					0.881	5% Shapiro Wilk Critical Value					0.881
1241	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1242												
1243	Assuming Normal Distribution						Assuming Lognormal Distribution					
1244	DL/2 Substitution Method						DL/2 Substitution Method					
1245	Mean					0.557	Mean					-2.431
1246	SD					1.286	SD					1.889
1247	95% DL/2 (t) UCL					0.919	95% H-Stat (DL/2) UCL					0.708
1248												
1249	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1250	MLE yields a negative mean						Mean in Log Scale					-2.593
1251							SD in Log Scale					2.087
1252							Mean in Original Scale					0.554
1253							SD in Original Scale					1.287
1254							95% Percentile Bootstrap UCL					0.94
1255							95% BCA Bootstrap UCL					1.022
1256												
1257	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1258	k star (bias corrected)					0.677	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1259	Theta Star					1.915						
1260	nu star					20.32						
1261												
1262	A-D Test Statistic					0.75	Nonparametric Statistics					
1263	5% A-D Critical Value					0.773	Kaplan-Meier (KM) Method					
1264	K-S Test Statistic					0.773	Mean					0.571
1265	5% K-S Critical Value					0.23	SD					1.262
1266	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.218
1267							95% KM (t) UCL					0.939
1268	Assuming Gamma Distribution						95% KM (z) UCL					0.929
1269	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.894
1270	Minimum					0.051	95% KM (bootstrap t) UCL					1.248
1271	Maximum					5.7	95% KM (BCA) UCL					1.051
1272	Mean					1.289	95% KM (Percentile Bootstrap) UCL					0.967

	A	B	C	D	E	F	G	H	I	J	K	L	
1273					Median	1.202				95% KM (Chebyshev) UCL		1.52	
1274					SD	1.122				97.5% KM (Chebyshev) UCL		1.931	
1275					k star	1.608				99% KM (Chebyshev) UCL		2.738	
1276					Theta star	0.801							
1277					Nu star	115.8			Potential UCLs to Use				
1278					AppChi2	91.95				95% KM (t) UCL		0.939	
1279					95% Gamma Approximate UCL	1.623							
1280					95% Adjusted Gamma UCL	1.64							
1281	Note: DL/2 is not a recommended method.												
1282													
1283													
1284	Aroclor-1260												
1285													
1286	General Statistics												
1287					Number of Valid Data	37				Number of Detected Data		25	
1288					Number of Distinct Detected Data	24				Number of Non-Detect Data		12	
1289										Percent Non-Detects		32.43%	
1290													
1291	Raw Statistics						Log-transformed Statistics						
1292					Minimum Detected	0.032				Minimum Detected		-3.442	
1293					Maximum Detected	30				Maximum Detected		3.401	
1294					Mean of Detected	2.266				Mean of Detected		-0.439	
1295					SD of Detected	5.983				SD of Detected		1.511	
1296					Minimum Non-Detect	0.036				Minimum Non-Detect		-3.324	
1297					Maximum Non-Detect	0.048				Maximum Non-Detect		-3.037	
1298													
1299	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		13
1300	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		24
1301	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		35.14%
1302													
1303	UCL Statistics												
1304	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1305					Shapiro Wilk Test Statistic	0.364				Shapiro Wilk Test Statistic		0.959	
1306					5% Shapiro Wilk Critical Value	0.918				5% Shapiro Wilk Critical Value		0.918	
1307	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1308													
1309	Assuming Normal Distribution						Assuming Lognormal Distribution						
1310					DL/2 Substitution Method					DL/2 Substitution Method			
1311					Mean	1.538				Mean		-1.554	
1312					SD	5				SD		2.046	
1313					95% DL/2 (t) UCL	2.925				95% H-Stat (DL/2) UCL		2.759	
1314													
1315					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method			
1316	MLE yields a negative mean										Mean in Log Scale		-1.453
1317										SD in Log Scale		1.95	
1318										Mean in Original Scale		1.541	
1319										SD in Original Scale		4.999	
1320										95% Percentile Bootstrap UCL		3.013	
1321										95% BCA Bootstrap UCL		4.334	
1322													
1323	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1324					k star (bias corrected)	0.471				Data appear Lognormal at 5% Significance Level			
1325					Theta Star	4.813							

	A	B	C	D	E	F	G	H	I	J	K	L	
1326					nu star	23.54							
1327													
1328					A-D Test Statistic	1.786	Nonparametric Statistics						
1329					5% A-D Critical Value	0.806	Kaplan-Meier (KM) Method						
1330					K-S Test Statistic	0.806				Mean		1.541	
1331					5% K-S Critical Value	0.184					SD	4.931	
1332	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.827	
1333											95% KM (t) UCL	2.938	
1334	Assuming Gamma Distribution											95% KM (z) UCL	2.902
1335	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	2.923
1336					Minimum	1E-09					95% KM (bootstrap t) UCL	9.061	
1337					Maximum	30					95% KM (BCA) UCL	3.278	
1338					Mean	1.535					95% KM (Percentile Bootstrap) UCL	3.047	
1339					Median	0.39					95% KM (Chebyshev) UCL	5.147	
1340					SD	5.001					97.5% KM (Chebyshev) UCL	6.708	
1341					k star	0.124					99% KM (Chebyshev) UCL	9.773	
1342					Theta star	12.41							
1343					Nu star	9.152	Potential UCLs to Use						
1344					AppChi2	3.419					99% KM (Chebyshev) UCL	9.773	
1345					95% Gamma Approximate UCL	4.109							
1346					95% Adjusted Gamma UCL	4.299							
1347	Note: DL/2 is not a recommended method.												
1348													
1349													
1350	Antimony												
1351													
1352	General Statistics												
1353					Number of Valid Data	38					Number of Detected Data	24	
1354					Number of Distinct Detected Data	21					Number of Non-Detect Data	14	
1355											Percent Non-Detects	36.84%	
1356													
1357	Raw Statistics						Log-transformed Statistics						
1358					Minimum Detected	2.5					Minimum Detected	0.916	
1359					Maximum Detected	76.7					Maximum Detected	4.34	
1360					Mean of Detected	16.67					Mean of Detected	2.256	
1361					SD of Detected	18.84					SD of Detected	1.073	
1362					Minimum Non-Detect	0.66					Minimum Non-Detect	-0.416	
1363					Maximum Non-Detect	8					Maximum Non-Detect	2.079	
1364													
1365	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	27
1366	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	11
1367	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	71.05%
1368													
1369	UCL Statistics												
1370	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1371					Shapiro Wilk Test Statistic	0.759					Shapiro Wilk Test Statistic	0.915	
1372					5% Shapiro Wilk Critical Value	0.916					5% Shapiro Wilk Critical Value	0.916	
1373	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1374													
1375	Assuming Normal Distribution						Assuming Lognormal Distribution						
1376					DL/2 Substitution Method						DL/2 Substitution Method		
1377					Mean	11.75					Mean	1.827	
1378					SD	16.24					SD	1.087	

A	B	C	D	E	F	G	H	I	J	K	L
1379	95% DL/2 (t) UCL				16.19	95% H-Stat (DL/2) UCL				13.91	
1380											
1381	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
1382	MLE yields a negative mean					Mean in Log Scale				1.856	
1383						SD in Log Scale				1.047	
1384						Mean in Original Scale				11.83	
1385						SD in Original Scale				16.2	
1386						95% Percentile Bootstrap UCL				16.22	
1387						95% BCA Bootstrap UCL				17.16	
1388											
1389	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1390	k star (bias corrected)				0.93	Data do not follow a Discernable Distribution (0.05)					
1391	Theta Star				17.93						
1392	nu star				44.62						
1393											
1394	A-D Test Statistic				1.091	Nonparametric Statistics					
1395	5% A-D Critical Value				0.771	Kaplan-Meier (KM) Method					
1396	K-S Test Statistic				0.771	Mean				11.89	
1397	5% K-S Critical Value				0.183	SD				15.96	
1398	Data not Gamma Distributed at 5% Significance Level					SE of Mean				2.649	
1399						95% KM (t) UCL				16.36	
1400	Assuming Gamma Distribution					95% KM (z) UCL				16.25	
1401	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				16.32	
1402	Minimum				2.5	95% KM (bootstrap t) UCL				18.31	
1403	Maximum				76.7	95% KM (BCA) UCL				16.21	
1404	Mean				16.39	95% KM (Percentile Bootstrap) UCL				16.44	
1405	Median				14.17	95% KM (Chebyshev) UCL				23.44	
1406	SD				14.94	97.5% KM (Chebyshev) UCL				28.43	
1407	k star				1.437	99% KM (Chebyshev) UCL				38.25	
1408	Theta star				11.4						
1409	Nu star				109.2	Potential UCLs to Use					
1410	AppChi2				86.13	97.5% KM (Chebyshev) UCL				28.43	
1411	95% Gamma Approximate UCL				20.79						
1412	95% Adjusted Gamma UCL				21						
1413	Note: DL/2 is not a recommended method.										
1414											
1415											
1416	Arsenic										
1417											
1418	General Statistics										
1419	Number of Valid Data				38	Number of Detected Data				37	
1420	Number of Distinct Detected Data				36	Number of Non-Detect Data				1	
1421						Percent Non-Detects				2.63%	
1422											
1423	Raw Statistics					Log-transformed Statistics					
1424	Minimum Detected				2.2	Minimum Detected				0.788	
1425	Maximum Detected				37.4	Maximum Detected				3.622	
1426	Mean of Detected				11.24	Mean of Detected				2.207	
1427	SD of Detected				8.158	SD of Detected				0.657	
1428	Minimum Non-Detect				0.48	Minimum Non-Detect				-0.734	
1429	Maximum Non-Detect				0.48	Maximum Non-Detect				-0.734	
1430											
1431											

A	B	C	D	E	F	G	H	I	J	K	L		
1432	UCL Statistics												
1433	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
1434	Shapiro Wilk Test Statistic				0.808	Shapiro Wilk Test Statistic				0.984			
1435	5% Shapiro Wilk Critical Value				0.936	5% Shapiro Wilk Critical Value				0.936			
1436	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
1437													
1438	Assuming Normal Distribution					Assuming Lognormal Distribution							
1439	DL/2 Substitution Method					DL/2 Substitution Method							
1440	Mean				10.95	Mean				2.111			
1441	SD				8.243	SD				0.876			
1442	95% DL/2 (t) UCL				13.2	95% H-Stat (DL/2) UCL				15.38			
1443													
1444	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
1445	Mean				10.85	Mean in Log Scale				2.163			
1446	SD				8.302	SD in Log Scale				0.703			
1447	95% MLE (t) UCL				13.12	Mean in Original Scale				10.99			
1448	95% MLE (Tiku) UCL				13.05	SD in Original Scale				8.195			
1449						95% Percentile Bootstrap UCL				13.28			
1450						95% BCA Bootstrap UCL				13.61			
1451													
1452	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
1453	k star (bias corrected)				2.322	Data appear Gamma Distributed at 5% Significance Level							
1454	Theta Star				4.839								
1455	nu star				171.9								
1456													
1457	A-D Test Statistic				0.463	Nonparametric Statistics							
1458	5% A-D Critical Value				0.757	Kaplan-Meier (KM) Method							
1459	K-S Test Statistic				0.757	Mean				11			
1460	5% K-S Critical Value				0.146	SD				8.071			
1461	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				1.327			
1462						95% KM (t) UCL				13.24			
1463	Assuming Gamma Distribution					95% KM (z) UCL						13.18	
1464	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						13.23	
1465	Minimum				1E-09	95% KM (bootstrap t) UCL					14		
1466	Maximum				37.4	95% KM (BCA) UCL					13.31		
1467	Mean				10.94	95% KM (Percentile Bootstrap) UCL					13.06		
1468	Median				8.9	95% KM (Chebyshev) UCL					16.79		
1469	SD				8.251	97.5% KM (Chebyshev) UCL					19.29		
1470	k star				0.715	99% KM (Chebyshev) UCL					24.21		
1471	Theta star				15.3								
1472	Nu star				54.36	Potential UCLs to Use							
1473	AppChi2				38.42	95% KM (BCA) UCL				13.31			
1474	95% Gamma Approximate UCL				15.48								
1475	95% Adjusted Gamma UCL				15.71								
1476	Note: DL/2 is not a recommended method.												
1477													
1478													
1479	Chromium												
1480													
1481	General Statistics												
1482	Number of Valid Observations				37	Number of Distinct Observations				34			
1483													
1484	Raw Statistics					Log-transformed Statistics							

A	B	C	D	E	F	G	H	I	J	K	L	
1485				Minimum	10.6				Minimum of Log Data		2.361	
1486				Maximum	12100				Maximum of Log Data		9.401	
1487				Mean	538				Mean of log Data		4.509	
1488				Median	97.6				SD of log Data		1.534	
1489				SD	2001							
1490				Coefficient of Variation	3.719							
1491				Skewness	5.668							
1492												
1493	Relevant UCL Statistics											
1494	Normal Distribution Test					Lognormal Distribution Test						
1495				Shapiro Wilk Test Statistic	0.273				Shapiro Wilk Test Statistic		0.907	
1496				Shapiro Wilk Critical Value	0.936				Shapiro Wilk Critical Value		0.936	
1497	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1498												
1499	Assuming Normal Distribution					Assuming Lognormal Distribution						
1500				95% Student's-t UCL	1093				95% H-UCL		644.1	
1501	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						670.4
1502				95% Adjusted-CLT UCL	1407				97.5% Chebyshev (MVUE) UCL		841	
1503				95% Modified-t UCL	1144				99% Chebyshev (MVUE) UCL		1176	
1504												
1505	Gamma Distribution Test					Data Distribution						
1506				k star (bias corrected)	0.362	Data do not follow a Discernable Distribution (0.05)						
1507				Theta Star	1488							
1508				MLE of Mean	538							
1509				MLE of Standard Deviation	894.7							
1510				nu star	26.76							
1511				Approximate Chi Square Value (.05)	15.96	Nonparametric Statistics						
1512				Adjusted Level of Significance	0.0431				95% CLT UCL		1079	
1513				Adjusted Chi Square Value	15.6				95% Jackknife UCL		1093	
1514									95% Standard Bootstrap UCL		1073	
1515				Anderson-Darling Test Statistic	4.682				95% Bootstrap-t UCL		3317	
1516				Anderson-Darling 5% Critical Value	0.841				95% Hall's Bootstrap UCL		3200	
1517				Kolmogorov-Smirnov Test Statistic	0.354				95% Percentile Bootstrap UCL		1161	
1518				Kolmogorov-Smirnov 5% Critical Value	0.156				95% BCA Bootstrap UCL		1598	
1519	Data not Gamma Distributed at 5% Significance Level								95% Chebyshev(Mean, Sd) UCL		1972	
1520									97.5% Chebyshev(Mean, Sd) UCL		2592	
1521	Assuming Gamma Distribution								99% Chebyshev(Mean, Sd) UCL		3811	
1522				95% Approximate Gamma UCL	901.8							
1523				95% Adjusted Gamma UCL	922.7							
1524												
1525	Potential UCL to Use								Use 99% Chebyshev (Mean, Sd) UCL		3811	
1526												
1527												
1528	Cobalt											
1529												
1530	General Statistics											
1531				Number of Valid Observations	38				Number of Distinct Observations		32	
1532												
1533	Raw Statistics					Log-transformed Statistics						
1534				Minimum	5.5				Minimum of Log Data		1.705	
1535				Maximum	36.2				Maximum of Log Data		3.589	
1536				Mean	11.66				Mean of log Data		2.345	
1537				Median	9.3				SD of log Data		0.438	

A	B	C	D	E	F	G	H	I	J	K	L
1538				SD	6.79						
1539				Coefficient of Variation	0.582						
1540				Skewness	2.29						
1541											
1542	Relevant UCL Statistics										
1543	Normal Distribution Test					Lognormal Distribution Test					
1544				Shapiro Wilk Test Statistic	0.71				Shapiro Wilk Test Statistic	0.885	
1545				Shapiro Wilk Critical Value	0.938				Shapiro Wilk Critical Value	0.938	
1546	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1547											
1548	Assuming Normal Distribution					Assuming Lognormal Distribution					
1549				95% Student's-t UCL	13.52				95% H-UCL	13.15	
1550	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					15.14
1551				95% Adjusted-CLT UCL	13.91				97.5% Chebyshev (MVUE) UCL	16.73	
1552				95% Modified-t UCL	13.59				99% Chebyshev (MVUE) UCL	19.86	
1553											
1554	Gamma Distribution Test					Data Distribution					
1555				k star (bias corrected)	4.306	Data do not follow a Discernable Distribution (0.05)					
1556				Theta Star	2.709						
1557				MLE of Mean	11.66						
1558				MLE of Standard Deviation	5.621						
1559				nu star	327.2						
1560				Approximate Chi Square Value (.05)	286.3	Nonparametric Statistics					
1561				Adjusted Level of Significance	0.0434				95% CLT UCL	13.47	
1562				Adjusted Chi Square Value	284.7				95% Jackknife UCL	13.52	
1563									95% Standard Bootstrap UCL	13.46	
1564				Anderson-Darling Test Statistic	2.218				95% Bootstrap-t UCL	14.47	
1565				Anderson-Darling 5% Critical Value	0.751				95% Hall's Bootstrap UCL	14	
1566				Kolmogorov-Smirnov Test Statistic	0.204				95% Percentile Bootstrap UCL	13.63	
1567				Kolmogorov-Smirnov 5% Critical Value	0.144				95% BCA Bootstrap UCL	14	
1568	Data not Gamma Distributed at 5% Significance Level								95% Chebyshev(Mean, Sd) UCL	16.46	
1569									97.5% Chebyshev(Mean, Sd) UCL	18.54	
1570	Assuming Gamma Distribution								99% Chebyshev(Mean, Sd) UCL	22.62	
1571				95% Approximate Gamma UCL	13.33						
1572				95% Adjusted Gamma UCL	13.4						
1573											
1574	Potential UCL to Use								Use 95% Student's-t UCL	13.52	
1575									or 95% Modified-t UCL	13.59	
1576											
1577											
1578	Copper										
1579											
1580	General Statistics										
1581				Number of Valid Observations	37				Number of Distinct Observations	37	
1582											
1583	Raw Statistics					Log-transformed Statistics					
1584				Minimum	6.2				Minimum of Log Data	1.825	
1585				Maximum	7460				Maximum of Log Data	8.917	
1586				Mean	945.9				Mean of log Data	5.827	
1587				Median	347				SD of log Data	1.633	
1588				SD	1495						
1589				Coefficient of Variation	1.58						
1590				Skewness	2.952						

A	B	C	D	E	F	G	H	I	J	K	L	
1591												
1592	Relevant UCL Statistics											
1593	Normal Distribution Test					Lognormal Distribution Test						
1594	Shapiro Wilk Test Statistic				0.631	Shapiro Wilk Test Statistic				0.972		
1595	Shapiro Wilk Critical Value				0.936	Shapiro Wilk Critical Value				0.936		
1596	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1597												
1598	Assuming Normal Distribution					Assuming Lognormal Distribution						
1599	95% Student's-t UCL				1361	95% H-UCL				3075		
1600	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					3036	
1601	95% Adjusted-CLT UCL				1478	97.5% Chebyshev (MVUE) UCL				3834		
1602	95% Modified-t UCL				1381	99% Chebyshev (MVUE) UCL				5401		
1603												
1604	Gamma Distribution Test					Data Distribution						
1605	k star (bias corrected)				0.572	Data appear Gamma Distributed at 5% Significance Level						
1606	Theta Star				1655							
1607	MLE of Mean				945.9							
1608	MLE of Standard Deviation				1251							
1609	nu star				42.3							
1610	Approximate Chi Square Value (.05)				28.39	Nonparametric Statistics						
1611	Adjusted Level of Significance				0.0431	95% CLT UCL				1350		
1612	Adjusted Chi Square Value				27.9	95% Jackknife UCL				1361		
1613						95% Standard Bootstrap UCL				1348		
1614	Anderson-Darling Test Statistic				0.532	95% Bootstrap-t UCL				1666		
1615	Anderson-Darling 5% Critical Value				0.803	95% Hall's Bootstrap UCL				1832		
1616	Kolmogorov-Smirnov Test Statistic				0.118	95% Percentile Bootstrap UCL				1367		
1617	Kolmogorov-Smirnov 5% Critical Value				0.152	95% BCA Bootstrap UCL				1586		
1618	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				2017		
1619						97.5% Chebyshev(Mean, Sd) UCL				2481		
1620	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						3391
1621	95% Approximate Gamma UCL				1409							
1622	95% Adjusted Gamma UCL				1434							
1623												
1624	Potential UCL to Use					Use 95% Approximate Gamma UCL						1409
1625												
1626												
1627	Iron											
1628												
1629	General Statistics											
1630	Number of Valid Observations				28	Number of Distinct Observations				28		
1631												
1632	Raw Statistics					Log-transformed Statistics						
1633	Minimum			17100	Minimum of Log Data				9.747			
1634	Maximum			224000	Maximum of Log Data				12.32			
1635	Mean			47611	Mean of log Data				10.54			
1636	Median			35100	SD of log Data				0.642			
1637	SD			42367								
1638	Coefficient of Variation			0.89								
1639	Skewness			2.991								
1640												
1641	Relevant UCL Statistics											
1642	Normal Distribution Test					Lognormal Distribution Test						
1643	Shapiro Wilk Test Statistic				0.666	Shapiro Wilk Test Statistic				0.923		

A	B	C	D	E	F	G	H	I	J	K	L	
1644	Shapiro Wilk Critical Value				0.924	Shapiro Wilk Critical Value				0.924		
1645	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1646												
1647	Assuming Normal Distribution					Assuming Lognormal Distribution						
1648	95% Student's-t UCL				61248	95% H-UCL				59754		
1649	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL				71813		
1650	95% Adjusted-CLT UCL				65616	97.5% Chebyshev (MVUE) UCL				83024		
1651	95% Modified-t UCL				62002	99% Chebyshev (MVUE) UCL				105046		
1652												
1653	Gamma Distribution Test					Data Distribution						
1654	k star (bias corrected)				2.071	Data do not follow a Discernable Distribution (0.05)						
1655	Theta Star				22991							
1656	MLE of Mean				47611							
1657	MLE of Standard Deviation				33085							
1658	nu star				116							
1659	Approximate Chi Square Value (.05)				92.1	Nonparametric Statistics						
1660	Adjusted Level of Significance				0.0404	95% CLT UCL				60780		
1661	Adjusted Chi Square Value				90.79	95% Jackknife UCL				61248		
1662						95% Standard Bootstrap UCL				60507		
1663	Anderson-Darling Test Statistic				1.048	95% Bootstrap-t UCL				72357		
1664	Anderson-Darling 5% Critical Value				0.757	95% Hall's Bootstrap UCL				115339		
1665	Kolmogorov-Smirnov Test Statistic				0.172	95% Percentile Bootstrap UCL				62186		
1666	Kolmogorov-Smirnov 5% Critical Value				0.167	95% BCA Bootstrap UCL				67118		
1667	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				82511		
1668						97.5% Chebyshev(Mean, Sd) UCL				97612		
1669	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				127276		
1670	95% Approximate Gamma UCL				59946							
1671	95% Adjusted Gamma UCL				60814							
1672												
1673	Potential UCL to Use					Use 95% Chebyshev (Mean, Sd) UCL				82511		
1674												
1675												
1676	Lead											
1677												
1678	General Statistics											
1679	Number of Valid Observations				38	Number of Distinct Observations				38		
1680												
1681	Raw Statistics					Log-transformed Statistics						
1682	Minimum				4	Minimum of Log Data				1.386		
1683	Maximum				3840	Maximum of Log Data				8.253		
1684	Mean				992.8	Mean of log Data				6.198		
1685	Median				666	SD of log Data				1.555		
1686	SD				962.9							
1687	Coefficient of Variation				0.97							
1688	Skewness				1.3							
1689												
1690	Relevant UCL Statistics											
1691	Normal Distribution Test					Lognormal Distribution Test						
1692	Shapiro Wilk Test Statistic				0.849	Shapiro Wilk Test Statistic				0.887		
1693	Shapiro Wilk Critical Value				0.938	Shapiro Wilk Critical Value				0.938		
1694	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1695												
1696	Assuming Normal Distribution					Assuming Lognormal Distribution						

A	B	C	D	E	F	G	H	I	J	K	L
1697	95% Student's-t UCL				1256	95% H-UCL					3639
1698	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					3761
1699	95% Adjusted-CLT UCL				1285	97.5% Chebyshev (MVUE) UCL					4721
1700	95% Modified-t UCL				1262	99% Chebyshev (MVUE) UCL					6607
1701											
1702	Gamma Distribution Test					Data Distribution					
1703	k star (bias corrected)				0.79	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1704	Theta Star				1256						
1705	MLE of Mean				992.8						
1706	MLE of Standard Deviation				1117						
1707	nu star				60.07						
1708	Approximate Chi Square Value (.05)				43.25	Nonparametric Statistics					
1709	Adjusted Level of Significance				0.0434	95% CLT UCL					1250
1710	Adjusted Chi Square Value				42.66	95% Jackknife UCL					1256
1711						95% Standard Bootstrap UCL					1249
1712	Anderson-Darling Test Statistic				0.434	95% Bootstrap-t UCL					1304
1713	Anderson-Darling 5% Critical Value				0.785	95% Hall's Bootstrap UCL					1280
1714	Kolmogorov-Smirnov Test Statistic				0.155	95% Percentile Bootstrap UCL					1263
1715	Kolmogorov-Smirnov 5% Critical Value				0.148	95% BCA Bootstrap UCL					1285
1716	Data follow Appr. Gamma Distribution at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL					1674
1717						97.5% Chebyshev(Mean, Sd) UCL					1968
1718	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					2547
1719	95% Approximate Gamma UCL				1379						
1720	95% Adjusted Gamma UCL				1398						
1721											
1722	Potential UCL to Use					Use 95% Approximate Gamma UCL					1379
1723											
1724											
1725	Manganese										
1726											
1727	General Statistics										
1728	Number of Valid Observations				38	Number of Distinct Observations					35
1729											
1730	Raw Statistics					Log-transformed Statistics					
1731	Minimum				278	Minimum of Log Data					5.628
1732	Maximum				3260	Maximum of Log Data					8.089
1733	Mean				735.6	Mean of log Data					6.382
1734	Median				551.5	SD of log Data					0.605
1735	SD				648						
1736	Coefficient of Variation				0.881						
1737	Skewness				2.944						
1738											
1739	Relevant UCL Statistics										
1740	Normal Distribution Test					Lognormal Distribution Test					
1741	Shapiro Wilk Test Statistic				0.634	Shapiro Wilk Test Statistic					0.905
1742	Shapiro Wilk Critical Value				0.938	Shapiro Wilk Critical Value					0.938
1743	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1744											
1745	Assuming Normal Distribution					Assuming Lognormal Distribution					
1746	95% Student's-t UCL				912.9	95% H-UCL					866.3
1747	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					1029
1748	95% Adjusted-CLT UCL				962.1	97.5% Chebyshev (MVUE) UCL					1168
1749	95% Modified-t UCL				921.3	99% Chebyshev (MVUE) UCL					1443

A	B	C	D	E	F	G	H	I	J	K	L
1750											
1751	Gamma Distribution Test					Data Distribution					
1752	k star (bias corrected)				2.264	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1753	Theta Star				324.8						
1754	MLE of Mean				735.6						
1755	MLE of Standard Deviation				488.8						
1756	nu star				172.1						
1757	Approximate Chi Square Value (.05)				142.8	Nonparametric Statistics					
1758	Adjusted Level of Significance				0.0434	95% CLT UCL				908.4	
1759	Adjusted Chi Square Value				141.7	95% Jackknife UCL				912.9	
1760						95% Standard Bootstrap UCL				906.2	
1761	Anderson-Darling Test Statistic				1.662	95% Bootstrap-t UCL				1074	
1762	Anderson-Darling 5% Critical Value				0.757	95% Hall's Bootstrap UCL				1807	
1763	Kolmogorov-Smirnov Test Statistic				0.14	95% Percentile Bootstrap UCL				912.5	
1764	Kolmogorov-Smirnov 5% Critical Value				0.145	95% BCA Bootstrap UCL				970.9	
1765	Data follow Appr. Gamma Distribution at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				1194	
1766						97.5% Chebyshev(Mean, Sd) UCL				1392	
1767	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				1781	
1768	95% Approximate Gamma UCL				886.7						
1769	95% Adjusted Gamma UCL				893.6						
1770											
1771	Potential UCL to Use					Use 95% Approximate Gamma UCL				886.7	
1772											
1773											
1774	Thallium										
1775											
1776	General Statistics										
1777	Number of Valid Data				38	Number of Detected Data				8	
1778	Number of Distinct Detected Data				6	Number of Non-Detect Data				30	
1779						Percent Non-Detects				78.95%	
1780											
1781	Raw Statistics					Log-transformed Statistics					
1782	Minimum Detected				0.72	Minimum Detected				-0.329	
1783	Maximum Detected				4.6	Maximum Detected				1.526	
1784	Mean of Detected				1.296	Mean of Detected				0.0149	
1785	SD of Detected				1.339	SD of Detected				0.623	
1786	Minimum Non-Detect				0.79	Minimum Non-Detect				-0.236	
1787	Maximum Non-Detect				3.3	Maximum Non-Detect				1.194	
1788											
1789	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				37	
1790	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				1	
1791	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				97.37%	
1792											
1793	Warning: There are only 8 Detected Values in this data										
1794	Note: It should be noted that even though bootstrap may be performed on this data set										
1795	the resulting calculations may not be reliable enough to draw conclusions										
1796											
1797	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
1798											
1799											
1800	UCL Statistics										
1801	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1802	Shapiro Wilk Test Statistic				0.487	Shapiro Wilk Test Statistic				0.593	

A	B	C	D	E	F	G	H	I	J	K	L
1803	5% Shapiro Wilk Critical Value				0.818	5% Shapiro Wilk Critical Value				0.818	
1804	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1805											
1806	Assuming Normal Distribution					Assuming Lognormal Distribution					
1807	DL/2 Substitution Method					DL/2 Substitution Method					
1808	Mean				1.281	Mean				0.127	
1809	SD				0.693	SD				0.508	
1810	95% DL/2 (t) UCL				1.471	95% H-Stat (DL/2) UCL				1.895	
1811											
1812	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
1813	MLE method failed to converge properly					Mean in Log Scale				-0.175	
1814						SD in Log Scale				0.36	
1815						Mean in Original Scale				0.922	
1816						SD in Original Scale				0.64	
1817						95% Percentile Bootstrap UCL				1.118	
1818						95% BCA Bootstrap UCL				1.259	
1819											
1820	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1821	k star (bias corrected)				1.456	Data do not follow a Discernable Distribution (0.05)					
1822	Theta Star				0.89						
1823	nu star				23.3						
1824											
1825	A-D Test Statistic				1.774	Nonparametric Statistics					
1826	5% A-D Critical Value				0.723	Kaplan-Meier (KM) Method					
1827	K-S Test Statistic				0.723	Mean				0.894	
1828	5% K-S Critical Value				0.297	SD				0.616	
1829	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.11	
1830						95% KM (t) UCL				1.079	
1831	Assuming Gamma Distribution					95% KM (z) UCL				1.074	
1832	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				1.07	
1833	Minimum				0.72	95% KM (bootstrap t) UCL				1.605	
1834	Maximum				4.6	95% KM (BCA) UCL				1.105	
1835	Mean				1.396	95% KM (Percentile Bootstrap) UCL				1.087	
1836	Median				1.307	95% KM (Chebyshev) UCL				1.371	
1837	SD				0.68	97.5% KM (Chebyshev) UCL				1.578	
1838	k star				5.677	99% KM (Chebyshev) UCL				1.984	
1839	Theta star				0.246						
1840	Nu star				431.5	Potential UCLs to Use					
1841	AppChi2				384.3	95% KM (t) UCL				1.079	
1842	95% Gamma Approximate UCL				1.567	95% KM (% Bootstrap) UCL				1.087	
1843	95% Adjusted Gamma UCL				1.575						
1844	Note: DL/2 is not a recommended method.										
1845											
1846											
1847	Vanadium										
1848											
1849	General Statistics										
1850	Number of Valid Observations				38	Number of Distinct Observations				38	
1851											
1852	Raw Statistics					Log-transformed Statistics					
1853	Minimum				8.9	Minimum of Log Data				2.186	
1854	Maximum				841	Maximum of Log Data				6.735	
1855	Mean				93.89	Mean of log Data				3.928	

	A	B	C	D	E	F	G	H	I	J	K	L
1856					Median	48.25					SD of log Data	1.06
1857					SD	148						
1858					Coefficient of Variation	1.576						
1859					Skewness	3.943						
1860												
1861	Relevant UCL Statistics											
1862	Normal Distribution Test						Lognormal Distribution Test					
1863					Shapiro Wilk Test Statistic	0.54				Shapiro Wilk Test Statistic	0.969	
1864					Shapiro Wilk Critical Value	0.938				Shapiro Wilk Critical Value	0.938	
1865	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1866												
1867	Assuming Normal Distribution						Assuming Lognormal Distribution					
1868					95% Student's-t UCL	134.4				95% H-UCL	136.9	
1869	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					
1870					95% Adjusted-CLT UCL	149.8				97.5% Chebyshev (MVUE) UCL	197.4	
1871					95% Modified-t UCL	137				99% Chebyshev (MVUE) UCL	262.8	
1872												
1873	Gamma Distribution Test						Data Distribution					
1874					k star (bias corrected)	0.889				Data appear Lognormal at 5% Significance Level		
1875					Theta Star	105.6						
1876					MLE of Mean	93.89						
1877					MLE of Standard Deviation	99.56						
1878					nu star	67.59						
1879					Approximate Chi Square Value (.05)	49.67				Nonparametric Statistics		
1880					Adjusted Level of Significance	0.0434				95% CLT UCL	133.4	
1881					Adjusted Chi Square Value	49.03				95% Jackknife UCL	134.4	
1882										95% Standard Bootstrap UCL	132.2	
1883					Anderson-Darling Test Statistic	1.247				95% Bootstrap-t UCL	178.5	
1884					Anderson-Darling 5% Critical Value	0.78				95% Hall's Bootstrap UCL	284.5	
1885					Kolmogorov-Smirnov Test Statistic	0.18				95% Percentile Bootstrap UCL	138.1	
1886					Kolmogorov-Smirnov 5% Critical Value	0.148				95% BCA Bootstrap UCL	155.3	
1887	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					
1888										97.5% Chebyshev(Mean, Sd) UCL	243.8	
1889	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					
1890					95% Approximate Gamma UCL	127.8						
1891					95% Adjusted Gamma UCL	129.4						
1892												
1893	Potential UCL to Use						Use 95% H-UCL					
1894												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics			General UCL Statistics for Data Sets with Non-Detects								
2	User Selected Options											
3	From File			\\Pr1-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProUCL_042								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	Acenaphthylene											
10												
11	General Statistics											
12	Number of Valid Data				42		Number of Detected Data				20	
13	Number of Distinct Detected Data				17		Number of Non-Detect Data				22	
14									Percent Non-Detects		52.38%	
15												
16	Raw Statistics						Log-transformed Statistics					
17	Minimum Detected			0.055			Minimum Detected			-2.9		
18	Maximum Detected			3.9			Maximum Detected			1.361		
19	Mean of Detected			1.081			Mean of Detected			-0.467		
20	SD of Detected			1.029			SD of Detected			1.22		
21	Minimum Non-Detect			0.18			Minimum Non-Detect			-1.715		
22	Maximum Non-Detect			1.9			Maximum Non-Detect			0.642		
23												
24	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect			39		
25	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected			3		
26	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage			92.86%		
27												
28	UCL Statistics											
29	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
30	Shapiro Wilk Test Statistic			0.858			Shapiro Wilk Test Statistic			0.946		
31	5% Shapiro Wilk Critical Value			0.905			5% Shapiro Wilk Critical Value			0.905		
32	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
33												
34	Assuming Normal Distribution						Assuming Lognormal Distribution					
35	DL/2 Substitution Method						DL/2 Substitution Method					
36	Mean			0.594			Mean			-1.332		
37	SD			0.853			SD			1.239		
38	95% DL/2 (t) UCL			0.816			95% H-Stat (DL/2) UCL			0.668		
39												
40	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
41	MLE yields a negative mean						Mean in Log Scale			-1.488		
42							SD in Log Scale			1.376		
43							Mean in Original Scale			0.571		
44							SD in Original Scale			0.857		
45							95% Percentile Bootstrap UCL			0.79		
46							95% BCA Bootstrap UCL			0.85		
47												
48	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
49	k star (bias corrected)			0.928			Data appear Gamma Distributed at 5% Significance Level					
50	Theta Star			1.165								
51	nu star			37.11								
52												
53	A-D Test Statistic			0.208			Nonparametric Statistics					

A	B	C	D	E	F	G	H	I	J	K	L
54	5% A-D Critical Value				0.767	Kaplan-Meier (KM) Method					
55	K-S Test Statistic				0.767	Mean					0.569
56	5% K-S Critical Value				0.199	SD					0.852
57	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					0.136
58						95% KM (t) UCL					0.797
59	Assuming Gamma Distribution					95% KM (z) UCL					0.792
60	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.795
61	Minimum				0.055	95% KM (bootstrap t) UCL					0.863
62	Maximum				3.9	95% KM (BCA) UCL					0.816
63	Mean				1.089	95% KM (Percentile Bootstrap) UCL					0.798
64	Median				1.06	95% KM (Chebyshev) UCL					1.161
65	SD				0.71	97.5% KM (Chebyshev) UCL					1.417
66	k star				1.906	99% KM (Chebyshev) UCL					1.92
67	Theta star				0.571						
68	Nu star				160.1	Potential UCLs to Use					
69	AppChi2				131.8	95% KM (t) UCL					0.797
70	95% Gamma Approximate UCL				1.322						
71	95% Adjusted Gamma UCL				1.331						
72	Note: DL/2 is not a recommended method.										
73											
74											
75	Benzo(a)anthracene										
76											
77	General Statistics										
78	Number of Valid Data				42	Number of Detected Data				31	
79	Number of Distinct Detected Data				29	Number of Non-Detect Data				11	
80						Percent Non-Detects				26.19%	
81											
82	Raw Statistics					Log-transformed Statistics					
83	Minimum Detected				0.077	Minimum Detected				-2.564	
84	Maximum Detected				42	Maximum Detected				3.738	
85	Mean of Detected				9.414	Mean of Detected				0.984	
86	SD of Detected				11.41	SD of Detected				2.027	
87	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715	
88	Maximum Non-Detect				1.9	Maximum Non-Detect				0.642	
89											
90	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				22	
91	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				20	
92	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				52.38%	
93											
94	UCL Statistics										
95	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
96	Shapiro Wilk Test Statistic				0.805	Shapiro Wilk Test Statistic				0.902	
97	5% Shapiro Wilk Critical Value				0.929	5% Shapiro Wilk Critical Value				0.929	
98	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
99											
100	Assuming Normal Distribution					Assuming Lognormal Distribution					
101	DL/2 Substitution Method					DL/2 Substitution Method					
102	Mean				6.994	Mean				0.16	
103	SD				10.6	SD				2.256	
104	95% DL/2 (t) UCL				9.745	95% H-Stat (DL/2) UCL				44.39	
105											
106	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					

	A	B	C	D	E	F	G	H	I	J	K	L	
107					Mean	0.293				Mean in Log Scale		0.145	
108					SD	17.37				SD in Log Scale		2.29	
109					95% MLE (t) UCL	4.803				Mean in Original Scale		6.987	
110					95% MLE (Tiku) UCL	6.015				SD in Original Scale		10.6	
111										95% Percentile Bootstrap UCL		9.882	
112										95% BCA Bootstrap UCL		10.25	
113													
114	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
115					k star (bias corrected)	0.477	Data appear Gamma Distributed at 5% Significance Level						
116					Theta Star	19.74							
117					nu star	29.57							
118													
119					A-D Test Statistic	0.6	Nonparametric Statistics						
120					5% A-D Critical Value	0.809	Kaplan-Meier (KM) Method						
121					K-S Test Statistic	0.809				Mean		6.977	
122					5% K-S Critical Value	0.167				SD		10.48	
123	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		1.644
124										95% KM (t) UCL		9.743	
125	Assuming Gamma Distribution										95% KM (z) UCL		9.681
126	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		9.731
127					Minimum	1E-09				95% KM (bootstrap t) UCL		10.48	
128					Maximum	42				95% KM (BCA) UCL		9.561	
129					Mean	7.175				95% KM (Percentile Bootstrap) UCL		9.803	
130					Median	2.204				95% KM (Chebyshev) UCL		14.14	
131					SD	10.5				97.5% KM (Chebyshev) UCL		17.24	
132					k star	0.182				99% KM (Chebyshev) UCL		23.33	
133					Theta star	39.35							
134					Nu star	15.32	Potential UCLs to Use						
135					AppChi2	7.481				95% KM (Chebyshev) UCL		14.14	
136					95% Gamma Approximate UCL	14.69							
137					95% Adjusted Gamma UCL	15.08							
138	Note: DL/2 is not a recommended method.												
139													
140													
141	Benzo(a)pyrene												
142													
143	General Statistics												
144					Number of Valid Data	42				Number of Detected Data		31	
145					Number of Distinct Detected Data	29				Number of Non-Detect Data		11	
146										Percent Non-Detects		26.19%	
147													
148	Raw Statistics						Log-transformed Statistics						
149					Minimum Detected	0.063				Minimum Detected		-2.765	
150					Maximum Detected	38				Maximum Detected		3.638	
151					Mean of Detected	8.321				Mean of Detected		0.894	
152					SD of Detected	10				SD of Detected		2.002	
153					Minimum Non-Detect	0.18				Minimum Non-Detect		-1.715	
154					Maximum Non-Detect	1.9				Maximum Non-Detect		0.642	
155													
156	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		23
157	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		19
158	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		54.76%
159													

A	B	C	D	E	F	G	H	I	J	K	L
160	UCL Statistics										
161	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
162	Shapiro Wilk Test Statistic				0.807	Shapiro Wilk Test Statistic				0.904	
163	5% Shapiro Wilk Critical Value				0.929	5% Shapiro Wilk Critical Value				0.929	
164	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
165											
166	Assuming Normal Distribution					Assuming Lognormal Distribution					
167	DL/2 Substitution Method					DL/2 Substitution Method					
168	Mean				6.186	Mean				0.0937	
169	SD				9.293	SD				2.214	
170	95% DL/2 (t) UCL				8.6	95% H-Stat (DL/2) UCL				36.7	
171											
172	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
173	MLE yields a negative mean					Mean in Log Scale				0.0713	
174						SD in Log Scale				2.256	
175						Mean in Original Scale				6.179	
176						SD in Original Scale				9.298	
177						95% Percentile Bootstrap UCL				8.587	
178						95% BCA Bootstrap UCL				9.065	
179											
180	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
181	k star (bias corrected)				0.488	Data appear Gamma Distributed at 5% Significance Level					
182	Theta Star				17.06						
183	nu star				30.23						
184											
185	A-D Test Statistic				0.598	Nonparametric Statistics					
186	5% A-D Critical Value				0.808	Kaplan-Meier (KM) Method					
187	K-S Test Statistic				0.808	Mean				6.171	
188	5% K-S Critical Value				0.167	SD				9.192	
189	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				1.442	
190						95% KM (t) UCL				8.597	
191	Assuming Gamma Distribution					95% KM (z) UCL				8.542	
192	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				8.587	
193	Minimum				1E-09	95% KM (bootstrap t) UCL				9.282	
194	Maximum				38	95% KM (BCA) UCL				8.773	
195	Mean				6.376	95% KM (Percentile Bootstrap) UCL				8.697	
196	Median				2.316	95% KM (Chebyshev) UCL				12.46	
197	SD				9.192	97.5% KM (Chebyshev) UCL				15.17	
198	k star				0.203	99% KM (Chebyshev) UCL				20.52	
199	Theta star				31.42						
200	Nu star				17.05	Potential UCLs to Use					
201	AppChi2				8.708	95% KM (Chebyshev) UCL				12.46	
202	95% Gamma Approximate UCL				12.48						
203	95% Adjusted Gamma UCL				12.8						
204	Note: DL/2 is not a recommended method.										
205											
206											
207	Benzo(b)fluoranthene										
208											
209	General Statistics										
210	Number of Valid Data				42	Number of Detected Data				33	
211	Number of Distinct Detected Data				30	Number of Non-Detect Data				9	
212						Percent Non-Detects				21.43%	

	A	B	C	D	E	F	G	H	I	J	K	L
213												
214	Raw Statistics						Log-transformed Statistics					
215	Minimum Detected					0.082	Minimum Detected					-2.501
216	Maximum Detected					54	Maximum Detected					3.989
217	Mean of Detected					12.4	Mean of Detected					1.141
218	SD of Detected					16.46	SD of Detected					2.082
219	Minimum Non-Detect					0.18	Minimum Non-Detect					-1.715
220	Maximum Non-Detect					0.21	Maximum Non-Detect					-1.561
221												
222	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					13
223	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					29
224	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					30.95%
225												
226	UCL Statistics											
227	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
228	Shapiro Wilk Test Statistic					0.736	Shapiro Wilk Test Statistic					0.911
229	5% Shapiro Wilk Critical Value					0.931	5% Shapiro Wilk Critical Value					0.931
230	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
231												
232	Assuming Normal Distribution						Assuming Lognormal Distribution					
233	DL/2 Substitution Method						DL/2 Substitution Method					
234	Mean					9.761	Mean					0.384
235	SD					15.42	SD					2.353
236	95% DL/2 (t) UCL					13.76	95% H-Stat (DL/2) UCL					81.83
237												
238	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
239	Mean					5.424	Mean in Log Scale					0.354
240	SD					19.89	SD in Log Scale					2.427
241	95% MLE (t) UCL					10.59	Mean in Original Scale					9.765
242	95% MLE (Tiku) UCL					10.86	SD in Original Scale					15.41
243							95% Percentile Bootstrap UCL					13.64
244							95% BCA Bootstrap UCL					14.12
245												
246	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
247	k star (bias corrected)					0.444	Data appear Gamma Distributed at 5% Significance Level					
248	Theta Star					27.91						
249	nu star					29.32						
250												
251	A-D Test Statistic					0.697	Nonparametric Statistics					
252	5% A-D Critical Value					0.818	Kaplan-Meier (KM) Method					
253	K-S Test Statistic					0.818	Mean					9.763
254	5% K-S Critical Value					0.163	SD					15.23
255	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					2.387
256							95% KM (t) UCL					13.78
257	Assuming Gamma Distribution						95% KM (z) UCL					13.69
258	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					13.77
259	Minimum					1E-09	95% KM (bootstrap t) UCL					14.76
260	Maximum					54	95% KM (BCA) UCL					13.97
261	Mean					9.749	95% KM (Percentile Bootstrap) UCL					13.64
262	Median					1.1	95% KM (Chebyshev) UCL					20.17
263	SD					15.43	97.5% KM (Chebyshev) UCL					24.67
264	k star					0.15	99% KM (Chebyshev) UCL					33.51
265	Theta star					65.06						

A	B	C	D	E	F	G	H	I	J	K	L
266				Nu star	12.59	Potential UCLs to Use					
267				AppChi2	5.616	95% KM (Chebyshev) UCL					20.17
268				95% Gamma Approximate UCL	21.85						
269				95% Adjusted Gamma UCL	22.51						
270	Note: DL/2 is not a recommended method.										
271											
272											
273	Benzo(g,h,i)perylene										
274											
275	General Statistics										
276				Number of Valid Data	40				Number of Detected Data	24	
277				Number of Distinct Detected Data	24				Number of Non-Detect Data	16	
278									Percent Non-Detects	40.00%	
279											
280	Raw Statistics					Log-transformed Statistics					
281				Minimum Detected	0.065				Minimum Detected	-2.733	
282				Maximum Detected	9.9				Maximum Detected	2.293	
283				Mean of Detected	3.18				Mean of Detected	0.547	
284				SD of Detected	2.736				SD of Detected	1.422	
285				Minimum Non-Detect	0.18				Minimum Non-Detect	-1.715	
286				Maximum Non-Detect	1.9				Maximum Non-Detect	0.642	
287											
288	Note: Data have multiple DLs - Use of KM Method is recommended								Number treated as Non-Detect	26	
289	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected	14	
290	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage	65.00%	
291											
292	UCL Statistics										
293	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
294				Shapiro Wilk Test Statistic	0.915				Shapiro Wilk Test Statistic	0.884	
295				5% Shapiro Wilk Critical Value	0.916				5% Shapiro Wilk Critical Value	0.916	
296	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
297											
298	Assuming Normal Distribution					Assuming Lognormal Distribution					
299				DL/2 Substitution Method					DL/2 Substitution Method		
300				Mean	1.968				Mean	-0.557	
301				SD	2.587				SD	1.788	
302				95% DL/2 (t) UCL	2.657				95% H-Stat (DL/2) UCL	4.518	
303											
304				Maximum Likelihood Estimate(MLE) Method					Log ROS Method		
305				Mean	0.255				Mean in Log Scale	-0.484	
306				SD	4.342				SD in Log Scale	1.748	
307				95% MLE (t) UCL	1.412				Mean in Original Scale	1.974	
308				95% MLE (Tiku) UCL	2.044				SD in Original Scale	2.58	
309									95% Percentile Bootstrap UCL	2.679	
310									95% BCA Bootstrap UCL	2.777	
311											
312	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
313				k star (bias corrected)	0.86	Data appear Gamma Distributed at 5% Significance Level					
314				Theta Star	3.698						
315				nu star	41.29						
316											
317				A-D Test Statistic	0.344	Nonparametric Statistics					
318				5% A-D Critical Value	0.774	Kaplan-Meier (KM) Method					

A	B	C	D	E	F	G	H	I	J	K	L
319	K-S Test Statistic				0.774	Mean				1.947	
320	5% K-S Critical Value				0.183	SD				2.568	
321	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.415	
322						95% KM (t) UCL				2.646	
323	Assuming Gamma Distribution					95% KM (z) UCL				2.63	
324	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				2.64	
325	Minimum				1E-09	95% KM (bootstrap t) UCL				2.765	
326	Maximum				9.9	95% KM (BCA) UCL				2.691	
327	Mean				2.735	95% KM (Percentile Bootstrap) UCL				2.652	
328	Median				2.266	95% KM (Chebyshev) UCL				3.756	
329	SD				2.309	97.5% KM (Chebyshev) UCL				4.539	
330	k star				0.598	99% KM (Chebyshev) UCL				6.076	
331	Theta star				4.576						
332	Nu star				47.82	Potential UCLs to Use					
333	AppChi2				32.95	95% KM (BCA) UCL				2.691	
334	95% Gamma Approximate UCL				3.97						
335	95% Adjusted Gamma UCL				4.026						
336	Note: DL/2 is not a recommended method.										
337											
338											
339	Carbazole										
340											
341	General Statistics										
342	Number of Valid Data				42	Number of Detected Data				20	
343	Number of Distinct Detected Data				17	Number of Non-Detect Data				22	
344						Percent Non-Detects				52.38%	
345											
346	Raw Statistics					Log-transformed Statistics					
347	Minimum Detected				0.18	Minimum Detected				-1.715	
348	Maximum Detected				9.3	Maximum Detected				2.23	
349	Mean of Detected				1.694	Mean of Detected				0.0103	
350	SD of Detected				2.12	SD of Detected				1.013	
351	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715	
352	Maximum Non-Detect				1.9	Maximum Non-Detect				0.642	
353											
354	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				37	
355	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				5	
356	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				88.10%	
357											
358	UCL Statistics										
359	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
360	Shapiro Wilk Test Statistic				0.668	Shapiro Wilk Test Statistic				0.977	
361	5% Shapiro Wilk Critical Value				0.905	5% Shapiro Wilk Critical Value				0.905	
362	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
363											
364	Assuming Normal Distribution					Assuming Lognormal Distribution					
365	DL/2 Substitution Method					DL/2 Substitution Method					
366	Mean				0.885	Mean				-1.111	
367	SD				1.645	SD				1.339	
368	95% DL/2 (t) UCL				1.312	95% H-Stat (DL/2) UCL				1.011	
369											
370	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
371	MLE yields a negative mean					Mean in Log Scale				-1.347	

	A	B	C	D	E	F	G	H	I	J	K	L
372											SD in Log Scale	1.577
373											Mean in Original Scale	0.856
374											SD in Original Scale	1.654
375											95% Percentile Bootstrap UCL	1.276
376											95% BCA Bootstrap UCL	1.505
377												
378	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
379					k star (bias corrected)	0.973	Data appear Gamma Distributed at 5% Significance Level					
380					Theta Star	1.741						
381					nu star	38.9						
382												
383					A-D Test Statistic	0.547	Nonparametric Statistics					
384					5% A-D Critical Value	0.766	Kaplan-Meier (KM) Method					
385					K-S Test Statistic	0.766	Mean					
386					5% K-S Critical Value	0.199	SD					
387	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					
388							95% KM (t) UCL					
389	Assuming Gamma Distribution						95% KM (z) UCL					
390	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
391					Minimum	1E-09	95% KM (bootstrap t) UCL					
392					Maximum	9.3	95% KM (BCA) UCL					
393					Mean	1.656	95% KM (Percentile Bootstrap) UCL					
394					Median	1.342	95% KM (Chebyshev) UCL					
395					SD	1.612	97.5% KM (Chebyshev) UCL					
396					k star	0.663	99% KM (Chebyshev) UCL					
397					Theta star	2.497						
398					Nu star	55.72	Potential UCLs to Use					
399					AppChi2	39.57	95% KM (t) UCL					
400					95% Gamma Approximate UCL	2.333						
401					95% Adjusted Gamma UCL	2.361						
402	Note: DL/2 is not a recommended method.											
403												
404												
405	Dibenzo(a,h)anthracene											
406												
407	General Statistics											
408					Number of Valid Data	40					Number of Detected Data	21
409					Number of Distinct Detected Data	18					Number of Non-Detect Data	19
410											Percent Non-Detects	47.50%
411												
412	Raw Statistics						Log-transformed Statistics					
413					Minimum Detected	0.084					Minimum Detected	-2.477
414					Maximum Detected	4.1					Maximum Detected	1.411
415					Mean of Detected	1.144					Mean of Detected	-0.349
416					SD of Detected	1.082					SD of Detected	1.106
417					Minimum Non-Detect	0.18					Minimum Non-Detect	-1.715
418					Maximum Non-Detect	1.9					Maximum Non-Detect	0.642
419												
420	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
421	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
422	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
423												
424	UCL Statistics											

A	B	C	D	E	F	G	H	I	J	K	L
425	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
426	Shapiro Wilk Test Statistic				0.848	Shapiro Wilk Test Statistic				0.965	
427	5% Shapiro Wilk Critical Value				0.908	5% Shapiro Wilk Critical Value				0.908	
428	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
429											
430	Assuming Normal Distribution					Assuming Lognormal Distribution					
431	DL/2 Substitution Method					DL/2 Substitution Method					
432	Mean				0.673	Mean				-1.203	
433	SD				0.932	SD				1.266	
434	95% DL/2 (t) UCL				0.921	95% H-Stat (DL/2) UCL				0.782	
435											
436	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
437	MLE yields a negative mean					Mean in Log Scale				-1.213	
438						SD in Log Scale				1.284	
439						Mean in Original Scale				0.664	
440						SD in Original Scale				0.929	
441						95% Percentile Bootstrap UCL				0.92	
442						95% BCA Bootstrap UCL				0.967	
443											
444	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
445	k star (bias corrected)				1.037	Data appear Gamma Distributed at 5% Significance Level					
446	Theta Star				1.102						
447	nu star				43.57						
448											
449	A-D Test Statistic				0.143	Nonparametric Statistics					
450	5% A-D Critical Value				0.766	Kaplan-Meier (KM) Method					
451	K-S Test Statistic				0.766	Mean				0.659	
452	5% K-S Critical Value				0.194	SD				0.923	
453	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.15	
454						95% KM (t) UCL				0.912	
455	Assuming Gamma Distribution					95% KM (z) UCL				0.906	
456	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.91	
457	Minimum				0.0171	95% KM (bootstrap t) UCL				1	
458	Maximum				4.1	95% KM (BCA) UCL				0.946	
459	Mean				1.114	95% KM (Percentile Bootstrap) UCL				0.907	
460	Median				1.021	95% KM (Chebyshev) UCL				1.314	
461	SD				0.864	97.5% KM (Chebyshev) UCL				1.597	
462	k star				1.329	99% KM (Chebyshev) UCL				2.154	
463	Theta star				0.838						
464	Nu star				106.3	Potential UCLs to Use					
465	AppChi2				83.49	95% KM (t) UCL				0.912	
466	95% Gamma Approximate UCL				1.418						
467	95% Adjusted Gamma UCL				1.43						
468	Note: DL/2 is not a recommended method.										
469											
470											
471	Dimethylphthalate										
472											
473	General Statistics										
474	Number of Valid Data				42	Number of Detected Data				4	
475	Number of Distinct Detected Data				4	Number of Non-Detect Data				38	
476						Percent Non-Detects				90.48%	
477											

A	B	C	D	E	F	G	H	I	J	K	L
478	Raw Statistics					Log-transformed Statistics					
479	Minimum Detected				0.047	Minimum Detected				-3.058	
480	Maximum Detected				0.63	Maximum Detected				-0.462	
481	Mean of Detected				0.384	Mean of Detected				-1.319	
482	SD of Detected				0.26	SD of Detected				1.195	
483	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715	
484	Maximum Non-Detect				2	Maximum Non-Detect				0.693	
485											
486	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				42	
487	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				0	
488	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				100.00%	
489											
490	Warning: There are only 4 Distinct Detected Values in this data										
491	Note: It should be noted that even though bootstrap may be performed on this data set										
492	the resulting calculations may not be reliable enough to draw conclusions										
493											
494	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
495											
496											
497	UCL Statistics										
498	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
499	Shapiro Wilk Test Statistic				0.945	Shapiro Wilk Test Statistic				0.818	
500	5% Shapiro Wilk Critical Value				0.748	5% Shapiro Wilk Critical Value				0.748	
501	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
502											
503	Assuming Normal Distribution					Assuming Lognormal Distribution					
504	DL/2 Substitution Method					DL/2 Substitution Method					
505	Mean				0.225	Mean				-1.848	
506	SD				0.249	SD				0.757	
507	95% DL/2 (t) UCL				0.29	95% H-Stat (DL/2) UCL				0.278	
508											
509	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
510	MLE method failed to converge properly					Mean in Log Scale				-2.842	
511						SD in Log Scale				0.846	
512						Mean in Original Scale				0.0905	
513						SD in Original Scale				0.124	
514						95% Percentile Bootstrap UCL				0.123	
515						95% BCA Bootstrap UCL				0.137	
516											
517	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
518	k star (bias corrected)				0.548	Data appear Normal at 5% Significance Level					
519	Theta Star				0.701						
520	nu star				4.384						
521											
522	A-D Test Statistic				0.436	Nonparametric Statistics					
523	5% A-D Critical Value				0.662	Kaplan-Meier (KM) Method					
524	K-S Test Statistic				0.662	Mean				0.0852	
525	5% K-S Critical Value				0.399	SD				0.129	
526	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.0249	
527						95% KM (t) UCL				0.127	
528	Assuming Gamma Distribution					95% KM (z) UCL				0.126	
529	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.254	
530	Minimum				1E-09	95% KM (bootstrap t) UCL				0.107	

	A	B	C	D	E	F	G	H	I	J	K	L		
531					Maximum	0.63				95% KM (BCA) UCL		0.63		
532					Mean	0.18				95% KM (Percentile Bootstrap) UCL		0.547		
533					Median	0.0903				95% KM (Chebyshev) UCL		0.194		
534					SD	0.196				97.5% KM (Chebyshev) UCL		0.241		
535					k star	0.126				99% KM (Chebyshev) UCL		0.333		
536					Theta star	1.429								
537					Nu star	10.56				Potential UCLs to Use				
538					AppChi2	4.297				95% KM (t) UCL		0.127		
539					95% Gamma Approximate UCL	0.442				95% KM (Percentile Bootstrap) UCL		0.547		
540					95% Adjusted Gamma UCL	N/A								
541	Note: DL/2 is not a recommended method.													
542														
543														
544	Di-n-octylphthalate													
545														
546	General Statistics													
547					Number of Valid Data	33				Number of Detected Data		7		
548					Number of Distinct Detected Data	7				Number of Non-Detect Data		26		
549										Percent Non-Detects		78.79%		
550														
551	Raw Statistics						Log-transformed Statistics							
552					Minimum Detected	0.053				Minimum Detected		-2.937		
553					Maximum Detected	2.5				Maximum Detected		0.916		
554					Mean of Detected	0.828				Mean of Detected		-0.638		
555					SD of Detected	0.792				SD of Detected		1.183		
556					Minimum Non-Detect	0.18				Minimum Non-Detect		-1.715		
557					Maximum Non-Detect	2				Maximum Non-Detect		0.693		
558														
559	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						32	
560	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						1	
561	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						96.97%	
562														
563	Warning: There are only 7 Detected Values in this data													
564	Note: It should be noted that even though bootstrap may be performed on this data set													
565	the resulting calculations may not be reliable enough to draw conclusions													
566														
567	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.													
568														
569														
570	UCL Statistics													
571	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
572					Shapiro Wilk Test Statistic	0.799				Shapiro Wilk Test Statistic		0.9		
573					5% Shapiro Wilk Critical Value	0.803				5% Shapiro Wilk Critical Value		0.803		
574	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
575														
576	Assuming Normal Distribution						Assuming Lognormal Distribution							
577					DL/2 Substitution Method					DL/2 Substitution Method				
578					Mean	0.321				Mean		-1.72		
579					SD	0.482				SD		0.958		
580					95% DL/2 (t) UCL	0.463				95% H-Stat (DL/2) UCL		0.342		
581														
582	Maximum Likelihood Estimate(MLE) Method						N/A						Log ROS Method	
583	MLE method failed to converge properly												Mean in Log Scale	-2.422

A	B	C	D	E	F	G	H	I	J	K	L
584										SD in Log Scale	1.275
585										Mean in Original Scale	0.232
586										SD in Original Scale	0.467
587										95% Percentile Bootstrap UCL	0.374
588										95% BCA Bootstrap UCL	0.444
589											
590	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
591				k star (bias corrected)	0.813	Data appear Gamma Distributed at 5% Significance Level					
592				Theta Star	1.018						
593				nu star	11.38						
594											
595				A-D Test Statistic	0.316	Nonparametric Statistics					
596				5% A-D Critical Value	0.724	Kaplan-Meier (KM) Method					
597				K-S Test Statistic	0.724	Mean					
598				5% K-S Critical Value	0.318	SD					
599	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					
600						95% KM (t) UCL					
601	Assuming Gamma Distribution					95% KM (z) UCL					
602	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					
603				Minimum	0.053	95% KM (bootstrap t) UCL					
604				Maximum	2.5	95% KM (BCA) UCL					
605				Mean	1.176	95% KM (Percentile Bootstrap) UCL					
606				Median	1.088	95% KM (Chebyshev) UCL					
607				SD	0.636	97.5% KM (Chebyshev) UCL					
608				k star	2.356	99% KM (Chebyshev) UCL					
609				Theta star	0.499						
610				Nu star	155.5	Potential UCLs to Use					
611				AppChi2	127.6	95% KM (t) UCL					
612				95% Gamma Approximate UCL	1.433						
613				95% Adjusted Gamma UCL	1.448						
614	Note: DL/2 is not a recommended method.										
615											
616											
617	Indeno(1,2,3-cd)pyrene										
618											
619	General Statistics										
620				Number of Valid Data	41					Number of Detected Data	29
621				Number of Distinct Detected Data	28					Number of Non-Detect Data	12
622										Percent Non-Detects	29.27%
623											
624	Raw Statistics					Log-transformed Statistics					
625				Minimum Detected	0.041					Minimum Detected	-3.194
626				Maximum Detected	14					Maximum Detected	2.639
627				Mean of Detected	3.833					Mean of Detected	0.354
628				SD of Detected	4.152					SD of Detected	1.785
629				Minimum Non-Detect	0.18					Minimum Non-Detect	-1.715
630				Maximum Non-Detect	1.9					Maximum Non-Detect	0.642
631											
632	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					25
633	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					16
634	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					60.98%
635											
636	UCL Statistics										

A	B	C	D	E	F	G	H	I	J	K	L
637	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
638	Shapiro Wilk Test Statistic				0.835	Shapiro Wilk Test Statistic				0.9	
639	5% Shapiro Wilk Critical Value				0.926	5% Shapiro Wilk Critical Value				0.926	
640	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
641											
642	Assuming Normal Distribution					Assuming Lognormal Distribution					
643	DL/2 Substitution Method					DL/2 Substitution Method					
644	Mean			2.759	Mean			-0.386			
645	SD			3.865	SD			1.926			
646	95% DL/2 (t) UCL			3.775	95% H-Stat (DL/2) UCL			9.578			
647											
648	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
649	Mean			0.0341	Mean in Log Scale			-0.341			
650	SD			6.615	SD in Log Scale			1.896			
651	95% MLE (t) UCL			1.774	Mean in Original Scale			2.759			
652	95% MLE (Tiku) UCL			2.531	SD in Original Scale			3.863			
653						95% Percentile Bootstrap UCL			3.784		
654						95% BCA Bootstrap UCL			3.917		
655											
656	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
657	k star (bias corrected)			0.58	Data appear Gamma Distributed at 5% Significance Level						
658	Theta Star			6.609							
659	nu star			33.63							
660											
661	A-D Test Statistic			0.532	Nonparametric Statistics						
662	5% A-D Critical Value			0.798	Kaplan-Meier (KM) Method						
663	K-S Test Statistic			0.798	Mean			2.746			
664	5% K-S Critical Value			0.171	SD			3.825			
665	Data appear Gamma Distributed at 5% Significance Level					SE of Mean			0.608		
666						95% KM (t) UCL			3.77		
667	Assuming Gamma Distribution					95% KM (z) UCL			3.746		
668	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL			3.765		
669	Minimum			1E-09	95% KM (bootstrap t) UCL			3.923			
670	Maximum			14	95% KM (BCA) UCL			3.863			
671	Mean			3.103	95% KM (Percentile Bootstrap) UCL			3.753			
672	Median			1.6	95% KM (Chebyshev) UCL			5.397			
673	SD			3.705	97.5% KM (Chebyshev) UCL			6.543			
674	k star			0.353	99% KM (Chebyshev) UCL			8.796			
675	Theta star			8.785							
676	Nu star			28.97	Potential UCLs to Use						
677	AppChi2			17.68	95% KM (Chebyshev) UCL			5.397			
678	95% Gamma Approximate UCL			5.084							
679	95% Adjusted Gamma UCL			5.178							
680	Note: DL/2 is not a recommended method.										
681											
682											
683	Phenanthrene										
684											
685	General Statistics										
686	Number of Valid Data			42	Number of Detected Data			30			
687	Number of Distinct Detected Data			27	Number of Non-Detect Data			12			
688						Percent Non-Detects			28.57%		
689											

A	B	C	D	E	F	G	H	I	J	K	L
690	Raw Statistics					Log-transformed Statistics					
691	Minimum Detected				0.047	Minimum Detected				-3.058	
692	Maximum Detected				73	Maximum Detected				4.29	
693	Mean of Detected				9.316	Mean of Detected				0.798	
694	SD of Detected				15.29	SD of Detected				2.067	
695	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715	
696	Maximum Non-Detect				1.9	Maximum Non-Detect				0.642	
697											
698	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				23	
699	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				19	
700	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				54.76%	
701											
702	UCL Statistics										
703	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
704	Shapiro Wilk Test Statistic				0.64	Shapiro Wilk Test Statistic				0.95	
705	5% Shapiro Wilk Critical Value				0.927	5% Shapiro Wilk Critical Value				0.927	
706	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
707											
708	Assuming Normal Distribution					Assuming Lognormal Distribution					
709	DL/2 Substitution Method					DL/2 Substitution Method					
710	Mean				6.702	Mean				-0.0484	
711	SD				13.52	SD				2.232	
712	95% DL/2 (t) UCL				10.21	95% H-Stat (DL/2) UCL				31.25	
713											
714	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
715	MLE yields a negative mean					Mean in Log Scale				-0.0888	
716						SD in Log Scale				2.299	
717						Mean in Original Scale				6.694	
718						SD in Original Scale				13.52	
719						95% Percentile Bootstrap UCL				10.14	
720						95% BCA Bootstrap UCL				11.92	
721											
722	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
723	k star (bias corrected)				0.428	Data appear Gamma Distributed at 5% Significance Level					
724	Theta Star				21.78						
725	nu star				25.66						
726											
727	A-D Test Statistic				0.387	Nonparametric Statistics					
728	5% A-D Critical Value				0.82	Kaplan-Meier (KM) Method					
729	K-S Test Statistic				0.82	Mean				6.686	
730	5% K-S Critical Value				0.17	SD				13.36	
731	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				2.098	
732						95% KM (t) UCL				10.22	
733	Assuming Gamma Distribution					95% KM (z) UCL					
734	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				10.2	
735	Minimum				1E-09	95% KM (bootstrap t) UCL				12.79	
736	Maximum				73	95% KM (BCA) UCL				10.75	
737	Mean				6.926	95% KM (Percentile Bootstrap) UCL				10.4	
738	Median				1.75	95% KM (Chebyshev) UCL				15.83	
739	SD				13.44	97.5% KM (Chebyshev) UCL				19.79	
740	k star				0.165	99% KM (Chebyshev) UCL				27.56	
741	Theta star				42.02						
742	Nu star				13.85	Potential UCLs to Use					

A	B	C	D	E	F	G	H	I	J	K	L
743	AppChi2				6.466	95% KM (Chebyshev) UCL				15.83	
744	95% Gamma Approximate UCL				14.83						
745	95% Adjusted Gamma UCL				15.26						
746	Note: DL/2 is not a recommended method.										
747											
748											
749	Dieldrin										
750											
751	General Statistics										
752	Number of Valid Data				38	Number of Detected Data				8	
753	Number of Distinct Detected Data				8	Number of Non-Detect Data				30	
754						Percent Non-Detects				78.95%	
755											
756	Raw Statistics					Log-transformed Statistics					
757	Minimum Detected				0.0011	Minimum Detected				-6.812	
758	Maximum Detected				0.12	Maximum Detected				-2.12	
759	Mean of Detected				0.0342	Mean of Detected				-3.977	
760	SD of Detected				0.0374	SD of Detected				1.392	
761	Minimum Non-Detect				0.0034	Minimum Non-Detect				-5.684	
762	Maximum Non-Detect				0.026	Maximum Non-Detect				-3.65	
763											
764	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				34	
765	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				4	
766	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				89.47%	
767											
768	Warning: There are only 8 Detected Values in this data										
769	Note: It should be noted that even though bootstrap may be performed on this data set										
770	the resulting calculations may not be reliable enough to draw conclusions										
771											
772	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
773											
774											
775	UCL Statistics										
776	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
777	Shapiro Wilk Test Statistic				0.765	Shapiro Wilk Test Statistic				0.914	
778	5% Shapiro Wilk Critical Value				0.818	5% Shapiro Wilk Critical Value				0.818	
779	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
780											
781	Assuming Normal Distribution					Assuming Lognormal Distribution					
782	DL/2 Substitution Method					DL/2 Substitution Method					
783	Mean				0.0108	Mean				-5.398	
784	SD				0.0207	SD				1.21	
785	95% DL/2 (t) UCL				0.0165	95% H-Stat (DL/2) UCL				0.0116	
786											
787	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
788	Mean				0.0755	Mean in Log Scale				-6.217	
789	SD				0.036	SD in Log Scale				1.52	
790	95% MLE (t) UCL				0.0853	Mean in Original Scale				0.00839	
791	95% MLE (Tiku) UCL				0.105	SD in Original Scale				0.0212	
792						95% Percentile Bootstrap UCL				0.0147	
793						95% BCA Bootstrap UCL				0.0175	
794											
795	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					

A	B	C	D	E	F	G	H	I	J	K	L	
796	k star (bias corrected)			0.686	Data appear Gamma Distributed at 5% Significance Level							
797	Theta Star			0.0499								
798	nu star			10.97								
799												
800	A-D Test Statistic			0.266	Nonparametric Statistics							
801	5% A-D Critical Value			0.737	Kaplan-Meier (KM) Method							
802	K-S Test Statistic			0.737	Mean							0.00838
803	5% K-S Critical Value			0.302	SD							0.021
804	Data appear Gamma Distributed at 5% Significance Level				SE of Mean							0.00366
805												
806	Assuming Gamma Distribution				95% KM (t) UCL							0.0146
807	Gamma ROS Statistics using Extrapolated Data				95% KM (z) UCL							0.0144
808	Minimum			0.0011	95% KM (jackknife) UCL							0.0143
809	Maximum			0.12	95% KM (bootstrap t) UCL							0.0179
810	Mean			0.0362	95% KM (BCA) UCL							0.027
811	Median			0.0357	95% KM (Percentile Bootstrap) UCL							0.0217
812	SD			0.017	95% KM (Chebyshev) UCL							0.0243
813	k star			3.553	97.5% KM (Chebyshev) UCL							0.0312
814	Theta star			0.0102	99% KM (Chebyshev) UCL							0.0448
815	Nu star			270.1	Potential UCLs to Use							
816	AppChi2			233	95% KM (t) UCL							0.0146
817	95% Gamma Approximate UCL			0.0419								
818	95% Adjusted Gamma UCL			0.0422								
819	Note: DL/2 is not a recommended method.											
820												
821												
822	Endosulfan II											
823												
824	General Statistics											
825	Number of Valid Data			40	Number of Detected Data			6				
826	Number of Distinct Detected Data			6	Number of Non-Detect Data			34				
827	Percent Non-Detects											85.00%
828												
829	Raw Statistics				Log-transformed Statistics							
830	Minimum Detected			0.013	Minimum Detected			-4.343				
831	Maximum Detected			0.67	Maximum Detected			-0.4				
832	Mean of Detected			0.179	Mean of Detected			-2.579				
833	SD of Detected			0.25	SD of Detected			1.528				
834	Minimum Non-Detect			0.0034	Minimum Non-Detect			-5.684				
835	Maximum Non-Detect			0.026	Maximum Non-Detect			-3.65				
836												
837	Note: Data have multiple DLs - Use of KM Method is recommended				Number treated as Non-Detect			36				
838	For all methods (except KM, DL/2, and ROS Methods),				Number treated as Detected			4				
839	Observations < Largest ND are treated as NDs				Single DL Non-Detect Percentage			90.00%				
840												
841	Warning: There are only 6 Detected Values in this data											
842	Note: It should be noted that even though bootstrap may be performed on this data set											
843	the resulting calculations may not be reliable enough to draw conclusions											
844												
845	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
846												
847												
848	UCL Statistics											

A	B	C	D	E	F	G	H	I	J	K	L
849	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
850	Shapiro Wilk Test Statistic				0.727	Shapiro Wilk Test Statistic				0.938	
851	5% Shapiro Wilk Critical Value				0.788	5% Shapiro Wilk Critical Value				0.788	
852	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
853											
854	Assuming Normal Distribution					Assuming Lognormal Distribution					
855	DL/2 Substitution Method					DL/2 Substitution Method					
856	Mean			0.0299	Mean			-5.432			
857	SD			0.11	SD			1.465			
858	95% DL/2 (t) UCL			0.0591	95% H-Stat (DL/2) UCL			0.0176			
859											
860	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
861	MLE yields a negative mean					Mean in Log Scale			-8.649		
862						SD in Log Scale			3.142		
863						Mean in Original Scale			0.0271		
864						SD in Original Scale			0.11		
865						95% Percentile Bootstrap UCL			0.0578		
866						95% BCA Bootstrap UCL			0.0889		
867											
868	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
869	k star (bias corrected)			0.462	Data appear Gamma Distributed at 5% Significance Level						
870	Theta Star			0.388							
871	nu star			5.548							
872											
873	A-D Test Statistic			0.308	Nonparametric Statistics						
874	5% A-D Critical Value			0.724	Kaplan-Meier (KM) Method						
875	K-S Test Statistic			0.724	Mean			0.038			
876	5% K-S Critical Value			0.344	SD			0.106			
877	Data appear Gamma Distributed at 5% Significance Level					SE of Mean			0.0184		
878						95% KM (t) UCL			0.069		
879	Assuming Gamma Distribution					95% KM (z) UCL			0.0683		
880	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL			0.0652		
881	Minimum			0.013	95% KM (bootstrap t) UCL			0.128			
882	Maximum			0.67	95% KM (BCA) UCL			0.194			
883	Mean			0.156	95% KM (Percentile Bootstrap) UCL			0.14			
884	Median			0.164	95% KM (Chebyshev) UCL			0.118			
885	SD			0.101	97.5% KM (Chebyshev) UCL			0.153			
886	k star			2.464	99% KM (Chebyshev) UCL			0.221			
887	Theta star			0.0634							
888	Nu star			197.1	Potential UCLs to Use						
889	AppChi2			165.6	95% KM (t) UCL			0.069			
890	95% Gamma Approximate UCL			0.186							
891	95% Adjusted Gamma UCL			0.187							
892	Note: DL/2 is not a recommended method.										
893											
894											
895	Endosulfan sulfate										
896											
897	General Statistics										
898	Number of Valid Data			37	Number of Detected Data			4			
899	Number of Distinct Detected Data			4	Number of Non-Detect Data			33			
900						Percent Non-Detects			89.19%		
901											

A	B	C	D	E	F	G	H	I	J	K	L
902	Raw Statistics					Log-transformed Statistics					
903	Minimum Detected				0.0018	Minimum Detected				-6.32	
904	Maximum Detected				0.029	Maximum Detected				-3.54	
905	Mean of Detected				0.0103	Mean of Detected				-5.095	
906	SD of Detected				0.0126	SD of Detected				1.152	
907	Minimum Non-Detect				0.0034	Minimum Non-Detect				-5.684	
908	Maximum Non-Detect				0.026	Maximum Non-Detect				-3.65	
909											
910	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				36	
911	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				1	
912	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				97.30%	
913											
914	Warning: There are only 4 Distinct Detected Values in this data										
915	Note: It should be noted that even though bootstrap may be performed on this data set										
916	the resulting calculations may not be reliable enough to draw conclusions										
917											
918	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
919											
920											
921	UCL Statistics										
922	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
923	Shapiro Wilk Test Statistic				0.745	Shapiro Wilk Test Statistic				0.936	
924	5% Shapiro Wilk Critical Value				0.748	5% Shapiro Wilk Critical Value				0.748	
925	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
926											
927	Assuming Normal Distribution					Assuming Lognormal Distribution					
928	DL/2 Substitution Method					DL/2 Substitution Method					
929	Mean				0.00536	Mean				-5.657	
930	SD				0.00587	SD				0.87	
931	95% DL/2 (t) UCL				0.00699	95% H-Stat (DL/2) UCL				0.00665	
932											
933	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
934	MLE method failed to converge properly					Mean in Log Scale				-6.372	
935						SD in Log Scale				0.721	
936						Mean in Original Scale				0.00257	
937						SD in Original Scale				0.0046	
938						95% Percentile Bootstrap UCL				0.00394	
939						95% BCA Bootstrap UCL				0.00496	
940											
941	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
942	k star (bias corrected)				0.441	Data appear Gamma Distributed at 5% Significance Level					
943	Theta Star				0.0233						
944	nu star				3.53						
945											
946	A-D Test Statistic				0.439	Nonparametric Statistics					
947	5% A-D Critical Value				0.666	Kaplan-Meier (KM) Method					
948	K-S Test Statistic				0.666	Mean				0.00281	
949	5% K-S Critical Value				0.402	SD				0.00446	
950	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.0008554	
951						95% KM (t) UCL				0.00425	
952	Assuming Gamma Distribution					95% KM (z) UCL				0.00421	
953	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.00488	
954	Minimum				1E-09	95% KM (bootstrap t) UCL				0.00574	

A	B	C	D	E	F	G	H	I	J	K	L
955				Maximum	0.0381					95% KM (BCA) UCL	0.029
956				Mean	0.0115					95% KM (Percentile Bootstrap) UCL	0.00692
957				Median	0.00821					95% KM (Chebyshev) UCL	0.00653
958				SD	0.0106					97.5% KM (Chebyshev) UCL	0.00815
959				k star	0.289					99% KM (Chebyshev) UCL	0.0113
960				Theta star	0.0398						
961				Nu star	21.35				Potential UCLs to Use		
962				AppChi2	11.85					95% KM (t) UCL	0.00425
963				95% Gamma Approximate UCL	0.0207						
964				95% Adjusted Gamma UCL	N/A						
965	Note: DL/2 is not a recommended method.										
966											
967											
968	Endrin aldehyde										
969											
970	General Statistics										
971				Number of Valid Data	39					Number of Detected Data	3
972				Number of Distinct Detected Data	3					Number of Non-Detect Data	36
973										Percent Non-Detects	92.31%
974											
975	Raw Statistics					Log-transformed Statistics					
976				Minimum Detected	0.0013					Minimum Detected	-6.645
977				Maximum Detected	0.052					Maximum Detected	-2.957
978				Mean of Detected	0.0288					Mean of Detected	-4.338
979				SD of Detected	0.0256					SD of Detected	2.011
980				Minimum Non-Detect	0.0034					Minimum Non-Detect	-5.684
981				Maximum Non-Detect	0.026					Maximum Non-Detect	-3.65
982											
983	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect	37
984	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected	2
985	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage	94.87%
986											
987	Warning: There are only 3 Distinct Detected Values in this data set										
988	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.										
989	Those methods will return a 'N/A' value on your output display!										
990											
991	It is necessary to have 4 or more Distinct Values for bootstrap methods.										
992	However, results obtained using 4 to 9 distinct values may not be reliable.										
993	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.										
994											
995											
996	UCL Statistics										
997	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
998				Shapiro Wilk Test Statistic	0.979					Shapiro Wilk Test Statistic	0.841
999				5% Shapiro Wilk Critical Value	0.767					5% Shapiro Wilk Critical Value	0.767
1000	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1001											
1002	Assuming Normal Distribution					Assuming Lognormal Distribution					
1003				DL/2 Substitution Method						DL/2 Substitution Method	
1004				Mean	0.00635					Mean	-5.672
1005				SD	0.00977					SD	0.979
1006				95% DL/2 (t) UCL	0.00899					95% H-Stat (DL/2) UCL	0.00706
1007											

A	B	C	D	E	F	G	H	I	J	K	L
1008	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
1009	MLE method failed to converge properly					Mean in Log Scale				-6.479	
1010						SD in Log Scale				1.119	
1011						Mean in Original Scale				0.00385	
1012						SD in Original Scale				0.00947	
1013						95% Percentile Bootstrap UCL				0.00655	
1014						95% BCA Bootstrap UCL				0.00754	
1015											
1016	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1017	k star (bias corrected)				N/A	Data appear Normal at 5% Significance Level					
1018	Theta Star				N/A						
1019	nu star				N/A						
1020											
1021	A-D Test Statistic				N/A	Nonparametric Statistics					
1022	5% A-D Critical Value				N/A	Kaplan-Meier (KM) Method					
1023	K-S Test Statistic				N/A	Mean				0.00341	
1024	5% K-S Critical Value				N/A	SD				0.00934	
1025	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.00183	
1026						95% KM (t) UCL				0.0065	
1027	Assuming Gamma Distribution					95% KM (z) UCL				0.00643	
1028	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.0236	
1029	Minimum				N/A	95% KM (bootstrap t) UCL				0.00445	
1030	Maximum				N/A	95% KM (BCA) UCL				0.052	
1031	Mean				N/A	95% KM (Percentile Bootstrap) UCL				N/A	
1032	Median				N/A	95% KM (Chebyshev) UCL				0.0114	
1033	SD				N/A	97.5% KM (Chebyshev) UCL				0.0149	
1034	k star				N/A	99% KM (Chebyshev) UCL				0.0216	
1035	Theta star				N/A						
1036	Nu star				N/A	Potential UCLs to Use					
1037	AppChi2				N/A	95% KM (t) UCL				0.0065	
1038	95% Gamma Approximate UCL				N/A	95% KM (Percentile Bootstrap) UCL				N/A	
1039	95% Adjusted Gamma UCL				N/A						
1040	Note: DL/2 is not a recommended method.										
1041											
1042											
1043	Endrin ketone										
1044											
1045	General Statistics										
1046	Number of Valid Data				42	Number of Detected Data				8	
1047	Number of Distinct Detected Data				8	Number of Non-Detect Data				34	
1048						Percent Non-Detects				80.95%	
1049											
1050	Raw Statistics					Log-transformed Statistics					
1051	Minimum Detected				0.0011	Minimum Detected				-6.812	
1052	Maximum Detected				0.089	Maximum Detected				-2.419	
1053	Mean of Detected				0.0499	Mean of Detected				-3.43	
1054	SD of Detected				0.0292	SD of Detected				1.427	
1055	Minimum Non-Detect				0.0034	Minimum Non-Detect				-5.684	
1056	Maximum Non-Detect				0.026	Maximum Non-Detect				-3.65	
1057											
1058	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				35	
1059	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				7	
1060	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				83.33%	

A	B	C	D	E	F	G	H	I	J	K	L	
1061												
1062	Warning: There are only 8 Detected Values in this data											
1063	Note: It should be noted that even though bootstrap may be performed on this data set											
1064	the resulting calculations may not be reliable enough to draw conclusions											
1065												
1066	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1067												
1068												
1069	UCL Statistics											
1070	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1071	Shapiro Wilk Test Statistic				0.965	Shapiro Wilk Test Statistic				0.684		
1072	5% Shapiro Wilk Critical Value				0.818	5% Shapiro Wilk Critical Value				0.818		
1073	Data appear Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1074												
1075	Assuming Normal Distribution					Assuming Lognormal Distribution						
1076	DL/2 Substitution Method					DL/2 Substitution Method						
1077	Mean				0.0133	Mean				-5.299		
1078	SD				0.022	SD				1.314		
1079	95% DL/2 (t) UCL				0.019	95% H-Stat (DL/2) UCL				0.0129		
1080												
1081	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
1082	MLE yields a negative mean					Mean in Log Scale				-5.896		
1083						SD in Log Scale				1.558		
1084						Mean in Original Scale				0.0113		
1085						SD in Original Scale				0.0225		
1086						95% Percentile Bootstrap UCL				0.0174		
1087						95% BCA Bootstrap UCL				0.0185		
1088												
1089	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1090	k star (bias corrected)				0.894	Data appear Normal at 5% Significance Level						
1091	Theta Star				0.0558							
1092	nu star				14.31							
1093												
1094	A-D Test Statistic				0.743	Nonparametric Statistics						
1095	5% A-D Critical Value				0.731	Kaplan-Meier (KM) Method						
1096	K-S Test Statistic				0.731	Mean				0.0104		
1097	5% K-S Critical Value				0.3	SD				0.0226		
1098	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean				0.00372		
1099						95% KM (t) UCL				0.0167		
1100	Assuming Gamma Distribution					95% KM (z) UCL				0.0165		
1101	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.0256		
1102	Minimum				0.0011	95% KM (bootstrap t) UCL				0.017		
1103	Maximum				0.089	95% KM (BCA) UCL				0.044		
1104	Mean				0.0489	95% KM (Percentile Bootstrap) UCL				0.0421		
1105	Median				0.0487	95% KM (Chebyshev) UCL				0.0266		
1106	SD				0.0124	97.5% KM (Chebyshev) UCL				0.0336		
1107	k star				5.686	99% KM (Chebyshev) UCL				0.0474		
1108	Theta star				0.0086							
1109	Nu star				477.6	Potential UCLs to Use						
1110	AppChi2				427.9	95% KM (t) UCL				0.0167		
1111	95% Gamma Approximate UCL				0.0546	95% KM (Percentile Bootstrap) UCL				0.0421		
1112	95% Adjusted Gamma UCL				0.0548							
1113	Note: DL/2 is not a recommended method.											

	A	B	C	D	E	F	G	H	I	J	K	L	
1114													
1115													
1116	gamma-Chlordane												
1117													
1118	General Statistics												
1119	Number of Valid Data					38		Number of Detected Data					3
1120	Number of Distinct Detected Data					3		Number of Non-Detect Data					35
1121								Percent Non-Detects					92.11%
1122													
1123	Raw Statistics						Log-transformed Statistics						
1124	Minimum Detected					0.0019		Minimum Detected					-6.266
1125	Maximum Detected					0.032		Maximum Detected					-3.442
1126	Mean of Detected					0.0145		Mean of Detected					-4.788
1127	SD of Detected					0.0157		SD of Detected					1.417
1128	Minimum Non-Detect					0.0017		Minimum Non-Detect					-6.377
1129	Maximum Non-Detect					0.013		Maximum Non-Detect					-4.343
1130													
1131	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					37	
1132	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1	
1133	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					97.37%	
1134													
1135	Warning: There are only 3 Distinct Detected Values in this data set												
1136	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.												
1137	Those methods will return a 'N/A' value on your output display!												
1138													
1139	It is necessary to have 4 or more Distinct Values for bootstrap methods.												
1140	However, results obtained using 4 to 9 distinct values may not be reliable.												
1141	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.												
1142													
1143													
1144	UCL Statistics												
1145	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1146	Shapiro Wilk Test Statistic					0.924		Shapiro Wilk Test Statistic					0.994
1147	5% Shapiro Wilk Critical Value					0.767		5% Shapiro Wilk Critical Value					0.767
1148	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1149													
1150	Assuming Normal Distribution						Assuming Lognormal Distribution						
1151	DL/2 Substitution Method							DL/2 Substitution Method					
1152	Mean					0.0033		Mean					-6.314
1153	SD					0.0054		SD					0.965
1154	95% DL/2 (t) UCL					0.00478		95% H-Stat (DL/2) UCL					0.00367
1155													
1156	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method					
1157	MLE method failed to converge properly						Mean in Log Scale					-9.971	
1158								SD in Log Scale					2.272
1159								Mean in Original Scale					0.00123
1160								SD in Original Scale					0.00536
1161								95% Percentile Bootstrap UCL					0.00288
1162								95% BCA Bootstrap UCL					0.00409
1163													
1164	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1165	k star (bias corrected)					N/A		Data appear Normal at 5% Significance Level					
1166	Theta Star					N/A							

A	B	C	D	E	F	G	H	I	J	K	L
1167				nu star	N/A						
1168											
1169				A-D Test Statistic	N/A	Nonparametric Statistics					
1170				5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method					
1171				K-S Test Statistic	N/A				Mean		0.00296
1172				5% K-S Critical Value	N/A				SD		0.00497
1173	Data not Gamma Distributed at 5% Significance Level								SE of Mean		0.001
1174									95% KM (t) UCL		0.00464
1175	Assuming Gamma Distribution								95% KM (z) UCL		0.0046
1176	Gamma ROS Statistics using Extrapolated Data								95% KM (jackknife) UCL		0.00786
1177				Minimum	N/A				95% KM (bootstrap t) UCL		0.00459
1178				Maximum	N/A				95% KM (BCA) UCL		0.032
1179				Mean	N/A				95% KM (Percentile Bootstrap) UCL		N/A
1180				Median	N/A				95% KM (Chebyshev) UCL		0.00732
1181				SD	N/A				97.5% KM (Chebyshev) UCL		0.0092
1182				k star	N/A				99% KM (Chebyshev) UCL		0.0129
1183				Theta star	N/A						
1184				Nu star	N/A	Potential UCLs to Use					
1185				AppChi2	N/A				95% KM (t) UCL		0.00464
1186				95% Gamma Approximate UCL	N/A				95% KM (Percentile Bootstrap) UCL		N/A
1187				95% Adjusted Gamma UCL	N/A						
1188	Note: DL/2 is not a recommended method.										
1189											
1190											
1191	Aroclor-1254										
1192											
1193	General Statistics										
1194				Number of Valid Data	42				Number of Detected Data		5
1195				Number of Distinct Detected Data	5				Number of Non-Detect Data		37
1196									Percent Non-Detects		88.10%
1197											
1198	Raw Statistics					Log-transformed Statistics					
1199				Minimum Detected	0.02				Minimum Detected		-3.912
1200				Maximum Detected	2.3				Maximum Detected		0.833
1201				Mean of Detected	0.868				Mean of Detected		-1.05
1202				SD of Detected	0.928				SD of Detected		1.906
1203				Minimum Non-Detect	0.034				Minimum Non-Detect		-3.381
1204				Maximum Non-Detect	0.08				Maximum Non-Detect		-2.526
1205											
1206	Note: Data have multiple DLs - Use of KM Method is recommended								Number treated as Non-Detect		38
1207	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected		4
1208	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage		90.48%
1209											
1210	Warning: There are only 5 Detected Values in this data										
1211	Note: It should be noted that even though bootstrap may be performed on this data set										
1212	the resulting calculations may not be reliable enough to draw conclusions										
1213											
1214	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
1215											
1216											
1217	UCL Statistics										
1218	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1219				Shapiro Wilk Test Statistic	0.91				Shapiro Wilk Test Statistic		0.928

A	B	C	D	E	F	G	H	I	J	K	L
1220	5% Shapiro Wilk Critical Value				0.762	5% Shapiro Wilk Critical Value				0.762	
1221	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1222	Assuming Normal Distribution					Assuming Lognormal Distribution					
1224	DL/2 Substitution Method					DL/2 Substitution Method					
1225	Mean				0.122	Mean				-3.556	
1226	SD				0.401	SD				1.118	
1227	95% DL/2 (t) UCL				0.226	95% H-Stat (DL/2) UCL				0.0617	
1228											
1229	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
1230	MLE yields a negative mean					Mean in Log Scale				-3.814	
1231						SD in Log Scale				1.585	
1232						Mean in Original Scale				0.126	
1233						SD in Original Scale				0.401	
1234						95% Percentile Bootstrap UCL				0.238	
1235						95% BCA Bootstrap UCL				0.3	
1236											
1237	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1238	k star (bias corrected)				0.401	Data appear Normal at 5% Significance Level					
1239	Theta Star				2.164						
1240	nu star				4.012						
1241											
1242	A-D Test Statistic				0.212	Nonparametric Statistics					
1243	5% A-D Critical Value				0.702	Kaplan-Meier (KM) Method					
1244	K-S Test Statistic				0.702	Mean				0.121	
1245	5% K-S Critical Value				0.368	SD				0.397	
1246	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.0685	
1247						95% KM (t) UCL				0.236	
1248	Assuming Gamma Distribution					95% KM (z) UCL				0.234	
1249	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.225	
1250	Minimum				0.02	95% KM (bootstrap t) UCL				0.277	
1251	Maximum				2.3	95% KM (BCA) UCL				1.252	
1252	Mean				0.855	95% KM (Percentile Bootstrap) UCL				0.794	
1253	Median				0.868	95% KM (Chebyshev) UCL				0.419	
1254	SD				0.294	97.5% KM (Chebyshev) UCL				0.548	
1255	k star				4.397	99% KM (Chebyshev) UCL				0.802	
1256	Theta star				0.194						
1257	Nu star				369.4	Potential UCLs to Use					
1258	AppChi2				325.8	95% KM (t) UCL				0.236	
1259	95% Gamma Approximate UCL				0.969	95% KM (Percentile Bootstrap) UCL				0.794	
1260	95% Adjusted Gamma UCL				0.974						
1261	Note: DL/2 is not a recommended method.										
1262											
1263											
1264	Aroclor-1260										
1265											
1266	General Statistics										
1267	Number of Valid Data				42	Number of Detected Data				20	
1268	Number of Distinct Detected Data				18	Number of Non-Detect Data				22	
1269						Percent Non-Detects				52.38%	
1270											
1271	Raw Statistics					Log-transformed Statistics					
1272	Minimum Detected				0.021	Minimum Detected				-3.863	

	A	B	C	D	E	F	G	H	I	J	K	L	
1273				Maximum Detected		13				Maximum Detected		2.565	
1274				Mean of Detected		1.072				Mean of Detected		-1.374	
1275				SD of Detected		2.867				SD of Detected		1.573	
1276				Minimum Non-Detect		0.034				Minimum Non-Detect		-3.381	
1277				Maximum Non-Detect		0.055				Maximum Non-Detect		-2.9	
1278													
1279	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		25
1280	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		17
1281	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		59.52%
1282													
1283	UCL Statistics												
1284	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1285				Shapiro Wilk Test Statistic		0.378				Shapiro Wilk Test Statistic		0.958	
1286				5% Shapiro Wilk Critical Value		0.905				5% Shapiro Wilk Critical Value		0.905	
1287	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1288													
1289	Assuming Normal Distribution						Assuming Lognormal Distribution						
1290				DL/2 Substitution Method						DL/2 Substitution Method			
1291				Mean		0.521				Mean		-2.712	
1292				SD		2.023				SD		1.679	
1293				95% DL/2 (t) UCL		1.046				95% H-Stat (DL/2) UCL		0.29	
1294													
1295				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1296	MLE yields a negative mean									Mean in Log Scale		-3.251	
1297										SD in Log Scale		2.183	
1298										Mean in Original Scale		0.515	
1299										SD in Original Scale		2.024	
1300										95% Percentile Bootstrap UCL		1.099	
1301										95% BCA Bootstrap UCL		1.469	
1302													
1303	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1304				k star (bias corrected)		0.414	Data Follow Appr. Gamma Distribution at 5% Significance Level						
1305				Theta Star		2.59							
1306				nu star		16.56							
1307													
1308				A-D Test Statistic		1.514	Nonparametric Statistics						
1309				5% A-D Critical Value		0.814				Kaplan-Meier (KM) Method			
1310				K-S Test Statistic		0.814				Mean		0.521	
1311				5% K-S Critical Value		0.206				SD		1.998	
1312	Data follow Appr. Gamma Distribution at 5% Significance Level									SE of Mean		0.316	
1313										95% KM (t) UCL		1.054	
1314	Assuming Gamma Distribution									95% KM (z) UCL		1.042	
1315				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL		1.035	
1316				Minimum		1E-09				95% KM (bootstrap t) UCL		3.213	
1317				Maximum		13				95% KM (BCA) UCL		1.133	
1318				Mean		1.094				95% KM (Percentile Bootstrap) UCL		1.114	
1319				Median		0.43				95% KM (Chebyshev) UCL		1.9	
1320				SD		2.117				97.5% KM (Chebyshev) UCL		2.497	
1321				k star		0.203				99% KM (Chebyshev) UCL		3.669	
1322				Theta star		5.39							
1323				Nu star		17.04	Potential UCLs to Use						
1324				AppChi2		8.704				95% KM (t) UCL		1.054	
1325				95% Gamma Approximate UCL		2.142							

A	B	C	D	E	F	G	H	I	J	K	L	
1326	95% Adjusted Gamma UCL				2.195							
1327	Note: DL/2 is not a recommended method.											
1328												
1329												
1330	Arsenic											
1331												
1332	General Statistics											
1333	Number of Valid Observations				42	Number of Distinct Observations				31		
1334												
1335	Raw Statistics					Log-transformed Statistics						
1336				Minimum	3.3				Minimum of Log Data	1.194		
1337				Maximum	14.1				Maximum of Log Data	2.646		
1338				Mean	7.481				Mean of log Data	1.957		
1339				Median	7.1				SD of log Data	0.338		
1340				SD	2.594							
1341				Coefficient of Variation	0.347							
1342				Skewness	0.957							
1343												
1344	Relevant UCL Statistics											
1345	Normal Distribution Test					Lognormal Distribution Test						
1346				Shapiro Wilk Test Statistic	0.886				Shapiro Wilk Test Statistic	0.937		
1347				Shapiro Wilk Critical Value	0.942				Shapiro Wilk Critical Value	0.942		
1348	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1349												
1350	Assuming Normal Distribution					Assuming Lognormal Distribution						
1351				95% Student's-t UCL	8.155				95% H-UCL	8.234		
1352	95% UCLs (Adjusted for Skewness)								95% Chebyshev (MVUE) UCL	9.217		
1353				95% Adjusted-CLT UCL	8.202				97.5% Chebyshev (MVUE) UCL	9.969		
1354				95% Modified-t UCL	8.164				99% Chebyshev (MVUE) UCL	11.45		
1355												
1356	Gamma Distribution Test					Data Distribution						
1357				k star (bias corrected)	8.495	Data appear Gamma Distributed at 5% Significance Level						
1358				Theta Star	0.881							
1359				MLE of Mean	7.481							
1360				MLE of Standard Deviation	2.567							
1361				nu star	713.6							
1362				Approximate Chi Square Value (.05)	652.6	Nonparametric Statistics						
1363				Adjusted Level of Significance	0.0443				95% CLT UCL	8.139		
1364				Adjusted Chi Square Value	650.6				95% Jackknife UCL	8.155		
1365									95% Standard Bootstrap UCL	8.128		
1366				Anderson-Darling Test Statistic	0.33				95% Bootstrap-t UCL	8.242		
1367				Anderson-Darling 5% Critical Value	0.749				95% Hall's Bootstrap UCL	8.21		
1368				Kolmogorov-Smirnov Test Statistic	0.0758				95% Percentile Bootstrap UCL	8.176		
1369				Kolmogorov-Smirnov 5% Critical Value	0.136				95% BCA Bootstrap UCL	8.21		
1370	Data appear Gamma Distributed at 5% Significance Level								95% Chebyshev(Mean, Sd) UCL	9.226		
1371									97.5% Chebyshev(Mean, Sd) UCL	9.981		
1372	Assuming Gamma Distribution								99% Chebyshev(Mean, Sd) UCL	11.46		
1373				95% Approximate Gamma UCL	8.18							
1374				95% Adjusted Gamma UCL	8.206							
1375												
1376	Potential UCL to Use					Use 95% Approximate Gamma UCL				8.18		
1377												
1378												

A	B	C	D	E	F	G	H	I	J	K	L			
1379	Chromium													
1380														
1381	General Statistics													
1382	Number of Valid Observations					41	Number of Distinct Observations					40		
1383														
1384	Raw Statistics					Log-transformed Statistics								
1385						Minimum	9.3						Minimum of Log Data	2.23
1386						Maximum	622						Maximum of Log Data	6.433
1387						Mean	58.9						Mean of log Data	3.454
1388						Median	25.1						SD of log Data	0.954
1389						SD	105.6							
1390						Coefficient of Variation	1.793							
1391						Skewness	4.323							
1392														
1393	Relevant UCL Statistics													
1394	Normal Distribution Test					Lognormal Distribution Test								
1395						Shapiro Wilk Test Statistic	0.469						Shapiro Wilk Test Statistic	0.874
1396						Shapiro Wilk Critical Value	0.941						Shapiro Wilk Critical Value	0.941
1397	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level								
1398														
1399	Assuming Normal Distribution					Assuming Lognormal Distribution								
1400						95% Student's-t UCL	86.67						95% H-UCL	70.57
1401	95% UCLs (Adjusted for Skewness)											95% Chebyshev (MVUE) UCL	85.88	
1402						95% Adjusted-CLT UCL	97.92						97.5% Chebyshev (MVUE) UCL	101.8
1403						95% Modified-t UCL	88.52						99% Chebyshev (MVUE) UCL	133.1
1404														
1405	Gamma Distribution Test					Data Distribution								
1406						k star (bias corrected)	0.883	Data do not follow a Discernable Distribution (0.05)						
1407						Theta Star	66.68							
1408						MLE of Mean	58.9							
1409						MLE of Standard Deviation	62.67							
1410						nu star	72.42							
1411						Approximate Chi Square Value (.05)	53.83	Nonparametric Statistics						
1412						Adjusted Level of Significance	0.0441						95% CLT UCL	86.03
1413						Adjusted Chi Square Value	53.24						95% Jackknife UCL	86.67
1414													95% Standard Bootstrap UCL	85.77
1415						Anderson-Darling Test Statistic	3.427						95% Bootstrap-t UCL	130.1
1416						Anderson-Darling 5% Critical Value	0.781						95% Hall's Bootstrap UCL	200.2
1417						Kolmogorov-Smirnov Test Statistic	0.257						95% Percentile Bootstrap UCL	87
1418						Kolmogorov-Smirnov 5% Critical Value	0.142						95% BCA Bootstrap UCL	97.79
1419	Data not Gamma Distributed at 5% Significance Level											95% Chebyshev(Mean, Sd) UCL	130.8	
1420												97.5% Chebyshev(Mean, Sd) UCL	161.9	
1421	Assuming Gamma Distribution											99% Chebyshev(Mean, Sd) UCL	223	
1422						95% Approximate Gamma UCL	79.24							
1423						95% Adjusted Gamma UCL	80.11							
1424														
1425	Potential UCL to Use											Use 95% Chebyshev (Mean, Sd) UCL	130.8	
1426														
1427														
1428	Lead													
1429														
1430	General Statistics													
1431	Number of Valid Observations					27	Number of Distinct Observations					27		

A	B	C	D	E	F	G	H	I	J	K	L	
1432												
1433	Raw Statistics					Log-transformed Statistics						
1434					Minimum	2.5					Minimum of Log Data	0.916
1435					Maximum	2360					Maximum of Log Data	7.766
1436					Mean	310.1					Mean of log Data	4.363
1437					Median	108					SD of log Data	2.078
1438					SD	481.9						
1439					Coefficient of Variation	1.554						
1440					Skewness	3.177						
1441												
1442	Relevant UCL Statistics											
1443	Normal Distribution Test					Lognormal Distribution Test						
1444					Shapiro Wilk Test Statistic	0.635					Shapiro Wilk Test Statistic	0.913
1445					Shapiro Wilk Critical Value	0.923					Shapiro Wilk Critical Value	0.923
1446	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1447												
1448	Assuming Normal Distribution					Assuming Lognormal Distribution						
1449					95% Student's-t UCL	468.3					95% H-UCL	3710
1450	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						1818
1451					95% Adjusted-CLT UCL	523.3					97.5% Chebyshev (MVUE) UCL	2367
1452					95% Modified-t UCL	477.8					99% Chebyshev (MVUE) UCL	3445
1453												
1454	Gamma Distribution Test					Data Distribution						
1455					k star (bias corrected)	0.44	Data appear Gamma Distributed at 5% Significance Level					
1456					Theta Star	704.9						
1457					MLE of Mean	310.1						
1458					MLE of Standard Deviation	467.6						
1459					nu star	23.76						
1460					Approximate Chi Square Value (.05)	13.66	Nonparametric Statistics					
1461					Adjusted Level of Significance	0.0401					95% CLT UCL	462.7
1462					Adjusted Chi Square Value	13.17					95% Jackknife UCL	468.3
1463											95% Standard Bootstrap UCL	461.9
1464					Anderson-Darling Test Statistic	0.531					95% Bootstrap-t UCL	584.9
1465					Anderson-Darling 5% Critical Value	0.815					95% Hall's Bootstrap UCL	1111
1466					Kolmogorov-Smirnov Test Statistic	0.141					95% Percentile Bootstrap UCL	476.8
1467					Kolmogorov-Smirnov 5% Critical Value	0.179					95% BCA Bootstrap UCL	530
1468	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL						714.4
1469						97.5% Chebyshev(Mean, Sd) UCL						889.3
1470	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						1233
1471					95% Approximate Gamma UCL	539.2						
1472					95% Adjusted Gamma UCL	559.3						
1473												
1474	Potential UCL to Use					Use 95% Adjusted Gamma UCL						559.3
1475												
1476												
1477	Thallium											
1478												
1479	General Statistics											
1480					Number of Valid Data	42					Number of Detected Data	21
1481					Number of Distinct Detected Data	17					Number of Non-Detect Data	21
1482											Percent Non-Detects	50.00%
1483												
1484	Raw Statistics					Log-transformed Statistics						

	A	B	C	D	E	F	G	H	I	J	K	L
1485				Minimum Detected		0.54				Minimum Detected		-0.616
1486				Maximum Detected		2.2				Maximum Detected		0.788
1487				Mean of Detected		1.04				Mean of Detected		-0.0129
1488				SD of Detected		0.375				SD of Detected		0.323
1489				Minimum Non-Detect		0.81				Minimum Non-Detect		-0.211
1490				Maximum Non-Detect		3.7				Maximum Non-Detect		1.308
1491												
1492	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect				42
1493	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected				0
1494	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage				100.00%
1495												
1496	UCL Statistics											
1497	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1498	Shapiro Wilk Test Statistic					0.86	Shapiro Wilk Test Statistic					0.959
1499	5% Shapiro Wilk Critical Value					0.908	5% Shapiro Wilk Critical Value					0.908
1500	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1501												
1502	Assuming Normal Distribution						Assuming Lognormal Distribution					
1503	DL/2 Substitution Method						DL/2 Substitution Method					
1504	Mean					1.062	Mean					-0.0374
1505	SD					0.444	SD					0.468
1506	95% DL/2 (t) UCL					1.177	95% H-Stat (DL/2) UCL					1.826
1507												
1508	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1509	MLE method failed to converge properly						Mean in Log Scale					-0.116
1510							SD in Log Scale					0.282
1511							Mean in Original Scale					0.929
1512							SD in Original Scale					0.305
1513							95% Percentile Bootstrap UCL					1.011
1514							95% BCA Bootstrap UCL					1.024
1515												
1516	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1517	k star (bias corrected)					8.316	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1518	Theta Star					0.125						
1519	nu star					349.3						
1520												
1521	A-D Test Statistic					0.583	Nonparametric Statistics					
1522	5% A-D Critical Value					0.743	Kaplan-Meier (KM) Method					
1523	K-S Test Statistic					0.743	Mean					0.95
1524	5% K-S Critical Value					0.189	SD					0.353
1525	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.0691
1526							95% KM (t) UCL					1.066
1527	Assuming Gamma Distribution						95% KM (z) UCL					1.064
1528	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1.067
1529	Minimum					0.54	95% KM (bootstrap t) UCL					1.094
1530	Maximum					2.2	95% KM (BCA) UCL					1.074
1531	Mean					1.06	95% KM (Percentile Bootstrap) UCL					1.073
1532	Median					1	95% KM (Chebyshev) UCL					1.251
1533	SD					0.31	97.5% KM (Chebyshev) UCL					1.381
1534	k star					12.12	99% KM (Chebyshev) UCL					1.637
1535	Theta star					0.0875						
1536	Nu star					1018	Potential UCLs to Use					
1537	AppChi2					945.4	95% KM (t) UCL					1.066

A	B	C	D	E	F	G	H	I	J	K	L	
1538	95% Gamma Approximate UCL				1.142							
1539	95% Adjusted Gamma UCL				1.145							
1540	Note: DL/2 is not a recommended method.											
1541												
1542												
1543	Vanadium											
1544												
1545	General Statistics											
1546	Number of Valid Observations				42	Number of Distinct Observations				39		
1547												
1548	Raw Statistics					Log-transformed Statistics						
1549	Minimum			8.6	Minimum of Log Data			2.152				
1550	Maximum			221	Maximum of Log Data			5.398				
1551	Mean			29.66	Mean of log Data			3.03				
1552	Median			15.45	SD of log Data			0.722				
1553	SD			38.02								
1554	Coefficient of Variation			1.282								
1555	Skewness			3.68								
1556												
1557	Relevant UCL Statistics											
1558	Normal Distribution Test					Lognormal Distribution Test						
1559	Shapiro Wilk Test Statistic			0.522	Shapiro Wilk Test Statistic			0.78				
1560	Shapiro Wilk Critical Value			0.942	Shapiro Wilk Critical Value			0.942				
1561	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1562												
1563	Assuming Normal Distribution					Assuming Lognormal Distribution						
1564	95% Student's-t UCL			39.53	95% H-UCL			33.95				
1565	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						40.83
1566	95% Adjusted-CLT UCL			42.87	97.5% Chebyshev (MVUE) UCL			46.97				
1567	95% Modified-t UCL			40.09	99% Chebyshev (MVUE) UCL			59.02				
1568												
1569	Gamma Distribution Test					Data Distribution						
1570	k star (bias corrected)			1.44	Data do not follow a Discernable Distribution (0.05)							
1571	Theta Star			20.59								
1572	MLE of Mean			29.66								
1573	MLE of Standard Deviation			24.71								
1574	nu star			121								
1575	Approximate Chi Square Value (.05)			96.6	Nonparametric Statistics							
1576	Adjusted Level of Significance			0.0443	95% CLT UCL			39.31				
1577	Adjusted Chi Square Value			95.82	95% Jackknife UCL			39.53				
1578					95% Standard Bootstrap UCL			38.91				
1579	Anderson-Darling Test Statistic			4.589	95% Bootstrap-t UCL			47.9				
1580	Anderson-Darling 5% Critical Value			0.766	95% Hall's Bootstrap UCL			73.7				
1581	Kolmogorov-Smirnov Test Statistic			0.275	95% Percentile Bootstrap UCL			39.93				
1582	Kolmogorov-Smirnov 5% Critical Value			0.139	95% BCA Bootstrap UCL			45.28				
1583	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL			55.23			
1584						97.5% Chebyshev(Mean, Sd) UCL			66.3			
1585	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL			88.03			
1586	95% Approximate Gamma UCL			37.15								
1587	95% Adjusted Gamma UCL			37.45								
1588												
1589	Potential UCL to Use					Use 95% Chebyshev (Mean, Sd) UCL			55.23			
1590												

A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects							
2	User Selected Options										
3	From File			\\Pr1-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProUCL_042							
4	Full Precision			OFF							
5	Confidence Coefficient			95%							
6	Number of Bootstrap Operations			2000							
7											
8											
9	Benzo(a)pyrene										
10											
11	General Statistics										
12	Number of Valid Data			23		Number of Detected Data			4		
13	Number of Distinct Detected Data			4		Number of Non-Detect Data			19		
14							Percent Non-Detects		82.61%		
15											
16	Raw Statistics					Log-transformed Statistics					
17	Minimum Detected			0.045		Minimum Detected			-3.101		
18	Maximum Detected			1.7		Maximum Detected			0.531		
19	Mean of Detected			0.496		Mean of Detected			-1.758		
20	SD of Detected			0.805		SD of Detected			1.624		
21	Minimum Non-Detect			0.18		Minimum Non-Detect			-1.715		
22	Maximum Non-Detect			0.41		Maximum Non-Detect			-0.892		
23											
24	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect			22		
25	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected			1		
26	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage			95.65%		
27											
28	Warning: There are only 4 Distinct Detected Values in this data										
29	Note: It should be noted that even though bootstrap may be performed on this data set										
30	the resulting calculations may not be reliable enough to draw conclusions										
31											
32	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
33											
34											
35	UCL Statistics										
36	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
37	Shapiro Wilk Test Statistic			0.686		Shapiro Wilk Test Statistic			0.888		
38	5% Shapiro Wilk Critical Value			0.748		5% Shapiro Wilk Critical Value			0.748		
39	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
40											
41	Assuming Normal Distribution					Assuming Lognormal Distribution					
42	DL/2 Substitution Method					DL/2 Substitution Method					
43	Mean			0.182		Mean			-2.119		
44	SD			0.333		SD			0.671		
45	95% DL/2 (t) UCL			0.301		95% H-Stat (DL/2) UCL			0.213		
46											
47	Maximum Likelihood Estimate(MLE) Method			N/A		Log ROS Method					
48	MLE method failed to converge properly					Mean in Log Scale			-2.349		
49						SD in Log Scale			0.91		
50						Mean in Original Scale			0.173		
51						SD in Original Scale			0.339		
52						95% Percentile Bootstrap UCL			0.31		
53						95% BCA Bootstrap UCL			0.392		

A	B	C	D	E	F	G	H	I	J	K	L
54	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
56	k star (bias corrected)				0.313	Data appear Gamma Distributed at 5% Significance Level					
57	Theta Star				1.582						
58	nu star				2.507						
59											
60	A-D Test Statistic				0.526	Nonparametric Statistics					
61	5% A-D Critical Value				0.677	Kaplan-Meier (KM) Method					
62	K-S Test Statistic				0.677	Mean					0.164
63	5% K-S Critical Value				0.408	SD					0.332
64	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					0.0861
65						95% KM (t) UCL					0.312
66	Assuming Gamma Distribution					95% KM (z) UCL					0.306
67	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.306
68	Minimum				1E-09	95% KM (bootstrap t) UCL					0.556
69	Maximum				1.7	95% KM (BCA) UCL					0.352
70	Mean				0.454	95% KM (Percentile Bootstrap) UCL					0.367
71	Median				0.534	95% KM (Chebyshev) UCL					0.54
72	SD				0.379	97.5% KM (Chebyshev) UCL					0.702
73	k star				0.467	99% KM (Chebyshev) UCL					1.021
74	Theta star				0.972						
75	Nu star				21.48	Potential UCLs to Use					
76	AppChi2				11.95	95% KM (t) UCL					0.312
77	95% Gamma Approximate UCL				0.816						
78	95% Adjusted Gamma UCL				N/A						
79	Note: DL/2 is not a recommended method.										
80											
81											
82	Benzo(g,h,i)perylene										
83											
84	General Statistics										
85	Number of Valid Data				23	Number of Detected Data				1	
86	Number of Distinct Detected Data				1	Number of Non-Detect Data				22	
87						Percent Non-Detects				95.65%	
88											
89	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!										
90	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).										
91											
92	The data set for variable Benzo(g,h,i)perylene was not processed!										
93											
94											
95											
96	Carbazole										
97											
98	General Statistics										
99	Number of Valid Data				24	Number of Detected Data				1	
100	Number of Distinct Detected Data				1	Number of Non-Detect Data				23	
101						Percent Non-Detects				95.83%	
102											
103	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!										
104	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).										
105											
106	The data set for variable Carbazole was not processed!										

A	B	C	D	E	F	G	H	I	J	K	L	
107												
108												
109												
110	Dibenzo(a,h)anthracene											
111												
112	General Statistics											
113	Number of Valid Data					23		Number of Detected Data			1	
114	Number of Distinct Detected Data					1		Number of Non-Detect Data			22	
115								Percent Non-Detects			95.65%	
116												
117	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
118	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
119												
120	The data set for variable Dibenzo(a,h)anthracene was not processed!											
121												
122												
123												
124	Di-n-octylphthalate											
125												
126	General Statistics											
127	Number of Valid Data					23		Number of Detected Data			2	
128	Number of Distinct Detected Data					2		Number of Non-Detect Data			21	
129								Percent Non-Detects			91.30%	
130												
131	Raw Statistics					Log-transformed Statistics						
132	Minimum Detected				0.059		Minimum Detected				-2.83	
133	Maximum Detected				0.22		Maximum Detected				-1.514	
134	Mean of Detected				0.14		Mean of Detected				-2.172	
135	SD of Detected				0.114		SD of Detected				0.931	
136	Minimum Non-Detect				0.18		Minimum Non-Detect				-1.715	
137	Maximum Non-Detect				4.5		Maximum Non-Detect				1.504	
138												
139	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					23	
140	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					0	
141	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					100.00%	
142												
143	Warning: Data set has only 2 Distinct Detected Values.											
144	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.											
145	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
146												
147	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.											
148												
149	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.											
150	Those methods will return a 'N/A' value on your output display!											
151												
152	It is necessary to have 4 or more Distinct Values for bootstrap methods.											
153	However, results obtained using 4 to 9 distinct values may not be reliable.											
154	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.											
155												
156												
157	UCL Statistics											
158	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
159	Shapiro Wilk Test Statistic				N/A		Shapiro Wilk Test Statistic				N/A	

A	B	C	D	E	F	G	H	I	J	K	L
160	5% Shapiro Wilk Critical Value				N/A	5% Shapiro Wilk Critical Value				N/A	
161	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
162											
163	Assuming Normal Distribution					Assuming Lognormal Distribution					
164	DL/2 Substitution Method					DL/2 Substitution Method					
165	Mean				0.207	Mean				-2.087	
166	SD				0.447	SD				0.696	
167	95% DL/2 (t) UCL				0.367	95% H-Stat (DL/2) UCL				0.234	
168											
169	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
170	MLE method failed to converge properly					Mean in Log Scale				N/A	
171						SD in Log Scale				N/A	
172						Mean in Original Scale				N/A	
173						SD in Original Scale				N/A	
174						95% Percentile Bootstrap UCL				N/A	
175						95% BCA Bootstrap UCL				N/A	
176											
177	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
178	k star (bias corrected)				N/A	Data do not follow a Discernable Distribution (0.05)					
179	Theta Star				N/A						
180	nu star				N/A						
181											
182	A-D Test Statistic				N/A	Nonparametric Statistics					
183	5% A-D Critical Value				N/A	Kaplan-Meier (KM) Method					
184	K-S Test Statistic				N/A	Mean				0.0685	
185	5% K-S Critical Value				N/A	SD				0.0379	
186	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.013	
187						95% KM (t) UCL				0.0908	
188	Assuming Gamma Distribution					95% KM (z) UCL				0.0898	
189	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.174	
190	Minimum				N/A	95% KM (bootstrap t) UCL				N/A	
191	Maximum				N/A	95% KM (BCA) UCL				0.22	
192	Mean				N/A	95% KM (Percentile Bootstrap) UCL				0.22	
193	Median				N/A	95% KM (Chebyshev) UCL				0.125	
194	SD				N/A	97.5% KM (Chebyshev) UCL				0.15	
195	k star				N/A	99% KM (Chebyshev) UCL				0.198	
196	Theta star				N/A						
197	Nu star				N/A	Potential UCLs to Use					
198	AppChi2				N/A	95% KM (t) UCL				0.0908	
199	95% Gamma Approximate UCL				N/A	95% KM (% Bootstrap) UCL				0.22	
200	95% Adjusted Gamma UCL				N/A						
201	Note: DL/2 is not a recommended method.										
202											
203											
204	Phenanthrene										
205											
206	General Statistics										
207	Number of Valid Data				24	Number of Detected Data				5	
208	Number of Distinct Detected Data				5	Number of Non-Detect Data				19	
209						Percent Non-Detects				79.17%	
210											
211	Raw Statistics					Log-transformed Statistics					
212	Minimum Detected				0.015	Minimum Detected				-4.2	

A	B	C	D	E	F	G	H	I	J	K	L
213				Maximum Detected	1.6					Maximum Detected	0.47
214				Mean of Detected	0.402					Mean of Detected	-2.038
215				SD of Detected	0.674					SD of Detected	1.712
216				Minimum Non-Detect	0.18					Minimum Non-Detect	-1.715
217				Maximum Non-Detect	0.41					Maximum Non-Detect	-0.892
218											
219	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect	23
220	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected	1
221	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage	95.83%
222											
223	Warning: There are only 5 Detected Values in this data										
224	Note: It should be noted that even though bootstrap may be performed on this data set										
225	the resulting calculations may not be reliable enough to draw conclusions										
226											
227	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
228											
229											
230	UCL Statistics										
231	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
232				Shapiro Wilk Test Statistic	0.655					Shapiro Wilk Test Statistic	0.973
233				5% Shapiro Wilk Critical Value	0.762					5% Shapiro Wilk Critical Value	0.762
234	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
235											
236	Assuming Normal Distribution					Assuming Lognormal Distribution					
237				DL/2 Substitution Method						DL/2 Substitution Method	
238				Mean	0.175					Mean	-2.164
239				SD	0.307					SD	0.758
240				95% DL/2 (t) UCL	0.283					95% H-Stat (DL/2) UCL	0.255
241											
242				Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method	
243	MLE method failed to converge properly									Mean in Log Scale	-2.887
244										SD in Log Scale	1.042
245										Mean in Original Scale	0.128
246										SD in Original Scale	0.317
247										95% Percentile Bootstrap UCL	0.254
248										95% BCA Bootstrap UCL	0.323
249											
250	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
251				k star (bias corrected)	0.355	Data appear Gamma Distributed at 5% Significance Level					
252				Theta Star	1.132						
253				nu star	3.552						
254											
255				A-D Test Statistic	0.42	Nonparametric Statistics					
256				5% A-D Critical Value	0.708					Kaplan-Meier (KM) Method	
257				K-S Test Statistic	0.708					Mean	0.133
258				5% K-S Critical Value	0.371					SD	0.31
259	Data appear Gamma Distributed at 5% Significance Level									SE of Mean	0.073
260										95% KM (t) UCL	0.258
261	Assuming Gamma Distribution									95% KM (z) UCL	0.253
262	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	0.251
263				Minimum	0.015					95% KM (bootstrap t) UCL	0.496
264				Maximum	1.6					95% KM (BCA) UCL	0.344
265				Mean	0.364					95% KM (Percentile Bootstrap) UCL	0.283

A	B	C	D	E	F	G	H	I	J	K	L
266				Median	0.352				95% KM (Chebyshev) UCL		0.451
267				SD	0.309				97.5% KM (Chebyshev) UCL		0.588
268				k star	1.479				99% KM (Chebyshev) UCL		0.859
269				Theta star	0.246						
270				Nu star	70.97			Potential UCLs to Use			
271				AppChi2	52.58				95% KM (t) UCL		0.258
272				95% Gamma Approximate UCL	0.491						
273				95% Adjusted Gamma UCL	0.502						
274	Note: DL/2 is not a recommended method.										
275											
276											
277	Endosulfan II										
278											
279	General Statistics										
280				Number of Valid Data	22				Number of Detected Data		2
281				Number of Distinct Detected Data	2				Number of Non-Detect Data		20
282									Percent Non-Detects		90.91%
283											
284	Raw Statistics					Log-transformed Statistics					
285				Minimum Detected	0.0023				Minimum Detected		-6.075
286				Maximum Detected	0.0026				Maximum Detected		-5.952
287				Mean of Detected	0.00245				Mean of Detected		-6.014
288				SD of Detected	0.0002121				SD of Detected		0.0867
289				Minimum Non-Detect	0.0035				Minimum Non-Detect		-5.655
290				Maximum Non-Detect	0.0089				Maximum Non-Detect		-4.722
291											
292	Note: Data have multiple DLs - Use of KM Method is recommended								Number treated as Non-Detect		22
293	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected		0
294	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage		100.00%
295											
296	Warning: Data set has only 2 Distinct Detected Values.										
297	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.										
298	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).										
299											
300	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.										
301											
302	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.										
303	Those methods will return a 'N/A' value on your output display!										
304											
305	It is necessary to have 4 or more Distinct Values for bootstrap methods.										
306	However, results obtained using 4 to 9 distinct values may not be reliable.										
307	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.										
308											
309											
310	UCL Statistics										
311	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
312				Shapiro Wilk Test Statistic	N/A				Shapiro Wilk Test Statistic		N/A
313				5% Shapiro Wilk Critical Value	N/A				5% Shapiro Wilk Critical Value		N/A
314	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
315											
316	Assuming Normal Distribution					Assuming Lognormal Distribution					
317				DL/2 Substitution Method					DL/2 Substitution Method		
318				Mean	0.00224				Mean		-6.131

A	B	C	D	E	F	G	H	I	J	K	L	
319					SD	0.0006774				SD	0.237	
320					95% DL/2 (t) UCL	0.00249				95% H-Stat (DL/2) UCL	0.0027	
321												
322					Maximum Likelihood Estimate(MLE) Method	N/A				Log ROS Method		
323					MLE method failed to converge properly					Mean in Log Scale	N/A	
324										SD in Log Scale	N/A	
325										Mean in Original Scale	N/A	
326										SD in Original Scale	N/A	
327										95% Percentile Bootstrap UCL	N/A	
328										95% BCA Bootstrap UCL	N/A	
329												
330					Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only		
331					k star (bias corrected)	N/A			Data do not follow a Discernable Distribution (0.05)			
332					Theta Star	N/A						
333					nu star	N/A						
334												
335					A-D Test Statistic	N/A			Nonparametric Statistics			
336					5% A-D Critical Value	N/A			Kaplan-Meier (KM) Method			
337					K-S Test Statistic	N/A				Mean	0.00245	
338					5% K-S Critical Value	N/A				SD	0.00015	
339					Data not Gamma Distributed at 5% Significance Level					SE of Mean	0.00015	
340										95% KM (t) UCL	0.00271	
341					Assuming Gamma Distribution					95% KM (z) UCL	0.0027	
342					Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL	0.00281	
343					Minimum	N/A				95% KM (bootstrap t) UCL	N/A	
344					Maximum	N/A				95% KM (BCA) UCL	N/A	
345					Mean	N/A				95% KM (Percentile Bootstrap) UCL	0.0026	
346					Median	N/A				95% KM (Chebyshev) UCL	0.0031	
347					SD	N/A				97.5% KM (Chebyshev) UCL	0.00339	
348					k star	N/A				99% KM (Chebyshev) UCL	0.00394	
349					Theta star	N/A						
350					Nu star	N/A			Potential UCLs to Use			
351					AppChi2	N/A				95% KM (t) UCL	0.00271	
352					95% Gamma Approximate UCL	N/A				95% KM (% Bootstrap) UCL	0.0026	
353					95% Adjusted Gamma UCL	N/A						
354					Warning: Recommended UCL exceeds the maximum observation							
355	Note: DL/2 is not a recommended method.											
356												
357												
358	Endrin aldehyde											
359												
360	General Statistics											
361					Number of Valid Data	22				Number of Detected Data	3	
362					Number of Distinct Detected Data	3				Number of Non-Detect Data	19	
363										Percent Non-Detects	86.36%	
364												
365	Raw Statistics					Log-transformed Statistics						
366					Minimum Detected	0.0011				Minimum Detected	-6.812	
367					Maximum Detected	0.011				Maximum Detected	-4.51	
368					Mean of Detected	0.00517				Mean of Detected	-5.669	
369					SD of Detected	0.00518				SD of Detected	1.151	
370					Minimum Non-Detect	0.0035				Minimum Non-Detect	-5.655	
371					Maximum Non-Detect	0.008				Maximum Non-Detect	-4.828	

	A	B	C	D	E	F	G	H	I	J	K	L		
372														
373	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect				21		
374	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected				1		
375	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage				95.45%		
376	Warning: There are only 3 Distinct Detected Values in this data set													
377	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.													
378	Those methods will return a 'N/A' value on your output display!													
379	It is necessary to have 4 or more Distinct Values for bootstrap methods.													
380	However, results obtained using 4 to 9 distinct values may not be reliable.													
381	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
382	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
383	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
384	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
385	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.													
386	UCL Statistics													
387	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
388	Shapiro Wilk Test Statistic						0.913	Shapiro Wilk Test Statistic						1
389	5% Shapiro Wilk Critical Value						0.767	5% Shapiro Wilk Critical Value						0.767
390	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
391	Assuming Normal Distribution						Assuming Lognormal Distribution							
392	DL/2 Substitution Method						DL/2 Substitution Method							
393	Mean						0.00253	Mean						-6.105
394	SD						0.00198	SD						0.429
395	95% DL/2 (t) UCL						0.00326	95% H-Stat (DL/2) UCL						0.00301
396	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
397	MLE method failed to converge properly						Mean in Log Scale						-6.204	
398							SD in Log Scale						0.569	
399							Mean in Original Scale						0.00244	
400							SD in Original Scale						0.00209	
401							95% Percentile Bootstrap UCL						0.00325	
402							95% BCA Bootstrap UCL						0.00365	
403														
404														
405														
406	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
407	k star (bias corrected)						N/A	Data appear Normal at 5% Significance Level						
408	Theta Star						N/A							
409	nu star						N/A							
410														
411	A-D Test Statistic						N/A	Nonparametric Statistics						
412	5% A-D Critical Value						N/A	Kaplan-Meier (KM) Method						
413	K-S Test Statistic						N/A	Mean						0.00265
414	5% K-S Critical Value						N/A	SD						0.00214
415	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.00106	
416							95% KM (t) UCL						0.00448	
417	Assuming Gamma Distribution						95% KM (z) UCL						0.0044	
418	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.00534	
419	Minimum						N/A	95% KM (bootstrap t) UCL						0.00445
420	Maximum						N/A	95% KM (BCA) UCL						0.011
421	Mean						N/A	95% KM (Percentile Bootstrap) UCL						0.011
422	Median						N/A	95% KM (Chebyshev) UCL						0.00728
423	SD						N/A	97.5% KM (Chebyshev) UCL						0.00929
424	k star						N/A	99% KM (Chebyshev) UCL						0.0132

A	B	C	D	E	F	G	H	I	J	K	L
425				Theta star	N/A						
426				Nu star	N/A	Potential UCLs to Use					
427				AppChi2	N/A				95% KM (t) UCL		0.00448
428				95% Gamma Approximate UCL	N/A				95% KM (Percentile Bootstrap) UCL		0.011
429				95% Adjusted Gamma UCL	N/A						
430	Note: DL/2 is not a recommended method.										
431											
432											
433	Endrin ketone										
434											
435	General Statistics										
436				Number of Valid Data	22				Number of Detected Data		2
437				Number of Distinct Detected Data	2				Number of Non-Detect Data		20
438									Percent Non-Detects		90.91%
439											
440	Raw Statistics					Log-transformed Statistics					
441				Minimum Detected	0.00031				Minimum Detected		-8.079
442				Maximum Detected	0.014				Maximum Detected		-4.269
443				Mean of Detected	0.00716				Mean of Detected		-6.174
444				SD of Detected	0.00968				SD of Detected		2.694
445				Minimum Non-Detect	0.0035				Minimum Non-Detect		-5.655
446				Maximum Non-Detect	0.008				Maximum Non-Detect		-4.828
447											
448	Note: Data have multiple DLs - Use of KM Method is recommended								Number treated as Non-Detect		21
449	For all methods (except KM, DL/2, and ROS Methods),								Number treated as Detected		1
450	Observations < Largest ND are treated as NDs								Single DL Non-Detect Percentage		95.45%
451											
452	Warning: Data set has only 2 Distinct Detected Values.										
453	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.										
454	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).										
455											
456	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.										
457											
458	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.										
459	Those methods will return a 'N/A' value on your output display!										
460											
461	It is necessary to have 4 or more Distinct Values for bootstrap methods.										
462	However, results obtained using 4 to 9 distinct values may not be reliable.										
463	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.										
464											
465											
466	UCL Statistics										
467	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
468				Shapiro Wilk Test Statistic	N/A				Shapiro Wilk Test Statistic		N/A
469				5% Shapiro Wilk Critical Value	N/A				5% Shapiro Wilk Critical Value		N/A
470	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
471											
472	Assuming Normal Distribution					Assuming Lognormal Distribution					
473				DL/2 Substitution Method					DL/2 Substitution Method		
474				Mean	0.00255				Mean		-6.189
475				SD	0.00263				SD		0.611
476				95% DL/2 (t) UCL	0.00351				95% H-Stat (DL/2) UCL		0.00356
477											

A	B	C	D	E	F	G	H	I	J	K	L
478	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
479	MLE method failed to converge properly					Mean in Log Scale					N/A
480						SD in Log Scale					N/A
481						Mean in Original Scale					N/A
482						SD in Original Scale					N/A
483						95% Percentile Bootstrap UCL					N/A
484						95% BCA Bootstrap UCL					N/A
485											
486	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
487	k star (bias corrected)				N/A	Data do not follow a Discernable Distribution (0.05)					
488	Theta Star				N/A						
489	nu star				N/A						
490											
491	A-D Test Statistic				N/A	Nonparametric Statistics					
492	5% A-D Critical Value				N/A	Kaplan-Meier (KM) Method					
493	K-S Test Statistic				N/A	Mean					0.0009323
494	5% K-S Critical Value				N/A	SD					0.00285
495	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.0008598
496						95% KM (t) UCL					0.00241
497	Assuming Gamma Distribution					95% KM (z) UCL					0.00235
498	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.00998
499	Minimum				N/A	95% KM (bootstrap t) UCL					N/A
500	Maximum				N/A	95% KM (BCA) UCL					0.014
501	Mean				N/A	95% KM (Percentile Bootstrap) UCL					0.014
502	Median				N/A	95% KM (Chebyshev) UCL					0.00468
503	SD				N/A	97.5% KM (Chebyshev) UCL					0.0063
504	k star				N/A	99% KM (Chebyshev) UCL					0.00949
505	Theta star				N/A						
506	Nu star				N/A	Potential UCLs to Use					
507	AppChi2				N/A	99% KM (Chebyshev) UCL					0.00949
508	95% Gamma Approximate UCL				N/A						
509	95% Adjusted Gamma UCL				N/A						
510	Note: DL/2 is not a recommended method.										
511											
512											
513	gamma-Chlordane										
514											
515	General Statistics										
516	Number of Valid Data				22	Number of Detected Data				1	
517	Number of Distinct Detected Data				1	Number of Non-Detect Data				21	
518						Percent Non-Detects				95.45%	
519											
520	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!										
521	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).										
522											
523	The data set for variable gamma-Chlordane was not processed!										
524											
525											
526											
527	Antimony										
528											
529	General Statistics										
530	Number of Valid Data				24	Number of Detected Data				13	

A	B	C	D	E	F	G	H	I	J	K	L
531	Number of Distinct Detected Data				11	Number of Non-Detect Data				11	
532						Percent Non-Detects				45.83%	
533											
534	Raw Statistics					Log-transformed Statistics					
535	Minimum Detected				0.3	Minimum Detected				-1.204	
536	Maximum Detected				115	Maximum Detected				4.745	
537	Mean of Detected				19.15	Mean of Detected				0.948	
538	SD of Detected				42.55	SD of Detected				1.864	
539	Minimum Non-Detect				0.63	Minimum Non-Detect				-0.462	
540	Maximum Non-Detect				9.9	Maximum Non-Detect				2.293	
541											
542	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				22	
543	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				2	
544	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				91.67%	
545											
546	UCL Statistics										
547	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
548	Shapiro Wilk Test Statistic				0.468	Shapiro Wilk Test Statistic				0.811	
549	5% Shapiro Wilk Critical Value				0.866	5% Shapiro Wilk Critical Value				0.866	
550	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
551											
552	Assuming Normal Distribution					Assuming Lognormal Distribution					
553	DL/2 Substitution Method					DL/2 Substitution Method					
554	Mean				11.98	Mean				1.024	
555	SD				31.76	SD				1.439	
556	95% DL/2 (t) UCL				23.1	95% H-Stat (DL/2) UCL				21.13	
557											
558	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
559	MLE method failed to converge properly					Mean in Log Scale				0.62	
560						SD in Log Scale				1.46	
561						Mean in Original Scale				11.05	
562						SD in Original Scale				32.03	
563						95% Percentile Bootstrap UCL				20.8	
564						95% BCA Bootstrap UCL				29.81	
565											
566	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
567	k star (bias corrected)				0.311	Data do not follow a Discernable Distribution (0.05)					
568	Theta Star				61.58						
569	nu star				8.084						
570											
571	A-D Test Statistic				2.139	Nonparametric Statistics					
572	5% A-D Critical Value				0.822	Kaplan-Meier (KM) Method					
573	K-S Test Statistic				0.822	Mean				11.06	
574	5% K-S Critical Value				0.255	SD				31.36	
575	Data not Gamma Distributed at 5% Significance Level					SE of Mean				6.666	
576						95% KM (t) UCL				22.48	
577	Assuming Gamma Distribution					95% KM (z) UCL				22.02	
578	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				22.27	
579	Minimum				0.3	95% KM (bootstrap t) UCL				221.1	
580	Maximum				115	95% KM (BCA) UCL				20.95	
581	Mean				15.84	95% KM (Percentile Bootstrap) UCL				20.76	
582	Median				5.23	95% KM (Chebyshev) UCL				40.11	
583	SD				31.22	97.5% KM (Chebyshev) UCL				52.69	

A	B	C	D	E	F	G	H	I	J	K	L
584				k star	0.498	99% KM (Chebyshev) UCL				77.38	
585				Theta star	31.82						
586				Nu star	23.9	Potential UCLs to Use					
587				AppChi2	13.78	99% KM (Chebyshev) UCL				77.38	
588				95% Gamma Approximate UCL	27.49						
589				95% Adjusted Gamma UCL	28.62						
590	Note: DL/2 is not a recommended method.										
591											
592											
593	Arsenic										
594											
595	General Statistics										
596	Number of Valid Observations				24	Number of Distinct Observations				21	
597											
598	Raw Statistics					Log-transformed Statistics					
599	Minimum				2.2	Minimum of Log Data				0.788	
600	Maximum				10.9	Maximum of Log Data				2.389	
601	Mean				5.95	Mean of log Data				1.719	
602	Median				5.8	SD of log Data				0.386	
603	SD				2.038						
604	Coefficient of Variation				0.343						
605	Skewness				0.278						
606											
607	Relevant UCL Statistics										
608	Normal Distribution Test					Lognormal Distribution Test					
609	Shapiro Wilk Test Statistic				0.977	Shapiro Wilk Test Statistic				0.931	
610	Shapiro Wilk Critical Value				0.916	Shapiro Wilk Critical Value				0.916	
611	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
612											
613	Assuming Normal Distribution					Assuming Lognormal Distribution					
614	95% Student's-t UCL				6.663	95% H-UCL				6.996	
615	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL				8.099	
616	95% Adjusted-CLT UCL				6.66	97.5% Chebyshev (MVUE) UCL				9.011	
617	95% Modified-t UCL				6.667	99% Chebyshev (MVUE) UCL				10.8	
618											
619	Gamma Distribution Test					Data Distribution					
620	k star (bias corrected)				6.965	Data appear Normal at 5% Significance Level					
621	Theta Star				0.854						
622	MLE of Mean				5.95						
623	MLE of Standard Deviation				2.255						
624	nu star				334.3						
625	Approximate Chi Square Value (.05)				292.9	Nonparametric Statistics					
626	Adjusted Level of Significance				0.0392	95% CLT UCL				6.634	
627	Adjusted Chi Square Value				290.2	95% Jackknife UCL				6.663	
628						95% Standard Bootstrap UCL				6.614	
629	Anderson-Darling Test Statistic				0.39	95% Bootstrap-t UCL				6.647	
630	Anderson-Darling 5% Critical Value				0.745	95% Hall's Bootstrap UCL				6.705	
631	Kolmogorov-Smirnov Test Statistic				0.131	95% Percentile Bootstrap UCL				6.592	
632	Kolmogorov-Smirnov 5% Critical Value				0.178	95% BCA Bootstrap UCL				6.725	
633	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				7.764	
634						97.5% Chebyshev(Mean, Sd) UCL				8.548	
635	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				10.09	
636	95% Approximate Gamma UCL				6.79						

A	B	C	D	E	F	G	H	I	J	K	L	
637	95% Adjusted Gamma UCL				6.854							
638												
639	Potential UCL to Use								Use 95% Student's-t UCL	6.663		
640												
641												
642	Chromium											
643												
644	General Statistics											
645	Number of Valid Observations				22	Number of Distinct Observations				20		
646												
647	Raw Statistics					Log-transformed Statistics						
648	Minimum			6.8	Minimum of Log Data			1.917				
649	Maximum			18.4	Maximum of Log Data			2.912				
650	Mean			11.23	Mean of log Data			2.38				
651	Median			10.85	SD of log Data			0.284				
652	SD			3.222								
653	Coefficient of Variation			0.287								
654	Skewness			0.639								
655												
656	Relevant UCL Statistics											
657	Normal Distribution Test					Lognormal Distribution Test						
658	Shapiro Wilk Test Statistic			0.938	Shapiro Wilk Test Statistic			0.961				
659	Shapiro Wilk Critical Value			0.911	Shapiro Wilk Critical Value			0.911				
660	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
661												
662	Assuming Normal Distribution					Assuming Lognormal Distribution						
663	95% Student's-t UCL			12.41	95% H-UCL			12.6				
664	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						14.24
665	95% Adjusted-CLT UCL			12.46	97.5% Chebyshev (MVUE) UCL			15.54				
666	95% Modified-t UCL			12.43	99% Chebyshev (MVUE) UCL			18.1				
667												
668	Gamma Distribution Test					Data Distribution						
669	k star (bias corrected)			11.38	Data appear Normal at 5% Significance Level							
670	Theta Star			0.987								
671	MLE of Mean			11.23								
672	MLE of Standard Deviation			3.33								
673	nu star			500.5								
674	Approximate Chi Square Value (.05)			449.7	Nonparametric Statistics							
675	Adjusted Level of Significance			0.0386	95% CLT UCL			12.36				
676	Adjusted Chi Square Value			446.1	95% Jackknife UCL			12.41				
677					95% Standard Bootstrap UCL			12.33				
678	Anderson-Darling Test Statistic			0.305	95% Bootstrap-t UCL			12.61				
679	Anderson-Darling 5% Critical Value			0.743	95% Hall's Bootstrap UCL			12.6				
680	Kolmogorov-Smirnov Test Statistic			0.099	95% Percentile Bootstrap UCL			12.34				
681	Kolmogorov-Smirnov 5% Critical Value			0.185	95% BCA Bootstrap UCL			12.5				
682	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL						14.23
683						97.5% Chebyshev(Mean, Sd) UCL						15.52
684	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL						18.07
685	95% Approximate Gamma UCL			12.5								
686	95% Adjusted Gamma UCL			12.6								
687												
688	Potential UCL to Use					Use 95% Student's-t UCL						12.41
689												

	A	B	C	D	E	F	G	H	I	J	K	L		
690														
691	Lead													
692														
693	General Statistics													
694	Number of Valid Observations						22	Number of Distinct Observations						22
695														
696	Raw Statistics						Log-transformed Statistics							
697	Minimum						3.8	Minimum of Log Data						1.335
698	Maximum						14600	Maximum of Log Data						9.589
699	Mean						760.2	Mean of log Data						3.763
700	Median						43.25	SD of log Data						1.96
701	SD						3098							
702	Coefficient of Variation						4.076							
703	Skewness						4.656							
704														
705	Relevant UCL Statistics													
706	Normal Distribution Test						Lognormal Distribution Test							
707	Shapiro Wilk Test Statistic						0.255	Shapiro Wilk Test Statistic						0.896
708	Shapiro Wilk Critical Value						0.911	Shapiro Wilk Critical Value						0.911
709	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
710														
711	Assuming Normal Distribution						Assuming Lognormal Distribution							
712	95% Student's-t UCL						1897	95% H-UCL						1710
713	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						784.4	
714	95% Adjusted-CLT UCL						2547	97.5% Chebyshev (MVUE) UCL						1021
715	95% Modified-t UCL						2006	99% Chebyshev (MVUE) UCL						1485
716														
717	Gamma Distribution Test						Data Distribution							
718	k star (bias corrected)						0.244	Data do not follow a Discernable Distribution (0.05)						
719	Theta Star						3111							
720	MLE of Mean						760.2							
721	MLE of Standard Deviation						1538							
722	nu star						10.75							
723	Approximate Chi Square Value (.05)						4.416	Nonparametric Statistics						
724	Adjusted Level of Significance						0.0386	95% CLT UCL						1847
725	Adjusted Chi Square Value						4.116	95% Jackknife UCL						1897
726								95% Standard Bootstrap UCL						1833
727	Anderson-Darling Test Statistic						3.53	95% Bootstrap-t UCL						32240
728	Anderson-Darling 5% Critical Value						0.871	95% Hall's Bootstrap UCL						23179
729	Kolmogorov-Smirnov Test Statistic						0.365	95% Percentile Bootstrap UCL						2082
730	Kolmogorov-Smirnov 5% Critical Value						0.203	95% BCA Bootstrap UCL						2835
731	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						3639	
732							97.5% Chebyshev(Mean, Sd) UCL						4885	
733	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						7333	
734	95% Approximate Gamma UCL						1851							
735	95% Adjusted Gamma UCL						1985							
736														
737	Potential UCL to Use						Use 99% Chebyshev (Mean, Sd) UCL						7333	
738														
739														
740	Thallium													
741														
742	General Statistics													

A	B	C	D	E	F	G	H	I	J	K	L
743	Number of Valid Data				24	Number of Detected Data				2	
744	Number of Distinct Detected Data				2	Number of Non-Detect Data				22	
745						Percent Non-Detects				91.67%	
746											
747	Raw Statistics					Log-transformed Statistics					
748	Minimum Detected				0.76	Minimum Detected				-0.274	
749	Maximum Detected				0.77	Maximum Detected				-0.261	
750	Mean of Detected				0.765	Mean of Detected				-0.268	
751	SD of Detected				0.00707	SD of Detected				0.00924	
752	Minimum Non-Detect				0.84	Minimum Non-Detect				-0.174	
753	Maximum Non-Detect				4.1	Maximum Non-Detect				1.411	
754											
755	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				24	
756	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				0	
757	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				100.00%	
758											
759	Warning: Data set has only 2 Distinct Detected Values.										
760	This may not be adequate enough to compute meaningful and reliable test statistics and estimates.										
761	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).										
762											
763	Unless Data Quality Objectives (DQOs) have been met, it is suggested to collect additional observations.										
764											
765	The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.										
766	Those methods will return a 'N/A' value on your output display!										
767											
768	It is necessary to have 4 or more Distinct Values for bootstrap methods.										
769	However, results obtained using 4 to 9 distinct values may not be reliable.										
770	It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.										
771											
772											
773	UCL Statistics										
774	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
775	Shapiro Wilk Test Statistic				N/A	Shapiro Wilk Test Statistic				N/A	
776	5% Shapiro Wilk Critical Value				N/A	5% Shapiro Wilk Critical Value				N/A	
777	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
778											
779	Assuming Normal Distribution					Assuming Lognormal Distribution					
780	DL/2 Substitution Method					DL/2 Substitution Method					
781	Mean				1.363	Mean				0.264	
782	SD				0.359	SD				0.339	
783	95% DL/2 (t) UCL				1.488	95% H-Stat (DL/2) UCL				1.848	
784											
785	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
786	MLE method failed to converge properly					Mean in Log Scale				N/A	
787						SD in Log Scale				N/A	
788						Mean in Original Scale				N/A	
789						SD in Original Scale				N/A	
790						95% Percentile Bootstrap UCL				N/A	
791						95% BCA Bootstrap UCL				N/A	
792											
793	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
794	k star (bias corrected)				N/A	Data do not follow a Discernable Distribution (0.05)					
795	Theta Star				N/A						

A	B	C	D	E	F	G	H	I	J	K	L	
796				nu star	N/A							
797												
798				A-D Test Statistic	N/A	Nonparametric Statistics						
799				5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method						
800				K-S Test Statistic	N/A	Mean					0.765	
801				5% K-S Critical Value	N/A	SD					0.005	
802	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.005	
803						95% KM (t) UCL					0.774	
804	Assuming Gamma Distribution					95% KM (z) UCL					0.773	
805	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.777	
806				Minimum	N/A	95% KM (bootstrap t) UCL					0.775	
807				Maximum	N/A	95% KM (BCA) UCL					0.77	
808				Mean	N/A	95% KM (Percentile Bootstrap) UCL					0.77	
809				Median	N/A	95% KM (Chebyshev) UCL					0.787	
810				SD	N/A	97.5% KM (Chebyshev) UCL					0.796	
811				k star	N/A	99% KM (Chebyshev) UCL					0.815	
812				Theta star	N/A							
813				Nu star	N/A	Potential UCLs to Use						
814				AppChi2	N/A	95% KM (t) UCL					0.774	
815				95% Gamma Approximate UCL	N/A	95% KM (% Bootstrap) UCL					0.77	
816				95% Adjusted Gamma UCL	N/A							
817	Warning: Recommended UCL exceeds the maximum observation											
818	Note: DL/2 is not a recommended method.											
819												
820												
821	Vanadium											
822												
823	General Statistics											
824	Number of Valid Observations				24	Number of Distinct Observations				21		
825												
826	Raw Statistics					Log-transformed Statistics						
827				Minimum	5.7	Minimum of Log Data					1.74	
828				Maximum	17.3	Maximum of Log Data					2.851	
829				Mean	12.15	Mean of log Data					2.473	
830				Median	12.15	SD of log Data					0.235	
831				SD	2.614							
832				Coefficient of Variation	0.215							
833				Skewness	-0.0777							
834												
835	Relevant UCL Statistics											
836	Normal Distribution Test					Lognormal Distribution Test						
837				Shapiro Wilk Test Statistic	0.968	Shapiro Wilk Test Statistic					0.92	
838				Shapiro Wilk Critical Value	0.916	Shapiro Wilk Critical Value					0.916	
839	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
840												
841	Assuming Normal Distribution					Assuming Lognormal Distribution						
842				95% Student's-t UCL	13.07	95% H-UCL					13.31	
843	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						14.75
844				95% Adjusted-CLT UCL	13.02	97.5% Chebyshev (MVUE) UCL					15.86	
845				95% Modified-t UCL	13.07	99% Chebyshev (MVUE) UCL					18.04	
846												
847	Gamma Distribution Test					Data Distribution						
848				k star (bias corrected)	17.97	Data appear Normal at 5% Significance Level						

TABLE B-7.1.2 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Construction / Utility Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations			
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-1	Dermal Absorption	Acenaphthylene	3.96E-01	mg/kg	7.12E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.99E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.74E+01	mg/kg	3.12E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.28E-07	2.19E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	2.86E+01	mg/kg	5.15E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.76E-06	3.61E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.83E+01	mg/kg	3.28E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.40E-07	2.30E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.17E+01	mg/kg	2.10E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.47E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	2.29E+01	mg/kg	4.12E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	3.01E-08	2.88E-05	mg/kg-day	--	mg/kg-day	--
				Carbazole	3.14E+00	mg/kg	4.35E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	8.70E-10	3.04E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.80E+00	mg/kg	3.23E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.36E-07	2.26E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	3.75E-01	mg/kg	5.19E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.63E-07	mg/kg-day	1.00E-01	mg/kg-day	3.63E-06
				Di-n-octylphthalate	9.38E-01	mg/kg	1.30E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.09E-07	mg/kg-day	2.00E-02	mg/kg-day	4.54E-05
				Indeno(1,2,3-cd)pyrene	1.61E+01	mg/kg	2.89E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.11E-07	2.03E-05	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	2.39E+01	mg/kg	4.30E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.01E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	3.87E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	3.05E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	3.09E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	2.69E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	3.02E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	2.59E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	9.39E-01	mg/kg	1.82E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.64E-08	1.27E-06	mg/kg-day	5.00E-05	mg/kg-day	2.55E-02
				Aroclor-1260	9.77E+00	mg/kg	1.89E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.79E-07	1.33E-05	mg/kg-day	--	mg/kg-day	--
				Aluminum	2.84E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Arsenic	1.33E+01	mg/kg	5.53E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	8.29E-08	3.87E-06	mg/kg-day	3.00E-04	mg/kg-day	1.29E-02
				Chromium (VI)	3.81E+03	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-04	mg/kg-day	--
				Cobalt	1.36E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E-02	mg/kg-day	--
				Copper	1.41E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	8.25E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
Lead	9.93E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Manganese	8.87E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Thallium	1.09E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	1.37E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.80E-04	mg/kg-day	--				
			Exp. Route Total							5.20E-06					3.84E-02	
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-1	Incidental Ingestion	Acenaphthylene	3.96E-01	mg/kg	1.83E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.28E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.74E+01	mg/kg	8.01E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.85E-07	5.61E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	2.86E+01	mg/kg	1.32E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	9.64E-06	9.24E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.83E+01	mg/kg	8.42E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.15E-07	5.90E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.17E+01	mg/kg	5.39E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.77E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	2.29E+01	mg/kg	1.06E-06	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	7.71E-08	7.39E-05	mg/kg-day	--	mg/kg-day	--
				Carbazole	3.14E+00	mg/kg	1.45E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	2.90E-09	1.01E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	1.80E+00	mg/kg	8.29E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	6.05E-07	5.80E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	3.75E-01	mg/kg	1.73E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.21E-06	mg/kg-day	1.00E-01	mg/kg-day	1.21E-05
				Di-n-octylphthalate	9.38E-01	mg/kg	4.33E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.03E-06	mg/kg-day	2.00E-02	mg/kg-day	1.51E-04
				Indeno(1,2,3-cd)pyrene	1.61E+01	mg/kg	7.42E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.42E-07	5.20E-05	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	2.39E+01	mg/kg	1.10E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.72E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	3.87E-02	mg/kg	1.79E-09	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	2.86E-08	1.25E-07	mg/kg-day	5.00E-05	mg/kg-day	2.50E-03
				Endosulfan II	3.05E-02	mg/kg	1.41E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.85E-08	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	3.09E-02	mg/kg	1.43E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.98E-08	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	2.69E-02	mg/kg	1.24E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.69E-08	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	3.02E-02	mg/kg	1.39E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.75E-08	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	2.59E-02	mg/kg	1.19E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.36E-08	mg/kg-day	--	mg/kg-day	--

TABLE B-7.1.2 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 1
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations									
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-1	Incidental Ingestion	Aroclor-1254	9.39E-01	mg/kg	4.33E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	8.66E-08	3.03E-06	mg/kg-day	5.00E-05	mg/kg-day	6.06E-02				
				Aroclor-1260	9.77E+00	mg/kg	4.51E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	9.02E-07	3.16E-05	mg/kg-day	--	mg/kg-day	--				
				Aluminum	2.84E+01	mg/kg	1.31E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.18E-05	mg/kg-day	1.00E+00	mg/kg-day	9.18E-05				
				Arsenic	1.33E+01	mg/kg	6.14E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	9.21E-07	4.30E-05	mg/kg-day	3.00E-04	mg/kg-day	1.43E-01				
				Chromium (VI)	3.81E+03	mg/kg	1.76E-04	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	8.79E-05	1.23E-02	mg/kg-day	2.00E-02	mg/kg-day	6.15E-01				
				Cobalt	1.36E+01	mg/kg	6.27E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.39E-05	mg/kg-day	1.00E-02	mg/kg-day	4.39E-03				
				Copper	1.41E+03	mg/kg	6.50E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.55E-03	mg/kg-day	4.00E-02	mg/kg-day	1.14E-01				
				Iron	8.25E+04	mg/kg	3.81E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.66E-01	mg/kg-day	7.00E-01	mg/kg-day	3.81E-01				
				Lead	9.93E+02	mg/kg	4.58E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.21E-03	mg/kg-day	--	mg/kg-day	--				
				Manganese	8.87E+02	mg/kg	4.09E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.86E-03	mg/kg-day	2.40E-02	mg/kg-day	1.19E-01				
				Thallium	1.09E+00	mg/kg	5.01E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.51E-06	mg/kg-day	--	mg/kg-day	--				
				Vanadium	1.37E+02	mg/kg	6.31E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.42E-04	mg/kg-day	7.00E-03	mg/kg-day	6.31E-02				
				Exp. Route Total										1.02E-04	1.50E+00					
				Soil	On-Site Subsurface Soil (0-10ft bgs)	Ambient Air AOC-1	Inhalation (Fugitive Dust)	Acenaphthylene	2.93E-07	mg/m ³	9.57E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	6.70E-08	mg/m ³	--	mg/m ³	--
								Benzo(a)anthracene	1.29E-05	mg/m ³	4.19E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	4.61E-09	2.94E-06	mg/m ³	--	mg/m ³	--
								Benzo(a)pyrene	2.12E-05	mg/m ³	6.92E-08	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	7.61E-08	4.84E-06	mg/m ³	--	mg/m ³	--
Benzo(b)fluoranthene	1.35E-05	mg/m ³	4.41E-08					mg/m ³	1.10E-04	(µg/m ³) ⁻¹	4.85E-09	3.09E-06	mg/m ³	--	mg/m ³	--				
Benzo(g,h,i)perylene	8.65E-06	mg/m ³	2.82E-08					mg/m ³	--	(µg/m ³) ⁻¹	--	1.98E-06	mg/m ³	--	mg/m ³	--				
Benzo(k)fluoranthene	1.70E-05	mg/m ³	5.53E-08					mg/m ³	1.10E-04	(µg/m ³) ⁻¹	6.09E-09	3.87E-06	mg/m ³	--	mg/m ³	--				
Carbazole	2.33E-06	mg/m ³	7.59E-09					mg/m ³	--	(µg/m ³) ⁻¹	--	5.31E-07	mg/m ³	--	mg/m ³	--				
Dibenzo(a,h)anthracene	1.33E-06	mg/m ³	4.34E-09					mg/m ³	1.20E-03	(µg/m ³) ⁻¹	5.21E-09	3.04E-07	mg/m ³	--	mg/m ³	--				
Dimethylphthalate	2.78E-07	mg/m ³	9.06E-10					mg/m ³	--	(µg/m ³) ⁻¹	--	6.34E-08	mg/m ³	--	mg/m ³	--				
Di-n-octylphthalate	6.95E-07	mg/m ³	2.27E-09					mg/m ³	--	(µg/m ³) ⁻¹	--	1.59E-07	mg/m ³	--	mg/m ³	--				
Indeno(1,2,3-cd)pyrene	1.19E-05	mg/m ³	3.89E-08					mg/m ³	1.10E-04	(µg/m ³) ⁻¹	4.28E-09	2.72E-06	mg/m ³	--	mg/m ³	--				
Phenanthrene	1.77E-05	mg/m ³	5.78E-08					mg/m ³	--	(µg/m ³) ⁻¹	--	4.05E-06	mg/m ³	--	mg/m ³	--				
Dieldrin	2.87E-08	mg/m ³	9.35E-11					mg/m ³	4.60E-03	(µg/m ³) ⁻¹	4.30E-10	6.54E-09	mg/m ³	--	mg/m ³	--				
Endosulfan II	2.26E-08	mg/m ³	7.37E-11					mg/m ³	--	(µg/m ³) ⁻¹	--	5.16E-09	mg/m ³	--	mg/m ³	--				
Endosulfan sulfate	2.29E-08	mg/m ³	7.47E-11					mg/m ³	--	(µg/m ³) ⁻¹	--	5.23E-09	mg/m ³	--	mg/m ³	--				
Endrin aldehyde	1.99E-08	mg/m ³	6.50E-11					mg/m ³	--	(µg/m ³) ⁻¹	--	4.55E-09	mg/m ³	--	mg/m ³	--				
Endrin ketone	2.24E-08	mg/m ³	7.30E-11					mg/m ³	--	(µg/m ³) ⁻¹	--	5.11E-09	mg/m ³	--	mg/m ³	--				
gamma-Chlordane	1.92E-08	mg/m ³	6.26E-11					mg/m ³	--	(µg/m ³) ⁻¹	--	4.38E-09	mg/m ³	--	mg/m ³	--				
Aroclor-1254	6.96E-07	mg/m ³	2.27E-09					mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.29E-09	1.59E-07	mg/m ³	--	mg/m ³	--				
Aroclor-1260	7.24E-06	mg/m ³	2.36E-08					mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.35E-08	1.65E-06	mg/m ³	--	mg/m ³	--				
Aluminum	2.11E-05	mg/m ³	6.87E-08					mg/m ³	--	(µg/m ³) ⁻¹	--	4.81E-06	mg/m ³	5.00E-03	mg/m ³	9.62E-04				
Arsenic	9.86E-06	mg/m ³	3.22E-08					mg/m ³	4.30E-03	(µg/m ³) ⁻¹	1.38E-07	2.25E-06	mg/m ³	1.50E-05	mg/m ³	1.50E-01				
Chromium (VI)	2.82E-03	mg/m ³	9.21E-06					mg/m ³	8.40E-02	(µg/m ³) ⁻¹	7.73E-04	6.45E-04	mg/m ³	3.00E-04	mg/m ³	2.15E+00				
Cobalt	1.01E-05	mg/m ³	3.28E-08	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	2.95E-07	2.30E-06	mg/m ³	6.00E-06	mg/m ³	3.83E-01								
Copper	1.04E-03	mg/m ³	3.40E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	2.38E-04	mg/m ³	--	mg/m ³	--								
Iron	6.11E-02	mg/m ³	1.99E-04	mg/m ³	--	(µg/m ³) ⁻¹	--	1.40E-02	mg/m ³	--	mg/m ³	--								
Lead	7.35E-04	mg/m ³	2.40E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	1.68E-04	mg/m ³	--	mg/m ³	--								
Manganese	6.57E-04	mg/m ³	2.14E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	1.50E-04	mg/m ³	5.00E-05	mg/m ³	3.00E+00								
Thallium	8.05E-07	mg/m ³	2.63E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	1.84E-07	mg/m ³	--	mg/m ³	--								
Vanadium	1.01E-04	mg/m ³	3.31E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	2.32E-05	mg/m ³	--	mg/m ³	--								
Exp. Route Total										7.74E-04	5.68E+00									
Exposure Point Total										8.81E-04	7.22E+00									
Exposure Medium Total										8.81E-04	7.22E+00									
Medium Total										8.81E-04	7.22E+00									
Total of Receptor Risks Across All Media										8.81E-04	Total of Receptor Hazards Across All Media					7.22E+00				

TABLE B-7.2.2 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 2
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Construction / Utility Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-2	Dermal Absorption	Acenaphthylene	7.97E-01	mg/kg	1.43E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.00E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.41E+01	mg/kg	2.54E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.86E-07	1.78E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.25E+01	mg/kg	2.24E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.64E-06	1.57E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	2.02E+01	mg/kg	3.63E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.65E-07	2.54E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	2.69E+00	mg/kg	4.84E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.39E-06	mg/kg-day	--	mg/kg-day	--
				Carbazole	1.34E+00	mg/kg	1.85E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	3.71E-10	1.30E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.12E-01	mg/kg	1.64E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.20E-07	1.15E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	5.47E-01	mg/kg	7.57E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.30E-07	mg/kg-day	1.00E-01	mg/kg-day	5.30E-06
				Di-n-octylphthalate	3.75E-01	mg/kg	5.19E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.63E-07	mg/kg-day	2.00E-02	mg/kg-day	1.82E-05
				Indeno(1,2,3-cd)pyrene	5.40E+00	mg/kg	9.71E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.09E-08	6.80E-06	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	1.58E+01	mg/kg	2.85E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.99E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.46E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	6.90E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	4.25E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	6.50E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	4.21E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.64E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	7.94E-01	mg/kg	1.54E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.08E-08	1.08E-06	mg/kg-day	5.00E-05	mg/kg-day	2.15E-02
				Aroclor-1260	1.05E+00	mg/kg	2.04E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	4.08E-08	1.43E-06	mg/kg-day	--	mg/kg-day	--
				Arsenic	8.18E+00	mg/kg	3.40E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	5.09E-08	2.38E-06	mg/kg-day	3.00E-04	mg/kg-day	7.92E-03
				Chromium (VI)	1.31E+02	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-04	mg/kg-day	--
Lead	3.10E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Thallium	1.07E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Exp. Route Total										2.40E-06				2.95E-02		
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-2	Incidental Ingestion	Acenaphthylene	7.97E-01	mg/kg	3.68E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.57E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.41E+01	mg/kg	6.52E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.76E-07	4.57E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.25E+01	mg/kg	5.75E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.20E-06	4.02E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	2.02E+01	mg/kg	9.30E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.79E-07	6.51E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	2.69E+00	mg/kg	1.24E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.69E-06	mg/kg-day	--	mg/kg-day	--
				Carbazole	1.34E+00	mg/kg	6.18E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.24E-09	4.32E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.12E-01	mg/kg	4.21E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.07E-07	2.94E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	5.47E-01	mg/kg	2.52E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.77E-06	mg/kg-day	1.00E-01	mg/kg-day	1.77E-05
				Di-n-octylphthalate	3.75E-01	mg/kg	1.73E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.21E-06	mg/kg-day	2.00E-02	mg/kg-day	6.05E-05
				Indeno(1,2,3-cd)pyrene	5.40E+00	mg/kg	2.49E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.82E-07	1.74E-05	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	1.58E+01	mg/kg	7.30E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.11E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.46E-02	mg/kg	6.73E-10	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.08E-08	4.71E-08	mg/kg-day	5.00E-05	mg/kg-day	9.43E-04
				Endosulfan II	6.90E-02	mg/kg	3.18E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.23E-07	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	4.25E-03	mg/kg	1.96E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.37E-08	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	6.50E-03	mg/kg	3.00E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.10E-08	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	4.21E-02	mg/kg	1.94E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.36E-07	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.64E-03	mg/kg	2.14E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.50E-08	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	7.94E-01	mg/kg	3.66E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	7.33E-08	2.56E-06	mg/kg-day	5.00E-05	mg/kg-day	5.13E-02
				Aroclor-1260	1.05E+00	mg/kg	4.86E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	9.72E-08	3.40E-06	mg/kg-day	--	mg/kg-day	--
				Arsenic	8.18E+00	mg/kg	3.77E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	5.66E-07	2.64E-05	mg/kg-day	3.00E-04	mg/kg-day	8.80E-02
				Chromium (VI)	1.31E+02	mg/kg	6.03E-06	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	3.02E-06	4.22E-04	mg/kg-day	2.00E-02	mg/kg-day	2.11E-02
Lead	3.10E+02	mg/kg	1.43E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.00E-03	mg/kg-day	--	mg/kg-day	--				
Thallium	1.07E+00	mg/kg	4.92E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.44E-06	mg/kg-day	--	mg/kg-day	--				
Exp. Route Total										9.61E-06				1.61E-01		

TABLE B-7.2.2 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 2
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Subsurface Soil (0-10ft bgs)	Ambient Air AOC-2	Inhalation (Fugitive Dust)	Acenaphthylene	5.90E-07	mg/m ³	1.93E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	1.35E-07	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	1.05E-05	mg/m ³	3.42E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	3.76E-09	2.39E-06	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	9.23E-06	mg/m ³	3.01E-08	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	3.31E-08	2.11E-06	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	1.49E-05	mg/m ³	4.87E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	5.36E-09	3.41E-06	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	1.99E-06	mg/m ³	6.50E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	4.55E-07	mg/m ³	--	mg/m ³	--
				Carbazole	9.92E-07	mg/m ³	3.24E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	2.26E-07	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	6.76E-07	mg/m ³	2.20E-09	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	2.64E-09	1.54E-07	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	4.05E-07	mg/m ³	1.32E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	9.25E-08	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	2.78E-07	mg/m ³	9.06E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	6.34E-08	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	4.00E-06	mg/m ³	1.30E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.43E-09	9.13E-07	mg/m ³	--	mg/m ³	--
				Phenanthrene	1.17E-05	mg/m ³	3.82E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	2.68E-06	mg/m ³	--	mg/m ³	--
				Dieldrin	1.08E-08	mg/m ³	3.53E-11	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	1.62E-10	2.47E-09	mg/m ³	--	mg/m ³	--
				Endosulfan II	5.11E-08	mg/m ³	1.67E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	1.17E-08	mg/m ³	--	mg/m ³	--
				Endosulfan sulfate	3.15E-09	mg/m ³	1.03E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	7.19E-10	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	4.81E-09	mg/m ³	1.57E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.10E-09	mg/m ³	--	mg/m ³	--
				Endrin ketone	3.12E-08	mg/m ³	1.02E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	7.12E-09	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	3.44E-09	mg/m ³	1.12E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	7.85E-10	mg/m ³	--	mg/m ³	--
				Aroclor-1254	5.88E-07	mg/m ³	1.92E-09	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.09E-09	1.34E-07	mg/m ³	--	mg/m ³	--
				Aroclor-1260	7.81E-07	mg/m ³	2.55E-09	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.45E-09	1.78E-07	mg/m ³	--	mg/m ³	--
				Arsenic	6.06E-06	mg/m ³	1.98E-08	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	8.50E-08	1.38E-06	mg/m ³	1.50E-05	mg/m ³	9.22E-02
				Chromium (VI)	9.69E-05	mg/m ³	3.16E-07	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	2.65E-05	2.21E-05	mg/m ³	3.00E-04	mg/m ³	7.37E-02
				Lead	2.30E-04	mg/m ³	7.49E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	5.24E-05	mg/m ³	--	mg/m ³	--
				Thallium	7.90E-07	mg/m ³	2.58E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	1.80E-07	mg/m ³	--	mg/m ³	--
Exp. Route Total										2.67E-05					1.66E-01	
Exposure Point Total										3.87E-05					3.57E-01	
Exposure Medium Total										3.87E-05					3.57E-01	
Medium Total										3.87E-05					3.57E-01	
Total of Receptor Risks Across All Media										3.87E-05	Total of Receptor Hazards Across All Media				3.57E-01	

TABLE B-7.3.2 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 3
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Construction / Utility Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-3	Dermal Absorption	Acenaphthylene	4.90E-01	mg/kg	8.82E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.17E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	5.40E+00	mg/kg	9.71E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.09E-08	6.80E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	3.30E+00	mg/kg	5.94E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.33E-07	4.16E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.00E+01	mg/kg	1.80E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.31E-07	1.26E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.60E+00	mg/kg	2.88E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.01E-06	mg/kg-day	--	mg/kg-day	--
				Carbazole	5.20E-01	mg/kg	7.20E-09	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.44E-10	5.04E-07	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	4.60E-01	mg/kg	8.28E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	6.04E-08	5.79E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	8.90E-02	mg/kg	1.23E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.62E-08	mg/kg-day	1.00E-01	mg/kg-day	8.62E-07
				Phenanthrene	2.80E+00	mg/kg	5.04E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.53E-06	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	1.60E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	1.10E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1260	4.30E+01	mg/kg	8.33E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.67E-06	5.83E-05	mg/kg-day	--	mg/kg-day	--
				Antimony	1.05E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	1.80E+01	mg/kg	7.47E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.12E-07	5.23E-06	mg/kg-day	3.00E-04	mg/kg-day	1.74E-02
				Chromium (VI)	5.62E+01	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-04	mg/kg-day	--
				Copper	1.04E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Lead	1.82E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Thallium	4.20E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Exp. Route Total										2.47E-06		
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-3	Incidental Ingestion	Acenaphthylene	4.90E-01	mg/kg	2.26E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.58E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	5.40E+00	mg/kg	2.49E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.82E-07	1.74E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	3.30E+00	mg/kg	1.52E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.11E-06	1.07E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.00E+01	mg/kg	4.61E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.37E-07	3.23E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.60E+00	mg/kg	7.38E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.17E-06	mg/kg-day	--	mg/kg-day	--
				Carbazole	5.20E-01	mg/kg	2.40E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	4.80E-10	1.68E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	4.60E-01	mg/kg	2.12E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.55E-07	1.49E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	8.90E-02	mg/kg	4.11E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.87E-07	mg/kg-day	1.00E-01	mg/kg-day	2.87E-06
				Phenanthrene	2.80E+00	mg/kg	1.29E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.04E-06	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	1.60E-02	mg/kg	7.38E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.17E-08	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.70E-02	mg/kg	1.25E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.72E-08	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	1.10E-03	mg/kg	5.07E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.55E-09	mg/kg-day	--	mg/kg-day	--
				Aroclor-1260	4.30E+01	mg/kg	1.98E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.97E-06	1.39E-04	mg/kg-day	--	mg/kg-day	--
				Antimony	1.05E+02	mg/kg	4.84E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.39E-04	mg/kg-day	4.00E-04	mg/kg-day	8.48E-01
				Arsenic	1.80E+01	mg/kg	8.30E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.25E-06	5.81E-05	mg/kg-day	3.00E-04	mg/kg-day	1.94E-01
				Chromium (VI)	5.62E+01	mg/kg	2.59E-06	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	1.30E-06	1.81E-04	mg/kg-day	2.00E-02	mg/kg-day	9.07E-03
				Copper	1.04E+04	mg/kg	4.80E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.36E-02	mg/kg-day	4.00E-02	mg/kg-day	8.40E-01
				Lead	1.82E+04	mg/kg	8.40E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.88E-02	mg/kg-day	--	mg/kg-day	--
				Thallium	4.20E+00	mg/kg	1.94E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.36E-05	mg/kg-day	--	mg/kg-day	--
				Exp. Route Total										8.29E-06		

TABLE B-7.3.2 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 3
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Subsurface Soil (0-10ft bgs)	Ambient Air AOC-3	Inhalation (Fugitive Dust)	Acenaphthylene	3.63E-07	mg/m ³	1.18E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	8.29E-08	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	4.00E-06	mg/m ³	1.30E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.44E-09	9.13E-07	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	2.44E-06	mg/m ³	7.97E-09	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	8.77E-09	5.58E-07	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	7.41E-06	mg/m ³	2.42E-08	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.66E-09	1.69E-06	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	1.19E-06	mg/m ³	3.87E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	2.71E-07	mg/m ³	--	mg/m ³	--
				Carbazole	3.85E-07	mg/m ³	1.26E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	8.79E-08	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	3.41E-07	mg/m ³	1.11E-09	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	1.33E-09	7.78E-08	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	6.59E-08	mg/m ³	2.15E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	1.51E-08	mg/m ³	--	mg/m ³	--
				Phenanthrene	2.07E-06	mg/m ³	6.76E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	4.74E-07	mg/m ³	--	mg/m ³	--
				Endosulfan sulfate	1.19E-08	mg/m ³	3.87E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	2.71E-09	mg/m ³	--	mg/m ³	--
				Endrin ketone	2.00E-08	mg/m ³	6.52E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	4.57E-09	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	8.15E-10	mg/m ³	2.66E-12	mg/m ³	--	(µg/m ³) ⁻¹	--	1.86E-10	mg/m ³	--	mg/m ³	--
				Aroclor-1260	3.19E-05	mg/m ³	1.04E-07	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	5.92E-08	7.27E-06	mg/m ³	--	mg/m ³	--
				Antimony	7.78E-05	mg/m ³	2.54E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	1.78E-05	mg/m ³	--	mg/m ³	--
				Arsenic	1.33E-05	mg/m ³	4.35E-08	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	1.87E-07	3.04E-06	mg/m ³	1.50E-05	mg/m ³	2.03E-01
				Chromium (VI)	4.16E-05	mg/m ³	1.36E-07	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	1.14E-05	9.50E-06	mg/m ³	3.00E-04	mg/m ³	3.17E-02
				Copper	7.70E-03	mg/m ³	2.51E-05	mg/m ³	--	(µg/m ³) ⁻¹	--	1.76E-03	mg/m ³	--	mg/m ³	--
				Lead	1.35E-02	mg/m ³	4.40E-05	mg/m ³	--	(µg/m ³) ⁻¹	--	3.08E-03	mg/m ³	--	mg/m ³	--
				Thallium	3.11E-06	mg/m ³	1.01E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	7.10E-07	mg/m ³	--	mg/m ³	--
							Exp. Route Total								1.17E-05	
			Exposure Point Total								2.24E-05			2.14E+00		
			Exposure Medium Total								2.24E-05			2.14E+00		
Medium Total										2.24E-05			2.14E+00			
										Total of Receptor Risks Across All Media		2.24E-05		Total of Receptor Hazards Across All Media		2.14E+00

TABLE B-7.4.2 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 4
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Construction / Utility Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient			
							Value	Units	Value	Units		Value	Units	Value	Units				
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-4	Dermal Absorption	Benzo(a)pyrene	3.12E-01	mg/kg	5.61E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.10E-08	3.93E-07	mg/kg-day	--	mg/kg-day	--			
				Benzo(g,h,i)perylene	6.90E-02	mg/kg	1.24E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.69E-08	mg/kg-day	--	mg/kg-day	--			
				Carbazole	7.10E-03	mg/kg	9.83E-11	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.97E-12	6.88E-09	mg/kg-day	--	mg/kg-day	--			
				Dibenzo(a,h)anthracene	1.40E+00	mg/kg	2.52E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.84E-07	1.76E-06	mg/kg-day	--	mg/kg-day	--			
				Di-n-octylphthalate	2.20E-01	mg/kg	3.04E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.13E-07	mg/kg-day	2.00E-02	mg/kg-day	1.07E-05			
				Phenanthrene	2.58E-01	mg/kg	4.64E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.25E-07	mg/kg-day	--	mg/kg-day	--			
				Endosulfan II	2.60E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--			
				Endrin aldehyde	1.10E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--			
				Endrin ketone	1.40E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--			
				gamma-Chlordane	1.20E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--			
				Antimony	7.74E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--			
				Arsenic	6.66E+00	mg/kg	2.77E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	4.15E-08	1.94E-06	mg/kg-day	3.00E-04	mg/kg-day	6.45E-03			
				Chromium (VI)	1.24E+01	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-04	mg/kg-day	--			
				Lead	7.60E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--			
				Thallium	7.70E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--			
				Exp. Route Total										2.66E-07					6.47E-03
				Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-4	Incidental Ingestion	Benzo(a)pyrene	3.12E-01	mg/kg	1.44E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.05E-07	1.01E-06	mg/kg-day	--	mg/kg-day
Benzo(g,h,i)perylene	6.90E-02	mg/kg	3.18E-09					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.23E-07	mg/kg-day	--	mg/kg-day	--			
Carbazole	7.10E-03	mg/kg	3.28E-10					mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	6.55E-12	2.29E-08	mg/kg-day	--	mg/kg-day	--			
Dibenzo(a,h)anthracene	1.40E+00	mg/kg	6.46E-08					mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.71E-07	4.52E-06	mg/kg-day	--	mg/kg-day	--			
Di-n-octylphthalate	2.20E-01	mg/kg	1.01E-08					mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.10E-07	mg/kg-day	2.00E-02	mg/kg-day	3.55E-05			
Phenanthrene	2.58E-01	mg/kg	1.19E-08					mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.33E-07	mg/kg-day	--	mg/kg-day	--			
Endosulfan II	2.60E-03	mg/kg	1.20E-10					mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.40E-09	mg/kg-day	--	mg/kg-day	--			
Endrin aldehyde	1.10E-02	mg/kg	5.07E-10					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.55E-08	mg/kg-day	--	mg/kg-day	--			
Endrin ketone	1.40E-02	mg/kg	6.46E-10					mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.52E-08	mg/kg-day	--	mg/kg-day	--			
gamma-Chlordane	1.20E-03	mg/kg	5.54E-11					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.87E-09	mg/kg-day	--	mg/kg-day	--			
Antimony	7.74E+01	mg/kg	3.57E-06					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.50E-04	mg/kg-day	4.00E-04	mg/kg-day	6.25E-01			
Arsenic	6.66E+00	mg/kg	3.07E-07					mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	4.61E-07	2.15E-05	mg/kg-day	3.00E-04	mg/kg-day	7.17E-02			
Chromium (VI)	1.24E+01	mg/kg	5.72E-07					mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	2.86E-07	4.01E-05	mg/kg-day	2.00E-02	mg/kg-day	2.00E-03			
Lead	7.60E+02	mg/kg	3.51E-05					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.45E-03	mg/kg-day	--	mg/kg-day	--			
Thallium	7.70E-01	mg/kg	3.55E-08					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.49E-06	mg/kg-day	--	mg/kg-day	--			
Exp. Route Total														1.32E-06					6.98E-01
Soil	On-Site Subsurface Soil (0-10ft bgs)	Ambient Air AOC-4	Inhalation (Fugitive Dust)					Benzo(a)pyrene	2.31E-07	mg/m ³	7.54E-10	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	8.29E-10	5.28E-08	mg/m ³	--	mg/m ³
				Benzo(g,h,i)perylene	5.11E-08	mg/m ³	1.67E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	1.17E-08	mg/m ³	--	mg/m ³	--			
				Carbazole	5.26E-09	mg/m ³	1.72E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.20E-09	mg/m ³	--	mg/m ³	--			
				Dibenzo(a,h)anthracene	1.04E-06	mg/m ³	3.38E-09	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	4.06E-09	2.37E-07	mg/m ³	--	mg/m ³	--			
				Di-n-octylphthalate	1.63E-07	mg/m ³	5.32E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	3.72E-08	mg/m ³	--	mg/m ³	--			
				Phenanthrene	1.91E-07	mg/m ³	6.23E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	4.36E-08	mg/m ³	--	mg/m ³	--			
				Endosulfan II	1.93E-09	mg/m ³	6.28E-12	mg/m ³	--	(µg/m ³) ⁻¹	--	4.40E-10	mg/m ³	--	mg/m ³	--			
				Endrin aldehyde	8.15E-09	mg/m ³	2.66E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.86E-09	mg/m ³	--	mg/m ³	--			
				Endrin ketone	1.04E-08	mg/m ³	3.38E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	2.37E-09	mg/m ³	--	mg/m ³	--			
				gamma-Chlordane	8.89E-10	mg/m ³	2.90E-12	mg/m ³	--	(µg/m ³) ⁻¹	--	2.03E-10	mg/m ³	--	mg/m ³	--			
				Antimony	5.73E-05	mg/m ³	1.87E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	1.31E-05	mg/m ³	--	mg/m ³	--			
				Arsenic	4.94E-06	mg/m ³	1.61E-08	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	6.92E-08	1.13E-06	mg/m ³	1.50E-05	mg/m ³	7.51E-02			
				Chromium (VI)	9.19E-06	mg/m ³	3.00E-08	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	2.52E-06	2.10E-06	mg/m ³	3.00E-04	mg/m ³	7.00E-03			
				Lead	5.63E-04	mg/m ³	1.84E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-04	mg/m ³	--	mg/m ³	--			
				Thallium	5.70E-07	mg/m ³	1.86E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	1.30E-07	mg/m ³	--	mg/m ³	--			
				Exp. Route Total										2.59E-06					8.21E-02
				Exposure Point Total										4.18E-06					7.87E-01
Exposure Medium Total										4.18E-06					7.87E-01				
Medium Total										4.18E-06					7.87E-01				
Total of Receptor Risks Across All Media										4.18E-06	Total of Receptor Hazards Across All Media				7.87E-01				

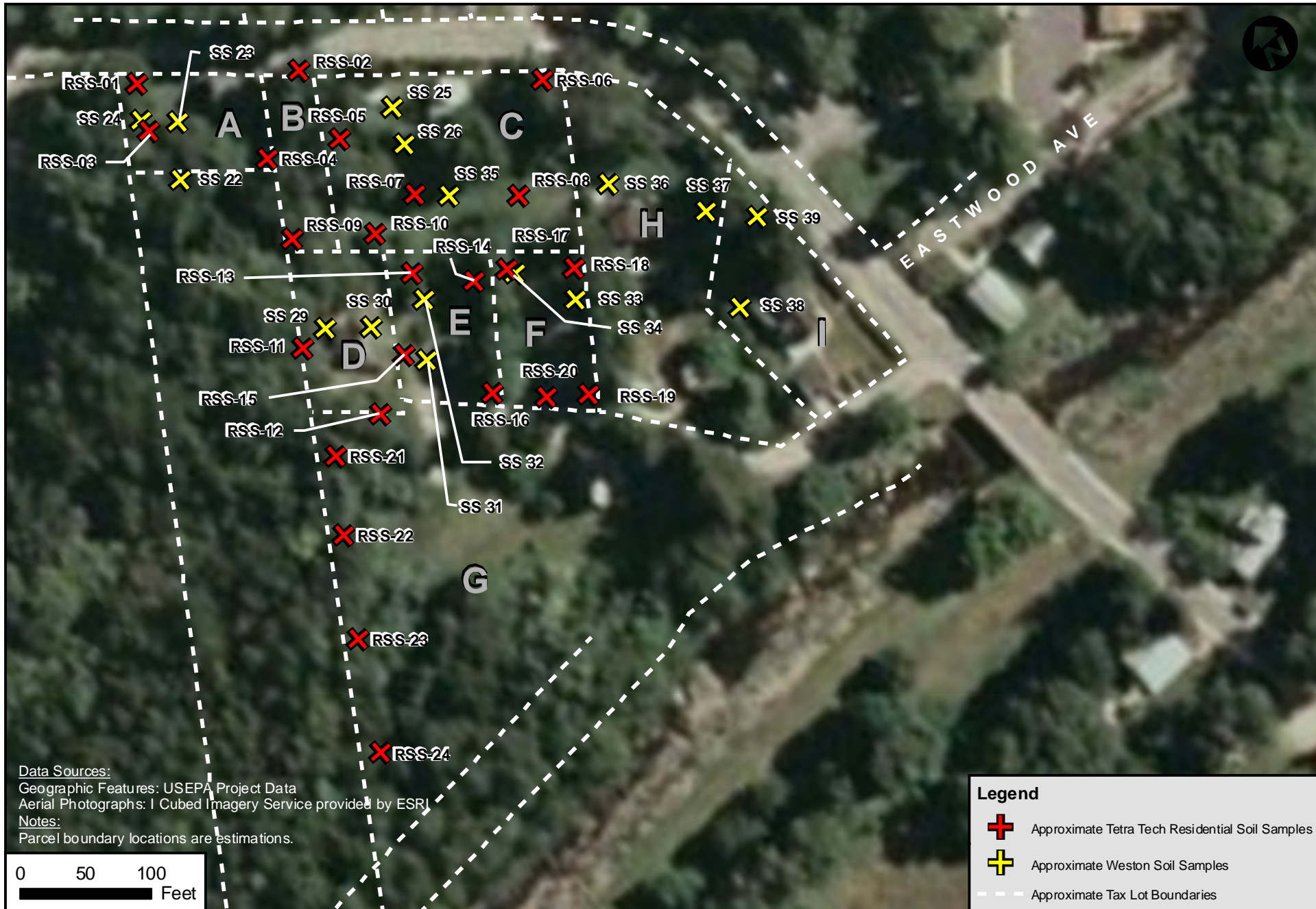


TABLE B-7.5.1 RME
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 REASONABLE MAXIMUM EXPOSURE
 Ellenville Scrap Iron and Metal Site - AOC 5
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Construction / Utility Worker
Receptor Age:	Adult

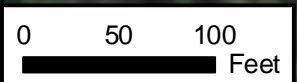
Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-5	Dermal Absorption	Acenaphthylene	7.20E+01	mg/kg	1.30E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.07E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	5.00E+02	mg/kg	8.99E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	6.57E-05	6.30E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.10E+02	mg/kg	1.98E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.39E-04	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	5.20E+02	mg/kg	9.35E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.55E-04	mg/kg-day	--	mg/kg-day	--
				Antimony	5.04E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	1.29E+01	mg/kg	5.36E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	8.03E-08	3.75E-06	mg/kg-day	3.00E-04	mg/kg-day	1.25E-02
				Chromium (VI)	1.81E+01	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-04	mg/kg-day	--
				Lead	3.28E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Thallium	2.00E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Exp. Route Total												
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs) AOC-5	Incidental Ingestion	Acenaphthylene	7.20E+01	mg/kg	3.32E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.32E-04	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	5.00E+02	mg/kg	2.31E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.68E-04	1.61E-03	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	1.10E+02	mg/kg	5.07E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.55E-04	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	5.20E+02	mg/kg	2.40E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.68E-03	mg/kg-day	--	mg/kg-day	--
				Antimony	5.04E+01	mg/kg	2.32E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.63E-04	mg/kg-day	4.00E-04	mg/kg-day	4.07E-01
				Arsenic	1.29E+01	mg/kg	5.95E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	8.93E-07	4.17E-05	mg/kg-day	3.00E-04	mg/kg-day	1.39E-01
				Chromium (VI)	1.81E+01	mg/kg	8.35E-07	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	4.17E-07	5.84E-05	mg/kg-day	2.00E-02	mg/kg-day	2.92E-03
				Lead	3.28E+03	mg/kg	1.51E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.06E-02	mg/kg-day	--	mg/kg-day	--
				Thallium	2.00E+00	mg/kg	9.23E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.46E-06	mg/kg-day	--	mg/kg-day	--
				Exp. Route Total												
Soil	On-Site Subsurface Soil (0-10ft bgs)	Ambient Air AOC-5	Inhalation (Fugitive Dust)	Acenaphthylene	5.33E-05	mg/m ³	1.74E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	1.22E-05	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	3.70E-04	mg/m ³	1.21E-06	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	1.33E-06	8.46E-05	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	8.15E-05	mg/m ³	2.66E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	1.86E-05	mg/m ³	--	mg/m ³	--
				Phenanthrene	3.85E-04	mg/m ³	1.26E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	8.79E-05	mg/m ³	--	mg/m ³	--
				Antimony	3.73E-05	mg/m ³	1.22E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	8.52E-06	mg/m ³	--	mg/m ³	--
				Arsenic	9.56E-06	mg/m ³	3.12E-08	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	1.34E-07	2.18E-06	mg/m ³	1.50E-05	mg/m ³	1.45E-01
				Chromium (VI)	1.34E-05	mg/m ³	4.37E-08	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	3.67E-06	3.06E-06	mg/m ³	3.00E-04	mg/m ³	1.02E-02
				Lead	2.43E-03	mg/m ³	7.92E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	5.55E-04	mg/m ³	--	mg/m ³	--
				Thallium	1.48E-06	mg/m ³	4.83E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	3.38E-07	mg/m ³	--	mg/m ³	--
				Exp. Route Total												
Exposure Point Total																
Exposure Medium Total																
Medium Total																
Total of Receptor Risks Across All Media																

ATTACHMENT C
Lead Analysis



Data Sources:
 Geographic Features: USEPA Project Data
 Aerial Photographs: I Cubed Imagery Service provided by ESRI
 Notes:
 Parcel boundary locations are estimations.

Legend	
	Approximate Tetra Tech Residential Soil Samples
	Approximate Weston Soil Samples
	Approximate Tax Lot Boundaries



Ellenville Scrap Iron and Metal Site
Weston and Tetra Tech Off-Site Residential Soil Sample Locations
Lead Analysis Residential Properties

Project #	Date	Figure #
114488	4/13/2010	X

Table 8-1
 Lead Analysis - Sample Summary Data
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Location	No. Samples	Lead Concentrations (mg/kg)		
		Minimum	Mean	Maximum
Site	99	10.9	1,100	18,200
A	5	637	47,071	230000 *
B	4	123	2,464	8,970
C	9	17.4	105	260
D	5	53.8	203	351
E	7	50.2	1,953	11,100
F	7	64.7	1,025	5,280
G	5	32.9	267	1,080
H	2	50.2	77	104
I	2	121	129	136

Notes:

Lead concentrations with a "J" value were included.

* Soil remediation was conducted at this property in 2004. EPA removed one foot of soil, installed a geofabric membrane and covered it with one foot of topsoil and then sod. Additionally, levels of lead as high as 230,000 mg/kg were reported in surface soils from samples collected prior to the removal action. However, information pertaining to the locations and depths of these samples and how they may have coincided with the excavation was not available for review (ATSDR, 2006).

TABLE 8-1
Lead Worksheet – Future On-site Residents
Ellenville Scrap Iron & Metal Site
Village of Ellenville, New York

Site Name: Ellenville Scrap Iron & Metal Site – Ellenville, NY

Receptor: Onsite Future Resident (includes child and adult)

Lead Screening Questions

For each medium for which Screening Level Analysis was performed, complete the following:

Medium ²	Lead Concentration Used for Screening		Basis for Lead Concentration Used for Screening	Lead Screening Level		Basis for Lead Screening Level
	Values	Unit		Values	Unit	
Surface Soil (On-site)	18,200 (911)	mg/kg (mg/kg)	Maximum Detected (Mean Value)	400	mg/kg	OSWER screening level for residential soil
Groundwater (Potable/ Residential Well Water)	1.9	µg/L	Maximum Detected (at monitoring Well EPA-3)	15	µg/L	NY Drinking Water

TABLE 8-1
Lead Worksheet – Future On-site Residents
Ellenville Scrap Iron & Metal Site
Ellenville, New York

2. Lead Model Questions

Question	Response for Residential Lead Model
Was a lead model used? (If “no” explain rationale)	No. Elevated lead concentrations to be evaluated further in the FS.
Which lead model and what version/date was used?	N/A
Where are the input values located in the risk assessment report?	N/A
Where are the output values located in the risk assessment report?	N/A
Was the model run using default values only?	N/A
If non-default values were used, where are the rationale for the values located in the risk assessment report?	N/A

3. Final Result

Medium	Result	Comment
N/A	N/A	N/A
N/A	N/A	N/A

TABLE 8-2
Lead Worksheet – Parcel A – Residents
Ellenville Scrap Iron & Metal Site
Village of Ellenville, New York

Site Name: Ellenville Scrap Iron & Metal Site – Ellenville, NY

Receptor: Offsite Resident (includes child and adult)

Lead Screening Questions

For each medium for which Screening Level Analysis was performed, complete the following:

Medium ²	Lead Concentration Used for Screening		Basis for Lead Concentration Used for Screening	Lead Screening Level		Basis for Lead Screening Level
	Values	Unit		Values	Unit	
Surface Soil	230,000 (47,071)	mg/kg (mg/kg)	Maximum Detected (below Geotextile layer) (Mean Value)	400	mg/kg	OSWER screening level for residential soil

Soil remediation was conducted at this property in 2004. EPA removed one foot of soil, installed a geofabric membrane and covered it with one foot of topsoil and then sod. Additionally, levels of lead as high as 230,000 mg/kg were reported in surface soils from samples collected prior to the removal action. However, information pertaining to the locations and depths of these samples and how they may have coincided with the excavation was not available for review (ATSDR, 2006).

TABLE 8-2
Lead Worksheet – Parcel A - Residents
Ellenville Scrap Iron & Metal Site
Ellenville, New York

2. Lead Model Questions

Question	Response for Residential Lead Model
Was a lead model used? (If “no” explain rationale)	No. Elevated lead concentration to be evaluated further in the FS.
Which lead model and what version/date was used?	N/A
Where are the input values located in the risk assessment report?	N/A
Where are the output values located in the risk assessment report?	N/A
Was the model run using default values only?	N/A
If non-default values were used, where are the rationale for the values located in the risk assessment report?	N/A

3. Final Result

Medium	Result	Comment
N/A	N/A	N/A
N/A	N/A	N/A

TABLE 8-3
Lead Worksheet – Parcel B - Residents
Ellenville Scrap Iron & Metal Site
Village of Ellenville, New York

Site Name: Ellenville Scrap Iron & Metal Site – Ellenville, NY

Receptor: Offsite Resident (includes child and adult)

Lead Screening Questions

For each medium for which Screening Level Analysis was performed, complete the following:

Medium ²	Lead Concentration Used for Screening		Basis for Lead Concentration Used for Screening	Lead Screening Level		Basis for Lead Screening Level
	Values	Unit		Values	Unit	
Surface Soil	8970 (2464)	mg/kg (mg/kg)	Maximum Detected (Mean Value)	400	mg/kg	OSWER screening level for residential soil

TABLE 8-3
Lead Worksheet – Parcel B - Residents
Ellenville Scrap Iron & Metal Site
Ellenville, New York

2. Lead Model Questions

Question	Response for Residential Lead Model
Was a lead model used? (If “no” explain rationale)	No. Elevated lead concentrations to be evaluated further in the FS.
Which lead model and what version/date was used?	N/A
Where are the input values located in the risk assessment report?	N/A
Where are the output values located in the risk assessment report?	N/A
Was the model run using default values only?	N/A
If non-default values were used, where are the rationale for the values located in the risk assessment report?	N/A

3. Final Result

Medium	Result	Comment
N/A	N/A	N/A
N/A	N/A	N/A

TABLE 8-4
Lead Worksheet – Parcel C - Residents
Ellenville Scrap Iron & Metal Site
Village of Ellenville, New York

Site Name: Ellenville Scrap Iron & Metal Site – Ellenville, NY

Receptor: Offsite Resident (includes child and adult)

Lead Screening Questions

For each medium for which Screening Level Analysis was performed, complete the following:

Medium ²	Lead Concentration Used for Screening		Basis for Lead Concentration Used for Screening	Lead Screening Level		Basis for Lead Screening Level
	Values	Unit		Values	Unit	
Surface Soil	260 (105)	mg/kg (mg/kg)	Maximum Detected (Mean Value)	400	mg/kg	OSWER screening level for residential soil

TABLE 8-4
Lead Worksheet – Parcel C - Residents
Ellenville Scrap Iron & Metal Site
Ellenville, New York

2. Lead Model Questions

Question	Response for Residential Lead Model
Was a lead model used? (If “no” explain rationale)	No. The mean value of lead concentrations is below the screening level.
Which lead model and what version/date was used?	N/A
Where are the input values located in the risk assessment report?	N/A
Where are the output values located in the risk assessment report?	N/A
Was the model run using default values only?	N/A
If non-default values were used, where are the rationale for the values located in the risk assessment report?	N/A

3. Final Result

Medium	Result	Comment
N/A	N/A	N/A
N/A	N/A	N/A

TABLE 8-5
Lead Worksheet – Parcel D - Residents
Ellenville Scrap Iron & Metal Site
Village of Ellenville, New York

Site Name: Ellenville Scrap Iron & Metal Site – Ellenville, NY

Receptor: Offsite Resident (includes child and adult)

Lead Screening Questions

For each medium for which Screening Level Analysis was performed, complete the following:

Medium ²	Lead Concentration Used for Screening		Basis for Lead Concentration Used for Screening	Lead Screening Level		Basis for Lead Screening Level
	Values	Unit		Values	Unit	
Surface Soil	351 (203)	mg/kg (mg/kg)	Maximum Detected (Mean Value)	400	mg/kg	OSWER screening level for residential soil

TABLE 8-5
Lead Worksheet – Parcel D - Residents
Ellenville Scrap Iron & Metal Site
Ellenville, New York

2. Lead Model Questions

Question	Response for Residential Lead Model
Was a lead model used? (If “no” explain rationale)	No. The mean value of lead concentrations is below the screening level.
Which lead model and what version/date was used?	N/A
Where are the input values located in the risk assessment report?	N/A
Where are the output values located in the risk assessment report?	N/A
Was the model run using default values only?	N/A
If non-default values were used, where are the rationale for the values located in the risk assessment report?	N/A

3. Final Result

Medium	Result	Comment
N/A	N/A	N/A
N/A	N/A	N/A

TABLE 8-6
Lead Worksheet – Parcel E - Residents
Ellenville Scrap Iron & Metal Site
Village of Ellenville, New York

Site Name: Ellenville Scrap Iron & Metal Site – Ellenville, NY

Receptor: Offsite Resident (includes child and adult)

Lead Screening Questions

For each medium for which Screening Level Analysis was performed, complete the following:

Medium ²	Lead Concentration Used for Screening		Basis for Lead Concentration Used for Screening	Lead Screening Level		Basis for Lead Screening Level
	Values	Unit		Values	Unit	
Surface Soil	11,100 (1,953)	mg/kg (mg/kg)	Maximum Detected (Mean Value)	400	mg/kg	OSWER screening level for residential soil

TABLE 8-6
Lead Worksheet – Parcel E - Residents
Ellenville Scrap Iron & Metal Site
Ellenville, New York

2. Lead Model Questions

Question	Response for Residential Lead Model
Was a lead model used? (If “no” explain rationale)	No. Elevated lead concentrations to be evaluated further in the FS.
Which lead model and what version/date was used?	N/A
Where are the input values located in the risk assessment report?	N/A
Where are the output values located in the risk assessment report?	N/A
Was the model run using default values only?	N/A
If non-default values were used, where are the rationale for the values located in the risk assessment report?	N/A

3. Final Result

Medium	Result	Comment
N/A	N/A	N/A
N/A	N/A	N/A

TABLE 8-7
Lead Worksheet – Parcel F - Residents
Ellenville Scrap Iron & Metal Site
Village of Ellenville, New York

Site Name: Ellenville Scrap Iron & Metal Site – Ellenville, NY

Receptor: Offsite Resident (includes child and adult)

Lead Screening Questions

For each medium for which Screening Level Analysis was performed, complete the following:

Medium ²	Lead Concentration Used for Screening		Basis for Lead Concentration Used for Screening	Lead Screening Level		Basis for Lead Screening Level
	Values	Unit		Values	Unit	
Surface Soil	5280 (1025)	mg/kg (mg/kg)	Maximum Detected (Mean Value)	400	mg/kg	OSWER screening level for residential soil

TABLE 8-7
Lead Worksheet – Parcel F - Residents
Ellenville Scrap Iron & Metal Site
Ellenville, New York

2. Lead Model Questions

Question	Response for Residential Lead Model
Was a lead model used? (If “no” explain rationale)	No. Elevated lead concentrations to be evaluated further in the FS.
Which lead model and what version/date was used?	N/A
Where are the input values located in the risk assessment report?	N/A
Where are the output values located in the risk assessment report?	N/A
Was the model run using default values only?	N/A
If non-default values were used, where are the rationale for the values located in the risk assessment report?	N/A

3. Final Result

Medium	Result	Comment
N/A	N/A	N/A
N/A	N/A	N/A

TABLE 8-8
Lead Worksheet – Parcel G - Residents
Ellenville Scrap Iron & Metal Site
Village of Ellenville, New York

Site Name: Ellenville Scrap Iron & Metal Site – Ellenville, NY

Receptor: Offsite Resident (includes child and adult)

Lead Screening Questions

For each medium for which Screening Level Analysis was performed, complete the following:

Medium ²	Lead Concentration Used for Screening		Basis for Lead Concentration Used for Screening	Lead Screening Level		Basis for Lead Screening Level
	Values	Unit		Values	Unit	
Surface Soil	1,080 (267)	mg/kg (mg/kg)	Maximum Detected (Mean Value)	400	mg/kg	OSWER screening level for residential soil

TABLE 8-8
Lead Worksheet – Parcel G - Residents
Ellenville Scrap Iron & Metal Site
Ellenville, New York

2. Lead Model Questions

Question	Response for Residential Lead Model
Was a lead model used? (If “no” explain rationale)	No. The mean value of lead concentrations is below the screening level.
Which lead model and what version/date was used?	N/A
Where are the input values located in the risk assessment report?	N/A
Where are the output values located in the risk assessment report?	N/A
Was the model run using default values only?	N/A
If non-default values were used, where are the rationale for the values located in the risk assessment report?	N/A

3. Final Result

Medium	Result	Comment
N/A	N/A	N/A
N/A	N/A	N/A

TABLE 8-9
Lead Worksheet – Parcel H - Residents
Ellenville Scrap Iron & Metal Site
Village of Ellenville, New York

Site Name: Ellenville Scrap Iron & Metal Site – Ellenville, NY

Receptor: Offsite Resident (includes child and adult)

Lead Screening Questions

For each medium for which Screening Level Analysis was performed, complete the following:

Medium ²	Lead Concentration Used for Screening		Basis for Lead Concentration Used for Screening	Lead Screening Level		Basis for Lead Screening Level
	Values	Unit		Values	Unit	
Surface Soil	104 (77)	mg/kg (mg/kg)	Maximum Detected (Mean Value)	400	mg/kg	OSWER screening level for residential soil

TABLE 8-9
Lead Worksheet – Parcel H - Residents
Ellenville Scrap Iron & Metal Site
Ellenville, New York

2. Lead Model Questions

Question	Response for Residential Lead Model
Was a lead model used? (If “no” explain rationale)	No. The mean value of lead concentrations were below the screening level.
Which lead model and what version/date was used?	N/A
Where are the input values located in the risk assessment report?	N/A
Where are the output values located in the risk assessment report?	N/A
Was the model run using default values only?	N/A
If non-default values were used, where are the rationale for the values located in the risk assessment report?	N/A

3. Final Result

Medium	Result	Comment
N/A	N/A	N/A
N/A	N/A	N/A

TABLE 8-10
Lead Worksheet – Parcel I - Residents
Ellenville Scrap Iron & Metal Site
Village of Ellenville, New York

Site Name: Ellenville Scrap Iron & Metal Site – Ellenville, NY

Receptor: Offsite Resident (includes child and adult)

Lead Screening Questions

For each medium for which Screening Level Analysis was performed, complete the following:

Medium ²	Lead Concentration Used for Screening		Basis for Lead Concentration Used for Screening	Lead Screening Level		Basis for Lead Screening Level
	Values	Unit		Values	Unit	
Surface Soil	136 (129)	mg/kg (mg/kg)	Maximum Detected (Mean Value)	400	mg/kg	OSWER screening level for residential soil

TABLE 8-10
Lead Worksheet – Parcel I - Residents
Ellenville Scrap Iron & Metal Site
Ellenville, New York

2. Lead Model Questions

Question	Response for Residential Lead Model
Was a lead model used? (If “no” explain rationale)	No. The mean value of lead concentrations were below the screening level.
Which lead model and what version/date was used?	N/A
Where are the input values located in the risk assessment report?	N/A
Where are the output values located in the risk assessment report?	N/A
Was the model run using default values only?	N/A
If non-default values were used, where are the rationale for the values located in the risk assessment report?	N/A

3. Final Result

Medium	Result	Comment
N/A	N/A	N/A
N/A	N/A	N/A

ATTACHMENT D
ProUCL Output

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects								
2	User Selected Options											
3	From File			\\Pr1-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProUCL_04								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	Acenaphthylene											
10												
11	General Statistics											
12	Number of Valid Data			87			Number of Detected Data			33		
13	Number of Distinct Detected Data			27			Number of Non-Detect Data			54		
14							Percent Non-Detects			62.07%		
15												
16	Raw Statistics						Log-transformed Statistics					
17	Minimum Detected			0.055			Minimum Detected			-2.9		
18	Maximum Detected			3.9			Maximum Detected			1.361		
19	Mean of Detected			0.843			Mean of Detected			-0.802		
20	SD of Detected			0.909			SD of Detected			1.253		
21	Minimum Non-Detect			0.18			Minimum Non-Detect			-1.715		
22	Maximum Non-Detect			4.5			Maximum Non-Detect			1.504		
23												
24	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect			87		
25	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected			0		
26	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage			100.00%		
27												
28	UCL Statistics											
29	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
30	Shapiro Wilk Test Statistic			0.808			Shapiro Wilk Test Statistic			0.942		
31	5% Shapiro Wilk Critical Value			0.931			5% Shapiro Wilk Critical Value			0.931		
32	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
33												
34	Assuming Normal Distribution						Assuming Lognormal Distribution					
35	DL/2 Substitution Method						DL/2 Substitution Method					
36	Mean			0.462			Mean			-1.489		
37	SD			0.693			SD			1.096		
38	95% DL/2 (t) UCL			0.586			95% H-Stat (DL/2) UCL			0.435		
39												
40	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
41	MLE method failed to converge properly						Mean in Log Scale			-1.735		
42							SD in Log Scale			1.174		
43							Mean in Original Scale			0.394		
44							SD in Original Scale			0.66		
45							95% Percentile Bootstrap UCL			0.513		
46							95% BCA Bootstrap UCL			0.547		
47												
48	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
49	k star (bias corrected)			0.859			Data appear Gamma Distributed at 5% Significance Level					
50	Theta Star			0.981								
51	nu star			56.72								
52												
53	A-D Test Statistic			0.362			Nonparametric Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L
54	5% A-D Critical Value				0.779	Kaplan-Meier (KM) Method						
55	K-S Test Statistic				0.779	Mean						0.389
56	5% K-S Critical Value				0.158	SD						0.667
57	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						0.0741
58						95% KM (t) UCL						0.513
59	Assuming Gamma Distribution					95% KM (z) UCL						0.511
60	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						0.512
61	Minimum				0.055	95% KM (bootstrap t) UCL						0.55
62	Maximum				3.9	95% KM (BCA) UCL						0.508
63	Mean				0.859	95% KM (Percentile Bootstrap) UCL						0.516
64	Median				0.844	95% KM (Chebyshev) UCL						0.713
65	SD				0.583	97.5% KM (Chebyshev) UCL						0.852
66	k star				1.995	99% KM (Chebyshev) UCL						1.127
67	Theta star				0.43							
68	Nu star				347.1	Potential UCLs to Use						
69	AppChi2				305	95% KM (t) UCL						0.513
70	95% Gamma Approximate UCL				0.977							
71	95% Adjusted Gamma UCL				0.979							
72	Note: DL/2 is not a recommended method.											
73												
74												
75	Benzo(a)anthracene											
76												
77	General Statistics											
78	Number of Valid Data				86	Number of Detected Data				63		
79	Number of Distinct Detected Data				52	Number of Non-Detect Data				23		
80					Percent Non-Detects				26.74%			
81												
82	Raw Statistics					Log-transformed Statistics						
83	Minimum Detected				0.023	Minimum Detected				-3.772		
84	Maximum Detected				42	Maximum Detected				3.738		
85	Mean of Detected				6.855	Mean of Detected				0.425		
86	SD of Detected				9.993	SD of Detected				2.057		
87	Minimum Non-Detect				0.19	Minimum Non-Detect				-1.661		
88	Maximum Non-Detect				1.9	Maximum Non-Detect				0.642		
89												
90	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				55		
91	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				31		
92	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				63.95%		
93												
94	UCL Statistics											
95	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
96	Lilliefors Test Statistic				0.259	Lilliefors Test Statistic				0.0997		
97	5% Lilliefors Critical Value				0.112	5% Lilliefors Critical Value				0.112		
98	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
99												
100	Assuming Normal Distribution					Assuming Lognormal Distribution						
101	DL/2 Substitution Method				DL/2 Substitution Method							
102	Mean				5.078	Mean				-0.2		
103	SD				9.033	SD				2.076		
104	95% DL/2 (t) UCL				6.698	95% H-Stat (DL/2) UCL				11.01		
105												
106	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						

	A	B	C	D	E	F	G	H	I	J	K	L		
107	MLE yields a negative mean										Mean in Log Scale		-0.294	
108											SD in Log Scale		2.165	
109											Mean in Original Scale		5.058	
110											SD in Original Scale		9.043	
111											95% Percentile Bootstrap UCL		6.749	
112											95% BCA Bootstrap UCL		6.91	
113														
114	Gamma Distribution Test with Detected Values Only							Data Distribution Test with Detected Values Only						
115	k star (bias corrected)						0.423	Data appear Lognormal at 5% Significance Level						
116	Theta Star						16.2							
117	nu star						53.32							
118														
119	A-D Test Statistic						1.418	Nonparametric Statistics						
120	5% A-D Critical Value						0.832	Kaplan-Meier (KM) Method						
121	K-S Test Statistic						0.832	Mean						5.055
122	5% K-S Critical Value						0.12	SD						8.993
123	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.978
124								95% KM (t) UCL						6.68
125	Assuming Gamma Distribution							95% KM (z) UCL						6.663
126	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						6.677
127	Minimum						1E-09	95% KM (bootstrap t) UCL						7.154
128	Maximum						42	95% KM (BCA) UCL						6.854
129	Mean						5.281	95% KM (Percentile Bootstrap) UCL						6.763
130	Median						0.995	95% KM (Chebyshev) UCL						9.316
131	SD						8.961	97.5% KM (Chebyshev) UCL						11.16
132	k star						0.188	99% KM (Chebyshev) UCL						14.78
133	Theta star						28.16							
134	Nu star						32.25	Potential UCLs to Use						
135	AppChi2						20.27	97.5% KM (Chebyshev) UCL						11.16
136	95% Gamma Approximate UCL						8.402							
137	95% Adjusted Gamma UCL						8.47							
138	Note: DL/2 is not a recommended method.													
139														
140														
141	Benzo(a)pyrene													
142														
143	General Statistics													
144	Number of Valid Data						85	Number of Detected Data						61
145	Number of Distinct Detected Data						54	Number of Non-Detect Data						24
146								Percent Non-Detects						28.24%
147														
148	Raw Statistics							Log-transformed Statistics						
149	Minimum Detected						0.045	Minimum Detected						-3.101
150	Maximum Detected						38	Maximum Detected						3.638
151	Mean of Detected						6.576	Mean of Detected						0.521
152	SD of Detected						9.452	SD of Detected						1.928
153	Minimum Non-Detect						0.19	Minimum Non-Detect						-1.661
154	Maximum Non-Detect						1.9	Maximum Non-Detect						0.642
155														
156	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect						55
157	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected						30
158	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage						64.71%
159														

	A	B	C	D	E	F	G	H	I	J	K	L
160	UCL Statistics											
161	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
162	Lilliefors Test Statistic					0.259	Lilliefors Test Statistic					0.085
163	5% Lilliefors Critical Value					0.113	5% Lilliefors Critical Value					0.113
164	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
165												
166	Assuming Normal Distribution						Assuming Lognormal Distribution					
167	DL/2 Substitution Method						DL/2 Substitution Method					
168	Mean					4.77	Mean					-0.184
169	SD					8.497	SD					2.01
170	95% DL/2 (t) UCL					6.303	95% H-Stat (DL/2) UCL					8.266
171												
172	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
173	MLE yields a negative mean						Mean in Log Scale					-0.265
174							SD in Log Scale					2.098
175							Mean in Original Scale					4.756
176							SD in Original Scale					8.504
177							95% Percentile Bootstrap UCL					6.328
178							95% BCA Bootstrap UCL					6.532
179												
180	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
181	k star (bias corrected)					0.458	Data appear Lognormal at 5% Significance Level					
182	Theta Star					14.35						
183	nu star					55.91						
184												
185	A-D Test Statistic					1.245	Nonparametric Statistics					
186	5% A-D Critical Value					0.823	Kaplan-Meier (KM) Method					
187	K-S Test Statistic					0.823	Mean					4.754
188	5% K-S Critical Value					0.121	SD					8.456
189	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.925
190							95% KM (t) UCL					6.292
191	Assuming Gamma Distribution						95% KM (z) UCL					6.275
192	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.288
193	Minimum					1E-09	95% KM (bootstrap t) UCL					6.694
194	Maximum					38	95% KM (BCA) UCL					6.377
195	Mean					4.964	95% KM (Percentile Bootstrap) UCL					6.258
196	Median					1.23	95% KM (Chebyshev) UCL					8.785
197	SD					8.414	97.5% KM (Chebyshev) UCL					10.53
198	k star					0.192	99% KM (Chebyshev) UCL					13.96
199	Theta star					25.83						
200	Nu star					32.66	Potential UCLs to Use					
201	AppChi2					20.6	97.5% KM (Chebyshev) UCL					10.53
202	95% Gamma Approximate UCL					7.871						
203	95% Adjusted Gamma UCL					7.934						
204	Note: DL/2 is not a recommended method.											
205												
206												
207	Benzo(b)fluoranthene											
208												
209	General Statistics											
210	Number of Valid Data					87	Number of Detected Data					67
211	Number of Distinct Detected Data					60	Number of Non-Detect Data					20
212							Percent Non-Detects					22.99%

	A	B	C	D	E	F	G	H	I	J	K	L
213												
214	Raw Statistics						Log-transformed Statistics					
215	Minimum Detected					0.063	Minimum Detected					-2.765
216	Maximum Detected					54	Maximum Detected					3.989
217	Mean of Detected					8.99	Mean of Detected					0.662
218	SD of Detected					13.99	SD of Detected					2.045
219	Minimum Non-Detect					0.19	Minimum Non-Detect					-1.661
220	Maximum Non-Detect					1.3	Maximum Non-Detect					0.262
221												
222	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					49
223	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					38
224	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					56.32%
225												
226	UCL Statistics											
227	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
228	Lilliefors Test Statistic					0.262	Lilliefors Test Statistic					0.0918
229	5% Lilliefors Critical Value					0.108	5% Lilliefors Critical Value					0.108
230	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
231												
232	Assuming Normal Distribution						Assuming Lognormal Distribution					
233	DL/2 Substitution Method						DL/2 Substitution Method					
234	Mean					6.959	Mean					0.0415
235	SD					12.81	SD					2.138
236	95% DL/2 (t) UCL					9.243	95% H-Stat (DL/2) UCL					14.1
237												
238	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
239	MLE yields a negative mean						Mean in Log Scale					0.0152
240							SD in Log Scale					2.178
241							Mean in Original Scale					6.956
242							SD in Original Scale					12.81
243							95% Percentile Bootstrap UCL					9.395
244							95% BCA Bootstrap UCL					9.761
245												
246	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
247	k star (bias corrected)					0.416	Data appear Lognormal at 5% Significance Level					
248	Theta Star					21.62						
249	nu star					55.71						
250												
251	A-D Test Statistic					1.571	Nonparametric Statistics					
252	5% A-D Critical Value					0.835	Kaplan-Meier (KM) Method					
253	K-S Test Statistic					0.835	Mean					6.953
254	5% K-S Critical Value					0.116	SD					12.74
255	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1.376
256							95% KM (t) UCL					9.241
257	Assuming Gamma Distribution						95% KM (z) UCL					9.217
258	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					9.237
259	Minimum					1E-09	95% KM (bootstrap t) UCL					9.872
260	Maximum					54	95% KM (BCA) UCL					9.28
261	Mean					6.938	95% KM (Percentile Bootstrap) UCL					9.306
262	Median					0.6	95% KM (Chebyshev) UCL					12.95
263	SD					12.82	97.5% KM (Chebyshev) UCL					15.55
264	k star					0.144	99% KM (Chebyshev) UCL					20.65
265	Theta star					48.31						

	A	B	C	D	E	F	G	H	I	J	K	L	
266					Nu star	24.99	Potential UCLs to Use						
267					AppChi2	14.6	97.5% KM (Chebyshev) UCL					15.55	
268					95% Gamma Approximate UCL	11.87							
269					95% Adjusted Gamma UCL	11.98							
270	Note: DL/2 is not a recommended method.												
271													
272													
273	Benzo(g,h,i)perylene												
274													
275	General Statistics												
276					Number of Valid Data	82					Number of Detected Data	49	
277					Number of Distinct Detected Data	43					Number of Non-Detect Data	33	
278											Percent Non-Detects	40.24%	
279													
280	Raw Statistics						Log-transformed Statistics						
281					Minimum Detected	0.065					Minimum Detected	-2.733	
282					Maximum Detected	16					Maximum Detected	2.773	
283					Mean of Detected	2.552					Mean of Detected	-0.101	
284					SD of Detected	3.297					SD of Detected	1.639	
285					Minimum Non-Detect	0.18					Minimum Non-Detect	-1.715	
286					Maximum Non-Detect	4.5					Maximum Non-Detect	1.504	
287													
288	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	70
289	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	12
290	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	85.37%
291													
292	UCL Statistics												
293	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
294					Shapiro Wilk Test Statistic	0.763					Shapiro Wilk Test Statistic	0.907	
295					5% Shapiro Wilk Critical Value	0.947					5% Shapiro Wilk Critical Value	0.947	
296	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
297													
298	Assuming Normal Distribution						Assuming Lognormal Distribution						
299					DL/2 Substitution Method						DL/2 Substitution Method		
300					Mean	1.626					Mean	-0.824	
301					SD	2.793					SD	1.624	
302					95% DL/2 (t) UCL	2.139					95% H-Stat (DL/2) UCL	1.84	
303													
304					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
305	MLE yields a negative mean											Mean in Log Scale	-0.875
306											SD in Log Scale	1.648	
307											Mean in Original Scale	1.592	
308											SD in Original Scale	2.798	
309											95% Percentile Bootstrap UCL	2.141	
310											95% BCA Bootstrap UCL	2.234	
311													
312	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
313					k star (bias corrected)	0.573	Data do not follow a Discernable Distribution (0.05)						
314					Theta Star	4.451							
315					nu star	56.18							
316													
317					A-D Test Statistic	1.397	Nonparametric Statistics						
318					5% A-D Critical Value	0.806	Kaplan-Meier (KM) Method						

	A	B	C	D	E	F	G	H	I	J	K	L
319	K-S Test Statistic					0.806					Mean	1.59
320	5% K-S Critical Value					0.133					SD	2.786
321	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.311
322											95% KM (t) UCL	2.107
323	Assuming Gamma Distribution										95% KM (z) UCL	2.101
324	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	2.105
325	Minimum					0.065					95% KM (bootstrap t) UCL	2.215
326	Maximum					16					95% KM (BCA) UCL	2.15
327	Mean					2.454					95% KM (Percentile Bootstrap) UCL	2.137
328	Median					1.923					95% KM (Chebyshev) UCL	2.946
329	SD					2.572					97.5% KM (Chebyshev) UCL	3.533
330	k star					0.892					99% KM (Chebyshev) UCL	4.686
331	Theta star					2.751						
332	Nu star					146.3					Potential UCLs to Use	
333	AppChi2					119.4					97.5% KM (Chebyshev) UCL	3.533
334	95% Gamma Approximate UCL					3.009						
335	95% Adjusted Gamma UCL					3.02						
336	Note: DL/2 is not a recommended method.											
337												
338												
339	Benzo(k)fluoranthene											
340												
341	General Statistics											
342	Number of Valid Data					85	Number of Detected Data					60
343	Number of Distinct Detected Data					47	Number of Non-Detect Data					25
344							Percent Non-Detects					29.41%
345												
346	Raw Statistics						Log-transformed Statistics					
347	Minimum Detected					0.026	Minimum Detected					-3.65
348	Maximum Detected					28	Maximum Detected					3.332
349	Mean of Detected					4.368	Mean of Detected					0.142
350	SD of Detected					6.372	SD of Detected					1.878
351	Minimum Non-Detect					0.19	Minimum Non-Detect					-1.661
352	Maximum Non-Detect					1.9	Maximum Non-Detect					0.642
353												
354	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					58
355	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					27
356	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					68.24%
357												
358	UCL Statistics											
359	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
360	Lilliefors Test Statistic					0.262	Lilliefors Test Statistic					0.105
361	5% Lilliefors Critical Value					0.114	5% Lilliefors Critical Value					0.114
362	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
363												
364	Assuming Normal Distribution						Assuming Lognormal Distribution					
365	DL/2 Substitution Method						DL/2 Substitution Method					
366	Mean					3.138	Mean					-0.472
367	SD					5.675	SD					1.872
368	95% DL/2 (t) UCL					4.162	95% H-Stat (DL/2) UCL					4.798
369												
370	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
371	MLE yields a negative mean						Mean in Log Scale					-0.498

	A	B	C	D	E	F	G	H	I	J	K	L	
372											SD in Log Scale	1.9	
373											Mean in Original Scale	3.13	
374											SD in Original Scale	5.679	
375											95% Percentile Bootstrap UCL	4.198	
376											95% BCA Bootstrap UCL	4.373	
377													
378	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
379					k star (bias corrected)	0.467	Data appear Lognormal at 5% Significance Level						
380					Theta Star	9.356							
381					nu star	56.03							
382													
383					A-D Test Statistic	1.404	Nonparametric Statistics						
384					5% A-D Critical Value	0.821	Kaplan-Meier (KM) Method						
385					K-S Test Statistic	0.821	Mean						3.124
386					5% K-S Critical Value	0.122	SD						5.649
387	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.618
388							95% KM (t) UCL						4.152
389	Assuming Gamma Distribution						95% KM (z) UCL						4.14
390	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						4.149
391					Minimum	1E-09	95% KM (bootstrap t) UCL						4.4
392					Maximum	28	95% KM (BCA) UCL						4.137
393					Mean	3.508	95% KM (Percentile Bootstrap) UCL						4.209
394					Median	1.312	95% KM (Chebyshev) UCL						5.817
395					SD	5.547	97.5% KM (Chebyshev) UCL						6.983
396					k star	0.293	99% KM (Chebyshev) UCL						9.272
397					Theta star	11.98							
398					Nu star	49.79	Potential UCLs to Use						
399					AppChi2	34.59	97.5% KM (Chebyshev) UCL						6.983
400					95% Gamma Approximate UCL	5.05							
401					95% Adjusted Gamma UCL	5.082							
402	Note: DL/2 is not a recommended method.												
403													
404													
405	Bis(2-ethylhexyl)phthalate												
406													
407	General Statistics												
408					Number of Valid Data	87					Number of Detected Data	60	
409					Number of Distinct Detected Data	49					Number of Non-Detect Data	27	
410											Percent Non-Detects	31.03%	
411													
412	Raw Statistics						Log-transformed Statistics						
413					Minimum Detected	0.052					Minimum Detected	-2.957	
414					Maximum Detected	62					Maximum Detected	4.127	
415					Mean of Detected	5.24					Mean of Detected	0.25	
416					SD of Detected	10.66					SD of Detected	1.806	
417					Minimum Non-Detect	0.19					Minimum Non-Detect	-1.661	
418					Maximum Non-Detect	2.2					Maximum Non-Detect	0.788	
419													
420	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						61
421	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						26
422	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						70.11%
423													
424	UCL Statistics												

A	B	C	D	E	F	G	H	I	J	K	L
425	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
426	Lilliefors Test Statistic				0.313	Lilliefors Test Statistic				0.0769	
427	5% Lilliefors Critical Value				0.114	5% Lilliefors Critical Value				0.114	
428	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
429											
430	Assuming Normal Distribution					Assuming Lognormal Distribution					
431	DL/2 Substitution Method					DL/2 Substitution Method					
432	Mean				3.671	Mean				-0.447	
433	SD				9.139	SD				1.856	
434	95% DL/2 (t) UCL				5.3	95% H-Stat (DL/2) UCL				4.584	
435											
436	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
437	MLE yields a negative mean					Mean in Log Scale				-0.515	
438						SD in Log Scale				1.928	
439						Mean in Original Scale				3.657	
440						SD in Original Scale				9.143	
441						95% Percentile Bootstrap UCL				5.343	
442						95% BCA Bootstrap UCL				5.751	
443											
444	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
445	k star (bias corrected)				0.446	Data appear Lognormal at 5% Significance Level					
446	Theta Star				11.75						
447	nu star				53.52						
448											
449	A-D Test Statistic				1.557	Nonparametric Statistics					
450	5% A-D Critical Value				0.826	Kaplan-Meier (KM) Method					
451	K-S Test Statistic				0.826	Mean				3.656	
452	5% K-S Critical Value				0.122	SD				9.091	
453	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.983	
454						95% KM (t) UCL				5.29	
455	Assuming Gamma Distribution					95% KM (z) UCL				5.273	
456	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				5.286	
457	Minimum				1E-09	95% KM (bootstrap t) UCL				6.502	
458	Maximum				62	95% KM (BCA) UCL				5.433	
459	Mean				3.877	95% KM (Percentile Bootstrap) UCL				5.461	
460	Median				0.84	95% KM (Chebyshev) UCL				7.94	
461	SD				9.088	97.5% KM (Chebyshev) UCL				9.794	
462	k star				0.177	99% KM (Chebyshev) UCL				13.44	
463	Theta star				21.89						
464	Nu star				30.82	Potential UCLs to Use					
465	AppChi2				19.14	97.5% KM (Chebyshev) UCL				9.794	
466	95% Gamma Approximate UCL				6.243						
467	95% Adjusted Gamma UCL				6.294						
468	Note: DL/2 is not a recommended method.										
469											
470											
471	Carbazole										
472											
473	General Statistics										
474	Number of Valid Data				87	Number of Detected Data				41	
475	Number of Distinct Detected Data				36	Number of Non-Detect Data				46	
476						Percent Non-Detects				52.87%	
477											

	A	B	C	D	E	F	G	H	I	J	K	L
478	Raw Statistics						Log-transformed Statistics					
479	Minimum Detected				0.0071		Minimum Detected				-4.948	
480	Maximum Detected				9.3		Maximum Detected				2.23	
481	Mean of Detected				1.455		Mean of Detected				-0.618	
482	SD of Detected				2.041		SD of Detected				1.631	
483	Minimum Non-Detect				0.18		Minimum Non-Detect				-1.715	
484	Maximum Non-Detect				4.5		Maximum Non-Detect				1.504	
485												
486	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				83	
487	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				4	
488	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				95.40%	
489												
490	UCL Statistics											
491	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
492	Shapiro Wilk Test Statistic				0.706		Shapiro Wilk Test Statistic				0.973	
493	5% Shapiro Wilk Critical Value				0.941		5% Shapiro Wilk Critical Value				0.941	
494	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
495												
496	Assuming Normal Distribution						Assuming Lognormal Distribution					
497	DL/2 Substitution Method						DL/2 Substitution Method					
498	Mean				0.803		Mean				-1.306	
499	SD				1.545		SD				1.387	
500	95% DL/2 (t) UCL				1.078		95% H-Stat (DL/2) UCL				0.828	
501												
502	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
503	MLE yields a negative mean						Mean in Log Scale				-1.65	
504							SD in Log Scale				1.589	
505							Mean in Original Scale				0.738	
506							SD in Original Scale				1.55	
507							95% Percentile Bootstrap UCL				1.024	
508							95% BCA Bootstrap UCL				1.127	
509												
510	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
511	k star (bias corrected)				0.59		Data appear Gamma Distributed at 5% Significance Level					
512	Theta Star				2.464							
513	nu star				48.42							
514												
515	A-D Test Statistic				0.453		Nonparametric Statistics					
516	5% A-D Critical Value				0.802		Kaplan-Meier (KM) Method					
517	K-S Test Statistic				0.802		Mean				0.748	
518	5% K-S Critical Value				0.145		SD				1.542	
519	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				0.168	
520							95% KM (t) UCL				1.027	
521	Assuming Gamma Distribution						95% KM (z) UCL				1.024	
522	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				1.026	
523	Minimum				0.0071		95% KM (bootstrap t) UCL				1.151	
524	Maximum				9.3		95% KM (BCA) UCL				1.032	
525	Mean				1.462		95% KM (Percentile Bootstrap) UCL				1.045	
526	Median				1.42		95% KM (Chebyshev) UCL				1.481	
527	SD				1.394		97.5% KM (Chebyshev) UCL				1.797	
528	k star				1.171		99% KM (Chebyshev) UCL				2.42	
529	Theta star				1.248							
530	Nu star				203.8		Potential UCLs to Use					

	A	B	C	D	E	F	G	H	I	J	K	L
531	AppChi2					171.8	95% KM (t) UCL					1.027
532	95% Gamma Approximate UCL					1.734						
533	95% Adjusted Gamma UCL					1.739						
534	Note: DL/2 is not a recommended method.											
535												
536												
537	Chrysene											
538												
539	General Statistics											
540	Number of Valid Data					87	Number of Detected Data					68
541	Number of Distinct Detected Data					58	Number of Non-Detect Data					19
542							Percent Non-Detects					21.84%
543												
544	Raw Statistics						Log-transformed Statistics					
545	Minimum Detected					0.017	Minimum Detected					-4.075
546	Maximum Detected					40	Maximum Detected					3.689
547	Mean of Detected					6.735	Mean of Detected					0.353
548	SD of Detected					10.37	SD of Detected					2.03
549	Minimum Non-Detect					0.19	Minimum Non-Detect					-1.661
550	Maximum Non-Detect					0.41	Maximum Non-Detect					-0.892
551												
552	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					44
553	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					43
554	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					50.57%
555												
556	UCL Statistics											
557	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
558	Lilliefors Test Statistic					0.276	Lilliefors Test Statistic					0.106
559	5% Lilliefors Critical Value					0.107	5% Lilliefors Critical Value					0.107
560	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
561												
562	Assuming Normal Distribution						Assuming Lognormal Distribution					
563	DL/2 Substitution Method						DL/2 Substitution Method					
564	Mean					5.29	Mean					-0.198
565	SD					9.554	SD					2.08
566	95% DL/2 (t) UCL					6.993	95% H-Stat (DL/2) UCL					10.04
567												
568	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
569	MLE yields a negative mean						Mean in Log Scale					-0.252
570							SD in Log Scale					2.158
571							Mean in Original Scale					5.289
572							SD in Original Scale					9.555
573							95% Percentile Bootstrap UCL					6.966
574							95% BCA Bootstrap UCL					7.215
575												
576	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
577	k star (bias corrected)					0.411	Data appear Lognormal at 5% Significance Level					
578	Theta Star					16.37						
579	nu star					55.95						
580												
581	A-D Test Statistic					2.067	Nonparametric Statistics					
582	5% A-D Critical Value					0.836	Kaplan-Meier (KM) Method					
583	K-S Test Statistic					0.836	Mean					5.289

A	B	C	D	E	F	G	H	I	J	K	L
584	5% K-S Critical Value				0.116					SD	9.5
585	Data not Gamma Distributed at 5% Significance Level									SE of Mean	1.026
586										95% KM (t) UCL	6.995
587	Assuming Gamma Distribution									95% KM (z) UCL	6.977
588	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	6.993
589	Minimum				1E-09					95% KM (bootstrap t) UCL	7.401
590	Maximum				40					95% KM (BCA) UCL	6.97
591	Mean				5.282					95% KM (Percentile Bootstrap) UCL	6.971
592	Median				0.54					95% KM (Chebyshev) UCL	9.762
593	SD				9.56					97.5% KM (Chebyshev) UCL	11.7
594	k star				0.14					99% KM (Chebyshev) UCL	15.5
595	Theta star				37.67						
596	Nu star				24.39	Potential UCLs to Use					
597	AppChi2				14.15					97.5% KM (Chebyshev) UCL	11.7
598	95% Gamma Approximate UCL				9.106						
599	95% Adjusted Gamma UCL				9.192						
600	Note: DL/2 is not a recommended method.										
601											
602											
603	Dibenzo(a,h)anthracene										
604											
605	General Statistics										
606	Number of Valid Data				77	Number of Detected Data				39	
607	Number of Distinct Detected Data				32	Number of Non-Detect Data				38	
608						Percent Non-Detects				49.35%	
609											
610	Raw Statistics					Log-transformed Statistics					
611	Minimum Detected				0.053	Minimum Detected				-2.937	
612	Maximum Detected				7.4	Maximum Detected				2.001	
613	Mean of Detected				1.187	Mean of Detected				-0.68	
614	SD of Detected				1.531	SD of Detected				1.45	
615	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715	
616	Maximum Non-Detect				1.9	Maximum Non-Detect				0.642	
617											
618	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				68	
619	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				9	
620	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				88.31%	
621											
622	UCL Statistics										
623	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
624	Shapiro Wilk Test Statistic				0.741	Shapiro Wilk Test Statistic				0.935	
625	5% Shapiro Wilk Critical Value				0.939	5% Shapiro Wilk Critical Value				0.939	
626	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
627											
628	Assuming Normal Distribution					Assuming Lognormal Distribution					
629	DL/2 Substitution Method					DL/2 Substitution Method					
630	Mean				0.682	Mean				-1.338	
631	SD				1.204	SD				1.28	
632	95% DL/2 (t) UCL				0.911	95% H-Stat (DL/2) UCL				0.643	
633											
634	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
635	MLE yields a negative mean					Mean in Log Scale				-1.5	
636						SD in Log Scale				1.4	

	A	B	C	D	E	F	G	H	I	J	K	L
637										Mean in Original Scale		0.658
638										SD in Original Scale		1.21
639										95% Percentile Bootstrap UCL		0.891
640										95% BCA Bootstrap UCL		0.939
641												
642	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
643					k star (bias corrected)	0.671	Data appear Gamma Distributed at 5% Significance Level					
644					Theta Star	1.769						
645					nu star	52.34						
646												
647					A-D Test Statistic	0.609	Nonparametric Statistics					
648					5% A-D Critical Value	0.793	Kaplan-Meier (KM) Method					
649					K-S Test Statistic	0.793	Mean					
650					5% K-S Critical Value	0.147	SD					
651	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					
652							95% KM (t) UCL					
653	Assuming Gamma Distribution						95% KM (z) UCL					
654	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
655					Minimum	0.053	95% KM (bootstrap t) UCL					
656					Maximum	7.4	95% KM (BCA) UCL					
657					Mean	1.192	95% KM (Percentile Bootstrap) UCL					
658					Median	1.148	95% KM (Chebyshev) UCL					
659					SD	1.092	97.5% KM (Chebyshev) UCL					
660					k star	1.239	99% KM (Chebyshev) UCL					
661					Theta star	0.961						
662					Nu star	190.9	Potential UCLs to Use					
663					AppChi2	159.9	95% KM (BCA) UCL					
664					95% Gamma Approximate UCL	1.422						
665					95% Adjusted Gamma UCL	1.427						
666	Note: DL/2 is not a recommended method.											
667												
668												
669	Dimethylphthalate											
670												
671	General Statistics											
672					Number of Valid Data	87				Number of Detected Data		12
673					Number of Distinct Detected Data	12				Number of Non-Detect Data		75
674										Percent Non-Detects		86.21%
675												
676	Raw Statistics						Log-transformed Statistics					
677					Minimum Detected	0.047				Minimum Detected		-3.058
678					Maximum Detected	1.3				Maximum Detected		0.262
679					Mean of Detected	0.362				Mean of Detected		-1.404
680					SD of Detected	0.347				SD of Detected		0.953
681					Minimum Non-Detect	0.18				Minimum Non-Detect		-1.715
682					Maximum Non-Detect	5.4				Maximum Non-Detect		1.686
683												
684	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
685	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
686	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
687												
688	UCL Statistics											
689	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
690	Shapiro Wilk Test Statistic					0.795	Shapiro Wilk Test Statistic					0.974
691	5% Shapiro Wilk Critical Value					0.859	5% Shapiro Wilk Critical Value					0.859
692	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
693												
694	Assuming Normal Distribution						Assuming Lognormal Distribution					
695	DL/2 Substitution Method						DL/2 Substitution Method					
696	Mean					0.333	Mean					-1.634
697	SD					0.464	SD					0.913
698	95% DL/2 (t) UCL					0.416	95% H-Stat (DL/2) UCL					0.369
699												
700	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
701	MLE method failed to converge properly						Mean in Log Scale					-2.285
702							SD in Log Scale					0.669
703							Mean in Original Scale					0.135
704							SD in Original Scale					0.16
705							95% Percentile Bootstrap UCL					0.165
706							95% BCA Bootstrap UCL					0.175
707												
708	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
709	k star (bias corrected)					1.128	Data appear Gamma Distributed at 5% Significance Level					
710	Theta Star					0.321						
711	nu star					27.07						
712												
713	A-D Test Statistic					0.249	Nonparametric Statistics					
714	5% A-D Critical Value					0.747	Kaplan-Meier (KM) Method					
715	K-S Test Statistic					0.747	Mean					0.14
716	5% K-S Critical Value					0.25	SD					0.17
717	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0243
718							95% KM (t) UCL					0.181
719	Assuming Gamma Distribution						95% KM (z) UCL					0.18
720	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.182
721	Minimum					0.047	95% KM (bootstrap t) UCL					0.194
722	Maximum					1.3	95% KM (BCA) UCL					0.189
723	Mean					0.402	95% KM (Percentile Bootstrap) UCL					0.188
724	Median					0.412	95% KM (Chebyshev) UCL					0.246
725	SD					0.155	97.5% KM (Chebyshev) UCL					0.292
726	k star					6.004	99% KM (Chebyshev) UCL					0.382
727	Theta star					0.0669						
728	Nu star					1045	Potential UCLs to Use					
729	AppChi2					970.7	95% KM (t) UCL					0.181
730	95% Gamma Approximate UCL					0.432						
731	95% Adjusted Gamma UCL					0.433						
732	Note: DL/2 is not a recommended method.											
733												
734												
735	Di-n-octylphthalate											
736												
737	General Statistics											
738	Number of Valid Data					65	Number of Detected Data					14
739	Number of Distinct Detected Data					14	Number of Non-Detect Data					51
740							Percent Non-Detects					78.46%
741												
742	Raw Statistics						Log-transformed Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L		
743				Minimum Detected		0.053				Minimum Detected		-2.937		
744				Maximum Detected		5				Maximum Detected		1.609		
745				Mean of Detected		0.877				Mean of Detected		-0.869		
746				SD of Detected		1.337				SD of Detected		1.241		
747				Minimum Non-Detect		0.18				Minimum Non-Detect		-1.715		
748				Maximum Non-Detect		4.5				Maximum Non-Detect		1.504		
749														
750	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		64	
751	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		1	
752	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		98.46%	
753														
754	UCL Statistics													
755	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
756	Shapiro Wilk Test Statistic						0.606	Shapiro Wilk Test Statistic						0.962
757	5% Shapiro Wilk Critical Value						0.874	5% Shapiro Wilk Critical Value						0.874
758	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
759														
760	Assuming Normal Distribution						Assuming Lognormal Distribution							
761	DL/2 Substitution Method							DL/2 Substitution Method						
762	Mean						0.407	Mean						-1.576
763	SD						0.741	SD						0.999
764	95% DL/2 (t) UCL						0.56	95% H-Stat (DL/2) UCL						0.395
765														
766	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method						
767	MLE method failed to converge properly						Mean in Log Scale						-2.521	
768							SD in Log Scale						1.229	
769							Mean in Original Scale						0.24	
770							SD in Original Scale						0.691	
771							95% Percentile Bootstrap UCL						0.394	
772							95% BCA Bootstrap UCL						0.492	
773														
774	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
775	k star (bias corrected)						0.68	Data appear Gamma Distributed at 5% Significance Level						
776	Theta Star						1.29							
777	nu star						19.03							
778														
779	A-D Test Statistic						0.665	Nonparametric Statistics						
780	5% A-D Critical Value						0.768	Kaplan-Meier (KM) Method						
781	K-S Test Statistic						0.768	Mean						0.252
782	5% K-S Critical Value						0.237	SD						0.688
783	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						0.0894	
784							95% KM (t) UCL						0.401	
785	Assuming Gamma Distribution						95% KM (z) UCL						0.399	
786	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.397	
787	Minimum						0.053	95% KM (bootstrap t) UCL						0.687
788	Maximum						5	95% KM (BCA) UCL						0.498
789	Mean						0.973	95% KM (Percentile Bootstrap) UCL						0.444
790	Median						0.902	95% KM (Chebyshev) UCL						0.641
791	SD						0.652	97.5% KM (Chebyshev) UCL						0.81
792	k star						2.649	99% KM (Chebyshev) UCL						1.141
793	Theta star						0.367							
794	Nu star						344.4	Potential UCLs to Use						
795	AppChi2						302.4	95% KM (t) UCL						0.401

	A	B	C	D	E	F	G	H	I	J	K	L	
796	95% Gamma Approximate UCL					1.108							
797	95% Adjusted Gamma UCL					1.112							
798	Note: DL/2 is not a recommended method.												
799													
800													
801	Indeno(1,2,3-cd)pyrene												
802													
803	General Statistics												
804	Number of Valid Data					83	Number of Detected Data					55	
805	Number of Distinct Detected Data					51	Number of Non-Detect Data					28	
806							Percent Non-Detects					33.73%	
807													
808	Raw Statistics						Log-transformed Statistics						
809	Minimum Detected					0.083	Minimum Detected					-2.489	
810	Maximum Detected					20	Maximum Detected					2.996	
811	Mean of Detected					3.25	Mean of Detected					0.13	
812	SD of Detected					4.346	SD of Detected					1.611	
813	Minimum Non-Detect					0.19	Minimum Non-Detect					-1.661	
814	Maximum Non-Detect					1.9	Maximum Non-Detect					0.642	
815													
816	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					61	
817	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					22	
818	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					73.49%	
819													
820	UCL Statistics												
821	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
822	Lilliefors Test Statistic					0.248	Lilliefors Test Statistic					0.106	
823	5% Lilliefors Critical Value					0.119	5% Lilliefors Critical Value					0.119	
824	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
825													
826	Assuming Normal Distribution						Assuming Lognormal Distribution						
827	DL/2 Substitution Method						DL/2 Substitution Method						
828	Mean					2.213	Mean					-0.582	
829	SD					3.819	SD					1.683	
830	95% DL/2 (t) UCL					2.911	95% H-Stat (DL/2) UCL					2.711	
831													
832	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
833	MLE yields a negative mean						Mean in Log Scale					-0.619	
834							SD in Log Scale					1.725	
835							Mean in Original Scale					2.204	
836							SD in Original Scale					3.823	
837							95% Percentile Bootstrap UCL					2.927	
838							95% BCA Bootstrap UCL					3.052	
839													
840	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
841	k star (bias corrected)					0.57	Data appear Lognormal at 5% Significance Level						
842	Theta Star					5.696							
843	nu star					62.75							
844													
845	A-D Test Statistic					1.302	Nonparametric Statistics						
846	5% A-D Critical Value					0.807	Kaplan-Meier (KM) Method						
847	K-S Test Statistic					0.807	Mean					2.202	
848	5% K-S Critical Value					0.126	SD					3.801	

A	B	C	D	E	F	G	H	I	J	K	L	
849	Data not Gamma Distributed at 5% Significance Level									SE of Mean	0.421	
850										95% KM (t) UCL	2.903	
851	Assuming Gamma Distribution									95% KM (z) UCL	2.895	
852	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	2.901	
853	Minimum					1E-09				95% KM (bootstrap t) UCL	3.075	
854	Maximum					20				95% KM (BCA) UCL	2.935	
855	Mean					2.656				95% KM (Percentile Bootstrap) UCL	2.914	
856	Median					1.3				95% KM (Chebyshev) UCL	4.038	
857	SD					3.679				97.5% KM (Chebyshev) UCL	4.832	
858	k star					0.407				99% KM (Chebyshev) UCL	6.392	
859	Theta star					6.533						
860	Nu star					67.5				Potential UCLs to Use		
861	AppChi2					49.59				97.5% KM (Chebyshev) UCL	4.832	
862	95% Gamma Approximate UCL					3.616						
863	95% Adjusted Gamma UCL					3.636						
864	Note: DL/2 is not a recommended method.											
865												
866												
867	Naphthalene											
868												
869	General Statistics											
870	Number of Valid Data					87	Number of Detected Data					29
871	Number of Distinct Detected Data					27	Number of Non-Detect Data					58
872							Percent Non-Detects					66.67%
873												
874	Raw Statistics						Log-transformed Statistics					
875	Minimum Detected					0.055	Minimum Detected					-2.9
876	Maximum Detected					11	Maximum Detected					2.398
877	Mean of Detected					0.876	Mean of Detected					-0.967
878	SD of Detected					1.996	SD of Detected					1.186
879	Minimum Non-Detect					0.18	Minimum Non-Detect					-1.715
880	Maximum Non-Detect					4.5	Maximum Non-Detect					1.504
881												
882	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					86
883	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					1
884	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					98.85%
885												
886	UCL Statistics											
887	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
888	Shapiro Wilk Test Statistic					0.366	Shapiro Wilk Test Statistic					0.952
889	5% Shapiro Wilk Critical Value					0.926	5% Shapiro Wilk Critical Value					0.926
890	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
891												
892	Assuming Normal Distribution						Assuming Lognormal Distribution					
893	DL/2 Substitution Method						DL/2 Substitution Method					
894	Mean					0.466	Mean					-1.554
895	SD					1.22	SD					1.033
896	95% DL/2 (t) UCL					0.683	95% H-Stat (DL/2) UCL					0.415
897												
898	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
899	MLE method failed to converge properly						Mean in Log Scale					-1.804
900							SD in Log Scale					1.023
901							Mean in Original Scale					0.376

	A	B	C	D	E	F	G	H	I	J	K	L	
902											SD in Original Scale	1.194	
903											95% Percentile Bootstrap UCL	0.607	
904											95% BCA Bootstrap UCL	0.775	
905													
906	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
907					k star (bias corrected)	0.669	Data appear Lognormal at 5% Significance Level						
908					Theta Star	1.31							
909					nu star	38.8							
910													
911					A-D Test Statistic	1.435	Nonparametric Statistics						
912					5% A-D Critical Value	0.787	Kaplan-Meier (KM) Method						
913					K-S Test Statistic	0.787	Mean						0.377
914					5% K-S Critical Value	0.169	SD						1.191
915	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.131
916							95% KM (t) UCL						0.594
917	Assuming Gamma Distribution						95% KM (z) UCL						0.591
918	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.591
919					Minimum	1E-09	95% KM (bootstrap t) UCL						1.061
920					Maximum	11	95% KM (BCA) UCL						0.637
921					Mean	0.906	95% KM (Percentile Bootstrap) UCL						0.615
922					Median	0.713	95% KM (Chebyshev) UCL						0.946
923					SD	1.242	97.5% KM (Chebyshev) UCL						1.192
924					k star	0.518	99% KM (Chebyshev) UCL						1.676
925					Theta star	1.748							
926					Nu star	90.2	Potential UCLs to Use						
927					AppChi2	69.3	95% KM (BCA) UCL						0.637
928					95% Gamma Approximate UCL	1.18							
929					95% Adjusted Gamma UCL	1.185							
930	Note: DL/2 is not a recommended method.												
931													
932													
933	Phenanthrene												
934													
935	General Statistics												
936					Number of Valid Data	87					Number of Detected Data	62	
937					Number of Distinct Detected Data	58					Number of Non-Detect Data	25	
938											Percent Non-Detects	28.74%	
939													
940	Raw Statistics						Log-transformed Statistics						
941					Minimum Detected	0.015					Minimum Detected	-4.2	
942					Maximum Detected	73					Maximum Detected	4.29	
943					Mean of Detected	6.934					Mean of Detected	0.359	
944					SD of Detected	12.23					SD of Detected	2.055	
945					Minimum Non-Detect	0.19					Minimum Non-Detect	-1.661	
946					Maximum Non-Detect	1.9					Maximum Non-Detect	0.642	
947													
948	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						56
949	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						31
950	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						64.37%
951													
952	UCL Statistics												
953	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
954					Lilliefors Test Statistic	0.286					Lilliefors Test Statistic	0.0831	

	A	B	C	D	E	F	G	H	I	J	K	L
955	5% Lilliefors Critical Value					0.113	5% Lilliefors Critical Value					0.113
956	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
957												
958	Assuming Normal Distribution					Assuming Lognormal Distribution						
959	DL/2 Substitution Method					DL/2 Substitution Method						
960	Mean					4.996	Mean					-0.311
961	SD					10.74	SD					2.059
962	95% DL/2 (t) UCL					6.911	95% H-Stat (DL/2) UCL					8.675
963												
964	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
965	MLE yields a negative mean					Mean in Log Scale					-0.422	
966						SD in Log Scale					2.173	
967						Mean in Original Scale					4.977	
968						SD in Original Scale					10.75	
969						95% Percentile Bootstrap UCL					7.01	
970						95% BCA Bootstrap UCL					7.621	
971												
972	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
973	k star (bias corrected)					0.406	Data Follow Appr. Gamma Distribution at 5% Significance Level					
974	Theta Star					17.1						
975	nu star					50.28						
976												
977	A-D Test Statistic					1.377	Nonparametric Statistics					
978	5% A-D Critical Value					0.836	Kaplan-Meier (KM) Method					
979	K-S Test Statistic					0.836	Mean					4.974
980	5% K-S Critical Value					0.121	SD					10.69
981	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean					1.156	
982						95% KM (t) UCL					6.895	
983	Assuming Gamma Distribution					95% KM (z) UCL					6.875	
984	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					6.891	
985	Minimum					1E-09	95% KM (bootstrap t) UCL					7.781
986	Maximum					73	95% KM (BCA) UCL					6.91
987	Mean					5.227	95% KM (Percentile Bootstrap) UCL					6.922
988	Median					0.83	95% KM (Chebyshev) UCL					10.01
989	SD					10.68	97.5% KM (Chebyshev) UCL					12.19
990	k star					0.171	99% KM (Chebyshev) UCL					16.47
991	Theta star					30.5						
992	Nu star					29.82	Potential UCLs to Use					
993	AppChi2					18.35	95% KM (Chebyshev) UCL					10.01
994	95% Gamma Approximate UCL					8.494						
995	95% Adjusted Gamma UCL					8.565						
996	Note: DL/2 is not a recommended method.											
997												
998												
999	Dieldrin											
1000												
1001	General Statistics											
1002	Number of Valid Data					80	Number of Detected Data					19
1003	Number of Distinct Detected Data					18	Number of Non-Detect Data					61
1004						Percent Non-Detects					76.25%	
1005												
1006	Raw Statistics					Log-transformed Statistics						
1007	Minimum Detected					0.0028	Minimum Detected					-5.878

	A	B	C	D	E	F	G	H	I	J	K	L	
1008				Maximum Detected		0.12				Maximum Detected		-2.12	
1009				Mean of Detected		0.0262				Mean of Detected		-4.058	
1010				SD of Detected		0.0279				SD of Detected		0.935	
1011				Minimum Non-Detect		0.0035				Minimum Non-Detect		-5.655	
1012				Maximum Non-Detect		0.026				Maximum Non-Detect		-3.65	
1013													
1014	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		74
1015	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		6
1016	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		92.50%
1017													
1018	UCL Statistics												
1019	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1020				Shapiro Wilk Test Statistic		0.725				Shapiro Wilk Test Statistic		0.988	
1021				5% Shapiro Wilk Critical Value		0.901				5% Shapiro Wilk Critical Value		0.901	
1022	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1023													
1024	Assuming Normal Distribution						Assuming Lognormal Distribution						
1025				DL/2 Substitution Method						DL/2 Substitution Method			
1026				Mean		0.01				Mean		-5.273	
1027				SD		0.0166				SD		1.075	
1028				95% DL/2 (t) UCL		0.0131				95% H-Stat (DL/2) UCL		0.0105	
1029													
1030				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
1031	MLE method failed to converge properly										Mean in Log Scale		-5.783
1032											SD in Log Scale		1.253
1033											Mean in Original Scale		0.00801
1034											SD in Original Scale		0.0169
1035											95% Percentile Bootstrap UCL		0.0114
1036											95% BCA Bootstrap UCL		0.0124
1037													
1038	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1039				k star (bias corrected)		1.168	Data appear Gamma Distributed at 5% Significance Level						
1040				Theta Star		0.0224							
1041				nu star		44.37							
1042													
1043				A-D Test Statistic		0.398	Nonparametric Statistics						
1044				5% A-D Critical Value		0.761	Kaplan-Meier (KM) Method						
1045				K-S Test Statistic		0.761				Mean		0.00878	
1046				5% K-S Critical Value		0.203				SD		0.0166	
1047	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		0.00192
1048											95% KM (t) UCL		0.012
1049	Assuming Gamma Distribution										95% KM (z) UCL		0.0119
1050	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		0.0114
1051				Minimum		0.0028				95% KM (bootstrap t) UCL		0.0136	
1052				Maximum		0.12				95% KM (BCA) UCL		0.0149	
1053				Mean		0.0264				95% KM (Percentile Bootstrap) UCL		0.0136	
1054				Median		0.0263				95% KM (Chebyshev) UCL		0.0172	
1055				SD		0.0133				97.5% KM (Chebyshev) UCL		0.0208	
1056				k star		5.028				99% KM (Chebyshev) UCL		0.0279	
1057				Theta star		0.00524							
1058				Nu star		804.4	Potential UCLs to Use						
1059				AppChi2		739.6				95% KM (t) UCL		0.012	
1060				95% Gamma Approximate UCL		0.0287							

	A	B	C	D	E	F	G	H	I	J	K	L	
1061	95% Adjusted Gamma UCL					0.0287							
1062	Note: DL/2 is not a recommended method.												
1063													
1064													
1065	Endosulfan II												
1066													
1067	General Statistics												
1068	Number of Valid Data					85	Number of Detected Data					14	
1069	Number of Distinct Detected Data					14	Number of Non-Detect Data					71	
1070							Percent Non-Detects					83.53%	
1071													
1072	Raw Statistics						Log-transformed Statistics						
1073	Minimum Detected					0.0023	Minimum Detected					-6.075	
1074	Maximum Detected					0.67	Maximum Detected					-0.4	
1075	Mean of Detected					0.107	Mean of Detected					-3.278	
1076	SD of Detected					0.173	SD of Detected					1.654	
1077	Minimum Non-Detect					0.0035	Minimum Non-Detect					-5.655	
1078	Maximum Non-Detect					0.026	Maximum Non-Detect					-3.65	
1079													
1080	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					77	
1081	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					8	
1082	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					90.59%	
1083													
1084	UCL Statistics												
1085	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1086	Shapiro Wilk Test Statistic					0.6	Shapiro Wilk Test Statistic					0.956	
1087	5% Shapiro Wilk Critical Value					0.874	5% Shapiro Wilk Critical Value					0.874	
1088	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1089													
1090	Assuming Normal Distribution						Assuming Lognormal Distribution						
1091	DL/2 Substitution Method						DL/2 Substitution Method						
1092	Mean					0.0207	Mean					-5.434	
1093	SD					0.0782	SD					1.299	
1094	95% DL/2 (t) UCL					0.0348	95% H-Stat (DL/2) UCL					0.0111	
1095													
1096	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
1097	MLE yields a negative mean						Mean in Log Scale					-5.892	
1098							SD in Log Scale					1.633	
1099							Mean in Original Scale					0.0198	
1100							SD in Original Scale					0.0784	
1101							95% Percentile Bootstrap UCL					0.0348	
1102							95% BCA Bootstrap UCL					0.0438	
1103													
1104	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1105	k star (bias corrected)					0.515	Data appear Gamma Distributed at 5% Significance Level						
1106	Theta Star					0.207							
1107	nu star					14.42							
1108													
1109	A-D Test Statistic					0.366	Nonparametric Statistics						
1110	5% A-D Critical Value					0.785	Kaplan-Meier (KM) Method						
1111	K-S Test Statistic					0.785	Mean					0.0197	
1112	5% K-S Critical Value					0.24	SD					0.0779	
1113	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.00877	

	A	B	C	D	E	F	G	H	I	J	K	L
1114							95% KM (t) UCL					0.0343
1115	Assuming Gamma Distribution						95% KM (z) UCL					0.0341
1116	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0339
1117					Minimum	1E-09	95% KM (bootstrap t) UCL					0.0541
1118					Maximum	0.67	95% KM (BCA) UCL					0.044
1119					Mean	0.11	95% KM (Percentile Bootstrap) UCL					0.0376
1120					Median	0.0886	95% KM (Chebyshev) UCL					0.0579
1121					SD	0.109	97.5% KM (Chebyshev) UCL					0.0745
1122					k star	0.338	99% KM (Chebyshev) UCL					0.107
1123					Theta star	0.324						
1124					Nu star	57.45	Potential UCLs to Use					
1125					AppChi2	41.03	95% KM (t) UCL					0.0343
1126	95% Gamma Approximate UCL					0.153						
1127	95% Adjusted Gamma UCL					0.154						
1128	Note: DL/2 is not a recommended method.											
1129												
1130												
1131	Endosulfan sulfate											
1132												
1133	General Statistics											
1134	Number of Valid Data					81	Number of Detected Data					7
1135	Number of Distinct Detected Data					7	Number of Non-Detect Data					74
1136							Percent Non-Detects					91.36%
1137												
1138	Raw Statistics						Log-transformed Statistics					
1139					Minimum Detected	0.0018					Minimum Detected	-6.32
1140					Maximum Detected	0.057					Maximum Detected	-2.865
1141					Mean of Detected	0.0203					Mean of Detected	-4.422
1142					SD of Detected	0.0196					SD of Detected	1.226
1143					Minimum Non-Detect	0.0035					Minimum Non-Detect	-5.655
1144					Maximum Non-Detect	0.026					Maximum Non-Detect	-3.65
1145												
1146	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					78
1147	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					3
1148	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					96.30%
1149												
1150	Warning: There are only 7 Detected Values in this data											
1151	Note: It should be noted that even though bootstrap may be performed on this data set											
1152	the resulting calculations may not be reliable enough to draw conclusions											
1153												
1154	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1155												
1156												
1157	UCL Statistics											
1158	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1159					Shapiro Wilk Test Statistic	0.876					Shapiro Wilk Test Statistic	0.946
1160					5% Shapiro Wilk Critical Value	0.803					5% Shapiro Wilk Critical Value	0.803
1161	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1162												
1163	Assuming Normal Distribution						Assuming Lognormal Distribution					
1164					DL/2 Substitution Method						DL/2 Substitution Method	
1165					Mean	0.00605					Mean	-5.582
1166					SD	0.00804					SD	0.878

	A	B	C	D	E	F	G	H	I	J	K	L
1167	95% DL/2 (t) UCL				0.00754	95% H-Stat (DL/2) UCL						0.00621
1168												
1169	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1170	Mean				0.0462	Mean in Log Scale						-6.526
1171	SD				0.0134	SD in Log Scale						1.027
1172	95% MLE (t) UCL				0.0487	Mean in Original Scale						0.00318
1173	95% MLE (Tiku) UCL				0.0587	SD in Original Scale						0.00762
1174							95% Percentile Bootstrap UCL				0.00468	
1175							95% BCA Bootstrap UCL				0.00539	
1176												
1177	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1178	k star (bias corrected)				0.716	Data appear Normal at 5% Significance Level						
1179	Theta Star				0.0284							
1180	nu star				10.03							
1181												
1182	A-D Test Statistic				0.269	Nonparametric Statistics						
1183	5% A-D Critical Value				0.726	Kaplan-Meier (KM) Method						
1184	K-S Test Statistic				0.726	Mean						0.0035
1185	5% K-S Critical Value				0.319	SD						0.00749
1186	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				0.0009085	
1187							95% KM (t) UCL				0.00501	
1188	Assuming Gamma Distribution						95% KM (z) UCL				0.00499	
1189	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.00559	
1190	Minimum				0.0004911	95% KM (bootstrap t) UCL				0.00555		
1191	Maximum				0.057	95% KM (BCA) UCL				0.0172		
1192	Mean				0.0213	95% KM (Percentile Bootstrap) UCL				0.00828		
1193	Median				0.0203	95% KM (Chebyshev) UCL				0.00746		
1194	SD				0.0131	97.5% KM (Chebyshev) UCL				0.00917		
1195	k star				1.843	99% KM (Chebyshev) UCL				0.0125		
1196	Theta star				0.0115							
1197	Nu star				298.5	Potential UCLs to Use						
1198	AppChi2				259.5	95% KM (t) UCL				0.00501		
1199	95% Gamma Approximate UCL				0.0244	95% KM (Percentile Bootstrap) UCL				0.00828		
1200	95% Adjusted Gamma UCL				0.0245							
1201	Note: DL/2 is not a recommended method.											
1202												
1203												
1204	Endrin aldehyde											
1205												
1206	General Statistics											
1207	Number of Valid Data				82	Number of Detected Data				8		
1208	Number of Distinct Detected Data				7	Number of Non-Detect Data				74		
1209							Percent Non-Detects				90.24%	
1210												
1211	Raw Statistics						Log-transformed Statistics					
1212	Minimum Detected				0.0034	Minimum Detected				-5.684		
1213	Maximum Detected				0.096	Maximum Detected				-2.343		
1214	Mean of Detected				0.0293	Mean of Detected				-3.995		
1215	SD of Detected				0.0311	SD of Detected				1.048		
1216	Minimum Non-Detect				0.0035	Minimum Non-Detect				-5.655		
1217	Maximum Non-Detect				0.026	Maximum Non-Detect				-3.65		
1218												
1219	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				79	

	A	B	C	D	E	F	G	H	I	J	K	L
1220	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					3
1221	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					96.34%
1222												
1223	Warning: There are only 8 Detected Values in this data											
1224	Note: It should be noted that even though bootstrap may be performed on this data set											
1225	the resulting calculations may not be reliable enough to draw conclusions											
1226												
1227	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
1228												
1229												
1230	UCL Statistics											
1231	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1232	Shapiro Wilk Test Statistic			0.784			Shapiro Wilk Test Statistic			0.957		
1233	5% Shapiro Wilk Critical Value			0.818			5% Shapiro Wilk Critical Value			0.818		
1234	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1235												
1236	Assuming Normal Distribution						Assuming Lognormal Distribution					
1237	DL/2 Substitution Method						DL/2 Substitution Method					
1238	Mean			0.00703			Mean			-5.55		
1239	SD			0.0124			SD			0.943		
1240	95% DL/2 (t) UCL			0.00931			95% H-Stat (DL/2) UCL			0.00713		
1241												
1242	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1243	MLE yields a negative mean						Mean in Log Scale			-5.914		
1244							SD in Log Scale			0.977		
1245							Mean in Original Scale			0.00537		
1246							SD in Original Scale			0.0122		
1247							95% Percentile Bootstrap UCL			0.00759		
1248							95% BCA Bootstrap UCL			0.00914		
1249												
1250	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1251	k star (bias corrected)			0.843			Data appear Gamma Distributed at 5% Significance Level					
1252	Theta Star			0.0347								
1253	nu star			13.49								
1254												
1255	A-D Test Statistic			0.401			Nonparametric Statistics					
1256	5% A-D Critical Value			0.732			Kaplan-Meier (KM) Method					
1257	K-S Test Statistic			0.732			Mean			0.00607		
1258	5% K-S Critical Value			0.3			SD			0.0119		
1259	Data appear Gamma Distributed at 5% Significance Level						SE of Mean			0.00142		
1260							95% KM (t) UCL			0.00843		
1261	Assuming Gamma Distribution						95% KM (z) UCL			0.0084		
1262	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL			0.0108		
1263	Minimum			1E-09			95% KM (bootstrap t) UCL			0.00995		
1264	Maximum			0.096			95% KM (BCA) UCL			0.0159		
1265	Mean			0.0241			95% KM (Percentile Bootstrap) UCL			0.0147		
1266	Median			0.0243			95% KM (Chebyshev) UCL			0.0122		
1267	SD			0.0177			97.5% KM (Chebyshev) UCL			0.0149		
1268	k star			0.277			99% KM (Chebyshev) UCL			0.0202		
1269	Theta star			0.087								
1270	Nu star			45.36			Potential UCLs to Use					
1271	AppChi2			30.91			95% KM (t) UCL			0.00843		
1272	95% Gamma Approximate UCL			0.0353								

	A	B	C	D	E	F	G	H	I	J	K	L	
1273	95% Adjusted Gamma UCL					0.0356							
1274	Note: DL/2 is not a recommended method.												
1275													
1276													
1277	Endrin ketone												
1278													
1279	General Statistics												
1280	Number of Valid Data					86	Number of Detected Data					14	
1281	Number of Distinct Detected Data					13	Number of Non-Detect Data					72	
1282							Percent Non-Detects					83.72%	
1283													
1284	Raw Statistics						Log-transformed Statistics						
1285	Minimum Detected					0.00031	Minimum Detected					-8.079	
1286	Maximum Detected					0.12	Maximum Detected					-2.12	
1287	Mean of Detected					0.0506	Mean of Detected					-3.455	
1288	SD of Detected					0.034	SD of Detected					1.482	
1289	Minimum Non-Detect					0.0035	Minimum Non-Detect					-5.655	
1290	Maximum Non-Detect					0.026	Maximum Non-Detect					-3.65	
1291													
1292	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					75	
1293	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					11	
1294	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					87.21%	
1295													
1296	UCL Statistics												
1297	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1298	Shapiro Wilk Test Statistic					0.967	Shapiro Wilk Test Statistic					0.712	
1299	5% Shapiro Wilk Critical Value					0.874	5% Shapiro Wilk Critical Value					0.874	
1300	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1301													
1302	Assuming Normal Distribution						Assuming Lognormal Distribution						
1303	DL/2 Substitution Method						DL/2 Substitution Method						
1304	Mean					0.0122	Mean					-5.336	
1305	SD					0.022	SD					1.238	
1306	95% DL/2 (t) UCL					0.0161	95% H-Stat (DL/2) UCL					0.0107	
1307													
1308	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
1309	MLE yields a negative mean						Mean in Log Scale					-6.736	
1310							SD in Log Scale					1.933	
1311							Mean in Original Scale					0.00924	
1312							SD in Original Scale					0.0227	
1313							95% Percentile Bootstrap UCL					0.0136	
1314							95% BCA Bootstrap UCL					0.0149	
1315													
1316	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1317	k star (bias corrected)					0.991	Data appear Normal at 5% Significance Level						
1318	Theta Star					0.051							
1319	nu star					27.76							
1320													
1321	A-D Test Statistic					0.57	Nonparametric Statistics						
1322	5% A-D Critical Value					0.756	Kaplan-Meier (KM) Method						
1323	K-S Test Statistic					0.756	Mean					0.00861	
1324	5% K-S Critical Value					0.234	SD					0.0228	
1325	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.00255	

	A	B	C	D	E	F	G	H	I	J	K	L
1326							95% KM (t) UCL					0.0129
1327	Assuming Gamma Distribution						95% KM (z) UCL					0.0128
1328	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0167
1329	Minimum				0.00031		95% KM (bootstrap t) UCL					0.0136
1330	Maximum				0.12		95% KM (BCA) UCL					0.0318
1331	Mean				0.0505		95% KM (Percentile Bootstrap) UCL					0.0252
1332	Median				0.0505		95% KM (Chebyshev) UCL					0.0197
1333	SD				0.0133		97.5% KM (Chebyshev) UCL					0.0246
1334	k star				6.443		99% KM (Chebyshev) UCL					0.034
1335	Theta star				0.00783							
1336	Nu star				1108		Potential UCLs to Use					
1337	AppChi2				1032		95% KM (t) UCL					0.0129
1338	95% Gamma Approximate UCL				0.0542		95% KM (Percentile Bootstrap) UCL					0.0252
1339	95% Adjusted Gamma UCL				0.0543							
1340	Note: DL/2 is not a recommended method.											
1341												
1342												
1343	gamma-Chlordane											
1344												
1345	General Statistics											
1346	Number of Valid Data				80		Number of Detected Data				10	
1347	Number of Distinct Detected Data				10		Number of Non-Detect Data				70	
1348							Percent Non-Detects				87.50%	
1349												
1350	Raw Statistics						Log-transformed Statistics					
1351	Minimum Detected				0.0011		Minimum Detected				-6.812	
1352	Maximum Detected				0.038		Maximum Detected				-3.27	
1353	Mean of Detected				0.0167		Mean of Detected				-4.802	
1354	SD of Detected				0.0152		SD of Detected				1.475	
1355	Minimum Non-Detect				0.0018		Minimum Non-Detect				-6.32	
1356	Maximum Non-Detect				0.013		Maximum Non-Detect				-4.343	
1357												
1358	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				75	
1359	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				5	
1360	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				93.75%	
1361												
1362	UCL Statistics											
1363	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1364	Shapiro Wilk Test Statistic				0.838		Shapiro Wilk Test Statistic				0.838	
1365	5% Shapiro Wilk Critical Value				0.842		5% Shapiro Wilk Critical Value				0.842	
1366	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1367												
1368	Assuming Normal Distribution						Assuming Lognormal Distribution					
1369	DL/2 Substitution Method						DL/2 Substitution Method					
1370	Mean				0.00425		Mean				-6.157	
1371	SD				0.0073		SD				1.023	
1372	95% DL/2 (t) UCL				0.00561		95% H-Stat (DL/2) UCL				0.00424	
1373												
1374	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1375	MLE yields a negative mean						Mean in Log Scale				-6.647	
1376							SD in Log Scale				1.196	
1377							Mean in Original Scale				0.00334	
1378							SD in Original Scale				0.00732	

	A	B	C	D	E	F	G	H	I	J	K	L	
1379										95% Percentile Bootstrap UCL		0.00471	
1380										95% BCA Bootstrap UCL		0.00504	
1381													
1382	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1383					k star (bias corrected)	0.647	Data appear Gamma Distributed at 5% Significance Level						
1384					Theta Star	0.0259							
1385					nu star	12.94							
1386													
1387					A-D Test Statistic	0.698	Nonparametric Statistics						
1388					5% A-D Critical Value	0.754	Kaplan-Meier (KM) Method						
1389					K-S Test Statistic	0.754	Mean						
1390					5% K-S Critical Value	0.275	SD						
1391	Data appear Gamma Distributed at 5% Significance Level							SE of Mean					
1392							95% KM (t) UCL						
1393	Assuming Gamma Distribution							95% KM (z) UCL					
1394	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					
1395					Minimum	0.0011	95% KM (bootstrap t) UCL						
1396					Maximum	0.038	95% KM (BCA) UCL						
1397					Mean	0.0174	95% KM (Percentile Bootstrap) UCL						
1398					Median	0.0172	95% KM (Chebyshev) UCL						
1399					SD	0.00556	97.5% KM (Chebyshev) UCL						
1400					k star	5.164	99% KM (Chebyshev) UCL						
1401					Theta star	0.00338							
1402					Nu star	826.3	Potential UCLs to Use						
1403					AppChi2	760.6	95% KM (t) UCL						
1404					95% Gamma Approximate UCL	0.0189							
1405					95% Adjusted Gamma UCL	0.019							
1406	Note: DL/2 is not a recommended method.												
1407													
1408													
1409	Aroclor-1254												
1410													
1411	General Statistics												
1412					Number of Valid Data	86				Number of Detected Data		14	
1413					Number of Distinct Detected Data	14				Number of Non-Detect Data		72	
1414										Percent Non-Detects		83.72%	
1415													
1416	Raw Statistics						Log-transformed Statistics						
1417					Minimum Detected	0.051				Minimum Detected		-2.976	
1418					Maximum Detected	4.8				Maximum Detected		1.569	
1419					Mean of Detected	1.197				Mean of Detected		-0.402	
1420					SD of Detected	1.336				SD of Detected		1.229	
1421					Minimum Non-Detect	0.033				Minimum Non-Detect		-3.411	
1422					Maximum Non-Detect	0.089				Maximum Non-Detect		-2.419	
1423													
1424	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect					
1425	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected					
1426	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage					
1427													
1428	UCL Statistics												
1429	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1430					Shapiro Wilk Test Statistic	0.766				Shapiro Wilk Test Statistic		0.963	
1431					5% Shapiro Wilk Critical Value	0.874				5% Shapiro Wilk Critical Value		0.874	

A	B	C	D	E	F	G	H	I	J	K	L	
1432	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1433												
1434	Assuming Normal Distribution					Assuming Lognormal Distribution						
1435	DL/2 Substitution Method					DL/2 Substitution Method						
1436	Mean					0.213	Mean					-3.281
1437	SD					0.681	SD					1.376
1438	95% DL/2 (t) UCL					0.335	95% H-Stat (DL/2) UCL					0.0982
1439												
1440	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1441	MLE yields a negative mean					Mean in Log Scale						-4.716
1442						SD in Log Scale						2.488
1443						Mean in Original Scale						0.204
1444						SD in Original Scale						0.683
1445						95% Percentile Bootstrap UCL						0.33
1446						95% BCA Bootstrap UCL						0.385
1447												
1448	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1449	k star (bias corrected)					0.827	Data appear Gamma Distributed at 5% Significance Level					
1450	Theta Star					1.448						
1451	nu star					23.16						
1452												
1453	A-D Test Statistic					0.309	Nonparametric Statistics					
1454	5% A-D Critical Value					0.76	Kaplan-Meier (KM) Method					
1455	K-S Test Statistic					0.76	Mean					0.238
1456	5% K-S Critical Value					0.235	SD					0.67
1457	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						0.075
1458						95% KM (t) UCL						0.362
1459	Assuming Gamma Distribution					95% KM (z) UCL						0.361
1460	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						0.339
1461	Minimum					0.051	95% KM (bootstrap t) UCL					0.448
1462	Maximum					4.8	95% KM (BCA) UCL					0.696
1463	Mean					1.238	95% KM (Percentile Bootstrap) UCL					0.471
1464	Median					1.234	95% KM (Chebyshev) UCL					0.564
1465	SD					0.564	97.5% KM (Chebyshev) UCL					0.706
1466	k star					4.569	99% KM (Chebyshev) UCL					0.983
1467	Theta star					0.271						
1468	Nu star					785.8	Potential UCLs to Use					
1469	AppChi2					721.8	95% KM (t) UCL					0.362
1470	95% Gamma Approximate UCL					1.348						
1471	95% Adjusted Gamma UCL					1.35						
1472	Note: DL/2 is not a recommended method.											
1473												
1474												
1475	Aroclor-1260											
1476												
1477	General Statistics											
1478	Number of Valid Data					87	Number of Detected Data					48
1479	Number of Distinct Detected Data					44	Number of Non-Detect Data					39
1480						Percent Non-Detects						44.83%
1481												
1482	Raw Statistics					Log-transformed Statistics						
1483	Minimum Detected					0.017	Minimum Detected					-4.075
1484	Maximum Detected					43	Maximum Detected					3.761

	A	B	C	D	E	F	G	H	I	J	K	L
1485	Mean of Detected				2.165	Mean of Detected				-0.765		
1486	SD of Detected				6.477	SD of Detected				1.679		
1487	Minimum Non-Detect				0.035	Minimum Non-Detect				-3.352		
1488	Maximum Non-Detect				0.089	Maximum Non-Detect				-2.419		
1489												
1490	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					47	
1491	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					40	
1492	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					54.02%	
1493												
1494	UCL Statistics											
1495	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1496	Shapiro Wilk Test Statistic				0.345	Shapiro Wilk Test Statistic				0.98		
1497	5% Shapiro Wilk Critical Value				0.947	5% Shapiro Wilk Critical Value				0.947		
1498	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1499												
1500	Assuming Normal Distribution					Assuming Lognormal Distribution						
1501	DL/2 Substitution Method					DL/2 Substitution Method						
1502	Mean				1.205	Mean				-2.134		
1503	SD				4.906	SD				1.974		
1504	95% DL/2 (t) UCL				2.079	95% H-Stat (DL/2) UCL				0.944		
1505												
1506	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
1507	MLE yields a negative mean					Mean in Log Scale				-2.413		
1508						SD in Log Scale				2.296		
1509						Mean in Original Scale				1.202		
1510						SD in Original Scale				4.907		
1511						95% Percentile Bootstrap UCL				2.171		
1512						95% BCA Bootstrap UCL				2.731		
1513												
1514	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1515	k star (bias corrected)				0.411	Data appear Lognormal at 5% Significance Level						
1516	Theta Star				5.264							
1517	nu star				39.49							
1518												
1519	A-D Test Statistic				2.711	Nonparametric Statistics						
1520	5% A-D Critical Value				0.832	Kaplan-Meier (KM) Method						
1521	K-S Test Statistic				0.832	Mean				1.204		
1522	5% K-S Critical Value				0.137	SD				4.878		
1523	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.529		
1524						95% KM (t) UCL				2.083		
1525	Assuming Gamma Distribution					95% KM (z) UCL				2.074		
1526	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				2.079		
1527	Minimum				1E-09	95% KM (bootstrap t) UCL				3.922		
1528	Maximum				43	95% KM (BCA) UCL				2.241		
1529	Mean				1.737	95% KM (Percentile Bootstrap) UCL				2.193		
1530	Median				0.633	95% KM (Chebyshev) UCL				3.508		
1531	SD				4.898	97.5% KM (Chebyshev) UCL				4.505		
1532	k star				0.196	99% KM (Chebyshev) UCL				6.463		
1533	Theta star				8.881							
1534	Nu star				34.04	Potential UCLs to Use						
1535	AppChi2				21.7	97.5% KM (Chebyshev) UCL				4.505		
1536	95% Gamma Approximate UCL				2.726							
1537	95% Adjusted Gamma UCL				2.747							

	A	B	C	D	E	F	G	H	I	J	K	L		
1538	Note: DL/2 is not a recommended method.													
1539														
1540														
1541	Aluminum													
1542														
1543	General Statistics													
1544	Number of Valid Observations					89		Number of Distinct Observations					83	
1545														
1546	Raw Statistics						Log-transformed Statistics							
1547	Minimum			75			Minimum of Log Data			4.317				
1548	Maximum			43900			Maximum of Log Data			10.69				
1549	Mean			8237			Mean of log Data			8.895				
1550	Median			7860			SD of log Data			0.61				
1551	SD			4836										
1552	Coefficient of Variation			0.587										
1553	Skewness			5.261										
1554														
1555	Relevant UCL Statistics													
1556	Normal Distribution Test						Lognormal Distribution Test							
1557	Lilliefors Test Statistic			0.245			Lilliefors Test Statistic			0.224				
1558	Lilliefors Critical Value			0.0939			Lilliefors Critical Value			0.0939				
1559	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1560														
1561	Assuming Normal Distribution						Assuming Lognormal Distribution							
1562	95% Student's-t UCL			9090			95% H-UCL			9958				
1563	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL			11436				
1564	95% Adjusted-CLT UCL			9386			97.5% Chebyshev (MVUE) UCL			12591				
1565	95% Modified-t UCL			9137			99% Chebyshev (MVUE) UCL			14860				
1566														
1567	Gamma Distribution Test						Data Distribution							
1568	k star (bias corrected)			4.139			Data do not follow a Discernable Distribution (0.05)							
1569	Theta Star			1990										
1570	MLE of Mean			8237										
1571	MLE of Standard Deviation			4049										
1572	nu star			736.7										
1573	Approximate Chi Square Value (.05)			674.7			Nonparametric Statistics							
1574	Adjusted Level of Significance			0.0473			95% CLT UCL			9081				
1575	Adjusted Chi Square Value			673.8			95% Jackknife UCL			9090				
1576							95% Standard Bootstrap UCL			9078				
1577	Anderson-Darling Test Statistic			6.458			95% Bootstrap-t UCL			9863				
1578	Anderson-Darling 5% Critical Value			0.755			95% Hall's Bootstrap UCL			13498				
1579	Kolmogorov-Smirnov Test Statistic			0.177			95% Percentile Bootstrap UCL			9167				
1580	Kolmogorov-Smirnov 5% Critical Value			0.095			95% BCA Bootstrap UCL			9518				
1581	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL			10472				
1582							97.5% Chebyshev(Mean, Sd) UCL			11439				
1583	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL			13338				
1584	95% Approximate Gamma UCL			8994										
1585	95% Adjusted Gamma UCL			9007										
1586														
1587	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL			10472				
1588														
1589														
1590	Antimony													

	A	B	C	D	E	F	G	H	I	J	K	L		
1591														
1592	General Statistics													
1593	Number of Valid Data					89		Number of Detected Data					59	
1594	Number of Distinct Detected Data					48		Number of Non-Detect Data					30	
1595								Percent Non-Detects					33.71%	
1596														
1597	Raw Statistics						Log-transformed Statistics							
1598	Minimum Detected					0.3		Minimum Detected					-1.204	
1599	Maximum Detected					115		Maximum Detected					4.745	
1600	Mean of Detected					12.23		Mean of Detected					1.183	
1601	SD of Detected					26.8		SD of Detected					1.5	
1602	Minimum Non-Detect					0.63		Minimum Non-Detect					-0.462	
1603	Maximum Non-Detect					9.9		Maximum Non-Detect					2.293	
1604														
1605	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						79	
1606	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						10	
1607	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						88.76%	
1608														
1609	UCL Statistics													
1610	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1611	Lilliefors Test Statistic					0.386		Lilliefors Test Statistic					0.124	
1612	5% Lilliefors Critical Value					0.115		5% Lilliefors Critical Value					0.115	
1613	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1614														
1615	Assuming Normal Distribution						Assuming Lognormal Distribution							
1616	DL/2 Substitution Method							DL/2 Substitution Method						
1617	Mean					9.227		Mean					1.123	
1618	SD					22.18		SD					1.311	
1619	95% DL/2 (t) UCL					13.13		95% H-Stat (DL/2) UCL					9.738	
1620														
1621	Maximum Likelihood Estimate(MLE) Method					N/A		Log ROS Method						
1622	MLE yields a negative mean						Mean in Log Scale					0.923		
1623								SD in Log Scale					1.336	
1624								Mean in Original Scale					8.739	
1625								SD in Original Scale					22.32	
1626								95% Percentile Bootstrap UCL					13.05	
1627								95% BCA Bootstrap UCL					13.84	
1628														
1629	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1630	k star (bias corrected)					0.47		Data do not follow a Discernable Distribution (0.05)						
1631	Theta Star					26.01								
1632	nu star					55.47								
1633														
1634	A-D Test Statistic					4.786		Nonparametric Statistics						
1635	5% A-D Critical Value					0.82		Kaplan-Meier (KM) Method						
1636	K-S Test Statistic					0.82		Mean					8.825	
1637	5% K-S Critical Value					0.123		SD					22.18	
1638	Data not Gamma Distributed at 5% Significance Level						SE of Mean					2.375		
1639								95% KM (t) UCL					12.77	
1640	Assuming Gamma Distribution						95% KM (z) UCL					12.73		
1641	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL					12.76	
1642	Minimum					0.3		95% KM (bootstrap t) UCL					15.39	
1643	Maximum					115		95% KM (BCA) UCL					12.92	

	A	B	C	D	E	F	G	H	I	J	K	L
1644					Mean	12.32				95% KM (Percentile Bootstrap) UCL		12.74
1645					Median	5.6				95% KM (Chebyshev) UCL		19.18
1646					SD	21.76				97.5% KM (Chebyshev) UCL		23.66
1647					k star	0.675				99% KM (Chebyshev) UCL		32.46
1648					Theta star	18.25						
1649					Nu star	120.2				Potential UCLs to Use		
1650					AppChi2	95.87				95% KM (Chebyshev) UCL		19.18
1651					95% Gamma Approximate UCL	15.44						
1652					95% Adjusted Gamma UCL	15.5						
1653	Note: DL/2 is not a recommended method.											
1654												
1655												
1656	Arsenic											
1657												
1658	General Statistics											
1659					Number of Valid Data	89				Number of Detected Data		88
1660					Number of Distinct Detected Data	61				Number of Non-Detect Data		1
1661										Percent Non-Detects		1.12%
1662												
1663	Raw Statistics						Log-transformed Statistics					
1664					Minimum Detected	2.3				Minimum Detected		0.833
1665					Maximum Detected	26.3				Maximum Detected		3.27
1666					Mean of Detected	8.415				Mean of Detected		2.024
1667					SD of Detected	4.131				SD of Detected		0.463
1668					Minimum Non-Detect	0.48				Minimum Non-Detect		-0.734
1669					Maximum Non-Detect	0.48				Maximum Non-Detect		-0.734
1670												
1671												
1672	UCL Statistics											
1673	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1674					Lilliefors Test Statistic	0.146				Lilliefors Test Statistic		0.0617
1675					5% Lilliefors Critical Value	0.0944				5% Lilliefors Critical Value		0.0944
1676	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1677												
1678	Assuming Normal Distribution						Assuming Lognormal Distribution					
1679					DL/2 Substitution Method					DL/2 Substitution Method		
1680					Mean	8.323				Mean		1.985
1681					SD	4.198				SD		0.588
1682					95% DL/2 (t) UCL	9.063				95% H-Stat (DL/2) UCL		9.494
1683												
1684					Maximum Likelihood Estimate(MLE) Method					Log ROS Method		
1685					Mean	8.307				Mean in Log Scale		2.01
1686					SD	4.21				SD in Log Scale		0.48
1687					95% MLE (t) UCL	9.049				Mean in Original Scale		8.344
1688					95% MLE (Tiku) UCL	9.043				SD in Original Scale		4.161
1689										95% Percentile Bootstrap UCL		9.124
1690										95% BCA Bootstrap UCL		9.15
1691												
1692	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1693					k star (bias corrected)	4.708				Data appear Gamma Distributed at 5% Significance Level		
1694					Theta Star	1.787						
1695					nu star	828.6						
1696												

A	B	C	D	E	F	G	H	I	J	K	L		
1697	A-D Test Statistic				0.465	Nonparametric Statistics							
1698	5% A-D Critical Value				0.755	Kaplan-Meier (KM) Method							
1699	K-S Test Statistic				0.755	Mean						8.346	
1700	5% K-S Critical Value				0.0956	SD						4.135	
1701	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						0.441	
1702						95% KM (t) UCL						9.079	
1703	Assuming Gamma Distribution					95% KM (z) UCL						9.071	
1704	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						9.073	
1705	Minimum				1E-09	95% KM (bootstrap t) UCL						9.158	
1706	Maximum				26.3	95% KM (BCA) UCL						9.04	
1707	Mean				8.32	95% KM (Percentile Bootstrap) UCL						9.12	
1708	Median				7.6	95% KM (Chebyshev) UCL						10.27	
1709	SD				4.203	97.5% KM (Chebyshev) UCL						11.1	
1710	k star				1.527	99% KM (Chebyshev) UCL						12.73	
1711	Theta star				5.449								
1712	Nu star				271.8	Potential UCLs to Use							
1713	AppChi2				234.6	95% KM (BCA) UCL						9.04	
1714	95% Gamma Approximate UCL				9.639								
1715	95% Adjusted Gamma UCL				9.662								
1716	Note: DL/2 is not a recommended method.												
1717													
1718													
1719	Barium												
1720													
1721	General Statistics												
1722	Number of Valid Data				89	Number of Detected Data				88			
1723	Number of Distinct Detected Data				85	Number of Non-Detect Data				1			
1724						Percent Non-Detects				1.12%			
1725													
1726	Raw Statistics					Log-transformed Statistics							
1727	Minimum Detected				27.7	Minimum Detected				3.321			
1728	Maximum Detected				5130	Maximum Detected				8.543			
1729	Mean of Detected				285.4	Mean of Detected				5.074			
1730	SD of Detected				589.6	SD of Detected				0.914			
1731	Minimum Non-Detect				22.4	Minimum Non-Detect				3.109			
1732	Maximum Non-Detect				22.4	Maximum Non-Detect				3.109			
1733													
1734													
1735	UCL Statistics												
1736	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
1737	Lilliefors Test Statistic				0.331	Lilliefors Test Statistic				0.101			
1738	5% Lilliefors Critical Value				0.0944	5% Lilliefors Critical Value				0.0944			
1739	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
1740													
1741	Assuming Normal Distribution					Assuming Lognormal Distribution							
1742	DL/2 Substitution Method					DL/2 Substitution Method							
1743	Mean				282.3	Mean				5.044			
1744	SD				587	SD				0.951			
1745	95% DL/2 (t) UCL				385.7	95% H-Stat (DL/2) UCL				296.3			
1746													
1747	Maximum Likelihood Estimate(MLE) Method					Log ROS Method							
1748	Mean				278.1	Mean in Log Scale				5.046			
1749	SD				587.9	SD in Log Scale				0.945			

	A	B	C	D	E	F	G	H	I	J	K	L
1750					95% MLE (t) UCL	381.7					Mean in Original Scale	282.3
1751					95% MLE (Tiku) UCL	370.3					SD in Original Scale	586.9
1752											95% Percentile Bootstrap UCL	399.7
1753											95% BCA Bootstrap UCL	452.5
1754												
1755	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1756					k star (bias corrected)	0.969	Data do not follow a Discernable Distribution (0.05)					
1757					Theta Star	294.4						
1758					nu star	170.6						
1759												
1760					A-D Test Statistic	4.917	Nonparametric Statistics					
1761					5% A-D Critical Value	0.783					Kaplan-Meier (KM) Method	
1762					K-S Test Statistic	0.783					Mean	282.5
1763					5% K-S Critical Value	0.0982					SD	583.6
1764	Data not Gamma Distributed at 5% Significance Level										SE of Mean	62.21
1765											95% KM (t) UCL	385.9
1766	Assuming Gamma Distribution										95% KM (z) UCL	384.8
1767					Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	385.9
1768					Minimum	1E-09					95% KM (bootstrap t) UCL	522.3
1769					Maximum	5130					95% KM (BCA) UCL	417.4
1770					Mean	282.2					95% KM (Percentile Bootstrap) UCL	397.1
1771					Median	140					95% KM (Chebyshev) UCL	553.7
1772					SD	587					97.5% KM (Chebyshev) UCL	671
1773					k star	0.687					99% KM (Chebyshev) UCL	901.5
1774					Theta star	410.6						
1775					Nu star	122.3	Potential UCLs to Use					
1776					AppChi2	97.78					95% KM (BCA) UCL	417.4
1777					95% Gamma Approximate UCL	353						
1778					95% Adjusted Gamma UCL	354.3						
1779	Note: DL/2 is not a recommended method.											
1780												
1781												
1782	Cadmium											
1783												
1784	General Statistics											
1785					Number of Valid Data	89					Number of Detected Data	69
1786					Number of Distinct Detected Data	49					Number of Non-Detect Data	20
1787											Percent Non-Detects	22.47%
1788												
1789	Raw Statistics						Log-transformed Statistics					
1790					Minimum Detected	0.21					Minimum Detected	-1.561
1791					Maximum Detected	18.6					Maximum Detected	2.923
1792					Mean of Detected	3.317					Mean of Detected	0.639
1793					SD of Detected	3.913					SD of Detected	1.094
1794					Minimum Non-Detect	0.07					Minimum Non-Detect	-2.659
1795					Maximum Non-Detect	0.72					Maximum Non-Detect	-0.329
1796												
1797	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect	34
1798	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected	55
1799	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage	38.20%
1800												
1801	UCL Statistics											
1802	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

A	B	C	D	E	F	G	H	I	J	K	L
1803	Lilliefors Test Statistic				0.214	Lilliefors Test Statistic				0.0629	
1804	5% Lilliefors Critical Value				0.107	5% Lilliefors Critical Value				0.107	
1805	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1806											
1807	Assuming Normal Distribution					Assuming Lognormal Distribution					
1808	DL/2 Substitution Method					DL/2 Substitution Method					
1809	Mean				2.625	Mean				0.108	
1810	SD				3.675	SD				1.45	
1811	95% DL/2 (t) UCL				3.272	95% H-Stat (DL/2) UCL				3.665	
1812											
1813	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
1814	Mean				1.329	Mean in Log Scale				0.179	
1815	SD				5.033	SD in Log Scale				1.314	
1816	95% MLE (t) UCL				2.216	Mean in Original Scale				2.634	
1817	95% MLE (Tiku) UCL				2.311	SD in Original Scale				3.669	
1818						95% Percentile Bootstrap UCL				3.324	
1819						95% BCA Bootstrap UCL				3.422	
1820											
1821	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1822	k star (bias corrected)				0.993	Data Follow Appr. Gamma Distribution at 5% Significance Level					
1823	Theta Star				3.341						
1824	nu star				137						
1825											
1826	A-D Test Statistic				0.87	Nonparametric Statistics					
1827	5% A-D Critical Value				0.78	Kaplan-Meier (KM) Method					
1828	K-S Test Statistic				0.78	Mean				2.638	
1829	5% K-S Critical Value				0.11	SD				3.646	
1830	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean				0.389	
1831						95% KM (t) UCL				3.285	
1832	Assuming Gamma Distribution					95% KM (z) UCL				3.279	
1833	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				3.28	
1834	Minimum				1E-09	95% KM (bootstrap t) UCL				3.463	
1835	Maximum				18.6	95% KM (BCA) UCL				3.354	
1836	Mean				2.662	95% KM (Percentile Bootstrap) UCL				3.318	
1837	Median				1.4	95% KM (Chebyshev) UCL				4.335	
1838	SD				3.658	97.5% KM (Chebyshev) UCL				5.069	
1839	k star				0.265	99% KM (Chebyshev) UCL				6.512	
1840	Theta star				10.05						
1841	Nu star				47.15	Potential UCLs to Use					
1842	AppChi2				32.39	95% KM (Chebyshev) UCL				4.335	
1843	95% Gamma Approximate UCL				3.874						
1844	95% Adjusted Gamma UCL				3.899						
1845	Note: DL/2 is not a recommended method.										
1846											
1847											
1848	Chromium										
1849											
1850	General Statistics										
1851	Number of Valid Observations				85	Number of Distinct Observations				78	
1852											
1853	Raw Statistics					Log-transformed Statistics					
1854	Minimum				3.6	Minimum of Log Data				1.281	
1855	Maximum				12100	Maximum of Log Data				9.401	

	A	B	C	D	E	F	G	H	I	J	K	L
1856					Mean	242.1					Mean of log Data	3.648
1857					Median	31.6					SD of log Data	1.383
1858					SD	1329						
1859					Coefficient of Variation	5.487						
1860					Skewness	8.698						
1861												
1862	Relevant UCL Statistics											
1863	Normal Distribution Test						Lognormal Distribution Test					
1864					Lilliefors Test Statistic	0.444					Lilliefors Test Statistic	0.108
1865					Lilliefors Critical Value	0.0961					Lilliefors Critical Value	0.0961
1866	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1867												
1868	Assuming Normal Distribution						Assuming Lognormal Distribution					
1869					95% Student's-t UCL	481.8					95% H-UCL	148.6
1870	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					
1871					95% Adjusted-CLT UCL	624.4					97.5% Chebyshev (MVUE) UCL	219.7
1872					95% Modified-t UCL	504.5					99% Chebyshev (MVUE) UCL	292.1
1873												
1874	Gamma Distribution Test						Data Distribution					
1875					k star (bias corrected)	0.358	Data do not follow a Discernable Distribution (0.05)					
1876					Theta Star	676.2						
1877					MLE of Mean	242.1						
1878					MLE of Standard Deviation	404.6						
1879					nu star	60.87						
1880					Approximate Chi Square Value (.05)	43.93	Nonparametric Statistics					
1881					Adjusted Level of Significance	0.0472					95% CLT UCL	479.2
1882					Adjusted Chi Square Value	43.68					95% Jackknife UCL	481.8
1883											95% Standard Bootstrap UCL	474.7
1884					Anderson-Darling Test Statistic	11.83					95% Bootstrap-t UCL	1548
1885					Anderson-Darling 5% Critical Value	0.851					95% Hall's Bootstrap UCL	1347
1886					Kolmogorov-Smirnov Test Statistic	0.273					95% Percentile Bootstrap UCL	515.6
1887					Kolmogorov-Smirnov 5% Critical Value	0.104					95% BCA Bootstrap UCL	661.1
1888	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					
1889							97.5% Chebyshev(Mean, Sd) UCL					
1890	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					
1891					95% Approximate Gamma UCL	335.5						
1892					95% Adjusted Gamma UCL	337.4						
1893												
1894	Potential UCL to Use						Use 97.5% Chebyshev (Mean, Sd) UCL					
1895												
1896												
1897	Cobalt											
1898												
1899	General Statistics											
1900					Number of Valid Data	89					Number of Detected Data	87
1901					Number of Distinct Detected Data	53					Number of Non-Detect Data	2
1902											Percent Non-Detects	2.25%
1903												
1904	Raw Statistics						Log-transformed Statistics					
1905					Minimum Detected	2.9					Minimum Detected	1.065
1906					Maximum Detected	28.5					Maximum Detected	3.35
1907					Mean of Detected	9.476					Mean of Detected	2.185
1908					SD of Detected	3.669					SD of Detected	0.359

	A	B	C	D	E	F	G	H	I	J	K	L		
1909				Minimum Non-Detect		5.6				Minimum Non-Detect		1.723		
1910				Maximum Non-Detect		8				Maximum Non-Detect		2.079		
1911														
1912	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		26	
1913	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		63	
1914	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		29.21%	
1915														
1916	UCL Statistics													
1917	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only							
1918	Lilliefors Test Statistic						0.17	Lilliefors Test Statistic						0.151
1919	5% Lilliefors Critical Value						0.095	5% Lilliefors Critical Value						0.095
1920	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
1921														
1922	Assuming Normal Distribution						Assuming Lognormal Distribution							
1923	DL/2 Substitution Method							DL/2 Substitution Method						
1924	Mean						9.339	Mean						2.163
1925	SD						3.74	SD						0.385
1926	95% DL/2 (t) UCL						9.998	95% H-Stat (DL/2) UCL						9.991
1927														
1928	Maximum Likelihood Estimate(MLE) Method							Log ROS Method						
1929	Mean						9.026	Mean in Log Scale						2.174
1930	SD						4.083	SD in Log Scale						0.363
1931	95% MLE (t) UCL						9.745	Mean in Original Scale						9.385
1932	95% MLE (Tiku) UCL						9.773	SD in Original Scale						3.679
1933								95% Percentile Bootstrap UCL						10.04
1934								95% BCA Bootstrap UCL						10.15
1935														
1936	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1937	k star (bias corrected)						7.749	Data do not follow a Discernable Distribution (0.05)						
1938	Theta Star						1.223							
1939	nu star						1348							
1940														
1941	A-D Test Statistic						2.651	Nonparametric Statistics						
1942	5% A-D Critical Value						0.753	Kaplan-Meier (KM) Method						
1943	K-S Test Statistic						0.753	Mean						9.379
1944	5% K-S Critical Value						0.0959	SD						3.672
1945	Data not Gamma Distributed at 5% Significance Level						SE of Mean						0.392	
1946								95% KM (t) UCL						10.03
1947	Assuming Gamma Distribution						95% KM (z) UCL						10.02	
1948	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						10.03
1949	Minimum						2.9	95% KM (bootstrap t) UCL						10.19
1950	Maximum						28.5	95% KM (BCA) UCL						10.13
1951	Mean						9.375	95% KM (Percentile Bootstrap) UCL						10.03
1952	Median						8.6	95% KM (Chebyshev) UCL						11.09
1953	SD						3.694	97.5% KM (Chebyshev) UCL						11.83
1954	k star						7.395	99% KM (Chebyshev) UCL						13.28
1955	Theta star						1.268							
1956	Nu star						1316	Potential UCLs to Use						
1957	AppChi2						1233	95% KM (BCA) UCL						10.13
1958	95% Gamma Approximate UCL						10.01							
1959	95% Adjusted Gamma UCL						10.02							
1960	Note: DL/2 is not a recommended method.													
1961														

	A	B	C	D	E	F	G	H	I	J	K	L		
1962														
1963	Copper													
1964														
1965	General Statistics													
1966	Number of Valid Observations						68	Number of Distinct Observations						67
1967														
1968	Raw Statistics						Log-transformed Statistics							
1969	Minimum						8.6	Minimum of Log Data						2.152
1970	Maximum						10400	Maximum of Log Data						9.25
1971	Mean						642.3	Mean of log Data						4.895
1972	Median						156	SD of log Data						1.752
1973	SD						1661							
1974	Coefficient of Variation						2.586							
1975	Skewness						4.454							
1976														
1977	Relevant UCL Statistics													
1978	Normal Distribution Test						Lognormal Distribution Test							
1979	Lilliefors Test Statistic						0.354	Lilliefors Test Statistic						0.097
1980	Lilliefors Critical Value						0.107	Lilliefors Critical Value						0.107
1981	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1982														
1983	Assuming Normal Distribution						Assuming Lognormal Distribution							
1984	95% Student's-t UCL						978.3	95% H-UCL						1093
1985	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						1372	
1986	95% Adjusted-CLT UCL						1090	97.5% Chebyshev (MVUE) UCL						1712
1987	95% Modified-t UCL						996.4	99% Chebyshev (MVUE) UCL						2378
1988														
1989	Gamma Distribution Test						Data Distribution							
1990	k star (bias corrected)						0.408	Data appear Lognormal at 5% Significance Level						
1991	Theta Star						1575							
1992	MLE of Mean						642.3							
1993	MLE of Standard Deviation						1006							
1994	nu star						55.48							
1995	Approximate Chi Square Value (.05)						39.36	Nonparametric Statistics						
1996	Adjusted Level of Significance						0.0465	95% CLT UCL						973.7
1997	Adjusted Chi Square Value						39.07	95% Jackknife UCL						978.3
1998								95% Standard Bootstrap UCL						962.1
1999	Anderson-Darling Test Statistic						3.549	95% Bootstrap-t UCL						1327
2000	Anderson-Darling 5% Critical Value						0.837	95% Hall's Bootstrap UCL						1330
2001	Kolmogorov-Smirnov Test Statistic						0.186	95% Percentile Bootstrap UCL						1000
2002	Kolmogorov-Smirnov 5% Critical Value						0.116	95% BCA Bootstrap UCL						1102
2003	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						1520	
2004								97.5% Chebyshev(Mean, Sd) UCL						1900
2005	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						2647	
2006	95% Approximate Gamma UCL						905.4							
2007	95% Adjusted Gamma UCL						912.2							
2008														
2009	Potential UCL to Use						Use 95% H-UCL						1093	
2010														
2011														
2012	Iron													
2013														
2014	General Statistics													

	A	B	C	D	E	F	G	H	I	J	K	L	
2015	Number of Valid Observations					86	Number of Distinct Observations					75	
2016													
2017	Raw Statistics					Log-transformed Statistics							
2018					Minimum	4500					Minimum of Log Data	8.412	
2019					Maximum	224000					Maximum of Log Data	12.32	
2020					Mean	31248					Mean of log Data	10.16	
2021					Median	23600					SD of log Data	0.577	
2022					SD	27552							
2023					Coefficient of Variation	0.882							
2024					Skewness	4.665							
2025													
2026	Relevant UCL Statistics												
2027	Normal Distribution Test					Lognormal Distribution Test							
2028					Lilliefors Test Statistic	0.245					Lilliefors Test Statistic	0.0964	
2029					Lilliefors Critical Value	0.0955					Lilliefors Critical Value	0.0955	
2030	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
2031													
2032	Assuming Normal Distribution					Assuming Lognormal Distribution							
2033					95% Student's-t UCL	36188					95% H-UCL	34245	
2034	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL							39166
2035					95% Adjusted-CLT UCL	37732					97.5% Chebyshev (MVUE) UCL	42980	
2036					95% Modified-t UCL	36438					99% Chebyshev (MVUE) UCL	50471	
2037													
2038	Gamma Distribution Test					Data Distribution							
2039					k star (bias corrected)	2.657	Data do not follow a Discernable Distribution (0.05)						
2040					Theta Star	11760							
2041					MLE of Mean	31248							
2042					MLE of Standard Deviation	19170							
2043					nu star	457							
2044					Approximate Chi Square Value (.05)	408.5	Nonparametric Statistics						
2045					Adjusted Level of Significance	0.0472					95% CLT UCL	36135	
2046					Adjusted Chi Square Value	407.7					95% Jackknife UCL	36188	
2047											95% Standard Bootstrap UCL	36123	
2048					Anderson-Darling Test Statistic	2.798					95% Bootstrap-t UCL	39303	
2049					Anderson-Darling 5% Critical Value	0.76					95% Hall's Bootstrap UCL	56246	
2050					Kolmogorov-Smirnov Test Statistic	0.146					95% Percentile Bootstrap UCL	36712	
2051					Kolmogorov-Smirnov 5% Critical Value	0.0973					95% BCA Bootstrap UCL	37923	
2052	Data not Gamma Distributed at 5% Significance Level									95% Chebyshev(Mean, Sd) UCL	44198		
2053											97.5% Chebyshev(Mean, Sd) UCL	49802	
2054	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL							60809
2055					95% Approximate Gamma UCL	34963							
2056					95% Adjusted Gamma UCL	35030							
2057													
2058	Potential UCL to Use									Use 95% Chebyshev (Mean, Sd) UCL	44198		
2059													
2060													
2061	Lead												
2062													
2063	General Statistics												
2064	Number of Valid Observations					72	Number of Distinct Observations					71	
2065													
2066	Raw Statistics					Log-transformed Statistics							
2067					Minimum	10.9					Minimum of Log Data	2.389	

	A	B	C	D	E	F	G	H	I	J	K	L
2068					Maximum	18200					Maximum of Log Data	9.809
2069					Mean	1100					Mean of log Data	5.73
2070					Median	351					SD of log Data	1.631
2071					SD	2743						
2072					Coefficient of Variation	2.493						
2073					Skewness	5.233						
2074												
2075	Relevant UCL Statistics											
2076	Normal Distribution Test						Lognormal Distribution Test					
2077					Lilliefors Test Statistic	0.346					Lilliefors Test Statistic	0.0887
2078					Lilliefors Critical Value	0.104					Lilliefors Critical Value	0.104
2079	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2080												
2081	Assuming Normal Distribution						Assuming Lognormal Distribution					
2082					95% Student's-t UCL	1639					95% H-UCL	2059
2083	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					
2084					95% Adjusted-CLT UCL	1845					97.5% Chebyshev (MVUE) UCL	3005
2085					95% Modified-t UCL	1672					99% Chebyshev (MVUE) UCL	4125
2086												
2087	Gamma Distribution Test						Data Distribution					
2088					k star (bias corrected)	0.487					Data appear Lognormal at 5% Significance Level	
2089					Theta Star	2257						
2090					MLE of Mean	1100						
2091					MLE of Standard Deviation	1576						
2092					nu star	70.19						
2093					Approximate Chi Square Value (.05)	51.91					Nonparametric Statistics	
2094					Adjusted Level of Significance	0.0467					95% CLT UCL	1632
2095					Adjusted Chi Square Value	51.59					95% Jackknife UCL	1639
2096											95% Standard Bootstrap UCL	1621
2097					Anderson-Darling Test Statistic	2.091					95% Bootstrap-t UCL	2738
2098					Anderson-Darling 5% Critical Value	0.817					95% Hall's Bootstrap UCL	4332
2099					Kolmogorov-Smirnov Test Statistic	0.136					95% Percentile Bootstrap UCL	1626
2100					Kolmogorov-Smirnov 5% Critical Value	0.111					95% BCA Bootstrap UCL	1888
2101	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					
2102											97.5% Chebyshev(Mean, Sd) UCL	3119
2103	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					
2104					95% Approximate Gamma UCL	1488						
2105					95% Adjusted Gamma UCL	1497						
2106												
2107	Potential UCL to Use						Use 95% H-UCL					
2108												
2109												
2110	Manganese											
2111												
2112	General Statistics											
2113					Number of Valid Observations	89					Number of Distinct Observations	84
2114												
2115	Raw Statistics						Log-transformed Statistics					
2116					Minimum	166					Minimum of Log Data	5.112
2117					Maximum	2010					Maximum of Log Data	7.606
2118					Mean	688.2					Mean of log Data	6.42
2119					Median	620					SD of log Data	0.49
2120					SD	335.7						

	A	B	C	D	E	F	G	H	I	J	K	L	
2121	Coefficient of Variation				0.488								
2122	Skewness				1.24								
2123													
2124	Relevant UCL Statistics												
2125	Normal Distribution Test						Lognormal Distribution Test						
2126	Lilliefors Test Statistic				0.0926	Lilliefors Test Statistic				0.0663			
2127	Lilliefors Critical Value				0.0939	Lilliefors Critical Value				0.0939			
2128	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
2129													
2130	Assuming Normal Distribution						Assuming Lognormal Distribution						
2131	95% Student's-t UCL				747.3	95% H-UCL				762.2			
2132	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL				855.9		
2133	95% Adjusted-CLT UCL				751.7	97.5% Chebyshev (MVUE) UCL				927.2			
2134	95% Modified-t UCL				748.1	99% Chebyshev (MVUE) UCL				1067			
2135													
2136	Gamma Distribution Test						Data Distribution						
2137	k star (bias corrected)				4.403	Data appear Normal at 5% Significance Level							
2138	Theta Star				156.3								
2139	MLE of Mean				688.2								
2140	MLE of Standard Deviation				328								
2141	nu star				783.7								
2142	Approximate Chi Square Value (.05)				719.7	Nonparametric Statistics							
2143	Adjusted Level of Significance				0.0473	95% CLT UCL				746.7			
2144	Adjusted Chi Square Value				718.7	95% Jackknife UCL				747.3			
2145						95% Standard Bootstrap UCL				746.4			
2146	Anderson-Darling Test Statistic				0.222	95% Bootstrap-t UCL				754.3			
2147	Anderson-Darling 5% Critical Value				0.755	95% Hall's Bootstrap UCL				756			
2148	Kolmogorov-Smirnov Test Statistic				0.0482	95% Percentile Bootstrap UCL				748.6			
2149	Kolmogorov-Smirnov 5% Critical Value				0.095	95% BCA Bootstrap UCL				753.5			
2150	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL				843.3		
2151						97.5% Chebyshev(Mean, Sd) UCL				910.4			
2152	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL				1042		
2153	95% Approximate Gamma UCL				749.3								
2154	95% Adjusted Gamma UCL				750.4								
2155													
2156	Potential UCL to Use						Use 95% Student's-t UCL				747.3		
2157													
2158													
2159	Mercury												
2160													
2161	General Statistics												
2162	Number of Valid Data				72	Number of Detected Data				57			
2163	Number of Distinct Detected Data				43	Number of Non-Detect Data				15			
2164						Percent Non-Detects				20.83%			
2165													
2166	Raw Statistics						Log-transformed Statistics						
2167	Minimum Detected				0.059	Minimum Detected				-2.83			
2168	Maximum Detected				2.6	Maximum Detected				0.956			
2169	Mean of Detected				0.533	Mean of Detected				-1.142			
2170	SD of Detected				0.554	SD of Detected				1.063			
2171	Minimum Non-Detect				0.06	Minimum Non-Detect				-2.813			
2172	Maximum Non-Detect				0.16	Maximum Non-Detect				-1.833			
2173													

A	B	C	D	E	F	G	H	I	J	K	L
2174	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					33
2175	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					39
2176	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					45.83%
2177											
2178	UCL Statistics										
2179	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
2180	Lilliefors Test Statistic				0.196	Lilliefors Test Statistic				0.106	
2181	5% Lilliefors Critical Value				0.117	5% Lilliefors Critical Value				0.117	
2182	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
2183											
2184	Assuming Normal Distribution					Assuming Lognormal Distribution					
2185	DL/2 Substitution Method					DL/2 Substitution Method					
2186	Mean				0.433	Mean				-1.53	
2187	SD				0.53	SD				1.223	
2188	95% DL/2 (t) UCL				0.537	95% H-Stat (DL/2) UCL				0.578	
2189											
2190	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
2191	Mean				0.187	Mean in Log Scale				-1.516	
2192	SD				0.792	SD in Log Scale				1.223	
2193	95% MLE (t) UCL				0.343	Mean in Original Scale				0.435	
2194	95% MLE (Tiku) UCL				0.371	SD in Original Scale				0.529	
2195						95% Percentile Bootstrap UCL				0.545	
2196						95% BCA Bootstrap UCL				0.557	
2197											
2198	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
2199	k star (bias corrected)				1.064	Data Follow Appr. Gamma Distribution at 5% Significance Level					
2200	Theta Star				0.502						
2201	nu star				121.3						
2202											
2203	A-D Test Statistic				0.877	Nonparametric Statistics					
2204	5% A-D Critical Value				0.777	Kaplan-Meier (KM) Method					
2205	K-S Test Statistic				0.777	Mean				0.437	
2206	5% K-S Critical Value				0.121	SD				0.524	
2207	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean				0.0623	
2208						95% KM (t) UCL				0.541	
2209	Assuming Gamma Distribution					95% KM (z) UCL				0.539	
2210	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.54	
2211	Minimum				1E-09	95% KM (bootstrap t) UCL				0.568	
2212	Maximum				2.6	95% KM (BCA) UCL				0.538	
2213	Mean				0.444	95% KM (Percentile Bootstrap) UCL				0.542	
2214	Median				0.26	95% KM (Chebyshev) UCL				0.708	
2215	SD				0.526	97.5% KM (Chebyshev) UCL				0.826	
2216	k star				0.294	99% KM (Chebyshev) UCL				1.057	
2217	Theta star				1.511						
2218	Nu star				42.3	Potential UCLs to Use					
2219	AppChi2				28.39	95% KM (BCA) UCL				0.538	
2220	95% Gamma Approximate UCL				0.661						
2221	95% Adjusted Gamma UCL				0.667						
2222	Note: DL/2 is not a recommended method.										
2223											
2224											
2225	Nickel										
2226											

	A	B	C	D	E	F	G	H	I	J	K	L		
2227	General Statistics													
2228	Number of Valid Observations						89	Number of Distinct Observations						79
2229														
2230	Raw Statistics						Log-transformed Statistics							
2231	Minimum						9.2	Minimum of Log Data						2.219
2232	Maximum						481	Maximum of Log Data						6.176
2233	Mean						52.86	Mean of log Data						3.567
2234	Median						26.4	SD of log Data						0.805
2235	SD						68.64							
2236	Coefficient of Variation						1.299							
2237	Skewness						4.152							
2238														
2239	Relevant UCL Statistics													
2240	Normal Distribution Test						Lognormal Distribution Test							
2241	Lilliefors Test Statistic						0.262	Lilliefors Test Statistic						0.18
2242	Lilliefors Critical Value						0.0939	Lilliefors Critical Value						0.0939
2243	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							
2244														
2245	Assuming Normal Distribution						Assuming Lognormal Distribution							
2246	95% Student's-t UCL						64.95	95% H-UCL						58.46
2247	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						69.27	
2248	95% Adjusted-CLT UCL						68.25	97.5% Chebyshev (MVUE) UCL						78.16
2249	95% Modified-t UCL						65.48	99% Chebyshev (MVUE) UCL						95.63
2250														
2251	Gamma Distribution Test						Data Distribution							
2252	k star (bias corrected)						1.351	Data do not follow a Discernable Distribution (0.05)						
2253	Theta Star						39.13							
2254	MLE of Mean						52.86							
2255	MLE of Standard Deviation						45.48							
2256	nu star						240.4							
2257	Approximate Chi Square Value (.05)						205.5	Nonparametric Statistics						
2258	Adjusted Level of Significance						0.0473	95% CLT UCL						64.82
2259	Adjusted Chi Square Value						205	95% Jackknife UCL						64.95
2260								95% Standard Bootstrap UCL						64.79
2261	Anderson-Darling Test Statistic						4.592	95% Bootstrap-t UCL						71.56
2262	Anderson-Darling 5% Critical Value						0.774	95% Hall's Bootstrap UCL						90.26
2263	Kolmogorov-Smirnov Test Statistic						0.212	95% Percentile Bootstrap UCL						65.01
2264	Kolmogorov-Smirnov 5% Critical Value						0.0967	95% BCA Bootstrap UCL						68.97
2265	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						84.57	
2266								97.5% Chebyshev(Mean, Sd) UCL						98.29
2267	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						125.2	
2268	95% Approximate Gamma UCL						61.83							
2269	95% Adjusted Gamma UCL						61.99							
2270														
2271	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL						84.57	
2272														
2273														
2274	Silver													
2275														
2276	General Statistics													
2277	Number of Valid Data						89	Number of Detected Data						64
2278	Number of Distinct Detected Data						53	Number of Non-Detect Data						25
2279								Percent Non-Detects						28.09%

	A	B	C	D	E	F	G	H	I	J	K	L
2280												
2281	Raw Statistics						Log-transformed Statistics					
2282	Minimum Detected					0.11	Minimum Detected					-2.207
2283	Maximum Detected					61.4	Maximum Detected					4.117
2284	Mean of Detected					2.904	Mean of Detected					-0.0733
2285	SD of Detected					8.751	SD of Detected					1.267
2286	Minimum Non-Detect					0.16	Minimum Non-Detect					-1.833
2287	Maximum Non-Detect					1.7	Maximum Non-Detect					0.531
2288												
2289	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					73
2290	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					16
2291	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					82.02%
2292												
2293	UCL Statistics											
2294	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
2295	Lilliefors Test Statistic					0.375	Lilliefors Test Statistic					0.098
2296	5% Lilliefors Critical Value					0.111	5% Lilliefors Critical Value					0.111
2297	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
2298												
2299	Assuming Normal Distribution						Assuming Lognormal Distribution					
2300	DL/2 Substitution Method						DL/2 Substitution Method					
2301	Mean					2.198	Mean					-0.415
2302	SD					7.492	SD					1.301
2303	95% DL/2 (t) UCL					3.518	95% H-Stat (DL/2) UCL					1.864
2304												
2305	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
2306	MLE yields a negative mean						Mean in Log Scale					-0.514
2307							SD in Log Scale					1.355
2308							Mean in Original Scale					2.163
2309							SD in Original Scale					7.5
2310							95% Percentile Bootstrap UCL					3.582
2311							95% BCA Bootstrap UCL					4.424
2312												
2313	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
2314	k star (bias corrected)					0.534	Data appear Lognormal at 5% Significance Level					
2315	Theta Star					5.437						
2316	nu star					68.37						
2317												
2318	A-D Test Statistic					5.032	Nonparametric Statistics					
2319	5% A-D Critical Value					0.812	Kaplan-Meier (KM) Method					
2320	K-S Test Statistic					0.812	Mean					2.176
2321	5% K-S Critical Value					0.117	SD					7.456
2322	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.797
2323							95% KM (t) UCL					3.5
2324	Assuming Gamma Distribution						95% KM (z) UCL					3.486
2325	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3.497
2326	Minimum					0.11	95% KM (bootstrap t) UCL					7.951
2327	Maximum					61.4	95% KM (BCA) UCL					3.937
2328	Mean					2.622	95% KM (Percentile Bootstrap) UCL					3.607
2329	Median					1.049	95% KM (Chebyshev) UCL					5.649
2330	SD					7.446	97.5% KM (Chebyshev) UCL					7.151
2331	k star					0.669	99% KM (Chebyshev) UCL					10.1
2332	Theta star					3.919						

	A	B	C	D	E	F	G	H	I	J	K	L	
2333					Nu star	119.1	Potential UCLs to Use						
2334					AppChi2	94.87	95% KM (Chebyshev) UCL					5.649	
2335					95% Gamma Approximate UCL	3.291							
2336					95% Adjusted Gamma UCL	3.303							
2337	Note: DL/2 is not a recommended method.												
2338													
2339													
2340	Thallium												
2341													
2342	General Statistics												
2343					Number of Valid Data	89					Number of Detected Data	35	
2344					Number of Distinct Detected Data	27					Number of Non-Detect Data	54	
2345											Percent Non-Detects	60.67%	
2346													
2347	Raw Statistics						Log-transformed Statistics						
2348					Minimum Detected	0.54					Minimum Detected	-0.616	
2349					Maximum Detected	4.6					Maximum Detected	1.526	
2350					Mean of Detected	1.194					Mean of Detected	0.034	
2351					SD of Detected	0.879					SD of Detected	0.475	
2352					Minimum Non-Detect	0.79					Minimum Non-Detect	-0.236	
2353					Maximum Non-Detect	4.1					Maximum Non-Detect	1.411	
2354													
2355	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	87
2356	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	2
2357	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	97.75%
2358													
2359	UCL Statistics												
2360	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
2361					Shapiro Wilk Test Statistic	0.585					Shapiro Wilk Test Statistic	0.826	
2362					5% Shapiro Wilk Critical Value	0.934					5% Shapiro Wilk Critical Value	0.934	
2363	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
2364													
2365	Assuming Normal Distribution						Assuming Lognormal Distribution						
2366					DL/2 Substitution Method						DL/2 Substitution Method		
2367					Mean	1.194					Mean	0.0338	
2368					SD	0.69					SD	0.544	
2369					95% DL/2 (t) UCL	1.316					95% H-Stat (DL/2) UCL	1.647	
2370													
2371					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
2372	MLE method failed to converge properly											Mean in Log Scale	-0.116
2373											SD in Log Scale	0.367	
2374											Mean in Original Scale	0.974	
2375											SD in Original Scale	0.596	
2376											95% Percentile Bootstrap UCL	1.081	
2377											95% BCA Bootstrap UCL	1.118	
2378													
2379	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
2380					k star (bias corrected)	3.349	Data do not follow a Discernable Distribution (0.05)						
2381					Theta Star	0.357							
2382					nu star	234.4							
2383													
2384					A-D Test Statistic	2.982	Nonparametric Statistics						
2385					5% A-D Critical Value	0.753	Kaplan-Meier (KM) Method						

	A	B	C	D	E	F	G	H	I	J	K	L
2386	K-S Test Statistic					0.753	Mean					0.986
2387	5% K-S Critical Value					0.149	SD					0.609
2388	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.072	
2389						95% KM (t) UCL					1.105	
2390	Assuming Gamma Distribution					95% KM (z) UCL					1.104	
2391	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					1.105	
2392	Minimum					0.456	95% KM (bootstrap t) UCL					1.155
2393	Maximum					4.6	95% KM (BCA) UCL					1.104
2394	Mean					1.287	95% KM (Percentile Bootstrap) UCL					1.117
2395	Median					1.174	95% KM (Chebyshev) UCL					1.3
2396	SD					0.634	97.5% KM (Chebyshev) UCL					1.435
2397	k star					5.587	99% KM (Chebyshev) UCL					1.702
2398	Theta star					0.23						
2399	Nu star					994.5	Potential UCLs to Use					
2400	AppChi2					922.3	95% KM (t) UCL					1.105
2401	95% Gamma Approximate UCL					1.388	95% KM (% Bootstrap) UCL					1.117
2402	95% Adjusted Gamma UCL					1.389						
2403	Note: DL/2 is not a recommended method.											
2404												
2405												
2406	Vanadium											
2407												
2408	General Statistics											
2409	Number of Valid Data					89	Number of Detected Data					88
2410	Number of Distinct Detected Data					81	Number of Non-Detect Data					1
2411						Percent Non-Detects					1.12%	
2412												
2413	Raw Statistics					Log-transformed Statistics						
2414	Minimum Detected					5.7	Minimum Detected					1.74
2415	Maximum Detected					841	Maximum Detected					6.735
2416	Mean of Detected					51.53	Mean of Detected					3.305
2417	SD of Detected					99.96	SD of Detected					0.982
2418	Minimum Non-Detect					5.6	Minimum Non-Detect					1.723
2419	Maximum Non-Detect					5.6	Maximum Non-Detect					1.723
2420												
2421												
2422	UCL Statistics											
2423	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
2424	Lilliefors Test Statistic					0.323	Lilliefors Test Statistic					0.184
2425	5% Lilliefors Critical Value					0.0944	5% Lilliefors Critical Value					0.0944
2426	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
2427												
2428	Assuming Normal Distribution					Assuming Lognormal Distribution						
2429	DL/2 Substitution Method					DL/2 Substitution Method						
2430	Mean					50.98	Mean					3.279
2431	SD					99.52	SD					1.006
2432	95% DL/2 (t) UCL					68.52	95% H-Stat (DL/2) UCL					54.56
2433												
2434	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
2435	Mean					50.28	Mean in Log Scale					3.276
2436	SD					99.68	SD in Log Scale					1.014
2437	95% MLE (t) UCL					67.85	Mean in Original Scale					50.98
2438	95% MLE (Tiku) UCL					65.94	SD in Original Scale					99.53

	A	B	C	D	E	F	G	H	I	J	K	L		
2439										95% Percentile Bootstrap UCL		69.47		
2440										95% BCA Bootstrap UCL		79.27		
2441														
2442	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
2443					k star (bias corrected)	0.892	Data do not follow a Discernable Distribution (0.05)							
2444					Theta Star	57.8								
2445					nu star	156.9								
2446														
2447					A-D Test Statistic	5.931	Nonparametric Statistics							
2448					5% A-D Critical Value	0.786	Kaplan-Meier (KM) Method							
2449					K-S Test Statistic	0.786	Mean							
2450					5% K-S Critical Value	0.0985	SD							
2451	Data not Gamma Distributed at 5% Significance Level						SE of Mean							
2452							95% KM (t) UCL							
2453	Assuming Gamma Distribution						95% KM (z) UCL							
2454	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL							
2455					Minimum	1E-09	95% KM (bootstrap t) UCL							
2456					Maximum	841	95% KM (BCA) UCL							
2457					Mean	50.95	95% KM (Percentile Bootstrap) UCL							
2458					Median	17.9	95% KM (Chebyshev) UCL							
2459					SD	99.54	97.5% KM (Chebyshev) UCL							
2460					k star	0.662	99% KM (Chebyshev) UCL							
2461					Theta star	76.95								
2462					Nu star	117.9	Potential UCLs to Use							
2463					AppChi2	93.79	95% KM (BCA) UCL							
2464					95% Gamma Approximate UCL	64.03								
2465					95% Adjusted Gamma UCL	64.27								
2466	Note: DL/2 is not a recommended method.													
2467														
2468														
2469	Zinc													
2470														
2471	General Statistics													
2472	Number of Valid Observations						89	Number of Distinct Observations						88
2473														
2474	Raw Statistics						Log-transformed Statistics							
2475					Minimum	34	Minimum of Log Data						3.526	
2476					Maximum	16000	Maximum of Log Data						9.68	
2477					Mean	977.7	Mean of log Data						6.034	
2478					Median	395	SD of log Data						1.29	
2479					SD	1936								
2480					Coefficient of Variation	1.98								
2481					Skewness	5.874								
2482														
2483	Relevant UCL Statistics													
2484	Normal Distribution Test						Lognormal Distribution Test							
2485					Lilliefors Test Statistic	0.313	Lilliefors Test Statistic						0.0836	
2486					Lilliefors Critical Value	0.0939	Lilliefors Critical Value						0.0939	
2487	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
2488														
2489	Assuming Normal Distribution						Assuming Lognormal Distribution							
2490					95% Student's-t UCL	1319	95% H-UCL						1361	
2491	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						1675	

	A	B	C	D	E	F	G	H	I	J	K	L
2492	95% Adjusted-CLT UCL					1452	97.5% Chebyshev (MVUE) UCL					1992
2493	95% Modified-t UCL					1340	99% Chebyshev (MVUE) UCL					2614
2494												
2495	Gamma Distribution Test						Data Distribution					
2496	k star (bias corrected)					0.693	Data appear Lognormal at 5% Significance Level					
2497	Theta Star					1411						
2498	MLE of Mean					977.7						
2499	MLE of Standard Deviation					1175						
2500	nu star					123.3						
2501	Approximate Chi Square Value (.05)					98.66	Nonparametric Statistics					
2502	Adjusted Level of Significance					0.0473	95% CLT UCL					1315
2503	Adjusted Chi Square Value					98.3	95% Jackknife UCL					1319
2504							95% Standard Bootstrap UCL					1316
2505	Anderson-Darling Test Statistic					2.058	95% Bootstrap-t UCL					1673
2506	Anderson-Darling 5% Critical Value					0.798	95% Hall's Bootstrap UCL					2763
2507	Kolmogorov-Smirnov Test Statistic					0.102	95% Percentile Bootstrap UCL					1349
2508	Kolmogorov-Smirnov 5% Critical Value					0.0988	95% BCA Bootstrap UCL					1501
2509	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					1872
2510							97.5% Chebyshev(Mean, Sd) UCL					2259
2511	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					3020
2512	95% Approximate Gamma UCL					1222						
2513	95% Adjusted Gamma UCL					1226						
2514												
2515	Potential UCL to Use						Use 95% H-UCL					1361
2516												

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects								
2	User Selected Options											
3	From File			\\Pr1-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProUCL_04								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	Acenaphthylene											
10												
11	General Statistics											
12	Number of Valid Data			116			Number of Detected Data			35		
13	Number of Distinct Detected Data			29			Number of Non-Detect Data			81		
14							Percent Non-Detects			69.83%		
15												
16	Raw Statistics						Log-transformed Statistics					
17	Minimum Detected			0.055			Minimum Detected			-2.9		
18	Maximum Detected			3.9			Maximum Detected			1.361		
19	Mean of Detected			0.823			Mean of Detected			-0.797		
20	SD of Detected			0.886			SD of Detected			1.216		
21	Minimum Non-Detect			0.18			Minimum Non-Detect			-1.715		
22	Maximum Non-Detect			13			Maximum Non-Detect			2.565		
23												
24	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect			116		
25	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected			0		
26	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage			100.00%		
27												
28	UCL Statistics											
29	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
30	Shapiro Wilk Test Statistic			0.799			Shapiro Wilk Test Statistic			0.947		
31	5% Shapiro Wilk Critical Value			0.934			5% Shapiro Wilk Critical Value			0.934		
32	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
33												
34	Assuming Normal Distribution						Assuming Lognormal Distribution					
35	DL/2 Substitution Method						DL/2 Substitution Method					
36	Mean			0.466			Mean			-1.548		
37	SD			0.845			SD			1.106		
38	95% DL/2 (t) UCL			0.597			95% H-Stat (DL/2) UCL			0.444		
39												
40	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
41	MLE method failed to converge properly						Mean in Log Scale			-1.922		
42							SD in Log Scale			1.155		
43							Mean in Original Scale			0.326		
44							SD in Original Scale			0.585		
45							95% Percentile Bootstrap UCL			0.418		
46							95% BCA Bootstrap UCL			0.438		
47												
48	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
49	k star (bias corrected)			0.9			Data appear Gamma Distributed at 5% Significance Level					
50	Theta Star			0.915								
51	nu star			62.98								
52												
53	A-D Test Statistic			0.347			Nonparametric Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L
54	5% A-D Critical Value				0.777	Kaplan-Meier (KM) Method						
55	K-S Test Statistic				0.777	Mean						0.322
56	5% K-S Critical Value				0.153	SD						0.597
57	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						0.0578
58						95% KM (t) UCL						0.418
59	Assuming Gamma Distribution					95% KM (z) UCL						0.417
60	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						0.417
61	Minimum				0.055	95% KM (bootstrap t) UCL						0.448
62	Maximum				3.9	95% KM (BCA) UCL						0.425
63	Mean				0.845	95% KM (Percentile Bootstrap) UCL						0.421
64	Median				0.842	95% KM (Chebyshev) UCL						0.574
65	SD				0.499	97.5% KM (Chebyshev) UCL						0.683
66	k star				2.673	99% KM (Chebyshev) UCL						0.897
67	Theta star				0.316							
68	Nu star				620.1	Potential UCLs to Use						
69	AppChi2				563.3	95% KM (t) UCL						0.418
70	95% Gamma Approximate UCL				0.931							
71	95% Adjusted Gamma UCL				0.932							
72	Note: DL/2 is not a recommended method.											
73												
74												
75	Benzo(a)anthracene											
76												
77	General Statistics											
78	Number of Valid Data				115	Number of Detected Data				72		
79	Number of Distinct Detected Data				61	Number of Non-Detect Data				43		
80						Percent Non-Detects				37.39%		
81												
82	Raw Statistics					Log-transformed Statistics						
83	Minimum Detected				0.023	Minimum Detected				-3.772		
84	Maximum Detected				50	Maximum Detected				3.912		
85	Mean of Detected				8.051	Mean of Detected				0.509		
86	SD of Detected				12.04	SD of Detected				2.128		
87	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715		
88	Maximum Non-Detect				1.9	Maximum Non-Detect				0.642		
89												
90	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				78		
91	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				37		
92	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				67.83%		
93												
94	UCL Statistics											
95	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
96	Lilliefors Test Statistic				0.254	Lilliefors Test Statistic				0.1		
97	5% Lilliefors Critical Value				0.104	5% Lilliefors Critical Value				0.104		
98	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
99												
100	Assuming Normal Distribution					Assuming Lognormal Distribution						
101	DL/2 Substitution Method					DL/2 Substitution Method						
102	Mean				5.106	Mean				-0.453		
103	SD				10.24	SD				2.131		
104	95% DL/2 (t) UCL				6.69	95% H-Stat (DL/2) UCL				9.074		
105												
106	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						

	A	B	C	D	E	F	G	H	I	J	K	L		
107	MLE yields a negative mean										Mean in Log Scale		-0.6	
108											SD in Log Scale		2.302	
109											Mean in Original Scale		5.089	
110											SD in Original Scale		10.25	
111											95% Percentile Bootstrap UCL		6.754	
112											95% BCA Bootstrap UCL		6.895	
113														
114	Gamma Distribution Test with Detected Values Only							Data Distribution Test with Detected Values Only						
115	k star (bias corrected)						0.407	Data appear Lognormal at 5% Significance Level						
116	Theta Star						19.79							
117	nu star						58.6							
118														
119	A-D Test Statistic						1.489	Nonparametric Statistics						
120	5% A-D Critical Value						0.838	Kaplan-Meier (KM) Method						
121	K-S Test Statistic						0.838	Mean						5.078
122	5% K-S Critical Value						0.112	SD						10.21
123	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.959
124								95% KM (t) UCL						6.668
125	Assuming Gamma Distribution							95% KM (z) UCL						6.655
126	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						6.664
127	Minimum						1E-09	95% KM (bootstrap t) UCL						7.107
128	Maximum						50	95% KM (BCA) UCL						6.598
129	Mean						6.386	95% KM (Percentile Bootstrap) UCL						6.734
130	Median						2.234	95% KM (Chebyshev) UCL						9.258
131	SD						9.959	97.5% KM (Chebyshev) UCL						11.07
132	k star						0.294	99% KM (Chebyshev) UCL						14.62
133	Theta star						21.72							
134	Nu star						67.63	Potential UCLs to Use						
135	AppChi2						49.71	97.5% KM (Chebyshev) UCL						11.07
136	95% Gamma Approximate UCL						8.689							
137	95% Adjusted Gamma UCL						8.723							
138	Note: DL/2 is not a recommended method.													
139														
140														
141	Benzo(a)pyrene													
142														
143	General Statistics													
144	Number of Valid Data						114	Number of Detected Data						71
145	Number of Distinct Detected Data						59	Number of Non-Detect Data						43
146								Percent Non-Detects						37.72%
147														
148	Raw Statistics							Log-transformed Statistics						
149	Minimum Detected						0.028	Minimum Detected						-3.576
150	Maximum Detected						43	Maximum Detected						3.761
151	Mean of Detected						7.585	Mean of Detected						0.535
152	SD of Detected						11.18	SD of Detected						2.058
153	Minimum Non-Detect						0.18	Minimum Non-Detect						-1.715
154	Maximum Non-Detect						1.9	Maximum Non-Detect						0.642
155														
156	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect						78
157	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected						36
158	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage						68.42%
159														

	A	B	C	D	E	F	G	H	I	J	K	L	
160	UCL Statistics												
161	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
162	Lilliefors Test Statistic					0.27	Lilliefors Test Statistic					0.0915	
163	5% Lilliefors Critical Value					0.105	5% Lilliefors Critical Value					0.105	
164	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
165													
166	Assuming Lognormal Distribution												
167	DL/2 Substitution Method						DL/2 Substitution Method						
168	Mean					4.784	Mean					-0.454	
169	SD					9.515	SD					2.094	
170	95% DL/2 (t) UCL					6.262	95% H-Stat (DL/2) UCL					7.668	
171													
172	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
173	MLE yields a negative mean						Mean in Log Scale					-0.588	
174							SD in Log Scale					2.259	
175							Mean in Original Scale					4.772	
176							SD in Original Scale					9.52	
177							95% Percentile Bootstrap UCL					6.369	
178							95% BCA Bootstrap UCL					6.403	
179													
180	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
181	k star (bias corrected)					0.426	Data appear Lognormal at 5% Significance Level						
182	Theta Star					17.79							
183	nu star					60.54							
184													
185	A-D Test Statistic						1.347	Nonparametric Statistics					
186	5% A-D Critical Value					0.833	Kaplan-Meier (KM) Method						
187	K-S Test Statistic					0.833	Mean					4.762	
188	5% K-S Critical Value					0.113	SD					9.483	
189	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.895	
190							95% KM (t) UCL					6.245	
191	Assuming Gamma Distribution						95% KM (z) UCL					6.233	
192	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					6.241	
193	Minimum					0.028	95% KM (bootstrap t) UCL					6.56	
194	Maximum					43	95% KM (BCA) UCL					6.352	
195	Mean					6.159	95% KM (Percentile Bootstrap) UCL					6.233	
196	Median					2.495	95% KM (Chebyshev) UCL					8.661	
197	SD					9.162	97.5% KM (Chebyshev) UCL					10.35	
198	k star					0.538	99% KM (Chebyshev) UCL					13.66	
199	Theta star					11.44							
200	Nu star					122.8	Potential UCLs to Use						
201	AppChi2					98.18	97.5% KM (Chebyshev) UCL					10.35	
202	95% Gamma Approximate UCL					7.702							
203	95% Adjusted Gamma UCL					7.724							
204	Note: DL/2 is not a recommended method.												
205													
206													
207	Benzo(b)fluoranthene												
208													
209	General Statistics												
210	Number of Valid Data					116	Number of Detected Data					76	
211	Number of Distinct Detected Data					67	Number of Non-Detect Data					40	
212						Percent Non-Detects					34.48%		

	A	B	C	D	E	F	G	H	I	J	K	L
213												
214	Raw Statistics						Log-transformed Statistics					
215	Minimum Detected					0.062	Minimum Detected					-2.781
216	Maximum Detected					54	Maximum Detected					3.989
217	Mean of Detected					9.676	Mean of Detected					0.719
218	SD of Detected					14.4	SD of Detected					2.094
219	Minimum Non-Detect					0.18	Minimum Non-Detect					-1.715
220	Maximum Non-Detect					1.3	Maximum Non-Detect					0.262
221												
222	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					72
223	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					44
224	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					62.07%
225												
226	UCL Statistics											
227	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
228	Lilliefors Test Statistic					0.261	Lilliefors Test Statistic					0.0936
229	5% Lilliefors Critical Value					0.102	5% Lilliefors Critical Value					0.102
230	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
231												
232	Assuming Normal Distribution						Assuming Lognormal Distribution					
233	DL/2 Substitution Method						DL/2 Substitution Method					
234	Mean					6.388	Mean					-0.265
235	SD					12.49	SD					2.193
236	95% DL/2 (t) UCL					8.311	95% H-Stat (DL/2) UCL					11.96
237												
238	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
239	MLE yields a negative mean						Mean in Log Scale					-0.356
240							SD in Log Scale					2.328
241							Mean in Original Scale					6.385
242							SD in Original Scale					12.49
243							95% Percentile Bootstrap UCL					8.283
244							95% BCA Bootstrap UCL					8.466
245												
246	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
247	k star (bias corrected)					0.413	Data appear Lognormal at 5% Significance Level					
248	Theta Star					23.42						
249	nu star					62.79						
250												
251	A-D Test Statistic					1.688	Nonparametric Statistics					
252	5% A-D Critical Value					0.837	Kaplan-Meier (KM) Method					
253	K-S Test Statistic					0.837	Mean					6.375
254	5% K-S Critical Value					0.109	SD					12.44
255	Data not Gamma Distributed at 5% Significance Level						SE of Mean					1.163
256							95% KM (t) UCL					8.303
257	Assuming Gamma Distribution						95% KM (z) UCL					8.288
258	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					8.299
259	Minimum					1E-09	95% KM (bootstrap t) UCL					8.632
260	Maximum					54	95% KM (BCA) UCL					8.346
261	Mean					7.42	95% KM (Percentile Bootstrap) UCL					8.324
262	Median					2.346	95% KM (Chebyshev) UCL					11.44
263	SD					12.16	97.5% KM (Chebyshev) UCL					13.64
264	k star					0.248	99% KM (Chebyshev) UCL					17.94
265	Theta star					29.97						

	A	B	C	D	E	F	G	H	I	J	K	L	
266					Nu star	57.43	Potential UCLs to Use						
267					AppChi2	41.01	97.5% KM (Chebyshev) UCL					13.64	
268					95% Gamma Approximate UCL	10.39							
269					95% Adjusted Gamma UCL	10.43							
270	Note: DL/2 is not a recommended method.												
271													
272													
273	Benzo(g,h,i)perylene												
274													
275	General Statistics												
276					Number of Valid Data	111					Number of Detected Data	57	
277					Number of Distinct Detected Data	48					Number of Non-Detect Data	54	
278											Percent Non-Detects	48.65%	
279													
280	Raw Statistics						Log-transformed Statistics						
281					Minimum Detected	0.029					Minimum Detected	-3.54	
282					Maximum Detected	24					Maximum Detected	3.178	
283					Mean of Detected	3.09					Mean of Detected	0.00222	
284					SD of Detected	4.403					SD of Detected	1.725	
285					Minimum Non-Detect	0.18					Minimum Non-Detect	-1.715	
286					Maximum Non-Detect	4.5					Maximum Non-Detect	1.504	
287													
288	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	95
289	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	16
290	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	85.59%
291													
292	UCL Statistics												
293	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
294					Lilliefors Test Statistic	0.243					Lilliefors Test Statistic	0.15	
295					5% Lilliefors Critical Value	0.117					5% Lilliefors Critical Value	0.117	
296	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
297													
298	Assuming Normal Distribution						Assuming Lognormal Distribution						
299					DL/2 Substitution Method						DL/2 Substitution Method		
300					Mean	1.686					Mean	-0.988	
301					SD	3.468					SD	1.676	
302					95% DL/2 (t) UCL	2.232					95% H-Stat (DL/2) UCL	1.771	
303													
304					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
305	MLE yields a negative mean											Mean in Log Scale	-1.202
306											SD in Log Scale	1.872	
307											Mean in Original Scale	1.645	
308											SD in Original Scale	3.478	
309											95% Percentile Bootstrap UCL	2.182	
310											95% BCA Bootstrap UCL	2.334	
311													
312	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
313					k star (bias corrected)	0.538	Data do not follow a Discernable Distribution (0.05)						
314					Theta Star	5.748							
315					nu star	61.29							
316													
317					A-D Test Statistic	1.213	Nonparametric Statistics						
318					5% A-D Critical Value	0.81	Kaplan-Meier (KM) Method						

	A	B	C	D	E	F	G	H	I	J	K	L
319	K-S Test Statistic					0.81					Mean	1.647
320	5% K-S Critical Value					0.124					SD	3.463
321	Data not Gamma Distributed at 5% Significance Level										SE of Mean	0.332
322											95% KM (t) UCL	2.197
323	Assuming Gamma Distribution										95% KM (z) UCL	2.193
324	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	2.195
325	Minimum					0.029					95% KM (bootstrap t) UCL	2.372
326	Maximum					24					95% KM (BCA) UCL	2.229
327	Mean					3.032					95% KM (Percentile Bootstrap) UCL	2.233
328	Median					2.63					95% KM (Chebyshev) UCL	3.093
329	SD					3.169					97.5% KM (Chebyshev) UCL	3.719
330	k star					0.963					99% KM (Chebyshev) UCL	4.949
331	Theta star					3.147						
332	Nu star					213.9					Potential UCLs to Use	
333	AppChi2					181					97.5% KM (Chebyshev) UCL	3.719
334	95% Gamma Approximate UCL					3.582						
335	95% Adjusted Gamma UCL					3.589						
336	Note: DL/2 is not a recommended method.											
337												
338												
339	Benzo(k)fluoranthene											
340												
341	General Statistics											
342	Number of Valid Data					114	Number of Detected Data					69
343	Number of Distinct Detected Data					55	Number of Non-Detect Data					45
344							Percent Non-Detects					39.47%
345												
346	Raw Statistics						Log-transformed Statistics					
347	Minimum Detected					0.026	Minimum Detected					-3.65
348	Maximum Detected					38	Maximum Detected					3.638
349	Mean of Detected					5.549	Mean of Detected					0.258
350	SD of Detected					8.655	SD of Detected					1.973
351	Minimum Non-Detect					0.18	Minimum Non-Detect					-1.715
352	Maximum Non-Detect					1.9	Maximum Non-Detect					0.642
353												
354	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					81
355	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					33
356	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					71.05%
357												
358	UCL Statistics											
359	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
360	Lilliefors Test Statistic					0.278	Lilliefors Test Statistic					0.0976
361	5% Lilliefors Critical Value					0.107	5% Lilliefors Critical Value					0.107
362	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
363												
364	Assuming Normal Distribution						Assuming Lognormal Distribution					
365	DL/2 Substitution Method						DL/2 Substitution Method					
366	Mean					3.422	Mean					-0.662
367	SD					7.217	SD					1.947
368	95% DL/2 (t) UCL					4.543	95% H-Stat (DL/2) UCL					4.655
369												
370	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
371	MLE yields a negative mean						Mean in Log Scale					-0.737

	A	B	C	D	E	F	G	H	I	J	K	L
372											SD in Log Scale	2.055
373											Mean in Original Scale	3.416
374											SD in Original Scale	7.219
375											95% Percentile Bootstrap UCL	4.539
376											95% BCA Bootstrap UCL	4.737
377												
378	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
379					k star (bias corrected)	0.435	Data Follow Appr. Gamma Distribution at 5% Significance Level					
380					Theta Star	12.76						
381					nu star	60.02						
382												
383					A-D Test Statistic	1.516	Nonparametric Statistics					
384					5% A-D Critical Value	0.83	Kaplan-Meier (KM) Method					
385					K-S Test Statistic	0.83	Mean					3.404
386					5% K-S Critical Value	0.114	SD					7.193
387	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					0.679
388							95% KM (t) UCL					4.53
389	Assuming Gamma Distribution						95% KM (z) UCL					4.521
390	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					4.527
391					Minimum	0.026	95% KM (bootstrap t) UCL					4.865
392					Maximum	38	95% KM (BCA) UCL					4.542
393					Mean	4.778	95% KM (Percentile Bootstrap) UCL					4.633
394					Median	2.245	95% KM (Chebyshev) UCL					6.363
395					SD	6.96	97.5% KM (Chebyshev) UCL					7.643
396					k star	0.591	99% KM (Chebyshev) UCL					10.16
397					Theta star	8.091						
398					Nu star	134.6	Potential UCLs to Use					
399					AppChi2	108.8	95% KM (BCA) UCL					4.542
400					95% Gamma Approximate UCL	5.911						
401					95% Adjusted Gamma UCL	5.927						
402	Note: DL/2 is not a recommended method.											
403												
404												
405	Carbazole											
406												
407	General Statistics											
408					Number of Valid Data	116	Number of Detected Data					47
409					Number of Distinct Detected Data	42	Number of Non-Detect Data					69
410							Percent Non-Detects					59.48%
411												
412	Raw Statistics						Log-transformed Statistics					
413					Minimum Detected	0.0071	Minimum Detected					-4.948
414					Maximum Detected	18	Maximum Detected					2.89
415					Mean of Detected	2.222	Mean of Detected					-0.376
416					SD of Detected	3.737	SD of Detected					1.725
417					Minimum Non-Detect	0.18	Minimum Non-Detect					-1.715
418					Maximum Non-Detect	4.5	Maximum Non-Detect					1.504
419												
420	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					109
421	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					7
422	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					93.97%
423												
424	UCL Statistics											

A	B	C	D	E	F	G	H	I	J	K	L
425	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
426	Shapiro Wilk Test Statistic				0.613	Shapiro Wilk Test Statistic				0.982	
427	5% Shapiro Wilk Critical Value				0.946	5% Shapiro Wilk Critical Value				0.946	
428	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
429											
430	Assuming Normal Distribution					Assuming Lognormal Distribution					
431	DL/2 Substitution Method					DL/2 Substitution Method					
432	Mean				1.015	Mean				-1.35	
433	SD				2.577	SD				1.449	
434	95% DL/2 (t) UCL				1.412	95% H-Stat (DL/2) UCL				0.86	
435											
436	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
437	MLE yields a negative mean					Mean in Log Scale				-1.802	
438						SD in Log Scale				1.781	
439						Mean in Original Scale				0.955	
440						SD in Original Scale				2.587	
441						95% Percentile Bootstrap UCL				1.377	
442						95% BCA Bootstrap UCL				1.493	
443											
444	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
445	k star (bias corrected)				0.515	Data Follow Appr. Gamma Distribution at 5% Significance Level					
446	Theta Star				4.314						
447	nu star				48.42						
448											
449	A-D Test Statistic				0.83	Nonparametric Statistics					
450	5% A-D Critical Value				0.811	Kaplan-Meier (KM) Method					
451	K-S Test Statistic				0.811	Mean				0.962	
452	5% K-S Critical Value				0.136	SD				2.575	
453	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean				0.242	
454						95% KM (t) UCL				1.363	
455	Assuming Gamma Distribution					95% KM (z) UCL				1.36	
456	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				1.361	
457	Minimum				0.0071	95% KM (bootstrap t) UCL				1.547	
458	Maximum				18	95% KM (BCA) UCL				1.368	
459	Mean				2.229	95% KM (Percentile Bootstrap) UCL				1.386	
460	Median				2.027	95% KM (Chebyshev) UCL				2.017	
461	SD				2.38	97.5% KM (Chebyshev) UCL				2.474	
462	k star				1.149	99% KM (Chebyshev) UCL				3.37	
463	Theta star				1.941						
464	Nu star				266.5	Potential UCLs to Use					
465	AppChi2				229.7	95% KM (t) UCL				1.363	
466	95% Gamma Approximate UCL				2.587						
467	95% Adjusted Gamma UCL				2.592						
468	Note: DL/2 is not a recommended method.										
469											
470											
471	Dibenzo(a,h)anthracene										
472											
473	General Statistics										
474	Number of Valid Data				106	Number of Detected Data				44	
475	Number of Distinct Detected Data				37	Number of Non-Detect Data				62	
476						Percent Non-Detects				58.49%	
477											

	A	B	C	D	E	F	G	H	I	J	K	L
478	Raw Statistics						Log-transformed Statistics					
479	Minimum Detected				0.053		Minimum Detected				-2.937	
480	Maximum Detected				7.4		Maximum Detected				2.001	
481	Mean of Detected				1.365		Mean of Detected				-0.553	
482	SD of Detected				1.701		SD of Detected				1.47	
483	Minimum Non-Detect				0.18		Minimum Non-Detect				-1.715	
484	Maximum Non-Detect				13		Maximum Non-Detect				2.565	
485												
486	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				106	
487	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				0	
488	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				100.00%	
489												
490	UCL Statistics											
491	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
492	Shapiro Wilk Test Statistic				0.764		Shapiro Wilk Test Statistic				0.936	
493	5% Shapiro Wilk Critical Value				0.944		5% Shapiro Wilk Critical Value				0.944	
494	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
495												
496	Assuming Normal Distribution						Assuming Lognormal Distribution					
497	DL/2 Substitution Method						DL/2 Substitution Method					
498	Mean				0.716		Mean				-1.412	
499	SD				1.37		SD				1.313	
500	95% DL/2 (t) UCL				0.936		95% H-Stat (DL/2) UCL				0.659	
501												
502	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
503	MLE method failed to converge properly						Mean in Log Scale				-1.638	
504							SD in Log Scale				1.452	
505							Mean in Original Scale				0.635	
506							SD in Original Scale				1.253	
507							95% Percentile Bootstrap UCL				0.845	
508							95% BCA Bootstrap UCL				0.902	
509												
510	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
511	k star (bias corrected)				0.667		Data appear Gamma Distributed at 5% Significance Level					
512	Theta Star				2.045							
513	nu star				58.73							
514												
515	A-D Test Statistic				0.637		Nonparametric Statistics					
516	5% A-D Critical Value				0.794		Kaplan-Meier (KM) Method					
517	K-S Test Statistic				0.794		Mean				0.625	
518	5% K-S Critical Value				0.139		SD				1.258	
519	Data appear Gamma Distributed at 5% Significance Level						SE of Mean				0.124	
520							95% KM (t) UCL				0.831	
521	Assuming Gamma Distribution						95% KM (z) UCL				0.829	
522	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL				0.83	
523	Minimum				0.053		95% KM (bootstrap t) UCL				0.894	
524	Maximum				7.4		95% KM (BCA) UCL				0.832	
525	Mean				1.379		95% KM (Percentile Bootstrap) UCL				0.838	
526	Median				1.325		95% KM (Chebyshev) UCL				1.167	
527	SD				1.103		97.5% KM (Chebyshev) UCL				1.402	
528	k star				1.472		99% KM (Chebyshev) UCL				1.863	
529	Theta star				0.937							
530	Nu star				312		Potential UCLs to Use					

	A	B	C	D	E	F	G	H	I	J	K	L
531	AppChi2					272.1	95% KM (t) UCL					0.831
532	95% Gamma Approximate UCL					1.581						
533	95% Adjusted Gamma UCL					1.584						
534	Note: DL/2 is not a recommended method.											
535												
536												
537	Dimethylphthalate											
538												
539	General Statistics											
540	Number of Valid Data					116	Number of Detected Data					14
541	Number of Distinct Detected Data					14	Number of Non-Detect Data					102
542							Percent Non-Detects					87.93%
543												
544	Raw Statistics						Log-transformed Statistics					
545	Minimum Detected					0.047	Minimum Detected					-3.058
546	Maximum Detected					1.6	Maximum Detected					0.47
547	Mean of Detected					0.453	Mean of Detected					-1.235
548	SD of Detected					0.459	SD of Detected					1.013
549	Minimum Non-Detect					0.18	Minimum Non-Detect					-1.715
550	Maximum Non-Detect					13	Maximum Non-Detect					2.565
551												
552	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					116
553	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
554	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
555												
556	UCL Statistics											
557	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
558	Shapiro Wilk Test Statistic					0.775	Shapiro Wilk Test Statistic					0.969
559	5% Shapiro Wilk Critical Value					0.874	5% Shapiro Wilk Critical Value					0.874
560	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
561												
562	Assuming Normal Distribution						Assuming Lognormal Distribution					
563	DL/2 Substitution Method						DL/2 Substitution Method					
564	Mean					0.369	Mean					-1.66
565	SD					0.723	SD					0.968
566	95% DL/2 (t) UCL					0.481	95% H-Stat (DL/2) UCL					0.372
567												
568	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
569	MLE method failed to converge properly						Mean in Log Scale					-2.348
570							SD in Log Scale					0.756
571							Mean in Original Scale					0.138
572							SD in Original Scale					0.199
573							95% Percentile Bootstrap UCL					0.172
574							95% BCA Bootstrap UCL					0.182
575												
576	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
577	k star (bias corrected)					1.042	Data appear Gamma Distributed at 5% Significance Level					
578	Theta Star					0.435						
579	nu star					29.19						
580												
581	A-D Test Statistic					0.34	Nonparametric Statistics					
582	5% A-D Critical Value					0.755	Kaplan-Meier (KM) Method					
583	K-S Test Statistic					0.755	Mean					0.143

A	B	C	D	E	F	G	H	I	J	K	L
584	5% K-S Critical Value				0.234					SD	0.21
585	Data appear Gamma Distributed at 5% Significance Level									SE of Mean	0.0248
586										95% KM (t) UCL	0.184
587	Assuming Gamma Distribution									95% KM (z) UCL	0.184
588	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	0.186
589	Minimum				0.047					95% KM (bootstrap t) UCL	0.204
590	Maximum				1.6					95% KM (BCA) UCL	0.2
591	Mean				0.526					95% KM (Percentile Bootstrap) UCL	0.188
592	Median				0.547					95% KM (Chebyshev) UCL	0.251
593	SD				0.183					97.5% KM (Chebyshev) UCL	0.298
594	k star				6.974					99% KM (Chebyshev) UCL	0.39
595	Theta star				0.0754						
596	Nu star				1618					Potential UCLs to Use	
597	AppChi2				1526					95% KM (t) UCL	0.184
598	95% Gamma Approximate UCL				0.558						
599	95% Adjusted Gamma UCL				0.558						
600	Note: DL/2 is not a recommended method.										
601											
602											
603	Di-n-octylphthalate										
604											
605	General Statistics										
606	Number of Valid Data				94	Number of Detected Data				19	
607	Number of Distinct Detected Data				17	Number of Non-Detect Data				75	
608						Percent Non-Detects				79.79%	
609											
610	Raw Statistics					Log-transformed Statistics					
611	Minimum Detected				0.021	Minimum Detected				-3.863	
612	Maximum Detected				5	Maximum Detected				1.609	
613	Mean of Detected				0.947	Mean of Detected				-0.825	
614	SD of Detected				1.245	SD of Detected				1.4	
615	Minimum Non-Detect				0.18	Minimum Non-Detect				-1.715	
616	Maximum Non-Detect				13	Maximum Non-Detect				2.565	
617											
618	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				94	
619	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				0	
620	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				100.00%	
621											
622	UCL Statistics										
623	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
624	Shapiro Wilk Test Statistic				0.707	Shapiro Wilk Test Statistic				0.971	
625	5% Shapiro Wilk Critical Value				0.901	5% Shapiro Wilk Critical Value				0.901	
626	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
627											
628	Assuming Normal Distribution					Assuming Lognormal Distribution					
629	DL/2 Substitution Method					DL/2 Substitution Method					
630	Mean				0.455	Mean				-1.62	
631	SD				0.937	SD				1.097	
632	95% DL/2 (t) UCL				0.616	95% H-Stat (DL/2) UCL				0.449	
633											
634	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
635	MLE method failed to converge properly					Mean in Log Scale				-2.75	
636						SD in Log Scale				1.422	

	A	B	C	D	E	F	G	H	I	J	K	L
637										Mean in Original Scale		0.236
638										SD in Original Scale		0.657
639										95% Percentile Bootstrap UCL		0.359
640										95% BCA Bootstrap UCL		0.404
641												
642	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
643					k star (bias corrected)	0.687	Data appear Gamma Distributed at 5% Significance Level					
644					Theta Star	1.379						
645					nu star	26.09						
646												
647					A-D Test Statistic	0.371	Nonparametric Statistics					
648					5% A-D Critical Value	0.778	Kaplan-Meier (KM) Method					
649					K-S Test Statistic	0.778	Mean					
650					5% K-S Critical Value	0.206	SD					
651	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					
652							95% KM (t) UCL					
653	Assuming Gamma Distribution						95% KM (z) UCL					
654	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
655					Minimum	1E-09	95% KM (bootstrap t) UCL					
656					Maximum	5	95% KM (BCA) UCL					
657					Mean	1.192	95% KM (Percentile Bootstrap) UCL					
658					Median	1.056	95% KM (Chebyshev) UCL					
659					SD	0.979	97.5% KM (Chebyshev) UCL					
660					k star	0.347	99% KM (Chebyshev) UCL					
661					Theta star	3.429						
662					Nu star	65.33	Potential UCLs to Use					
663					AppChi2	47.73	95% KM (t) UCL					
664					95% Gamma Approximate UCL	1.631						
665					95% Adjusted Gamma UCL	1.639						
666	Note: DL/2 is not a recommended method.											
667												
668												
669	Indeno(1,2,3-cd)pyrene											
670												
671	General Statistics											
672					Number of Valid Data	112				Number of Detected Data		64
673					Number of Distinct Detected Data	57				Number of Non-Detect Data		48
674										Percent Non-Detects		42.86%
675												
676	Raw Statistics						Log-transformed Statistics					
677					Minimum Detected	0.028				Minimum Detected		-3.576
678					Maximum Detected	28				Maximum Detected		3.332
679					Mean of Detected	4.006				Mean of Detected		0.178
680					SD of Detected	5.893				SD of Detected		1.764
681					Minimum Non-Detect	0.18				Minimum Non-Detect		-1.715
682					Maximum Non-Detect	1.9				Maximum Non-Detect		0.642
683												
684	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
685	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
686	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
687												
688	UCL Statistics											
689	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					

	A	B	C	D	E	F	G	H	I	J	K	L
690	Lilliefors Test Statistic					0.252	Lilliefors Test Statistic					0.101
691	5% Lilliefors Critical Value					0.111	5% Lilliefors Critical Value					0.111
692	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
693												
694	Assuming Normal Distribution						Assuming Lognormal Distribution					
695	DL/2 Substitution Method						DL/2 Substitution Method					
696	Mean					2.357	Mean					-0.792
697	SD					4.835	SD					1.781
698	95% DL/2 (t) UCL					3.115	95% H-Stat (DL/2) UCL					2.65
699												
700	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
701	MLE yields a negative mean						Mean in Log Scale					-0.952
702							SD in Log Scale					1.96
703							Mean in Original Scale					2.34
704							SD in Original Scale					4.842
705							95% Percentile Bootstrap UCL					3.1
706							95% BCA Bootstrap UCL					3.271
707												
708	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
709	k star (bias corrected)					0.507	Data appear Lognormal at 5% Significance Level					
710	Theta Star					7.896						
711	nu star					64.94						
712												
713	A-D Test Statistic					1.247	Nonparametric Statistics					
714	5% A-D Critical Value					0.814	Kaplan-Meier (KM) Method					
715	K-S Test Statistic					0.814	Mean					2.339
716	5% K-S Critical Value					0.118	SD					4.821
717	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.459
718							95% KM (t) UCL					3.1
719	Assuming Gamma Distribution						95% KM (z) UCL					3.094
720	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					3.098
721	Minimum					1E-09	95% KM (bootstrap t) UCL					3.311
722	Maximum					28	95% KM (BCA) UCL					3.111
723	Mean					3.456	95% KM (Percentile Bootstrap) UCL					3.107
724	Median					1.601	95% KM (Chebyshev) UCL					4.34
725	SD					4.687	97.5% KM (Chebyshev) UCL					5.206
726	k star					0.402	99% KM (Chebyshev) UCL					6.908
727	Theta star					8.597						
728	Nu star					90.04	Potential UCLs to Use					
729	AppChi2					69.16	97.5% KM (Chebyshev) UCL					5.206
730	95% Gamma Approximate UCL					4.499						
731	95% Adjusted Gamma UCL					4.514						
732	Note: DL/2 is not a recommended method.											
733												
734												
735	Phenanthrene											
736												
737	General Statistics											
738	Number of Valid Data					116	Number of Detected Data					73
739	Number of Distinct Detected Data					69	Number of Non-Detect Data					43
740							Percent Non-Detects					37.07%
741												
742	Raw Statistics						Log-transformed Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L	
743				Minimum Detected		0.015				Minimum Detected		-4.2	
744				Maximum Detected		80				Maximum Detected		4.382	
745				Mean of Detected		8.973				Mean of Detected		0.506	
746				SD of Detected		16.53				SD of Detected		2.132	
747				Minimum Non-Detect		0.18				Minimum Non-Detect		-1.715	
748				Maximum Non-Detect		1.9				Maximum Non-Detect		0.642	
749													
750	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		78
751	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		38
752	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		67.24%
753													
754	UCL Statistics												
755	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
756				Lilliefors Test Statistic		0.294				Lilliefors Test Statistic		0.0691	
757				5% Lilliefors Critical Value		0.104				5% Lilliefors Critical Value		0.104	
758	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
759													
760	Assuming Normal Distribution						Assuming Lognormal Distribution						
761				DL/2 Substitution Method						DL/2 Substitution Method			
762				Mean		5.702				Mean		-0.479	
763				SD		13.76				SD		2.148	
764				95% DL/2 (t) UCL		7.82				95% H-Stat (DL/2) UCL		9.216	
765													
766				Maximum Likelihood Estimate(MLE) Method		N/A				Log ROS Method			
767	MLE yields a negative mean										Mean in Log Scale		-0.602
768											SD in Log Scale		2.318
769											Mean in Original Scale		5.695
770											SD in Original Scale		13.76
771											95% Percentile Bootstrap UCL		7.844
772											95% BCA Bootstrap UCL		8.364
773													
774	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
775				k star (bias corrected)		0.384				Data appear Lognormal at 5% Significance Level			
776				Theta Star		23.35							
777				nu star		56.11							
778													
779				A-D Test Statistic		1.528				Nonparametric Statistics			
780				5% A-D Critical Value		0.844				Kaplan-Meier (KM) Method			
781				K-S Test Statistic		0.844				Mean		5.683	
782				5% K-S Critical Value		0.112				SD		13.71	
783	Data not Gamma Distributed at 5% Significance Level										SE of Mean		1.282
784											95% KM (t) UCL		7.808
785	Assuming Gamma Distribution										95% KM (z) UCL		7.791
786	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		7.803
787				Minimum		1E-09				95% KM (bootstrap t) UCL		8.445	
788				Maximum		80				95% KM (BCA) UCL		7.893	
789				Mean		6.884				95% KM (Percentile Bootstrap) UCL		7.895	
790				Median		1.67				95% KM (Chebyshev) UCL		11.27	
791				SD		13.63				97.5% KM (Chebyshev) UCL		13.69	
792				k star		0.163				99% KM (Chebyshev) UCL		18.43	
793				Theta star		42.29							
794				Nu star		37.77				Potential UCLs to Use			
795				AppChi2		24.7				97.5% KM (Chebyshev) UCL		13.69	

	A	B	C	D	E	F	G	H	I	J	K	L	
796	95% Gamma Approximate UCL					10.53							
797	95% Adjusted Gamma UCL					10.59							
798	Note: DL/2 is not a recommended method.												
799													
800													
801	Dieldrin												
802													
803	General Statistics												
804	Number of Valid Data					107	Number of Detected Data					28	
805	Number of Distinct Detected Data					25	Number of Non-Detect Data					79	
806							Percent Non-Detects					73.83%	
807													
808	Raw Statistics						Log-transformed Statistics						
809	Minimum Detected					0.0011	Minimum Detected					-6.812	
810	Maximum Detected					0.29	Maximum Detected					-1.238	
811	Mean of Detected					0.0374	Mean of Detected					-3.928	
812	SD of Detected					0.0561	SD of Detected					1.165	
813	Minimum Non-Detect					0.0034	Minimum Non-Detect					-5.684	
814	Maximum Non-Detect					0.026	Maximum Non-Detect					-3.65	
815													
816	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					96	
817	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					11	
818	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					89.72%	
819													
820	UCL Statistics												
821	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
822	Shapiro Wilk Test Statistic					0.565	Shapiro Wilk Test Statistic					0.987	
823	5% Shapiro Wilk Critical Value					0.924	5% Shapiro Wilk Critical Value					0.924	
824	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
825													
826	Assuming Normal Distribution						Assuming Lognormal Distribution						
827	DL/2 Substitution Method						DL/2 Substitution Method						
828	Mean					0.0129	Mean					-5.317	
829	SD					0.0321	SD					1.21	
830	95% DL/2 (t) UCL					0.0181	95% H-Stat (DL/2) UCL					0.0117	
831													
832	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
833	MLE yields a negative mean						Mean in Log Scale					-5.902	
834							SD in Log Scale					1.542	
835							Mean in Original Scale					0.0112	
836							SD in Original Scale					0.0324	
837							95% Percentile Bootstrap UCL					0.0169	
838							95% BCA Bootstrap UCL					0.0197	
839													
840	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
841	k star (bias corrected)					0.837	Data appear Gamma Distributed at 5% Significance Level						
842	Theta Star					0.0446							
843	nu star					46.87							
844													
845	A-D Test Statistic					0.646	Nonparametric Statistics						
846	5% A-D Critical Value					0.778	Kaplan-Meier (KM) Method						
847	K-S Test Statistic					0.778	Mean					0.0115	
848	5% K-S Critical Value					0.171	SD					0.0322	

	A	B	C	D	E	F	G	H	I	J	K	L	
849	Data appear Gamma Distributed at 5% Significance Level											SE of Mean	0.0032
850												95% KM (t) UCL	0.0169
851	Assuming Gamma Distribution											95% KM (z) UCL	0.0168
852	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	0.0169
853	Minimum						0.0011					95% KM (bootstrap t) UCL	0.0219
854	Maximum						0.29					95% KM (BCA) UCL	0.0194
855	Mean						0.037					95% KM (Percentile Bootstrap) UCL	0.0179
856	Median						0.036					95% KM (Chebyshev) UCL	0.0255
857	SD						0.0285					97.5% KM (Chebyshev) UCL	0.0316
858	k star						3.007					99% KM (Chebyshev) UCL	0.0434
859	Theta star						0.0123						
860	Nu star						643.6					Potential UCLs to Use	
861	AppChi2						585.7					95% KM (t) UCL	0.0169
862	95% Gamma Approximate UCL						0.0406						
863	95% Adjusted Gamma UCL						0.0407						
864	Note: DL/2 is not a recommended method.												
865													
866													
867	Endosulfan II												
868													
869	General Statistics												
870	Number of Valid Data						110					Number of Detected Data	16
871	Number of Distinct Detected Data						15					Number of Non-Detect Data	94
872												Percent Non-Detects	85.45%
873													
874	Raw Statistics							Log-transformed Statistics					
875	Minimum Detected						0.0023					Minimum Detected	-6.075
876	Maximum Detected						0.67					Maximum Detected	-0.4
877	Mean of Detected						0.0946					Mean of Detected	-3.45
878	SD of Detected						0.164					SD of Detected	1.61
879	Minimum Non-Detect						0.0034					Minimum Non-Detect	-5.684
880	Maximum Non-Detect						0.026					Maximum Non-Detect	-3.65
881													
882	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	102
883	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	8
884	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	92.73%
885													
886	UCL Statistics												
887	Normal Distribution Test with Detected Values Only							Lognormal Distribution Test with Detected Values Only					
888	Shapiro Wilk Test Statistic						0.57					Shapiro Wilk Test Statistic	0.958
889	5% Shapiro Wilk Critical Value						0.887					5% Shapiro Wilk Critical Value	0.887
890	Data not Normal at 5% Significance Level							Data appear Lognormal at 5% Significance Level					
891													
892	Assuming Normal Distribution							Assuming Lognormal Distribution					
893	DL/2 Substitution Method											DL/2 Substitution Method	
894	Mean						0.0165					Mean	-5.603
895	SD						0.0691					SD	1.203
896	95% DL/2 (t) UCL						0.0275					95% H-Stat (DL/2) UCL	0.00811
897													
898	Maximum Likelihood Estimate(MLE) Method						N/A					Log ROS Method	
899	MLE yields a negative mean											Mean in Log Scale	-6.178
900												SD in Log Scale	1.644
901												Mean in Original Scale	0.0157

	A	B	C	D	E	F	G	H	I	J	K	L	
902											SD in Original Scale	0.0692	
903											95% Percentile Bootstrap UCL	0.0277	
904											95% BCA Bootstrap UCL	0.0336	
905													
906	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
907					k star (bias corrected)	0.505	Data appear Gamma Distributed at 5% Significance Level						
908					Theta Star	0.187							
909					nu star	16.17							
910													
911					A-D Test Statistic	0.566	Nonparametric Statistics						
912					5% A-D Critical Value	0.79	Kaplan-Meier (KM) Method						
913					K-S Test Statistic	0.79	Mean					0.0159	
914					5% K-S Critical Value	0.226	SD					0.0688	
915	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.00678	
916							95% KM (t) UCL					0.0272	
917	Assuming Gamma Distribution						95% KM (z) UCL					0.0271	
918	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0269	
919					Minimum	1E-09	95% KM (bootstrap t) UCL					0.0444	
920					Maximum	0.67	95% KM (BCA) UCL					0.0327	
921					Mean	0.109	95% KM (Percentile Bootstrap) UCL					0.0296	
922					Median	0.0824	95% KM (Chebyshev) UCL					0.0455	
923					SD	0.114	97.5% KM (Chebyshev) UCL					0.0583	
924					k star	0.217	99% KM (Chebyshev) UCL					0.0834	
925					Theta star	0.5							
926					Nu star	47.81	Potential UCLs to Use						
927					AppChi2	32.94	95% KM (t) UCL					0.0272	
928					95% Gamma Approximate UCL	0.158							
929					95% Adjusted Gamma UCL	0.158							
930	Note: DL/2 is not a recommended method.												
931													
932													
933	Endosulfan sulfate												
934													
935	General Statistics												
936					Number of Valid Data	107					Number of Detected Data	11	
937					Number of Distinct Detected Data	11					Number of Non-Detect Data	96	
938											Percent Non-Detects	89.72%	
939													
940	Raw Statistics						Log-transformed Statistics						
941					Minimum Detected	0.0018					Minimum Detected	-6.32	
942					Maximum Detected	0.057					Maximum Detected	-2.865	
943					Mean of Detected	0.0234					Mean of Detected	-4.171	
944					SD of Detected	0.0187					SD of Detected	1.087	
945					Minimum Non-Detect	0.0034					Minimum Non-Detect	-5.684	
946					Maximum Non-Detect	0.026					Maximum Non-Detect	-3.65	
947													
948	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						102
949	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						5
950	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						95.33%
951													
952	UCL Statistics												
953	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
954					Shapiro Wilk Test Statistic	0.918					Shapiro Wilk Test Statistic	0.937	

A	B	C	D	E	F	G	H	I	J	K	L
955	5% Shapiro Wilk Critical Value				0.85	5% Shapiro Wilk Critical Value				0.85	
956	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
957											
958	Assuming Normal Distribution					Assuming Lognormal Distribution					
959	DL/2 Substitution Method					DL/2 Substitution Method					
960	Mean			0.00603		Mean			-5.664		
961	SD			0.00903		SD			0.912		
962	95% DL/2 (t) UCL			0.00747		95% H-Stat (DL/2) UCL			0.00591		
963											
964	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
965	Mean			0.0451		Mean in Log Scale			-6.511		
966	SD			0.0118		SD in Log Scale			1.201		
967	95% MLE (t) UCL			0.047		Mean in Original Scale			0.00385		
968	95% MLE (Tiku) UCL			0.0536		SD in Original Scale			0.00887		
969						95% Percentile Bootstrap UCL			0.00533		
970						95% BCA Bootstrap UCL			0.0057		
971											
972	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
973	k star (bias corrected)			1.04		Data appear Normal at 5% Significance Level					
974	Theta Star			0.0225							
975	nu star			22.88							
976											
977	A-D Test Statistic			0.209		Nonparametric Statistics					
978	5% A-D Critical Value			0.745		Kaplan-Meier (KM) Method					
979	K-S Test Statistic			0.745		Mean			0.00412		
980	5% K-S Critical Value			0.261		SD			0.00874		
981	Data appear Gamma Distributed at 5% Significance Level					SE of Mean			0.0008943		
982						95% KM (t) UCL			0.00561		
983	Assuming Gamma Distribution					95% KM (z) UCL			0.00559		
984	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL			0.00618		
985	Minimum			0.0018		95% KM (bootstrap t) UCL			0.00579		
986	Maximum			0.057		95% KM (BCA) UCL			0.0167		
987	Mean			0.0242		95% KM (Percentile Bootstrap) UCL			0.00894		
988	Median			0.0243		95% KM (Chebyshev) UCL			0.00802		
989	SD			0.00596		97.5% KM (Chebyshev) UCL			0.00971		
990	k star			11.01		99% KM (Chebyshev) UCL			0.013		
991	Theta star			0.0022							
992	Nu star			2357		Potential UCLs to Use					
993	AppChi2			2245		95% KM (t) UCL			0.00561		
994	95% Gamma Approximate UCL			0.0254		95% KM (Percentile Bootstrap) UCL			0.00894		
995	95% Adjusted Gamma UCL			0.0255							
996	Note: DL/2 is not a recommended method.										
997											
998											
999	Endrin aldehyde										
1000											
1001	General Statistics										
1002	Number of Valid Data			107		Number of Detected Data			16		
1003	Number of Distinct Detected Data			13		Number of Non-Detect Data			91		
1004						Percent Non-Detects			85.05%		
1005											
1006	Raw Statistics					Log-transformed Statistics					
1007	Minimum Detected			0.0011		Minimum Detected			-6.812		

	A	B	C	D	E	F	G	H	I	J	K	L	
1008				Maximum Detected		0.11				Maximum Detected		-2.207	
1009				Mean of Detected		0.0294				Mean of Detected		-4.189	
1010				SD of Detected		0.033				SD of Detected		1.337	
1011				Minimum Non-Detect		0.0034				Minimum Non-Detect		-5.684	
1012				Maximum Non-Detect		0.026				Maximum Non-Detect		-3.65	
1013													
1014	Note: Data have multiple DLs - Use of KM Method is recommended										Number treated as Non-Detect		102
1015	For all methods (except KM, DL/2, and ROS Methods),										Number treated as Detected		5
1016	Observations < Largest ND are treated as NDs										Single DL Non-Detect Percentage		95.33%
1017													
1018	UCL Statistics												
1019	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1020				Shapiro Wilk Test Statistic		0.767				Shapiro Wilk Test Statistic		0.927	
1021				5% Shapiro Wilk Critical Value		0.887				5% Shapiro Wilk Critical Value		0.887	
1022	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
1023													
1024	Assuming Normal Distribution						Assuming Lognormal Distribution						
1025				DL/2 Substitution Method						DL/2 Substitution Method			
1026				Mean		0.00787				Mean		-5.589	
1027				SD		0.0158				SD		1.027	
1028				95% DL/2 (t) UCL		0.0104				95% H-Stat (DL/2) UCL		0.00745	
1029													
1030				Maximum Likelihood Estimate(MLE) Method						Log ROS Method			
1031				Mean		0.0782				Mean in Log Scale		-6.292	
1032				SD		0.0288				SD in Log Scale		1.327	
1033				95% MLE (t) UCL		0.0828				Mean in Original Scale		0.00599	
1034				95% MLE (Tiku) UCL		0.0992				SD in Original Scale		0.0159	
1035										95% Percentile Bootstrap UCL		0.00867	
1036										95% BCA Bootstrap UCL		0.00971	
1037													
1038	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1039				k star (bias corrected)		0.761				Data appear Gamma Distributed at 5% Significance Level			
1040				Theta Star		0.0386							
1041				nu star		24.37							
1042													
1043				A-D Test Statistic		0.459				Nonparametric Statistics			
1044				5% A-D Critical Value		0.768				Kaplan-Meier (KM) Method			
1045				K-S Test Statistic		0.768				Mean		0.0059	
1046				5% K-S Critical Value		0.222				SD		0.0159	
1047	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		0.00162
1048										95% KM (t) UCL		0.00859	
1049	Assuming Gamma Distribution										95% KM (z) UCL		0.00856
1050				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL		0.00854	
1051				Minimum		1E-09				95% KM (bootstrap t) UCL		0.00965	
1052				Maximum		0.11				95% KM (BCA) UCL		0.0145	
1053				Mean		0.0296				95% KM (Percentile Bootstrap) UCL		0.0102	
1054				Median		0.0276				95% KM (Chebyshev) UCL		0.013	
1055				SD		0.0218				97.5% KM (Chebyshev) UCL		0.016	
1056				k star		0.727				99% KM (Chebyshev) UCL		0.022	
1057				Theta star		0.0408							
1058				Nu star		155.5				Potential UCLs to Use			
1059				AppChi2		127.7				95% KM (t) UCL		0.00859	
1060				95% Gamma Approximate UCL		0.0361							

	A	B	C	D	E	F	G	H	I	J	K	L	
1061	95% Adjusted Gamma UCL					0.0362							
1062	Note: DL/2 is not a recommended method.												
1063													
1064													
1065	Endrin ketone												
1066													
1067	General Statistics												
1068	Number of Valid Data					113	Number of Detected Data					21	
1069	Number of Distinct Detected Data					20	Number of Non-Detect Data					92	
1070							Percent Non-Detects					81.42%	
1071													
1072	Raw Statistics						Log-transformed Statistics						
1073	Minimum Detected					0.00031	Minimum Detected					-8.079	
1074	Maximum Detected					0.12	Maximum Detected					-2.12	
1075	Mean of Detected					0.0414	Mean of Detected					-3.692	
1076	SD of Detected					0.0315	SD of Detected					1.422	
1077	Minimum Non-Detect					0.0034	Minimum Non-Detect					-5.684	
1078	Maximum Non-Detect					0.026	Maximum Non-Detect					-3.65	
1079													
1080	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					99	
1081	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					14	
1082	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					87.61%	
1083													
1084	UCL Statistics												
1085	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1086	Shapiro Wilk Test Statistic					0.933	Shapiro Wilk Test Statistic					0.789	
1087	5% Shapiro Wilk Critical Value					0.908	5% Shapiro Wilk Critical Value					0.908	
1088	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1089													
1090	Assuming Normal Distribution						Assuming Lognormal Distribution						
1091	DL/2 Substitution Method						DL/2 Substitution Method						
1092	Mean					0.011	Mean					-5.439	
1093	SD					0.0201	SD					1.225	
1094	95% DL/2 (t) UCL					0.0142	95% H-Stat (DL/2) UCL					0.00975	
1095													
1096	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
1097	MLE yields a negative mean						Mean in Log Scale					-6.385	
1098							SD in Log Scale					1.762	
1099							Mean in Original Scale					0.009	
1100							SD in Original Scale					0.0206	
1101							95% Percentile Bootstrap UCL					0.0122	
1102							95% BCA Bootstrap UCL					0.0134	
1103													
1104	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1105	k star (bias corrected)					0.992	Data appear Normal at 5% Significance Level						
1106	Theta Star					0.0418							
1107	nu star					41.66							
1108													
1109	A-D Test Statistic					0.491	Nonparametric Statistics						
1110	5% A-D Critical Value					0.767	Kaplan-Meier (KM) Method						
1111	K-S Test Statistic					0.767	Mean					0.00843	
1112	5% K-S Critical Value					0.194	SD					0.0207	
1113	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.00201	

	A	B	C	D	E	F	G	H	I	J	K	L
1114							95% KM (t) UCL					0.0118
1115	Assuming Gamma Distribution						95% KM (z) UCL					0.0117
1116	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0118
1117					Minimum	0.00031	95% KM (bootstrap t) UCL					0.0124
1118					Maximum	0.12	95% KM (BCA) UCL					0.02
1119					Mean	0.0417	95% KM (Percentile Bootstrap) UCL					0.0185
1120					Median	0.0414	95% KM (Chebyshev) UCL					0.0172
1121					SD	0.0164	97.5% KM (Chebyshev) UCL					0.021
1122					k star	4.147	99% KM (Chebyshev) UCL					0.0285
1123					Theta star	0.0101						
1124					Nu star	937.3	Potential UCLs to Use					
1125					AppChi2	867.2	95% KM (t) UCL					0.0118
1126	95% Gamma Approximate UCL					0.0451	95% KM (Percentile Bootstrap) UCL					0.0185
1127	95% Adjusted Gamma UCL					0.0451						
1128	Note: DL/2 is not a recommended method.											
1129												
1130												
1131	gamma-Chlordane											
1132												
1133	General Statistics											
1134	Number of Valid Data					105	Number of Detected Data					16
1135	Number of Distinct Detected Data					15	Number of Non-Detect Data					89
1136							Percent Non-Detects					84.76%
1137												
1138	Raw Statistics						Log-transformed Statistics					
1139					Minimum Detected	0.0011					Minimum Detected	-6.812
1140					Maximum Detected	0.065					Maximum Detected	-2.733
1141					Mean of Detected	0.0231					Mean of Detected	-4.385
1142					SD of Detected	0.0188					SD of Detected	1.403
1143					Minimum Non-Detect	0.0017					Minimum Non-Detect	-6.377
1144					Maximum Non-Detect	0.013					Maximum Non-Detect	-4.343
1145												
1146	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					95
1147	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					10
1148	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					90.48%
1149												
1150	UCL Statistics											
1151	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1152					Shapiro Wilk Test Statistic	0.914					Shapiro Wilk Test Statistic	0.846
1153					5% Shapiro Wilk Critical Value	0.887					5% Shapiro Wilk Critical Value	0.887
1154	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1155												
1156	Assuming Normal Distribution						Assuming Lognormal Distribution					
1157					DL/2 Substitution Method						DL/2 Substitution Method	
1158					Mean	0.00532					Mean	-6.17
1159					SD	0.0106					SD	1.153
1160					95% DL/2 (t) UCL	0.00703					95% H-Stat (DL/2) UCL	0.00479
1161												
1162	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1163					Mean	0.0372					Mean in Log Scale	-6.645
1164					SD	0.0123					SD in Log Scale	1.472
1165					95% MLE (t) UCL	0.0391					Mean in Original Scale	0.0047
1166					95% MLE (Tiku) UCL	0.0435					SD in Original Scale	0.0107

	A	B	C	D	E	F	G	H	I	J	K	L
1167										95% Percentile Bootstrap UCL		0.00648
1168										95% BCA Bootstrap UCL		0.00697
1169												
1170	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1171					k star (bias corrected)	0.81	Data appear Normal at 5% Significance Level					
1172					Theta Star	0.0285						
1173					nu star	25.91						
1174												
1175					A-D Test Statistic	0.843	Nonparametric Statistics					
1176					5% A-D Critical Value	0.766	Kaplan-Meier (KM) Method					
1177					K-S Test Statistic	0.766	Mean					
1178					5% K-S Critical Value	0.222	SD					
1179	Data follow Appr. Gamma Distribution at 5% Significance Level						SE of Mean					
1180							95% KM (t) UCL					
1181	Assuming Gamma Distribution						95% KM (z) UCL					
1182	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
1183					Minimum	0.0011	95% KM (bootstrap t) UCL					
1184					Maximum	0.065	95% KM (BCA) UCL					
1185					Mean	0.0291	95% KM (Percentile Bootstrap) UCL					
1186					Median	0.0293	95% KM (Chebyshev) UCL					
1187					SD	0.0153	97.5% KM (Chebyshev) UCL					
1188					k star	2.412	99% KM (Chebyshev) UCL					
1189					Theta star	0.0121						
1190					Nu star	506.6	Potential UCLs to Use					
1191					AppChi2	455.4	95% KM (t) UCL					
1192					95% Gamma Approximate UCL	0.0324	95% KM (Percentile Bootstrap) UCL					
1193					95% Adjusted Gamma UCL	0.0325						
1194	Note: DL/2 is not a recommended method.											
1195												
1196												
1197	Aroclor-1254											
1198												
1199	General Statistics											
1200					Number of Valid Data	114				Number of Detected Data		21
1201					Number of Distinct Detected Data	21				Number of Non-Detect Data		93
1202										Percent Non-Detects		81.58%
1203												
1204	Raw Statistics						Log-transformed Statistics					
1205					Minimum Detected	0.02				Minimum Detected		-3.912
1206					Maximum Detected	5.7				Maximum Detected		1.74
1207					Mean of Detected	1.164				Mean of Detected		-0.622
1208					SD of Detected	1.553				SD of Detected		1.394
1209					Minimum Non-Detect	0.033				Minimum Non-Detect		-3.411
1210					Maximum Non-Detect	0.38				Maximum Non-Detect		-0.968
1211												
1212	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					
1213	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					
1214	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					
1215												
1216	UCL Statistics											
1217	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1218					Shapiro Wilk Test Statistic	0.685				Shapiro Wilk Test Statistic		0.967
1219					5% Shapiro Wilk Critical Value	0.908				5% Shapiro Wilk Critical Value		0.908

A	B	C	D	E	F	G	H	I	J	K	L		
1220	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
1221													
1222	Assuming Normal Distribution					Assuming Lognormal Distribution							
1223	DL/2 Substitution Method					DL/2 Substitution Method							
1224	Mean					0.233	Mean					-3.26	
1225	SD					0.79	SD					1.415	
1226	95% DL/2 (t) UCL					0.356	95% H-Stat (DL/2) UCL					0.104	
1227													
1228	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
1229	MLE yields a negative mean					Mean in Log Scale						-3.928	
1230						SD in Log Scale						2.113	
1231						Mean in Original Scale						0.231	
1232						SD in Original Scale						0.791	
1233						95% Percentile Bootstrap UCL						0.363	
1234						95% BCA Bootstrap UCL						0.402	
1235													
1236	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
1237	k star (bias corrected)					0.693	Data appear Gamma Distributed at 5% Significance Level						
1238	Theta Star					1.68							
1239	nu star					29.1							
1240													
1241	A-D Test Statistic					0.519	Nonparametric Statistics						
1242	5% A-D Critical Value					0.782	Kaplan-Meier (KM) Method						
1243	K-S Test Statistic					0.782	Mean					0.231	
1244	5% K-S Critical Value					0.197	SD					0.787	
1245	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						0.0755	
1246						95% KM (t) UCL						0.356	
1247	Assuming Gamma Distribution					95% KM (z) UCL						0.355	
1248	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						0.336	
1249	Minimum					0.02	95% KM (bootstrap t) UCL						0.431
1250	Maximum					5.7	95% KM (BCA) UCL						0.44
1251	Mean					1.158	95% KM (Percentile Bootstrap) UCL						0.402
1252	Median					1.153	95% KM (Chebyshev) UCL						0.56
1253	SD					0.656	97.5% KM (Chebyshev) UCL						0.703
1254	k star					3.551	99% KM (Chebyshev) UCL						0.982
1255	Theta star					0.326							
1256	Nu star					809.6	Potential UCLs to Use						
1257	AppChi2					744.5	95% KM (t) UCL					0.356	
1258	95% Gamma Approximate UCL					1.259							
1259	95% Adjusted Gamma UCL					1.26							
1260	Note: DL/2 is not a recommended method.												
1261													
1262													
1263	Aroclor-1260												
1264													
1265	General Statistics												
1266	Number of Valid Data					115	Number of Detected Data					59	
1267	Number of Distinct Detected Data					52	Number of Non-Detect Data					56	
1268						Percent Non-Detects						48.70%	
1269													
1270	Raw Statistics					Log-transformed Statistics							
1271	Minimum Detected					0.017	Minimum Detected					-4.075	
1272	Maximum Detected					43	Maximum Detected					3.761	

	A	B	C	D	E	F	G	H	I	J	K	L
1273	Mean of Detected				2.316	Mean of Detected				-0.925		
1274	SD of Detected				6.926	SD of Detected				1.774		
1275	Minimum Non-Detect				0.034	Minimum Non-Detect				-3.381		
1276	Maximum Non-Detect				0.089	Maximum Non-Detect				-2.419		
1277												
1278	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					69	
1279	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					46	
1280	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					60.00%	
1281												
1282	UCL Statistics											
1283	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
1284	Lilliefors Test Statistic				0.377	Lilliefors Test Statistic				0.0719		
1285	5% Lilliefors Critical Value				0.115	5% Lilliefors Critical Value				0.115		
1286	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1287												
1288	Assuming Normal Distribution					Assuming Lognormal Distribution						
1289	DL/2 Substitution Method					DL/2 Substitution Method						
1290	Mean				1.199	Mean				-2.36		
1291	SD				5.073	SD				1.952		
1292	95% DL/2 (t) UCL				1.983	95% H-Stat (DL/2) UCL				0.626		
1293												
1294	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
1295	MLE yields a negative mean					Mean in Log Scale				-2.68		
1296						SD in Log Scale				2.316		
1297						Mean in Original Scale				1.196		
1298						SD in Original Scale				5.073		
1299						95% Percentile Bootstrap UCL				1.985		
1300						95% BCA Bootstrap UCL				2.359		
1301												
1302	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
1303	k star (bias corrected)				0.369	Data appear Lognormal at 5% Significance Level						
1304	Theta Star				6.281							
1305	nu star				43.51							
1306												
1307	A-D Test Statistic				4.045	Nonparametric Statistics						
1308	5% A-D Critical Value				0.845	Kaplan-Meier (KM) Method						
1309	K-S Test Statistic				0.845	Mean				1.2		
1310	5% K-S Critical Value				0.124	SD				5.05		
1311	Data not Gamma Distributed at 5% Significance Level					SE of Mean				0.475		
1312						95% KM (t) UCL				1.988		
1313	Assuming Gamma Distribution					95% KM (z) UCL				1.981		
1314	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				1.984		
1315	Minimum				1E-09	95% KM (bootstrap t) UCL				3.538		
1316	Maximum				43	95% KM (BCA) UCL				2.077		
1317	Mean				2.204	95% KM (Percentile Bootstrap) UCL				2.01		
1318	Median				0.59	95% KM (Chebyshev) UCL				3.27		
1319	SD				5.271	97.5% KM (Chebyshev) UCL				4.166		
1320	k star				0.155	99% KM (Chebyshev) UCL				5.926		
1321	Theta star				14.18							
1322	Nu star				35.75	Potential UCLs to Use						
1323	AppChi2				23.07	97.5% KM (Chebyshev) UCL				4.166		
1324	95% Gamma Approximate UCL				3.415							
1325	95% Adjusted Gamma UCL				3.434							

	A	B	C	D	E	F	G	H	I	J	K	L
1326	Note: DL/2 is not a recommended method.											
1327												
1328												
1329	Antimony											
1330												
1331	General Statistics											
1332	Number of Valid Data				118		Number of Detected Data				77	
1333	Number of Distinct Detected Data				58		Number of Non-Detect Data				41	
1334							Percent Non-Detects				34.75%	
1335												
1336	Raw Statistics						Log-transformed Statistics					
1337	Minimum Detected				0.3		Minimum Detected				-1.204	
1338	Maximum Detected				115		Maximum Detected				4.745	
1339	Mean of Detected				11.63		Mean of Detected				1.246	
1340	SD of Detected				24.3		SD of Detected				1.435	
1341	Minimum Non-Detect				0.63		Minimum Non-Detect				-0.462	
1342	Maximum Non-Detect				9.9		Maximum Non-Detect				2.293	
1343												
1344	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				103	
1345	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				15	
1346	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				87.29%	
1347												
1348	UCL Statistics											
1349	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1350	Lilliefors Test Statistic				0.355		Lilliefors Test Statistic				0.13	
1351	5% Lilliefors Critical Value				0.101		5% Lilliefors Critical Value				0.101	
1352	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1353												
1354	Assuming Normal Distribution						Assuming Lognormal Distribution					
1355	DL/2 Substitution Method						DL/2 Substitution Method					
1356	Mean				8.758		Mean				1.184	
1357	SD				19.99		SD				1.234	
1358	95% DL/2 (t) UCL				11.81		95% H-Stat (DL/2) UCL				9.243	
1359												
1360	Maximum Likelihood Estimate(MLE) Method				N/A		Log ROS Method					
1361	MLE yields a negative mean						Mean in Log Scale				0.994	
1362							SD in Log Scale				1.275	
1363							Mean in Original Scale				8.309	
1364							SD in Original Scale				20.12	
1365							95% Percentile Bootstrap UCL				11.7	
1366							95% BCA Bootstrap UCL				12.49	
1367												
1368	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1369	k star (bias corrected)				0.511		Data do not follow a Discernable Distribution (0.05)					
1370	Theta Star				22.78							
1371	nu star				78.65							
1372												
1373	A-D Test Statistic				5.884		Nonparametric Statistics					
1374	5% A-D Critical Value				0.816		Kaplan-Meier (KM) Method					
1375	K-S Test Statistic				0.816		Mean				8.334	
1376	5% K-S Critical Value				0.107		SD				20.04	
1377	Data not Gamma Distributed at 5% Significance Level						SE of Mean				1.86	
1378							95% KM (t) UCL				11.42	

A	B	C	D	E	F	G	H	I	J	K	L
1379	Assuming Gamma Distribution					95% KM (z) UCL					11.39
1380	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					11.41
1381	Minimum			0.3		95% KM (bootstrap t) UCL					12.89
1382	Maximum			115		95% KM (BCA) UCL					12.31
1383	Mean			11.54		95% KM (Percentile Bootstrap) UCL					11.56
1384	Median			6.8		95% KM (Chebyshev) UCL					16.44
1385	SD			19.59		97.5% KM (Chebyshev) UCL					19.95
1386	k star			0.744		99% KM (Chebyshev) UCL					26.84
1387	Theta star			15.51							
1388	Nu star			175.6		Potential UCLs to Use					
1389	AppChi2			146		95% KM (Chebyshev) UCL					16.44
1390	95% Gamma Approximate UCL			13.88							
1391	95% Adjusted Gamma UCL			13.92							
1392	Note: DL/2 is not a recommended method.										
1393											
1394											
1395	Arsenic										
1396											
1397	General Statistics										
1398	Number of Valid Data			118		Number of Detected Data			117		
1399	Number of Distinct Detected Data			75		Number of Non-Detect Data			1		
1400						Percent Non-Detects			0.85%		
1401											
1402	Raw Statistics					Log-transformed Statistics					
1403	Minimum Detected			2.2		Minimum Detected			0.788		
1404	Maximum Detected			37.4		Maximum Detected			3.622		
1405	Mean of Detected			8.437		Mean of Detected			1.988		
1406	SD of Detected			5.478		SD of Detected			0.518		
1407	Minimum Non-Detect			0.48		Minimum Non-Detect			-0.734		
1408	Maximum Non-Detect			0.48		Maximum Non-Detect			-0.734		
1409											
1410											
1411	UCL Statistics										
1412	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
1413	Lilliefors Test Statistic			0.201		Lilliefors Test Statistic			0.0836		
1414	5% Lilliefors Critical Value			0.0819		5% Lilliefors Critical Value			0.0819		
1415	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level					
1416											
1417	Assuming Normal Distribution					Assuming Lognormal Distribution					
1418	DL/2 Substitution Method					DL/2 Substitution Method					
1419	Mean			8.367		Mean			1.959		
1420	SD			5.506		SD			0.604		
1421	95% DL/2 (t) UCL			9.208		95% H-Stat (DL/2) UCL			9.285		
1422											
1423	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
1424	Mean			8.348		Mean in Log Scale			1.976		
1425	SD			5.519		SD in Log Scale			0.532		
1426	95% MLE (t) UCL			9.191		Mean in Original Scale			8.38		
1427	95% MLE (Tiku) UCL			9.167		SD in Original Scale			5.489		
1428						95% Percentile Bootstrap UCL			9.216		
1429						95% BCA Bootstrap UCL			9.361		
1430											
1431	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					

A	B	C	D	E	F	G	H	I	J	K	L		
1432				k star (bias corrected)	3.535	Data do not follow a Discernable Distribution (0.05)							
1433				Theta Star	2.386								
1434				nu star	827.3								
1435													
1436				A-D Test Statistic	1.795	Nonparametric Statistics							
1437				5% A-D Critical Value	0.757	Kaplan-Meier (KM) Method							
1438				K-S Test Statistic	0.757						Mean	8.384	
1439				5% K-S Critical Value	0.0855						SD	5.461	
1440	Data not Gamma Distributed at 5% Significance Level											SE of Mean	0.505
1441												95% KM (t) UCL	9.221
1442	Assuming Gamma Distribution											95% KM (z) UCL	9.214
1443	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	9.221
1444				Minimum	1E-09						95% KM (bootstrap t) UCL	9.445	
1445				Maximum	37.4						95% KM (BCA) UCL	9.309	
1446				Mean	8.365						95% KM (Percentile Bootstrap) UCL	9.252	
1447				Median	7.1						95% KM (Chebyshev) UCL	10.58	
1448				SD	5.509						97.5% KM (Chebyshev) UCL	11.54	
1449				k star	1.633						99% KM (Chebyshev) UCL	13.41	
1450				Theta star	5.121								
1451				Nu star	385.5	Potential UCLs to Use							
1452				AppChi2	341						95% KM (BCA) UCL	9.309	
1453				95% Gamma Approximate UCL	9.457								
1454				95% Adjusted Gamma UCL	9.471								
1455	Note: DL/2 is not a recommended method.												
1456													
1457													
1458	Chromium												
1459													
1460	General Statistics												
1461	Number of Valid Observations				114	Number of Distinct Observations				98			
1462													
1463	Raw Statistics					Log-transformed Statistics							
1464				Minimum	3.6						Minimum of Log Data	1.281	
1465				Maximum	12100						Maximum of Log Data	9.401	
1466				Mean	200.8						Mean of log Data	3.52	
1467				Median	24.85						SD of log Data	1.333	
1468				SD	1155								
1469				Coefficient of Variation	5.754								
1470				Skewness	9.889								
1471													
1472	Relevant UCL Statistics												
1473	Normal Distribution Test					Lognormal Distribution Test							
1474				Lilliefors Test Statistic	0.442						Lilliefors Test Statistic	0.138	
1475				Lilliefors Critical Value	0.083						Lilliefors Critical Value	0.083	
1476	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
1477													
1478	Assuming Normal Distribution					Assuming Lognormal Distribution							
1479				95% Student's-t UCL	380.3						95% H-UCL	113	
1480	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						139.4	
1481				95% Adjusted-CLT UCL	485.9						97.5% Chebyshev (MVUE) UCL	164.6	
1482				95% Modified-t UCL	397						99% Chebyshev (MVUE) UCL	214.3	
1483													
1484	Gamma Distribution Test					Data Distribution							

	A	B	C	D	E	F	G	H	I	J	K	L		
1485	k star (bias corrected)				0.369	Data do not follow a Discernable Distribution (0.05)								
1486	Theta Star				543.7									
1487	MLE of Mean				200.8									
1488	MLE of Standard Deviation				330.4									
1489	nu star				84.21									
1490	Approximate Chi Square Value (.05)				64.06	Nonparametric Statistics								
1491	Adjusted Level of Significance				0.0479	95% CLT UCL							378.8	
1492	Adjusted Chi Square Value				63.84	95% Jackknife UCL							380.3	
1493						95% Standard Bootstrap UCL							380.1	
1494	Anderson-Darling Test Statistic				16.77	95% Bootstrap-t UCL							998	
1495	Anderson-Darling 5% Critical Value				0.85	95% Hall's Bootstrap UCL							950.9	
1496	Kolmogorov-Smirnov Test Statistic				0.271	95% Percentile Bootstrap UCL							406	
1497	Kolmogorov-Smirnov 5% Critical Value				0.0923	95% BCA Bootstrap UCL							536.2	
1498	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL							672.5	
1499						97.5% Chebyshev(Mean, Sd) UCL							876.6	
1500	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL							1278	
1501	95% Approximate Gamma UCL				264									
1502	95% Adjusted Gamma UCL				264.9									
1503														
1504	Potential UCL to Use					Use 97.5% Chebyshev (Mean, Sd) UCL							876.6	
1505														
1506														
1507	Cobalt													
1508														
1509	General Statistics													
1510	Number of Valid Data				118	Number of Detected Data				116				
1511	Number of Distinct Detected Data				64	Number of Non-Detect Data				2				
1512						Percent Non-Detects				1.69%				
1513														
1514	Raw Statistics					Log-transformed Statistics								
1515	Minimum Detected				2.9	Minimum Detected				1.065				
1516	Maximum Detected				36.2	Maximum Detected				3.589				
1517	Mean of Detected				9.668	Mean of Detected				2.196				
1518	SD of Detected				4.514	SD of Detected				0.364				
1519	Minimum Non-Detect				5.6	Minimum Non-Detect				1.723				
1520	Maximum Non-Detect				8	Maximum Non-Detect				2.079				
1521														
1522	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				35				
1523	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				83				
1524	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				29.66%				
1525														
1526	UCL Statistics													
1527	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only								
1528	Lilliefors Test Statistic				0.22	Lilliefors Test Statistic				0.142				
1529	5% Lilliefors Critical Value				0.0823	5% Lilliefors Critical Value				0.0823				
1530	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level								
1531														
1532	Assuming Normal Distribution					Assuming Lognormal Distribution								
1533	DL/2 Substitution Method					DL/2 Substitution Method								
1534	Mean				9.562	Mean				2.179				
1535	SD				4.549	SD				0.384				
1536	95% DL/2 (t) UCL				10.26	95% H-Stat (DL/2) UCL				10.07				
1537														

	A	B	C	D	E	F	G	H	I	J	K	L		
1538	Maximum Likelihood Estimate(MLE) Method						Log ROS Method							
1539	Mean				8.877	Mean in Log Scale					2.187			
1540	SD				5.284	SD in Log Scale					0.368			
1541	95% MLE (t) UCL				9.683	Mean in Original Scale					9.596			
1542	95% MLE (Tiku) UCL				9.714	SD in Original Scale					4.51			
1543						95% Percentile Bootstrap UCL					10.3			
1544						95% BCA Bootstrap UCL					10.46			
1545														
1546	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only								
1547	k star (bias corrected)				6.853	Data do not follow a Discernable Distribution (0.05)								
1548	Theta Star				1.411									
1549	nu star				1590									
1550														
1551	A-D Test Statistic				5.68	Nonparametric Statistics								
1552	5% A-D Critical Value				0.754	Kaplan-Meier (KM) Method								
1553	K-S Test Statistic				0.754	Mean					9.594			
1554	5% K-S Critical Value				0.0854	SD					4.498			
1555	Data not Gamma Distributed at 5% Significance Level					SE of Mean					0.416			
1556						95% KM (t) UCL					10.28			
1557	Assuming Gamma Distribution					95% KM (z) UCL					10.28			
1558	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					10.28			
1559	Minimum				2.9	95% KM (bootstrap t) UCL					10.52			
1560	Maximum				36.2	95% KM (BCA) UCL					10.36			
1561	Mean				9.584	95% KM (Percentile Bootstrap) UCL					10.31			
1562	Median				8.6	95% KM (Chebyshev) UCL					11.41			
1563	SD				4.526	97.5% KM (Chebyshev) UCL					12.19			
1564	k star				6.553	99% KM (Chebyshev) UCL					13.73			
1565	Theta star				1.463									
1566	Nu star				1546	Potential UCLs to Use								
1567	AppChi2				1456	95% KM (BCA) UCL					10.36			
1568	95% Gamma Approximate UCL				10.18									
1569	95% Adjusted Gamma UCL				10.19									
1570	Note: DL/2 is not a recommended method.													
1571														
1572														
1573	Copper													
1574														
1575	General Statistics													
1576	Number of Valid Observations				97	Number of Distinct Observations				92				
1577														
1578	Raw Statistics					Log-transformed Statistics								
1579	Minimum				4.3	Minimum of Log Data					1.459			
1580	Maximum				10400	Maximum of Log Data					9.25			
1581	Mean				530.3	Mean of log Data					4.512			
1582	Median				61.7	SD of log Data					1.903			
1583	SD				1431									
1584	Coefficient of Variation				2.698									
1585	Skewness				5.062									
1586														
1587	Relevant UCL Statistics													
1588	Normal Distribution Test					Lognormal Distribution Test								
1589	Lilliefors Test Statistic				0.357	Lilliefors Test Statistic					0.108			
1590	Lilliefors Critical Value				0.09	Lilliefors Critical Value					0.09			

A	B	C	D	E	F	G	H	I	J	K	L	
1591	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1592												
1593	Assuming Normal Distribution					Assuming Lognormal Distribution						
1594	95% Student's-t UCL			771.6		95% H-UCL			1055			
1595	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL						1216
1596	95% Adjusted-CLT UCL			849		97.5% Chebyshev (MVUE) UCL			1513			
1597	95% Modified-t UCL			784		99% Chebyshev (MVUE) UCL			2096			
1598												
1599	Gamma Distribution Test					Data Distribution						
1600	k star (bias corrected)			0.372		Data do not follow a Discernable Distribution (0.05)						
1601	Theta Star			1424								
1602	MLE of Mean			530.3								
1603	MLE of Standard Deviation			869.1								
1604	nu star			72.22								
1605	Approximate Chi Square Value (.05)			53.65		Nonparametric Statistics						
1606	Adjusted Level of Significance			0.0475		95% CLT UCL			769.3			
1607	Adjusted Chi Square Value			53.41		95% Jackknife UCL			771.6			
1608						95% Standard Bootstrap UCL			766.1			
1609	Anderson-Darling Test Statistic			4.67		95% Bootstrap-t UCL			973.3			
1610	Anderson-Darling 5% Critical Value			0.849		95% Hall's Bootstrap UCL			1530			
1611	Kolmogorov-Smirnov Test Statistic			0.163		95% Percentile Bootstrap UCL			799.4			
1612	Kolmogorov-Smirnov 5% Critical Value			0.0977		95% BCA Bootstrap UCL			848.3			
1613	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL			1164			
1614						97.5% Chebyshev(Mean, Sd) UCL			1438			
1615	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL			1976			
1616	95% Approximate Gamma UCL			713.8								
1617	95% Adjusted Gamma UCL			717								
1618												
1619	Potential UCL to Use					Use 97.5% Chebyshev (Mean, Sd) UCL			1438			
1620												
1621												
1622	Iron											
1623												
1624	General Statistics											
1625	Number of Valid Observations			106		Number of Distinct Observations			90			
1626												
1627	Raw Statistics					Log-transformed Statistics						
1628	Minimum			4500		Minimum of Log Data			8.412			
1629	Maximum			224000		Maximum of Log Data			12.32			
1630	Mean			29925		Mean of log Data			10.14			
1631	Median			23600		SD of log Data			0.529			
1632	SD			25109								
1633	Coefficient of Variation			0.839								
1634	Skewness			5.122								
1635												
1636	Relevant UCL Statistics											
1637	Normal Distribution Test					Lognormal Distribution Test						
1638	Lilliefors Test Statistic			0.247		Lilliefors Test Statistic			0.105			
1639	Lilliefors Critical Value			0.0861		Lilliefors Critical Value			0.0861			
1640	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1641												
1642	Assuming Normal Distribution					Assuming Lognormal Distribution						
1643	95% Student's-t UCL			33973		95% H-UCL			32053			

	A	B	C	D	E	F	G	H	I	J	K	L
1644	95% UCLs (Adjusted for Skewness)							95% Chebyshev (MVUE) UCL				36009
1645	95% Adjusted-CLT UCL				35234		97.5% Chebyshev (MVUE) UCL				39001	
1646	95% Modified-t UCL				34175		99% Chebyshev (MVUE) UCL				44880	
1647												
1648	Gamma Distribution Test						Data Distribution					
1649	k star (bias corrected)				3.076	Data do not follow a Discernable Distribution (0.05)						
1650	Theta Star				9728							
1651	MLE of Mean				29925							
1652	MLE of Standard Deviation				17062							
1653	nu star				652.1							
1654	Approximate Chi Square Value (.05)				593.9	Nonparametric Statistics						
1655	Adjusted Level of Significance				0.0477					95% CLT UCL	33937	
1656	Adjusted Chi Square Value				593.1					95% Jackknife UCL	33973	
1657										95% Standard Bootstrap UCL	33876	
1658	Anderson-Darling Test Statistic				4.215					95% Bootstrap-t UCL	36648	
1659	Anderson-Darling 5% Critical Value				0.758					95% Hall's Bootstrap UCL	51644	
1660	Kolmogorov-Smirnov Test Statistic				0.151					95% Percentile Bootstrap UCL	34331	
1661	Kolmogorov-Smirnov 5% Critical Value				0.0885					95% BCA Bootstrap UCL	35801	
1662	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL				40556	
1663							97.5% Chebyshev(Mean, Sd) UCL				45156	
1664	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL				54192	
1665	95% Approximate Gamma UCL				32860							
1666	95% Adjusted Gamma UCL				32902							
1667												
1668	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL				40556	
1669												
1670												
1671	Lead											
1672												
1673	General Statistics											
1674	Number of Valid Observations				101	Number of Distinct Observations				98		
1675												
1676	Raw Statistics						Log-transformed Statistics					
1677	Minimum				2.5	Minimum of Log Data				0.916		
1678	Maximum				18200	Maximum of Log Data				9.809		
1679	Mean				917.7	Mean of log Data				5.113		
1680	Median				240	SD of log Data				2.143		
1681	SD				2381							
1682	Coefficient of Variation				2.594							
1683	Skewness				5.872							
1684												
1685	Relevant UCL Statistics											
1686	Normal Distribution Test						Lognormal Distribution Test					
1687	Lilliefors Test Statistic				0.35	Lilliefors Test Statistic				0.122		
1688	Lilliefors Critical Value				0.0882	Lilliefors Critical Value				0.0882		
1689	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1690												
1691	Assuming Normal Distribution						Assuming Lognormal Distribution					
1692	95% Student's-t UCL				1311	95% H-UCL				3475		
1693	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL				3869	
1694	95% Adjusted-CLT UCL				1455	97.5% Chebyshev (MVUE) UCL				4877		
1695	95% Modified-t UCL				1334	99% Chebyshev (MVUE) UCL				6857		
1696												

A	B	C	D	E	F	G	H	I	J	K	L	
1697	Gamma Distribution Test					Data Distribution						
1698	k star (bias corrected)			0.382	Data do not follow a Discernable Distribution (0.05)							
1699	Theta Star			2401								
1700	MLE of Mean			917.7								
1701	MLE of Standard Deviation			1484								
1702	nu star			77.2								
1703	Approximate Chi Square Value (.05)			57.96	Nonparametric Statistics							
1704	Adjusted Level of Significance			0.0476	95% CLT UCL					1307		
1705	Adjusted Chi Square Value			57.72	95% Jackknife UCL					1311		
1706					95% Standard Bootstrap UCL					1302		
1707	Anderson-Darling Test Statistic			1.716	95% Bootstrap-t UCL					1858		
1708	Anderson-Darling 5% Critical Value			0.846	95% Hall's Bootstrap UCL					3305		
1709	Kolmogorov-Smirnov Test Statistic			0.0959	95% Percentile Bootstrap UCL					1357		
1710	Kolmogorov-Smirnov 5% Critical Value			0.0957	95% BCA Bootstrap UCL					1548		
1711	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL					1950	
1712						97.5% Chebyshev(Mean, Sd) UCL					2397	
1713	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					3275	
1714	95% Approximate Gamma UCL			1222								
1715	95% Adjusted Gamma UCL			1227								
1716												
1717	Potential UCL to Use					Use 99% Chebyshev (Mean, Sd) UCL					3275	
1718												
1719												
1720	Manganese											
1721												
1722	General Statistics											
1723	Number of Valid Observations			118	Number of Distinct Observations					109		
1724												
1725	Raw Statistics					Log-transformed Statistics						
1726	Minimum			166	Minimum of Log Data					5.112		
1727	Maximum			3260	Maximum of Log Data					8.089		
1728	Mean			737.6	Mean of log Data					6.462		
1729	Median			654.5	SD of log Data					0.523		
1730	SD			456.7								
1731	Coefficient of Variation			0.619								
1732	Skewness			2.843								
1733												
1734	Relevant UCL Statistics											
1735	Normal Distribution Test					Lognormal Distribution Test						
1736	Lilliefors Test Statistic			0.143	Lilliefors Test Statistic					0.0518		
1737	Lilliefors Critical Value			0.0816	Lilliefors Critical Value					0.0816		
1738	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
1739												
1740	Assuming Normal Distribution					Assuming Lognormal Distribution						
1741	95% Student's-t UCL			807.3	95% H-UCL					803.1		
1742	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					896.7	
1743	95% Adjusted-CLT UCL			818.5	97.5% Chebyshev (MVUE) UCL					967.4		
1744	95% Modified-t UCL			809.1	99% Chebyshev (MVUE) UCL					1106		
1745												
1746	Gamma Distribution Test					Data Distribution						
1747	k star (bias corrected)			3.611	Data Follow Appr. Gamma Distribution at 5% Significance Level							
1748	Theta Star			204.3								
1749	MLE of Mean			737.6								

	A	B	C	D	E	F	G	H	I	J	K	L
1750	MLE of Standard Deviation					388.2						
1751	nu star					852.1						
1752	Approximate Chi Square Value (.05)					785.4	Nonparametric Statistics					
1753	Adjusted Level of Significance					0.048	95% CLT UCL					806.8
1754	Adjusted Chi Square Value					784.6	95% Jackknife UCL					807.3
1755							95% Standard Bootstrap UCL					805.1
1756	Anderson-Darling Test Statistic					0.76	95% Bootstrap-t UCL					825.8
1757	Anderson-Darling 5% Critical Value					0.757	95% Hall's Bootstrap UCL					835.1
1758	Kolmogorov-Smirnov Test Statistic					0.0673	95% Percentile Bootstrap UCL					813.1
1759	Kolmogorov-Smirnov 5% Critical Value					0.0852	95% BCA Bootstrap UCL					823.2
1760	Data follow Appr. Gamma Distribution at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					920.9
1761							97.5% Chebyshev(Mean, Sd) UCL					1000
1762	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					1156
1763	95% Approximate Gamma UCL					800.3						
1764	95% Adjusted Gamma UCL					801.1						
1765												
1766	Potential UCL to Use						Use 95% Approximate Gamma UCL					800.3
1767												
1768												
1769	Thallium											
1770												
1771	General Statistics											
1772	Number of Valid Data					118	Number of Detected Data					36
1773	Number of Distinct Detected Data					28	Number of Non-Detect Data					82
1774							Percent Non-Detects					69.49%
1775												
1776	Raw Statistics						Log-transformed Statistics					
1777	Minimum Detected					0.54	Minimum Detected					-0.616
1778	Maximum Detected					4.6	Maximum Detected					1.526
1779	Mean of Detected					1.247	Mean of Detected					0.0645
1780	SD of Detected					0.923	SD of Detected					0.503
1781	Minimum Non-Detect					0.79	Minimum Non-Detect					-0.236
1782	Maximum Non-Detect					4.1	Maximum Non-Detect					1.411
1783												
1784	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					116
1785	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					2
1786	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					98.31%
1787												
1788	UCL Statistics											
1789	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1790	Shapiro Wilk Test Statistic					0.626	Shapiro Wilk Test Statistic					0.835
1791	5% Shapiro Wilk Critical Value					0.935	5% Shapiro Wilk Critical Value					0.935
1792	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1793												
1794	Assuming Normal Distribution						Assuming Lognormal Distribution					
1795	DL/2 Substitution Method						DL/2 Substitution Method					
1796	Mean					1.26	Mean					0.115
1797	SD					0.631	SD					0.499
1798	95% DL/2 (t) UCL					1.356	95% H-Stat (DL/2) UCL					1.759
1799												
1800	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
1801	MLE method failed to converge properly						Mean in Log Scale					-0.112
1802							SD in Log Scale					0.382

	A	B	C	D	E	F	G	H	I	J	K	L
1803										Mean in Original Scale		0.98
1804										SD in Original Scale		0.576
1805										95% Percentile Bootstrap UCL		1.074
1806										95% BCA Bootstrap UCL		1.092
1807												
1808	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1809					k star (bias corrected)	3.093	Data do not follow a Discernable Distribution (0.05)					
1810					Theta Star	0.403						
1811					nu star	222.7						
1812												
1813					A-D Test Statistic	3.045	Nonparametric Statistics					
1814					5% A-D Critical Value	0.753	Kaplan-Meier (KM) Method					
1815					K-S Test Statistic	0.753	Mean					
1816					5% K-S Critical Value	0.148	SD					
1817	Data not Gamma Distributed at 5% Significance Level						SE of Mean					
1818							95% KM (t) UCL					
1819	Assuming Gamma Distribution						95% KM (z) UCL					
1820	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					
1821					Minimum	0.286	95% KM (bootstrap t) UCL					
1822					Maximum	4.6	95% KM (BCA) UCL					
1823					Mean	1.368	95% KM (Percentile Bootstrap) UCL					
1824					Median	1.249	95% KM (Chebyshev) UCL					
1825					SD	0.671	97.5% KM (Chebyshev) UCL					
1826					k star	4.508	99% KM (Chebyshev) UCL					
1827					Theta star	0.304						
1828					Nu star	1064	Potential UCLs to Use					
1829					AppChi2	989.1	95% KM (t) UCL					
1830					95% Gamma Approximate UCL	1.472	95% KM (% Bootstrap) UCL					
1831					95% Adjusted Gamma UCL	1.473						
1832	Note: DL/2 is not a recommended method.											
1833												
1834												
1835	Vanadium											
1836												
1837	General Statistics											
1838					Number of Valid Data	118				Number of Detected Data		117
1839					Number of Distinct Detected Data	101				Number of Non-Detect Data		1
1840										Percent Non-Detects		0.85%
1841												
1842	Raw Statistics						Log-transformed Statistics					
1843					Minimum Detected	5.7				Minimum Detected		1.74
1844					Maximum Detected	841				Maximum Detected		6.735
1845					Mean of Detected	48.12				Mean of Detected		3.228
1846					SD of Detected	94.22				SD of Detected		0.966
1847					Minimum Non-Detect	5.6				Minimum Non-Detect		1.723
1848					Maximum Non-Detect	5.6				Maximum Non-Detect		1.723
1849												
1850												
1851	UCL Statistics											
1852	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1853					Lilliefors Test Statistic	0.328				Lilliefors Test Statistic		0.19
1854					5% Lilliefors Critical Value	0.0819				5% Lilliefors Critical Value		0.0819
1855	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L		
1856														
1857	Assuming Normal Distribution						Assuming Lognormal Distribution							
1858	DL/2 Substitution Method						DL/2 Substitution Method							
1859	Mean						47.74	Mean						3.21
1860	SD						93.91	SD						0.983
1861	95% DL/2 (t) UCL						62.07	95% H-Stat (DL/2) UCL						48.16
1862														
1863	Maximum Likelihood Estimate(MLE) Method						Log ROS Method							
1864	Mean						47.24	Mean in Log Scale						3.207
1865	SD						94.02	SD in Log Scale						0.989
1866	95% MLE (t) UCL						61.59	Mean in Original Scale						47.73
1867	95% MLE (Tiku) UCL						60.01	SD in Original Scale						93.91
1868								95% Percentile Bootstrap UCL						63.53
1869								95% BCA Bootstrap UCL						70.78
1870														
1871	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
1872	k star (bias corrected)						0.887	Data do not follow a Discernable Distribution (0.05)						
1873	Theta Star						54.23							
1874	nu star						207.7							
1875														
1876	A-D Test Statistic						9.514	Nonparametric Statistics						
1877	5% A-D Critical Value						0.788	Kaplan-Meier (KM) Method						
1878	K-S Test Statistic						0.788	Mean						47.76
1879	5% K-S Critical Value						0.0879	SD						93.5
1880	Data not Gamma Distributed at 5% Significance Level						SE of Mean						8.644	
1881								95% KM (t) UCL						62.1
1882	Assuming Gamma Distribution						95% KM (z) UCL						61.98	
1883	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						62.07	
1884	Minimum						1E-09	95% KM (bootstrap t) UCL						73.38
1885	Maximum						841	95% KM (BCA) UCL						65.19
1886	Mean						47.72	95% KM (Percentile Bootstrap) UCL						63.88
1887	Median						16.75	95% KM (Chebyshev) UCL						85.44
1888	SD						93.92	97.5% KM (Chebyshev) UCL						101.7
1889	k star						0.704	99% KM (Chebyshev) UCL						133.8
1890	Theta star						67.73							
1891	Nu star						166.3	Potential UCLs to Use						
1892	AppChi2						137.4	95% KM (BCA) UCL						65.19
1893	95% Gamma Approximate UCL						57.72							
1894	95% Adjusted Gamma UCL						57.86							
1895	Note: DL/2 is not a recommended method.													
1896														

A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects							
2	User Selected Options										
3	From File			\\Prl-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProU							
4	Full Precision			OFF							
5	Confidence Coefficient			95%							
6	Number of Bootstrap Operations			2000							
7											
8											
9	Aluminum										
10											
11	General Statistics										
12	Number of Valid Data				12		Number of Detected Data				11
13	Number of Distinct Detected Data				11		Number of Non-Detect Data				1
14									Percent Non-Detects		8.33%
15											
16	Raw Statistics					Log-transformed Statistics					
17	Minimum Detected			66.1		Minimum Detected			4.191		
18	Maximum Detected			436000		Maximum Detected			12.99		
19	Mean of Detected			82110		Mean of Detected			8.038		
20	SD of Detected			152104		SD of Detected			3.207		
21	Minimum Non-Detect			200		Minimum Non-Detect			5.298		
22	Maximum Non-Detect			200		Maximum Non-Detect			5.298		
23											
24											
25	UCL Statistics										
26	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
27	Shapiro Wilk Test Statistic			0.624		Shapiro Wilk Test Statistic			0.877		
28	5% Shapiro Wilk Critical Value			0.85		5% Shapiro Wilk Critical Value			0.85		
29	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
30											
31	Assuming Normal Distribution					Assuming Lognormal Distribution					
32	DL/2 Substitution Method					DL/2 Substitution Method					
33	Mean			75276		Mean			7.752		
34	SD			146945		SD			3.214		
35	95% DL/2 (t) UCL			151456		95% H-Stat (DL/2) UCL			256100000		
36											
37	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
38	Mean			57216		Mean in Log Scale			7.575		
39	SD			159304		SD in Log Scale			3.453		
40	95% MLE (t) UCL			139804		Mean in Original Scale			75268		
41	95% MLE (Tiku) UCL			136809		SD in Original Scale			146949		
42						95% Percentile Bootstrap UCL			146080		
43						95% BCA Bootstrap UCL			172473		
44											
45	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
46	k star (bias corrected)			0.221		Data Follow Appr. Gamma Distribution at 5% Significance Level					
47	Theta Star			370973							
48	nu star			4.869							
49											
50	A-D Test Statistic			0.967		Nonparametric Statistics					
51	5% A-D Critical Value			0.852		Kaplan-Meier (KM) Method					
52	K-S Test Statistic			0.852		Mean			75273		

A	B	C	D	E	F	G	H	I	J	K	L
53	5% K-S Critical Value				0.281					SD	140690
54	Data follow Appr. Gamma Distribution at 5% Significance Level									SE of Mean	42596
55										95% KM (t) UCL	151771
56	Assuming Gamma Distribution									95% KM (z) UCL	145337
57	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	151445
58	Minimum				1E-09					95% KM (bootstrap t) UCL	296047
59	Maximum				436000					95% KM (BCA) UCL	150578
60	Mean				75267					95% KM (Percentile Bootstrap) UCL	149062
61	Median				687					95% KM (Chebyshev) UCL	260945
62	SD				146949					97.5% KM (Chebyshev) UCL	341286
63	k star				0.16					99% KM (Chebyshev) UCL	499099
64	Theta star				470874						
65	Nu star				3.836					Potential UCLs to Use	
66	AppChi2				0.658					95% KM (Chebyshev) UCL	260945
67	95% Gamma Approximate UCL				438757						
68	95% Adjusted Gamma UCL				590122						
69	Note: DL/2 is not a recommended method.										
70											
71											
72	Arsenic										
73											
74	General Statistics										
75	Number of Valid Data				12	Number of Detected Data				7	
76	Number of Distinct Detected Data				7	Number of Non-Detect Data				5	
77						Percent Non-Detects				41.67%	
78											
79	Raw Statistics					Log-transformed Statistics					
80	Minimum Detected				2.1	Minimum Detected				0.742	
81	Maximum Detected				557	Maximum Detected				6.323	
82	Mean of Detected				140.2	Mean of Detected				3.561	
83	SD of Detected				200.3	SD of Detected				2.187	
84	Minimum Non-Detect				10	Minimum Non-Detect				2.303	
85	Maximum Non-Detect				10	Maximum Non-Detect				2.303	
86											
87											
88	Warning: There are only 7 Detected Values in this data										
89	Note: It should be noted that even though bootstrap may be performed on this data set										
90	the resulting calculations may not be reliable enough to draw conclusions										
91											
92	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
93											
94											
95	UCL Statistics										
96	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
97	Shapiro Wilk Test Statistic				0.759	Shapiro Wilk Test Statistic				0.923	
98	5% Shapiro Wilk Critical Value				0.803	5% Shapiro Wilk Critical Value				0.803	
99	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
100											
101	Assuming Normal Distribution					Assuming Lognormal Distribution					
102	DL/2 Substitution Method					DL/2 Substitution Method					
103	Mean				83.88	Mean				2.748	
104	SD				163.5	SD				1.902	

A	B	C	D	E	F	G	H	I	J	K	L
105	95% DL/2 (t) UCL				168.7	95% H-Stat (DL/2) UCL				569.8	
106											
107	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
108	MLE yields a negative mean					Mean in Log Scale				2.39	
109						SD in Log Scale				2.307	
110						Mean in Original Scale				83.33	
111						SD in Original Scale				163.8	
112						95% Percentile Bootstrap UCL				163.4	
113						95% BCA Bootstrap UCL				205.5	
114											
115	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
116	k star (bias corrected)				0.361	Data appear Gamma Distributed at 5% Significance Level					
117	Theta Star				388.6						
118	nu star				5.052						
119											
120	A-D Test Statistic				0.239	Nonparametric Statistics					
121	5% A-D Critical Value				0.757	Kaplan-Meier (KM) Method					
122	K-S Test Statistic				0.757	Mean				82.76	
123	5% K-S Critical Value				0.329	SD				157.1	
124	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				48.99	
125						95% KM (t) UCL				170.7	
126	Assuming Gamma Distribution					95% KM (z) UCL				163.3	
127	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				167.8	
128	Minimum				1E-09	95% KM (bootstrap t) UCL				348.7	
129	Maximum				557	95% KM (BCA) UCL				177.1	
130	Mean				145.8	95% KM (Percentile Bootstrap) UCL				171.1	
131	Median				72.35	95% KM (Chebyshev) UCL				296.3	
132	SD				186.1	97.5% KM (Chebyshev) UCL				388.7	
133	k star				0.229	99% KM (Chebyshev) UCL				570.2	
134	Theta star				637.7						
135	Nu star				5.489	Potential UCLs to Use					
136	AppChi2				1.384	95% KM (BCA) UCL				177.1	
137	95% Gamma Approximate UCL				578.2						
138	95% Adjusted Gamma UCL				729.8						
139	Note: DL/2 is not a recommended method.										
140											
141											
142	Barium										
143											
144	General Statistics										
145	Number of Valid Data				12	Number of Detected Data				9	
146	Number of Distinct Detected Data				9	Number of Non-Detect Data				3	
147						Percent Non-Detects				25.00%	
148											
149	Raw Statistics					Log-transformed Statistics					
150	Minimum Detected				35.5	Minimum Detected				3.57	
151	Maximum Detected				4880	Maximum Detected				8.493	
152	Mean of Detected				1075	Mean of Detected				5.734	
153	SD of Detected				1609	SD of Detected				1.848	
154	Minimum Non-Detect				200	Minimum Non-Detect				5.298	
155	Maximum Non-Detect				200	Maximum Non-Detect				5.298	
156											

	A	B	C	D	E	F	G	H	I	J	K	L	
157													
158	Warning: There are only 9 Detected Values in this data												
159	Note: It should be noted that even though bootstrap may be performed on this data set												
160	the resulting calculations may not be reliable enough to draw conclusions												
161													
162	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
163													
164													
165	UCL Statistics												
166	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
167	Shapiro Wilk Test Statistic					0.721	Shapiro Wilk Test Statistic					0.917	
168	5% Shapiro Wilk Critical Value					0.829	5% Shapiro Wilk Critical Value					0.829	
169	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
170													
171	Assuming Normal Distribution						Assuming Lognormal Distribution						
172	DL/2 Substitution Method						DL/2 Substitution Method						
173	Mean					831.2	Mean					5.452	
174	SD					1442	SD					1.657	
175	95% DL/2 (t) UCL					1579	95% H-Stat (DL/2) UCL					5217	
176													
177	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
178	MLE yields a negative mean						Mean in Log Scale					5.322	
179							SD in Log Scale					1.788	
180							Mean in Original Scale					825.4	
181							SD in Original Scale					1445	
182							95% Percentile Bootstrap UCL					1485	
183							95% BCA Bootstrap UCL					1946	
184													
185	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
186	k star (bias corrected)					0.413	Data appear Gamma Distributed at 5% Significance Level						
187	Theta Star					2602							
188	nu star					7.436							
189													
190	A-D Test Statistic					0.401	Nonparametric Statistics						
191	5% A-D Critical Value					0.77	Kaplan-Meier (KM) Method						
192	K-S Test Statistic					0.77	Mean					820.7	
193	5% K-S Critical Value					0.294	SD					1386	
194	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					424.4	
195							95% KM (t) UCL					1583	
196	Assuming Gamma Distribution						95% KM (z) UCL					1519	
197	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					1571	
198	Minimum					1E-09	95% KM (bootstrap t) UCL					3070	
199	Maximum					4880	95% KM (BCA) UCL					1508	
200	Mean					910.4	95% KM (Percentile Bootstrap) UCL					1530	
201	Median					270.9	95% KM (Chebyshev) UCL					2671	
202	SD					1422	97.5% KM (Chebyshev) UCL					3471	
203	k star					0.224	99% KM (Chebyshev) UCL					5043	
204	Theta star					4056							
205	Nu star					5.387	Potential UCLs to Use						
206	AppChi2					1.335	95% KM (Chebyshev) UCL					2671	
207	95% Gamma Approximate UCL					3674							
208	95% Adjusted Gamma UCL					4651							

A	B	C	D	E	F	G	H	I	J	K	L	
209	Note: DL/2 is not a recommended method.											
210												
211												
212	Beryllium											
213												
214	General Statistics											
215	Number of Valid Data				12		Number of Detected Data				4	
216	Number of Distinct Detected Data				4		Number of Non-Detect Data				8	
217									Percent Non-Detects		66.67%	
218												
219	Raw Statistics					Log-transformed Statistics						
220	Minimum Detected			0.3		Minimum Detected			-1.204			
221	Maximum Detected			23.6		Maximum Detected			3.161			
222	Mean of Detected			12.43		Mean of Detected			1.752			
223	SD of Detected			9.88		SD of Detected			2.004			
224	Minimum Non-Detect			0.1		Minimum Non-Detect			-2.303			
225	Maximum Non-Detect			5		Maximum Non-Detect			1.609			
226												
227	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					9	
228	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					3	
229	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					75.00%	
230												
231	Warning: There are only 4 Distinct Detected Values in this data											
232	Note: It should be noted that even though bootstrap may be performed on this data set											
233	the resulting calculations may not be reliable enough to draw conclusions											
234												
235	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
236												
237												
238	UCL Statistics											
239	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
240	Shapiro Wilk Test Statistic			0.997		Shapiro Wilk Test Statistic			0.79			
241	5% Shapiro Wilk Critical Value			0.748		5% Shapiro Wilk Critical Value			0.748			
242	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
243												
244	Assuming Normal Distribution					Assuming Lognormal Distribution						
245	DL/2 Substitution Method					DL/2 Substitution Method						
246	Mean			5.317		Mean			0.5			
247	SD			7.414		SD			1.992			
248	95% DL/2 (t) UCL			9.16		95% H-Stat (DL/2) UCL			71.45			
249												
250	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
251	Mean			16.92		Mean in Log Scale			-1.702			
252	SD			5.681		SD in Log Scale			3.098			
253	95% MLE (t) UCL			19.87		Mean in Original Scale			4.212			
254	95% MLE (Tiku) UCL			22.76		SD in Original Scale			7.964			
255									95% Percentile Bootstrap UCL			8.134
256									95% BCA Bootstrap UCL			9.453
257												
258	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
259	k star (bias corrected)			0.361		Data appear Normal at 5% Significance Level						
260	Theta Star			34.44								

A	B	C	D	E	F	G	H	I	J	K	L
261				nu star	2.886						
262											
263				A-D Test Statistic	0.46	Nonparametric Statistics					
264				5% A-D Critical Value	0.67	Kaplan-Meier (KM) Method					
265				K-S Test Statistic	0.67					Mean	4.342
266				5% K-S Critical Value	0.405					SD	7.555
267	Data appear Gamma Distributed at 5% Significance Level									SE of Mean	2.518
268										95% KM (t) UCL	8.864
269	Assuming Gamma Distribution									95% KM (z) UCL	8.484
270	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	10.65
271				Minimum	0.3					95% KM (bootstrap t) UCL	7.351
272				Maximum	23.6					95% KM (BCA) UCL	23.6
273				Mean	11.96					95% KM (Percentile Bootstrap) UCL	17.35
274				Median	10.93					95% KM (Chebyshev) UCL	15.32
275				SD	5.793					97.5% KM (Chebyshev) UCL	20.07
276				k star	1.529					99% KM (Chebyshev) UCL	29.4
277				Theta star	7.822						
278				Nu star	36.69	Potential UCLs to Use					
279				AppChi2	23.82					95% KM (t) UCL	8.864
280				95% Gamma Approximate UCL	18.41					95% KM (Percentile Bootstrap) UCL	17.35
281				95% Adjusted Gamma UCL	N/A						
282	Note: DL/2 is not a recommended method.										
283											
284											
285	Cadmium										
286											
287	General Statistics										
288				Number of Valid Data	12					Number of Detected Data	5
289				Number of Distinct Detected Data	5					Number of Non-Detect Data	7
290										Percent Non-Detects	58.33%
291											
292	Raw Statistics					Log-transformed Statistics					
293				Minimum Detected	1.7					Minimum Detected	0.531
294				Maximum Detected	39.2					Maximum Detected	3.669
295				Mean of Detected	18.98					Mean of Detected	2.519
296				SD of Detected	14.92					SD of Detected	1.231
297				Minimum Non-Detect	0.3					Minimum Non-Detect	-1.204
298				Maximum Non-Detect	5					Maximum Non-Detect	1.609
299											
300	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect	8
301	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected	4
302	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage	66.67%
303											
304	Warning: There are only 5 Detected Values in this data										
305	Note: It should be noted that even though bootstrap may be performed on this data set										
306	the resulting calculations may not be reliable enough to draw conclusions										
307											
308	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
309											
310											
311	UCL Statistics										
312	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					

A	B	C	D	E	F	G	H	I	J	K	L
313	Shapiro Wilk Test Statistic				0.969	Shapiro Wilk Test Statistic				0.902	
314	5% Shapiro Wilk Critical Value				0.762	5% Shapiro Wilk Critical Value				0.762	
315	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
316											
317	Assuming Normal Distribution					Assuming Lognormal Distribution					
318	DL/2 Substitution Method					DL/2 Substitution Method					
319	Mean				8.779	Mean				0.881	
320	SD				12.76	SD				1.969	
321	95% DL/2 (t) UCL				15.4	95% H-Stat (DL/2) UCL				75.88	
322											
323	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
324	MLE yields a negative mean					Mean in Log Scale				0.51	
325						SD in Log Scale				2.083	
326						Mean in Original Scale				8.277	
327						SD in Original Scale				13.06	
328						95% Percentile Bootstrap UCL				14.91	
329						95% BCA Bootstrap UCL				16.21	
330											
331	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
332	k star (bias corrected)				0.661	Data appear Normal at 5% Significance Level					
333	Theta Star				28.72						
334	nu star				6.608						
335											
336	A-D Test Statistic				0.236	Nonparametric Statistics					
337	5% A-D Critical Value				0.688	Kaplan-Meier (KM) Method					
338	K-S Test Statistic				0.688	Mean				8.9	
339	5% K-S Critical Value				0.363	SD				12.12	
340	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				3.911	
341						95% KM (t) UCL				15.92	
342	Assuming Gamma Distribution					95% KM (z) UCL				15.33	
343	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				15.85	
344	Minimum				1.7	95% KM (bootstrap t) UCL				16.89	
345	Maximum				39.2	95% KM (BCA) UCL				29.39	
346	Mean				18.93	95% KM (Percentile Bootstrap) UCL				20.73	
347	Median				17.89	95% KM (Chebyshev) UCL				25.95	
348	SD				9.238	97.5% KM (Chebyshev) UCL				33.32	
349	k star				2.228	99% KM (Chebyshev) UCL				47.81	
350	Theta star				8.497						
351	Nu star				53.48	Potential UCLs to Use					
352	AppChi2				37.68	95% KM (t) UCL				15.92	
353	95% Gamma Approximate UCL				26.87	95% KM (Percentile Bootstrap) UCL				20.73	
354	95% Adjusted Gamma UCL				28.39						
355	Note: DL/2 is not a recommended method.										
356											
357											
358	Chromium										
359											
360	General Statistics										
361	Number of Valid Data				12	Number of Detected Data				9	
362	Number of Distinct Detected Data				8	Number of Non-Detect Data				3	
363						Percent Non-Detects				25.00%	
364											

A	B	C	D	E	F	G	H	I	J	K	L
365	Raw Statistics					Log-transformed Statistics					
366	Minimum Detected				3.6	Minimum Detected				1.281	
367	Maximum Detected				4350	Maximum Detected				8.378	
368	Mean of Detected				665.3	Mean of Detected				4.29	
369	SD of Detected				1431	SD of Detected				2.423	
370	Minimum Non-Detect				10	Minimum Non-Detect				2.303	
371	Maximum Non-Detect				10	Maximum Non-Detect				2.303	
372											
373											
374	Warning: There are only 9 Detected Values in this data										
375	Note: It should be noted that even though bootstrap may be performed on this data set										
376	the resulting calculations may not be reliable enough to draw conclusions										
377											
378	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
379											
380											
381	UCL Statistics										
382	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
383	Shapiro Wilk Test Statistic				0.543	Shapiro Wilk Test Statistic				0.94	
384	5% Shapiro Wilk Critical Value				0.829	5% Shapiro Wilk Critical Value				0.829	
385	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
386											
387	Assuming Normal Distribution					Assuming Lognormal Distribution					
388	DL/2 Substitution Method					DL/2 Substitution Method					
389	Mean				500.2	Mean				3.62	
390	SD				1256	SD				2.396	
391	95% DL/2 (t) UCL				1151	95% H-Stat (DL/2) UCL				16177	
392											
393	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
394	MLE yields a negative mean					Mean in Log Scale				3.619	
395											
396											
397											
398											
399											
400											
401	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
402	k star (bias corrected)				0.281	Data appear Gamma Distributed at 5% Significance Level					
403	Theta Star				2368						
404	nu star				5.057						
405											
406	A-D Test Statistic				0.61	Nonparametric Statistics					
407	5% A-D Critical Value				0.805	Kaplan-Meier (KM) Method					
408	K-S Test Statistic				0.805	Mean				500.4	
409	5% K-S Critical Value				0.301	SD				1202	
410	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				368.2	
411											
412	Assuming Gamma Distribution					95% KM (z) UCL				1106	
413	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				1152	
414	Minimum				1E-09	95% KM (bootstrap t) UCL				9479	
415	Maximum				4350	95% KM (BCA) UCL				1178	
416	Mean				507	95% KM (Percentile Bootstrap) UCL				1119	

	A	B	C	D	E	F	G	H	I	J	K	L	
417					Median	60.55					95% KM (Chebyshev) UCL	2105	
418					SD	1253					97.5% KM (Chebyshev) UCL	2800	
419					k star	0.152					99% KM (Chebyshev) UCL	4164	
420					Theta star	3328							
421					Nu star	3.656				Potential UCLs to Use			
422					AppChi2	0.591					95% KM (Chebyshev) UCL	2105	
423					95% Gamma Approximate UCL	3138							
424					95% Adjusted Gamma UCL	4255							
425	Note: DL/2 is not a recommended method.												
426													
427													
428	Cobalt												
429													
430	General Statistics												
431					Number of Valid Data	12					Number of Detected Data	5	
432					Number of Distinct Detected Data	5					Number of Non-Detect Data	7	
433											Percent Non-Detects	58.33%	
434													
435	Raw Statistics						Log-transformed Statistics						
436					Minimum Detected	0.8					Minimum Detected	-0.223	
437					Maximum Detected	493					Maximum Detected	6.201	
438					Mean of Detected	203.8					Mean of Detected	3.785	
439					SD of Detected	218.1					SD of Detected	2.789	
440					Minimum Non-Detect	0.8					Minimum Non-Detect	-0.223	
441					Maximum Non-Detect	50					Maximum Non-Detect	3.912	
442													
443	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						9
444	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						3
445	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						75.00%
446													
447	Warning: There are only 5 Detected Values in this data												
448	Note: It should be noted that even though bootstrap may be performed on this data set												
449	the resulting calculations may not be reliable enough to draw conclusions												
450													
451	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
452													
453													
454	UCL Statistics												
455	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
456					Shapiro Wilk Test Statistic	0.894					Shapiro Wilk Test Statistic	0.871	
457					5% Shapiro Wilk Critical Value	0.762					5% Shapiro Wilk Critical Value	0.762	
458	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
459													
460	Assuming Normal Distribution						Assuming Lognormal Distribution						
461					DL/2 Substitution Method						DL/2 Substitution Method		
462					Mean	96.22					Mean	3.034	
463					SD	162.4					SD	2.137	
464					95% DL/2 (t) UCL	180.4					95% H-Stat (DL/2) UCL	2323	
465													
466					Maximum Likelihood Estimate(MLE) Method						Log ROS Method		
467					Mean	347.1					Mean in Log Scale	1.117	
468					SD	138.2					SD in Log Scale	3.299	

A	B	C	D	E	F	G	H	I	J	K	L
469					95% MLE (t) UCL	418.8				Mean in Original Scale	86.12
470					95% MLE (Tiku) UCL	489.4				SD in Original Scale	167.6
471										95% Percentile Bootstrap UCL	169.4
472										95% BCA Bootstrap UCL	187
473											
474	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
475					k star (bias corrected)	0.303	Data appear Normal at 5% Significance Level				
476					Theta Star	671.8					
477					nu star	3.034					
478											
479					A-D Test Statistic	0.375	Nonparametric Statistics				
480					5% A-D Critical Value	0.722	Kaplan-Meier (KM) Method				
481					K-S Test Statistic	0.722	Mean				
482					5% K-S Critical Value	0.375	SD				
483	Data appear Gamma Distributed at 5% Significance Level									SE of Mean	51.76
484										95% KM (t) UCL	179.4
485	Assuming Gamma Distribution									95% KM (z) UCL	171.6
486	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	171.9
487					Minimum	0.8	95% KM (bootstrap t) UCL				
488					Maximum	493	95% KM (BCA) UCL				
489					Mean	202.1	95% KM (Percentile Bootstrap) UCL				
490					Median	213	95% KM (Chebyshev) UCL				
491					SD	136.7	97.5% KM (Chebyshev) UCL				
492					k star	0.721	99% KM (Chebyshev) UCL				
493					Theta star	280.3					
494					Nu star	17.3	Potential UCLs to Use				
495					AppChi2	8.889	95% KM (t) UCL				
496					95% Gamma Approximate UCL	393.3	95% KM (Percentile Bootstrap) UCL				
497					95% Adjusted Gamma UCL	437.9					
498	Note: DL/2 is not a recommended method.										
499											
500											
501	Copper										
502											
503	General Statistics										
504					Number of Valid Data	12				Number of Detected Data	9
505					Number of Distinct Detected Data	9				Number of Non-Detect Data	3
506										Percent Non-Detects	25.00%
507											
508	Raw Statistics					Log-transformed Statistics					
509					Minimum Detected	16.2				Minimum Detected	2.785
510					Maximum Detected	1480				Maximum Detected	7.3
511					Mean of Detected	505.6				Mean of Detected	5.097
512					SD of Detected	577.7				SD of Detected	1.914
513					Minimum Non-Detect	25				Minimum Non-Detect	3.219
514					Maximum Non-Detect	25				Maximum Non-Detect	3.219
515											
516											
517	Warning: There are only 9 Detected Values in this data										
518	Note: It should be noted that even though bootstrap may be performed on this data set										
519	the resulting calculations may not be reliable enough to draw conclusions										
520											

A	B	C	D	E	F	G	H	I	J	K	L	
521	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
522												
523												
524	UCL Statistics											
525	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
526	Shapiro Wilk Test Statistic				0.828	Shapiro Wilk Test Statistic				0.857		
527	5% Shapiro Wilk Critical Value				0.829	5% Shapiro Wilk Critical Value				0.829		
528	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
529												
530	Assuming Normal Distribution					Assuming Lognormal Distribution						
531	DL/2 Substitution Method					DL/2 Substitution Method						
532	Mean			382.3	Mean			4.454				
533	SD			540.8	SD			2.004				
534	95% DL/2 (t) UCL			662.6	95% H-Stat (DL/2) UCL			4453				
535												
536	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
537	Mean			36.29	Mean in Log Scale			4.573				
538	SD			885	SD in Log Scale			1.926				
539	95% MLE (t) UCL			495.1	Mean in Original Scale			385.6				
540	95% MLE (Tiku) UCL			601.1	SD in Original Scale			538.4				
541							95% Percentile Bootstrap UCL			656		
542							95% BCA Bootstrap UCL			675.9		
543												
544	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
545	k star (bias corrected)			0.443	Data appear Gamma Distributed at 5% Significance Level							
546	Theta Star			1140								
547	nu star			7.979								
548												
549	A-D Test Statistic			0.485	Nonparametric Statistics							
550	5% A-D Critical Value			0.767	Kaplan-Meier (KM) Method							
551	K-S Test Statistic			0.767	Mean			383.5				
552	5% K-S Critical Value			0.293	SD			516.9				
553	Data appear Gamma Distributed at 5% Significance Level					SE of Mean			158.3			
554							95% KM (t) UCL			667.7		
555	Assuming Gamma Distribution					95% KM (z) UCL			643.8			
556	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL			663.4			
557	Minimum			11.17	95% KM (bootstrap t) UCL			858.6				
558	Maximum			1480	95% KM (BCA) UCL			671.4				
559	Mean			418.7	95% KM (Percentile Bootstrap) UCL			646.5				
560	Median			192.2	95% KM (Chebyshev) UCL			1073				
561	SD			522	97.5% KM (Chebyshev) UCL			1372				
562	k star			0.472	99% KM (Chebyshev) UCL			1958				
563	Theta star			887.3								
564	Nu star			11.32	Potential UCLs to Use							
565	AppChi2			4.785	95% KM (Chebyshev) UCL			1073				
566	95% Gamma Approximate UCL			990.7								
567	95% Adjusted Gamma UCL			1141								
568	Note: DL/2 is not a recommended method.											
569												
570												
571	Iron											
572												

	A	B	C	D	E	F	G	H	I	J	K	L	
573	General Statistics												
574	Number of Valid Observations					12			Number of Distinct Observations				12
575													
576	Raw Statistics						Log-transformed Statistics						
577	Minimum					71.2			Minimum of Log Data				4.265
578	Maximum					1130000			Maximum of Log Data				13.94
579	Mean					208881			Mean of log Data				9.097
580	Median					6495			SD of log Data				3.443
581	SD					399231							
582	Coefficient of Variation					1.911							
583	Skewness					1.939							
584													
585	Relevant UCL Statistics												
586	Normal Distribution Test						Lognormal Distribution Test						
587	Shapiro Wilk Test Statistic					0.59			Shapiro Wilk Test Statistic				0.93
588	Shapiro Wilk Critical Value					0.859			Shapiro Wilk Critical Value				0.859
589	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
590													
591	Assuming Normal Distribution						Assuming Lognormal Distribution						
592	95% Student's-t UCL					415853			95% H-UCL				1.66E+10
593	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						2885230
594	95% Adjusted-CLT UCL					467377			97.5% Chebyshev (MVUE) UCL				3879214
595	95% Modified-t UCL					426604			99% Chebyshev (MVUE) UCL				5831702
596													
597	Gamma Distribution Test						Data Distribution						
598	k star (bias corrected)					0.227			Data appear Gamma Distributed at 5% Significance Level				
599	Theta Star					920202							
600	MLE of Mean					208881							
601	MLE of Standard Deviation					438420							
602	nu star					5.448							
603	Approximate Chi Square Value (.05)					1.365			Nonparametric Statistics				
604	Adjusted Level of Significance					0.029			95% CLT UCL				398447
605	Adjusted Chi Square Value					1.08			95% Jackknife UCL				415853
606									95% Standard Bootstrap UCL				386000
607	Anderson-Darling Test Statistic					0.52			95% Bootstrap-t UCL				1071029
608	Anderson-Darling 5% Critical Value					0.854			95% Hall's Bootstrap UCL				1362210
609	Kolmogorov-Smirnov Test Statistic					0.204			95% Percentile Bootstrap UCL				405926
610	Kolmogorov-Smirnov 5% Critical Value					0.269			95% BCA Bootstrap UCL				463028
611	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						711235
612									97.5% Chebyshev(Mean, Sd) UCL				928604
613	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						1355583
614	95% Approximate Gamma UCL					833954							
615	95% Adjusted Gamma UCL					1053890							
616													
617	Potential UCL to Use						Use 95% Adjusted Gamma UCL						1053890
618													
619													
620	Lead												
621													
622	General Statistics												
623	Number of Valid Data					12			Number of Detected Data				11
624	Number of Distinct Detected Data					10			Number of Non-Detect Data				1

	A	B	C	D	E	F	G	H	I	J	K	L	
625										Percent Non-Detects		8.33%	
626													
627	Raw Statistics						Log-transformed Statistics						
628				Minimum Detected		15.7				Minimum Detected		2.754	
629				Maximum Detected		1800				Maximum Detected		7.496	
630				Mean of Detected		443				Mean of Detected		4.987	
631				SD of Detected		589.6				SD of Detected		1.725	
632				Minimum Non-Detect		10				Minimum Non-Detect		2.303	
633				Maximum Non-Detect		10				Maximum Non-Detect		2.303	
634													
635													
636	UCL Statistics												
637	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
638				Shapiro Wilk Test Statistic		0.764				Shapiro Wilk Test Statistic		0.922	
639				5% Shapiro Wilk Critical Value		0.85				5% Shapiro Wilk Critical Value		0.85	
640	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
641													
642	Assuming Normal Distribution						Assuming Lognormal Distribution						
643				DL/2 Substitution Method						DL/2 Substitution Method			
644				Mean		406.5				Mean		4.705	
645				SD		576.2				SD		1.912	
646				95% DL/2 (t) UCL		705.2				95% H-Stat (DL/2) UCL		10763	
647													
648				Maximum Likelihood Estimate(MLE) Method						Log ROS Method			
649				Mean		377.1				Mean in Log Scale		4.634	
650				SD		587				SD in Log Scale		2.048	
651				95% MLE (t) UCL		681.4				Mean in Original Scale		406.2	
652				95% MLE (Tiku) UCL		663.7				SD in Original Scale		576.4	
653										95% Percentile Bootstrap UCL		680.4	
654										95% BCA Bootstrap UCL		772.8	
655													
656	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
657				k star (bias corrected)		0.47				Data appear Gamma Distributed at 5% Significance Level			
658				Theta Star		941.7							
659				nu star		10.35							
660													
661				A-D Test Statistic		0.477				Nonparametric Statistics			
662				5% A-D Critical Value		0.776				Kaplan-Meier (KM) Method			
663				K-S Test Statistic		0.776				Mean		407.4	
664				5% K-S Critical Value		0.268				SD		551	
665	Data appear Gamma Distributed at 5% Significance Level										SE of Mean		166.8
666										95% KM (t) UCL		707	
667	Assuming Gamma Distribution										95% KM (z) UCL		681.8
668	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL		705.7
669				Minimum		1E-09				95% KM (bootstrap t) UCL		925.9	
670				Maximum		1800				95% KM (BCA) UCL		729	
671				Mean		406.1				95% KM (Percentile Bootstrap) UCL		686.4	
672				Median		106				95% KM (Chebyshev) UCL		1135	
673				SD		576.5				97.5% KM (Chebyshev) UCL		1449	
674				k star		0.227				99% KM (Chebyshev) UCL		2067	
675				Theta star		1793							
676				Nu star		5.437				Potential UCLs to Use			

A	B	C	D	E	F	G	H	I	J	K	L
677	AppChi2				1.359	95% KM (Chebyshev) UCL				1135	
678	95% Gamma Approximate UCL				1624						
679	95% Adjusted Gamma UCL				2053						
680	Note: DL/2 is not a recommended method.										
681											
682											
683	Manganese										
684											
685	General Statistics										
686	Number of Valid Data				12	Number of Detected Data				11	
687	Number of Distinct Detected Data				11	Number of Non-Detect Data				1	
688						Percent Non-Detects				8.33%	
689											
690	Raw Statistics					Log-transformed Statistics					
691	Minimum Detected				10.7	Minimum Detected				2.37	
692	Maximum Detected				38600	Maximum Detected				10.56	
693	Mean of Detected				9300	Mean of Detected				6.773	
694	SD of Detected				15541	SD of Detected				2.645	
695	Minimum Non-Detect				15	Minimum Non-Detect				2.708	
696	Maximum Non-Detect				15	Maximum Non-Detect				2.708	
697											
698											
699	UCL Statistics										
700	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
701	Shapiro Wilk Test Statistic				0.628	Shapiro Wilk Test Statistic				0.886	
702	5% Shapiro Wilk Critical Value				0.85	5% Shapiro Wilk Critical Value				0.85	
703	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
704											
705	Assuming Normal Distribution					Assuming Lognormal Distribution					
706	DL/2 Substitution Method					DL/2 Substitution Method					
707	Mean				8525	Mean				6.377	
708	SD				15059	SD				2.872	
709	95% DL/2 (t) UCL				16332	95% H-Stat (DL/2) UCL				4622296	
710											
711	Maximum Likelihood Estimate(MLE) Method					Log ROS Method					
712	Mean				6709	Mean in Log Scale				6.389	
713	SD				16370	SD in Log Scale				2.851	
714	95% MLE (t) UCL				15195	Mean in Original Scale				8525	
715	95% MLE (Tiku) UCL				14921	SD in Original Scale				15059	
716						95% Percentile Bootstrap UCL				15912	
717						95% BCA Bootstrap UCL				17110	
718											
719	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
720	k star (bias corrected)				0.274	Data appear Lognormal at 5% Significance Level					
721	Theta Star				33997						
722	nu star				6.018						
723											
724	A-D Test Statistic				1.134	Nonparametric Statistics					
725	5% A-D Critical Value				0.823	Kaplan-Meier (KM) Method					
726	K-S Test Statistic				0.823	Mean				8526	
727	5% K-S Critical Value				0.276	SD				14417	
728	Data not Gamma Distributed at 5% Significance Level					SE of Mean				4365	

A	B	C	D	E	F	G	H	I	J	K	L	
729										95% KM (t) UCL	16365	
730	Assuming Gamma Distribution									95% KM (z) UCL	15705	
731	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	16330	
732				Minimum	1E-09					95% KM (bootstrap t) UCL	20918	
733				Maximum	38600					95% KM (BCA) UCL	16671	
734				Mean	8525					95% KM (Percentile Bootstrap) UCL	15937	
735				Median	453.5					95% KM (Chebyshev) UCL	27552	
736				SD	15059					97.5% KM (Chebyshev) UCL	35785	
737				k star	0.18					99% KM (Chebyshev) UCL	51957	
738				Theta star	47392							
739				Nu star	4.317	Potential UCLs to Use						
740				AppChi2	0.851					99% KM (Chebyshev) UCL	51957	
741				95% Gamma Approximate UCL		43255						
742				95% Adjusted Gamma UCL		56945						
743	Warning: Recommended UCL exceeds the maximum observation											
744	Note: DL/2 is not a recommended method.											
745												
746												
747	Mercury											
748												
749	General Statistics											
750				Number of Valid Data		11				Number of Detected Data		6
751				Number of Distinct Detected Data		6				Number of Non-Detect Data		5
752										Percent Non-Detects		45.45%
753												
754	Raw Statistics					Log-transformed Statistics						
755				Minimum Detected		0.068				Minimum Detected		-2.688
756				Maximum Detected		1.6				Maximum Detected		0.47
757				Mean of Detected		0.752				Mean of Detected		-0.82
758				SD of Detected		0.604				SD of Detected		1.358
759				Minimum Non-Detect		0.1				Minimum Non-Detect		-2.303
760				Maximum Non-Detect		0.2				Maximum Non-Detect		-1.609
761												
762	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect		7
763	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected		4
764	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage		63.64%
765												
766	Warning: There are only 6 Detected Values in this data											
767	Note: It should be noted that even though bootstrap may be performed on this data set											
768	the resulting calculations may not be reliable enough to draw conclusions											
769												
770	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
771												
772												
773	UCL Statistics											
774	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
775				Shapiro Wilk Test Statistic		0.922				Shapiro Wilk Test Statistic		0.82
776				5% Shapiro Wilk Critical Value		0.788				5% Shapiro Wilk Critical Value		0.788
777	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
778												
779	Assuming Normal Distribution					Assuming Lognormal Distribution						
780				DL/2 Substitution Method						DL/2 Substitution Method		

	A	B	C	D	E	F	G	H	I	J	K	L	
781					Mean	0.446					Mean	-1.62	
782					SD	0.553					SD	1.35	
783					95% DL/2 (t) UCL	0.749				95% H-Stat (DL/2) UCL		1.244	
784													
785					Maximum Likelihood Estimate(MLE) Method					Log ROS Method			
786					Mean	1.094				Mean in Log Scale		-1.524	
787					SD	0.343				SD in Log Scale		1.316	
788					95% MLE (t) UCL	1.282				Mean in Original Scale		0.459	
789					95% MLE (Tiku) UCL	1.404				SD in Original Scale		0.545	
790										95% Percentile Bootstrap UCL		0.734	
791										95% BCA Bootstrap UCL		0.769	
792													
793					Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only			
794					k star (bias corrected)	0.646				Data appear Normal at 5% Significance Level			
795					Theta Star	1.163							
796					nu star	7.757							
797													
798					A-D Test Statistic	0.526				Nonparametric Statistics			
799					5% A-D Critical Value	0.714				Kaplan-Meier (KM) Method			
800					K-S Test Statistic	0.714				Mean		0.447	
801					5% K-S Critical Value	0.34				SD		0.527	
802					Data appear Gamma Distributed at 5% Significance Level					SE of Mean		0.174	
803										95% KM (t) UCL		0.762	
804					Assuming Gamma Distribution					95% KM (z) UCL		0.733	
805					Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL		0.749	
806					Minimum	0.068				95% KM (bootstrap t) UCL		0.75	
807					Maximum	1.6				95% KM (BCA) UCL		0.963	
808					Mean	0.737				95% KM (Percentile Bootstrap) UCL		0.925	
809					Median	0.77				95% KM (Chebyshev) UCL		1.205	
810					SD	0.438				97.5% KM (Chebyshev) UCL		1.534	
811					k star	1.379				99% KM (Chebyshev) UCL		2.179	
812					Theta star	0.534							
813					Nu star	30.34				Potential UCLs to Use			
814					AppChi2	18.76				95% KM (t) UCL		0.762	
815					95% Gamma Approximate UCL	1.192				95% KM (Percentile Bootstrap) UCL		0.925	
816					95% Adjusted Gamma UCL	1.293							
817					Note: DL/2 is not a recommended method.								
818													
819													
820					Nickel								
821													
822					General Statistics								
823					Number of Valid Data	12				Number of Detected Data		9	
824					Number of Distinct Detected Data	9				Number of Non-Detect Data		3	
825										Percent Non-Detects		25.00%	
826													
827					Raw Statistics					Log-transformed Statistics			
828					Minimum Detected	6.3				Minimum Detected		1.841	
829					Maximum Detected	1270				Maximum Detected		7.147	
830					Mean of Detected	336.4				Mean of Detected		4.318	
831					SD of Detected	526.5				SD of Detected		2.005	
832					Minimum Non-Detect	40				Minimum Non-Detect		3.689	

A	B	C	D	E	F	G	H	I	J	K	L
833	Maximum Non-Detect				40	Maximum Non-Detect				3.689	
834											
835											
836	Warning: There are only 9 Detected Values in this data										
837	Note: It should be noted that even though bootstrap may be performed on this data set										
838	the resulting calculations may not be reliable enough to draw conclusions										
839											
840	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
841											
842											
843	UCL Statistics										
844	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
845	Shapiro Wilk Test Statistic				0.653	Shapiro Wilk Test Statistic				0.917	
846	5% Shapiro Wilk Critical Value				0.829	5% Shapiro Wilk Critical Value				0.829	
847	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
848											
849	Assuming Normal Distribution					Assuming Lognormal Distribution					
850	DL/2 Substitution Method					DL/2 Substitution Method					
851	Mean				257.3	Mean				3.987	
852	SD				471.2	SD				1.811	
853	95% DL/2 (t) UCL				501.6	95% H-Stat (DL/2) UCL				1928	
854											
855	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
856	MLE yields a negative mean					Mean in Log Scale				3.877	
857						SD in Log Scale				1.933	
858						Mean in Original Scale				256.6	
859						SD in Original Scale				471.7	
860						95% Percentile Bootstrap UCL				481.4	
861						95% BCA Bootstrap UCL				565.8	
862											
863	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
864	k star (bias corrected)				0.363	Data appear Gamma Distributed at 5% Significance Level					
865	Theta Star				927.3						
866	nu star				6.53						
867											
868	A-D Test Statistic				0.594	Nonparametric Statistics					
869	5% A-D Critical Value				0.783	Kaplan-Meier (KM) Method					
870	K-S Test Statistic				0.783	Mean				256.9	
871	5% K-S Critical Value				0.297	SD				451.4	
872	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				138.3	
873						95% KM (t) UCL				505.2	
874	Assuming Gamma Distribution					95% KM (z) UCL				484.3	
875	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				501.4	
876	Minimum				1E-09	95% KM (bootstrap t) UCL				1375	
877	Maximum				1270	95% KM (BCA) UCL				526.2	
878	Mean				279.7	95% KM (Percentile Bootstrap) UCL				486	
879	Median				44.2	95% KM (Chebyshev) UCL				859.5	
880	SD				465.1	97.5% KM (Chebyshev) UCL				1120	
881	k star				0.219	99% KM (Chebyshev) UCL				1632	
882	Theta star				1278						
883	Nu star				5.253	Potential UCLs to Use					
884	AppChi2				1.271	95% KM (Chebyshev) UCL				859.5	

A	B	C	D	E	F	G	H	I	J	K	L
885	95% Gamma Approximate UCL				1156						
886	95% Adjusted Gamma UCL				1470						
887	Note: DL/2 is not a recommended method.										
888											
889											
890	Silver										
891											
892	General Statistics										
893	Number of Valid Data				12	Number of Detected Data				4	
894	Number of Distinct Detected Data				4	Number of Non-Detect Data				8	
895						Percent Non-Detects				66.67%	
896											
897	Raw Statistics					Log-transformed Statistics					
898	Minimum Detected				5.1	Minimum Detected				1.629	
899	Maximum Detected				44.6	Maximum Detected				3.798	
900	Mean of Detected				24.23	Mean of Detected				2.712	
901	SD of Detected				21.94	SD of Detected				1.217	
902	Minimum Non-Detect				0.7	Minimum Non-Detect				-0.357	
903	Maximum Non-Detect				10	Maximum Non-Detect				2.303	
904											
905	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				10	
906	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				2	
907	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				83.33%	
908											
909	Warning: There are only 4 Distinct Detected Values in this data										
910	Note: It should be noted that even though bootstrap may be performed on this data set										
911	the resulting calculations may not be reliable enough to draw conclusions										
912											
913	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
914											
915											
916	UCL Statistics										
917	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
918	Shapiro Wilk Test Statistic				0.765	Shapiro Wilk Test Statistic				0.756	
919	5% Shapiro Wilk Critical Value				0.748	5% Shapiro Wilk Critical Value				0.748	
920	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
921											
922	Assuming Normal Distribution					Assuming Lognormal Distribution					
923	DL/2 Substitution Method					DL/2 Substitution Method					
924	Mean				10.25	Mean				1.312	
925	SD				15.54	SD				1.636	
926	95% DL/2 (t) UCL				18.3	95% H-Stat (DL/2) UCL				43.95	
927											
928	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
929	MLE method failed to converge properly					Mean in Log Scale				0.963	
930						SD in Log Scale				1.693	
931						Mean in Original Scale				9.326	
932						SD in Original Scale				15.98	
933						95% Percentile Bootstrap UCL				16.63	
934						95% BCA Bootstrap UCL				19.68	
935											
936	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					

A	B	C	D	E	F	G	H	I	J	K	L
937	k star (bias corrected)				0.464	Data appear Normal at 5% Significance Level					
938	Theta Star				52.2						
939	nu star				3.713						
940											
941	A-D Test Statistic				0.66	Nonparametric Statistics					
942	5% A-D Critical Value				0.665	Kaplan-Meier (KM) Method					
943	K-S Test Statistic				0.665	Mean				11.5	
944	5% K-S Critical Value				0.401	SD				14.19	
945	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					4.73
946						95% KM (t) UCL					19.99
947	Assuming Gamma Distribution					95% KM (z) UCL					19.28
948	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					19.06
949	Minimum				5.1	95% KM (bootstrap t) UCL					16.29
950	Maximum				62.83	95% KM (BCA) UCL					44.6
951	Mean				25.14	95% KM (Percentile Bootstrap) UCL					42.27
952	Median				19.44	95% KM (Chebyshev) UCL					32.12
953	SD				18.63	97.5% KM (Chebyshev) UCL					41.04
954	k star				1.45	99% KM (Chebyshev) UCL					58.56
955	Theta star				17.34						
956	Nu star				34.79	Potential UCLs to Use					
957	AppChi2				22.3	95% KM (t) UCL					19.99
958	95% Gamma Approximate UCL				39.23	95% KM (Percentile Bootstrap) UCL					42.27
959	95% Adjusted Gamma UCL				N/A						
960	Note: DL/2 is not a recommended method.										
961											
962											
963	Vanadium										
964											
965	General Statistics										
966	Number of Valid Data				12	Number of Detected Data				7	
967	Number of Distinct Detected Data				7	Number of Non-Detect Data				5	
968						Percent Non-Detects				41.67%	
969											
970	Raw Statistics					Log-transformed Statistics					
971	Minimum Detected				4	Minimum Detected				1.386	
972	Maximum Detected				649	Maximum Detected				6.475	
973	Mean of Detected				231.9	Mean of Detected				4.286	
974	SD of Detected				273	SD of Detected				2.103	
975	Minimum Non-Detect				50	Minimum Non-Detect				3.912	
976	Maximum Non-Detect				50	Maximum Non-Detect				3.912	
977											
978											
979	Warning: There are only 7 Detected Values in this data										
980	Note: It should be noted that even though bootstrap may be performed on this data set										
981	the resulting calculations may not be reliable enough to draw conclusions										
982											
983	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
984											
985											
986	UCL Statistics										
987	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
988	Shapiro Wilk Test Statistic				0.792	Shapiro Wilk Test Statistic				0.86	

A	B	C	D	E	F	G	H	I	J	K	L
989	5% Shapiro Wilk Critical Value				0.803	5% Shapiro Wilk Critical Value				0.803	
990	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
991											
992	Assuming Normal Distribution					Assuming Lognormal Distribution					
993	DL/2 Substitution Method					DL/2 Substitution Method					
994	Mean			145.7		Mean			3.841		
995	SD			228.1		SD			1.647		
996	95% DL/2 (t) UCL			263.9		95% H-Stat (DL/2) UCL			1002		
997											
998	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
999	MLE yields a negative mean					Mean in Log Scale				3.16	
1000						SD in Log Scale				2.218	
1001						Mean in Original Scale				138.7	
1002						SD in Original Scale				232.3	
1003						95% Percentile Bootstrap UCL				256.6	
1004						95% BCA Bootstrap UCL				283.1	
1005											
1006	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
1007	k star (bias corrected)			0.404	Data appear Gamma Distributed at 5% Significance Level						
1008	Theta Star			573.6							
1009	nu star			5.661							
1010											
1011	A-D Test Statistic			0.359	Nonparametric Statistics						
1012	5% A-D Critical Value			0.749	Kaplan-Meier (KM) Method						
1013	K-S Test Statistic			0.749	Mean			137			
1014	5% K-S Critical Value			0.326	SD			223.3			
1015	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				69.63	
1016						95% KM (t) UCL				262.1	
1017	Assuming Gamma Distribution					95% KM (z) UCL				251.6	
1018	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				258	
1019	Minimum			4	95% KM (bootstrap t) UCL				511.9		
1020	Maximum			649	95% KM (BCA) UCL				276		
1021	Mean			235.8	95% KM (Percentile Bootstrap) UCL				260.4		
1022	Median			137.4	95% KM (Chebyshev) UCL				440.5		
1023	SD			246.1	97.5% KM (Chebyshev) UCL				571.9		
1024	k star			0.558	99% KM (Chebyshev) UCL				829.9		
1025	Theta star			422.7							
1026	Nu star			13.39	Potential UCLs to Use						
1027	AppChi2			6.156	95% KM (BCA) UCL				276		
1028	95% Gamma Approximate UCL			513							
1029	95% Adjusted Gamma UCL			582.1							
1030	Note: DL/2 is not a recommended method.										
1031											
1032											
1033	Zinc										
1034											
1035	General Statistics										
1036	Number of Valid Observations			12	Number of Distinct Observations			12			
1037											
1038	Raw Statistics					Log-transformed Statistics					
1039	Minimum			33.6	Minimum of Log Data			3.515			
1040	Maximum			5330	Maximum of Log Data			8.581			

A	B	C	D	E	F	G	H	I	J	K	L	
1				General UCL Statistics for Data Sets with Non-Detects								
2	User Selected Options											
3	From File			\\Prl-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProU								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	Aluminum											
10												
11	General Statistics											
12	Number of Valid Data				11		Number of Detected Data				8	
13	Number of Distinct Detected Data				8		Number of Non-Detect Data				3	
14									Percent Non-Detects		27.27%	
15												
16	Raw Statistics					Log-transformed Statistics						
17	Minimum Detected			130		Minimum Detected			4.868			
18	Maximum Detected			5940		Maximum Detected			8.689			
19	Mean of Detected			1934		Mean of Detected			6.861			
20	SD of Detected			2208		SD of Detected			1.383			
21	Minimum Non-Detect			100		Minimum Non-Detect			4.605			
22	Maximum Non-Detect			222		Maximum Non-Detect			5.403			
23												
24	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect						4
25	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected						7
26	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage						36.36%
27												
28	Warning: There are only 8 Detected Values in this data											
29	Note: It should be noted that even though bootstrap may be performed on this data set											
30	the resulting calculations may not be reliable enough to draw conclusions											
31												
32	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
33												
34												
35	UCL Statistics											
36	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
37	Shapiro Wilk Test Statistic			0.791		Shapiro Wilk Test Statistic			0.944			
38	5% Shapiro Wilk Critical Value			0.818		5% Shapiro Wilk Critical Value			0.818			
39	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
40												
41	Assuming Normal Distribution					Assuming Lognormal Distribution						
42	DL/2 Substitution Method					DL/2 Substitution Method						
43	Mean			1431		Mean			6.202			
44	SD			2038		SD			1.63			
45	95% DL/2 (t) UCL			2545		95% H-Stat (DL/2) UCL			11601			
46												
47	Maximum Likelihood Estimate(MLE) Method					Log ROS Method						
48	Mean			767.7		Mean in Log Scale			6.027			
49	SD			2674		SD in Log Scale			1.864			
50	95% MLE (t) UCL			2229		Mean in Original Scale			1421			
51	95% MLE (Tiku) UCL			2364		SD in Original Scale			2046			
52						95% Percentile Bootstrap UCL			2471			

A	B	C	D	E	F	G	H	I	J	K	L
53									95% BCA Bootstrap UCL		2705
54											
55	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
56				k star (bias corrected)	0.606	Data appear Gamma Distributed at 5% Significance Level					
57				Theta Star	3194						
58				nu star	9.69						
59											
60				A-D Test Statistic	0.316	Nonparametric Statistics					
61				5% A-D Critical Value	0.742	Kaplan-Meier (KM) Method					
62				K-S Test Statistic	0.742					Mean	1442
63				5% K-S Critical Value	0.303					SD	1936
64	Data appear Gamma Distributed at 5% Significance Level									SE of Mean	624
65										95% KM (t) UCL	2573
66	Assuming Gamma Distribution									95% KM (z) UCL	2468
67	Gamma ROS Statistics using Extrapolated Data									95% KM (jackknife) UCL	2537
68				Minimum	1E-09					95% KM (bootstrap t) UCL	4625
69				Maximum	5940					95% KM (BCA) UCL	2644
70				Mean	1456					95% KM (Percentile Bootstrap) UCL	2544
71				Median	542.4					95% KM (Chebyshev) UCL	4162
72				SD	2025					97.5% KM (Chebyshev) UCL	5339
73				k star	0.163					99% KM (Chebyshev) UCL	7650
74				Theta star	8914						
75				Nu star	3.593	Potential UCLs to Use					
76				AppChi2	0.568					95% KM (Chebyshev) UCL	4162
77				95% Gamma Approximate UCL	9212						
78				95% Adjusted Gamma UCL	12805						
79	Note: DL/2 is not a recommended method.										
80											
81											
82	Antimony										
83											
84	General Statistics										
85				Number of Valid Data	16					Number of Detected Data	5
86				Number of Distinct Detected Data	4					Number of Non-Detect Data	11
87										Percent Non-Detects	68.75%
88											
89	Raw Statistics					Log-transformed Statistics					
90				Minimum Detected	2.8					Minimum Detected	1.03
91				Maximum Detected	3.6					Maximum Detected	1.281
92				Mean of Detected	3.12					Mean of Detected	1.133
93				SD of Detected	0.363					SD of Detected	0.115
94				Minimum Non-Detect	2					Minimum Non-Detect	0.693
95				Maximum Non-Detect	66.7					Maximum Non-Detect	4.2
96											
97	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect	16
98	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected	0
99	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage	100.00%
100											
101	Warning: There are only 4 Distinct Detected Values in this data										
102	Note: It should be noted that even though bootstrap may be performed on this data set										
103	the resulting calculations may not be reliable enough to draw conclusions										
104											

A	B	C	D	E	F	G	H	I	J	K	L	
105	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
106												
107												
108	UCL Statistics											
109	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
110	Shapiro Wilk Test Statistic				0.867	Shapiro Wilk Test Statistic				0.868		
111	5% Shapiro Wilk Critical Value				0.762	5% Shapiro Wilk Critical Value				0.762		
112	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
113												
114	Assuming Normal Distribution					Assuming Lognormal Distribution						
115	DL/2 Substitution Method					DL/2 Substitution Method						
116	Mean				7.059	Mean				1.437		
117	SD				8.034	SD				1.082		
118	95% DL/2 (t) UCL				10.58	95% H-Stat (DL/2) UCL				45.74		
119												
120	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
121	MLE method failed to converge properly					Mean in Log Scale				0.983		
122						SD in Log Scale				0.181		
123						Mean in Original Scale				2.714		
124						SD in Original Scale				0.491		
125						95% Percentile Bootstrap UCL				2.915		
126						95% BCA Bootstrap UCL				2.917		
127												
128	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
129	k star (bias corrected)				37.79	Data appear Normal at 5% Significance Level						
130	Theta Star				0.0826							
131	nu star				377.9							
132												
133	A-D Test Statistic				0.438	Nonparametric Statistics						
134	5% A-D Critical Value				0.678	Kaplan-Meier (KM) Method						
135	K-S Test Statistic				0.678	Mean				2.978		
136	5% K-S Critical Value				0.357	SD				0.29		
137	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.108		
138						95% KM (t) UCL				3.167		
139	Assuming Gamma Distribution					95% KM (z) UCL				3.155		
140	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				3.162		
141	Minimum				2.656	95% KM (bootstrap t) UCL				3.395		
142	Maximum				3.817	95% KM (BCA) UCL				3.4		
143	Mean				3.231	95% KM (Percentile Bootstrap) UCL				3.244		
144	Median				3.245	95% KM (Chebyshev) UCL				3.448		
145	SD				0.358	97.5% KM (Chebyshev) UCL				3.652		
146	k star				70.06	99% KM (Chebyshev) UCL				4.052		
147	Theta star				0.0461							
148	Nu star				2242	Potential UCLs to Use						
149	AppChi2				2133	95% KM (t) UCL				3.167		
150	95% Gamma Approximate UCL				3.396	95% KM (Percentile Bootstrap) UCL				3.244		
151	95% Adjusted Gamma UCL				3.415							
152	Note: DL/2 is not a recommended method.											
153												
154												
155	Arsenic											
156												

A	B	C	D	E	F	G	H	I	J	K	L
157	General Statistics										
158	Number of Valid Data				16	Number of Detected Data				7	
159	Number of Distinct Detected Data				7	Number of Non-Detect Data				9	
160						Percent Non-Detects				56.25%	
161											
162	Raw Statistics					Log-transformed Statistics					
163	Minimum Detected				0.99	Minimum Detected				-0.0101	
164	Maximum Detected				95.5	Maximum Detected				4.559	
165	Mean of Detected				22.17	Mean of Detected				2.176	
166	SD of Detected				33.29	SD of Detected				1.566	
167	Minimum Non-Detect				1	Minimum Non-Detect				0	
168	Maximum Non-Detect				11.1	Maximum Non-Detect				2.407	
169											
170	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				12	
171	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				4	
172	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				75.00%	
173											
174	Warning: There are only 7 Detected Values in this data										
175	Note: It should be noted that even though bootstrap may be performed on this data set										
176	the resulting calculations may not be reliable enough to draw conclusions										
177											
178	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
179											
180											
181	UCL Statistics										
182	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
183	Shapiro Wilk Test Statistic				0.669	Shapiro Wilk Test Statistic				0.97	
184	5% Shapiro Wilk Critical Value				0.803	5% Shapiro Wilk Critical Value				0.803	
185	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
186											
187	Assuming Normal Distribution					Assuming Lognormal Distribution					
188	DL/2 Substitution Method					DL/2 Substitution Method					
189	Mean				12.12	Mean				1.684	
190	SD				22.99	SD				1.222	
191	95% DL/2 (t) UCL				22.19	95% H-Stat (DL/2) UCL				27.08	
192											
193	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
194	MLE yields a negative mean					Mean in Log Scale				1.162	
195						SD in Log Scale				1.505	
196						Mean in Original Scale				10.85	
197						SD in Original Scale				23.48	
198						95% Percentile Bootstrap UCL				21.92	
199						95% BCA Bootstrap UCL				27.46	
200											
201	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
202	k star (bias corrected)				0.472	Data appear Gamma Distributed at 5% Significance Level					
203	Theta Star				46.92						
204	nu star				6.614						
205											
206	A-D Test Statistic				0.299	Nonparametric Statistics					
207	5% A-D Critical Value				0.742	Kaplan-Meier (KM) Method					
208	K-S Test Statistic				0.742	Mean				10.86	

A	B	C	D	E	F	G	H	I	J	K	L	
209	5% K-S Critical Value				0.324					SD	22.73	
210	Data appear Gamma Distributed at 5% Significance Level									SE of Mean	6.161	
211										95% KM (t) UCL	21.66	
212	Assuming Gamma Distribution									95% KM (z) UCL	20.99	
213	Gamma ROS Statistics using Extrapolated Data								95% KM (jackknife) UCL		21.08	
214	Minimum				0.99					95% KM (bootstrap t) UCL		42.54
215	Maximum				95.5					95% KM (BCA) UCL		23.63
216	Mean				22.35					95% KM (Percentile Bootstrap) UCL		22.23
217	Median				18.47					95% KM (Chebyshev) UCL		37.71
218	SD				21.49					97.5% KM (Chebyshev) UCL		49.33
219	k star				1.124					99% KM (Chebyshev) UCL		72.16
220	Theta star				19.88							
221	Nu star				35.96					Potential UCLs to Use		
222	AppChi2				23.24					95% KM (t) UCL		21.66
223	95% Gamma Approximate UCL				34.58							
224	95% Adjusted Gamma UCL				36.4							
225	Note: DL/2 is not a recommended method.											
226												
227												
228	Chromium											
229												
230	General Statistics											
231	Number of Valid Data				16					Number of Detected Data		9
232	Number of Distinct Detected Data				8					Number of Non-Detect Data		7
233									Percent Non-Detects		43.75%	
234												
235	Raw Statistics					Log-transformed Statistics						
236	Minimum Detected				0.79					Minimum Detected		-0.236
237	Maximum Detected				280					Maximum Detected		5.635
238	Mean of Detected				45.85					Mean of Detected		2.154
239	SD of Detected				92.24					SD of Detected		1.929
240	Minimum Non-Detect				5					Minimum Non-Detect		1.609
241	Maximum Non-Detect				11.1					Maximum Non-Detect		2.407
242												
243	Note: Data have multiple DLs - Use of KM Method is recommended									Number treated as Non-Detect		12
244	For all methods (except KM, DL/2, and ROS Methods),									Number treated as Detected		4
245	Observations < Largest ND are treated as NDs									Single DL Non-Detect Percentage		75.00%
246												
247	Warning: There are only 9 Detected Values in this data											
248	Note: It should be noted that even though bootstrap may be performed on this data set											
249	the resulting calculations may not be reliable enough to draw conclusions											
250												
251	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
252												
253												
254	UCL Statistics											
255	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
256	Shapiro Wilk Test Statistic				0.569					Shapiro Wilk Test Statistic		0.935
257	5% Shapiro Wilk Critical Value				0.829					5% Shapiro Wilk Critical Value		0.829
258	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
259												
260	Assuming Normal Distribution					Assuming Lognormal Distribution						

A	B	C	D	E	F	G	H	I	J	K	L	
261	DL/2 Substitution Method						DL/2 Substitution Method					
262	Mean					27.84	Mean					1.862
263	SD					70.59	SD					1.471
264	95% DL/2 (t) UCL					58.78	95% H-Stat (DL/2) UCL					64.38
265												
266	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
267	MLE yields a negative mean						Mean in Log Scale					1.503
268							SD in Log Scale					1.718
269							Mean in Original Scale					27.04
270							SD in Original Scale					70.89
271							95% Percentile Bootstrap UCL					60.06
272							95% BCA Bootstrap UCL					78.66
273												
274	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
275	k star (bias corrected)					0.337	Data appear Gamma Distributed at 5% Significance Level					
276	Theta Star					136						
277	nu star					6.069						
278												
279	A-D Test Statistic					0.738	Nonparametric Statistics					
280	5% A-D Critical Value					0.79	Kaplan-Meier (KM) Method					
281	K-S Test Statistic					0.79	Mean					26.81
282	5% K-S Critical Value					0.298	SD					68.71
283	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					18.22
284							95% KM (t) UCL					58.75
285	Assuming Gamma Distribution						95% KM (z) UCL					56.78
286	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					57.92
287	Minimum					0.79	95% KM (bootstrap t) UCL					382.7
288	Maximum					280	95% KM (BCA) UCL					59.26
289	Mean					45.63	95% KM (Percentile Bootstrap) UCL					60.06
290	Median					26.32	95% KM (Chebyshev) UCL					106.2
291	SD					68.19	97.5% KM (Chebyshev) UCL					140.6
292	k star					0.549	99% KM (Chebyshev) UCL					208.1
293	Theta star					83.05						
294	Nu star					17.58	Potential UCLs to Use					
295	AppChi2					9.088	95% KM (BCA) UCL					59.26
296	95% Gamma Approximate UCL					88.26						
297	95% Adjusted Gamma UCL					95.49						
298	Note: DL/2 is not a recommended method.											
299												
300												
301	Iron											
302												
303	General Statistics											
304	Number of Valid Observations					11	Number of Distinct Observations					10
305												
306	Raw Statistics						Log-transformed Statistics					
307	Minimum					49.1	Minimum of Log Data					3.894
308	Maximum					14000	Maximum of Log Data					9.547
309	Mean					4191	Mean of log Data					7.689
310	Median					2600	SD of log Data					1.55
311	SD					4131						
312	Coefficient of Variation					0.986						

A	B	C	D	E	F	G	H	I	J	K	L
313	Skewness				1.502						
314											
315	Relevant UCL Statistics										
316	Normal Distribution Test					Lognormal Distribution Test					
317	Shapiro Wilk Test Statistic				0.852	Shapiro Wilk Test Statistic				0.873	
318	Shapiro Wilk Critical Value				0.85	Shapiro Wilk Critical Value				0.85	
319	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
320											
321	Assuming Normal Distribution					Assuming Lognormal Distribution					
322	95% Student's-t UCL				6449	95% H-UCL				55325	
323	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					19128
324	95% Adjusted-CLT UCL				6843	97.5% Chebyshev (MVUE) UCL				24812	
325	95% Modified-t UCL				6543	99% Chebyshev (MVUE) UCL				35978	
326											
327	Gamma Distribution Test					Data Distribution					
328	k star (bias corrected)				0.713	Data appear Normal at 5% Significance Level					
329	Theta Star				5881						
330	MLE of Mean				4191						
331	MLE of Standard Deviation				4965						
332	nu star				15.68						
333	Approximate Chi Square Value (.05)				7.737	Nonparametric Statistics					
334	Adjusted Level of Significance				0.0278	95% CLT UCL				6240	
335	Adjusted Chi Square Value				6.846	95% Jackknife UCL				6449	
336						95% Standard Bootstrap UCL				6110	
337	Anderson-Darling Test Statistic				0.226	95% Bootstrap-t UCL				7927	
338	Anderson-Darling 5% Critical Value				0.756	95% Hall's Bootstrap UCL				8663	
339	Kolmogorov-Smirnov Test Statistic				0.136	95% Percentile Bootstrap UCL				6288	
340	Kolmogorov-Smirnov 5% Critical Value				0.263	95% BCA Bootstrap UCL				6747	
341	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				9621	
342						97.5% Chebyshev(Mean, Sd) UCL				11970	
343	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				16584	
344	95% Approximate Gamma UCL				8495						
345	95% Adjusted Gamma UCL				9600						
346											
347	Potential UCL to Use					Use 95% Student's-t UCL				6449	
348											
349											
350	Manganese										
351											
352	General Statistics										
353	Number of Valid Observations				16	Number of Distinct Observations				16	
354											
355	Raw Statistics					Log-transformed Statistics					
356	Minimum				9.2	Minimum of Log Data				2.219	
357	Maximum				10000	Maximum of Log Data				9.21	
358	Mean				1335	Mean of log Data				5.991	
359	Median				581	SD of log Data				1.787	
360	SD				2543						
361	Coefficient of Variation				1.904						
362	Skewness				3.101						
363											
364	Relevant UCL Statistics										

A	B	C	D	E	F	G	H	I	J	K	L
365	Normal Distribution Test					Lognormal Distribution Test					
366	Shapiro Wilk Test Statistic				0.523	Shapiro Wilk Test Statistic				0.944	
367	Shapiro Wilk Critical Value				0.887	Shapiro Wilk Critical Value				0.887	
368	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
369											
370	Assuming Normal Distribution					Assuming Lognormal Distribution					
371	95% Student's-t UCL				2450	95% H-UCL				12900	
372	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL				5241	
373	95% Adjusted-CLT UCL				2908	97.5% Chebyshev (MVUE) UCL				6816	
374	95% Modified-t UCL				2532	99% Chebyshev (MVUE) UCL				9910	
375											
376	Gamma Distribution Test					Data Distribution					
377	k star (bias corrected)				0.467	Data appear Gamma Distributed at 5% Significance Level					
378	Theta Star				2861						
379	MLE of Mean				1335						
380	MLE of Standard Deviation				1955						
381	nu star				14.94						
382	Approximate Chi Square Value (.05)				7.216	Nonparametric Statistics					
383	Adjusted Level of Significance				0.0335	95% CLT UCL				2381	
384	Adjusted Chi Square Value				6.613	95% Jackknife UCL				2450	
385						95% Standard Bootstrap UCL				2351	
386	Anderson-Darling Test Statistic				0.695	95% Bootstrap-t UCL				7400	
387	Anderson-Darling 5% Critical Value				0.794	95% Hall's Bootstrap UCL				7696	
388	Kolmogorov-Smirnov Test Statistic				0.226	95% Percentile Bootstrap UCL				2472	
389	Kolmogorov-Smirnov 5% Critical Value				0.227	95% BCA Bootstrap UCL				3098	
390	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				4106	
391						97.5% Chebyshev(Mean, Sd) UCL				5306	
392	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				7661	
393	95% Approximate Gamma UCL				2764						
394	95% Adjusted Gamma UCL				3016						
395											
396	Potential UCL to Use					Use 95% Approximate Gamma UCL				2764	
397											
398											
399	Nickel										
400											
401	General Statistics										
402	Number of Valid Data				16	Number of Detected Data				10	
403	Number of Distinct Detected Data				10	Number of Non-Detect Data				6	
404						Percent Non-Detects				37.50%	
405											
406	Raw Statistics					Log-transformed Statistics					
407	Minimum Detected				0.97	Minimum Detected				-0.0305	
408	Maximum Detected				180	Maximum Detected				5.193	
409	Mean of Detected				28.58	Mean of Detected				1.541	
410	SD of Detected				59.29	SD of Detected				1.829	
411	Minimum Non-Detect				20	Minimum Non-Detect				2.996	
412	Maximum Non-Detect				44.4	Maximum Non-Detect				3.793	
413											
414	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				14	
415	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				2	
416	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				87.50%	

	A	B	C	D	E	F	G	H	I	J	K	L	
417													
418	UCL Statistics												
419	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
420	Shapiro Wilk Test Statistic					0.55	Shapiro Wilk Test Statistic					0.785	
421	5% Shapiro Wilk Critical Value					0.842	5% Shapiro Wilk Critical Value					0.842	
422	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
423													
424	Assuming Normal Distribution						Assuming Lognormal Distribution						
425	DL/2 Substitution Method						DL/2 Substitution Method						
426	Mean					22.37	Mean					1.877	
427	SD					46.75	SD					1.497	
428	95% DL/2 (t) UCL					42.86	95% H-Stat (DL/2) UCL					216.5	
429													
430	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
431	MLE method failed to converge properly						Mean in Log Scale					1.32	
432							SD in Log Scale					1.561	
433							Mean in Original Scale					19.29	
434							SD in Original Scale					47.61	
435							95% Percentile Bootstrap UCL					40.92	
436							95% BCA Bootstrap UCL					51.69	
437													
438	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
439	k star (bias corrected)					0.324	Data do not follow a Discernable Distribution (0.05)						
440	Theta Star					88.09							
441	nu star					6.488							
442													
443	A-D Test Statistic					1.523	Nonparametric Statistics						
444	5% A-D Critical Value					0.801	Kaplan-Meier (KM) Method						
445	K-S Test Statistic					0.801	Mean					18.81	
446	5% K-S Critical Value					0.285	SD					46.24	
447	Data not Gamma Distributed at 5% Significance Level						SE of Mean					12.19	
448							95% KM (t) UCL					40.18	
449	Assuming Gamma Distribution						95% KM (z) UCL					38.86	
450	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					39.75	
451	Minimum					1E-09	95% KM (bootstrap t) UCL					404.2	
452	Maximum					180	95% KM (BCA) UCL					40.73	
453	Mean					28.27	95% KM (Percentile Bootstrap) UCL					40.4	
454	Median					5.15	95% KM (Chebyshev) UCL					71.94	
455	SD					46.78	97.5% KM (Chebyshev) UCL					94.94	
456	k star					0.262	99% KM (Chebyshev) UCL					140.1	
457	Theta star					108							
458	Nu star					8.38	Potential UCLs to Use						
459	AppChi2					2.957	99% KM (Chebyshev) UCL					140.1	
460	95% Gamma Approximate UCL					80.12							
461	95% Adjusted Gamma UCL					91.05							
462	Note: DL/2 is not a recommended method.												
463													

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Data Sets with Non-Detects								
2	User Selected Options											
3	From File			\\Pr1-srv3\gis_projects\443005_USEPA REGION 2\0114488_EPAR2-008RICO02LX- ELLENVILLE\Data\ProUCL_04								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	Benzo(a)anthracene											
10												
11	General Statistics											
12	Number of Valid Data			32			Number of Detected Data			22		
13	Number of Distinct Detected Data			20			Number of Non-Detect Data			10		
14							Percent Non-Detects			31.25%		
15												
16	Raw Statistics						Log-transformed Statistics					
17	Minimum Detected			0.017			Minimum Detected			-4.075		
18	Maximum Detected			0.86			Maximum Detected			-0.151		
19	Mean of Detected			0.132			Mean of Detected			-2.585		
20	SD of Detected			0.187			SD of Detected			1.015		
21	Minimum Non-Detect			0.19			Minimum Non-Detect			-1.661		
22	Maximum Non-Detect			0.47			Maximum Non-Detect			-0.755		
23												
24	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect			31		
25	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected			1		
26	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage			96.88%		
27												
28	UCL Statistics											
29	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
30	Shapiro Wilk Test Statistic			0.596			Shapiro Wilk Test Statistic			0.966		
31	5% Shapiro Wilk Critical Value			0.911			5% Shapiro Wilk Critical Value			0.911		
32	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
33												
34	Assuming Normal Distribution						Assuming Lognormal Distribution					
35	DL/2 Substitution Method						DL/2 Substitution Method					
36	Mean			0.126			Mean			-2.469		
37	SD			0.156			SD			0.866		
38	95% DL/2 (t) UCL			0.173			95% H-Stat (DL/2) UCL			0.214		
39												
40	Maximum Likelihood Estimate(MLE) Method			N/A			Log ROS Method					
41	MLE method failed to converge properly						Mean in Log Scale			-2.66		
42							SD in Log Scale			0.894		
43							Mean in Original Scale			0.112		
44							SD in Original Scale			0.158		
45							95% Percentile Bootstrap UCL			0.165		
46							95% BCA Bootstrap UCL			0.181		
47												
48	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
49	k star (bias corrected)			0.916			Data Follow Appr. Gamma Distribution at 5% Significance Level					
50	Theta Star			0.144								
51	nu star			40.32								
52												
53	A-D Test Statistic			0.846			Nonparametric Statistics					

	A	B	C	D	E	F	G	H	I	J	K	L
54	5% A-D Critical Value				0.77	Kaplan-Meier (KM) Method						
55	K-S Test Statistic				0.77	Mean						0.114
56	5% K-S Critical Value				0.191	SD						0.157
57	Data follow Appr. Gamma Distribution at 5% Significance Level					SE of Mean						0.0291
58						95% KM (t) UCL						0.163
59	Assuming Gamma Distribution					95% KM (z) UCL						0.162
60	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						0.163
61	Minimum				0.017	95% KM (bootstrap t) UCL						0.212
62	Maximum				0.86	95% KM (BCA) UCL						0.169
63	Mean				0.132	95% KM (Percentile Bootstrap) UCL						0.165
64	Median				0.126	95% KM (Chebyshev) UCL						0.24
65	SD				0.154	97.5% KM (Chebyshev) UCL						0.295
66	k star				1.326	99% KM (Chebyshev) UCL						0.403
67	Theta star				0.0998							
68	Nu star				84.85	Potential UCLs to Use						
69	AppChi2				64.62	95% KM (BCA) UCL						0.169
70	95% Gamma Approximate UCL				0.174							
71	95% Adjusted Gamma UCL				0.176							
72	Note: DL/2 is not a recommended method.											
73												
74												
75	Benzo(a)pyrene											
76												
77	General Statistics											
78	Number of Valid Data				32	Number of Detected Data				20		
79	Number of Distinct Detected Data				17	Number of Non-Detect Data				12		
80						Percent Non-Detects				37.50%		
81												
82	Raw Statistics					Log-transformed Statistics						
83	Minimum Detected				0.024	Minimum Detected				-3.73		
84	Maximum Detected				0.74	Maximum Detected				-0.301		
85	Mean of Detected				0.124	Mean of Detected				-2.538		
86	SD of Detected				0.163	SD of Detected				0.894		
87	Minimum Non-Detect				0.19	Minimum Non-Detect				-1.661		
88	Maximum Non-Detect				0.47	Maximum Non-Detect				-0.755		
89												
90	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				31		
91	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				1		
92	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				96.88%		
93												
94	UCL Statistics											
95	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
96	Shapiro Wilk Test Statistic				0.581	Shapiro Wilk Test Statistic				0.94		
97	5% Shapiro Wilk Critical Value				0.905	5% Shapiro Wilk Critical Value				0.905		
98	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
99												
100	Assuming Normal Distribution					Assuming Lognormal Distribution						
101	DL/2 Substitution Method					DL/2 Substitution Method						
102	Mean				0.12	Mean				-2.42		
103	SD				0.13	SD				0.732		
104	95% DL/2 (t) UCL				0.159	95% H-Stat (DL/2) UCL				0.195		
105												
106	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						

	A	B	C	D	E	F	G	H	I	J	K	L		
107	MLE method failed to converge properly										Mean in Log Scale		-2.599	
108											SD in Log Scale		0.773	
109											Mean in Original Scale		0.106	
110											SD in Original Scale		0.132	
111											95% Percentile Bootstrap UCL		0.145	
112											95% BCA Bootstrap UCL		0.169	
113														
114	Gamma Distribution Test with Detected Values Only							Data Distribution Test with Detected Values Only						
115	k star (bias corrected)						1.091	Data appear Lognormal at 5% Significance Level						
116	Theta Star						0.114							
117	nu star						43.65							
118														
119	A-D Test Statistic						0.929	Nonparametric Statistics						
120	5% A-D Critical Value						0.763	Kaplan-Meier (KM) Method						
121	K-S Test Statistic						0.763	Mean						0.107
122	5% K-S Critical Value						0.198	SD						0.131
123	Data not Gamma Distributed at 5% Significance Level							SE of Mean						0.0247
124								95% KM (t) UCL						0.149
125	Assuming Gamma Distribution							95% KM (z) UCL						0.148
126	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						0.149
127	Minimum						0.024	95% KM (bootstrap t) UCL						0.188
128	Maximum						0.74	95% KM (BCA) UCL						0.153
129	Mean						0.124	95% KM (Percentile Bootstrap) UCL						0.152
130	Median						0.122	95% KM (Chebyshev) UCL						0.215
131	SD						0.128	97.5% KM (Chebyshev) UCL						0.261
132	k star						1.757	99% KM (Chebyshev) UCL						0.353
133	Theta star						0.0706							
134	Nu star						112.5	Potential UCLs to Use						
135	AppChi2						88.99	95% KM (BCA) UCL						0.153
136	95% Gamma Approximate UCL						0.157							
137	95% Adjusted Gamma UCL						0.159							
138	Note: DL/2 is not a recommended method.													
139														
140														
141	Benzo(b)fluoranthene													
142														
143	General Statistics													
144	Number of Valid Data						32	Number of Detected Data						23
145	Number of Distinct Detected Data						22	Number of Non-Detect Data						9
146								Percent Non-Detects						28.13%
147														
148	Raw Statistics							Log-transformed Statistics						
149	Minimum Detected						0.02	Minimum Detected						-3.912
150	Maximum Detected						1.3	Maximum Detected						0.262
151	Mean of Detected						0.167	Mean of Detected						-2.452
152	SD of Detected						0.273	SD of Detected						1.068
153	Minimum Non-Detect						0.19	Minimum Non-Detect						-1.661
154	Maximum Non-Detect						0.47	Maximum Non-Detect						-0.755
155														
156	Note: Data have multiple DLs - Use of KM Method is recommended							Number treated as Non-Detect						30
157	For all methods (except KM, DL/2, and ROS Methods),							Number treated as Detected						2
158	Observations < Largest ND are treated as NDs							Single DL Non-Detect Percentage						93.75%
159														

	A	B	C	D	E	F	G	H	I	J	K	L
160	UCL Statistics											
161	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
162	Shapiro Wilk Test Statistic					0.534	Shapiro Wilk Test Statistic					0.947
163	5% Shapiro Wilk Critical Value					0.914	5% Shapiro Wilk Critical Value					0.914
164	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
165												
166	Assuming Normal Distribution						Assuming Lognormal Distribution					
167	DL/2 Substitution Method						DL/2 Substitution Method					
168	Mean					0.152	Mean					-2.382
169	SD					0.232	SD					0.918
170	95% DL/2 (t) UCL					0.222	95% H-Stat (DL/2) UCL					0.243
171												
172	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
173	MLE method failed to converge properly						Mean in Log Scale					-2.55
174							SD in Log Scale					0.949
175							Mean in Original Scale					0.139
176							SD in Original Scale					0.235
177							95% Percentile Bootstrap UCL					0.212
178							95% BCA Bootstrap UCL					0.254
179												
180	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
181	k star (bias corrected)					0.8	Data appear Lognormal at 5% Significance Level					
182	Theta Star					0.208						
183	nu star					36.81						
184												
185	A-D Test Statistic					1.155	Nonparametric Statistics					
186	5% A-D Critical Value					0.775	Kaplan-Meier (KM) Method					
187	K-S Test Statistic					0.775	Mean					0.139
188	5% K-S Critical Value					0.188	SD					0.232
189	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0423
190							95% KM (t) UCL					0.211
191	Assuming Gamma Distribution						95% KM (z) UCL					0.209
192	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.211
193	Minimum					0.02	95% KM (bootstrap t) UCL					0.306
194	Maximum					1.3	95% KM (BCA) UCL					0.211
195	Mean					0.167	95% KM (Percentile Bootstrap) UCL					0.215
196	Median					0.107	95% KM (Chebyshev) UCL					0.324
197	SD					0.231	97.5% KM (Chebyshev) UCL					0.404
198	k star					1.085	99% KM (Chebyshev) UCL					0.56
199	Theta star					0.154						
200	Nu star					69.45	Potential UCLs to Use					
201	AppChi2					51.26	97.5% KM (Chebyshev) UCL					0.404
202	95% Gamma Approximate UCL					0.227						
203	95% Adjusted Gamma UCL					0.231						
204	Note: DL/2 is not a recommended method.											
205												
206												
207	Benzo(g,h,i)perylene											
208												
209	General Statistics											
210	Number of Valid Data					32	Number of Detected Data					12
211	Number of Distinct Detected Data					12	Number of Non-Detect Data					20
212							Percent Non-Detects					62.50%

	A	B	C	D	E	F	G	H	I	J	K	L
213												
214	Raw Statistics						Log-transformed Statistics					
215	Minimum Detected					0.021	Minimum Detected					-3.863
216	Maximum Detected					0.14	Maximum Detected					-1.966
217	Mean of Detected					0.0679	Mean of Detected					-2.854
218	SD of Detected					0.04	SD of Detected					0.611
219	Minimum Non-Detect					0.19	Minimum Non-Detect					-1.661
220	Maximum Non-Detect					0.47	Maximum Non-Detect					-0.755
221												
222	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					32
223	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					0
224	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					100.00%
225												
226	UCL Statistics											
227	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
228	Shapiro Wilk Test Statistic					0.904	Shapiro Wilk Test Statistic					0.962
229	5% Shapiro Wilk Critical Value					0.859	5% Shapiro Wilk Critical Value					0.859
230	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
231												
232	Assuming Normal Distribution						Assuming Lognormal Distribution					
233	DL/2 Substitution Method						DL/2 Substitution Method					
234	Mean					0.0944	Mean					-2.463
235	SD					0.0396	SD					0.501
236	95% DL/2 (t) UCL					0.106	95% H-Stat (DL/2) UCL					0.167
237												
238	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
239	MLE method failed to converge properly						Mean in Log Scale					-2.854
240							SD in Log Scale					0.514
241							Mean in Original Scale					0.0653
242							SD in Original Scale					0.0337
243							95% Percentile Bootstrap UCL					0.0752
244							95% BCA Bootstrap UCL					0.0757
245												
246	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
247	k star (bias corrected)					2.446	Data appear Normal at 5% Significance Level					
248	Theta Star					0.0278						
249	nu star					58.7						
250												
251	A-D Test Statistic					0.26	Nonparametric Statistics					
252	5% A-D Critical Value					0.738	Kaplan-Meier (KM) Method					
253	K-S Test Statistic					0.738	Mean					0.0679
254	5% K-S Critical Value					0.247	SD					0.0383
255	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0116
256							95% KM (t) UCL					0.0875
257	Assuming Gamma Distribution						95% KM (z) UCL					0.0869
258	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0881
259	Minimum					0.00669	95% KM (bootstrap t) UCL					0.0943
260	Maximum					0.14	95% KM (BCA) UCL					0.0869
261	Mean					0.0692	95% KM (Percentile Bootstrap) UCL					0.087
262	Median					0.0733	95% KM (Chebyshev) UCL					0.118
263	SD					0.0328	97.5% KM (Chebyshev) UCL					0.14
264	k star					3.166	99% KM (Chebyshev) UCL					0.183
265	Theta star					0.0219						

	A	B	C	D	E	F	G	H	I	J	K	L	
266					Nu star	202.6	Potential UCLs to Use						
267					AppChi2	170.7	95% KM (t) UCL					0.0875	
268					95% Gamma Approximate UCL	0.0821	95% KM (Percentile Bootstrap) UCL					0.087	
269					95% Adjusted Gamma UCL	0.0829							
270	Note: DL/2 is not a recommended method.												
271													
272													
273	Carbazole												
274													
275	General Statistics												
276					Number of Valid Data	32					Number of Detected Data	6	
277					Number of Distinct Detected Data	6					Number of Non-Detect Data	26	
278											Percent Non-Detects	81.25%	
279													
280	Raw Statistics						Log-transformed Statistics						
281					Minimum Detected	0.022					Minimum Detected	-3.817	
282					Maximum Detected	0.088					Maximum Detected	-2.43	
283					Mean of Detected	0.046					Mean of Detected	-3.21	
284					SD of Detected	0.0264					SD of Detected	0.553	
285					Minimum Non-Detect	0.18					Minimum Non-Detect	-1.715	
286					Maximum Non-Detect	0.47					Maximum Non-Detect	-0.755	
287													
288	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						32
289	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
290	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
291													
292	Warning: There are only 6 Detected Values in this data												
293	Note: It should be noted that even though bootstrap may be performed on this data set												
294	the resulting calculations may not be reliable enough to draw conclusions												
295													
296	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
297													
298													
299	UCL Statistics												
300	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
301					Shapiro Wilk Test Statistic	0.877					Shapiro Wilk Test Statistic	0.931	
302					5% Shapiro Wilk Critical Value	0.788					5% Shapiro Wilk Critical Value	0.788	
303	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
304													
305	Assuming Normal Distribution						Assuming Lognormal Distribution						
306					DL/2 Substitution Method						DL/2 Substitution Method		
307					Mean	0.102					Mean	-2.388	
308					SD	0.0447					SD	0.511	
309					95% DL/2 (t) UCL	0.115					95% H-Stat (DL/2) UCL	0.186	
310													
311					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
312	MLE method failed to converge properly						Mean in Log Scale						-3.21
313							SD in Log Scale						0.472
314							Mean in Original Scale						0.045
315							SD in Original Scale						0.022
316							95% Percentile Bootstrap UCL						0.0516
317							95% BCA Bootstrap UCL						0.0519
318													

A	B	C	D	E	F	G	H	I	J	K	L
319	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
320	k star (bias corrected)				2.1	Data appear Normal at 5% Significance Level					
321	Theta Star				0.0219						
322	nu star				25.19						
323											
324	A-D Test Statistic				0.336	Nonparametric Statistics					
325	5% A-D Critical Value				0.7	Kaplan-Meier (KM) Method					
326	K-S Test Statistic				0.7	Mean					0.046
327	5% K-S Critical Value				0.334	SD					0.0241
328	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					0.0108
329						95% KM (t) UCL					0.0643
330	Assuming Gamma Distribution					95% KM (z) UCL					0.0637
331	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.0657
332	Minimum				0.0002006	95% KM (bootstrap t) UCL					0.0981
333	Maximum				0.088	95% KM (BCA) UCL					0.0634
334	Mean				0.0464	95% KM (Percentile Bootstrap) UCL					0.0642
335	Median				0.0487	95% KM (Chebyshev) UCL					0.093
336	SD				0.0211	97.5% KM (Chebyshev) UCL					0.113
337	k star				2.042	99% KM (Chebyshev) UCL					0.153
338	Theta star				0.0227						
339	Nu star				130.7	Potential UCLs to Use					
340	AppChi2				105.3	95% KM (t) UCL					0.0643
341	95% Gamma Approximate UCL				0.0576	95% KM (Percentile Bootstrap) UCL					0.0642
342	95% Adjusted Gamma UCL				0.0582						
343	Note: DL/2 is not a recommended method.										
344											
345											
346	Dibenzo(a,h)anthracene										
347											
348	General Statistics										
349	Number of Valid Data				32	Number of Detected Data				5	
350	Number of Distinct Detected Data				5	Number of Non-Detect Data				27	
351						Percent Non-Detects				84.38%	
352											
353	Raw Statistics					Log-transformed Statistics					
354	Minimum Detected				0.023	Minimum Detected				-3.772	
355	Maximum Detected				0.096	Maximum Detected				-2.343	
356	Mean of Detected				0.056	Mean of Detected				-3.019	
357	SD of Detected				0.0301	SD of Detected				0.608	
358	Minimum Non-Detect				0.19	Minimum Non-Detect				-1.661	
359	Maximum Non-Detect				0.47	Maximum Non-Detect				-0.755	
360											
361	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				32	
362	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				0	
363	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				100.00%	
364											
365	Warning: There are only 5 Detected Values in this data										
366	Note: It should be noted that even though bootstrap may be performed on this data set										
367	the resulting calculations may not be reliable enough to draw conclusions										
368											
369	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
370											
371											

	A	B	C	D	E	F	G	H	I	J	K	L	
372	UCL Statistics												
373	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
374	Shapiro Wilk Test Statistic					0.931	Shapiro Wilk Test Statistic					0.907	
375	5% Shapiro Wilk Critical Value					0.762	5% Shapiro Wilk Critical Value					0.762	
376	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
377													
378	Assuming Normal Distribution						Assuming Lognormal Distribution						
379	DL/2 Substitution Method						DL/2 Substitution Method						
380	Mean					0.106	Mean					-2.324	
381	SD					0.0414	SD					0.435	
382	95% DL/2 (t) UCL					0.118	95% H-Stat (DL/2) UCL					0.169	
383													
384	Maximum Likelihood Estimate(MLE) Method						N/A	Log ROS Method					
385	MLE method failed to converge properly						Mean in Log Scale					-3.019	
386													
387													
388													
389													
390													
391													
392	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
393	k star (bias corrected)					1.662	Data appear Normal at 5% Significance Level						
394	Theta Star					0.0337							
395	nu star					16.62							
396													
397	A-D Test Statistic						0.353	Nonparametric Statistics					
398	5% A-D Critical Value					0.681	Kaplan-Meier (KM) Method						
399	K-S Test Statistic					0.681	Mean					0.056	
400	5% K-S Critical Value					0.359	SD					0.027	
401	Data appear Gamma Distributed at 5% Significance Level						SE of Mean						0.0135
402													
403	Assuming Gamma Distribution						95% KM (z) UCL						0.0782
404	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						0.0812
405	Minimum					0.000413	95% KM (bootstrap t) UCL						0.0856
406	Maximum					0.0984	95% KM (BCA) UCL						0.0795
407	Mean					0.0561	95% KM (Percentile Bootstrap) UCL						0.0786
408	Median					0.0583	95% KM (Chebyshev) UCL						0.115
409	SD					0.0256	97.5% KM (Chebyshev) UCL						0.14
410	k star					2.116	99% KM (Chebyshev) UCL						0.19
411	Theta star					0.0265							
412	Nu star					135.4	Potential UCLs to Use						
413	AppChi2					109.5	95% KM (t) UCL					0.0789	
414	95% Gamma Approximate UCL					0.0694	95% KM (Percentile Bootstrap) UCL						0.0786
415	95% Adjusted Gamma UCL					0.0702							
416	Note: DL/2 is not a recommended method.												
417													
418													
419	Indeno(1,2,3-cd)pyrene												
420													
421	General Statistics												
422	Number of Valid Data					32	Number of Detected Data					15	
423	Number of Distinct Detected Data					14	Number of Non-Detect Data					17	
424													
											Percent Non-Detects	53.13%	

	A	B	C	D	E	F	G	H	I	J	K	L	
425													
426	Raw Statistics						Log-transformed Statistics						
427	Minimum Detected					0.022	Minimum Detected					-3.817	
428	Maximum Detected					0.32	Maximum Detected					-1.139	
429	Mean of Detected					0.0834	Mean of Detected					-2.748	
430	SD of Detected					0.0757	SD of Detected					0.711	
431	Minimum Non-Detect					0.19	Minimum Non-Detect					-1.661	
432	Maximum Non-Detect					0.47	Maximum Non-Detect					-0.755	
433													
434	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						32
435	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
436	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
437													
438	UCL Statistics												
439	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
440	Shapiro Wilk Test Statistic					0.712	Shapiro Wilk Test Statistic					0.967	
441	5% Shapiro Wilk Critical Value					0.881	5% Shapiro Wilk Critical Value					0.881	
442	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
443													
444	Assuming Normal Distribution						Assuming Lognormal Distribution						
445	DL/2 Substitution Method						DL/2 Substitution Method						
446	Mean					0.098	Mean					-2.471	
447	SD					0.0578	SD					0.568	
448	95% DL/2 (t) UCL					0.115	95% H-Stat (DL/2) UCL					0.16	
449													
450	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
451	MLE method failed to converge properly						Mean in Log Scale					-2.8	
452							SD in Log Scale					0.579	
453							Mean in Original Scale					0.0729	
454							SD in Original Scale					0.0558	
455							95% Percentile Bootstrap UCL					0.0902	
456							95% BCA Bootstrap UCL					0.096	
457													
458	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
459	k star (bias corrected)					1.68	Data appear Gamma Distributed at 5% Significance Level						
460	Theta Star					0.0496							
461	nu star					50.4							
462													
463	A-D Test Statistic					0.469	Nonparametric Statistics						
464	5% A-D Critical Value					0.747	Kaplan-Meier (KM) Method						
465	K-S Test Statistic					0.747	Mean					0.0747	
466	5% K-S Critical Value					0.224	SD					0.0583	
467	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0131	
468							95% KM (t) UCL					0.097	
469	Assuming Gamma Distribution						95% KM (z) UCL					0.0963	
470	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0971	
471	Minimum					0.022	95% KM (bootstrap t) UCL					0.109	
472	Maximum					0.32	95% KM (BCA) UCL					0.0976	
473	Mean					0.0845	95% KM (Percentile Bootstrap) UCL					0.0979	
474	Median					0.0815	95% KM (Chebyshev) UCL					0.132	
475	SD					0.0529	97.5% KM (Chebyshev) UCL					0.157	
476	k star					3.413	99% KM (Chebyshev) UCL					0.205	
477	Theta star					0.0248							

	A	B	C	D	E	F	G	H	I	J	K	L	
478					Nu star	218.4	Potential UCLs to Use						
479					AppChi2	185.2	95% KM (t) UCL					0.097	
480					95% Gamma Approximate UCL	0.0996							
481					95% Adjusted Gamma UCL	0.1							
482	Note: DL/2 is not a recommended method.												
483													
484													
485	Phenanthrene												
486													
487	General Statistics												
488					Number of Valid Data	32					Number of Detected Data	20	
489					Number of Distinct Detected Data	18					Number of Non-Detect Data	12	
490											Percent Non-Detects	37.50%	
491													
492	Raw Statistics						Log-transformed Statistics						
493					Minimum Detected	0.011					Minimum Detected	-4.51	
494					Maximum Detected	0.49					Maximum Detected	-0.713	
495					Mean of Detected	0.119					Mean of Detected	-2.633	
496					SD of Detected	0.131					SD of Detected	1.035	
497					Minimum Non-Detect	0.19					Minimum Non-Detect	-1.661	
498					Maximum Non-Detect	0.47					Maximum Non-Detect	-0.755	
499													
500	Note: Data have multiple DLs - Use of KM Method is recommended											Number treated as Non-Detect	31
501	For all methods (except KM, DL/2, and ROS Methods),											Number treated as Detected	1
502	Observations < Largest ND are treated as NDs											Single DL Non-Detect Percentage	96.88%
503													
504	UCL Statistics												
505	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
506					Shapiro Wilk Test Statistic	0.753					Shapiro Wilk Test Statistic	0.971	
507					5% Shapiro Wilk Critical Value	0.905					5% Shapiro Wilk Critical Value	0.905	
508	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
509													
510	Assuming Normal Distribution						Assuming Lognormal Distribution						
511					DL/2 Substitution Method						DL/2 Substitution Method		
512					Mean	0.119					Mean	-2.461	
513					SD	0.106					SD	0.859	
514					95% DL/2 (t) UCL	0.151					95% H-Stat (DL/2) UCL	0.228	
515													
516					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
517	MLE method failed to converge properly											Mean in Log Scale	-2.759
518											SD in Log Scale	0.887	
519											Mean in Original Scale	0.0962	
520											SD in Original Scale	0.108	
521											95% Percentile Bootstrap UCL	0.131	
522											95% BCA Bootstrap UCL	0.138	
523													
524	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
525					k star (bias corrected)	0.992	Data appear Gamma Distributed at 5% Significance Level						
526					Theta Star	0.12							
527					nu star	39.67							
528													
529					A-D Test Statistic	0.639	Nonparametric Statistics						
530					5% A-D Critical Value	0.765	Kaplan-Meier (KM) Method						

	A	B	C	D	E	F	G	H	I	J	K	L
531	K-S Test Statistic					0.765	Mean					0.0995
532	5% K-S Critical Value					0.199	SD					0.11
533	Data appear Gamma Distributed at 5% Significance Level					SE of Mean					0.0213	
534						95% KM (t) UCL					0.136	
535	Assuming Gamma Distribution					95% KM (z) UCL					0.135	
536	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL					0.136	
537	Minimum					0.011	95% KM (bootstrap t) UCL					0.151
538	Maximum					0.49	95% KM (BCA) UCL					0.141
539	Mean					0.119	95% KM (Percentile Bootstrap) UCL					0.135
540	Median					0.115	95% KM (Chebyshev) UCL					0.192
541	SD					0.103	97.5% KM (Chebyshev) UCL					0.232
542	k star					1.589	99% KM (Chebyshev) UCL					0.311
543	Theta star					0.0752						
544	Nu star					101.7	Potential UCLs to Use					
545	AppChi2					79.4	95% KM (BCA) UCL					0.141
546	95% Gamma Approximate UCL					0.153						
547	95% Adjusted Gamma UCL					0.155						
548	Note: DL/2 is not a recommended method.											
549												
550												
551	Endrin aldehyde											
552												
553	General Statistics											
554	Number of Valid Data					45	Number of Detected Data					6
555	Number of Distinct Detected Data					6	Number of Non-Detect Data					39
556						Percent Non-Detects					86.67%	
557												
558	Raw Statistics					Log-transformed Statistics						
559	Minimum Detected					0.001	Minimum Detected					-6.908
560	Maximum Detected					0.042	Maximum Detected					-3.17
561	Mean of Detected					0.012	Mean of Detected					-5.112
562	SD of Detected					0.0154	SD of Detected					1.347
563	Minimum Non-Detect					0.0036	Minimum Non-Detect					-5.627
564	Maximum Non-Detect					0.007	Maximum Non-Detect					-4.962
565												
566	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					42	
567	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					3	
568	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					93.33%	
569												
570	Warning: There are only 6 Detected Values in this data											
571	Note: It should be noted that even though bootstrap may be performed on this data set											
572	the resulting calculations may not be reliable enough to draw conclusions											
573												
574	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.											
575												
576												
577	UCL Statistics											
578	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
579	Shapiro Wilk Test Statistic					0.758	Shapiro Wilk Test Statistic					0.99
580	5% Shapiro Wilk Critical Value					0.788	5% Shapiro Wilk Critical Value					0.788
581	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
582												
583	Assuming Normal Distribution					Assuming Lognormal Distribution						

	A	B	C	D	E	F	G	H	I	J	K	L
584	DL/2 Substitution Method						DL/2 Substitution Method					
585	Mean					0.00344	Mean					-6.025
586	SD					0.00622	SD					0.592
587	95% DL/2 (t) UCL					0.005	95% H-Stat (DL/2) UCL					0.00316
588												
589	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
590	MLE yields a negative mean						Mean in Log Scale					-6.464
591							SD in Log Scale					0.942
592							Mean in Original Scale					0.00296
593							SD in Original Scale					0.0064
594							95% Percentile Bootstrap UCL					0.00461
595							95% BCA Bootstrap UCL					0.00584
596												
597	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
598	k star (bias corrected)					0.537	Data appear Gamma Distributed at 5% Significance Level					
599	Theta Star					0.0224						
600	nu star					6.44						
601												
602	A-D Test Statistic					0.228	Nonparametric Statistics					
603	5% A-D Critical Value					0.719	Kaplan-Meier (KM) Method					
604	K-S Test Statistic					0.719	Mean					0.00291
605	5% K-S Critical Value					0.342	SD					0.00628
606	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.00108
607							95% KM (t) UCL					0.00473
608	Assuming Gamma Distribution						95% KM (z) UCL					0.00469
609	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.00482
610	Minimum					1E-09	95% KM (bootstrap t) UCL					0.00688
611	Maximum					0.042	95% KM (BCA) UCL					0.0098
612	Mean					0.00971	95% KM (Percentile Bootstrap) UCL					0.00683
613	Median					0.00959	95% KM (Chebyshev) UCL					0.00763
614	SD					0.00841	97.5% KM (Chebyshev) UCL					0.00967
615	k star					0.242	99% KM (Chebyshev) UCL					0.0137
616	Theta star					0.0402						
617	Nu star					21.75	Potential UCLs to Use					
618	AppChi2					12.15	95% KM (t) UCL					0.00473
619	95% Gamma Approximate UCL					0.0174						
620	95% Adjusted Gamma UCL					0.0177						
621	Note: DL/2 is not a recommended method.											
622												
623												
624	Endrin ketone											
625												
626	General Statistics											
627	Number of Valid Data					45	Number of Detected Data					8
628	Number of Distinct Detected Data					8	Number of Non-Detect Data					37
629							Percent Non-Detects					82.22%
630												
631	Raw Statistics						Log-transformed Statistics					
632	Minimum Detected					0.00095	Minimum Detected					-6.959
633	Maximum Detected					0.013	Maximum Detected					-4.343
634	Mean of Detected					0.00473	Mean of Detected					-5.652
635	SD of Detected					0.00395	SD of Detected					0.846
636	Minimum Non-Detect					0.0035	Minimum Non-Detect					-5.655

A	B	C	D	E	F	G	H	I	J	K	L
637	Maximum Non-Detect				0.007	Maximum Non-Detect				-4.962	
638											
639	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect					43
640	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected					2
641	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage					95.56%
642											
643	Warning: There are only 8 Detected Values in this data										
644	Note: It should be noted that even though bootstrap may be performed on this data set										
645	the resulting calculations may not be reliable enough to draw conclusions										
646											
647	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.										
648											
649											
650	UCL Statistics										
651	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only					
652	Shapiro Wilk Test Statistic				0.863	Shapiro Wilk Test Statistic				0.993	
653	5% Shapiro Wilk Critical Value				0.818	5% Shapiro Wilk Critical Value				0.818	
654	Data appear Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
655											
656	Assuming Normal Distribution					Assuming Lognormal Distribution					
657	DL/2 Substitution Method					DL/2 Substitution Method					
658	Mean				0.00258	Mean				-6.075	
659	SD				0.00189	SD				0.41	
660	95% DL/2 (t) UCL				0.00306	95% H-Stat (DL/2) UCL				0.00292	
661											
662	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method					
663	MLE method failed to converge properly					Mean in Log Scale				-6.2	
664						SD in Log Scale				0.548	
665						Mean in Original Scale				0.00243	
666						SD in Original Scale				0.00202	
667						95% Percentile Bootstrap UCL				0.00294	
668						95% BCA Bootstrap UCL				0.00306	
669											
670	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only					
671	k star (bias corrected)				1.224	Data appear Normal at 5% Significance Level					
672	Theta Star				0.00386						
673	nu star				19.59						
674											
675	A-D Test Statistic				0.159	Nonparametric Statistics					
676	5% A-D Critical Value				0.726	Kaplan-Meier (KM) Method					
677	K-S Test Statistic				0.726	Mean				0.00259	
678	5% K-S Critical Value				0.298	SD				0.00204	
679	Data appear Gamma Distributed at 5% Significance Level					SE of Mean				0.0005247	
680						95% KM (t) UCL				0.00347	
681	Assuming Gamma Distribution					95% KM (z) UCL				0.00345	
682	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL				0.00359	
683	Minimum				0.00095	95% KM (bootstrap t) UCL				0.00386	
684	Maximum				0.013	95% KM (BCA) UCL				0.00361	
685	Mean				0.00481	95% KM (Percentile Bootstrap) UCL				0.00362	
686	Median				0.00495	95% KM (Chebyshev) UCL				0.00487	
687	SD				0.00204	97.5% KM (Chebyshev) UCL				0.00586	
688	k star				5.11	99% KM (Chebyshev) UCL				0.00781	
689	Theta star				0.0009414						

	A	B	C	D	E	F	G	H	I	J	K	L	
690					Nu star	459.9	Potential UCLs to Use						
691					AppChi2	411.2	95% KM (t) UCL					0.00347	
692					95% Gamma Approximate UCL	0.00538	95% KM (Percentile Bootstrap) UCL					0.00362	
693					95% Adjusted Gamma UCL	0.0054							
694	Note: DL/2 is not a recommended method.												
695													
696													
697	Endosulfan II												
698													
699	General Statistics												
700					Number of Valid Data	46					Number of Detected Data	4	
701					Number of Distinct Detected Data	4					Number of Non-Detect Data	42	
702											Percent Non-Detects	91.30%	
703													
704	Raw Statistics						Log-transformed Statistics						
705					Minimum Detected	0.00027					Minimum Detected	-8.217	
706					Maximum Detected	0.0013					Maximum Detected	-6.645	
707					Mean of Detected	0.00072					Mean of Detected	-7.462	
708					SD of Detected	0.0005117					SD of Detected	0.801	
709					Minimum Non-Detect	0.0036					Minimum Non-Detect	-5.627	
710					Maximum Non-Detect	0.007					Maximum Non-Detect	-4.962	
711													
712	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect						46
713	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						0
714	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						100.00%
715													
716	Warning: There are only 4 Distinct Detected Values in this data												
717	Note: It should be noted that even though bootstrap may be performed on this data set												
718	the resulting calculations may not be reliable enough to draw conclusions												
719													
720	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.												
721													
722													
723	UCL Statistics												
724	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
725					Shapiro Wilk Test Statistic	0.864					Shapiro Wilk Test Statistic	0.847	
726					5% Shapiro Wilk Critical Value	0.748					5% Shapiro Wilk Critical Value	0.748	
727	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
728													
729	Assuming Normal Distribution						Assuming Lognormal Distribution						
730					DL/2 Substitution Method						DL/2 Substitution Method		
731					Mean	0.00198					Mean	-6.283	
732					SD	0.0005007					SD	0.437	
733					95% DL/2 (t) UCL	0.00211					95% H-Stat (DL/2) UCL	0.00282	
734													
735					Maximum Likelihood Estimate(MLE) Method	N/A					Log ROS Method		
736	MLE method failed to converge properly						Mean in Log Scale						-7.462
737							SD in Log Scale						0.662
738							Mean in Original Scale						0.000708
739							SD in Original Scale						0.0004743
740							95% Percentile Bootstrap UCL						0.0008232
741							95% BCA Bootstrap UCL						0.0008397
742													

A	B	C	D	E	F	G	H	I	J	K	L		
743	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
744	k star (bias corrected)			0.758		Data appear Normal at 5% Significance Level							
745	Theta Star			0.0009499									
746	nu star			6.064									
747													
748	A-D Test Statistic			0.473		Nonparametric Statistics							
749	5% A-D Critical Value			0.66		Kaplan-Meier (KM) Method							
750	K-S Test Statistic			0.66						Mean	0.00072		
751	5% K-S Critical Value			0.397						SD	0.0004431		
752	Data appear Gamma Distributed at 5% Significance Level									SE of Mean	0.0002558		
753											95% KM (t) UCL	0.00115	
754	Assuming Gamma Distribution											95% KM (z) UCL	0.00114
755	Gamma ROS Statistics using Extrapolated Data											95% KM (jackknife) UCL	0.00121
756	Minimum			5.848E-05						95% KM (bootstrap t) UCL	0.00125		
757	Maximum			0.00152						95% KM (BCA) UCL	0.00115		
758	Mean			0.0007183						95% KM (Percentile Bootstrap) UCL	0.00123		
759	Median			0.0006878						95% KM (Chebyshev) UCL	0.00184		
760	SD			0.0004183						97.5% KM (Chebyshev) UCL	0.00232		
761	k star			2.081						99% KM (Chebyshev) UCL	0.00327		
762	Theta star			0.0003451									
763	Nu star			191.5		Potential UCLs to Use							
764	AppChi2			160.4						95% KM (t) UCL	0.00115		
765	95% Gamma Approximate UCL			0.0008571						95% KM (Percentile Bootstrap) UCL	0.00123		
766	95% Adjusted Gamma UCL			N/A									
767	Note: DL/2 is not a recommended method.												
768													
769													
770	gamma-Chlordane												
771													
772	General Statistics												
773	Number of Valid Data			45		Number of Detected Data				17			
774	Number of Distinct Detected Data			16		Number of Non-Detect Data				28			
775							Percent Non-Detects				62.22%		
776													
777	Raw Statistics					Log-transformed Statistics							
778	Minimum Detected			0.000076		Minimum Detected				-9.485			
779	Maximum Detected			0.015		Maximum Detected				-4.2			
780	Mean of Detected			0.00214		Mean of Detected				-6.88			
781	SD of Detected			0.00346		SD of Detected				1.286			
782	Minimum Non-Detect			0.0019		Minimum Non-Detect				-6.266			
783	Maximum Non-Detect			0.0036		Maximum Non-Detect				-5.627			
784													
785	Note: Data have multiple DLs - Use of KM Method is recommended					Number treated as Non-Detect				44			
786	For all methods (except KM, DL/2, and ROS Methods),					Number treated as Detected				1			
787	Observations < Largest ND are treated as NDs					Single DL Non-Detect Percentage				97.78%			
788													
789	UCL Statistics												
790	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
791	Shapiro Wilk Test Statistic			0.523		Shapiro Wilk Test Statistic				0.964			
792	5% Shapiro Wilk Critical Value			0.892		5% Shapiro Wilk Critical Value				0.892			
793	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level							
794													
795	Assuming Normal Distribution					Assuming Lognormal Distribution							

A	B	C	D	E	F	G	H	I	J	K	L	
796	DL/2 Substitution Method					DL/2 Substitution Method						
797	Mean				0.00148	Mean						-6.854
798	SD				0.00215	SD						0.782
799	95% DL/2 (t) UCL				0.00202	95% H-Stat (DL/2) UCL						0.00221
800												
801	Maximum Likelihood Estimate(MLE) Method				N/A	Log ROS Method						
802	MLE method failed to converge properly					Mean in Log Scale						-7.367
803						SD in Log Scale						1.007
804						Mean in Original Scale						0.00116
805						SD in Original Scale						0.00224
806						95% Percentile Bootstrap UCL						0.00178
807						95% BCA Bootstrap UCL						0.00221
808												
809	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
810	k star (bias corrected)				0.705	Data appear Gamma Distributed at 5% Significance Level						
811	Theta Star				0.00303							
812	nu star				23.99							
813												
814	A-D Test Statistic				0.539	Nonparametric Statistics						
815	5% A-D Critical Value				0.774	Kaplan-Meier (KM) Method						
816	K-S Test Statistic				0.774	Mean						0.00124
817	5% K-S Critical Value				0.217	SD						0.00221
818	Data appear Gamma Distributed at 5% Significance Level					SE of Mean						0.0003533
819						95% KM (t) UCL						0.00183
820	Assuming Gamma Distribution					95% KM (z) UCL						0.00182
821	Gamma ROS Statistics using Extrapolated Data					95% KM (jackknife) UCL						0.00183
822	Minimum				0.000076	95% KM (bootstrap t) UCL						0.00246
823	Maximum				0.015	95% KM (BCA) UCL						0.0019
824	Mean				0.00211	95% KM (Percentile Bootstrap) UCL						0.00189
825	Median				0.00208	95% KM (Chebyshev) UCL						0.00278
826	SD				0.00209	97.5% KM (Chebyshev) UCL						0.00345
827	k star				1.835	99% KM (Chebyshev) UCL						0.00475
828	Theta star				0.00115							
829	Nu star				165.1	Potential UCLs to Use						
830	AppChi2				136.4	95% KM (t) UCL						0.00183
831	95% Gamma Approximate UCL				0.00256							
832	95% Adjusted Gamma UCL				0.00257							
833	Note: DL/2 is not a recommended method.											
834												
835												
836	Aroclor-1260											
837												
838	General Statistics											
839	Number of Valid Data				45	Number of Detected Data				18		
840	Number of Distinct Detected Data				18	Number of Non-Detect Data				27		
841						Percent Non-Detects				60.00%		
842												
843	Raw Statistics					Log-transformed Statistics						
844	Minimum Detected				0.0068	Minimum Detected				-4.991		
845	Maximum Detected				0.38	Maximum Detected				-0.968		
846	Mean of Detected				0.126	Mean of Detected				-2.677		
847	SD of Detected				0.125	SD of Detected				1.265		
848	Minimum Non-Detect				0.036	Minimum Non-Detect				-3.324		

	A	B	C	D	E	F	G	H	I	J	K	L
849	Maximum Non-Detect					0.05	Maximum Non-Detect					-2.996
850												
851	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					33
852	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					12
853	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					73.33%
854												
855	UCL Statistics											
856	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only						
857	Shapiro Wilk Test Statistic					0.829	Shapiro Wilk Test Statistic					0.942
858	5% Shapiro Wilk Critical Value					0.897	5% Shapiro Wilk Critical Value					0.897
859	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
860												
861	Assuming Normal Distribution					Assuming Lognormal Distribution						
862	DL/2 Substitution Method						DL/2 Substitution Method					
863	Mean					0.0625	Mean					-3.407
864	SD					0.0934	SD					0.992
865	95% DL/2 (t) UCL					0.0859	95% H-Stat (DL/2) UCL					0.0531
866												
867	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method					
868	MLE yields a negative mean						Mean in Log Scale					-3.648
869							SD in Log Scale					1.221
870							Mean in Original Scale					0.0599
871							SD in Original Scale					0.0949
872							95% Percentile Bootstrap UCL					0.084
873							95% BCA Bootstrap UCL					0.0903
874												
875	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only						
876	k star (bias corrected)					0.84	Data appear Gamma Distributed at 5% Significance Level					
877	Theta Star					0.15						
878	nu star					30.22						
879												
880	A-D Test Statistic					0.303	Nonparametric Statistics					
881	5% A-D Critical Value					0.768	Kaplan-Meier (KM) Method					
882	K-S Test Statistic					0.768	Mean					0.0587
883	5% K-S Critical Value					0.21	SD					0.0942
884	Data appear Gamma Distributed at 5% Significance Level						SE of Mean					0.0145
885							95% KM (t) UCL					0.0832
886	Assuming Gamma Distribution						95% KM (z) UCL					0.0827
887	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.0828
888	Minimum					0.0068	95% KM (bootstrap t) UCL					0.095
889	Maximum					0.38	95% KM (BCA) UCL					0.0842
890	Mean					0.126	95% KM (Percentile Bootstrap) UCL					0.0834
891	Median					0.124	95% KM (Chebyshev) UCL					0.122
892	SD					0.0808	97.5% KM (Chebyshev) UCL					0.15
893	k star					1.969	99% KM (Chebyshev) UCL					0.203
894	Theta star					0.0639						
895	Nu star					177.2	Potential UCLs to Use					
896	AppChi2					147.4	95% KM (t) UCL					0.0832
897	95% Gamma Approximate UCL					0.151						
898	95% Adjusted Gamma UCL					0.152						
899	Note: DL/2 is not a recommended method.											
900												
901												

	A	B	C	D	E	F	G	H	I	J	K	L		
902	Aluminum													
903														
904	General Statistics													
905	Number of Valid Observations					45	Number of Distinct Observations					42		
906														
907	Raw Statistics						Log-transformed Statistics							
908						Minimum	4140						Minimum of Log Data	8.328
909						Maximum	8920						Maximum of Log Data	9.096
910						Mean	6254						Mean of log Data	8.724
911						Median	6070						SD of log Data	0.189
912						SD	1175							
913						Coefficient of Variation	0.188							
914						Skewness	0.282							
915														
916	Relevant UCL Statistics													
917	Normal Distribution Test						Lognormal Distribution Test							
918						Shapiro Wilk Test Statistic	0.966						Shapiro Wilk Test Statistic	0.972
919						Shapiro Wilk Critical Value	0.945						Shapiro Wilk Critical Value	0.945
920	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
921														
922	Assuming Normal Distribution						Assuming Lognormal Distribution							
923						95% Student's-t UCL	6549						95% H-UCL	6566
924	95% UCLs (Adjusted for Skewness)											95% Chebyshev (MVUE) UCL	7030	
925						95% Adjusted-CLT UCL	6551						97.5% Chebyshev (MVUE) UCL	7365
926						95% Modified-t UCL	6550						99% Chebyshev (MVUE) UCL	8023
927														
928	Gamma Distribution Test						Data Distribution							
929						k star (bias corrected)	27.05	Data appear Normal at 5% Significance Level						
930						Theta Star	231.3							
931						MLE of Mean	6254							
932						MLE of Standard Deviation	1203							
933						nu star	2434							
934						Approximate Chi Square Value (.05)	2321	Nonparametric Statistics						
935						Adjusted Level of Significance	0.0447						95% CLT UCL	6543
936						Adjusted Chi Square Value	2317						95% Jackknife UCL	6549
937													95% Standard Bootstrap UCL	6540
938						Anderson-Darling Test Statistic	0.295						95% Bootstrap-t UCL	6548
939						Anderson-Darling 5% Critical Value	0.748						95% Hall's Bootstrap UCL	6555
940						Kolmogorov-Smirnov Test Statistic	0.0723						95% Percentile Bootstrap UCL	6538
941						Kolmogorov-Smirnov 5% Critical Value	0.132						95% BCA Bootstrap UCL	6560
942	Data appear Gamma Distributed at 5% Significance Level											95% Chebyshev(Mean, Sd) UCL	7018	
943												97.5% Chebyshev(Mean, Sd) UCL	7349	
944	Assuming Gamma Distribution											99% Chebyshev(Mean, Sd) UCL	7998	
945						95% Approximate Gamma UCL	6561							
946						95% Adjusted Gamma UCL	6571							
947														
948	Potential UCL to Use											Use 95% Student's-t UCL	6549	
949														
950														
951	Antimony													
952														
953	General Statistics													
954	Number of Valid Data					45	Number of Detected Data					22		

	A	B	C	D	E	F	G	H	I	J	K	L	
955	Number of Distinct Detected Data					21	Number of Non-Detect Data					23	
956							Percent Non-Detects					51.11%	
957													
958	Raw Statistics					Log-transformed Statistics							
959	Minimum Detected					0.28	Minimum Detected					-1.273	
960	Maximum Detected					2210	Maximum Detected					7.701	
961	Mean of Detected					111.9	Mean of Detected					0.993	
962	SD of Detected					469.4	SD of Detected					2.288	
963	Minimum Non-Detect					0.61	Minimum Non-Detect					-0.494	
964	Maximum Non-Detect					8.5	Maximum Non-Detect					2.14	
965													
966	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					40	
967	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					5	
968	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					88.89%	
969													
970	UCL Statistics												
971	Normal Distribution Test with Detected Values Only					Lognormal Distribution Test with Detected Values Only							
972	Shapiro Wilk Test Statistic					0.251	Shapiro Wilk Test Statistic					0.829	
973	5% Shapiro Wilk Critical Value					0.911	5% Shapiro Wilk Critical Value					0.911	
974	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
975													
976	Assuming Normal Distribution					Assuming Lognormal Distribution							
977	DL/2 Substitution Method						DL/2 Substitution Method						
978	Mean					55.93	Mean					0.681	
979	SD					329	SD					1.818	
980	95% DL/2 (t) UCL					138.3	95% H-Stat (DL/2) UCL					24.5	
981													
982	Maximum Likelihood Estimate(MLE) Method					N/A	Log ROS Method						
983	MLE yields a negative mean						Mean in Log Scale					0.139	
984							SD in Log Scale					1.853	
985							Mean in Original Scale					55.02	
986							SD in Original Scale					329.1	
987							95% Percentile Bootstrap UCL					152.4	
988							95% BCA Bootstrap UCL					207.3	
989													
990	Gamma Distribution Test with Detected Values Only					Data Distribution Test with Detected Values Only							
991	k star (bias corrected)					0.201	Data do not follow a Discernable Distribution (0.05)						
992	Theta Star					556							
993	nu star					8.854							
994													
995	A-D Test Statistic					3.898	Nonparametric Statistics						
996	5% A-D Critical Value					0.893	Kaplan-Meier (KM) Method						
997	K-S Test Statistic					0.893	Mean					55.06	
998	5% K-S Critical Value					0.206	SD					325.4	
999	Data not Gamma Distributed at 5% Significance Level						SE of Mean					49.65	
1000							95% KM (t) UCL					138.5	
1001	Assuming Gamma Distribution						95% KM (z) UCL					136.7	
1002	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					137.5	
1003	Minimum					1E-09	95% KM (bootstrap t) UCL					1786	
1004	Maximum					2210	95% KM (BCA) UCL					154.7	
1005	Mean					70.12	95% KM (Percentile Bootstrap) UCL					152	
1006	Median					0.44	95% KM (Chebyshev) UCL					271.5	
1007	SD					334.8	97.5% KM (Chebyshev) UCL					365.2	

	A	B	C	D	E	F	G	H	I	J	K	L
1008					k star	0.0824					99% KM (Chebyshev) UCL	549.1
1009					Theta star	851.4						
1010					Nu star	7.412				Potential UCLs to Use		
1011					AppChi2	2.399					99% KM (Chebyshev) UCL	549.1
1012					95% Gamma Approximate UCL	216.6						
1013					95% Adjusted Gamma UCL	225.4						
1014	Note: DL/2 is not a recommended method.											
1015												
1016												
1017	Arsenic											
1018												
1019	General Statistics											
1020	Number of Valid Observations					45	Number of Distinct Observations					34
1021												
1022	Raw Statistics						Log-transformed Statistics					
1023	Minimum					1.6	Minimum of Log Data					0.47
1024	Maximum					20.3	Maximum of Log Data					3.011
1025	Mean					5.787	Mean of log Data					1.639
1026	Median					5.1	SD of log Data					0.463
1027	SD					3.449						
1028	Coefficient of Variation					0.596						
1029	Skewness					2.922						
1030												
1031	Relevant UCL Statistics											
1032	Normal Distribution Test						Lognormal Distribution Test					
1033	Shapiro Wilk Test Statistic					0.698	Shapiro Wilk Test Statistic					0.947
1034	Shapiro Wilk Critical Value					0.945	Shapiro Wilk Critical Value					0.945
1035	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1036												
1037	Assuming Normal Distribution						Assuming Lognormal Distribution					
1038	95% Student's-t UCL					6.651	95% H-UCL					6.539
1039	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					7.514
1040	95% Adjusted-CLT UCL					6.872	97.5% Chebyshev (MVUE) UCL					8.291
1041	95% Modified-t UCL					6.688	99% Chebyshev (MVUE) UCL					9.818
1042												
1043	Gamma Distribution Test						Data Distribution					
1044	k star (bias corrected)					4.167	Data appear Lognormal at 5% Significance Level					
1045	Theta Star					1.389						
1046	MLE of Mean					5.787						
1047	MLE of Standard Deviation					2.835						
1048	nu star					375.1						
1049	Approximate Chi Square Value (.05)					331.2	Nonparametric Statistics					
1050	Adjusted Level of Significance					0.0447	95% CLT UCL					6.632
1051	Adjusted Chi Square Value					329.8	95% Jackknife UCL					6.651
1052							95% Standard Bootstrap UCL					6.623
1053	Anderson-Darling Test Statistic					1.433	95% Bootstrap-t UCL					7.178
1054	Anderson-Darling 5% Critical Value					0.753	95% Hall's Bootstrap UCL					11.27
1055	Kolmogorov-Smirnov Test Statistic					0.145	95% Percentile Bootstrap UCL					6.673
1056	Kolmogorov-Smirnov 5% Critical Value					0.132	95% BCA Bootstrap UCL					6.929
1057	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					8.028
1058							97.5% Chebyshev(Mean, Sd) UCL					8.998
1059	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					10.9
1060	95% Approximate Gamma UCL					6.553						

	A	B	C	D	E	F	G	H	I	J	K	L	
1061	95% Adjusted Gamma UCL					6.58							
1062													
1063	Potential UCL to Use									Use 95% Student's-t UCL	6.651		
1064										95% Modified-t UCL	6.688		
1065										or 95% H-UCL	6.539		
1066													
1067													
1068	Barium												
1069													
1070							General Statistics						
1071	Number of Valid Observations				45		Number of Distinct Observations				45		
1072													
1073	Raw Statistics						Log-transformed Statistics						
1074					Minimum	24.9					Minimum of Log Data	3.215	
1075					Maximum	3590					Maximum of Log Data	8.186	
1076					Mean	192.5					Mean of log Data	4.602	
1077					Median	83.6					SD of log Data	0.83	
1078					SD	528.2							
1079					Coefficient of Variation	2.744							
1080					Skewness	6.337							
1081													
1082							Relevant UCL Statistics						
1083	Normal Distribution Test						Lognormal Distribution Test						
1084	Shapiro Wilk Test Statistic				0.265		Shapiro Wilk Test Statistic				0.861		
1085	Shapiro Wilk Critical Value				0.945		Shapiro Wilk Critical Value				0.945		
1086	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1087													
1088	Assuming Normal Distribution						Assuming Lognormal Distribution						
1089	95% Student's-t UCL				324.8		95% H-UCL				185.1		
1090	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL				223.9		
1091	95% Adjusted-CLT UCL				401.5		97.5% Chebyshev (MVUE) UCL				260.4		
1092	95% Modified-t UCL				337.2		99% Chebyshev (MVUE) UCL				332.3		
1093													
1094	Gamma Distribution Test						Data Distribution						
1095	k star (bias corrected)				0.845		Data do not follow a Discernable Distribution (0.05)						
1096	Theta Star				227.7								
1097	MLE of Mean				192.5								
1098	MLE of Standard Deviation				209.4								
1099	nu star				76.09								
1100	Approximate Chi Square Value (.05)				56.99		Nonparametric Statistics						
1101	Adjusted Level of Significance				0.0447		95% CLT UCL				322		
1102	Adjusted Chi Square Value				56.45		95% Jackknife UCL				324.8		
1103							95% Standard Bootstrap UCL				317		
1104	Anderson-Darling Test Statistic				5.249		95% Bootstrap-t UCL				1078		
1105	Anderson-Darling 5% Critical Value				0.783		95% Hall's Bootstrap UCL				852.4		
1106	Kolmogorov-Smirnov Test Statistic				0.265		95% Percentile Bootstrap UCL				343.8		
1107	Kolmogorov-Smirnov 5% Critical Value				0.136		95% BCA Bootstrap UCL				432.2		
1108	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL				535.7		
1109							97.5% Chebyshev(Mean, Sd) UCL				684.3		
1110	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL				976		
1111	95% Approximate Gamma UCL				257								
1112	95% Adjusted Gamma UCL				259.5								
1113													

	A	B	C	D	E	F	G	H	I	J	K	L	
1114	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL					535.7	
1115													
1116													
1117	Cadmium												
1118													
1119	General Statistics												
1120	Number of Valid Data				45		Number of Detected Data				25		
1121	Number of Distinct Detected Data				23		Number of Non-Detect Data				20		
1122												Percent Non-Detects	44.44%
1123													
1124	Raw Statistics						Log-transformed Statistics						
1125	Minimum Detected				0.3		Minimum Detected				-1.204		
1126	Maximum Detected				13.8		Maximum Detected				2.625		
1127	Mean of Detected				1.173		Mean of Detected				-0.458		
1128	SD of Detected				2.664		SD of Detected				0.822		
1129	Minimum Non-Detect				0.07		Minimum Non-Detect				-2.659		
1130	Maximum Non-Detect				0.62		Maximum Non-Detect				-0.478		
1131													
1132	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect				34		
1133	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected				11		
1134	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage				75.56%		
1135													
1136	UCL Statistics												
1137	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only						
1138	Shapiro Wilk Test Statistic				0.317		Shapiro Wilk Test Statistic				0.764		
1139	5% Shapiro Wilk Critical Value				0.918		5% Shapiro Wilk Critical Value				0.918		
1140	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1141													
1142	Assuming Normal Distribution						Assuming Lognormal Distribution						
1143	DL/2 Substitution Method						DL/2 Substitution Method						
1144	Mean				0.714		Mean				-1.328		
1145	SD				2.036		SD				1.327		
1146	95% DL/2 (t) UCL				1.224		95% H-Stat (DL/2) UCL				0.88		
1147													
1148	Maximum Likelihood Estimate(MLE) Method						Log ROS Method						
1149	MLE yields a negative mean						Mean in Log Scale				-1.129		
1150												SD in Log Scale	1.025
1151												Mean in Original Scale	0.721
1152												SD in Original Scale	2.033
1153												95% Percentile Bootstrap UCL	1.294
1154												95% BCA Bootstrap UCL	1.594
1155													
1156	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only						
1157	k star (bias corrected)				0.856		Data do not follow a Discernable Distribution (0.05)						
1158	Theta Star				1.371								
1159	nu star				42.78								
1160													
1161	A-D Test Statistic				3.547		Nonparametric Statistics						
1162	5% A-D Critical Value				0.775		Kaplan-Meier (KM) Method						
1163	K-S Test Statistic				0.775		Mean				0.794		
1164	5% K-S Critical Value				0.18		SD				1.991		
1165	Data not Gamma Distributed at 5% Significance Level						SE of Mean				0.303		
1166												95% KM (t) UCL	1.303

	A	B	C	D	E	F	G	H	I	J	K	L	
1167	Assuming Gamma Distribution							95% KM (z) UCL				1.292	
1168	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL				1.295	
1169					Minimum	1E-09	95% KM (bootstrap t) UCL				3.66		
1170					Maximum	13.8	95% KM (BCA) UCL				1.414		
1171					Mean	0.914	95% KM (Percentile Bootstrap) UCL				1.385		
1172					Median	0.498	95% KM (Chebyshev) UCL				2.115		
1173					SD	2.028	97.5% KM (Chebyshev) UCL				2.686		
1174					k star	0.254	99% KM (Chebyshev) UCL				3.809		
1175					Theta star	3.593							
1176					Nu star	22.88	Potential UCLs to Use						
1177					AppChi2	13	95% KM (t) UCL				1.303		
1178					95% Gamma Approximate UCL	1.608	95% KM (% Bootstrap) UCL				1.385		
1179					95% Adjusted Gamma UCL	1.639							
1180	Note: DL/2 is not a recommended method.												
1181													
1182													
1183	Chromium												
1184													
1185	General Statistics												
1186	Number of Valid Observations				45	Number of Distinct Observations				38			
1187													
1188	Raw Statistics						Log-transformed Statistics						
1189					Minimum	6.2	Minimum of Log Data				1.825		
1190					Maximum	26.2	Maximum of Log Data				3.266		
1191					Mean	11.79	Mean of log Data				2.411		
1192					Median	11	SD of log Data				0.329		
1193					SD	4.406							
1194					Coefficient of Variation	0.374							
1195					Skewness	1.58							
1196													
1197	Relevant UCL Statistics												
1198	Normal Distribution Test						Lognormal Distribution Test						
1199					Shapiro Wilk Test Statistic	0.842	Shapiro Wilk Test Statistic				0.941		
1200					Shapiro Wilk Critical Value	0.945	Shapiro Wilk Critical Value				0.945		
1201	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1202													
1203	Assuming Normal Distribution						Assuming Lognormal Distribution						
1204					95% Student's-t UCL	12.89	95% H-UCL				12.86		
1205	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL				14.31		
1206					95% Adjusted-CLT UCL	13.04	97.5% Chebyshev (MVUE) UCL				15.42		
1207					95% Modified-t UCL	12.92	99% Chebyshev (MVUE) UCL				17.6		
1208													
1209	Gamma Distribution Test						Data Distribution						
1210					k star (bias corrected)	8.383	Data do not follow a Discernable Distribution (0.05)						
1211					Theta Star	1.407							
1212					MLE of Mean	11.79							
1213					MLE of Standard Deviation	4.072							
1214					nu star	754.5							
1215	Approximate Chi Square Value (.05)						691.7	Nonparametric Statistics					
1216					Adjusted Level of Significance	0.0447	95% CLT UCL				12.87		
1217					Adjusted Chi Square Value	689.8	95% Jackknife UCL				12.89		
1218							95% Standard Bootstrap UCL				12.86		
1219					Anderson-Darling Test Statistic	1.33	95% Bootstrap-t UCL				13.16		

A	B	C	D	E	F	G	H	I	J	K	L
1220	Anderson-Darling 5% Critical Value				0.749	95% Hall's Bootstrap UCL				13.14	
1221	Kolmogorov-Smirnov Test Statistic				0.166	95% Percentile Bootstrap UCL				12.91	
1222	Kolmogorov-Smirnov 5% Critical Value				0.132	95% BCA Bootstrap UCL				13.12	
1223	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				14.65	
1224						97.5% Chebyshev(Mean, Sd) UCL				15.89	
1225	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				18.33	
1226	95% Approximate Gamma UCL				12.86						
1227	95% Adjusted Gamma UCL				12.9						
1228											
1229	Potential UCL to Use					Use 95% Student's-t UCL				12.89	
1230						or 95% Modified-t UCL				12.92	
1231											
1232											
1233	Cobalt										
1234											
1235	General Statistics										
1236	Number of Valid Observations				45	Number of Distinct Observations				29	
1237											
1238	Raw Statistics					Log-transformed Statistics					
1239	Minimum				4.2	Minimum of Log Data				1.435	
1240	Maximum				9.6	Maximum of Log Data				2.262	
1241	Mean				6.142	Mean of log Data				1.799	
1242	Median				6	SD of log Data				0.178	
1243	SD				1.131						
1244	Coefficient of Variation				0.184						
1245	Skewness				0.959						
1246											
1247	Relevant UCL Statistics										
1248	Normal Distribution Test					Lognormal Distribution Test					
1249	Shapiro Wilk Test Statistic				0.929	Shapiro Wilk Test Statistic				0.961	
1250	Shapiro Wilk Critical Value				0.945	Shapiro Wilk Critical Value				0.945	
1251	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level					
1252											
1253	Assuming Normal Distribution					Assuming Lognormal Distribution					
1254	95% Student's-t UCL				6.425	95% H-UCL				6.427	
1255	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL				6.857	
1256	95% Adjusted-CLT UCL				6.445	97.5% Chebyshev (MVUE) UCL				7.167	
1257	95% Modified-t UCL				6.429	99% Chebyshev (MVUE) UCL				7.775	
1258											
1259	Gamma Distribution Test					Data Distribution					
1260	k star (bias corrected)				29.79	Data appear Gamma Distributed at 5% Significance Level					
1261	Theta Star				0.206						
1262	MLE of Mean				6.142						
1263	MLE of Standard Deviation				1.125						
1264	nu star				2681						
1265	Approximate Chi Square Value (.05)				2562	Nonparametric Statistics					
1266	Adjusted Level of Significance				0.0447	95% CLT UCL				6.419	
1267	Adjusted Chi Square Value				2558	95% Jackknife UCL				6.425	
1268						95% Standard Bootstrap UCL				6.418	
1269	Anderson-Darling Test Statistic				0.567	95% Bootstrap-t UCL				6.47	
1270	Anderson-Darling 5% Critical Value				0.748	95% Hall's Bootstrap UCL				6.484	
1271	Kolmogorov-Smirnov Test Statistic				0.107	95% Percentile Bootstrap UCL				6.418	
1272	Kolmogorov-Smirnov 5% Critical Value				0.131	95% BCA Bootstrap UCL				6.447	

A	B	C	D	E	F	G	H	I	J	K	L	
1273	Data appear Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL					6.877	
1274						97.5% Chebyshev(Mean, Sd) UCL					7.195	
1275	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					7.819	
1276	95% Approximate Gamma UCL			6.428								
1277	95% Adjusted Gamma UCL			6.438								
1278												
1279	Potential UCL to Use					Use 95% Approximate Gamma UCL					6.428	
1280												
1281												
1282	Copper											
1283												
1284	General Statistics											
1285	Number of Valid Observations			45	Number of Distinct Observations			44				
1286												
1287	Raw Statistics					Log-transformed Statistics						
1288	Minimum			9.8	Minimum of Log Data			2.282				
1289	Maximum			751	Maximum of Log Data			6.621				
1290	Mean			66.67	Mean of log Data			3.474				
1291	Median			26.2	SD of log Data			0.943				
1292	SD			147.5								
1293	Coefficient of Variation			2.212								
1294	Skewness			4.267								
1295												
1296	Relevant UCL Statistics											
1297	Normal Distribution Test					Lognormal Distribution Test						
1298	Shapiro Wilk Test Statistic			0.368	Shapiro Wilk Test Statistic			0.844				
1299	Shapiro Wilk Critical Value			0.945	Shapiro Wilk Critical Value			0.945				
1300	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level						
1301												
1302	Assuming Normal Distribution					Assuming Lognormal Distribution						
1303	95% Student's-t UCL			103.6	95% H-UCL			69.88				
1304	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL					84.76	
1305	95% Adjusted-CLT UCL			117.8	97.5% Chebyshev (MVUE) UCL			99.96				
1306	95% Modified-t UCL			105.9	99% Chebyshev (MVUE) UCL			129.8				
1307												
1308	Gamma Distribution Test					Data Distribution						
1309	k star (bias corrected)			0.776	Data do not follow a Discernable Distribution (0.05)							
1310	Theta Star			85.93								
1311	MLE of Mean			66.67								
1312	MLE of Standard Deviation			75.69								
1313	nu star			69.83								
1314	Approximate Chi Square Value (.05)			51.59	Nonparametric Statistics							
1315	Adjusted Level of Significance			0.0447	95% CLT UCL			102.8				
1316	Adjusted Chi Square Value			51.07	95% Jackknife UCL			103.6				
1317					95% Standard Bootstrap UCL			102.5				
1318	Anderson-Darling Test Statistic			5.203	95% Bootstrap-t UCL			227.9				
1319	Anderson-Darling 5% Critical Value			0.786	95% Hall's Bootstrap UCL			263.7				
1320	Kolmogorov-Smirnov Test Statistic			0.258	95% Percentile Bootstrap UCL			104.7				
1321	Kolmogorov-Smirnov 5% Critical Value			0.137	95% BCA Bootstrap UCL			123				
1322	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL					162.5	
1323						97.5% Chebyshev(Mean, Sd) UCL					204	
1324	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL					285.4	
1325	95% Approximate Gamma UCL			90.24								

	A	B	C	D	E	F	G	H	I	J	K	L	
1326	95% Adjusted Gamma UCL					91.16							
1327													
1328	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL					162.5	
1329													
1330													
1331	Iron												
1332													
1333	General Statistics												
1334	Number of Valid Observations					45	Number of Distinct Observations					37	
1335													
1336	Raw Statistics						Log-transformed Statistics						
1337	Minimum					9550	Minimum of Log Data					9.164	
1338	Maximum					60200	Maximum of Log Data					11.01	
1339	Mean					16434	Mean of log Data					9.632	
1340	Median					14000	SD of log Data					0.342	
1341	SD					8735							
1342	Coefficient of Variation					0.531							
1343	Skewness					3.792							
1344													
1345	Relevant UCL Statistics												
1346	Normal Distribution Test						Lognormal Distribution Test						
1347	Shapiro Wilk Test Statistic					0.556	Shapiro Wilk Test Statistic					0.789	
1348	Shapiro Wilk Critical Value					0.945	Shapiro Wilk Critical Value					0.945	
1349	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
1350													
1351	Assuming Normal Distribution						Assuming Lognormal Distribution						
1352	95% Student's-t UCL					18622	95% H-UCL					17746	
1353	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					19817	
1354	95% Adjusted-CLT UCL					19363	97.5% Chebyshev (MVUE) UCL					21405	
1355	95% Modified-t UCL					18745	99% Chebyshev (MVUE) UCL					24524	
1356													
1357	Gamma Distribution Test						Data Distribution						
1358	k star (bias corrected)					6.413	Data do not follow a Discernable Distribution (0.05)						
1359	Theta Star					2563							
1360	MLE of Mean					16434							
1361	MLE of Standard Deviation					6490							
1362	nu star					577.2							
1363	Approximate Chi Square Value (.05)					522.5	Nonparametric Statistics						
1364	Adjusted Level of Significance					0.0447	95% CLT UCL					18576	
1365	Adjusted Chi Square Value					520.8	95% Jackknife UCL					18622	
1366							95% Standard Bootstrap UCL					18545	
1367	Anderson-Darling Test Statistic					3.947	95% Bootstrap-t UCL					21366	
1368	Anderson-Darling 5% Critical Value					0.751	95% Hall's Bootstrap UCL					28360	
1369	Kolmogorov-Smirnov Test Statistic					0.257	95% Percentile Bootstrap UCL					18847	
1370	Kolmogorov-Smirnov 5% Critical Value					0.132	95% BCA Bootstrap UCL					19516	
1371	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					22110	
1372							97.5% Chebyshev(Mean, Sd) UCL					24566	
1373	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					29390	
1374	95% Approximate Gamma UCL					18156							
1375	95% Adjusted Gamma UCL					18216							
1376													
1377	Potential UCL to Use						Use 95% Student's-t UCL					18622	
1378							or 95% Modified-t UCL					18745	

	A	B	C	D	E	F	G	H	I	J	K	L		
1432	General Statistics													
1433	Number of Valid Observations						33	Number of Distinct Observations						32
1434														
1435	Raw Statistics						Log-transformed Statistics							
1436	Minimum						240	Minimum of Log Data						5.481
1437	Maximum						818	Maximum of Log Data						6.707
1438	Mean						538.6	Mean of log Data						6.246
1439	Median						560	SD of log Data						0.311
1440	SD						150.9							
1441	Coefficient of Variation						0.28							
1442	Skewness						-0.193							
1443														
1444	Relevant UCL Statistics													
1445	Normal Distribution Test						Lognormal Distribution Test							
1446	Shapiro Wilk Test Statistic						0.97	Shapiro Wilk Test Statistic						0.937
1447	Shapiro Wilk Critical Value						0.931	Shapiro Wilk Critical Value						0.931
1448	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
1449														
1450	Assuming Normal Distribution						Assuming Lognormal Distribution							
1451	95% Student's-t UCL						583.1	95% H-UCL						597.7
1452	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						670.3	
1453	95% Adjusted-CLT UCL						580.9	97.5% Chebyshev (MVUE) UCL						726.5
1454	95% Modified-t UCL						583	99% Chebyshev (MVUE) UCL						836.8
1455														
1456	Gamma Distribution Test						Data Distribution							
1457	k star (bias corrected)						10.65	Data appear Normal at 5% Significance Level						
1458	Theta Star						50.6							
1459	MLE of Mean						538.6							
1460	MLE of Standard Deviation						165.1							
1461	nu star						702.6							
1462	Approximate Chi Square Value (.05)						642.1	Nonparametric Statistics						
1463	Adjusted Level of Significance						0.0419	95% CLT UCL						581.8
1464	Adjusted Chi Square Value						639.1	95% Jackknife UCL						583.1
1465								95% Standard Bootstrap UCL						580.4
1466	Anderson-Darling Test Statistic						0.503	95% Bootstrap-t UCL						579.9
1467	Anderson-Darling 5% Critical Value						0.747	95% Hall's Bootstrap UCL						583.2
1468	Kolmogorov-Smirnov Test Statistic						0.129	95% Percentile Bootstrap UCL						581.5
1469	Kolmogorov-Smirnov 5% Critical Value						0.153	95% BCA Bootstrap UCL						581.6
1470	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						653.1	
1471								97.5% Chebyshev(Mean, Sd) UCL						702.7
1472	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						800	
1473	95% Approximate Gamma UCL						589.4							
1474	95% Adjusted Gamma UCL						592.1							
1475														
1476	Potential UCL to Use						Use 95% Student's-t UCL						583.1	
1477														
1478														
1479	Mercury													
1480														
1481	General Statistics													
1482	Number of Valid Data						45	Number of Detected Data						31
1483	Number of Distinct Detected Data						25	Number of Non-Detect Data						14
1484								Percent Non-Detects						31.11%

	A	B	C	D	E	F	G	H	I	J	K	L
1485												
1486	Raw Statistics						Log-transformed Statistics					
1487	Minimum Detected					0.048	Minimum Detected					-3.037
1488	Maximum Detected					1.3	Maximum Detected					0.262
1489	Mean of Detected					0.25	Mean of Detected					-1.713
1490	SD of Detected					0.259	SD of Detected					0.766
1491	Minimum Non-Detect					0.06	Minimum Non-Detect					-2.813
1492	Maximum Non-Detect					0.14	Maximum Non-Detect					-1.966
1493												
1494	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect					27
1495	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected					18
1496	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage					60.00%
1497												
1498	UCL Statistics											
1499	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
1500	Shapiro Wilk Test Statistic					0.661	Shapiro Wilk Test Statistic					0.963
1501	5% Shapiro Wilk Critical Value					0.929	5% Shapiro Wilk Critical Value					0.929
1502	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
1503												
1504	Assuming Normal Distribution						Assuming Lognormal Distribution					
1505	DL/2 Substitution Method						DL/2 Substitution Method					
1506	Mean					0.187	Mean					-2.124
1507	SD					0.234	SD					0.901
1508	95% DL/2 (t) UCL					0.246	95% H-Stat (DL/2) UCL					0.206
1509												
1510	Maximum Likelihood Estimate(MLE) Method						Log ROS Method					
1511	Mean					0.00223	Mean in Log Scale					-2.109
1512	SD					0.402	SD in Log Scale					0.892
1513	95% MLE (t) UCL					0.103	Mean in Original Scale					0.189
1514	95% MLE (Tiku) UCL					0.147	SD in Original Scale					0.233
1515							95% Percentile Bootstrap UCL					0.249
1516							95% BCA Bootstrap UCL					0.275
1517												
1518	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only					
1519	k star (bias corrected)					1.546	Data appear Lognormal at 5% Significance Level					
1520	Theta Star					0.161						
1521	nu star					95.88						
1522												
1523	A-D Test Statistic					1.002	Nonparametric Statistics					
1524	5% A-D Critical Value					0.762	Kaplan-Meier (KM) Method					
1525	K-S Test Statistic					0.762	Mean					0.191
1526	5% K-S Critical Value					0.16	SD					0.229
1527	Data not Gamma Distributed at 5% Significance Level						SE of Mean					0.0348
1528							95% KM (t) UCL					0.249
1529	Assuming Gamma Distribution						95% KM (z) UCL					0.248
1530	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL					0.249
1531	Minimum					1E-09	95% KM (bootstrap t) UCL					0.297
1532	Maximum					1.3	95% KM (BCA) UCL					0.264
1533	Mean					0.211	95% KM (Percentile Bootstrap) UCL					0.252
1534	Median					0.15	95% KM (Chebyshev) UCL					0.343
1535	SD					0.228	97.5% KM (Chebyshev) UCL					0.408
1536	k star					0.421	99% KM (Chebyshev) UCL					0.537
1537	Theta star					0.502						

	A	B	C	D	E	F	G	H	I	J	K	L
1538					Nu star	37.88	Potential UCLs to Use					
1539					AppChi2	24.78	95% KM (BCA) UCL					0.264
1540					95% Gamma Approximate UCL	0.323						
1541					95% Adjusted Gamma UCL	0.328						
1542	Note: DL/2 is not a recommended method.											
1543												
1544												
1545	Zinc											
1546												
1547	General Statistics											
1548	Number of Valid Observations					45	Number of Distinct Observations					44
1549												
1550	Raw Statistics						Log-transformed Statistics					
1551	Minimum					7.3	Minimum of Log Data					1.988
1552	Maximum					4090	Maximum of Log Data					8.316
1553	Mean					380.7	Mean of log Data					5.088
1554	Median					128	SD of log Data					1.123
1555	SD					802.4						
1556	Coefficient of Variation					2.108						
1557	Skewness					3.659						
1558												
1559	Relevant UCL Statistics											
1560	Normal Distribution Test						Lognormal Distribution Test					
1561	Shapiro Wilk Test Statistic					0.43	Shapiro Wilk Test Statistic					0.9
1562	Shapiro Wilk Critical Value					0.945	Shapiro Wilk Critical Value					0.945
1563	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
1564												
1565	Assuming Normal Distribution						Assuming Lognormal Distribution					
1566	95% Student's-t UCL					581.6	95% H-UCL					466.1
1567	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL					560.3
1568	95% Adjusted-CLT UCL					647.1	97.5% Chebyshev (MVUE) UCL					673.9
1569	95% Modified-t UCL					592.5	99% Chebyshev (MVUE) UCL					897
1570												
1571	Gamma Distribution Test						Data Distribution					
1572	k star (bias corrected)					0.674	Data do not follow a Discernable Distribution (0.05)					
1573	Theta Star					564.4						
1574	MLE of Mean					380.7						
1575	MLE of Standard Deviation					463.5						
1576	nu star					60.7						
1577	Approximate Chi Square Value (.05)					43.78	Nonparametric Statistics					
1578	Adjusted Level of Significance					0.0447	95% CLT UCL					577.4
1579	Adjusted Chi Square Value					43.31	95% Jackknife UCL					581.6
1580							95% Standard Bootstrap UCL					576.8
1581	Anderson-Darling Test Statistic					4.64	95% Bootstrap-t UCL					737.5
1582	Anderson-Darling 5% Critical Value					0.794	95% Hall's Bootstrap UCL					585.3
1583	Kolmogorov-Smirnov Test Statistic					0.236	95% Percentile Bootstrap UCL					584.9
1584	Kolmogorov-Smirnov 5% Critical Value					0.137	95% BCA Bootstrap UCL					672.8
1585	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					902
1586							97.5% Chebyshev(Mean, Sd) UCL					1128
1587	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					1571
1588	95% Approximate Gamma UCL					527.8						
1589	95% Adjusted Gamma UCL					533.6						
1590												

	A	B	C	D	E	F	G	H	I	J	K	L
1591	Potential UCL to Use						Use 99% Chebyshev (Mean, Sd) UCL					1571
1592												

ATTACHMENT E
CTE Analysis

Table 4.1a CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future

Medium: Soil

Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Ingestion	Trespasser / Recreator	Child/Adult	On-site Surface Soil	CS	Chemical Concentration in Surface Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x IR x CF x FI x EF x ED) / (BW x AT)
				IR _c	Ingestion Rate (child)	100	mg/day	conservatively assume rates comparable to residential receptor	
					MOA chemical - child (0-2 years)	100	mg/day	EPA 2008,2009	
					MOA chemical - child (2-6 years)	100	mg/day	EPA 2008,2009	
					MOA chemical - child (6-16 years)	50	mg/day	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	50	mg/day	EPA 2008,2009	
				IR _a	Ingestion Rate (adult)	50	mg/day	conservatively assume rates comparable to residential receptor	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				FI	Fraction Ingested	100%	unitless	best professional judgment	
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgment	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	9	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	9	years	best professional judgment	
BW _c	Body Weight (child)	15	kg	EPA 1991					

Table 4.1a CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future

Medium: Soil

Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Ingestion	Trespasser / Recreator	Child/Adult	On-site Surface Soil	BW	MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,2007	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,2007	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,2007	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,2007	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365	days	EPA 1989	
Ingestion	Trespasser / Recreator	Child/Adult Aggregate	On-site Surface Soil	IR-adj	Ingestion Rate (age-adjusted)	46.43	mg-yr/kg-day	calculated	Intake = CS x IR-adj x EF x CF x 1/AT
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				CF	Conversion Factor	1.E-06	kg/mg	NA	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	
Ingestion	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	CS	Chemical Concentration in Off-Site Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x IR x CF x FI x EF x ED) / (BW x AT)
				IR _c	Ingestion Rate (child)	100	mg/day	EPA 1991	
					MOA chemical - child (0-2 years)	100	mg/day	EPA 2008,2009	
					MOA chemical - child (2-6 years)	100	mg/day	EPA 2008,2009	
					MOA chemical - child (6-16 years)	50	mg/day	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	50	mg/day	EPA 2008,2009	
				IR _a	Ingestion Rate (adult)	50	mg/day	EPA 1991	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
FI	Fraction Ingested	100%	unitless	best professional judgment					

Table 4.1a CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Soil
Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Ingestion	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	EF	Exposure Frequency	350	days/yr	EPA 1991	
				ED _c	Exposure Duration (child)	6	years	EPA 1991	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	9	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	9	years	EPA 1991	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009, 1997	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365	days	EPA 1989	
Ingestion	Resident	Child/Adult Aggregate	Residences A-I Surface Soil and On-site Surface Soil	IR-adj	Ingestion Rate (age-adjusted)	46.43	mg-yr/kg- day	calculated	Intake = CS x IR-adj x EF x CF x 1/AT
				EF	Exposure Frequency	350	days/yr	EPA 1991	
				CF	Conversion Factor	1.E-06	kg/mg	NA	IR-adj = (ED-C x IR-C / BW-C) + (ED-A x IR-A / BW-A)
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	

Table 4.1a CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future

Medium: Soil

Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)	
Dermal	Trespasser / Recreator	Child/Adult	On-site Surface Soil	CS	Chemical Concentration in Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x CF x SA x AF x ABS x EF x ED) / (BW x AT)	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A		
				SA _c	Skin Surface Area (child)	2800	cm ²	EPA 2004		
					MOA chemical - child (0-2 years)	2598	cm²/event	EPA 2008,2009, 1997		
					MOA chemical - child (2-6 years)	2939	cm²/event	EPA 2008,2009, 1997		
					MOA chemical - child (6-16 years)	4111	cm²/event	EPA 2008,2009, 1997		
				SA _a	Skin Surface Area (adult)	MOA chemical - adult (16-30 years)	5700	cm²/event		EPA 2008,2009, 1997
						5700	cm ²	EPA 2004		
						AF _c	Adherence Factor (child)	0.04		mg/cm ²
				AF _c	Adherence Factor (child)	MOA chemical - child (0-2 years)	0.04	mg/cm²		EPA 2008,2009
						MOA chemical - child (2-6 years)	0.04	mg/cm²		EPA 2008,2009
						MOA chemical - child (6-16 years)	0.04	mg/cm²		EPA 2008,2009
						MOA chemical - adult (16-30 years)	0.01	mg/cm²		EPA 2008,2009
				AF _a	Adherence Factor (adult)	0.01	mg/cm ²	EPA 2002		
				ABS	Absorption Factor	chem-spec	unitless	EPA 2004		
				EF _c	Exposure Frequency (child)	40	events/yr	EPA 1997		
				EF _a	Exposure Frequency (adult)	40	events/yr	EPA 1997		
ED _c	Exposure Duration (child)	6	years	best professional judgment						
		MOA chemical - child (0-2 years)	2	years	EPA 2008,2009					
		MOA chemical - child (2-6 years)	4	years	EPA 2008,2009					

Table 4.1a CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Soil
Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Dermal	Trespasser / Recreator	Child/Adult	On-site Surface Soil		MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	9	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	9	years	best professional judgment	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,1997	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365	days	EPA 1989	
Dermal	Trespasser / Recreator	Child / Adult Aggregate	On-site Surface Soil	DA -adj	Dermal Absorption, age-adjusted	52.13	mg-yr/kg-event	calculated	CDI = CS x DA-adj x ABS x CF x EF x 1/AT
				ABS	Dermal Absorption Factor Solids	chem spec	unitless	EPA 2004	
				CF	Conversion Factor	1E-06	kg/mg	NA	DA-adj = (ED-C x SA-C x AF-C / BW-C) + (ED-A x SA-A x AF-A / BW-A)
				EF	Exposure Frequency	40	events/yr	EPA 1997	
				AT-C	Averaging Time - Carcinogens	25,550	day	EPA 1989	
Dermal	Resident	Child/Adult	Residences A-1 Surface Soil and On-site Surface Soil	CS	Chemical Concentration in Off-Site Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x CF x SA x AF x ABS x EF x ED) / (BW x AT)
				CF	Conversion Factor	10-6	kg/mg	-	
				SA _c	Skin Surface Area (child)	2800	cm ² /event	EPA 2002	
					MOA chemical - child (0-2 years)	2598	cm²/event	EPA 2008,2009, 1997	

Table 4.1a CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future

Medium: Soil

Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Dermal	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	SA	MOA chemical - child (2-6 years)	2939	cm ² /event	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	4111	cm ² /event	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	5700	cm ² /event	EPA 2008,2009, 1997	
				SA _a	Skin Surface Area (adult)	5700	cm ² /event	EPA 2002	
				AF _c	Adherence Factor (child)	0.04	mg/cm ²	EPA 2002	
					MOA chemical - child (0-2 years)	0.04	mg/cm ²	EPA 2008,2009	
					MOA chemical - child (2-6 years)	0.04	mg/cm ²	EPA 2008,2009	
					MOA chemical - child (6-16 years)	0.04	mg/cm ²	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	0.01	mg/cm ²	EPA 2008,2009	
				AF _a	Adherence Factor (adult)	0.01	mg/cm ²	EPA 2002	
				ABS	Absorption Factor	chem-spec	unitless	EPA 2004	
				EF _c	Exposure Frequency (child)	350	days/yr	EPA 1991	
				EF _a	Exposure Frequency (adult)	350	days/yr	EPA 1991	
				ED _c	Exposure Duration (child)	6	years	EPA 1991	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
	MOA chemical - child (6-16 years)	10	years	EPA 2008,2009					
	MOA chemical - adult (16-30 years)	9	years	EPA 2008,2009					

Table 4.1a CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Medium: Soil
 Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Dermal	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	ED _a	Exposure Duration (adult)	9	years	EPA 1991	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,1997	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
	AT	Averaging Time	ED x 365	days	EPA 1989				
Dermal	Resident	Child / Adult Aggregate	Residences A-I Surface Soil and On-site Surface Soil	DA -adj	Dermal Absorption, age-adjusted	52.13	mg-yr/kg- event	calculated	$CDI = CS \times DA\text{-adj} \times ABS \times CF \times EF \times 1/AT$ $DA\text{-adj} = (ED\text{-}C \times SA\text{-}C \times AF\text{-}C / BW\text{-}C) + (ED\text{-}A \times SA\text{-}A \times AF\text{-}A / BW\text{-}A)$
				ABS	Dermal Absorption Factor Solids	chem spec	unitless	EPA 2004	
				CF	Conversion Factor	1E-06	kg/mg	NA	
				EF	Exposure Frequency	350	day/yr	EPA 1991	
				AT-C	Averaging Time - Carcinogens	25,550	day	EPA 1989	
Inhalation	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	CA	Chemical Concentration in Air	chem spec	mg/m ³	calculated	$EC = (CA \times ET \times EF \times ED \times CF) \times 1/AT$ Where $CA \text{ (mg/m}^3\text{)} = CS / PEF$
				CS	chemical concentration in soil	EPC	mg/kg	RAGS Part D Table 3	
				PEF	Particulate Emission Factor	8.31E+08	m ³ /kg	See 4.1a CTE Supplement	
				ET	Exposure Time	24	hr/day	EPA 2009	
				EF	Exposure Frequency	350	days/yr	EPA 1991	
				ED _c	Exposure Duration (child)	6	years	EPA 1991	

Table 4.1a CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future

Medium: Soil

Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Inhalation	Resident	Child/Adult	Residences A-I Surface Soil and On-site Surface Soil	ED _a	Exposure Duration (adult)	9	years	EPA 1991	EC = CA x ET x EF x ED x CF x 1/AT Where CA (mg/m3) = CS / PEF
				AT	Averaging Time - Cancer	ED x 365	days	EPA 1989	
				CF	Conversion Factor	1/24	days/hr	EPA 1989	
				CA	Chemical Concentration in Air	chem spec	mg/m ³	calculated	
				PEF	Particulates Emissions Factor	8.31E+08	m ³ /kg	See 4.1a CTE Supplement	
				ET	Exposure Time	24	hr/day	EPA 2009	
				EF	Exposure Frequency	350	days/yr	EPA 1991	
				ED	Exposure Duration	15	years	EPA 1991	
				AT-C	Averaging Time - Carcinogens	25,550	days	EPA 1989	
CF	Conversion Factor	1/24	days/hr	NA					
Inhalation	Trespasser / Recreator	Child/Adult	On-site (0-2 ft)	CA	Chemical Concentration in Air	chem spec	mg/m ³	calculated	Intake (mg/m ³) = (CA x ET x EF x ED x CF) / AT Where CA = CS / PEF for particulate
				ET	Exposure Time	2	hr/day	EPA 2009	
				PEF	Particulates Emissions Factor	8.31E+08	m ³ /kg	See 4.1a CTE Supplement	
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgment	
				ED _a	Exposure Duration (adult)	9	years	best professional judgment	
				AT	Averaging Time	ED x 365	days	EPA 1989	
CF	Conversion Factor	1/24	days/hr	NA					
Inhalation	Trespasser / Recreator	Child/Adult Aggregate	On-site (0-2 ft)	CA	Chemical Concentration in Air	chem spec	mg/m ³	calculated	EC = CA x ET x EF x ED x CF x 1/AT Where CA (mg/m3) = CS / PEF
				PEF	Particulates Emissions Factor	8.31E+08	m ³ /kg	See 4.1a CTE Supplement	
				ET	Exposure Time	2	hr/day	best professional judgment	

Table 4.1a CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Soil
Exposure Medium: Surface Soil (0-2 ft)

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Inhalation	Trespasser / Recreator	Child/Adult Aggregate	On-site (0-2 ft)	EF	Exposure Frequency	40	days/yr	EPA 1997	
				ED	Exposure Duration	15	years	best professional judgment	
				AT-C	Averaging Time - Carcinogens	25,550	days	EPA 1989	
				CF	Conversion Factor	1/24	days/hr	NA	

Table 4.1a CTE Soil Supplement
 Calculation of PEF for Residential Setting
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Formula:	
$PEF = Q/C_{wind} \times \frac{3600}{(0.036 \times V \times (U_m/U_t)^3 \times F(x))} = 8.31E+08$	<p>Note: this PEF used for resident and other receptors except construction workers</p>
Variables:	
Q/C_{wind} V U_m U_t $F(x)$	calculated (g/m ² -s per kg/m ³) fraction of vegetative cover (assumed to be 50%) mean annual wind speed (m/s), value of 4.69 used equivalent threshold value of windspeed at 7 m (m/s), value of 11.32 used derived value (0.194)
Q/C_{wind} Geographical Zone 8 selected (Hartford, CT)	
$Q/C = \frac{A \times \exp \{ (\ln A_{site} - B) \}}{C} = 57.3$	
A_{site} = areal extent of site contamination, acres (value of 22.05 acres used, summing AOC 1-5)	
A, B, C constants from Exhibit D-4 of guidance $A = 15.3353$ $B = 21.669$ $C = 261.7432$	

Table 4.1b CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Surface Soil, Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Ingestion	Commercial / Industrial worker	Adult	On-site Surface Soil	CS	Chemical Concentration in Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x IR x CF x FI x EF x ED) / (BW x AT)
				IR _a	Ingestion Rate (adult)	50	mg/day	EPA 2001	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				FI	Fraction Ingested	100%	unitless	best professional judgment	
				EF	Exposure Frequency	219	days/yr	EPA 1991	
				ED	Exposure Duration	6.6	years	EPA 1991	
				BW	Body Weight	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,500	days	EPA 1989	
Ingestion	Construction / Utility worker	Adult	On-site Subsurface Soil	CS	Chemical Concentration in Soil	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x IR x CF x FI x EF x ED) / (BW x AT)
				IR _a	Ingestion Rate (adult)	100	mg/day	EPA 2001	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				FI	Fraction Ingested	100%	unitless	best professional judgment	
				EF	Exposure Frequency	219	days/yr	EPA 1991	
				ED _a	Exposure Duration (adult)	0.5	years	best professional judgment	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	
Dermal	Commercial / Industrial worker	Adult	On-site Surface Soil	CS	Chemical Concentration in Soil	EPC	mg/kg	RAGS D Table 3	Intake (mg/kg-day) = (CS x CF x SA x AF x ABS x EF x ED) / (BW x AT)
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				SA	Skin Surface Area	3300	cm ²	EPA 2004	
				AF	Adherence Factor	0.01	mg/cm ²	EPA 2004	
				ABS	Absorption Factor	chem-spec	unitless	EPA 2004	
				EF	Exposure Frequency	219	events/yr	EPA 1991	

Table 4.1b CTE Soil
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Surface Soil, Subsurface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Dermal	Commercial / Industrial worker	Adult	On-site Surface Soil	ED	Exposure Duration	6.6	years	EPA 1991	
				BW	Body Weight	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	
Dermal	Construction / Utility worker	Adult	On-site Subsurface Soil	CS	Chemical Concentration in Soil	EPC	mg/kg	RAGS	Intake (mg/kg-day) = (CS x CF x SA x AF x ABS x EF x ED) / (BW x AT)
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				SA	Skin Surface Area	3300	cm ²	EPA 2004	
				AF	Adherence Factor	0.3	mg/cm ²	EPA 2004	
				ABS	Absorption Factor	chem-spec	unitless	EPA 2004	
				EF	Exposure Frequency	219	events/yr	EPA 1991	
				ED	Exposure Duration	0.5	years	best professional judgment	
				BW	Body Weight	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	
Inhalation	Commercial / Industrial worker	Adult	On-site Surface Soil	CA	Chemical Concentration in Air	chem-spec	mg/m ³	calculated	EC (mg/m ³) = (CA x ET x EF x ED x CF) / AT Where CA = CS / PEF
				ET	Exposure Time	8	hr/day	EPA 2009	
				PEF	Particulates Emissions Factor	8.31E+08	m ³ /kg	See 4.1a CTE Supplement	
				EF	Exposure Frequency	219	days/yr	EPA 1991	
				ED	Exposure Duration	6.6	years	EPA 1991	
				CF	Conversion Factor	1/24	days/hr	NA	
				AT	Averaging Time	ED x 365	days	EPA 1989	
Inhalation	Construction / Utility worker	Adult	On-site Subsurface Soil	CA	Chemical Concentration in Air	chem-spec	mg/m ³	calculated	EC (mg/m ³) = (CA x ET x EF x ED x CF) / AT Where CA = CS / PEF
				ET	Exposure Time	8	hr/day	EPA 2009	
				PEF	Particulates Emissions Factor	1.35E+06	m ³ /kg	See 4.1b CTE Supplement	
				EF	Exposure Frequency	219	days/yr	EPA 1991	
				ED	Exposure Duration	0.5	years	best professional judgment	
				CF	Conversion Factor	1/24	days/hr	NA	
				AT	Averaging Time	ED x 365	days	EPA 1989	

Table 4.1b CTE Soil Supplement
 Calculation of PEF for Construction Worker
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Formula:	
$PEF = Q/Csr \times \frac{1}{F_D} \times \frac{T \times A_R}{556 \times (W/3)^{0.4} \times (365 - p)/365 \times \sum VKT} = 1.35E+06$	
Variables:	
PEF calculated from Equation 5-5 of Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites (Dec. 2002)	
Q/Csr	Inverse of the ration of the 1-h geometric mean air concentration to the emission flux along a straight road segment bisecting a square site (g/m ² -s per kg/m ³): 39.8 (calculated below)
F _D	Dispersion correction factor (unitless) (0.185) Appendix E of Supplemental Guidance
$F_D = 0.1852 + \frac{5.3537}{t_c} + \frac{-9.6318}{t_c^2} = 0.1879$ <p style="text-align: right; margin-right: 100px;">t_c = duration of construction (hrs) 250 days x 8 hr/day = 2000 hrs</p>	
T	Total time over which construction occurs (in seconds, based on 12 month duration of disturbed soil): 7,200,000
A _R	Surface area of contaminated road segment (m ²) (A _R = L _R x W _R x 0.092903m ² /ft ²) = 1672 m²
<p style="margin-left: 40px;">L_R length of road segment (assumed to be 900 ft based on distance from Cape Road to Beer Kill, following historic dirt road)</p> <p style="margin-left: 40px;">W_R width of road segment (assumed to be 20 ft, or 6.10 m)</p>	
W	Mean vehicle weight (tons) (8 tons assumed , based on 2 cars per every 1 truck; cars assumed at 2 tons each and trucks at 20 tons each)
p	Number of days with at least .01 inches of precipitation (days/yr) (150 , based on Exhibit 5-2 of Supplemental Guidance)
VKT	Sum of fleet vehicles kilometers traveled during the exposure duration (km) Assume 20 vehicles/fleet, L _R distance per vehicle trip, 5 days/week, and 12 month duration. (900 ft x 20 vehicles per day, 250 days: 4,500,000 ft, or 1371 km)
Q/Csr	$Q/C = \frac{A \times \exp \{ (\ln A_{site} - B) / C \}}{C} = 14.3$ <p style="margin-left: 40px;">A_{site} = areal extent of site contamination, acres (value of 22.05 acres used, summing AOC 1-5)</p> <p style="margin-left: 40px;">A, B, C constants from Exhibit D-2 of guidance A = 12.9351 B = 5.7383 C = 71.7711</p>



Table 4.2a CTE Groundwater
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site

Scenario Timeframe: Future
 Medium: Groundwater
 Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Dermal	Construction / Utility worker	Adult	Shallow on-site groundwater (excavation)	DAD	Dermally Absorbed Dose	calc	mg/kg-day	calc	$DAD = DA_{event} \times EV \times ED \times EF \times SA / BW \times AT$
				DAevent	Absorbed Dose per Event	calc	mg/cm ² -event	calc	
				SA	Skin Surface Area	3,300	cm ²	EPA 2004	organics:
				EV	Event Frequency	1	events/day	EPA 2004, prof judg	$DA_{event} = \text{If } tevent \leq t^*, \text{ then: } DA_{event} = 2 FA \times Kp \times Cw \sqrt{(6 \tau_{event} \times tevent) / \pi}$
				EF	Exposure Frequency	10	days/year	EPA 2004, prof judg	
				ED	Exposure Duration	0.5	years	best professional judgement	$DA_{event} = \text{If } tevent > t^*, \text{ then: } DA_{event} = FA \times Kp \times Cw \{ (tevent / (1 + B)) + 2 \tau_{event} [1 + 3 B + 3 B^2 / (1 + B)^2] \}$
				BW	Body Weight	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	inorganics: $DA_{event} = Kp \times Cw \times tevent$
Dermal	Construction / Utility worker	Adult	Shallow on-site groundwater (excavation)	FA	Fraction Absorbed in Water	chem spec	unitless	EPA 2004	
				Kp	Dermal Permeability Coefficient	chem spec	cm/hr	EPA 2004	
				Cw	Chemical Concentration in Water	site specific	mg/cm ³	RAGS Part D Table 3	
				τ_{event}	Lag Time per Event	chem spec	hr/event	EPA 2004	$\tau_{event} = 0.105 \times 10^{(0.0056 \times MW)}$
				tevent	Event Duration	0.5	hr/event	best professional judgement	
				t*	Time to Reach Steady State	chem spec	hr	EPA 2004	
				B	Ratio of permeability coefficient of compound through stratum corneum relative to permeability coefficient across viable epidermis	chem spec	unitless	EPA 2004	$B = Kp \times (\nu MW) / 2.6$

Table 4.2a Supplement
 Dermal Worksheet for On-Site Resident and Construction/Utility Worker Receptors: Leachate and Groundwater Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Media: Shallow Groundwater
 Receptor: Construction / Utility Worker

Chemical	Variables						Formula Selection	DA _{event}	DAD Calc. Results	
	C _w	FA	K _p	Tau _{event}	t*	B		Adult	Cancer	Non-Cancer
								DA _{event}	Adult	Adult
Chloroform	4.50E-07	1.0	6.80E-03	5.00E-01	1.19E+00	2.86E-02	t _{event} ≤ t*	4.23E-09	3.90E-11	5.46E-09
Tetrachloroethene	5.30E-07	1.0	3.30E-02	9.10E-01	2.18E+00	2.00E-01	t _{event} ≤ t*	3.26E-08	3.01E-10	4.21E-08
Benzo(a)anthracene	4.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	5.24E-06	4.83E-08	6.76E-06
Benzo(a)pyrene	4.00E-06	1.0	7.00E-01	2.69E+00	1.17E+01	4.30E+00	t _{event} ≤ t*	8.98E-06	8.28E-08	1.16E-05
Benzo(b)fluoranthene	6.50E-07	1.0	7.00E-01	2.77E+00	1.20E+01	4.30E+00	t _{event} ≤ t*	1.48E-06	1.37E-08	1.91E-06
Benzo(g,h,i)perylene	3.00E-06	1.0	1.07E+00	3.70E+00	9.41E+00	6.84E+00	t _{event} ≤ t*	1.21E-05	1.11E-07	1.56E-05
Benzo(k)fluoranthene	6.00E-06	1.0	6.91E-01	2.72E+00	6.90E+00	4.22E+00	t _{event} ≤ t*	1.34E-05	1.23E-07	1.73E-05
Carbazole	7.00E-06	1.0	5.25E-02	9.07E-01	2.30E+00	2.61E-01	t _{event} ≤ t*	6.84E-07	6.31E-09	8.83E-07
Chrysene	5.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	6.54E-06	6.04E-08	8.45E-06
Dibenzo(a,h)anthracene	1.00E-06	0.6	1.50E+00	3.88E+00	1.76E+01	9.70E+00	t _{event} ≤ t*	3.46E-06	3.20E-08	4.48E-06
Indeno(1,2,3-cd)pyrene	3.00E-06	0.6	1.00E+00	3.78E+00	1.68E+01	6.70E+00	t _{event} ≤ t*	6.84E-06	6.31E-08	8.83E-06
Naphthalene	4.00E-06	1.0	4.70E-02	5.60E-01	1.34E+00	2.00E-01	t _{event} ≤ t*	2.75E-07	2.54E-09	3.55E-07
Phenanthrene	1.00E-05	1.0	1.40E-01	1.06E+00	4.11E+00	7.00E-01	t _{event} ≤ t*	2.82E-06	2.60E-08	3.64E-06
Dieldrin	2.40E-08	0.8	1.20E-02	1.46E+01	3.51E+01	1.00E-01	t _{event} ≤ t*	1.72E-09	1.59E-11	2.22E-09
Endosulfan I	4.20E-07	1.0	2.81E-03	2.00E+01	5.07E+01	2.18E-02	t _{event} ≤ t*	1.03E-08	9.50E-11	1.33E-08
Endrin aldehyde	7.30E-08	1.0	1.72E-02	1.43E+01	3.62E+01	1.29E-01	t _{event} ≤ t*	9.27E-09	8.55E-11	1.20E-08
Aroclor-1260	5.40E-07	1.0	2.79E+00	1.27E+01	3.23E+01	2.07E+01	t _{event} ≤ t*	1.05E-05	9.69E-08	1.36E-05
Aluminum	2.61E-01	1.0	1.00E-03	I	I	I	Inorganic	1.30E-04	1.20E-06	1.69E-04
Antimony	4.66E-05	1.0	1.00E-03	I	I	I	Inorganic	2.33E-08	2.15E-10	3.01E-08
Arsenic	1.77E-04	1.0	1.00E-03	I	I	I	Inorganic	8.86E-08	8.17E-10	1.14E-07
Barium	2.67E-03	1.0	1.00E-03	I	I	I	Inorganic	1.34E-06	1.23E-08	1.72E-06
Beryllium	1.74E-05	1.0	1.00E-03	I	I	I	Inorganic	8.68E-09	8.00E-11	1.12E-08
Cadmium	2.07E-05	1.0	1.00E-03	I	I	I	Inorganic	1.04E-08	9.56E-11	1.34E-08
Chromium (VI)	2.11E-03	1.0	2.00E-03	I	I	I	Inorganic	2.11E-06	1.94E-08	2.72E-06
Cobalt	2.37E-04	1.0	4.00E-04	I	I	I	Inorganic	4.74E-08	4.37E-10	6.12E-08
Copper	1.07E-03	1.0	1.00E-03	I	I	I	Inorganic	5.37E-07	4.95E-09	6.93E-07
Lead	4.07E-04	1.0	1.00E-04	I	I	I	Inorganic	2.03E-08	1.88E-10	2.63E-08
Manganese	3.86E-02	1.0	1.00E-03	I	I	I	Inorganic	1.93E-05	1.78E-07	2.49E-05
Mercury	9.25E-07	1.0	1.00E-03	I	I	I	Inorganic	4.63E-10	4.27E-12	5.97E-10
Nickel	8.60E-04	1.0	2.00E-04	I	I	I	Inorganic	8.60E-08	7.93E-10	1.11E-07
Silver	4.23E-05	1.0	6.00E-04	I	I	I	Inorganic	1.27E-08	1.17E-10	1.64E-08
Vanadium	2.76E-04	1.0	1.00E-03	I	I	I	Inorganic	1.38E-07	1.27E-09	1.78E-07
Zinc	3.77E-03	1.0	6.00E-04	I	I	I	Inorganic	1.13E-06	1.04E-08	1.46E-06

I = Inorganic (therefore inorganic equation chosen as default)

Intake Calculation Formula Variables & Values			
Variable	Cancer	Non-Cancer	Units
	Adult	Adult	
C _w	Chem. Spcf.	Chem. Spcf.	mg/cm ³
K _p	Chem. Spcf.	Chem. Spcf.	cm/hr
Tau	Chem. Spcf.	Chem. Spcf.	hrs/event
t*	Chem. Spcf.	Chem. Spcf.	hours
B	Chem. Spcf.	Chem. Spcf.	unitless
FA	Chem. Spcf.	Chem. Spcf.	unitless

Intake Calculation Formula Variables & Values			
Variable	Cancer	Non-Cancer	Units
	Adult	Adult	
EV	1	1	events/day
SA	3300	3300	cm ²
EF	10	10	days/yr
ED	0.5	0.5	years
ET (t _{event})	0.5	0.5	hrs/event
BW	70	70	kg
AT	25,550	182.5	days

Table 4.2a Supplement
 Dermal Worksheet for On-Site Resident and Construction/Utility Worker Receptors: Leachate and Groundwater Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Equations:	
$\text{If } t_{\text{event}} \leq t^*, \text{ then: } DA_{\text{event}} = 2FA \times K_p \times C_w \times \sqrt{\frac{B \times \tau_{\text{event}} \times t_{\text{event}}}{\pi}}$	
$\text{If } t_{\text{event}} > t^*, \text{ then: } DA_{\text{event}} = FA \times K_p \times C_w \left[\frac{t_{\text{event}}}{1+B} + 2\tau_{\text{event}} \left(\frac{1+BF+BF^2}{(1+B)^2} \right) \right]$	
For Inorganic Compounds: $DA_{\text{event}} = K_p \times C_w \times \tau_{\text{event}}$	
$DAD = \frac{DA_{\text{event}} \times EV \times ED \times EF \times SA}{BW \times AT}$	
Where:	
FA	Fraction absorbed water (dimensionless)
K_p	Dermal permeability coefficient of a compound in water (cm/hr)
C_w	Chemical concentration in water (mg/cm ³)
τ_{event}	Lag time per event (hr/event)
t_{event}	Event duration; also ED (hr/event)
t^*	Time to reach steady-state (hr) = 2.4 τ_{event}
B	Ratio of PC of a compound through the stratum corneum relative to its PC across the viable epidermis (dimensionless)

Notes:

K_p, τ_{event} , FA, and B are derived from RAGS part E.

$\tau_{\text{event}} = 0.105 \times 10^{(0.0056 \times \text{molec wt})}$

For FA, default value of 1.0 used if no value listed in RAGS part E.

SA_{Child} : it is assumed that a short-sleeved shirt, shorts and shoes are worn and that the exposed area is composed of the head, hands, forearms, lower legs, and feet.

SA_{Adult} : it is assumed that a short-sleeved shirt, shorts, and shoes are worn and that the exposed area is composed of the head, hands, forearms, and lower legs.

For Construction / Utility Worker SA value assumes an exposed head, forearms and hands.

Table 4.3a CTE Beer Kill Creek Sediment
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current and Future
 Medium: Sediment
 Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/ Model Name (1)
Dermal	Recreator	Child/Adult	Beer Kill Creek	CS	Chemical Concentration in Sediment	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x CF x SA _c x AF x ABS x EF x ED) / (BW x AT)
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				SA _c	Skin Surface Area (child)	2800	cm ²	EPA 2002	
					MOA chemical - child (0-2 years)	2598	cm²	EPA 2008,2009,1997	
					MOA chemical - child (2-6 years)	2939	cm²	EPA 2008,2009,1997	
					MOA chemical - child (6-16 years)	4111	cm²	EPA 2008,2009,1997	
					MOA chemical - adult (16-30 years)	5700	cm²	EPA 2008,2009,1997	
				SA _a	Skin Surface Area (adult)	5,700	cm ²	EPA 2002	
				AF _c	Adherence Factor (child)	0.04	mg/cm ²	EPA 2002	
					MOA chemical - child (0-2 years)	0.04	mg/cm²	EPA 2008,2009	
					MOA chemical - child (2-6 years)	0.04	mg/cm²	EPA 2008,2009	
					MOA chemical - child (6-16 years)	0.04	mg/cm²	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	0.01	mg/cm²	EPA 2008,2009	
				AF _a	Adherence Factor (adult)	0.01	mg/cm ²	EPA 2002	
				ABS	Absorption Factor	chem spec	unitless	EPA 2004	
				EF _c	Exposure Frequency (child)	40	events/yr	EPA 1997	
				EF _a	Exposure Frequency (adult)	40	events/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgment	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
	MOA chemical - child (6-16 years)	10	years	EPA 2008,2009					

Table 4.3a CTE Beer Kill Creek Sediment
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name (1)
Dermal	Recreator	Child/Adult	Beer Kill Creek	ED	MOA chemical - adult (16-30 years)	9	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	9	years	best professional judgment	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,1997	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
	AT	Averaging Time	ED x 365	days	EPA 1989				
Dermal	Recreator	Child/Adult Aggregate	Beer Kill Creek	DA-adj	Dermal abs, age-adjusted	52.13	mg-yr/kg-day	calc	Intake = CS x DA - Adj x ABS x CF x EF x 1/AT
				ABS	Dermal absorption	chem spec	unitless	EPA 2004	
				CF	Conversion Factor	1.00E-06	kg/mg	-	DA-adj = (ED-C x SA-C x AF-C / BW-C)+(ED-A x SA-A x AF-A / BW-A)
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				AT-C	Averaging Time - Carcinogens	25,550	days	EPA 1989	
Ingestion	Recreator	Child/Adult	Beer Kill Creek	CS	Chemical Concentration in Sediment	EPC	mg/kg	RAGS Part D Table 3	Intake (mg/kg-day) = (CS x IR x CF x FI x EF x ED) / (BW x AT)
				IR _c	Ingestion Rate (child)	100	mg/day	conservatively assume rates comparable to residential receptor	
					MOA chemical - child (0-2 years)	100	mg/day	EPA 2008,2009	
					MOA chemical - child (2-6 years)	100	mg/day	EPA 2008,2009	
					MOA chemical - child (6-16 years)	100	mg/day	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	50	mg/day	EPA 2008,2009	

Table 4.3a CTE Beer Kill Creek Sediment
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Ingestion	Recreator	Child/Adult	Beer Kill Creek	IR _a	Ingestion Rate (adult)	50	mg/day	conservatively assume rates comparable to residential receptor	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	N/A	
				FI	Fraction Ingested	1	unitless	best professional judgment	
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgment	
						2	years	EPA 2008,2009	
						4	years	EPA 2008,2009	
						10	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	9	years	EPA 2008,2009	
						9	years	best professional judgment	
						9	years	EPA 1991	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
						10.2	kg	EPA 2008,2009,1997	
						16.425	kg	EPA 2008,2009,1997	
						39.43	kg	EPA 2008,2009,1997	
						70	kg	EPA 2008,2009,1997	
BW _a	Body Weight (adult)	70	kg	EPA 1991					
AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989					
Ingestion	Recreator	Child/Adult Aggregate	Beer Kill Creek	IR-adj	Ingestion Rate (age-adjusted)	46.43	mg-yr/kg-day	calculated	Intake = CS x IR-adj x EF x CF x 1/AT IR-adj = (ED-C x IR-C / BW-C) + (ED-Ax IR-a/BW-A)
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				CF	Conversion Factor	10 ⁻⁶	kg/mg	NA	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	

DRAFT Table 4.4a CTE Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Leachate
Exposure Medium: Leachate

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/Model Name (1)
Dermal	Recreator / Trespasser	Child/Adult	Leachate Area (on-site)	DAD	Dermally Absorbed Dose	EPC	mg/kg-day	EPA 2004	$DAD = DA_{event} \times EV \times ED \times EF \times SA / BW \times AT$ organics: $DA_{event} = \text{If } t_{event} \leq t^*, \text{ then: } DA_{event} = 2 FA \times Kp \times Cw \sqrt{(6 t_{event} \times t_{event}) / \pi}$ $DA_{event} = \text{If } t_{event} > t^*, \text{ then: } DA_{event} = FA \times Kp \times Cw \{ (t_{event} / (1 + B)) + 2 t_{event} [1 + 3 B + 3 B^2 / (1 + B)^2] \}$ inorganics: $DA_{event} = Kp \times Cw \times t_{event}$
				DA _{event}	Absorbed Dose per Event	chem spec	mg/cm ² -event	EPA 2004	
				SAC	Skin Surface Area (child)	2,800	cm ²	EPA 2004	
					MOA chemical - child (0-2 years)	2598	cm²	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	2939	cm²	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	4111	cm²	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	5700	cm²	EPA 2008,2009, 1997	
				SA _a	Skin Surface Area (adult)	5,700	cm ²	EPA 2004	
				EV	Event Frequency	1	events/day	EPA 2004	
				EF	Exposure Frequency	40	days/year	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	EPA 2004	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	9	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	9	years	EPA 2004	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009, 1997	
	MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009, 1997					
BW _a	Body Weight (adult)	70	kg	EPA 1991					

DRAFT Table 4.4a CTE Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Leachate
Exposure Medium: Leachate

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/ Model Name (1)
Dermal	Recreator / Trespasser	Child/Adult	Leachate Area (on-site)	AT	Averaging Time	ED x 365	days	EPA 1989	$\tau_{\text{event}} = 0.105 \times 10^{(0.0056 \times \text{MW})}$ $B = Kp \times (\text{vMW})/2.6$
				FA	Fraction Absorbed in Water	chem spec	unitless	EPA 2004	
				Kp	Dermal Permeability Coefficient	chem spec	cm/hr	EPA 2004	
				Cw	Chemical Concentration in Water	EPC	mg/cm ³	RAGS Part D Table 3	
				τ_{event}	Lag Time per Event	chem spec	hr/event	EPA 2004	
				tevent _c	Event Duration (child)	0.5	hr/event	best professional judgement	
				tevent _a	Event Duration (adult)	0.5	hr/event	best professional judgement	
				t*	Time to Reach Steady State	chem spec	hr	EPA 2004	
B	Ratio of permeability coefficient of compound through stratum corneum relative to permeability coefficient across viable epidermis	chem spec	unitless	EPA 2004					
Dermal	Recreator / Trespasser	Child/Adult Aggregate	Leachate Area (on-site)	DAevent-adj	Dermally Absorbed Dose, age-adjusted	calc	mg-yr/event-kg	calc	$\text{DAevent-adj} = (\text{DAevent} - A \times \text{SA-A} \times \text{ED} - A \times 1/\text{BW-A}) + (\text{Daevent-C} \times \text{SA-C} \times \text{ED-C} \times 1/\text{BW-C})$
				EV	Event Frequency	1	event/day	EPA 2004	$\text{DAD} = \text{Daevent-adj} \times \text{EV} \times \text{EF} / \text{AT-C}$
				EF	Exposure Frequency	40	days/yr	EPA 1997	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	
Ingestion	Recreator / Trespasser	Child/Adult	Leachate Area (on-site)	Cw	Chemical Concentration in Leachate	EPC	mg/L	RAGS Part D Table 3	$\text{Intake (mg/kg-day)} = (\text{CW} \times \text{CR} \times \text{ET} \times \text{EF} \times \text{ED} \times \text{CF}) / (\text{BW} \times \text{AT})$
				CR	Contact Rate	5	ml/hour	professional judgement: taken as 5% of RME for incidental ingestion while swimming for children aged 6-15.	
				ET _c	Exposure Time (child)	0.5	hours/event	best professional judgement	
				ET _a	Exposure Time (adult)	0.5	hours/event	best professional judgement	
				EF _c	Exposure Frequency (child)	40	events/yr	EPA 1997	

DRAFT Table 4.4a CTE Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
Medium: Leachate
Exposure Medium: Leachate

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation/ Model Name (1)
Ingestion	Recreator / Trespasser	Child/Adult	Leachate Area (on-site)	EF _a	Exposure Frequency (adult)	40	events/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	best professional judgement	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	9	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	9	years	best professional judgement	
				CF	Conversion Factor	0.001	L/mL	-	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009, 1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009, 1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009, 1997	
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009, 1997	
BW _a	Body Weight (adult)	70	kg	EPA 1991					
AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989					
Ingestion	Recreator / Trespasser	Child/Adult Aggregate	Leachate Area (on-site)	CR-L-adj	Leachate contact rate, age-adjusted	0.0013	L-yr/kg-event	calc	Intake = CW x CR-L-adj x EF x 1/AT-C CR-L-adj = [((EDc x CRc x ETc) / BWc) + ((EDa x CRa x ETa) / BWa)] x CF
				EF	Exposure Frequency	40	events/yr	EPA 1997	
				CF	Conversion Factor	0.001	L/mL	-	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	

Table 4.4a Supplement
 Dermal Worksheet for Trespasser and Recreator Receptors: Leachate Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Media: Leachate
 Receptor: On-Site Trespasser / Recreator

Chemical	Variables						Formula Selection	DA _{event} Calculations Results			DAD Calculation Results		
	C _w	FA	K _p	Tau _{event}	t*	B		Adult	Child	Agg,	Cancer	Non-Cancer	
								DA _{event}	DA _{event}	DA _{event}	Child / Adult Aggregate	Adult	Child
Chloroform	4.50E-07	1.0	6.80E-03	5.00E-01	1.19E+00	2.86E-02	t _{event} ≤ t*	4.23E-09	4.23E-09	7.84E-06	1.23E-08	3.77E-08	8.65E-08
Benzo(a)anthracene	4.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	5.24E-06	5.24E-06	9.70E-03	1.52E-05	4.67E-05	1.07E-04
Benzo(a)pyrene	4.00E-06	1.0	7.00E-01	2.69E+00	1.17E+01	4.30E+00	t _{event} ≤ t*	8.98E-06	8.98E-06	1.66E-02	2.60E-05	8.01E-05	1.84E-04
Benzo(b)fluoranthene	6.50E-07	1.0	7.00E-01	2.77E+00	1.20E+01	4.30E+00	t _{event} ≤ t*	1.48E-06	1.48E-06	2.74E-03	4.29E-06	1.32E-05	3.03E-05
Benzo(g,h,i)perylene	3.00E-06	1.0	1.07E+00	3.70E+00	9.41E+00	6.84E+00	t _{event} ≤ t*	1.21E-05	1.21E-05	2.24E-02	3.50E-05	1.08E-04	2.47E-04
Benzo(k)fluoranthene	6.00E-06	1.0	6.91E-01	2.72E+00	6.90E+00	4.22E+00	t _{event} ≤ t*	1.34E-05	1.34E-05	2.47E-02	3.87E-05	1.19E-04	2.73E-04
Carbazole	7.00E-06	1.0	5.25E-02	9.07E-01	2.30E+00	2.61E-01	t _{event} ≤ t*	6.84E-07	6.84E-07	1.27E-03	1.98E-06	6.10E-06	1.40E-05
Chrysene	5.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	6.54E-06	6.54E-06	1.21E-02	1.90E-05	5.84E-05	1.34E-04
Dibenzo(a,h)anthracene	1.00E-06	0.6	1.50E+00	3.88E+00	1.76E+01	9.70E+00	t _{event} ≤ t*	3.46E-06	3.46E-06	6.42E-03	1.01E-05	3.09E-05	7.09E-05
Indeno(1,2,3-cd)pyrene	3.00E-06	0.6	1.00E+00	3.78E+00	1.68E+01	6.70E+00	t _{event} ≤ t*	6.84E-06	6.84E-06	1.27E-02	1.98E-05	6.10E-05	1.40E-04
Naphthalene	4.00E-06	1.0	4.70E-02	5.60E-01	1.34E+00	2.00E-01	t _{event} ≤ t*	2.75E-07	2.75E-07	5.09E-04	7.98E-07	2.45E-06	5.62E-06
Phenanthrene	1.00E-05	1.0	1.40E-01	1.06E+00	4.11E+00	7.00E-01	t _{event} ≤ t*	2.82E-06	2.82E-06	5.22E-03	8.17E-06	2.51E-05	5.76E-05
alpha-Chlordane	3.00E-08	0.7	3.40E-02	2.13E+01	5.11E+01	3.00E-01	t _{event} ≤ t*	6.44E-09	6.44E-09	1.19E-05	1.87E-08	5.74E-08	1.32E-07
Dieldrin	2.40E-08	0.8	1.20E-02	1.46E+01	3.51E+01	1.00E-01	t _{event} ≤ t*	1.72E-09	1.72E-09	3.19E-06	4.99E-09	1.54E-08	3.52E-08
Aroclor-1260	5.40E-07	1.0	2.79E+00	1.27E+01	3.23E+01	2.07E+01	t _{event} ≤ t*	1.05E-05	1.05E-05	1.95E-02	3.05E-05	9.37E-05	2.15E-04
Aluminum	9.10E-03	1.0	1.00E-03				Inorganic	4.55E-06	4.55E-06	8.43E-03	1.32E-05	4.06E-05	9.31E-05
Arsenic	5.80E-05	1.0	1.00E-03				Inorganic	2.90E-08	2.90E-08	5.37E-05	8.41E-08	2.59E-07	5.93E-07
Barium	8.10E-04	1.0	1.00E-03				Inorganic	4.05E-07	4.05E-07	7.50E-04	1.17E-06	3.61E-06	8.28E-06
Cadmium	1.00E-05	1.0	1.00E-03				Inorganic	5.00E-09	5.00E-09	9.26E-06	1.45E-08	4.46E-08	1.02E-07
Chromium (VI)	1.10E-04	1.0	2.00E-03				Inorganic	1.10E-07	1.10E-07	2.04E-04	3.19E-07	9.82E-07	2.25E-06
Copper	8.30E-04	1.0	1.00E-03				Inorganic	4.15E-07	4.15E-07	7.69E-04	1.20E-06	3.70E-06	8.49E-06
Iron	5.40E-02	1.0	1.00E-03				Inorganic	2.70E-05	2.70E-05	5.00E-02	7.83E-05	2.41E-04	5.52E-04
Lead	1.80E-03	1.0	1.00E-04				Inorganic	9.00E-08	9.00E-08	1.67E-04	2.61E-07	8.03E-07	1.84E-06
Manganese	8.05E-04	1.0	1.00E-03				Inorganic	4.03E-07	4.03E-07	7.46E-04	1.17E-06	3.59E-06	8.23E-06
Nickel	1.00E-04	1.0	2.00E-04				Inorganic	1.00E-08	1.00E-08	1.85E-05	2.90E-08	8.92E-08	2.05E-07
Vanadium	1.00E-04	1.0	1.00E-03				Inorganic	5.00E-08	5.00E-08	9.26E-05	1.45E-07	4.46E-07	1.02E-06
Zinc	5.30E-03	1.0	6.00E-04				Inorganic	1.59E-06	1.59E-06	2.95E-03	4.61E-06	1.42E-05	3.25E-05

| = Inorganic (therefore inorganic equation chosen as default)

Variable	Cancer		Non-Cancer		Units
	Adult	Child	Adult	Child	
C _w	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	mg/cm ³
K _p	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	cm/hr
Tau	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	hrs/event
t*	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	hours
B	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	unitless
FA	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	unitless

Variable	Cancer		Non-Cancer		Units
	Adult	Child	Adult	Child	
EV	1	1	1	1	events/day
SA	5700	2800	5700	2800	cm ²
EF	40	40	40	40	days/yr
ED	9	6	9	6	years
ET (t _{event})	0.5	0.5	0.5	0.5	hrs/event
BW	70	15	70	15	kg
AT	25,550	25,550	3,285	2,190	days

Table 4.4a Supplement
 Dermal Worksheet for Trespasser and Recreator Receptors: Leachate Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Equations:	
<p>If $t_{event} \leq t^*$, then: $DA_{event} = 2FA \times K_p \times C_w \sqrt{\frac{6 \tau_{event} \times t_{event}}{\pi}}$</p> <p>If $t_{event} > t^*$, then: $DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2 \tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^3} \right) \right]$</p> <p>For Inorganic Compounds: $DA_{event} = K_p \times C_w \times t_{event}$</p> <p style="text-align: center;">$DAD = \frac{DA_{event} \times EV \times ED \times CF \times SA}{BW \times AT}$</p>	
Where:	
FA	Fraction absorbed water (dimensionless)
K_p	Dermal permeability coefficient of a compound in water (cm/hr)
C_w	Chemical concentration in water (mg/cm ³)
τ_{event}	Lag time per event (hr/event)
t_{event}	Event duration; also ED (hr/event)
t^*	Time to reach steady-state (hr) = $2.4\tau_{event}$
B	Ratio of PC of a compound through the stratum corneum relative to its PC across the viable epidermis (dimensionless)

Notes:

K_p , τ_{event} , FA, and B are derived from RAGS part E.

$\tau_{event} = 0.105 \times 10^{(0.0056 \times \text{molec wt})}$

For FA, default value of 1.0 used if no value listed in RAGS part E.

SA_{child} : it is assumed that a short-sleeved shirt, shorts and shoes are worn and that the exposed area is composed of the head, hands, forearms, lower legs, and feet.

SA_{adult} : it is assumed that a short-sleeved shirt, shorts, and shoes are worn and that the exposed area is composed of the head, hands, forearms, and lower legs.

Table 4.4b CTE Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
Medium: Leachate
Exposure Medium: Leachate

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation / Model Name (1)	
Dermal	Resident	Child/Adult	Leachate Area (on-site)	DAD	Dermally Absorbed Dose	EPC	mg/kg-day	EPA 2004	DAD = DAevent x EV x ED x EF x SA / BW x AT	
				DAevent	Absorbed Dose per Event	chem spec	mg/cm ²	EPA 2004		
				SAC	Skin Surface Area (child)	2,800	cm ²	EPA 2004	organics:	
					MOA chemical - child (0-2 years)	2598	cm²	EPA 2008,2009, 1997	DAevent = If tevent ≤ t*, then: DAevent = 2 FA x Kp x Cw √(6 τ event x tevent)/π	
					MOA chemical - child (2-6 years)	2939	cm²	EPA 2008,2009, 1997	DAevent = If tevent > t*, then: DAevent = FA x Kp x Cw {(tevent/1 + B) + 2 τ event [1 + 3 B + 3 B ² / (1 + B) ²]} ²	
					MOA chemical - child (6-16 years)	4111	cm²	EPA 2008,2009, 1997		
					MOA chemical - adult (16-30 years)	5700	cm²	EPA 2008,2009, 1997		
					SA _a	Skin Surface Area (adult)	5,700	cm ²	EPA 2004	
					EV	Event Frequency	1	events/day	EPA 2004	
					EF	Exposure Frequency	350	days/year	EPA 1997	
					ED _c	Exposure Duration (child)	6	years	EPA 2004	
						MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	inorganics: DAevent = Kp x Cw x tevent
						MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
						MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
						MOA chemical - adult (16-30 years)	9	years	EPA 2008,2009	
		ED _a	Exposure Duration (adult)	9	years	EPA 2004				
		BW _c	Body Weight (child)	15	kg	EPA 1991				

Table 4.4b CTE Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation / Model Name (1)	
Dermal	Resident	Child/Adult	Leachate Area (on-site)	BW	MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009, 1997		
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009, 1997		
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009, 1997		
					MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009, 1997		
				BW _a	Body Weight (adult)	70	kg	EPA 1991		
				AT	Averaging Time	ED x 365	days	EPA 1989		
				FA	Fraction Absorbed in Leachate	chem spec	unitless	EPA 2004		
				Kp	Dermal Permeability Coefficient	chem spec	cm/hr	EPA 2004		
				Cw	Chemical Concentration in Leachate	EPC	mg/cm ³	RAGS Part D Table 3		
				τ event	Lag Time per Event	chem spec	hr/event	EPA 2004		τ event = 0.105 x 10 ^(0.0056*MMW)
				tevent _c	Event Duration (child)		hr/event	best professional judgement		
				tevent _a	Event Duration (adult)		hr/event	best professional judgement		
				t*	Time to Reach Steady State	chem spec	hr	EPA 2004		B = Kp x (vMW)/2.6
				B	Ratio of permeability coefficient of compound through stratum corneum relative to permeability coefficient across viable epidermis	chem spec	unitless	EPA 2004		
Dermal	Resident	Child/Adult Aggregate	Leachate Area (on-site)	DAevent-adj	Dermally Absorbed Dose, age-adjusted	calc	mg-yr/event-kg	calc	DAevent-adj = (DAevent - A x SA - A x ED-A x 1/BW-A) + (Daevent-C x SA-C x ED-C x 1/BW-C)	
				EV	Event Frequency	1	event/day	EPA 2004	DAD = DAevent-adj x EV x EF / AT-C	

Table 4.4b CTE Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/Reference	Intake Equation / Model Name (1)
Dermal	Resident	Child/Adult Aggregate	Leachate Area (on-site)	EF	Exposure Frequency	350	days/yr	EPA 1997	
				AT-C	Averaging Time - Cancer	25550	days	EPA 1989	
Dermal	Commercial / Industrial worker	Adult	Leachate Area (on-site)	DAD	Dermally Absorbed Dose	EPC	mg/kg-day	EPA 2004	$DAD = DA_{event} \times EV \times ED \times EF \times SA / BW \times AT$ $\tau_{event} = 0.105 \times 10^{(0.0056 \times MW)}$ $B = Kp \times (\nu MW) / 2.6$
				DA _{event}	Absorbed Dose per Event	chem spec	mg/cm ² -event	EPA 2004	
				SA _a	Skin Surface Area (adult)	3,300	cm ²	EPA 2004	
				EV	Event Frequency	1	events/day	EPA 2004	
				EF	Exposure Frequency	219	days/year	EPA 1997	
				ED _a	Exposure Duration (adult)	6.6	years	EPA 2004	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365	days	EPA 1989	
				FA	Fraction Absorbed in Water	chem spec	unitless	EPA 2004	
				Kp	Dermal Permeability Coefficient	chem spec	cm/hr	EPA 2004	
				Cw	Chemical Concentration in Water	EPC	mg/cm ³	RAGS Part D Table 3	
				τ _{event}	Lag Time per Event	chem spec	hr/event	EPA 2004	
				tevent _a	Event Duration (adult)	0.5	hr/event	best professional judgement	
				t*	Time to Reach Steady State	chem spec	hr	EPA 2004	
B	Ratio of permeability coefficient of compound through stratum corneum relative to permeability coefficient across viable epidermis	chem spec	unitless	EPA 2004					
Ingestion	Resident	Child/Adult	Leachate Area (on-site)	CW	Chemical Concentration in Leachate	EPC	mg/L	RAGS Part D Table 3	Intake (mg/kg-day) = (CW x CR x ET x EF x ED x CF) / (BW x AT)

Table 4.4b CTE Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation / Model Name (1)
Ingestion	Resident	Child/Adult	Leachate Area (on-site)	CR	Contact Rate	5	ml/hour	professional judgement: taken as 5% of RME for incidental ingestion while swimming for children aged 6-15.	
				ET _c	Exposure Time (child)	0.5	hours/event	best professional judgement	
				ET _a	Exposure Time (adult)	0.5	hours/event	best professional judgement	
				EF _c	Exposure Frequency (child)	350	events/yr	EPA 1997	
				EF _a	Exposure Frequency (adult)	350	events/yr	EPA 1997	
				ED _c	Exposure Duration (child)	6	years	EPA 2004	
					MOA chemical - child (0-2 years)	2	years	EPA 2008,2009	
					MOA chemical - child (2-6 years)	4	years	EPA 2008,2009	
					MOA chemical - child (6-16 years)	10	years	EPA 2008,2009	
					MOA chemical - adult (16-30 years)	9	years	EPA 2008,2009	
				ED _a	Exposure Duration (adult)	9	years	best professional judgement	
				CF	Conversion Factor	0.001	L/mL	-	
				BW _c	Body Weight (child)	15	kg	EPA 1991	
					MOA chemical - child (0-2 years)	10.2	kg	EPA 2008,2009,1997	
					MOA chemical - child (2-6 years)	16.425	kg	EPA 2008,2009,1997	
					MOA chemical - child (6-16 years)	39.43	kg	EPA 2008,2009,1997	
	MOA chemical - adult (16-30 years)	70	kg	EPA 2008,2009,1997					
BW _a	Body Weight (adult)	70	kg	EPA 1991					

Table 4.4b CTE Leachate
 Values Used for Daily Intake Calculations
 Reasonable Maximum Exposure
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation / Model Name (1)
Ingestion	Resident	Child/Adult	Leachate Area (on-site)	AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	
Ingestion	Resident	Child/Adult Aggregate	Leachate Area (on-site)	CR-L-adj	Leachate contact rate, age-adjusted	0.0013	L-yr/kg-event	calc	Intake = CW x CR-L-adj x EF x 1/AT-C
				EF	Exposure Frequency	350	days/yr	EPA 2004	
				CF	Conversion Factor	0.001	L/mL	-	
				AT-C	Averaging Time - Cancer	25,550	days	EPA 1989	
Ingestion	Commercial / Industrial worker	Adult	Leachate Area (on-site)	CW	Chemical Concentration in Leachate	EPC	mg/L	RAGS Part D Table 3	Intake (mg/kg-day) = (CWxCRxETxEFxEDxCF) / (BW x AT)
				CR	Contact Rate	5	ml/hour	professional judgement: taken as 5% of RME for incidental ingestion while swimming for children aged 6-15.	
				ET _a	Exposure Time (adult)	0.5	hours/event	best professional judgement	
				EF _a	Exposure Frequency (adult)	219	events/yr	EPA 1991	
				ED _a	Exposure Duration (adult)	6.6	years	EPA 1991	
				CF	Conversion Factor	0.001	L/mL	-	
				BW _a	Body Weight (adult)	70	kg	EPA 1991	
				AT	Averaging Time	ED x 365 or 25,550	days	EPA 1989	

Table 4.4b Supplement
 Dermal Worksheet for On-Site Resident and Commercial/Industrial Worker Receptors: Leachate Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Media: Leachate
 Receptor: On-Site Resident

Chemical	Variables						Formula Selection	DA _{event} Calculations Results			DAD Calculation Results		
	C _w	FA	K _p	Tau _{event}	t*	B		Adult	Child	Agg,	Cancer	Non-Cancer	
								DA _{event}	DA _{event}	DA _{event}	Child / Adult Aggregate	Adult	Child
Chloroform	4.50E-07	1.0	6.80E-03	5.00E-01	1.19E+00	2.86E-02	t _{event} ≤ t*	4.23E-09	4.23E-09	7.84E-06	1.07E-07	3.30E-07	7.57E-07
Benzo(a)anthracene	4.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	5.24E-06	5.24E-06	9.70E-03	1.33E-04	4.09E-04	9.37E-04
Benzo(a)pyrene	4.00E-06	1.0	7.00E-01	2.69E+00	1.17E+01	4.30E+00	t _{event} ≤ t*	8.98E-06	8.98E-06	1.66E-02	2.28E-04	7.01E-04	1.61E-03
Benzo(b)fluoranthene	6.50E-07	1.0	7.00E-01	2.77E+00	1.20E+01	4.30E+00	t _{event} ≤ t*	1.48E-06	1.48E-06	2.74E-03	3.76E-05	1.16E-04	2.65E-04
Benzo(g,h,i)perylene	3.00E-06	1.0	1.07E+00	3.70E+00	9.41E+00	6.84E+00	t _{event} ≤ t*	1.21E-05	1.21E-05	2.24E-02	3.06E-04	9.43E-04	2.16E-03
Benzo(k)fluoranthene	6.00E-06	1.0	6.91E-01	2.72E+00	6.90E+00	4.22E+00	t _{event} ≤ t*	1.34E-05	1.34E-05	2.47E-02	3.39E-04	1.04E-03	2.39E-03
Carbazole	7.00E-06	1.0	5.25E-02	9.07E-01	2.30E+00	2.61E-01	t _{event} ≤ t*	6.84E-07	6.84E-07	1.27E-03	1.74E-05	5.34E-05	1.22E-04
Chrysene	5.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	6.54E-06	6.54E-06	1.21E-02	1.66E-04	5.11E-04	1.17E-03
Dibenzo(a,h)anthracene	1.00E-06	0.6	1.50E+00	3.88E+00	1.76E+01	9.70E+00	t _{event} ≤ t*	3.46E-06	3.46E-06	6.42E-03	8.79E-05	2.71E-04	6.20E-04
Indeno(1,2,3-cd)pyrene	3.00E-06	0.6	1.00E+00	3.78E+00	1.68E+01	6.70E+00	t _{event} ≤ t*	6.84E-06	6.84E-06	1.27E-02	1.74E-04	5.34E-04	1.22E-03
Naphthalene	4.00E-06	1.0	4.70E-02	5.60E-01	1.34E+00	2.00E-01	t _{event} ≤ t*	2.75E-07	2.75E-07	5.09E-04	6.98E-06	2.15E-05	4.92E-05
Phenanthrene	1.00E-05	1.0	1.40E-01	1.06E+00	4.11E+00	7.00E-01	t _{event} ≤ t*	2.82E-06	2.82E-06	5.22E-03	7.15E-05	2.20E-04	5.04E-04
alpha-Chlordane	3.00E-08	0.7	3.40E-02	2.13E+01	5.11E+01	3.00E-01	t _{event} ≤ t*	6.44E-09	6.44E-09	1.19E-05	1.63E-07	5.03E-07	1.15E-06
Dieldrin	2.40E-08	0.8	1.20E-02	1.46E+01	3.51E+01	1.00E-01	t _{event} ≤ t*	1.72E-09	1.72E-09	3.19E-06	4.37E-08	1.34E-07	3.08E-07
Aroclor-1260	5.40E-07	1.0	2.79E+00	1.27E+01	3.23E+01	2.07E+01	t _{event} ≤ t*	1.05E-05	1.05E-05	1.95E-02	2.67E-04	8.20E-04	1.88E-03
Aluminum	9.10E-03	1.0	1.00E-03	I	I	I	Inorganic	4.55E-06	4.55E-06	8.43E-03	1.15E-04	3.55E-04	8.14E-04
Arsenic	5.80E-05	1.0	1.00E-03	I	I	I	Inorganic	2.90E-08	2.90E-08	5.37E-05	7.36E-07	2.26E-06	5.19E-06
Barium	8.10E-04	1.0	1.00E-03	I	I	I	Inorganic	4.05E-07	4.05E-07	7.50E-04	1.03E-05	3.16E-05	7.25E-05
Cadmium	1.00E-05	1.0	1.00E-03	I	I	I	Inorganic	5.00E-09	5.00E-09	9.26E-06	1.27E-07	3.90E-07	8.95E-07
Chromium (VI)	1.10E-04	1.0	2.00E-03	I	I	I	Inorganic	1.10E-07	1.10E-07	2.04E-04	2.79E-06	8.59E-06	1.97E-05
Copper	8.30E-04	1.0	1.00E-03	I	I	I	Inorganic	4.15E-07	4.15E-07	7.69E-04	1.05E-05	3.24E-05	7.43E-05
Iron	5.40E-02	1.0	1.00E-03	I	I	I	Inorganic	2.70E-05	2.70E-05	5.00E-02	6.85E-04	2.11E-03	4.83E-03
Lead	1.80E-03	1.0	1.00E-04	I	I	I	Inorganic	9.00E-08	9.00E-08	1.67E-04	2.28E-06	7.03E-06	1.61E-05
Manganese	8.05E-04	1.0	1.00E-03	I	I	I	Inorganic	4.03E-07	4.03E-07	7.46E-04	1.02E-05	3.14E-05	7.20E-05
Nickel	1.00E-04	1.0	2.00E-04	I	I	I	Inorganic	1.00E-08	1.00E-08	1.85E-05	2.54E-07	7.81E-07	1.79E-06
Vanadium	1.00E-04	1.0	1.00E-03	I	I	I	Inorganic	5.00E-08	5.00E-08	9.26E-05	1.27E-06	3.90E-06	8.95E-06
Zinc	5.30E-03	1.0	6.00E-04	I	I	I	Inorganic	1.59E-06	1.59E-06	2.95E-03	4.04E-05	1.24E-04	2.85E-04

I = Inorganic (therefore inorganic equation chosen as default)

Intake Calculation Formula Variables & Values					
Variable	Cancer		Non-Cancer		Units
	Adult	Child	Adult	Child	
C _w	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	mg/cm ³
K _p	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	cm/hr
Tau	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	hrs/event
t*	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	hours
B	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	unitless
FA	Chem. Specific	Chem. Specific	Chem. Specific	Chem. Specific	unitless

Intake Calculation Formula Variables & Values					
Variable	Cancer		Non-Cancer		Units
	Adult	Child	Adult	Child	
EV	1	1	1	1	events/day
SA	5700	2800	5700	2800	cm ²
EF	350	350	350	350	days/yr
ED	9	6	9	6	years
ET (t _{event})	0.5	0.5	0.5	0.5	hrs/event
BW	70	15	70	15	kg
AT	25,550	25,550	3,285	2,190	days

Table 4.4b Supplement
 Dermal Worksheet for On-Site Resident and Commercial/Industrial Worker Receptors: Leachate Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Media: Leachate
 Receptor: Commercial / Industrial Worker

Chemical	Variables						Formula Selection	DAD Calc. Results		
	C _w	FA	K _p	Tau _{event}	t*	B		DA _{event}	Cancer	Non-Cancer
								Adult	Adult	Adult
Chloroform	4.50E-07	1.0	6.80E-03	5.00E-01	1.19E+00	2.86E-02	t _{event} ≤ t*	4.23E-09	1.13E-08	1.20E-07
Benzo(a)anthracene	4.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	5.24E-06	1.40E-05	1.48E-04
Benzo(a)pyrene	4.00E-06	1.0	7.00E-01	2.69E+00	1.17E+01	4.30E+00	t _{event} ≤ t*	8.98E-06	2.39E-05	2.54E-04
Benzo(b)fluoranthene	6.50E-07	1.0	7.00E-01	2.77E+00	1.20E+01	4.30E+00	t _{event} ≤ t*	1.48E-06	3.95E-06	4.19E-05
Benzo(g,h,i)perylene	3.00E-06	1.0	1.07E+00	3.70E+00	9.41E+00	6.84E+00	t _{event} ≤ t*	1.21E-05	3.22E-05	3.42E-04
Benzo(k)fluoranthene	6.00E-06	1.0	6.91E-01	2.72E+00	6.90E+00	4.22E+00	t _{event} ≤ t*	1.34E-05	3.56E-05	3.78E-04
Carbazole	7.00E-06	1.0	5.25E-02	9.07E-01	2.30E+00	2.61E-01	t _{event} ≤ t*	6.84E-07	1.82E-06	1.93E-05
Chrysene	5.00E-06	1.0	4.70E-01	2.03E+00	8.53E+00	2.80E+00	t _{event} ≤ t*	6.54E-06	1.75E-05	1.85E-04
Dibenzo(a,h)anthracene	1.00E-06	0.6	1.50E+00	3.88E+00	1.76E+01	9.70E+00	t _{event} ≤ t*	3.46E-06	9.24E-06	9.80E-05
Indeno(1,2,3-cd)pyrene	3.00E-06	0.6	1.00E+00	3.78E+00	1.68E+01	6.70E+00	t _{event} ≤ t*	6.84E-06	1.82E-05	1.93E-04
Naphthalene	4.00E-06	1.0	4.70E-02	5.60E-01	1.34E+00	2.00E-01	t _{event} ≤ t*	2.75E-07	7.33E-07	7.78E-06
Phenanthrene	1.00E-05	1.0	1.40E-01	1.06E+00	4.11E+00	7.00E-01	t _{event} ≤ t*	2.82E-06	7.51E-06	7.97E-05
alpha-Chlordane	3.00E-08	0.7	3.40E-02	2.13E+01	5.11E+01	3.00E-01	t _{event} ≤ t*	6.44E-09	1.72E-08	1.82E-07
Dieldrin	2.40E-08	0.8	1.20E-02	1.46E+01	3.51E+01	1.00E-01	t _{event} ≤ t*	1.72E-09	4.59E-09	4.87E-08
Aroclor-1260	5.40E-07	1.0	2.79E+00	1.27E+01	3.23E+01	2.07E+01	t _{event} ≤ t*	1.05E-05	2.80E-05	2.97E-04
Aluminum	9.10E-03	1.0	1.00E-03				Inorganic	4.55E-06	1.21E-05	1.29E-04
Arsenic	5.80E-05	1.0	1.00E-03				Inorganic	2.90E-08	7.73E-08	8.20E-07
Barium	8.10E-04	1.0	1.00E-03				Inorganic	4.05E-07	1.08E-06	1.15E-05
Cadmium	1.00E-05	1.0	1.00E-03				Inorganic	5.00E-09	1.33E-08	1.41E-07
Chromium (VI)	1.10E-04	1.0	2.00E-03				Inorganic	1.10E-07	2.93E-07	3.11E-06
Copper	8.30E-04	1.0	1.00E-03				Inorganic	4.15E-07	1.11E-06	1.17E-05
Iron	5.40E-02	1.0	1.00E-03				Inorganic	2.70E-05	7.20E-05	7.64E-04
Lead	1.80E-03	1.0	1.00E-04				Inorganic	9.00E-08	2.40E-07	2.55E-06
Manganese	8.05E-04	1.0	1.00E-03				Inorganic	4.03E-07	1.07E-06	1.14E-05
Nickel	1.00E-04	1.0	2.00E-04				Inorganic	1.00E-08	2.67E-08	2.83E-07
Vanadium	1.00E-04	1.0	1.00E-03				Inorganic	5.00E-08	1.33E-07	1.41E-06
Zinc	5.30E-03	1.0	6.00E-04				Inorganic	1.59E-06	4.24E-06	4.50E-05

| = Inorganic (therefore inorganic equation chosen as default)

Intake Calculation Formula Variables & Values			
Variable	Cancer	Non-Cancer	Units
	Adult	Adult	
C _w	Chem. Spcf.	Chem. Spcf.	mg/cm ³
K _p	Chem. Spcf.	Chem. Spcf.	cm/hr
Tau	Chem. Spcf.	Chem. Spcf.	hrs/event
t*	Chem. Spcf.	Chem. Spcf.	hours
B	Chem. Spcf.	Chem. Spcf.	unitless
FA	Chem. Spcf.	Chem. Spcf.	unitless

Intake Calculation Formula Variables & Values			
Variable	Cancer	Non-Cancer	Units
	Adult	Adult	
EV	1	1	events/day
SA	3300	3300	cm ²
EF	219	219	days/yr
ED	6.6	6.6	years
ET (t _{event})	0.5	0.5	hrs/event
BW	70	70	kg
AT	25,550	2,409	days

Table 4.4b Supplement
 Dermal Worksheet for On-Site Resident and Commercial/Industrial Worker Receptors: Leachate Media
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Equations:	
$\text{If } t_{\text{event}} \leq t^*, \text{ then: } DA_{\text{event}} = 2FA \times K_p \times C_w \times \sqrt{\frac{D \times t_{\text{event}} \times t_{\text{event}}}{\pi}}$	
$\text{If } t_{\text{event}} > t^*, \text{ then: } DA_{\text{event}} = FA \times K_p \times C_w \left[\frac{t_{\text{event}}}{1 + B} + 2t_{\text{event}} \left(\frac{1 + 2B + 2B^2}{(1 + B)^2} \right) \right]$	
<p style="text-align: center;">For Inorganic Compounds: $DA_{\text{event}} = K_p \times C_w \times t_{\text{event}}$</p>	
$DAD = \frac{DA_{\text{event}} \times EV \times ED \times EF \times SA}{BW \times AT}$	
Where:	
FA	Fraction absorbed water (dimensionless)
K _p	Dermal permeability coefficient of a compound in water (cm/hr)
C _w	Chemical concentration in water (mg/cm ³)
Tau _{event}	Lag time per event (hr/event)
t _{event}	Event duration; also ED (hr/event)
t*	Time to reach steady-state (hr) = 2.4Tau _{event}
B	Ratio of PC of a compound through the stratum corneum relative to its PC across the viable epidermis (dimensionless)

Notes:

K_p, Tau_{event}, FA, and B are derived from RAGS part E.

$$Tau_{\text{event}} = 0.105 \times 10^{(0.0056 \times \text{molec wt})}$$

For FA, default value of 1.0 used if no value listed in RAGS part E.

SA_{Child}: it is assumed that a short-sleeved shirt, shorts and shoes are worn and that the exposed area is composed of the head, hands, forearms, lower legs, and feet.

SA_{Adult}: it is assumed that a short-sleeved shirt, shorts, and shoes are worn and that the exposed area is composed of the head, hands, forearms, and lower legs.

For Commercial / Industrial Worker SA value assumes an exposed head, forearms and hands.

Table 9a
 SITE-WIDE SUMMARY OF RISK
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

	RECEPTOR	MEDIA	Carcinogenic Risk			Routes	Non-Carcinogenic HQ			Routes
			Ingestion	Inhalation	Dermal	Total	Ingestion	Inhalation	Dermal	Total
Current	Child - Adult Aggregate Trespasser	Soil 0 - 2ft bgs	3.35E-04	1.07E-06	9.35E-06	3.45E-04	--	--	--	--
		Leachate	1.55E-06	--	1.87E-03	1.87E-03	--	--	--	--
		Route Total	3.36E-04	1.07E-06	1.88E-03	2.21E-03	--	--	--	--
Current / Future	Child - Adult Aggregate Recreator	Soil 0 - 2ft bgs	3.35E-04	1.07E-06	9.35E-06	3.45E-04	--	--	--	--
		Leachate	1.55E-06	--	1.87E-03	1.87E-03	--	--	--	--
		Beer Kill Creek Sediment	2.90E-06	--	4.83E-08	2.95E-06	--	--	--	--
		Beer Kill Creek Surface Water	--	--	--	--	--	--	--	--
		Route Total	3.39E-04	1.07E-06	1.88E-03	2.22E-03	--	--	--	--
Future	Adult On-Site Resident	Soil 0 - 2ft bgs	--	--	--	--	4.65E-01	3.80E-02	2.86E-03	5.06E-01
		Leachate	--	--	--	--	1.49E-02	--	2.12E-01	2.27E-01
		Route Total	--	--	--	--	4.80E-01	3.80E-02	2.15E-01	7.32E-01
	Child On-Site Resident	Soil 0 - 2ft bgs	--	--	--	--	4.34E+00	3.80E-02	2.63E-02	4.40E+00
		Leachate	--	--	--	--	6.97E-02	--	4.85E-01	5.55E-01
		Route Total	--	--	--	--	4.41E+00	3.80E-02	5.12E-01	4.96E+00
	Child - Adult Aggregate On-Site Resident	Soil 0 - 2ft bgs	2.93E-03	1.12E-04	8.04E-05	3.12E-03	--	--	--	--
		Leachate	1.35E-05	--	1.63E-02	1.63E-02	--	--	--	--
		Route Total	2.94E-03	1.12E-04	1.64E-02	1.95E-02	--	--	--	--
Future	Adult Construction Worker	Soil 0 - 10ft bgs	3.46E-06	7.81E-05	9.20E-07	8.25E-05	2.24E-01	3.15E+00	1.64E-02	3.39E+00
		Groundwater (in Excavations to 10ft bgs)	--	--	1.52E-06	1.52E-06	--	--	3.50E-02	3.50E-02
		Route Total	3.46E-06	7.81E-05	2.44E-06	8.40E-05	2.24E-01	3.15E+00	5.13E-02	3.43E+00
Future	Adult Commercial / Industrial Worker	Soil 0 - 2ft bgs	2.84E-05	2.18E-06	4.19E-07	3.10E-05	2.91E-01	7.93E-03	1.04E-03	3.00E-01
		Leachate	3.76E-07	--	3.33E-04	3.34E-04	9.35E-03	--	7.67E-02	8.61E-02
		Route Total	2.87E-05	2.18E-06	3.34E-04	3.65E-04	3.00E-01	7.93E-03	7.77E-02	3.86E-01
Current / Future	Adult Off-Site Resident	Off-Site Soil 0 - 2ft bgs	--	--	--	--	1.02E+00	1.83E-02	5.65E-04	1.04E+00
		Route Total	--	--	--	--	1.02E+00	1.83E-02	5.65E-04	1.04E+00
	Child Off-Site Resident	Off-Site Soil 0 - 2ft bgs	--	--	--	--	9.55E+00	1.83E-02	5.19E-03	9.57E+00
		Route Total	--	--	--	--	9.55E+00	1.83E-02	5.19E-03	9.57E+00
	Child - Adult Off-Site Resident	Off-Site Soil 0 - 2ft bgs	1.59E-05	1.29E-06	1.87E-06	1.90E-05	--	--	--	--
		Route Total	1.59E-05	1.29E-06	1.87E-06	1.90E-05	--	--	--	--

Table 9b
 CHEMICALS OF CONCERN
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Cancer Risk Chemicals of Concern							
Soil (0 - 2ft)		Soil (0 - 10)		Leachate Areas		Shallow Groundwater in Excavations	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Benzo(a)anthracene	TR, RC, RES	No COCs	--	Benzo(a)anthracene	TR, RC, RES, CI	No COCs	--
Benzo(a)pyrene	TR, RC, RES			Benzo(a)pyrene	TR, RC, RES, CI		
Benzo(b)fluoranthene	TR, RC, RES			Benzo(b)fluoranthene	TR, RC, RES, CI		
Benzo(k)fluoranthene	RES			Benzo(k)fluoranthene	TR, RC, RES, CI		
Dibenzo(a,h)anthracene	TR, RC, RES			Chrysene	RES		
Indeno(1,2,3-cd)pyrene	TR, RC, RES			Dibenzo(a,h)anthracene	TR, RC, RES, CI		
Aroclor-1260	RES			Indeno(1,2,3-cd)pyrene	TR, RC, RES, CI		
Arsenic	TR, RC, RES			Aroclor-1260	TR, RC, RES, CI		
Chromium (VI)	TR, RC, RES			Arsenic	RES		
				Chromium (VI)	TR, RC, RES, CI		

Cancer Risk Chemicals of Concern							
Groundwater		Off-Site Soil		Beer Kill Sediment		Beer Kill Surface Water	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Not Evaluated in CTE		No COCs	--	No COCs		No COCs	--

Non-Cancer Hazard Chemicals of Concern							
Soil (0 - 2ft)		Soil (0 - 10)		Leachate Areas		Shallow Groundwater in Excavations	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Chromium (VI)	RES	Lead	*	Lead	*	Lead	*
Lead	*	Manganese	CW				

Table 9b
 CHEMICALS OF CONCERN
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Non-Cancer Hazard Chemicals of Concern							
Groundwater		Off-Site Soil		Beer Kill Sediment		Beer Kill Surface Water	
COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR	COC	RECEPTOR
Not Evaluated in CTE	--	Antimony Lead	ORES *	No COCs	--	No COCs	--

* Lead was identified as a COPC in several of the on-site media, and is included in the above COC inventory since no further quantitative assessment of lead was conducted.

Receptor Code:

-
- TR Trespasser
 - RC Recreator
 - RES On-Site Resident
 - ORES Off-Site Resident
 - CW Construction / Utility Worker
 - CI Commercial / Industrial Worker

Table 7.1.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Current
Receptor Population:	Trespasser
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	5.44E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	1.18E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.64E-08
				Benzo(a)pyrene	1.05E+01	mg/kg	1.12E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	8.16E-07
				Benzo(b)fluoranthene	1.56E+01	mg/kg	1.65E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.20E-07
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	3.75E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	7.41E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	5.41E-09
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	7.99E-08	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	1.12E-09
				Carbazole	1.03E+00	mg/kg	8.38E-09	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.68E-10
				Chrysene	1.17E+01	mg/kg	1.24E-07	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	9.06E-10
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	9.74E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	7.11E-08
				Dimethylphthalate	9.18E-01	mg/kg	7.49E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	3.27E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	5.13E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.74E-08
				Naphthalene	6.37E-01	mg/kg	5.20E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	1.06E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	4.14E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	8.27E-09
				Aroclor-1260	4.51E+00	mg/kg	5.15E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.03E-07
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	2.21E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	3.32E-08
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	4.34E+00	mg/kg	3.54E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

Table 7.1.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Exp. Route Total							
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	3.73E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	8.11E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.92E-07
				Benzo(a)pyrene	1.05E+01	mg/kg	7.65E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.59E-06
				Benzo(b)fluoranthene	1.56E+01	mg/kg	1.13E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.25E-07
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	2.57E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	5.08E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	3.71E-08
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	7.12E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	9.97E-09
				Carbazole	1.03E+00	mg/kg	7.47E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.49E-09
				Chrysene	1.17E+01	mg/kg	8.50E-07	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	6.21E-09
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	6.67E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.87E-07
				Dimethylphthalate	9.18E-01	mg/kg	6.67E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	2.91E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	3.51E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.56E-07
				Naphthalene	6.37E-01	mg/kg	4.63E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	7.28E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	8.72E-10	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.40E-08
				Endosulfan II	3.43E-02	mg/kg	2.49E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	6.02E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	6.13E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	1.83E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	3.36E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	2.63E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.26E-08
				Aroclor-1260	4.51E+00	mg/kg	3.27E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	6.55E-07
				Aluminum	1.05E+04	mg/kg	7.61E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	1.39E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	6.57E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	9.86E-07
				Barium	4.17E+02	mg/kg	3.03E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Cadmium	4.34E+00	mg/kg	3.15E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Chromium (VI)	1.14E+03	mg/kg	8.30E-05	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	4.15E-05				
Cobalt	1.01E+01	mg/kg	7.36E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Copper	1.09E+03	mg/kg	7.94E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Iron	4.42E+04	mg/kg	3.21E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	8.00E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	7.47E+02	mg/kg	5.43E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	3.91E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

Table 7.1.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
					Value	Units	Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Nickel	8.46E+01	mg/kg	6.15E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Silver	5.65E+00	mg/kg	4.11E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Thallium	1.12E+00	mg/kg	8.12E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	5.09E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	9.89E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Exp. Route Total							
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	1.21E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	2.63E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.89E-12
				Benzo(a)pyrene	1.27E-08	mg/m ³	2.48E-11	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	2.73E-11
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	3.66E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	4.03E-12
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	8.32E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	1.64E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.81E-12
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	2.31E-11	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	5.54E-14
				Carbazole	1.24E-09	mg/m ³	2.42E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Chrysene	1.41E-08	mg/m ³	2.76E-11	mg/m ³	1.10E-05	(µg/m ³) ⁻¹	3.03E-13
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	2.16E-12	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	2.59E-12
				Dimethylphthalate	1.10E-09	mg/m ³	2.16E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	9.44E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	1.14E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.25E-12
				Naphthalene	7.67E-10	mg/m ³	1.50E-12	mg/m ³	3.40E-05	(µg/m ³) ⁻¹	5.10E-14
				Phenanthrene	1.20E-08	mg/m ³	2.36E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Dieldrin	1.44E-11	mg/m ³	2.83E-14	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	1.30E-13
				Endosulfan II	4.13E-11	mg/m ³	8.08E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endosulfan sulfate	9.96E-12	mg/m ³	1.95E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin aldehyde	1.01E-11	mg/m ³	1.99E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	3.03E-11	mg/m ³	5.93E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	5.56E-12	mg/m ³	1.09E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1254	4.36E-10	mg/m ³	8.52E-13	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	4.86E-13
				Aroclor-1260	5.42E-09	mg/m ³	1.06E-11	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	6.05E-12
				Aluminum	1.26E-05	mg/m ³	2.47E-08	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	2.31E-08	mg/m ³	4.52E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	1.09E-08	mg/m ³	2.13E-11	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	9.15E-11
				Barium	5.02E-07	mg/m ³	9.83E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Cadmium	5.22E-09	mg/m ³	1.02E-11	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	1.84E-11
				Chromium (VI)	1.37E-06	mg/m ³	2.69E-09	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	2.26E-07
				Cobalt	1.22E-08	mg/m ³	2.39E-11	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	2.15E-10
Copper	1.32E-06	mg/m ³	2.57E-09	mg/m ³	--	(µg/m ³) ⁻¹	--				
Iron	5.32E-05	mg/m ³	1.04E-07	mg/m ³	--	(µg/m ³) ⁻¹	--				
Lead	1.32E-06	mg/m ³	2.59E-09	mg/m ³	--	(µg/m ³) ⁻¹	--				
Manganese	8.99E-07	mg/m ³	1.76E-09	mg/m ³	--	(µg/m ³) ⁻¹	--				

Table 7.1.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Mercury	6.47E-10	mg/m ³	1.27E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Nickel	1.02E-07	mg/m ³	1.99E-10	mg/m ³	2.60E-04	(µg/m ³) ⁻¹	5.18E-11
				Silver	6.80E-09	mg/m ³	1.33E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Thallium	1.34E-09	mg/m ³	2.63E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Vanadium	8.43E-08	mg/m ³	1.65E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Zinc	1.64E-06	mg/m ³	3.21E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Exp. Route Total							
		Exposure Point Total								5.25E-05	
	Exposure Medium Total									5.25E-05	
Medium Total										5.25E-05	
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	1.23E-08	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	3.80E-10
				Benzo(a)anthracene	4.00E-03	mg/L	1.52E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.11E-05
				Benzo(a)pyrene	4.00E-03	mg/L	2.60E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.90E-04
				Benzo(b)fluoranthene	6.50E-04	mg/L	4.29E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.13E-06
				Benzo(g,h,i)perylene	3.00E-03	mg/L	3.50E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	3.87E-05	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.83E-06
				Carbazole	7.00E-03	mg/L	1.98E-06	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	3.97E-08
				Chrysene	5.00E-03	mg/L	1.90E-05	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	1.39E-07
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	1.01E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	7.34E-05
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	1.98E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.45E-05
				Naphthalene	4.00E-03	mg/L	7.98E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E-02	mg/L	8.17E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				alpha-Chlordane	3.00E-05	mg/L	1.87E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	2.40E-05	mg/L	4.99E-09	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	7.99E-08
				Aroclor-1260	5.40E-04	mg/L	3.05E-05	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	6.09E-05
				Aluminum	9.10E+00	mg/L	1.32E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	5.80E-02	mg/L	8.41E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.26E-07
				Barium	8.10E-01	mg/L	1.17E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.00E-02	mg/L	1.45E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.10E-01	mg/L	3.19E-07	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	6.38E-06
				Copper	8.30E-01	mg/L	1.20E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Iron	5.40E+01	mg/L	7.83E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.80E+00	mg/L	2.61E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	8.05E-01	mg/L	1.17E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	1.00E-01	mg/L	2.90E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Vanadium	1.00E-01	mg/L	1.45E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	5.30E+00	mg/L	4.61E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
		Exp. Route Total								3.63E-04	
Leachate	Leachate	On-Site Leachate Areas	Incidental	Chloroform	4.50E-04	mg/L	9.16E-10	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	2.84E-11
			Ingestion	Benzo(a)anthracene	4.00E-03	mg/L	8.14E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.94E-09

Table 7.1.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Benzo(a)pyrene	4.00E-03	mg/L	8.14E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.94E-08
				Benzo(b)fluoranthene	6.50E-04	mg/L	1.32E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	9.66E-10
				Benzo(g,h,i)perylene	3.00E-03	mg/L	6.11E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	1.22E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	8.91E-10
				Carbazole	7.00E-03	mg/L	1.42E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	2.85E-10
				Chrysene	5.00E-03	mg/L	1.02E-08	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	7.43E-11
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	2.04E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.49E-08
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	6.11E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.46E-09
				Naphthalene	4.00E-03	mg/L	8.14E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E-02	mg/L	2.04E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				alpha-Chlordane	3.00E-05	mg/L	6.11E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	2.40E-05	mg/L	4.88E-11	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	7.82E-10
				Aroclor-1260	5.40E-04	mg/L	1.10E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	2.20E-09
				Aluminum	9.10E+00	mg/L	1.85E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	5.80E-02	mg/L	1.18E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.77E-07
				Barium	8.10E-01	mg/L	1.65E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.00E-02	mg/L	2.04E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.10E-01	mg/L	2.24E-07	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	1.12E-07
				Copper	8.30E-01	mg/L	1.69E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	5.40E+01	mg/L	1.10E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	1.80E+00	mg/L	3.66E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	8.05E-01	mg/L	1.64E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Nickel	1.00E-01	mg/L	2.04E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Vanadium	1.00E-01	mg/L	2.04E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	5.30E+00	mg/L	1.08E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Exp. Route Total											3.79E-07
Exposure Point Total											3.63E-04
Exposure Medium Total											3.63E-04
Medium Total											3.63E-04
Total of Receptor Risks Across All Media										4.16E-04	

Table 7.1.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scra Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

Footnotes:

[a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.

[b] Inputs were applied as follows:
 Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
 Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
 Age 6 - 16 Adult IR/CR and BW; ED = 10; ADAF = 3
 Age 16 - 30 Adult IR/CR and BW; ED = 9; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

On-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
		Benzo(a)anthracene	1.12E+01	7.30E-01	7.00E-07	7.30E-01	4.00E-06
Benzo(a)pyrene	1.05E+01	7.30E+00	6.60E-06	7.30E+00	3.77E-05	1.10E-03	1.29E-10
Benzo(b)fluoranthene	1.56E+01	7.30E-01	9.75E-07	7.30E-01	5.57E-06	1.10E-04	1.91E-11
Benzo(k)fluoranthene	6.98E+00	7.00E-02	4.20E-08	7.00E-02	2.40E-07	1.10E-04	8.56E-12
Chrysene	1.17E+01	7.30E-03	7.34E-09	7.30E-03	4.19E-08	1.10E-05	1.43E-12
Dibenzo(a,h)anthracene	9.18E-01	7.30E+00	5.76E-07	7.30E+00	3.29E-06	1.20E-03	1.23E-11
Indeno(1,2,3-cd)pyrene	4.83E+00	7.30E-01	3.03E-07	7.30E-01	1.73E-06	1.10E-04	5.92E-12
Chromium (VI)	1.14E+03	2.00E+01	--	5.00E-01	2.80E-04	8.40E-02	1.07E-06

*Cancer Risk using ADAF

On-Site Leachate							
MMOA Chemical	CW (mg/L)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
		Benzo(a)anthracene	4.00E-03	7.30E-01	6.64E-05	7.30E-01	4.09E-08
Benzo(a)pyrene	4.00E-03	7.30E+00	1.14E-03	7.30E+00	4.09E-07	--	--
Benzo(b)fluoranthene	6.50E-04	7.30E-01	1.88E-05	7.30E-01	6.65E-09	--	--
Benzo(k)fluoranthene	6.00E-03	7.00E-02	1.62E-05	7.00E-02	5.89E-09	--	--
Chrysene	5.00E-03	7.30E-03	8.30E-07	7.30E-03	5.12E-10	--	--
Dibenzo(a,h)anthracene	1.00E-03	7.30E+00	4.40E-04	7.30E+00	1.02E-07	--	--
Indeno(1,2,3-cd)pyrene	3.00E-03	7.30E-01	8.68E-05	7.30E-01	3.07E-08	--	--
Chromium (VI)	1.10E-01	2.00E+01	3.82E-05	5.00E-01	7.71E-07	--	--

*Cancer Risk using ADAF

Table 7.2.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Recreator
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft)	On-Site Surface Soil (0 to 2ft)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	5.44E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	1.18E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.64E-08
				Benzo(a)pyrene	1.05E+01	mg/kg	1.12E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	8.16E-07
				Benzo(b)fluoranthene	1.56E+01	mg/kg	1.65E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.20E-07
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	3.75E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	7.41E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	5.41E-09
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	7.99E-08	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	1.12E-09
				Carbazole	1.03E+00	mg/kg	8.38E-09	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.68E-10
				Chrysene	1.17E+01	mg/kg	1.24E-07	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	9.06E-10
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	9.74E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	7.11E-08
				Dimethylphthalate	9.18E-01	mg/kg	7.49E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	3.27E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	5.13E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.74E-08
				Naphthalene	6.37E-01	mg/kg	5.20E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	1.06E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	4.14E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	8.27E-09
				Aroclor-1260	4.51E+00	mg/kg	5.15E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.03E-07
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	2.21E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	3.32E-08
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	4.34E+00	mg/kg	3.54E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

Table 7.2.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft)	On-Site Surface Soil (0 to 2ft)	Dermal Absorption	Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								1.28E-06
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	3.73E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	8.11E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.92E-07
				Benzo(a)pyrene	1.05E+01	mg/kg	7.65E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.59E-06
				Benzo(b)fluoranthene	1.56E+01	mg/kg	1.13E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.25E-07
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	2.57E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	5.08E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	3.71E-08
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	7.12E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	9.97E-09
				Carbazole	1.03E+00	mg/kg	7.47E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.49E-09
				Chrysene	1.17E+01	mg/kg	8.50E-07	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	6.21E-09
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	6.67E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.87E-07
				Dimethylphthalate	9.18E-01	mg/kg	6.67E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	2.91E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	3.51E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.56E-07
				Naphthalene	6.37E-01	mg/kg	4.63E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	7.28E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	8.72E-10	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.40E-08
				Endosulfan II	3.43E-02	mg/kg	2.49E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	6.02E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	6.13E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	1.83E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	3.36E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	2.63E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.26E-08
				Aroclor-1260	4.51E+00	mg/kg	3.27E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	6.55E-07
				Aluminum	1.05E+04	mg/kg	7.61E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	1.39E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	6.57E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	9.86E-07
				Barium	4.17E+02	mg/kg	3.03E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Cadmium	4.34E+00	mg/kg	3.15E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Chromium (VI)	1.14E+03	mg/kg	8.30E-05	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	4.15E-05				
Cobalt	1.01E+01	mg/kg	7.36E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Copper	1.09E+03	mg/kg	7.94E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Iron	4.42E+04	mg/kg	3.21E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	8.00E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	7.47E+02	mg/kg	5.43E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	3.91E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	8.46E+01	mg/kg	6.15E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Silver	5.65E+00	mg/kg	4.11E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

Table 7.2.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Thallium	1.12E+00	mg/kg	8.12E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	5.09E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	9.89E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								5.10E-05
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	2.42E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	5.26E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	5.78E-12
				Benzo(a)pyrene	1.27E-08	mg/m ³	4.96E-11	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	5.46E-11
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	7.32E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	8.06E-12
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	1.66E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	3.29E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	3.62E-12
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	4.61E-11	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	1.11E-13
				Carbazole	1.24E-09	mg/m ³	4.84E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Chrysene	1.41E-08	mg/m ³	5.51E-11	mg/m ³	1.10E-05	(µg/m ³) ⁻¹	6.06E-13
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	4.32E-12	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	5.19E-12
				Dimethylphthalate	1.10E-09	mg/m ³	4.32E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	1.89E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	2.28E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.50E-12
				Naphthalene	7.67E-10	mg/m ³	3.00E-12	mg/m ³	3.40E-05	(µg/m ³) ⁻¹	1.02E-13
				Phenanthrene	1.20E-08	mg/m ³	4.71E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Dieldrin	1.44E-11	mg/m ³	5.65E-14	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	2.60E-13
				Endosulfan II	4.13E-11	mg/m ³	1.62E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endosulfan sulfate	9.96E-12	mg/m ³	3.90E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin aldehyde	1.01E-11	mg/m ³	3.97E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	3.03E-11	mg/m ³	1.19E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	5.56E-12	mg/m ³	2.18E-14	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1254	4.36E-10	mg/m ³	1.70E-12	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	9.72E-13
				Aroclor-1260	5.42E-09	mg/m ³	2.12E-11	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.21E-11
				Aluminum	1.26E-05	mg/m ³	4.93E-08	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	2.31E-08	mg/m ³	9.03E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	1.09E-08	mg/m ³	4.26E-11	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	1.83E-10
				Barium	5.02E-07	mg/m ³	1.97E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Cadmium	5.22E-09	mg/m ³	2.04E-11	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	3.68E-11
				Chromium (VI)	1.37E-06	mg/m ³	5.38E-09	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	4.52E-07
				Cobalt	1.22E-08	mg/m ³	4.77E-11	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	4.29E-10
				Copper	1.32E-06	mg/m ³	5.15E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Iron	5.32E-05	mg/m ³	2.08E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Lead	1.32E-06	mg/m ³	5.18E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
Manganese	8.99E-07	mg/m ³	3.52E-09	mg/m ³	--	(µg/m ³) ⁻¹	--				
Mercury	6.47E-10	mg/m ³	2.53E-12	mg/m ³	--	(µg/m ³) ⁻¹	--				
Nickel	1.02E-07	mg/m ³	3.98E-10	mg/m ³	2.60E-04	(µg/m ³) ⁻¹	1.04E-10				
Silver	6.80E-09	mg/m ³	2.66E-11	mg/m ³	--	(µg/m ³) ⁻¹	--				

Table 7.2.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Thallium	1.34E-09	mg/m ³	5.26E-12	mg/m ³	--	(μg/m ³) ⁻¹	--
				Vanadium	8.43E-08	mg/m ³	3.30E-10	mg/m ³	--	(μg/m ³) ⁻¹	--
				Zinc	1.64E-06	mg/m ³	6.41E-09	mg/m ³	--	(μg/m ³) ⁻¹	--
			Exp. Route Total								4.53E-07
		Exposure Point Total									5.28E-05
		Exposure Medium Total									5.28E-05
Medium Total											5.28E-05
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	1.23E-08	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	3.80E-10
				Benzo(a)anthracene	4.00E-03	mg/L	1.52E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.11E-05
				Benzo(a)pyrene	4.00E-03	mg/L	2.60E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.90E-04
				Benzo(b)fluoranthene	6.50E-04	mg/L	4.29E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.13E-06
				Benzo(g,h,i)perylene	3.00E-03	mg/L	3.50E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	3.87E-05	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.83E-06
				Carbazole	7.00E-03	mg/L	1.98E-06	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	3.97E-08
				Chrysene	5.00E-03	mg/L	1.90E-05	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	1.39E-07
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	1.01E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	7.34E-05
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	1.98E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.45E-05
				Naphthalene	4.00E-03	mg/L	7.98E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E-02	mg/L	8.17E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				alpha-Chlordane	3.00E-05	mg/L	1.87E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	2.40E-05	mg/L	4.99E-09	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	7.99E-08
				Aroclor-1260	5.40E-04	mg/L	3.05E-05	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	6.09E-05
				Aluminum	9.10E+00	mg/L	1.32E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	5.80E-02	mg/L	8.41E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.26E-07
				Barium	8.10E-01	mg/L	1.17E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.00E-02	mg/L	1.45E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.10E-01	mg/L	3.19E-07	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	6.38E-06
				Copper	8.30E-01	mg/L	1.20E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	5.40E+01	mg/L	7.83E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	1.80E+00	mg/L	2.61E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	8.05E-01	mg/L	1.17E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Nickel	1.00E-01	mg/L	2.90E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Vanadium	1.00E-01	mg/L	1.45E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	5.30E+00	mg/L	4.61E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
		Exp. Route Total								3.63E-04	
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	9.16E-10	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	2.84E-11
				Benzo(a)anthracene	4.00E-03	mg/L	8.14E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.94E-09
				Benzo(a)pyrene	4.00E-03	mg/L	8.14E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.94E-08
				Benzo(b)fluoranthene	6.50E-04	mg/L	1.32E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	9.66E-10
				Benzo(g,h,i)perylene	3.00E-03	mg/L	6.11E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.00E-03	mg/L	1.22E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	8.91E-10

Table 7.2.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Carbazole	7.00E-03	mg/L	1.42E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	2.85E-10
				Chrysene	5.00E-03	mg/L	1.02E-08	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	7.43E-11
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	2.04E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.49E-08
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	6.11E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.46E-09
				Naphthalene	4.00E-03	mg/L	8.14E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E-02	mg/L	2.04E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				alpha-Chlordane	3.00E-05	mg/L	6.11E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	2.40E-05	mg/L	4.88E-11	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	7.82E-10
				Aroclor-1260	5.40E-04	mg/L	1.10E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	2.20E-09
				Aluminum	9.10E+00	mg/L	1.85E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	5.80E-02	mg/L	1.18E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.77E-07
				Barium	8.10E-01	mg/L	1.65E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.00E-02	mg/L	2.04E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.10E-01	mg/L	2.24E-07	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	1.12E-07
				Copper	8.30E-01	mg/L	1.69E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	5.40E+01	mg/L	1.10E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	1.80E+00	mg/L	3.66E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	8.05E-01	mg/L	1.64E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Nickel	1.00E-01	mg/L	2.04E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	1.00E-01	mg/L	2.04E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	5.30E+00	mg/L	1.08E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								3.79E-07
			Exposure Point Total								3.63E-04
			Exposure Medium Total								3.63E-04
Medium Total										3.63E-04	
Sediment	Sediment in Beer Kill	Beer Kill Creek	Dermal Absorption	Benzo(a)pyrene	4.60E-02	mg/kg	4.88E-10	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.56E-09
				Phenanthrene	4.10E-02	mg/kg	4.35E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.50E-04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	5.30E+00	mg/kg	1.30E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.95E-08
				Chromium (VI)	8.80E+00	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	8.00E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	1.93E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	9.98E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
							Exp. Route Total				
Sediment	Sediment in Beer Kill	Beer Kill Creek	Incidental Ingestion	Benzo(a)pyrene	4.60E-02	mg/kg	3.34E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.44E-08
				Phenanthrene	4.10E-02	mg/kg	2.98E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.50E-04	mg/kg	1.82E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	5.30E+00	mg/kg	3.85E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	5.78E-07
				Chromium (VI)	8.80E+00	mg/kg	6.40E-07	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	3.20E-07
				Cobalt	8.00E+00	mg/kg	5.82E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--

Table 7.2.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	
							Value	Units	Value	Units		
Sediment	Sediment in Beer Kill	Beer Kill Creek	Incidental	Iron	1.93E+04	mg/kg	1.40E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
			Ingestion	Manganese	9.98E+02	mg/kg	7.25E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	
			Exp. Route Total								9.22E-07	
		Exposure Point Total								9.45E-07		
	Exposure Medium Total									9.45E-07		
Medium Total										9.45E-07		
Surface Water	Surface Water in Beer Kill Creek	No Chemicals met the COPC criteria for this medium.										
		Beer Kill Creek										
		Exp. Route Total										--
		Exposure Point Total										--
	Exposure Medium Total										--	
Medium Total											--	
Total of Receptor Risks Across All Media											4.17E-04	

Footnotes:

[a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.

[b] Inputs were applied as follows:

- Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
- Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
- Age 6 - 16 Adult IR/CR and BW; ED = 10, ADAF = 3
- Age 16 - 30 Adult IR/CR and BW; ED = 9; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

On-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	1.12E+01	7.30E-01	7.00E-07	7.30E-01	4.00E-06	1.10E-04	1.37E-11
Benzo(a)pyrene	1.05E+01	7.30E+00	6.60E-06	7.30E+00	3.77E-05	1.10E-03	1.29E-10
Benzo(b)fluoranthene	1.56E+01	7.30E-01	9.75E-07	7.30E-01	5.57E-06	1.10E-04	1.91E-11
Benzo(k)fluoranthene	6.98E+00	7.00E-02	4.20E-08	7.00E-02	2.40E-07	1.10E-04	8.56E-12
Chrysene	1.17E+01	7.30E-03	7.34E-09	7.30E-03	4.19E-08	1.10E-05	1.43E-12
Dibenzo(a,h)anthracene	9.18E-01	7.30E+00	5.76E-07	7.30E+00	3.29E-06	1.20E-03	1.23E-11
Indeno(1,2,3-cd)pyrene	4.83E+00	7.30E-01	3.03E-07	7.30E-01	1.73E-06	1.10E-04	5.92E-12
Chromium (VI)	1.14E+03	2.00E+01	--	5.00E-01	2.80E-04	8.40E-02	1.07E-06

*Cancer Risk using ADAF

On-Site Leachate							
MMOA Chemical	CW (mg/L)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	4.00E-03	7.30E-01	6.64E-05	7.30E-01	4.09E-08	--	--
Benzo(a)pyrene	4.00E-03	7.30E+00	1.14E-03	7.30E+00	4.09E-07	--	--
Benzo(b)fluoranthene	6.50E-04	7.30E-01	1.88E-05	7.30E-01	6.65E-09	--	--
Benzo(k)fluoranthene	6.00E-03	7.00E-02	1.62E-05	7.00E-02	5.89E-09	--	--
Chrysene	5.00E-03	7.30E-03	8.30E-07	7.30E-03	5.12E-10	--	--
Dibenzo(a,h)anthracene	1.00E-03	7.30E+00	4.40E-04	7.30E+00	1.02E-07	--	--
Indeno(1,2,3-cd)pyrene	3.00E-03	7.30E-01	8.68E-05	7.30E-01	3.07E-08	--	--
Chromium (VI)	1.10E-01	2.00E+01	3.82E-05	5.00E-01	7.71E-07	--	--

*Cancer Risk using ADAF

On-Site Sediment							
MMOA Chemical	CW (mg/L)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)pyrene	4.60E-02	7.30E+00	2.88E-08	7.30E+00	1.65E-07	--	--
Chromium (VI)	8.80E+00	2.00E+01	--	5.00E-01	2.16E-06	--	--

*Cancer Risk using ADAF

TABLE 7.3.1 CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Future
 Receptor Population: Resident (on-site)
 Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.21E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.13E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.07E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.58E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.59E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.09E-07	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.65E-07	mg/kg-day	2.00E-02	mg/kg-day	3.82E-05
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.02E-08	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.19E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.32E-08	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.17E-08	mg/kg-day	1.00E+01	mg/kg-day	7.17E-07
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.13E-08	mg/kg-day	2.00E-02	mg/kg-day	1.57E-06
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.90E-07	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.97E-08	mg/kg-day	2.00E-02	mg/kg-day	2.49E-06
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.02E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.96E-08	mg/kg-day	2.00E-05	mg/kg-day	1.98E-03
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.92E-07	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.12E-07	mg/kg-day	3.00E-04	mg/kg-day	7.06E-04
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.38E-09	mg/kg-day	2.50E-05	mg/kg-day	1.35E-04
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--				
Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total															2.86E-03	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.51E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.64E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.21E-06	mg/kg-day	--	mg/kg-day	--

TABLE 7.3.1 CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.07E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.42E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.78E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.71E-06	mg/kg-day	2.00E-02	mg/kg-day	3.35E-04
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.03E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.01E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.29E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.29E-07	mg/kg-day	1.00E-01	mg/kg-day	6.29E-06
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.75E-07	mg/kg-day	2.00E-02	mg/kg-day	1.37E-05
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.31E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.36E-07	mg/kg-day	2.00E-02	mg/kg-day	2.18E-05
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.86E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.22E-09	mg/kg-day	5.00E-05	mg/kg-day	1.64E-04
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.35E-08	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.67E-09	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.77E-09	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.73E-08	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.16E-09	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.48E-07	mg/kg-day	2.00E-05	mg/kg-day	1.24E-02
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.09E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.17E-03	mg/kg-day	1.00E+00	mg/kg-day	7.17E-03
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.31E-05	mg/kg-day	4.00E-04	mg/kg-day	3.28E-02
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.19E-06	mg/kg-day	3.00E-04	mg/kg-day	2.06E-02
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.86E-04	mg/kg-day	2.00E-01	mg/kg-day	1.43E-03
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.97E-06	mg/kg-day	5.00E-04	mg/kg-day	5.94E-03
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.82E-04	mg/kg-day	3.00E-03	mg/kg-day	2.61E-01
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.94E-06	mg/kg-day	3.00E-04	mg/kg-day	2.31E-02
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.49E-04	mg/kg-day	4.00E-02	mg/kg-day	1.87E-02
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.03E-02	mg/kg-day	7.00E-01	mg/kg-day	4.32E-02
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.53E-04	mg/kg-day	--	mg/kg-day	--
				Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.12E-04	mg/kg-day	2.40E-02	mg/kg-day	2.13E-02
				Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.68E-07	mg/kg-day	3.00E-04	mg/kg-day	1.23E-03
				Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.79E-05	mg/kg-day	3.00E-02	mg/kg-day	1.93E-03
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.87E-06	mg/kg-day	5.00E-03	mg/kg-day	7.74E-04				
Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.65E-07	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.80E-05	mg/kg-day	5.00E-03	mg/kg-day	9.60E-03				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.32E-04	mg/kg-day	3.00E-01	mg/kg-day	3.11E-03				
Exp. Route Total											--					4.65E-01
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	5.92E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.29E-08	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.27E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.22E-08	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.79E-08	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	4.08E-09	mg/m ³	--	mg/m ³	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	8.06E-09	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.13E-08	mg/m ³	--	mg/m ³	--
				Carbazole	1.24E-09	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.19E-09	mg/m ³	--	mg/m ³	--
				Chrysene	1.41E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.35E-08	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.06E-09	mg/m ³	--	mg/m ³	--

TABLE 7.3.1 CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient	
							Value	Units	Value	Units		Value	Units	Value	Units		
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Dimethylphthalate	1.10E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.06E-09	mg/m ³	--	mg/m ³	--	
				Di-n-octylphthalate	4.83E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.63E-10	mg/m ³	--	mg/m ³	--	
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.58E-09	mg/m ³	--	mg/m ³	--	
				Naphthalene	7.67E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.35E-10	mg/m ³	3.00E-03	mg/m ³	2.45E-07	
				Phenanthrene	1.20E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.16E-08	mg/m ³	--	mg/m ³	--	
				Dieldrin	1.44E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.38E-11	mg/m ³	--	mg/m ³	--	
				Endosulfan II	4.13E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.96E-11	mg/m ³	--	mg/m ³	--	
				Endosulfan sulfate	9.96E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.55E-12	mg/m ³	--	mg/m ³	--	
				Endrin aldehyde	1.01E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.73E-12	mg/m ³	--	mg/m ³	--	
				Endrin ketone	3.03E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.91E-11	mg/m ³	--	mg/m ³	--	
				gamma-Chlordane	5.56E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.33E-12	mg/m ³	--	mg/m ³	--	
				Aroclor-1254	4.36E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.18E-10	mg/m ³	--	mg/m ³	--	
				Aroclor-1260	5.42E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.20E-09	mg/m ³	--	mg/m ³	--	
				Aluminum	1.26E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-05	mg/m ³	5.00E-03	mg/m ³	2.42E-03	
				Antimony	2.31E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.21E-08	mg/m ³	--	mg/m ³	--	
				Arsenic	1.09E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.04E-08	mg/m ³	1.50E-05	mg/m ³	6.95E-04	
				Barium	5.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.82E-07	mg/m ³	5.00E-04	mg/m ³	9.63E-04	
				Cadmium	5.22E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.00E-09	mg/m ³	1.00E-05	mg/m ³	5.00E-04	
				Chromium (VI)	1.37E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.32E-06	mg/m ³	1.00E-04	mg/m ³	1.32E-02	
				Cobalt	1.22E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.17E-08	mg/m ³	6.00E-06	mg/m ³	1.95E-03	
				Copper	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.26E-06	mg/m ³	--	mg/m ³	--	
				Iron	5.32E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.10E-05	mg/m ³	--	mg/m ³	--	
				Lead	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.27E-06	mg/m ³	--	mg/m ³	--	
				Manganese	8.99E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.62E-07	mg/m ³	5.00E-05	mg/m ³	1.72E-02	
				Mercury	6.47E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.21E-10	mg/m ³	3.00E-04	mg/m ³	2.07E-06	
				Nickel	1.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.76E-08	mg/m ³	9.00E-05	mg/m ³	1.08E-03	
				Silver	6.80E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.52E-09	mg/m ³	--	mg/m ³	--	
Thallium	1.34E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-09	mg/m ³	--	mg/m ³	--					
Vanadium	8.43E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.09E-08	mg/m ³	--	mg/m ³	--					
Zinc	1.64E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.57E-06	mg/m ³	--	mg/m ³	--					
Exp. Route Total																3.80E-02	
Exposure Point Total																	5.06E-01
Exposure Medium Total																	5.06E-01
Medium Total																	5.06E-01
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.30E-07	mg/kg-day	1.00E-02	mg/kg-day	3.30E-05	
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.09E-04	mg/kg-day	--	mg/kg-day	--	
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.01E-04	mg/kg-day	--	mg/kg-day	--	
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.16E-04	mg/kg-day	--	mg/kg-day	--	
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.43E-04	mg/kg-day	--	mg/kg-day	--	
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.04E-03	mg/kg-day	--	mg/kg-day	--	
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.34E-05	mg/kg-day	--	mg/kg-day	--	
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.11E-04	mg/kg-day	--	mg/kg-day	--	
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.71E-04	mg/kg-day	--	mg/kg-day	--	
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.34E-04	mg/kg-day	--	mg/kg-day	--	
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.15E-05	mg/kg-day	2.00E-02	mg/kg-day	1.07E-03	
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.20E-04	mg/kg-day	--	mg/kg-day	--	
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.03E-07	mg/kg-day	--	mg/kg-day	--	
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.34E-07	mg/kg-day	5.00E-05	mg/kg-day	2.69E-03	

TABLE 7.3.1 CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.20E-04	mg/kg-day	--	mg/kg-day	--				
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.55E-04	mg/kg-day	1.00E+00	mg/kg-day	3.55E-04				
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.26E-06	mg/kg-day	3.00E-04	mg/kg-day	7.55E-03				
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.16E-05	mg/kg-day	1.40E-02	mg/kg-day	2.26E-03				
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.90E-07	mg/kg-day	2.50E-05	mg/kg-day	1.56E-02				
				Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.59E-06	mg/kg-day	7.50E-05	mg/kg-day	1.15E-01				
				Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.24E-05	mg/kg-day	4.00E-02	mg/kg-day	8.10E-04				
				Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.11E-03	mg/kg-day	7.00E-01	mg/kg-day	3.01E-03				
				Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.03E-06	mg/kg-day	--	mg/kg-day	--				
				Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.14E-05	mg/kg-day	9.60E-04	mg/kg-day	3.27E-02				
				Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.81E-07	mg/kg-day	1.20E-03	mg/kg-day	6.51E-04				
				Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.90E-06	mg/kg-day	1.30E-04	mg/kg-day	3.00E-02				
				Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.24E-04	mg/kg-day	3.00E-01	mg/kg-day	4.14E-04				
				Exp. Route Total											--			2.12E-01		
				Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.54E-08	mg/kg-day	1.00E-02	mg/kg-day	1.54E-06
								Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.37E-07	mg/kg-day	--	mg/kg-day	--
								Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.37E-07	mg/kg-day	--	mg/kg-day	--
								Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.23E-08	mg/kg-day	--	mg/kg-day	--
								Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.03E-07	mg/kg-day	--	mg/kg-day	--
Benzo(k)fluoranthene	6.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.05E-07	mg/kg-day	--	mg/kg-day	--				
Carbazole	7.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.40E-07	mg/kg-day	--	mg/kg-day	--				
Chrysene	5.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.71E-07	mg/kg-day	--	mg/kg-day	--				
Dibenzo(a,h)anthracene	1.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.42E-08	mg/kg-day	--	mg/kg-day	--				
Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.03E-07	mg/kg-day	--	mg/kg-day	--				
Naphthalene	4.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.37E-07	mg/kg-day	2.00E-02	mg/kg-day	6.85E-06				
Phenanthrene	1.00E-02	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.42E-07	mg/kg-day	--	mg/kg-day	--				
alpha-Chlordane	3.00E-05	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.03E-09	mg/kg-day	--	mg/kg-day	--				
Dieldrin	2.40E-05	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.22E-10	mg/kg-day	5.00E-05	mg/kg-day	1.64E-05				
Aroclor-1260	5.40E-04	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.85E-08	mg/kg-day	--	mg/kg-day	--				
Aluminum	9.10E+00	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.12E-04	mg/kg-day	1.00E+00	mg/kg-day	3.12E-04				
Arsenic	5.80E-02	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.99E-06	mg/kg-day	3.00E-04	mg/kg-day	6.62E-03				
Barium	8.10E-01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.77E-05	mg/kg-day	2.00E-01	mg/kg-day	1.39E-04				
Cadmium	1.00E-02	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.42E-07	mg/kg-day	5.00E-04	mg/kg-day	6.85E-04				
Chromium (VI)	1.10E-01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.77E-06	mg/kg-day	3.00E-03	mg/kg-day	1.26E-03				
Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.84E-05	mg/kg-day	4.00E-02	mg/kg-day	7.11E-04								
Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.85E-03	mg/kg-day	7.00E-01	mg/kg-day	2.64E-03								
Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.16E-05	mg/kg-day	--	mg/kg-day	--								
Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.76E-05	mg/kg-day	2.40E-02	mg/kg-day	1.15E-03								
Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.42E-06	mg/kg-day	3.00E-02	mg/kg-day	1.14E-04								
Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.42E-06	mg/kg-day	5.00E-03	mg/kg-day	6.85E-04								
Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.82E-04	mg/kg-day	3.00E-01	mg/kg-day	6.05E-04								
Exp. Route Total											--			1.49E-02						
Exposure Point Total											--			2.27E-01						
Exposure Medium Total											--			2.27E-01						
Medium Total											--			2.27E-01						
Total of Receptor Risks Across All Media											--			7.32E-01						
Total of Receptor Hazards Across All Media											--			7.32E-01						

TABLE 7.3.2 CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.77E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.04E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.80E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.45E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.29E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.50E-06	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.01E-06	mg/kg-day	2.00E-02	mg/kg-day	3.51E-04
				Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.35E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.09E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.54E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.57E-07	mg/kg-day	1.00E-01	mg/kg-day	6.57E-06
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.87E-07	mg/kg-day	2.00E-02	mg/kg-day	1.44E-05
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.50E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.56E-07	mg/kg-day	2.00E-02	mg/kg-day	2.28E-05
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.32E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.63E-07	mg/kg-day	2.00E-05	mg/kg-day	1.81E-02
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.52E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.94E-06	mg/kg-day	3.00E-04	mg/kg-day	6.47E-03
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.10E-08	mg/kg-day	2.50E-05	mg/kg-day	1.24E-03
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--				
Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
			Exp. Route Total												2.63E-02	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.28E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.13E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.73E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.94E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.26E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.46E-05	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.26E-05	mg/kg-day	2.00E-02	mg/kg-day	3.13E-03
Carbazole	1.03E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.57E-06	mg/kg-day	--	mg/kg-day	--				

TABLE 7.3.2 CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Chrysene	1.17E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.48E-05	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.87E-06	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.87E-06	mg/kg-day	1.00E-01	mg/kg-day	5.87E-05
				Di-n-octylphthalate	4.01E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.56E-06	mg/kg-day	2.00E-02	mg/kg-day	1.28E-04
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.09E-05	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.07E-06	mg/kg-day	2.00E-02	mg/kg-day	2.04E-04
				Phenanthrene	1.00E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.40E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.67E-08	mg/kg-day	5.00E-05	mg/kg-day	1.53E-03
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.19E-07	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.29E-08	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.39E-08	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.61E-07	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.95E-08	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.31E-06	mg/kg-day	2.00E-05	mg/kg-day	1.16E-01
				Aroclor-1260	4.51E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.88E-05	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.69E-02	mg/kg-day	1.00E+00	mg/kg-day	6.69E-02
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.23E-04	mg/kg-day	4.00E-04	mg/kg-day	3.07E-01
				Arsenic	9.04E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.78E-05	mg/kg-day	3.00E-04	mg/kg-day	1.93E-01
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.67E-03	mg/kg-day	2.00E-01	mg/kg-day	1.33E-02
				Cadmium	4.34E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.77E-05	mg/kg-day	5.00E-04	mg/kg-day	5.54E-02
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.30E-03	mg/kg-day	3.00E-03	mg/kg-day	2.43E+00
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.48E-05	mg/kg-day	3.00E-04	mg/kg-day	2.16E-01
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.99E-03	mg/kg-day	4.00E-02	mg/kg-day	1.75E-01
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.83E-01	mg/kg-day	7.00E-01	mg/kg-day	4.04E-01
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.03E-03	mg/kg-day	--	mg/kg-day	--
				Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.78E-03	mg/kg-day	2.40E-02	mg/kg-day	1.99E-01
				Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.44E-06	mg/kg-day	3.00E-04	mg/kg-day	1.15E-02
				Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.41E-04	mg/kg-day	3.00E-02	mg/kg-day	1.80E-02
				Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.61E-05	mg/kg-day	5.00E-03	mg/kg-day	7.22E-03
				Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.14E-06	mg/kg-day	--	mg/kg-day	--
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.48E-04	mg/kg-day	5.00E-03	mg/kg-day	8.96E-02
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.70E-03	mg/kg-day	3.00E-01	mg/kg-day	2.90E-02
Exp. Route Total							--	4.34E+00								
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Inhalation of Dust	Acenaphthylene	6.17E-10	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	5.92E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.29E-08	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.27E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.22E-08	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.79E-08	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	4.08E-09	mg/m ³	--	mg/m ³	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	8.06E-09	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.13E-08	mg/m ³	--	mg/m ³	--
				Carbazole	1.24E-09	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.19E-09	mg/m ³	--	mg/m ³	--
				Chrysene	1.41E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.35E-08	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.06E-09	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	1.10E-09	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.06E-09	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	4.63E-10	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	5.58E-09	mg/m ³	--	mg/m ³	--
				Naphthalene	7.67E-10	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	7.35E-10	mg/m ³	3.00E-03	mg/m ³	2.45E-07
				Phenanthrene	1.20E-08	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.16E-08	mg/m ³	--	mg/m ³	--
				Dieldrin	1.44E-11	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	1.38E-11	mg/m ³	--	mg/m ³	--
				Endosulfan II	4.13E-11	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	3.96E-11	mg/m ³	--	mg/m ³	--
				Endosulfan sulfate	9.96E-12	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	9.55E-12	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	1.01E-11	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	9.73E-12	mg/m ³	--	mg/m ³	--
				Endrin ketone	3.03E-11	mg/m ³	--	mg/m ³	--	(μg/m ³) ⁻¹	--	2.91E-11	mg/m ³	--	mg/m ³	--



TABLE 7.3.2 CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations								
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Inhalation of Dust	gamma-Chlordane	5.56E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.33E-12	mg/m ³	--	mg/m ³	--				
				Aroclor-1254	4.36E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.18E-10	mg/m ³	--	mg/m ³	--				
				Aroclor-1260	5.42E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.20E-09	mg/m ³	--	mg/m ³	--				
				Aluminum	1.26E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.21E-05	mg/m ³	5.00E-03	mg/m ³	2.42E-03				
				Antimony	2.31E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.21E-08	mg/m ³	--	mg/m ³	--				
				Arsenic	1.09E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.04E-08	mg/m ³	1.50E-05	mg/m ³	6.95E-04				
				Barium	5.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.82E-07	mg/m ³	5.00E-04	mg/m ³	9.63E-04				
				Cadmium	5.22E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.00E-09	mg/m ³	1.00E-05	mg/m ³	5.00E-04				
				Chromium (VI)	1.37E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.32E-06	mg/m ³	1.00E-04	mg/m ³	1.32E-02				
				Cobalt	1.22E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.17E-08	mg/m ³	6.00E-06	mg/m ³	1.95E-03				
				Copper	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.26E-06	mg/m ³	--	mg/m ³	--				
				Iron	5.32E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.10E-05	mg/m ³	--	mg/m ³	--				
				Lead	1.32E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.27E-06	mg/m ³	--	mg/m ³	--				
				Manganese	8.99E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.62E-07	mg/m ³	5.00E-05	mg/m ³	1.72E-02				
				Mercury	6.47E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.21E-10	mg/m ³	3.00E-04	mg/m ³	2.07E-06				
				Nickel	1.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.76E-08	mg/m ³	9.00E-05	mg/m ³	1.08E-03				
				Silver	6.80E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.52E-09	mg/m ³	--	mg/m ³	--				
				Thallium	1.34E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-09	mg/m ³	--	mg/m ³	--				
				Vanadium	8.43E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	8.09E-08	mg/m ³	--	mg/m ³	--				
				Zinc	1.64E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.57E-06	mg/m ³	--	mg/m ³	--				
				Exp. Route Total															3.80E-02	
				Exposure Point Total																4.40E+00
				Exposure Medium Total																4.40E+00
				Medium Total																4.40E+00
				Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.57E-07	mg/kg-day	1.00E-02	mg/kg-day	7.57E-05
								Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.37E-04	mg/kg-day	--	mg/kg-day	--
								Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.61E-03	mg/kg-day	--	mg/kg-day	--
								Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.65E-04	mg/kg-day	--	mg/kg-day	--
Benzo(g,h,i)perylene	3.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.16E-03	mg/kg-day	--	mg/kg-day	--				
Benzo(k)fluoranthene	6.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.39E-03	mg/kg-day	--	mg/kg-day	--				
Carbazole	7.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.22E-04	mg/kg-day	--	mg/kg-day	--				
Chrysene	5.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-03	mg/kg-day	--	mg/kg-day	--				
Dibenzo(a,h)anthracene	1.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.20E-04	mg/kg-day	--	mg/kg-day	--				
Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.22E-03	mg/kg-day	--	mg/kg-day	--				
Naphthalene	4.00E-03	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.92E-05	mg/kg-day	2.00E-02	mg/kg-day	2.46E-03				
Phenanthrene	1.00E-02	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.04E-04	mg/kg-day	--	mg/kg-day	--				
alpha-Chlordane	3.00E-05	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.15E-06	mg/kg-day	--	mg/kg-day	--				
Dieldrin	2.40E-05	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.08E-07	mg/kg-day	5.00E-05	mg/kg-day	6.16E-03				
Aroclor-1260	5.54E-04	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.88E-03	mg/kg-day	--	mg/kg-day	--				
Aluminum	9.10E+00	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.14E-04	mg/kg-day	1.00E+00	mg/kg-day	8.14E-04				
Arsenic	5.80E-02	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.19E-06	mg/kg-day	3.00E-04	mg/kg-day	1.73E-02				
Barium	8.10E-01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.25E-05	mg/kg-day	1.40E-02	mg/kg-day	5.18E-03				
Cadmium	1.00E-02	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.95E-07	mg/kg-day	2.50E-05	mg/kg-day	3.58E-02				
Chromium (VI)	1.10E-01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.97E-05	mg/kg-day	7.50E-05	mg/kg-day	2.63E-01				
Copper	8.30E-01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.43E-05	mg/kg-day	4.00E-02	mg/kg-day	1.86E-03				
Iron	5.40E+01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.83E-03	mg/kg-day	7.00E-01	mg/kg-day	6.90E-03				
Lead	1.80E+00	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.61E-05	mg/kg-day	--	mg/kg-day	--				
Manganese	8.05E-01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.20E-05	mg/kg-day	9.60E-04	mg/kg-day	7.50E-02				
Nickel	1.00E-01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.79E-06	mg/kg-day	1.20E-03	mg/kg-day	1.49E-03				
Vanadium	1.00E-01	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.95E-06	mg/kg-day	1.30E-04	mg/kg-day	6.88E-02				
Zinc	5.30E+00	mg/L	--					mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.85E-04	mg/kg-day	3.00E-01	mg/kg-day	9.49E-04				
Exp. Route Total																				4.85E-01

TABLE 7.3.2 CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient	
							Value	Units	Value	Units		Value	Units	Value	Units		
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.19E-08	mg/kg-day	1.00E-02	mg/kg-day	7.19E-06	
				Benzo(a)anthracene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.39E-07	mg/kg-day	--	mg/kg-day	--	
				Benzo(a)pyrene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.39E-07	mg/kg-day	--	mg/kg-day	--	
				Benzo(b)fluoranthene	6.50E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.04E-07	mg/kg-day	--	mg/kg-day	--	
				Benzo(g,h,i)perylene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.79E-07	mg/kg-day	--	mg/kg-day	--	
				Benzo(k)fluoranthene	6.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.59E-07	mg/kg-day	--	mg/kg-day	--	
				Carbazole	7.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.12E-06	mg/kg-day	--	mg/kg-day	--	
				Chrysene	5.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.99E-07	mg/kg-day	--	mg/kg-day	--	
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.60E-07	mg/kg-day	--	mg/kg-day	--	
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.79E-07	mg/kg-day	--	mg/kg-day	--	
				Naphthalene	4.00E-03	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.39E-07	mg/kg-day	2.00E-02	mg/kg-day	3.20E-05	
				Phenanthrene	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.60E-06	mg/kg-day	--	mg/kg-day	--	
				alpha-Chlordane	3.00E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.79E-09	mg/kg-day	--	mg/kg-day	--	
				Dieldrin	2.40E-05	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.84E-09	mg/kg-day	5.00E-05	mg/kg-day	7.67E-05	
				Aroclor-1260	5.40E-04	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.63E-08	mg/kg-day	--	mg/kg-day	--	
				Aluminum	9.10E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.45E-03	mg/kg-day	1.00E+00	mg/kg-day	1.45E-03	
				Arsenic	5.80E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.27E-06	mg/kg-day	3.00E-04	mg/kg-day	3.09E-02	
				Barium	8.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.29E-04	mg/kg-day	2.00E-01	mg/kg-day	6.47E-04	
				Cadmium	1.00E-02	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.60E-06	mg/kg-day	5.00E-04	mg/kg-day	3.20E-03	
				Chromium (VI)	1.10E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.76E-05	mg/kg-day	3.00E-03	mg/kg-day	5.86E-03	
				Copper	8.30E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.33E-04	mg/kg-day	4.00E-02	mg/kg-day	3.32E-03	
				Iron	5.40E+01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.63E-03	mg/kg-day	7.00E-01	mg/kg-day	1.23E-02	
				Lead	1.80E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.88E-04	mg/kg-day	--	mg/kg-day	--	
				Manganese	8.05E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.29E-04	mg/kg-day	2.40E-02	mg/kg-day	5.36E-03	
				Nickel	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.60E-05	mg/kg-day	3.00E-02	mg/kg-day	5.33E-04	
				Vanadium	1.00E-01	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.60E-05	mg/kg-day	5.00E-03	mg/kg-day	3.20E-03	
				Zinc	5.30E+00	mg/L	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.47E-04	mg/kg-day	3.00E-01	mg/kg-day	2.82E-03	
Exp. Route Total																6.97E-02	
Exposure Point Total																	5.55E-01
Exposure Medium Total																	5.55E-01
Medium Total																	5.55E-01
Total of Receptor Risks Across All Media										--	Total of Receptor Hazards Across All Media				4.96E+00		

TABLE 7.3.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	4.76E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	1.04E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.56E-07
				Benzo(a)pyrene	1.05E+01	mg/kg	9.78E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	7.14E-06
				Benzo(b)fluoranthene	1.56E+01	mg/kg	1.44E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.05E-06
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	3.28E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	6.48E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	4.73E-08
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	6.99E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	9.79E-09
				Carbazole	1.03E+00	mg/kg	7.33E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.47E-09
				Chrysene	1.17E+01	mg/kg	1.09E-06	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	7.93E-09
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	8.52E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	6.22E-07
				Dimethylphthalate	9.18E-01	mg/kg	6.56E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	2.86E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	4.49E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.27E-07
				Naphthalene	6.37E-01	mg/kg	4.55E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	9.29E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	3.62E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	7.24E-08
				Aroclor-1260	4.51E+00	mg/kg	4.50E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	9.01E-07
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	1.94E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.90E-07
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	4.34E+00	mg/kg	3.10E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

TABLE 7.3.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								1.12E-05
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	3.26E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.12E+01	mg/kg	7.10E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.18E-05
				Benzo(a)pyrene	1.05E+01	mg/kg	6.70E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.89E-06
				Benzo(b)fluoranthene	1.56E+01	mg/kg	9.89E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.22E-06
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	2.25E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	4.44E-06	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	3.24E-07
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	6.23E-06	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	8.72E-08
				Carbazole	1.03E+00	mg/kg	6.53E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.31E-08
				Chrysene	1.17E+01	mg/kg	7.44E-06	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	5.43E-08
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	5.84E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.26E-06
				Dimethylphthalate	9.18E-01	mg/kg	5.84E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Di-n-octylphthalate	4.01E-01	mg/kg	2.55E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	3.07E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.24E-06
				Naphthalene	6.37E-01	mg/kg	4.05E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E+01	mg/kg	6.37E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	1.20E-02	mg/kg	7.63E-09	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.22E-07
				Endosulfan II	3.43E-02	mg/kg	2.18E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan sulfate	8.28E-03	mg/kg	5.27E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	8.43E-03	mg/kg	5.36E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	2.52E-02	mg/kg	1.60E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	4.62E-03	mg/kg	2.94E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1254	3.62E-01	mg/kg	2.30E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	4.60E-07
				Aroclor-1260	4.51E+00	mg/kg	2.87E-06	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.73E-06
				Aluminum	1.05E+04	mg/kg	6.66E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	1.92E+01	mg/kg	1.22E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	9.04E+00	mg/kg	5.75E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	8.62E-06
				Barium	4.17E+02	mg/kg	2.65E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	4.34E+00	mg/kg	2.76E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.14E+03	mg/kg	7.26E-04	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	3.63E-04
				Cobalt	1.01E+01	mg/kg	6.44E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	1.09E+03	mg/kg	6.95E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Iron	4.42E+04	mg/kg	2.81E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	1.10E+03	mg/kg	7.00E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	7.47E+02	mg/kg	4.75E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	5.38E-01	mg/kg	3.42E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Nickel	8.46E+01	mg/kg	5.38E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Silver	5.65E+00	mg/kg	3.59E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--				

TABLE 7.3.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
					Value	Units	Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Thallium	1.12E+00	mg/kg	7.10E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	7.01E+01	mg/kg	4.46E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.36E+03	mg/kg	8.66E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								4.46E-04
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Inhalation of Dust	Acenaphthylene	6.17E-10	mg/m ³	1.27E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	2.76E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	3.04E-10
				Benzo(a)pyrene	1.27E-08	mg/m ³	2.60E-09	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	2.86E-09
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	3.85E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	4.23E-10
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	8.74E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	1.73E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.90E-10
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	2.42E-09	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	5.81E-12
				Carbazole	1.24E-09	mg/m ³	2.54E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Chrysene	1.41E-08	mg/m ³	2.89E-09	mg/m ³	1.10E-05	(µg/m ³) ⁻¹	3.18E-11
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	2.27E-10	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	2.72E-10
				Dimethylphthalate	1.10E-09	mg/m ³	2.27E-10	mg/m ³	--	(µg/m ³) ⁻¹	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	9.92E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	1.19E-09	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.31E-10
				Naphthalene	7.67E-10	mg/m ³	1.58E-10	mg/m ³	3.40E-05	(µg/m ³) ⁻¹	5.36E-12
				Phenanthrene	1.20E-08	mg/m ³	2.48E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Dieldrin	1.44E-11	mg/m ³	2.97E-12	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	1.36E-11
				Endosulfan II	4.13E-11	mg/m ³	8.48E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endosulfan sulfate	9.96E-12	mg/m ³	2.05E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin aldehyde	1.01E-11	mg/m ³	2.08E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	3.03E-11	mg/m ³	6.23E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	5.56E-12	mg/m ³	1.14E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1254	4.36E-10	mg/m ³	8.95E-11	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	5.10E-11
				Aroclor-1260	5.42E-09	mg/m ³	1.11E-09	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	6.35E-10
				Aluminum	1.26E-05	mg/m ³	2.59E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	2.31E-08	mg/m ³	4.74E-09	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	1.09E-08	mg/m ³	2.24E-09	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	9.61E-09
				Barium	5.02E-07	mg/m ³	1.03E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Cadmium	5.22E-09	mg/m ³	1.07E-09	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	1.93E-09
				Chromium (VI)	1.37E-06	mg/m ³	2.82E-07	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	2.37E-05
				Cobalt	1.22E-08	mg/m ³	2.50E-09	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	2.25E-08
				Copper	1.32E-06	mg/m ³	2.70E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
Iron	5.32E-05	mg/m ³	1.09E-05	mg/m ³	--	(µg/m ³) ⁻¹	--				
Lead	1.32E-06	mg/m ³	2.72E-07	mg/m ³	--	(µg/m ³) ⁻¹	--				
Manganese	8.99E-07	mg/m ³	1.85E-07	mg/m ³	--	(µg/m ³) ⁻¹	--				
Mercury	6.47E-10	mg/m ³	1.33E-10	mg/m ³	--	(µg/m ³) ⁻¹	--				
Nickel	1.02E-07	mg/m ³	2.09E-08	mg/m ³	2.60E-04	(µg/m ³) ⁻¹	5.44E-09				
Silver	6.80E-09	mg/m ³	1.40E-09	mg/m ³	--	(µg/m ³) ⁻¹	--				

TABLE 7.3.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk			
							Value	Units	Value	Units				
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Inhalation of Dust	Thallium	1.34E-09	mg/m ³	2.76E-10	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Vanadium	8.43E-08	mg/m ³	1.73E-08	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Zinc	1.64E-06	mg/m ³	3.37E-07	mg/m ³	--	(µg/m ³) ⁻¹	--			
					Exp. Route Total							2.38E-05		
		Exposure Point Total								4.81E-04				
		Exposure Medium Total								4.81E-04				
Medium Total											4.81E-04			
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	1.07E-07	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	3.33E-09			
				Benzo(a)anthracene	4.00E-03	mg/L	1.33E-04	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	9.70E-05			
				Benzo(a)pyrene	4.00E-03	mg/L	2.28E-04	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.66E-03			
				Benzo(b)fluoranthene	6.50E-04	mg/L	3.76E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.74E-05			
				Benzo(g,h,i)perylene	3.00E-03	mg/L	3.06E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Benzo(k)fluoranthene	6.00E-03	mg/L	3.39E-04	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.47E-05			
				Carbazole	7.00E-03	mg/L	1.74E-05	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	3.47E-07			
				Chrysene	5.00E-03	mg/L	1.66E-04	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	1.21E-06			
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	8.79E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	6.42E-04			
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	1.74E-04	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.27E-04			
				Naphthalene	4.00E-03	mg/L	6.98E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Phenanthrene	1.00E-02	mg/L	7.15E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				alpha-Chlordane	3.00E-05	mg/L	1.63E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Dieldrin	2.40E-05	mg/L	4.37E-08	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	6.99E-07			
				Aroclor-1260	5.40E-04	mg/L	2.67E-04	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.33E-04			
				Aluminum	9.10E+00	mg/L	1.15E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Arsenic	5.80E-02	mg/L	7.36E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.10E-06			
				Barium	8.10E-01	mg/L	1.03E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Cadmium	1.00E-02	mg/L	1.27E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Chromium (VI)	1.10E-01	mg/L	2.79E-06	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	5.58E-05			
				Copper	8.30E-01	mg/L	1.05E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Iron	5.40E+01	mg/L	6.85E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Lead	1.80E+00	mg/L	2.28E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Manganese	8.05E-01	mg/L	1.02E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Nickel	1.00E-01	mg/L	2.54E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Vanadium	1.00E-01	mg/L	1.27E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
				Zinc	5.30E+00	mg/L	4.04E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--			
						Exp. Route Total							3.17E-03	
						Incidental Ingestion	Chloroform	4.50E-04	mg/L	8.01E-09	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	2.48E-10
							Benzo(a)anthracene	4.00E-03	mg/L	7.12E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.20E-08
							Benzo(a)pyrene	4.00E-03	mg/L	7.12E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.20E-07
							Benzo(b)fluoranthene	6.50E-04	mg/L	1.16E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	8.45E-09
		Benzo(g,h,i)perylene	3.00E-03	mg/L	5.34E-08		mg/kg-day	--	(mg/kg-day) ⁻¹	--				
		Benzo(k)fluoranthene	6.00E-03	mg/L	1.07E-07		mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	7.80E-09				

TABLE 7.3.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Carbazole	7.00E-03	mg/L	1.25E-07	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	2.49E-09
				Chrysene	5.00E-03	mg/L	8.90E-08	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	6.50E-10
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	1.78E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.30E-07
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	5.34E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.90E-08
				Naphthalene	4.00E-03	mg/L	7.12E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Phenanthrene	1.00E-02	mg/L	1.78E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				alpha-Chlordane	3.00E-05	mg/L	5.34E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Dieldrin	2.40E-05	mg/L	4.27E-10	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	6.84E-09
				Aroclor-1260	5.40E-04	mg/L	9.62E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.92E-08
				Aluminum	9.10E+00	mg/L	1.62E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	5.80E-02	mg/L	1.03E-06	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.55E-06
				Barium	8.10E-01	mg/L	1.44E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.00E-02	mg/L	1.78E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.10E-01	mg/L	1.96E-06	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	9.79E-07
				Copper	8.30E-01	mg/L	1.48E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	5.40E+01	mg/L	9.62E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	1.80E+00	mg/L	3.21E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	8.05E-01	mg/L	1.43E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Nickel	1.00E-01	mg/L	1.78E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Vanadium	1.00E-01	mg/L	1.78E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	5.30E+00	mg/L	9.44E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--
			Exp. Route Total								3.32E-06
			Exposure Point Total								3.18E-03
			Exposure Medium Total								3.18E-03
Medium Total											3.18E-03
										Total of Receptor Risks Across All Media	3.66E-03

TABLE 7.3.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	

Footnotes:

[a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.

[b] Inputs were applied as follows:

- Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
- Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
- Age 6 - 16 Adult IR/CR and BW; ED = 10; ADAF = 3
- Age 16 - 30 Adult IR/CR and BW; ED = 9; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

On-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	1.12E+01	7.30E-01	6.02E-06	7.30E-01	3.50E-05	1.10E-04	1.44E-09
Benzo(a)pyrene	1.05E+01	7.30E+00	5.68E-05	7.30E+00	3.30E-04	1.10E-03	1.36E-08
Benzo(b)fluoranthene	1.56E+01	7.30E-01	8.38E-06	7.30E-01	4.88E-05	1.10E-04	2.00E-09
Benzo(k)fluoranthene	6.98E+00	7.00E-02	3.61E-07	7.00E-02	2.10E-06	1.10E-04	8.99E-10
Chrysene	1.17E+01	7.30E-03	6.31E-08	7.30E-03	3.67E-07	1.10E-05	1.51E-10
Dibenzo(a,h)anthracene	9.18E-01	7.30E+00	4.95E-06	7.30E+00	2.88E-05	1.20E-03	1.29E-09
Indeno(1,2,3-cd)pyrene	4.83E+00	7.30E-01	2.61E-06	7.30E-01	1.52E-05	1.10E-04	6.22E-10
Chromium (VI)	1.14E+03	2.00E+01	--	5.00E-01	2.45E-03	8.40E-02	1.12E-04

*Cancer Risk using ADAF

On-Site Leachate							
MMOA Chemical	CW (mg/L)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	4.00E-03	7.30E-01	5.81E-04	7.30E-01	3.58E-07	--	--
Benzo(a)pyrene	4.00E-03	7.30E+00	9.96E-03	7.30E+00	3.58E-06	--	--
Benzo(b)fluoranthene	6.50E-04	7.30E-01	1.64E-04	7.30E-01	5.82E-08	--	--
Benzo(k)fluoranthene	6.00E-03	7.00E-02	1.42E-04	7.00E-02	5.15E-08	--	--
Chrysene	5.00E-03	7.30E-03	7.26E-06	7.30E-03	4.48E-09	--	--
Dibenzo(a,h)anthracene	1.00E-03	7.30E+00	3.85E-03	7.30E+00	8.95E-07	--	--
Indeno(1,2,3-cd)pyrene	3.00E-03	7.30E-01	7.59E-04	7.30E-01	2.69E-07	--	--
Chromium (VI)	1.10E-01	2.00E+01	3.35E-04	5.00E-01	6.74E-06	--	--

*Cancer Risk using ADAF

TABLE 7.4.1 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Construction / Utility Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs)	Dermal Absorption	Acenaphthylene	4.18E-01	mg/kg	3.29E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.61E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.11E+01	mg/kg	8.72E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.37E-08	1.22E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.04E+01	mg/kg	8.16E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.95E-07	1.14E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.36E+01	mg/kg	1.07E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.85E-08	1.50E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.72E+00	mg/kg	2.93E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.10E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	4.54E+00	mg/kg	3.58E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.61E-09	5.01E-06	mg/kg-day	--	mg/kg-day	--
				Carbazole	1.36E+00	mg/kg	8.26E-09	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.65E-10	1.16E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	8.31E-01	mg/kg	6.55E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.78E-08	9.17E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	1.84E-01	mg/kg	1.12E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.56E-07	mg/kg-day	1.00E-01	mg/kg-day	1.56E-06
				Di-n-octylphthalate	3.62E-01	mg/kg	2.19E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.07E-07	mg/kg-day	2.00E-02	mg/kg-day	1.54E-05
				Indeno(1,2,3-cd)pyrene	5.21E+00	mg/kg	4.10E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.99E-08	5.74E-06	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	1.37E+01	mg/kg	1.08E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.51E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.69E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	2.72E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.94E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.59E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	1.85E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	6.59E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.56E-01	mg/kg	3.02E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	6.04E-09	4.23E-07	mg/kg-day	5.00E-05	mg/kg-day	8.46E-03
				Aroclor-1260	4.17E+00	mg/kg	3.54E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	7.07E-08	4.95E-06	mg/kg-day	--	mg/kg-day	--
				Antimony	1.64E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.31E+00	mg/kg	1.69E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.54E-08	2.37E-06	mg/kg-day	3.00E-04	mg/kg-day	7.90E-03
				Chromium (VI)	8.77E+02	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-04	mg/kg-day	--
				Cobalt	1.04E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E-02	mg/kg-day	--
				Copper	1.44E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.06E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
Lead	9.18E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Manganese	8.00E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--				
Thallium	1.10E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	6.52E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.80E-04	mg/kg-day	--				
Exp. Route Total										9.20E-07					1.64E-02	
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs)	Incidental Ingestion	Acenaphthylene	4.18E-01	mg/kg	2.56E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.58E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.11E+01	mg/kg	6.78E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.95E-08	9.49E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.04E+01	mg/kg	6.34E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	4.63E-07	8.87E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.36E+01	mg/kg	8.35E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.10E-08	1.17E-05	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.72E+00	mg/kg	2.28E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.19E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	4.54E+00	mg/kg	2.78E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.03E-09	3.89E-06	mg/kg-day	--	mg/kg-day	--
				Carbazole	1.36E+00	mg/kg	8.34E-09	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.67E-10	1.17E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	8.31E-01	mg/kg	5.09E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.71E-08	7.12E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	1.84E-01	mg/kg	1.13E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.58E-07	mg/kg-day	1.00E-01	mg/kg-day	1.58E-06
				Di-n-octylphthalate	3.62E-01	mg/kg	2.22E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.10E-07	mg/kg-day	2.00E-02	mg/kg-day	1.55E-05
				Indeno(1,2,3-cd)pyrene	5.21E+00	mg/kg	3.19E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.33E-08	4.46E-06	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	1.37E+01	mg/kg	8.38E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-05	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.69E-02	mg/kg	1.03E-10	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	1.66E-09	1.45E-08	mg/kg-day	5.00E-05	mg/kg-day	2.90E-04
				Endosulfan II	2.72E-02	mg/kg	1.67E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.33E-08	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.94E-03	mg/kg	5.47E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.66E-09	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.59E-03	mg/kg	5.26E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.36E-09	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	1.85E-02	mg/kg	1.13E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.59E-08	mg/kg-day	--	mg/kg-day	--

**TABLE 7.4.1 CTE
CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX**

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient				
							Value	Units	Value	Units		Value	Units	Value	Units					
Soil	On-Site Subsurface Soil (0-10ft bgs)	On-Site Subsurface Soil (0-10ft bgs)	Incidental Ingestion	gamma-Chlordane	6.59E-03	mg/kg	4.03E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.65E-09	mg/kg-day	--	mg/kg-day	--				
				Aroclor-1254	3.56E-01	mg/kg	2.18E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	4.36E-09	3.05E-07	mg/kg-day	5.00E-05	mg/kg-day	6.10E-03				
				Aroclor-1260	4.17E+00	mg/kg	2.55E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.10E-08	3.57E-06	mg/kg-day	--	mg/kg-day	--				
				Antimony	1.64E+01	mg/kg	1.01E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-05	mg/kg-day	4.00E-04	mg/kg-day	3.52E-02				
				Arsenic	9.31E+00	mg/kg	5.70E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	8.55E-08	7.98E-06	mg/kg-day	3.00E-04	mg/kg-day	2.66E-02				
				Chromium (VI)	8.77E+02	mg/kg	5.37E-06	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	2.68E-06	7.51E-04	mg/kg-day	2.00E-02	mg/kg-day	3.76E-02				
				Cobalt	1.04E+01	mg/kg	6.34E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.88E-06	mg/kg-day	1.00E-02	mg/kg-day	8.88E-04				
				Copper	1.44E+03	mg/kg	8.80E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.23E-03	mg/kg-day	4.00E-02	mg/kg-day	3.08E-02				
				Iron	4.06E+04	mg/kg	2.48E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.48E-02	mg/kg-day	7.00E-01	mg/kg-day	4.97E-02				
				Lead	9.18E+02	mg/kg	5.62E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.87E-04	mg/kg-day	--	mg/kg-day	--				
				Manganese	8.00E+02	mg/kg	4.90E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.86E-04	mg/kg-day	2.40E-02	mg/kg-day	2.86E-02				
				Thallium	1.10E+00	mg/kg	6.73E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.43E-07	mg/kg-day	--	mg/kg-day	--				
				Vanadium	6.52E+01	mg/kg	3.99E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.59E-05	mg/kg-day	7.00E-03	mg/kg-day	7.98E-03				
				Exp. Route Total										3.46E-06						
				Soil	On-Site Subsurface Soil (0-10ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	3.10E-07	mg/m ³	4.42E-10	mg/m ³	--	(μg/m ³) ⁻¹	--	6.19E-08	mg/m ³	--	mg/m ³	--
								Benzo(a)anthracene	8.20E-06	mg/m ³	1.17E-08	mg/m ³	1.10E-04	(μg/m ³) ⁻¹	1.29E-09	1.64E-06	mg/m ³	--	mg/m ³	--
								Benzo(a)pyrene	7.67E-06	mg/m ³	1.10E-08	mg/m ³	1.10E-03	(μg/m ³) ⁻¹	1.20E-08	1.53E-06	mg/m ³	--	mg/m ³	--
	Benzo(b)fluoranthene	1.01E-05	mg/m ³					1.44E-08	mg/m ³	1.10E-04	(μg/m ³) ⁻¹	1.59E-09	2.02E-06	mg/m ³	--	mg/m ³	--			
	Benzo(g,h,i)perylene	2.75E-06	mg/m ³					3.94E-09	mg/m ³	--	(μg/m ³) ⁻¹	--	5.51E-07	mg/m ³	--	mg/m ³	--			
	Benzo(k)fluoranthene	3.36E-06	mg/m ³					4.81E-09	mg/m ³	1.10E-04	(μg/m ³) ⁻¹	5.29E-10	6.73E-07	mg/m ³	--	mg/m ³	--			
	Carbazole	1.01E-06	mg/m ³					1.44E-09	mg/m ³	--	(μg/m ³) ⁻¹	--	2.02E-07	mg/m ³	--	mg/m ³	--			
	Dibenzo(a,h)anthracene	6.16E-07	mg/m ³					8.79E-10	mg/m ³	1.20E-03	(μg/m ³) ⁻¹	1.06E-09	1.23E-07	mg/m ³	--	mg/m ³	--			
	Dimethylphthalate	1.36E-07	mg/m ³					1.95E-10	mg/m ³	--	(μg/m ³) ⁻¹	--	2.73E-08	mg/m ³	--	mg/m ³	--			
	Di-n-octylphthalate	2.68E-07	mg/m ³					3.83E-10	mg/m ³	--	(μg/m ³) ⁻¹	--	5.36E-08	mg/m ³	--	mg/m ³	--			
	Indeno(1,2,3-cd)pyrene	3.86E-06	mg/m ³					5.51E-09	mg/m ³	1.10E-04	(μg/m ³) ⁻¹	6.06E-10	7.71E-07	mg/m ³	--	mg/m ³	--			
	Phenanthrene	1.01E-05	mg/m ³					1.45E-08	mg/m ³	--	(μg/m ³) ⁻¹	--	2.03E-06	mg/m ³	--	mg/m ³	--			
	Dieldrin	1.25E-08	mg/m ³					1.79E-11	mg/m ³	4.60E-03	(μg/m ³) ⁻¹	8.23E-11	2.50E-09	mg/m ³	--	mg/m ³	--			
	Endosulfan II	2.01E-08	mg/m ³					2.88E-11	mg/m ³	--	(μg/m ³) ⁻¹	--	4.03E-09	mg/m ³	--	mg/m ³	--			
	Endosulfan sulfate	6.62E-09	mg/m ³					9.46E-12	mg/m ³	--	(μg/m ³) ⁻¹	--	1.32E-09	mg/m ³	--	mg/m ³	--			
	Endrin aldehyde	6.36E-09	mg/m ³	9.09E-12	mg/m ³	--	(μg/m ³) ⁻¹	--	1.27E-09	mg/m ³	--	mg/m ³	--							
	Endrin ketone	1.37E-08	mg/m ³	1.96E-11	mg/m ³	--	(μg/m ³) ⁻¹	--	2.74E-09	mg/m ³	--	mg/m ³	--							
	Exp. Route Total										7.81E-05									
Exposure Point Total										8.25E-05										
Exposure Medium Total										8.25E-05										
Medium Total										8.25E-05										
Groundwater	Groundwater	Shallow Groundwater in Excavations 10ft bgs	Dermal Absorption	Chloroform	4.50E-04	mg/L	3.90E-11	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	1.21E-12	5.46E-09	mg/kg-day	1.00E-02	mg/kg-day	5.46E-07				
				Tetrachloroethene	5.30E-04	mg/L	3.01E-10	mg/kg-day	5.40E-01	(mg/kg-day) ⁻¹	1.62E-10	4.21E-08	mg/kg-day	1.00E-02	mg/kg-day	4.21E-06				
				Benzo(a)anthracene	4.00E-03	mg/L	4.83E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.53E-08	6.76E-06	mg/kg-day	--	mg/kg-day	--				
				Benzo(a)pyrene	4.00E-03	mg/L	8.28E-08	mg/kg-day	7.30E-00	(mg/kg-day) ⁻¹	6.04E-07	1.16E-05	mg/kg-day	--	mg/kg-day	--				
Exp. Route Total										9.97E-09										
Exposure Point Total										9.97E-09										
Exposure Medium Total										9.97E-09										
Medium Total										9.97E-09										

TABLE 7.4.1 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations					
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient		
							Value	Units	Value	Units		Value	Units	Value	Units			
Groundwater	Groundwater	Shallow Groundwater in Excavations 10ft bgs	Dermal Absorption	Benzo(g,h,i)perylene	3.00E-03	mg/L	1.11E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.56E-05	mg/kg-day	--	mg/kg-day	--		
				Benzo(k)fluoranthene	6.00E-03	mg/L	1.23E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	8.99E-09	1.73E-05	mg/kg-day	--	mg/kg-day	--		
				Carbazole	7.00E-03	mg/L	6.31E-09	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	1.26E-10	8.83E-07	mg/kg-day	--	mg/kg-day	--		
				Chrysene	5.00E-03	mg/L	6.04E-08	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	4.41E-10	8.45E-06	mg/kg-day	--	mg/kg-day	--		
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	3.20E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.33E-07	4.48E-06	mg/kg-day	--	mg/kg-day	--		
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	6.31E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.61E-08	8.83E-06	mg/kg-day	--	mg/kg-day	--		
				Naphthalene	4.00E-03	mg/L	2.54E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.55E-07	mg/kg-day	6.00E-01	mg/kg-day	5.92E-07		
				Phenanthrene	1.00E-02	mg/L	2.60E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.64E-06	mg/kg-day	--	mg/kg-day	--		
				Dieldrin	2.40E-05	mg/L	1.59E-11	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	2.54E-10	2.22E-09	mg/kg-day	5.00E-05	mg/kg-day	4.45E-05		
				Endosulfan I	4.20E-04	mg/L	9.50E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.33E-08	mg/kg-day	--	mg/kg-day	--		
				Endrin aldehyde	7.30E-05	mg/L	8.55E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.20E-08	mg/kg-day	--	mg/kg-day	--		
				Aroclor-1260	5.40E-04	mg/L	9.69E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.94E-07	1.36E-05	mg/kg-day	--	mg/kg-day	--		
				Aluminum	2.61E+02	mg/L	1.20E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.69E-04	mg/kg-day	1.00E+00	mg/kg-day	1.69E-04		
				Antimony	4.66E-02	mg/L	2.15E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.01E-08	mg/kg-day	6.00E-05	mg/kg-day	5.02E-04		
				Arsenic	1.77E-01	mg/L	8.17E-10	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.23E-09	1.14E-07	mg/kg-day	3.00E-04	mg/kg-day	3.81E-04		
				Barium	2.67E+00	mg/L	1.23E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.72E-06	mg/kg-day	4.90E-03	mg/kg-day	3.52E-04		
				Beryllium	1.74E-02	mg/L	8.00E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.12E-08	mg/kg-day	3.50E-05	mg/kg-day	3.20E-04		
				Cadmium	2.07E-02	mg/L	9.56E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.34E-08	mg/kg-day	2.50E-05	mg/kg-day	5.35E-04		
				Chromium (VI)	2.11E+00	mg/L	1.94E-08	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	3.88E-07	2.72E-06	mg/kg-day	5.00E-04	mg/kg-day	5.44E-03		
				Cobalt	2.37E-01	mg/L	4.37E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.12E-08	mg/kg-day	1.00E-02	mg/kg-day	6.12E-06		
				Copper	1.07E+00	mg/L	4.95E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.93E-07	mg/kg-day	4.00E-02	mg/kg-day	1.73E-05		
				Lead	4.07E-01	mg/L	1.88E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.63E-08	mg/kg-day	--	mg/kg-day	--		
				Manganese	3.86E+01	mg/L	1.78E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.49E-05	mg/kg-day	9.60E-04	mg/kg-day	2.60E-02		
				Mercury	9.25E-04	mg/L	4.27E-12	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.97E-10	mg/kg-day	3.00E-03	mg/kg-day	1.99E-07		
				Nickel	8.60E-01	mg/L	7.93E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.11E-07	mg/kg-day	8.00E-04	mg/kg-day	1.39E-04		
				Silver	4.23E-02	mg/L	1.17E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.64E-08	mg/kg-day	2.00E-04	mg/kg-day	8.19E-05		
				Vanadium	2.76E-01	mg/L	1.27E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.78E-07	mg/kg-day	1.80E-04	mg/kg-day	9.90E-04		
				Zinc	3.77E+00	mg/L	1.04E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.46E-06	mg/kg-day	3.00E-01	mg/kg-day	4.86E-06		
								Exp. Route Total							1.52E-06			3.50E-02
								Exposure Point Total							1.52E-06			3.50E-02
								Exposure Medium Total							1.52E-06			3.50E-02
								Medium Total							1.52E-06			3.50E-02
										Total of Receptor Risks Across All Media	8.40E-05	Total of Receptor Hazards Across All Media		3.43E+00				

TABLE 7.5.1 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Commercial / Industrial Worker
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Dermal Absorption	Acenaphthylene	5.13E-01	mg/kg	1.78E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.89E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	3.87E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.82E-08	4.10E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	3.65E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.67E-07	3.87E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	5.39E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.94E-08	5.72E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	1.22E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.30E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	2.42E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	1.77E-09	2.57E-07	mg/kg-day	--	mg/kg-day	--
				Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	2.61E-08	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	3.66E-10	2.77E-07	mg/kg-day	2.00E-02	mg/kg-day	1.39E-05
				Carbazole	1.03E+00	mg/kg	2.74E-09	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	5.48E-11	2.90E-08	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	4.06E-08	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	2.96E-10	4.30E-07	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	3.18E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.32E-08	3.38E-08	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	2.45E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.60E-08	mg/kg-day	1.00E-01	mg/kg-day	2.60E-07
				Di-n-octylphthalate	4.01E-01	mg/kg	1.07E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.13E-08	mg/kg-day	2.00E-02	mg/kg-day	5.67E-07
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	1.68E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.22E-08	1.78E-07	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	1.70E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.80E-08	mg/kg-day	2.00E-02	mg/kg-day	9.01E-07
				Phenanthrene	1.00E+01	mg/kg	3.47E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.68E-07	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	--	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	5.00E-05	mg/kg-day	--
				Endosulfan II	3.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	1.35E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	2.70E-09	1.43E-08	mg/kg-day	2.00E-05	mg/kg-day	7.17E-04
				Aroclor-1260	4.51E+00	mg/kg	1.68E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.36E-08	1.78E-07	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	1.92E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	9.04E+00	mg/kg	7.23E-09	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.08E-08	7.67E-08	mg/kg-day	3.00E-04	mg/kg-day	2.56E-04
				Barium	4.17E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	4.34E+00	mg/kg	1.16E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.23E-09	mg/kg-day	2.50E-05	mg/kg-day	4.90E-05
				Chromium (VI)	1.14E+03	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	1.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.09E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	4.42E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	1.10E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Manganese	7.47E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--
				Mercury	5.38E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
Nickel	8.46E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.20E-03	mg/kg-day	--				
Silver	5.65E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	2.00E-04	mg/kg-day	--				
Thallium	1.12E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.30E-04	mg/kg-day	--				
Zinc	1.36E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--				
Exp. Route Total										4.19E-07					1.04E-03	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Acenaphthylene	5.13E-01	mg/kg	2.07E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.20E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.12E+01	mg/kg	4.51E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	3.29E-07	4.78E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.05E+01	mg/kg	4.25E-07	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.11E-06	4.51E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	1.56E+01	mg/kg	6.28E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.59E-07	6.66E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	3.53E+00	mg/kg	1.43E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.51E-06	mg/kg-day	--	mg/kg-day	--
				Benzo(k)fluoranthene	6.98E+00	mg/kg	2.82E-07	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.06E-08	2.99E-06	mg/kg-day	--	mg/kg-day	--
Bis(2-ethylhexyl)phthalate	9.79E+00	mg/kg	3.96E-07	mg/kg-day	1.40E-02	(mg/kg-day) ⁻¹	5.54E-09	4.20E-06	mg/kg-day	2.00E-02	mg/kg-day	2.10E-04				

TABLE 7.5.1 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs)	Incidental Ingestion	Carbazole	1.03E+00	mg/kg	4.15E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	8.30E-10	4.40E-07	mg/kg-day	--	mg/kg-day	--
				Chrysene	1.17E+01	mg/kg	4.73E-07	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	3.45E-09	5.01E-06	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	9.18E-01	mg/kg	3.71E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	2.71E-07	3.93E-07	mg/kg-day	--	mg/kg-day	--
				Dimethylphthalate	9.18E-01	mg/kg	3.71E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.93E-07	mg/kg-day	1.00E-01	mg/kg-day	3.93E-06
				Di-n-octylphthalate	4.01E-01	mg/kg	1.62E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.72E-07	mg/kg-day	2.00E-02	mg/kg-day	8.59E-06
				Indeno(1,2,3-cd)pyrene	4.83E+00	mg/kg	1.95E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.43E-07	2.07E-06	mg/kg-day	--	mg/kg-day	--
				Naphthalene	6.37E-01	mg/kg	2.57E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.73E-07	mg/kg-day	2.00E-02	mg/kg-day	1.37E-05
				Phenanthrene	1.00E+01	mg/kg	4.04E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.29E-06	mg/kg-day	--	mg/kg-day	--
				Dieldrin	1.20E-02	mg/kg	4.85E-10	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	7.76E-09	5.14E-09	mg/kg-day	5.00E-05	mg/kg-day	1.03E-04
				Endosulfan II	3.43E-02	mg/kg	1.39E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.47E-08	mg/kg-day	--	mg/kg-day	--
				Endosulfan sulfate	8.28E-03	mg/kg	3.35E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.55E-09	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	8.43E-03	mg/kg	3.41E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.61E-09	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	2.52E-02	mg/kg	1.02E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.08E-08	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	4.62E-03	mg/kg	1.87E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.98E-09	mg/kg-day	--	mg/kg-day	--
				Aroclor-1254	3.62E-01	mg/kg	1.46E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	2.93E-08	1.55E-07	mg/kg-day	2.00E-05	mg/kg-day	7.76E-03
				Aroclor-1260	4.51E+00	mg/kg	1.82E-07	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	3.64E-07	1.93E-06	mg/kg-day	--	mg/kg-day	--
				Aluminum	1.05E+04	mg/kg	4.23E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.49E-03	mg/kg-day	1.00E+00	mg/kg-day	4.49E-03
				Antimony	1.92E+01	mg/kg	7.75E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.22E-06	mg/kg-day	4.00E-04	mg/kg-day	2.06E-02
				Arsenic	9.04E+00	mg/kg	3.65E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	5.48E-07	3.87E-06	mg/kg-day	3.00E-04	mg/kg-day	1.29E-02
				Barium	4.17E+02	mg/kg	1.69E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.79E-04	mg/kg-day	2.00E-01	mg/kg-day	8.94E-04
				Cadmium	4.34E+00	mg/kg	1.75E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.86E-06	mg/kg-day	5.00E-04	mg/kg-day	3.72E-03
				Chromium (VI)	1.14E+03	mg/kg	4.61E-05	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	2.31E-05	4.89E-04	mg/kg-day	3.00E-03	mg/kg-day	1.63E-01
				Cobalt	1.01E+01	mg/kg	4.09E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.34E-06	mg/kg-day	3.00E-04	mg/kg-day	1.45E-02
				Copper	1.09E+03	mg/kg	4.42E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.68E-04	mg/kg-day	4.00E-02	mg/kg-day	1.17E-02
				Iron	4.42E+04	mg/kg	1.79E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.89E-02	mg/kg-day	7.00E-01	mg/kg-day	2.71E-02
				Lead	1.10E+03	mg/kg	4.44E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.71E-04	mg/kg-day	--	mg/kg-day	--
				Manganese	7.47E+02	mg/kg	3.02E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.20E-04	mg/kg-day	2.40E-02	mg/kg-day	1.33E-02
				Mercury	5.38E-01	mg/kg	2.17E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.31E-07	mg/kg-day	3.00E-04	mg/kg-day	7.69E-04
				Nickel	8.46E+01	mg/kg	3.42E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.62E-05	mg/kg-day	3.00E-02	mg/kg-day	1.21E-03
				Silver	5.65E+00	mg/kg	2.28E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.42E-06	mg/kg-day	5.00E-03	mg/kg-day	4.84E-04
Thallium	1.12E+00	mg/kg	4.51E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.79E-07	mg/kg-day	--	mg/kg-day	--				
Vanadium	7.01E+01	mg/kg	2.83E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.00E-05	mg/kg-day	5.00E-03	mg/kg-day	6.01E-03				
Zinc	1.36E+03	mg/kg	5.50E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.83E-04	mg/kg-day	3.00E-01	mg/kg-day	1.94E-03				
Exp. Route Total										2.84E-05			2.91E-01			
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Acenaphthylene	6.17E-10	mg/m ³	1.16E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.23E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	1.34E-08	mg/m ³	2.53E-10	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.79E-11	2.69E-09	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.27E-08	mg/m ³	2.39E-10	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	2.63E-10	2.53E-09	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	1.87E-08	mg/m ³	3.53E-10	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	3.88E-11	3.74E-09	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	4.25E-09	mg/m ³	8.02E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	8.50E-10	mg/m ³	--	mg/m ³	--
				Benzo(k)fluoranthene	8.40E-09	mg/m ³	1.58E-10	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.74E-11	1.68E-09	mg/m ³	--	mg/m ³	--
				Bis(2-ethylhexyl)phthalate	1.18E-08	mg/m ³	2.22E-10	mg/m ³	2.40E-06	(µg/m ³) ⁻¹	5.33E-13	2.36E-09	mg/m ³	--	mg/m ³	--
				Carbazole	1.24E-09	mg/m ³	2.33E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	2.47E-10	mg/m ³	--	mg/m ³	--
				Chrysene	1.41E-08	mg/m ³	2.65E-10	mg/m ³	1.10E-05	(µg/m ³) ⁻¹	2.92E-12	2.82E-09	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	1.10E-09	mg/m ³	2.08E-11	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	2.50E-11	2.21E-10	mg/m ³	--	mg/m ³	--
				Dimethylphthalate	1.10E-09	mg/m ³	2.08E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	2.21E-10	mg/m ³	--	mg/m ³	--
				Di-n-octylphthalate	4.83E-10	mg/m ³	9.10E-12	mg/m ³	--	(µg/m ³) ⁻¹	--	9.65E-11	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	5.81E-09	mg/m ³	1.10E-10	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.21E-11	1.16E-09	mg/m ³	--	mg/m ³	--
				Naphthalene	7.67E-10	mg/m ³	1.45E-11	mg/m ³	3.40E-05	(µg/m ³) ⁻¹	4.91E-13	1.53E-10	mg/m ³	3.00E-03	mg/m ³	5.11E-08
				Phenanthrene	1.20E-08	mg/m ³	2.27E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	2.41E-09	mg/m ³	--	mg/m ³	--
				Dieldrin	1.44E-11	mg/m ³	2.72E-13	mg/m ³	4.60E-03	(µg/m ³) ⁻¹	1.25E-12	2.89E-12	mg/m ³	--	mg/m ³	--
				Endosulfan II	4.13E-11	mg/m ³	7.78E-13	mg/m ³	--	(µg/m ³) ⁻¹	--	8.26E-12	mg/m ³	--	mg/m ³	--
				Endosulfan sulfate	9.96E-12	mg/m ³	1.88E-13	mg/m ³	--	(µg/m ³) ⁻¹	--	1.99E-12	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	1.01E-11	mg/m ³	1.91E-13	mg/m ³	--	(µg/m ³) ⁻¹	--	2.03E-12	mg/m ³	--	mg/m ³	--

TABLE 7.5.1 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient			
							Value	Units	Value	Units		Value	Units	Value	Units				
Soil	On-Site Surface Soil (0 to 2ft bgs)	Ambient Air	Inhalation (Fugitive Dust)	Endrin ketone	3.03E-11	mg/m ³	5.72E-13	mg/m ³	--	(µg/m ³) ⁻¹	--	6.06E-12	mg/m ³	--	mg/m ³	--			
				gamma-Chlordane	5.56E-12	mg/m ³	1.05E-13	mg/m ³	--	(µg/m ³) ⁻¹	--	1.11E-12	mg/m ³	--	mg/m ³	--			
				Aroclor-1254	4.36E-10	mg/m ³	8.21E-12	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	4.68E-12	8.71E-11	mg/m ³	--	mg/m ³	--			
				Aroclor-1260	5.42E-09	mg/m ³	1.02E-10	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	5.83E-11	1.08E-09	mg/m ³	--	mg/m ³	--			
				Aluminum	1.26E-05	mg/m ³	2.38E-07	mg/m ³	--	(µg/m ³) ⁻¹	--	2.52E-06	mg/m ³	5.00E-03	mg/m ³	5.04E-04			
				Antimony	2.31E-08	mg/m ³	4.35E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	4.62E-09	mg/m ³	--	mg/m ³	--			
				Arsenic	1.09E-08	mg/m ³	2.05E-10	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	8.82E-10	2.18E-09	mg/m ³	1.50E-05	mg/m ³	1.45E-04			
				Barium	5.02E-07	mg/m ³	9.47E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	1.00E-07	mg/m ³	5.00E-04	mg/m ³	2.01E-04			
				Cadmium	5.22E-09	mg/m ³	9.84E-11	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	1.77E-10	1.04E-09	mg/m ³	1.00E-05	mg/m ³	1.04E-04			
				Chromium (VI)	1.37E-06	mg/m ³	2.59E-08	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	2.18E-06	2.75E-07	mg/m ³	1.00E-04	mg/m ³	2.75E-03			
				Cobalt	1.22E-08	mg/m ³	2.30E-10	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	2.07E-09	2.44E-09	mg/m ³	6.00E-06	mg/m ³	4.06E-04			
				Copper	1.32E-06	mg/m ³	2.48E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	2.63E-07	mg/m ³	--	mg/m ³	--			
				Iron	5.32E-05	mg/m ³	1.00E-06	mg/m ³	--	(µg/m ³) ⁻¹	--	1.06E-05	mg/m ³	--	mg/m ³	--			
				Lead	1.32E-06	mg/m ³	2.50E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	2.65E-07	mg/m ³	--	mg/m ³	--			
				Manganese	8.99E-07	mg/m ³	1.70E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	1.80E-07	mg/m ³	5.00E-05	mg/m ³	3.60E-03			
				Mercury	6.47E-10	mg/m ³	1.22E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	1.29E-10	mg/m ³	3.00E-04	mg/m ³	4.32E-07			
				Nickel	1.02E-07	mg/m ³	1.92E-09	mg/m ³	2.60E-04	(µg/m ³) ⁻¹	4.99E-10	2.04E-08	mg/m ³	9.00E-05	mg/m ³	2.26E-04			
				Silver	6.80E-09	mg/m ³	1.28E-10	mg/m ³	--	(µg/m ³) ⁻¹	--	1.36E-09	mg/m ³	--	mg/m ³	--			
				Thallium	1.34E-09	mg/m ³	2.53E-11	mg/m ³	--	(µg/m ³) ⁻¹	--	2.69E-10	mg/m ³	--	mg/m ³	--			
				Vanadium	8.43E-08	mg/m ³	1.59E-09	mg/m ³	--	(µg/m ³) ⁻¹	--	1.69E-08	mg/m ³	--	mg/m ³	--			
				Zinc	1.64E-06	mg/m ³	3.09E-08	mg/m ³	--	(µg/m ³) ⁻¹	--	3.28E-07	mg/m ³	--	mg/m ³	--			
							Exp. Route Total							2.18E-06			7.93E-03		
							Exposure Point Total								3.10E-05			3.00E-01	
							Exposure Medium Total								3.10E-05			3.00E-01	
Medium Total											3.10E-05			3.00E-01					
Leachate	Leachate	On-Site Leachate Areas	Dermal Absorption	Chloroform	4.50E-04	mg/L	1.13E-08	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	3.50E-10	1.20E-07	mg/kg-day	1.00E-02	mg/kg-day	1.20E-05			
				Benzo(a)anthracene	4.00E-03	mg/L	1.40E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.02E-05	1.48E-04	mg/kg-day	--	mg/kg-day	--			
				Benzo(a)pyrene	4.00E-03	mg/L	2.39E-05	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.75E-04	2.54E-04	mg/kg-day	--	mg/kg-day	--			
				Benzo(b)fluoranthene	6.50E-04	mg/L	3.95E-06	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.88E-06	4.19E-05	mg/kg-day	--	mg/kg-day	--			
				Benzo(g,h,i)perylene	3.00E-03	mg/L	3.22E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.42E-04	mg/kg-day	--	mg/kg-day	--			
				Benzo(k)fluoranthene	6.00E-03	mg/L	3.56E-05	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	2.60E-06	3.78E-04	mg/kg-day	--	mg/kg-day	--			
				Carbazole	7.00E-03	mg/L	1.82E-06	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	3.65E-08	1.93E-05	mg/kg-day	--	mg/kg-day	--			
				Chrysene	5.00E-03	mg/L	1.75E-05	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	1.27E-07	1.85E-04	mg/kg-day	--	mg/kg-day	--			
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	9.24E-06	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	6.75E-05	9.80E-05	mg/kg-day	--	mg/kg-day	--			
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	1.82E-05	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.33E-05	1.93E-04	mg/kg-day	--	mg/kg-day	--			
				Naphthalene	4.00E-03	mg/L	7.33E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.78E-06	mg/kg-day	2.00E-02	mg/kg-day	3.89E-04			
				Phenanthrene	1.00E-02	mg/L	7.51E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.97E-05	mg/kg-day	--	mg/kg-day	--			
				alpha-Chlordane	3.00E-05	mg/L	1.72E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.82E-07	mg/kg-day	--	mg/kg-day	--			
				Dieldrin	2.40E-05	mg/L	4.59E-09	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	7.35E-08	4.87E-08	mg/kg-day	5.00E-05	mg/kg-day	9.74E-04			
				Aroclor-1260	5.40E-04	mg/L	2.80E-05	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	5.60E-05	2.97E-04	mg/kg-day	--	mg/kg-day	--			
				Aluminum	9.10E+00	mg/L	1.21E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.29E-04	mg/kg-day	1.00E+00	mg/kg-day	1.29E-04			
				Arsenic	5.80E-02	mg/L	7.73E-08	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.16E-07	8.20E-07	mg/kg-day	3.00E-04	mg/kg-day	2.73E-03			
				Barium	8.10E-01	mg/L	1.08E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.15E-05	mg/kg-day	1.40E-02	mg/kg-day	8.18E-04			
				Cadmium	1.00E-02	mg/L	1.33E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-07	mg/kg-day	2.50E-05	mg/kg-day	5.66E-03			
				Chromium (VI)	1.10E-01	mg/L	2.93E-07	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	5.87E-06	3.11E-06	mg/kg-day	7.50E-05	mg/kg-day	4.15E-02			
				Copper	8.30E-01	mg/L	1.11E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-05	mg/kg-day	4.00E-02	mg/kg-day	2.93E-04			
				Iron	5.40E+01	mg/L	7.20E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.64E-04	mg/kg-day	7.00E-01	mg/kg-day	1.09E-03			
				Lead	1.80E+00	mg/L	2.40E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.55E-06	mg/kg-day	--	mg/kg-day	--			
Manganese	8.05E-01	mg/L	1.07E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.14E-05	mg/kg-day	9.60E-04	mg/kg-day	1.19E-02							
Nickel	1.00E-01	mg/L	2.67E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.83E-07	mg/kg-day	1.20E-03	mg/kg-day	2.36E-04							
Vanadium	1.00E-01	mg/L	1.33E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.41E-06	mg/kg-day	1.30E-04	mg/kg-day	1.09E-02							
Zinc	5.30E+00	mg/L	4.24E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.50E-05	mg/kg-day	3.00E-01	mg/kg-day	1.50E-04							
			Exp. Route Total							3.33E-04			7.67E-02						

TABLE 7.5.1 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient	
							Value	Units	Value	Units		Value	Units	Value	Units		
Leachate	Leachate	On-Site Leachate Areas	Incidental Ingestion	Chloroform	4.50E-04	mg/L	9.09E-10	mg/kg-day	3.10E-02	(mg/kg-day) ⁻¹	2.82E-11	9.64E-09	mg/kg-day	1.00E-02	mg/kg-day	9.64E-07	
				Benzo(a)anthracene	4.00E-03	mg/L	8.08E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	5.90E-09	8.57E-08	mg/kg-day	--	mg/kg-day	--	
				Benzo(a)pyrene	4.00E-03	mg/L	8.08E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.90E-08	8.57E-08	mg/kg-day	--	mg/kg-day	--	
				Benzo(b)fluoranthene	6.50E-04	mg/L	1.31E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	9.59E-10	1.39E-08	mg/kg-day	--	mg/kg-day	--	
				Benzo(g,h,i)perylene	3.00E-03	mg/L	6.06E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.43E-08	mg/kg-day	--	mg/kg-day	--	
				Benzo(k)fluoranthene	6.00E-03	mg/L	1.21E-08	mg/kg-day	7.30E-02	(mg/kg-day) ⁻¹	8.85E-10	1.29E-07	mg/kg-day	--	mg/kg-day	--	
				Carbazole	7.00E-03	mg/L	1.41E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	2.83E-10	1.50E-07	mg/kg-day	--	mg/kg-day	--	
				Chrysene	5.00E-03	mg/L	1.01E-08	mg/kg-day	7.30E-03	(mg/kg-day) ⁻¹	7.37E-11	1.07E-07	mg/kg-day	--	mg/kg-day	--	
				Dibenzo(a,h)anthracene	1.00E-03	mg/L	2.02E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.47E-08	2.14E-08	mg/kg-day	--	mg/kg-day	--	
				Indeno(1,2,3-cd)pyrene	3.00E-03	mg/L	6.06E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.42E-09	6.43E-08	mg/kg-day	--	mg/kg-day	--	
				Naphthalene	4.00E-03	mg/L	8.08E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.57E-08	mg/kg-day	2.00E-02	mg/kg-day	4.29E-06	
				Phenanthrene	1.00E-02	mg/L	2.02E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.14E-07	mg/kg-day	--	mg/kg-day	--	
				alpha-Chlordane	3.00E-05	mg/L	6.06E-11	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.43E-10	mg/kg-day	--	mg/kg-day	--	
				Dieldrin	2.40E-05	mg/L	4.85E-11	mg/kg-day	1.60E+01	(mg/kg-day) ⁻¹	7.76E-10	5.14E-10	mg/kg-day	5.00E-05	mg/kg-day	1.03E-05	
				Aroclor-1260	5.40E-04	mg/L	1.09E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	2.18E-09	1.16E-08	mg/kg-day	--	mg/kg-day	--	
				Aluminum	9.10E+00	mg/L	1.84E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.95E-04	mg/kg-day	1.00E+00	mg/kg-day	1.95E-04	
				Arsenic	5.80E-02	mg/L	1.17E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	1.76E-07	1.24E-06	mg/kg-day	3.00E-04	mg/kg-day	4.14E-03	
				Barium	8.10E-01	mg/L	1.64E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.74E-05	mg/kg-day	2.00E-01	mg/kg-day	8.68E-05	
				Cadmium	1.00E-02	mg/L	2.02E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.14E-07	mg/kg-day	5.00E-04	mg/kg-day	4.29E-04	
				Chromium (VI)	1.10E-01	mg/L	2.22E-07	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	1.11E-07	2.36E-06	mg/kg-day	3.00E-03	mg/kg-day	7.86E-04	
				Copper	8.30E-01	mg/L	1.68E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.78E-05	mg/kg-day	4.00E-02	mg/kg-day	4.45E-04	
				Iron	5.40E+01	mg/L	1.09E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.16E-03	mg/kg-day	7.00E-01	mg/kg-day	1.65E-03	
				Lead	1.80E+00	mg/L	3.64E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.86E-05	mg/kg-day	--	mg/kg-day	--	
				Manganese	8.05E-01	mg/L	1.63E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.73E-05	mg/kg-day	2.40E-02	mg/kg-day	7.19E-04	
				Nickel	1.00E-01	mg/L	2.02E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.14E-06	mg/kg-day	3.00E-02	mg/kg-day	7.14E-05	
				Vanadium	1.00E-01	mg/L	2.02E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.14E-06	mg/kg-day	5.00E-03	mg/kg-day	4.29E-04	
				Zinc	5.30E+00	mg/L	1.07E-05	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.14E-04	mg/kg-day	3.00E-01	mg/kg-day	3.79E-04	
Exp. Route Total										3.76E-07					9.35E-03		
Exposure Point Total										3.34E-04						8.61E-02	
Exposure Medium Total										3.34E-04						8.61E-02	
Medium Total										3.34E-04						8.61E-02	
Total of Receptor Risks Across All Media										3.65E-04	Total of Receptor Hazards Across All Media				3.86E-01		

Table 7.6.1.CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Resident (off site)
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface soil (0-2 ft)	Residences A-1 (0-2 ft, off-site)	Dermal Absorption	Acenaphthylene	5.30E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.38E-09	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.69E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.72E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.53E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.55E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	4.04E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.10E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	8.75E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.88E-09	mg/kg-day	--	mg/kg-day	--
				Carbazole	6.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.02E-09	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	7.89E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.01E-09	mg/kg-day	--	mg/kg-day	--
				Indeno(1,2,3-cd)pyrene	9.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.85E-09	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	1.41E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.43E-08	mg/kg-day	--	mg/kg-day	--
				delta-BHC	3.60E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endosulfan II	1.23E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	4.73E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	3.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	1.83E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Aroclor-1260	8.32E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.10E-09	mg/kg-day	--	mg/kg-day	--
				Aluminum	6.55E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--
				Antimony	5.49E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--
				Arsenic	6.69E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.57E-07	mg/kg-day	3.00E-04	mg/kg-day	5.22E-04
				Barium	5.36E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--
				Cadmium	1.39E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.08E-09	mg/kg-day	2.50E-05	mg/kg-day	4.33E-05
				Chromium (VI)	1.29E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--
				Cobalt	6.43E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Copper	1.63E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--
				Iron	1.87E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--
				Lead	5.97E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--
				Manganese	5.83E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--
				Mercury	2.64E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--
				Zinc	1.57E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--
				Exp. Route Total												
Soil	Surface soil (0-2 ft)	Residences A-1 (0-2 ft, off-site)	Incidental Ingestion	Acenaphthylene	5.30E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.63E-08	mg/kg-day	--	mg/kg-day	--
				Benzo(a)anthracene	1.69E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.16E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(a)pyrene	1.53E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.05E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(b)fluoranthene	4.04E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.77E-07	mg/kg-day	--	mg/kg-day	--
				Benzo(g,h,i)perylene	8.75E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.99E-08	mg/kg-day	--	mg/kg-day	--
				Carbazole	6.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.40E-08	mg/kg-day	--	mg/kg-day	--
				Dibenzo(a,h)anthracene	7.89E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.40E-08	mg/kg-day	--	mg/kg-day	--
				Indeno(1,2,3-cd)pyrene	9.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.64E-08	mg/kg-day	--	mg/kg-day	--
				Phenanthrene	1.41E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.66E-08	mg/kg-day	--	mg/kg-day	--
				delta-BHC	3.60E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.47E-09	mg/kg-day	--	mg/kg-day	--
				Endosulfan II	1.23E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.42E-10	mg/kg-day	--	mg/kg-day	--
				Endrin aldehyde	4.73E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.24E-09	mg/kg-day	--	mg/kg-day	--
				Endrin ketone	3.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.48E-09	mg/kg-day	--	mg/kg-day	--
				gamma-Chlordane	1.83E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.25E-09	mg/kg-day	--	mg/kg-day	--
				Aroclor-1260	8.32E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.70E-08	mg/kg-day	--	mg/kg-day	--
				Aluminum	6.55E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.49E-03	mg/kg-day	1.00E+00	mg/kg-day	4.49E-03
				Antimony	5.49E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.76E-04	mg/kg-day	4.00E-04	mg/kg-day	9.40E-01
				Arsenic	6.69E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.58E-06	mg/kg-day	3.00E-04	mg/kg-day	1.53E-02
				Barium	5.36E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.67E-04	mg/kg-day	2.00E-01	mg/kg-day	1.83E-03
				Cadmium	1.39E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.49E-07	mg/kg-day	5.00E-04	mg/kg-day	1.90E-03
				Chromium (VI)	1.29E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.83E-06	mg/kg-day	3.00E-03	mg/kg-day	2.94E-03

Table 7.6.1.CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations						Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient	
							Value	Units	Value	Units		Value	Units	Value	Units		
Soil	Surface soil (0-2 ft)	Residences A-1 (0-2 ft, off-site)	Incidental Ingestion	Cobalt	6.43E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.40E-06	mg/kg-day	3.00E-04	mg/kg-day	1.47E-02	
				Copper	1.63E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.11E-04	mg/kg-day	4.00E-02	mg/kg-day	2.78E-03	
				Iron	1.87E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.28E-02	mg/kg-day	7.00E-01	mg/kg-day	1.83E-02	
				Lead	5.97E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.09E-03	mg/kg-day	--	mg/kg-day	--	
				Manganese	5.83E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.99E-04	mg/kg-day	2.40E-02	mg/kg-day	1.66E-02	
				Mercury	2.64E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.81E-07	mg/kg-day	3.00E-04	mg/kg-day	6.03E-04	
				Zinc	1.57E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.08E-03	mg/kg-day	3.00E-01	mg/kg-day	3.59E-03	
Exp. Route Total															1.02E+00		
Soil	Surface soil (0-2 ft)	Residences A-1 (0-2 ft, off-site) Ambient Air	Inhalation Fugitive Dust	Acenaphthylene	6.38E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.12E-11	mg/m ³	--	mg/m ³	--	
				Benzo(a)anthracene	2.03E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.95E-10	mg/m ³	--	mg/m ³	--	
				Benzo(a)pyrene	1.84E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.77E-10	mg/m ³	--	mg/m ³	--	
				Benzo(b)fluoranthene	4.86E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.66E-10	mg/m ³	--	mg/m ³	--	
				Benzo(g,h,i)perylene	1.05E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-10	mg/m ³	--	mg/m ³	--	
				Carbazole	7.74E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.42E-11	mg/m ³	--	mg/m ³	--	
				Dibenzo(a,h)anthracene	9.49E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.10E-11	mg/m ³	--	mg/m ³	--	
				Indeno(1,2,3-cd)pyrene	1.17E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.12E-10	mg/m ³	--	mg/m ³	--	
				Phenanthrene	1.70E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.63E-10	mg/m ³	--	mg/m ³	--	
				delta-BHC	4.33E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.15E-12	mg/m ³	--	mg/m ³	--	
				Endosulfan II	1.48E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.42E-12	mg/m ³	--	mg/m ³	--	
				Endrin aldehyde	5.69E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.46E-12	mg/m ³	--	mg/m ³	--	
				Endrin ketone	4.36E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.18E-12	mg/m ³	--	mg/m ³	--	
				gamma-Chlordane	2.20E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.11E-12	mg/m ³	--	mg/m ³	--	
				Aroclor-1260	1.00E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.60E-11	mg/m ³	--	mg/m ³	--	
				Aluminum	7.88E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.56E-06	mg/m ³	5.00E-03	mg/m ³	1.51E-03	
				Antimony	6.61E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.34E-07	mg/m ³	--	mg/m ³	--	
				Arsenic	8.05E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.72E-09	mg/m ³	1.50E-05	mg/m ³	5.14E-04	
				Barium	6.45E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.18E-07	mg/m ³	5.00E-04	mg/m ³	1.24E-03	
				Cadmium	1.67E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.60E-09	mg/m ³	1.00E-05	mg/m ³	1.60E-04	
				Chromium (VI)	1.55E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.49E-08	mg/m ³	1.00E-04	mg/m ³	1.49E-04	
				Cobalt	7.74E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.42E-09	mg/m ³	6.00E-06	mg/m ³	1.24E-03	
				Copper	1.96E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.88E-07	mg/m ³	--	mg/m ³	--	
				Iron	2.26E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.16E-05	mg/m ³	--	mg/m ³	--	
				Lead	7.19E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.89E-06	mg/m ³	--	mg/m ³	--	
				Manganese	7.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.73E-07	mg/m ³	5.00E-05	mg/m ³	1.35E-02	
				Mercury	3.18E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.05E-10	mg/m ³	3.00E-04	mg/m ³	1.02E-06	
Zinc	1.89E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.81E-06	mg/m ³	--	mg/m ³	--					
Exp. Route Total															1.83E-02		
Exposure Point Total															1.04E+00		
Exposure Medium Total															1.04E+00		
Medium Total															1.04E+00		
Total of Receptor Risks Across All Media											Total of Receptor Hazards Across All Media				1.04E+00		

Table 7.6.2.CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe: Current / Future
 Receptor Population: Resident (off site)
 Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations						
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient		
							Value	Units	Value	Units		Value	Units	Value	Units			
Soil	Surface soil (0-2 ft)	Residences A-1 (0-2 ft, off-site)	Dermal Absorption	Acenaphthylene	5.30E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.93E-08	mg/kg-day	--	mg/kg-day	--		
				Benzo(a)anthracene	1.69E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.57E-07	mg/kg-day	--	mg/kg-day	--		
				Benzo(a)pyrene	1.53E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.42E-07	mg/kg-day	--	mg/kg-day	--		
				Benzo(b)fluoranthene	4.04E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.76E-07	mg/kg-day	--	mg/kg-day	--		
				Benzo(g,h,i)perylene	8.75E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.14E-08	mg/kg-day	--	mg/kg-day	--		
				Carbazole	6.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.60E-08	mg/kg-day	--	mg/kg-day	--		
				Dibenzo(a,h)anthracene	7.89E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.34E-08	mg/kg-day	--	mg/kg-day	--		
				Indeno(1,2,3-cd)pyrene	9.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.03E-08	mg/kg-day	--	mg/kg-day	--		
				Phenanthrene	1.41E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.31E-07	mg/kg-day	--	mg/kg-day	--		
				delta-BHC	3.60E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--		
				Endosulfan II	1.23E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--		
				Endrin aldehyde	4.73E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--		
				Endrin ketone	3.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--		
				gamma-Chlordane	1.83E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--		
				Aroclor-1260	8.32E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.34E-08	mg/kg-day	--	mg/kg-day	--		
				Aluminum	6.55E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.00E+00	mg/kg-day	--		
				Antimony	5.49E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	6.00E-05	mg/kg-day	--		
				Arsenic	6.69E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.44E-06	mg/kg-day	3.00E-04	mg/kg-day	4.79E-03		
				Barium	5.36E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	1.40E-02	mg/kg-day	--		
				Cadmium	1.39E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.92E-09	mg/kg-day	2.50E-05	mg/kg-day	3.97E-04		
				Chromium (VI)	1.29E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.50E-05	mg/kg-day	--		
				Cobalt	6.43E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--		
				Copper	1.63E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	4.00E-02	mg/kg-day	--		
				Iron	1.87E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	7.00E-01	mg/kg-day	--		
				Lead	5.97E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	--	mg/kg-day	--		
				Manganese	5.83E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	9.60E-04	mg/kg-day	--		
				Mercury	2.64E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-04	mg/kg-day	--		
Zinc	1.57E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	--	mg/kg-day	3.00E-01	mg/kg-day	--						
Exp. Route Total																		
Soil	Surface soil (0-2 ft)	Residences A-1 (0-2 ft, off-site)	Incidental Ingestion	Acenaphthylene	5.30E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.39E-07	mg/kg-day	--	mg/kg-day	--		
				Benzo(a)anthracene	1.69E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.08E-06	mg/kg-day	--	mg/kg-day	--		
				Benzo(a)pyrene	1.53E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.78E-07	mg/kg-day	--	mg/kg-day	--		
				Benzo(b)fluoranthene	4.04E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.58E-06	mg/kg-day	--	mg/kg-day	--		
				Benzo(g,h,i)perylene	8.75E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.59E-07	mg/kg-day	--	mg/kg-day	--		
				Carbazole	6.43E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.11E-07	mg/kg-day	--	mg/kg-day	--		
				Dibenzo(a,h)anthracene	7.89E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.04E-07	mg/kg-day	--	mg/kg-day	--		
				Indeno(1,2,3-cd)pyrene	9.70E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	6.20E-07	mg/kg-day	--	mg/kg-day	--		
				Phenanthrene	1.41E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	9.01E-07	mg/kg-day	--	mg/kg-day	--		
				delta-BHC	3.60E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.30E-08	mg/kg-day	--	mg/kg-day	--		
				Endosulfan II	1.23E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	7.86E-09	mg/kg-day	--	mg/kg-day	--		
				Endrin aldehyde	4.73E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.02E-08	mg/kg-day	--	mg/kg-day	--		
				Endrin ketone	3.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	2.31E-08	mg/kg-day	--	mg/kg-day	--		
				gamma-Chlordane	1.83E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.17E-08	mg/kg-day	--	mg/kg-day	--		
				Aroclor-1260	8.32E-02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	5.32E-07	mg/kg-day	--	mg/kg-day	--		
				Aluminum	6.55E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.19E-02	mg/kg-day	1.00E+00	mg/kg-day	4.19E-02		
				Antimony	5.49E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.51E-03	mg/kg-day	4.00E-04	mg/kg-day	8.78E+00		
				Arsenic	6.69E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.28E-05	mg/kg-day	3.00E-04	mg/kg-day	1.43E-01		
				Barium	5.36E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.42E-03	mg/kg-day	2.00E-01	mg/kg-day	1.71E-02		
				Cadmium	1.39E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.85E-06	mg/kg-day	5.00E-04	mg/kg-day	1.77E-02		
Chromium (VI)	1.29E+01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	8.24E-05	mg/kg-day	3.00E-03	mg/kg-day	2.75E-02						



Table 7.6.2.CTE
 CALCULATION OF CHEMICAL NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RID/RIC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil	Surface soil (0-2 ft)	Residences A-1 (0-2 ft, off-site)	Incidental Ingestion	Cobalt	6.43E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	4.11E-05	mg/kg-day	3.00E-04	mg/kg-day	1.37E-01
				Copper	1.63E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.04E-03	mg/kg-day	4.00E-02	mg/kg-day	2.60E-02
				Iron	1.87E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.20E-01	mg/kg-day	7.00E-01	mg/kg-day	1.71E-01
				Lead	5.97E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.82E-02	mg/kg-day	--	mg/kg-day	--
				Manganese	5.83E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	3.73E-03	mg/kg-day	2.40E-02	mg/kg-day	1.55E-01
				Mercury	2.64E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.69E-06	mg/kg-day	3.00E-04	mg/kg-day	5.63E-03
				Zinc	1.57E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--	1.00E-02	mg/kg-day	3.00E-01	mg/kg-day	3.35E-02
				Exp. Route Total												
Soil	Surface soil (0-2 ft)	Residences A-1 (0-2 ft, off-site) Ambient Air	Inhalation Fugitive Dust	Acenaphthylene	6.38E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.12E-11	mg/m ³	--	mg/m ³	--
				Benzo(a)anthracene	2.03E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.95E-10	mg/m ³	--	mg/m ³	--
				Benzo(a)pyrene	1.84E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.77E-10	mg/m ³	--	mg/m ³	--
				Benzo(b)fluoranthene	4.86E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.66E-10	mg/m ³	--	mg/m ³	--
				Benzo(g,h,i)perylene	1.05E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.01E-10	mg/m ³	--	mg/m ³	--
				Carbazole	7.74E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.42E-11	mg/m ³	--	mg/m ³	--
				Dibenzo(a,h)anthracene	9.49E-11	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.10E-11	mg/m ³	--	mg/m ³	--
				Indeno(1,2,3-cd)pyrene	1.17E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.12E-10	mg/m ³	--	mg/m ³	--
				Phenanthrene	1.70E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.63E-10	mg/m ³	--	mg/m ³	--
				delta-BHC	4.33E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.15E-12	mg/m ³	--	mg/m ³	--
				Endosulfan II	1.48E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.42E-12	mg/m ³	--	mg/m ³	--
				Endrin aldehyde	5.69E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	5.46E-12	mg/m ³	--	mg/m ³	--
				Endrin ketone	4.36E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	4.18E-12	mg/m ³	--	mg/m ³	--
				gamma-Chlordane	2.20E-12	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.11E-12	mg/m ³	--	mg/m ³	--
				Aroclor-1260	1.00E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	9.60E-11	mg/m ³	--	mg/m ³	--
				Aluminum	7.88E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.56E-06	mg/m ³	5.00E-03	mg/m ³	1.51E-03
				Antimony	6.61E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.34E-07	mg/m ³	--	mg/m ³	--
				Arsenic	8.05E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.72E-09	mg/m ³	1.50E-05	mg/m ³	5.14E-04
				Barium	6.45E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.18E-07	mg/m ³	5.00E-04	mg/m ³	1.24E-03
				Cadmium	1.67E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.60E-09	mg/m ³	1.00E-05	mg/m ³	1.60E-04
				Chromium (VI)	1.55E-08	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.49E-08	mg/m ³	1.00E-04	mg/m ³	1.49E-04
				Cobalt	7.74E-09	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	7.42E-09	mg/m ³	6.00E-06	mg/m ³	1.24E-03
				Copper	1.96E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.88E-07	mg/m ³	--	mg/m ³	--
				Iron	2.26E-05	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	2.16E-05	mg/m ³	--	mg/m ³	--
				Lead	7.19E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.89E-06	mg/m ³	--	mg/m ³	--
				Manganese	7.02E-07	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	6.73E-07	mg/m ³	5.00E-05	mg/m ³	1.35E-02
				Mercury	3.18E-10	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	3.05E-10	mg/m ³	3.00E-04	mg/m ³	1.02E-06
				Zinc	1.89E-06	mg/m ³	--	mg/m ³	--	(µg/m ³) ⁻¹	--	1.81E-06	mg/m ³	--	mg/m ³	--
Exp. Route Total																
Exposure Point Total															1.83E-02	
Exposure Medium Total															9.57E+00	
Medium Total															9.57E+00	
Total of Receptor Risks Across All Media											Total of Receptor Hazards Across All Media					9.57E+00

Table 7.6.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Resident (off site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface soil (0-2 ft)	Residences A-1 (0-2 ft, off-site)	Dermal Absorption	Acenaphthylene	5.30E-02	mg/kg	4.92E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.69E-01	mg/kg	1.57E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.15E-08
				Benzo(a)pyrene	1.53E-01	mg/kg	1.42E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	1.04E-07
				Benzo(b)fluoranthene	4.04E-01	mg/kg	3.75E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	2.74E-08
				Benzo(g,h,i)perylene	8.75E-02	mg/kg	8.12E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Carbazole	6.43E-02	mg/kg	4.59E-09	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	9.18E-11
				Dibenzo(a,h)anthracene	7.89E-02	mg/kg	7.32E-09	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	5.35E-08
				Indeno(1,2,3-cd)pyrene	9.70E-02	mg/kg	9.00E-09	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	6.57E-09
				Phenanthrene	1.41E-01	mg/kg	1.31E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				delta-BHC	3.60E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan II	1.23E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	4.73E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	3.62E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	1.83E-03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1260	8.32E-02	mg/kg	8.32E-09	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.66E-08
				Aluminum	6.55E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	5.49E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	6.69E+00	mg/kg	1.43E-07	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	2.15E-07
				Barium	5.36E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.39E+00	mg/kg	9.89E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.29E+01	mg/kg	--	mg/kg-day	2.00E+01	(mg/kg-day) ⁻¹	--
				Cobalt	6.43E+00	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	1.63E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Iron	1.87E+04	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Lead	5.97E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Manganese	5.83E+02	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Mercury	2.64E-01	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Zinc	1.57E+03	mg/kg	--	mg/kg-day	--	(mg/kg-day) ⁻¹	--				
Exp. Route Total											4.34E-07
Soil	Surface soil (0-2 ft)	Residences A-1 (0-2 ft, off-site)	Incidental Ingestion	Acenaphthylene	5.30E-02	mg/kg	3.37E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Benzo(a)anthracene	1.69E-01	mg/kg	1.07E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	7.85E-08
				Benzo(a)pyrene	1.53E-01	mg/kg	9.73E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	7.10E-07
				Benzo(b)fluoranthene	4.04E-01	mg/kg	2.57E-07	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	1.88E-07
				Benzo(g,h,i)perylene	8.75E-02	mg/kg	5.57E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Carbazole	6.43E-02	mg/kg	4.09E-08	mg/kg-day	2.00E-02	(mg/kg-day) ⁻¹	8.18E-10
				Dibenzo(a,h)anthracene	7.89E-02	mg/kg	5.02E-08	mg/kg-day	7.30E+00	(mg/kg-day) ⁻¹	3.66E-07
Indeno(1,2,3-cd)pyrene	9.70E-02	mg/kg	6.17E-08	mg/kg-day	7.30E-01	(mg/kg-day) ⁻¹	4.50E-08				

Table 7.6.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk
							Value	Units	Value	Units	
Soil	Surface soil (0-2 ft)	Residences A-I (0-2 ft, off-site)	Incidental Ingestion	Phenanthrene	1.41E-01	mg/kg	8.97E-08	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				delta-BHC	3.60E-03	mg/kg	2.29E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endosulfan II	1.23E-03	mg/kg	7.82E-10	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin aldehyde	4.73E-03	mg/kg	3.01E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Endrin ketone	3.62E-03	mg/kg	2.30E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				gamma-Chlordane	1.83E-03	mg/kg	1.16E-09	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Aroclor-1260	8.32E-02	mg/kg	5.29E-08	mg/kg-day	2.00E+00	(mg/kg-day) ⁻¹	1.06E-07
				Aluminum	6.55E+03	mg/kg	4.17E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Antimony	5.49E+02	mg/kg	3.49E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Arsenic	6.69E+00	mg/kg	4.25E-04	mg/kg-day	1.50E+00	(mg/kg-day) ⁻¹	6.38E-06
				Barium	5.36E+02	mg/kg	3.41E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Cadmium	1.39E+00	mg/kg	8.81E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Chromium (VI)	1.29E+01	mg/kg	8.20E-06	mg/kg-day	5.00E-01	(mg/kg-day) ⁻¹	4.10E-06
				Cobalt	6.43E+00	mg/kg	4.09E-06	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Copper	1.63E+02	mg/kg	1.03E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Iron	1.87E+04	mg/kg	1.19E-02	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Lead	5.97E+03	mg/kg	3.80E-03	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Manganese	5.83E+02	mg/kg	3.71E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Mercury	2.64E-01	mg/kg	1.68E-07	mg/kg-day	--	(mg/kg-day) ⁻¹	--
				Zinc	1.57E+03	mg/kg	9.99E-04	mg/kg-day	--	(mg/kg-day) ⁻¹	--
Exp. Route Total				1.20E-05							
Soil	Surface soil (0-2 ft)	Residences A-I (0-2 ft, off-site) Ambient Air	Inhalation of Dust	Acenaphthylene	6.38E-11	mg/m ³	1.31E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Benzo(a)anthracene	2.03E-10	mg/m ³	4.18E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	4.60E-12
				Benzo(a)pyrene	1.84E-10	mg/m ³	3.78E-11	mg/m ³	1.10E-03	(µg/m ³) ⁻¹	4.16E-11
				Benzo(b)fluoranthene	4.86E-10	mg/m ³	9.99E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	1.10E-11
				Benzo(g,h,i)perylene	1.05E-10	mg/m ³	2.16E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Carbazole	7.74E-11	mg/m ³	1.59E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				Dibenzo(a,h)anthracene	9.49E-11	mg/m ³	1.95E-11	mg/m ³	1.20E-03	(µg/m ³) ⁻¹	2.34E-11
				Indeno(1,2,3-cd)pyrene	1.17E-10	mg/m ³	2.40E-11	mg/m ³	1.10E-04	(µg/m ³) ⁻¹	2.64E-12
				Phenanthrene	1.70E-10	mg/m ³	3.49E-11	mg/m ³	--	(µg/m ³) ⁻¹	--
				delta-BHC	4.33E-12	mg/m ³	8.90E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endosulfan II	1.48E-12	mg/m ³	3.04E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin aldehyde	5.69E-12	mg/m ³	1.17E-12	mg/m ³	--	(µg/m ³) ⁻¹	--
				Endrin ketone	4.36E-12	mg/m ³	8.95E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				gamma-Chlordane	2.20E-12	mg/m ³	4.52E-13	mg/m ³	--	(µg/m ³) ⁻¹	--
				Aroclor-1260	1.00E-10	mg/m ³	2.06E-11	mg/m ³	5.70E-04	(µg/m ³) ⁻¹	1.17E-11
				Aluminum	7.88E-06	mg/m ³	1.62E-06	mg/m ³	--	(µg/m ³) ⁻¹	--
				Antimony	6.61E-07	mg/m ³	1.36E-07	mg/m ³	--	(µg/m ³) ⁻¹	--
				Arsenic	8.05E-09	mg/m ³	1.65E-09	mg/m ³	4.30E-03	(µg/m ³) ⁻¹	7.11E-09
Barium	6.45E-07	mg/m ³	1.32E-07	mg/m ³	--	(µg/m ³) ⁻¹	--				
Cadmium	1.67E-09	mg/m ³	3.42E-10	mg/m ³	1.80E-03	(µg/m ³) ⁻¹	6.16E-10				

Table 7.6.3 CTE
 CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
 CENTRAL TENDENCY EXPOSURE
 Ellenville Scrap Iron and Metal Site
 008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations							
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk			
							Value	Units	Value	Units				
Soil	Surface soil (0-2 ft)	Residences A-I (0-2 ft, off-site) Ambient Air	Inhalation of Dust	Chromium (VI)	1.55E-08	mg/m ³	3.19E-09	mg/m ³	8.40E-02	(µg/m ³) ⁻¹	2.68E-07			
				Cobalt	7.74E-09	mg/m ³	1.59E-09	mg/m ³	9.00E-03	(µg/m ³) ⁻¹	1.43E-08			
				Copper	1.96E-07	mg/m ³	4.02E-08	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Iron	2.26E-05	mg/m ³	4.64E-06	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Lead	7.19E-06	mg/m ³	1.48E-06	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Manganese	7.02E-07	mg/m ³	1.44E-07	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Mercury	3.18E-10	mg/m ³	6.53E-11	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Zinc	1.89E-06	mg/m ³	3.88E-07	mg/m ³	--	(µg/m ³) ⁻¹	--			
				Exp. Route Total										2.90E-07
				Exposure Point Total										1.27E-05
Exposure Medium Total										1.27E-05				
Medium Total										1.27E-05				
Total of Receptor Risks Across All Media										1.27E-05				

Footnotes:

- [a] Cancer Risk = Sum of risks for each life segment where ingestion or contact rate, ED, BW, and ADAF change per lifetime segment.
- [b] Inputs were applied as follows:
 Age 0 - 2 Child IR/CR and BW; ED = 2; ADAF = 10
 Age 2 - 6 Child IR/CR and BW; ED = 4; ADAF = 3
 Age 6 - 16 Adult IR/CR and BW; ED = 10, ADAF = 3
 Age 16 - 30 Adult IR/CR and BW; ED = 9; ADAF = 1

Note: See attached Formula Sheet for formulas used to calculate risk.

Off-Site Surface Soil							
MMOA Chemical	CS (mg/kg)	Cancer Risk * [a,b]					
		SF _{Dermal}	Dermal	SF	Ingestion	IUR	Inhalation
Benzo(a)anthracene	1.69E-01	7.30E-01	9.27E-08	7.30E-01	5.30E-07	1.10E-04	2.18E-11
Benzo(a)pyrene	1.53E-01	7.30E+00	8.40E-07	7.30E+00	4.80E-06	1.10E-03	1.97E-10
Benzo(b)fluoranthene	4.04E-01	7.30E-01	2.22E-07	7.30E-01	1.27E-06	1.10E-04	5.20E-11
Dibenzo(a,h)anthracene	7.89E-02	7.30E+00	4.33E-07	7.30E+00	2.47E-06	1.20E-03	1.11E-10
Indeno(1,2,3-cd)pyrene	9.70E-02	7.30E-01	5.32E-08	7.30E-01	3.04E-07	1.10E-04	1.25E-11
Chromium (VI)	1.55E-08	2.00E+01	--	5.00E-01	3.33E-14	8.40E-02	1.27E-06

*Cancer Risk using ADAF

Table 7 Supplement
Formulas Used to Calculate MMOA Risks
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

SOLID MEDIA

$$\text{Solid Media Ingestion Risk} = \left[\left(\frac{\text{CS} \times \text{IR} \times \text{EF} \times \text{CF} \times \text{FI} \times \text{ED}_{0-2}}{\text{BW} \times \text{AT}} \right) \times 10 \times \text{CSF}_{\text{ingestion}} \right] + \left[\left(\frac{\text{CS} \times \text{IR} \times \text{EF} \times \text{CF} \times \text{FI} \times \text{ED}_{2-6}}{\text{BW} \times \text{AT}} \right) \times 3 \times \text{CSF}_{\text{ingestion}} \right] +$$

$$\left[\left(\frac{\text{CS} \times \text{IR} \times \text{EF} \times \text{CF} \times \text{FI} \times \text{ED}_{6-16}}{\text{BW} \times \text{AT}} \right) \times 3 \times \text{CSF}_{\text{ingestion}} \right] + \left[\left(\frac{\text{CS} \times \text{IR} \times \text{EF} \times \text{CF} \times \text{FI} \times \text{ED}_{16-30}}{\text{BW} \times \text{AT}} \right) \times 1 \times \text{CSF}_{\text{ingestion}} \right]$$

$$\text{Solid Media Dermal Absorption Risk} = \left[\left(\frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}_{0-2}}{\text{BW} \times \text{AT}} \right) \times 10 \times \text{CSF}_{\text{dermal}} \right] + \left[\left(\frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}_{2-6}}{\text{BW} \times \text{AT}} \right) \times 3 \times \text{CSF}_{\text{dermal}} \right] +$$

$$\left[\left(\frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}_{6-16}}{\text{BW} \times \text{AT}} \right) \times 3 \times \text{CSF}_{\text{dermal}} \right] + \left[\left(\frac{\text{CS} \times \text{CF} \times \text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED}_{16-30}}{\text{BW} \times \text{AT}} \right) \times 1 \times \text{CSF}_{\text{dermal}} \right]$$

$$\text{Solid Media Inhalation Risk} = \left[\left(\frac{\text{CA} \times \text{ET} \times \text{EF} \times \text{CF} \times \text{ED}_{0-2}}{\text{AT}} \right) \times 1000 \times 10 \times \text{IUR} \right] + \left[\left(\frac{\text{CA} \times \text{ET} \times \text{EF} \times \text{CF} \times \text{ED}_{2-6}}{\text{AT}} \right) \times 1000 \times 3 \times \text{IUR} \right] +$$

$$\left[\left(\frac{\text{CA} \times \text{ET} \times \text{EF} \times \text{CF} \times \text{ED}_{6-16}}{\text{AT}} \right) \times 1000 \times 3 \times \text{IUR} \right] + \left[\left(\frac{\text{CA} \times \text{ET} \times \text{EF} \times \text{CF} \times \text{ED}_{16-30}}{\text{AT}} \right) \times 1000 \times 1 \times \text{IUR} \right]$$

AQUEOUS MEDIA

$$\text{Aqueous Media Ingestion Risk} = \left[\left(\frac{\text{Cw} \times \text{CR} \times \text{ET} \times \text{EF} \times \text{ED}_{0-2} \times \text{CF}}{\text{BW} \times \text{AT}} \right) \times 10 \times \text{CSF}_{\text{ingestion}} \right] + \left[\left(\frac{\text{Cw} \times \text{CR} \times \text{ET} \times \text{EF} \times \text{ED}_{2-6} \times \text{CF}}{\text{BW} \times \text{AT}} \right) \times 3 \times \text{CSF}_{\text{ingestion}} \right] +$$

$$\left[\left(\frac{\text{Cw} \times \text{CR} \times \text{ET} \times \text{EF} \times \text{ED}_{6-16} \times \text{CF}}{\text{BW} \times \text{AT}} \right) \times 3 \times \text{CSF}_{\text{ingestion}} \right] + \left[\left(\frac{\text{Cw} \times \text{CR} \times \text{ET} \times \text{EF} \times \text{ED}_{16-30} \times \text{CF}}{\text{BW} \times \text{AT}} \right) \times 1 \times \text{CSF}_{\text{ingestion}} \right] +$$

$$\text{Aqueous Media Dermal Absorption Risk} = \left[\left(\frac{\text{DA}_{\text{event}} \times \text{SA}_{\text{child}} \times \text{ED} \times \text{EV} \times \text{EF}}{\text{BW}_{\text{child}} \times \text{AT}} \right) \times 10 \times \text{SF} \right] + \left[\left(\frac{\text{DA}_{\text{event}} \times \text{SA}_{\text{child}} \times \text{ED} \times \text{EV} \times \text{EF}}{\text{BW}_{\text{child}} \times \text{AT}} \right) \times 3 \times \text{SF} \right] +$$

$$\left[\left(\frac{\text{DA}_{\text{event}} \times \text{SA}_{\text{adult}} \times \text{ED} \times \text{EV} \times \text{EF}}{\text{BW}_{\text{adult}} \times \text{AT}} \right) \times 3 \times \text{SF} \right] + \left[\left(\frac{\text{DA}_{\text{event}} \times \text{SA}_{\text{adult}} \times \text{ED} \times \text{EV} \times \text{EF}}{\text{BW}_{\text{adult}} \times \text{AT}} \right) \times 1 \times \text{SF} \right]$$

TABLE 9.1.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Current
Receptor Population:	Trespasser
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--
			Benzo(a)anthracene	4.00E-06	1.37E-11	7.00E-07	4.70E-06
			Benzo(a)pyrene	3.77E-05	1.29E-10	6.60E-06	4.43E-05
			Benzo(b)fluoranthene	5.57E-06	1.91E-11	9.75E-07	6.55E-06
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	2.40E-07	8.56E-12	4.20E-08	2.82E-07
			Bis(2-ethylhexyl)phthalate	9.97E-09	5.54E-14	1.12E-09	1.11E-08
			Carbazole	1.49E-09	--	1.68E-10	1.66E-09
			Chrysene	4.19E-08	1.43E-12	7.34E-09	4.93E-08
			Dibenzo(a,h)anthracene	3.29E-06	1.23E-11	5.76E-07	3.87E-06
			Dimethylphthalate	--	--	--	--
			Di-n-octylphthalate	--	--	--	--
			Indeno(1,2,3-cd)pyrene	1.73E-06	5.92E-12	3.03E-07	2.03E-06
			Naphthalene	--	5.10E-14	--	5.10E-14
			Phenanthrene	--	--	--	--
			Dieldrin	1.40E-08	1.30E-13	--	1.40E-08
			Endosulfan II	--	--	--	--
			Endosulfan sulfate	--	--	--	--
			Endrin aldehyde	--	--	--	--
			Endrin ketone	--	--	--	--
			gamma-Chlordane	--	--	--	--
			Aroclor-1254	5.26E-08	4.86E-13	8.27E-09	6.09E-08
			Aroclor-1260	6.55E-07	6.05E-12	1.03E-07	7.58E-07
Aluminum	--	--	--	--			
Antimony	--	--	--	--			
Arsenic	9.86E-07	9.15E-11	3.32E-08	1.02E-06			

TABLE 9.1.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Barium	--	--	--	--
			Cadmium	--	1.84E-11	--	1.84E-11
			Chromium (VI)	2.80E-04	1.07E-06	--	2.81E-04
			Cobalt	--	2.15E-10	--	2.15E-10
			Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Mercury	--	--	--	--
			Nickel	--	5.18E-11	--	5.18E-11
			Silver	--	--	--	--
			Thallium	--	--	--	--
			Vanadium	--	--	--	--
			Zinc	--	--	--	--
						Chemical Total	3.35E-04
			Exposure Point Total				3.45E-04
			Exposure Medium Total				3.45E-04
Medium Total							3.45E-04
Leachate	Leachate	On-Site Leachate Areas	Chloroform	2.84E-11	--	3.80E-10	4.09E-10
			Benzo(a)anthracene	4.09E-08	--	6.64E-05	6.65E-05
			Benzo(a)pyrene	4.09E-07	--	1.14E-03	1.14E-03
			Benzo(b)fluoranthene	6.65E-09	--	1.88E-05	1.88E-05
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	5.89E-09	--	1.62E-05	1.63E-05
			Carbazole	2.85E-10	--	3.97E-08	4.00E-08
			Chrysene	5.12E-10	--	8.30E-07	8.31E-07
			Dibenzo(a,h)anthracene	1.02E-07	--	4.40E-04	4.40E-04
			Indeno(1,2,3-cd)pyrene	3.07E-08	--	8.68E-05	8.68E-05
			Naphthalene	--	--	--	--

TABLE 9.1.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Leachate	Leachate	On-Site Leachate Areas	Phenanthrene	--	--	--	--
			alpha-Chlordane	--	--	--	--
			Dieldrin	7.82E-10	--	7.99E-08	8.07E-08
			Aroclor-1260	2.20E-09	--	6.09E-05	6.09E-05
			Aluminum	--	--	--	--
			Arsenic	1.77E-07	--	1.26E-07	3.03E-07
			Barium	--	--	--	--
			Cadmium	--	--	--	--
			Chromium (VI)	7.71E-07	--	3.82E-05	3.90E-05
			Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Nickel	--	--	--	--
			Vanadium	--	--	--	--
			Zinc	--	--	--	--
						Chemical Total	1.55E-06
			Exposure Point Total				1.87E-03
			Exposure Medium Total				1.87E-03
			Medium Total				1.87E-03
							2.21E-03

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 9.2.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Recreator
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--
			Benzo(a)anthracene	4.00E-06	1.37E-11	7.00E-07	4.70E-06
			Benzo(a)pyrene	3.77E-05	1.29E-10	6.60E-06	4.43E-05
			Benzo(b)fluoranthene	5.57E-06	1.91E-11	9.75E-07	6.55E-06
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	2.40E-07	8.56E-12	4.20E-08	2.82E-07
			Bis(2-ethylhexyl)phthalate	9.97E-09	1.11E-13	1.12E-09	1.11E-08
			Carbazole	1.49E-09	--	1.68E-10	1.66E-09
			Chrysene	4.19E-08	1.43E-12	7.34E-09	4.93E-08
			Dibenzo(a,h)anthracene	3.29E-06	1.23E-11	5.76E-07	3.87E-06
			Dimethylphthalate	--	--	--	--
			Di-n-octylphthalate	--	--	--	--
			Indeno(1,2,3-cd)pyrene	1.73E-06	5.92E-12	3.03E-07	2.03E-06
			Naphthalene	--	1.02E-13	--	1.02E-13
			Phenanthrene	--	--	--	--
			Dieldrin	1.40E-08	2.60E-13	--	1.40E-08
			Endosulfan II	--	--	--	--
			Endosulfan sulfate	--	--	--	--
			Endrin aldehyde	--	--	--	--
			Endrin ketone	--	--	--	--
gamma-Chlordane	--	--	--	--			
Aroclor-1254	5.26E-08	9.72E-13	8.27E-09	6.09E-08			

TABLE 9.2.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk						
				Ingestion	Inhalation	Dermal	Exposure Routes Total			
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Aroclor-1260	6.55E-07	1.21E-11	1.03E-07	7.58E-07			
			Aluminum	--	--	--	--			
			Antimony	--	--	--	--			
			Arsenic	9.86E-07	1.83E-10	3.32E-08	1.02E-06			
			Barium	--	--	--	--			
			Cadmium	--	3.68E-11	--	3.68E-11			
			Chromium (VI)	2.80E-04	1.07E-06	--	2.81E-04			
			Cobalt	--	4.29E-10	--	4.29E-10			
			Copper	--	--	--	--			
			Iron	--	--	--	--			
			Lead	--	--	--	--			
			Manganese	--	--	--	--			
			Mercury	--	--	--	--			
			Nickel	--	1.04E-10	--	1.04E-10			
			Silver	--	--	--	--			
			Thallium	--	--	--	--			
			Vanadium	--	--	--	--			
			Zinc	--	--	--	--			
						Chemical Total	3.35E-04	1.07E-06	9.35E-06	3.45E-04
						Exposure Point Total				3.45E-04
			Exposure Medium Total				3.45E-04			
Medium Total							3.45E-04			
Leachate	Leachate	On-Site Leachate Areas	Chloroform	2.84E-11	--	3.80E-10	4.09E-10			
			Benzo(a)anthracene	4.09E-08	--	6.64E-05	6.65E-05			
			Benzo(a)pyrene	4.09E-07	--	1.14E-03	1.14E-03			
			Benzo(b)fluoranthene	6.65E-09	--	1.88E-05	1.88E-05			

TABLE 9.2.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Leachate	Leachate	On-Site Leachate Areas	Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	5.89E-09	--	1.62E-05	1.63E-05
			Carbazole	2.85E-10	--	3.97E-08	4.00E-08
			Chrysene	5.12E-10	--	8.30E-07	8.31E-07
			Dibenzo(a,h)anthracene	1.02E-07	--	4.40E-04	4.40E-04
			Indeno(1,2,3-cd)pyrene	3.07E-08	--	8.68E-05	8.68E-05
			Naphthalene	--	--	--	--
			Phenanthrene	--	--	--	--
			alpha-Chlordane	--	--	--	--
			Dieldrin	7.82E-10	--	7.99E-08	8.07E-08
			Aroclor-1260	2.20E-09	--	6.09E-05	6.09E-05
			Aluminum	--	--	--	--
			Arsenic	1.77E-07	--	1.26E-07	3.03E-07
			Barium	--	--	--	--
			Cadmium	--	--	--	--
			Chromium (VI)	7.71E-07	--	3.82E-05	3.90E-05
			Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Nickel	--	--	--	--
			Vanadium	--	--	--	--
			Zinc	--	--	--	--
			Chemical Total	1.55E-06	--	1.87E-03	1.87E-03
			Exposure Point Total				1.87E-03
			Exposure Medium Total				1.87E-03
			Medium Total				1.87E-03

TABLE 9.2.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment in Beer Kill	Beer Kill Creek	Benzo(a)pyrene	1.65E-07	--	2.88E-08	1.94E-07
			Phenanthrene	--	--	--	--
			Endrin ketone	--	--	--	--
			Arsenic	5.78E-07	--	1.95E-08	5.97E-07
			Chromium (VI)	2.16E-06	--	--	2.16E-06
			Cobalt	--	--	--	--
			Iron	--	--	--	--
			Manganese	--	--	--	--
			Chemical Total	2.90E-06	--	4.83E-08	2.95E-06
			Exposure Point Total				2.95E-06
Exposure Medium Total					2.95E-06		
Medium Total				2.95E-06			
Surface Water	Surface Water in	Beer Kill Creek	No Chemicals met the COPC criteria for this medium.				
	Beer Kill Creek						
		Chemical Total	--	--	--	--	
	Exposure Point Total					--	
Exposure Medium Total					--		
Medium Total				--			
Total of Receptor Risks Across All Media						2.22E-03	

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 9.3.1 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Benzo(k)fluoranthene	--	--	--	--	--	--
			Bis(2-ethylhexyl)phthalate	Liver	--	3.35E-04	--	3.82E-05	3.74E-04
			Carbazole	--	--	--	--	--	--
			Chrysene	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Dimethylphthalate	--	--	6.29E-06	--	7.17E-07	7.00E-06
			Di-n-octylphthalate	Kidneys, Liver	--	1.37E-05	--	1.57E-06	1.53E-05
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Naphthalene	Body Weight	Respiratory Epithelium	2.18E-05	2.45E-07	2.49E-06	2.45E-05
			Phenanthrene	--	--	--	--	--	--
			Dieldrin	Liver	--	1.64E-04	--	--	1.64E-04
			Endosulfan II	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--
			Aroclor-1254	Eyes, Nails, Immune System	--	1.24E-02	--	1.98E-03	1.44E-02
			Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	7.17E-03	2.42E-03	--	9.59E-03
			Antimony	Longevity, Blood Guucose, Cholesterol	--	3.28E-02	--	--	3.28E-02
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	2.06E-02	6.95E-04	7.06E-04	2.20E-02
			Barium	Kidneys	Developmental	1.43E-03	9.63E-04	--	2.39E-03
			Cadmium	Kidneys	Kidneys	5.94E-03	5.00E-04	1.35E-04	6.57E-03
			Chromium (VI)	No Observed Effects	Lungs	2.61E-01	1.32E-02	--	2.74E-01
			Cobalt	Iodine Uptake	Respiratory System	2.31E-02	1.95E-03	--	2.51E-02
Copper	Gastrointestinal System	--	1.87E-02	--	--	1.87E-02			
Iron	Gastrointestinal System	--	4.32E-02	--	--	4.32E-02			

TABLE 9.3.1 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient							
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Lead	--	--	--	--	--	--		
			Manganese	Central Nervous System	Central Nervous System	2.13E-02	1.72E-02	--	3.86E-02		
			Mercury	Immune System	Central Nervous System	1.23E-03	2.07E-06	--	1.23E-03		
			Nickel	Body Weight	Respiratory System	1.93E-03	1.08E-03	--	3.02E-03		
			Silver	Skin	--	7.74E-04	--	--	7.74E-04		
			Thallium	--	--	--	--	--	--		
			Vanadium	Decreased Hair Cystine	--	9.60E-03	--	--	9.60E-03		
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	3.11E-03	--	--	3.11E-03		
			Chemical Total					4.65E-01	3.80E-02	2.86E-03	5.06E-01
			Exposure Point Total								
Exposure Medium Total									5.06E-01		
Medium Total									5.06E-01		
Leachate	Leachate	On-Site Leachate Areas	Chloroform	Liver	Liver	1.54E-06	--	3.30E-05	3.46E-05		
			Benzo(a)anthracene	--	--	--	--	--	--		
			Benzo(a)pyrene	--	--	--	--	--	--		
			Benzo(b)fluoranthene	--	--	--	--	--	--		
			Benzo(g,h,i)perylene	--	--	--	--	--	--		
			Benzo(k)fluoranthene	--	--	--	--	--	--		
			Carbazole	--	--	--	--	--	--		
			Chrysene	--	--	--	--	--	--		
			Dibenzo(a,h)anthracene	--	--	--	--	--	--		
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--		
			Naphthalene	Body Weight	Respiratory Epithelium	6.85E-06	--	1.07E-03	1.08E-03		
			Phenanthrene	--	--	--	--	--	--		
			alpha-Chlordane	--	--	--	--	--	--		
			Dieldrin	Liver	--	1.64E-05	--	2.69E-03	2.71E-03		
			Aroclor-1260	--	--	--	--	--	--		
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	3.12E-04	--	3.55E-04	6.67E-04		
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	6.62E-03	--	7.55E-03	1.42E-02		
			Barium	Kidneys	Developmental	1.39E-04	--	2.26E-03	2.40E-03		
			Cadmium	Kidneys	Kidneys	6.85E-04	--	1.56E-02	1.63E-02		
			Chromium (VI)	No Observed Effects	Lungs	1.26E-03	--	1.15E-01	1.16E-01		
Copper	Gastrointestinal System	--	7.11E-04	--	8.10E-04	1.52E-03					
Leachate	Leachate	On-Site	Iron	Gastrointestinal System	--	2.64E-03	--	3.01E-03	5.65E-03		

TABLE 9.3.1 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
		Leachate Areas	Lead	--	--	--	--	--	--
			Manganese	Central Nervous System	Central Nervous System	1.15E-03	--	3.27E-02	3.39E-02
			Nickel	Body Weight	Respiratory System	1.14E-04	--	6.51E-04	7.65E-04
			Vanadium	Decreased Hair Cystine	--	6.85E-04	--	3.00E-02	3.07E-02
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	6.05E-04	--	4.14E-04	1.02E-03
			Chemical Total			1.49E-02	--	2.12E-01	2.27E-01
		Exposure Point Total						2.27E-01	
	Exposure Medium Total							2.27E-01	
Medium Total								2.27E-01	
Receptor HI Total								7.32E-01	

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	3.70E-02	--	Immune System	1.56E-02	--
Body Weight	3.80E-03	--	Iodine Uptake	2.31E-02	--
Cardiovascular System	--	6.95E-04	Kidneys	2.62E-02	5.00E-04
Central Nervous System	6.31E-02	2.28E-02	Liver	3.29E-03	--
Cholesterol	3.28E-02	--	Longevity	3.28E-02	--
Decreased Hair Cystine	4.03E-02	--	Respiratory System	--	1.62E-02
Developmental	--	1.66E-03	Nails	1.44E-02	--
Eyes	1.44E-02	--	Skin	3.63E-02	--
Gastrointestinal System	6.91E-02	--	No Observed Effects	3.77E-01	--

TABLE 9.3.2 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Benzo(k)fluoranthene	--	--	--	--	--	--
			Bis(2-ethylhexyl)phthalate	Liver	--	3.13E-03	--	3.51E-04	3.48E-03
			Carbazole	--	--	--	--	--	--
			Chrysene	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Dimethylphthalate	--	--	5.87E-05	--	6.57E-06	6.53E-05
			Di-n-octylphthalate	Kidneys, Liver	--	1.28E-04	--	1.44E-05	1.43E-04
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Naphthalene	Body Weight	Respiratory Epithelium	2.04E-04	2.45E-07	2.28E-05	2.27E-04
			Phenanthrene	--	--	--	--	--	--
			Dieldrin	Liver	--	1.53E-03	--	--	1.53E-03
			Endosulfan II	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--
			Aroclor-1254	Eyes, Nails, Immune System	--	1.16E-01	--	1.81E-02	1.34E-01
			Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	6.69E-02	2.42E-03	--	6.94E-02
			Antimony	Longevity, Blood Guucose, Cholesterol	--	3.07E-01	--	--	3.07E-01
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	1.93E-01	6.95E-04	6.47E-03	2.00E-01
			Barium	Kidneys	Developmental	1.33E-02	9.63E-04	--	1.43E-02
			Cadmium	Kidneys	Kidneys	5.54E-02	5.00E-04	1.24E-03	5.72E-02
			Chromium (VI)	No Observed Effects	Lungs	2.43E+00	1.32E-02	--	2.45E+00
			Cobalt	Iodine Uptake	Respiratory System	2.16E-01	1.95E-03	--	2.18E-01
Copper	Gastrointestinal System	--	1.75E-01	--	--	1.75E-01			
Iron	Gastrointestinal System	--	4.04E-01	--	--	4.04E-01			

TABLE 9.3.2 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Lead	--	--	--	--	--	--
			Manganese	Central Nervous System	Central Nervous System	1.99E-01	1.72E-02	--	2.16E-01
			Mercury	Immune System	Central Nervous System	1.15E-02	2.07E-06	--	1.15E-02
			Nickel	Body Weight	Respiratory System	1.80E-02	1.08E-03	--	1.91E-02
			Silver	Skin	--	7.22E-03	--	--	7.22E-03
			Thallium	--	--	--	--	--	--
			Vanadium	Decreased Hair Cystine	--	8.96E-02	--	--	8.96E-02
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	2.90E-02	--	--	2.90E-02
			Chemical Total			4.34E+00	3.80E-02	2.63E-02	4.40E+00
			Exposure Point Total						4.40E+00
Exposure Medium Total						4.40E+00			
Medium Total						4.40E+00			
Leachate	Leachate	On-Site Leachate Areas	Chloroform	Liver	Liver	7.19E-06	--	7.57E-05	8.29E-05
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Benzo(k)fluoranthene	--	--	--	--	--	--
			Carbazole	--	--	--	--	--	--
			Chrysene	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Naphthalene	Body Weight	Respiratory Epithelium	3.20E-05	--	2.46E-03	2.49E-03
			Phenanthrene	--	--	--	--	--	--
			alpha-Chlordane	--	--	--	--	--	--
			Dieldrin	Liver	--	7.67E-05	--	6.16E-03	6.24E-03
			Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	1.45E-03	--	8.14E-04	2.27E-03
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	3.09E-02	--	1.73E-02	4.82E-02
			Barium	Kidneys	Developmental	6.47E-04	--	5.18E-03	5.83E-03
			Cadmium	Kidneys	Kidneys	3.20E-03	--	3.58E-02	3.90E-02
			Chromium (VI)	No Observed Effects	Lungs	5.86E-03	--	2.63E-01	2.68E-01
Copper	Gastrointestinal System	--	3.32E-03	--	1.86E-03	5.17E-03			

TABLE 9.3.2 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Leachate	Leachate	On-Site Leachate Areas	Iron	Gastrointestinal System	--	1.23E-02	--	6.90E-03	1.92E-02
			Lead	--	--	--	--	--	
			Manganese	Central Nervous System	Central Nervous System	5.36E-03	--	7.50E-02	8.04E-02
			Nickel	Body Weight	Respiratory System	5.33E-04	--	1.49E-03	2.02E-03
			Vanadium	Decreased Hair Cystine	--	3.20E-03	--	6.88E-02	7.20E-02
			Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	2.82E-03	--	9.49E-04	3.77E-03
			Chemical Total			6.97E-02	--	4.85E-01	5.55E-01
Exposure Point Total									5.55E-01
Exposure Medium Total									5.55E-01
Medium Total									5.55E-01
								Receptor HI Total	4.96E+00

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	3.39E-01	--	Immune System	1.45E-01	--
Body Weight	2.28E-02	--	Iodine Uptake	2.16E-01	--
Cardiovascular System	--	6.95E-04	Kidneys	1.15E-01	5.00E-04
Central Nervous System	3.49E-01	2.28E-02	Liver	1.15E-02	--
Cholesterol	3.07E-01	--	Longevity	3.07E-01	--
Decreased Hair Cystine	1.62E-01	--	Respiratory System	--	1.62E-02
Developmental	--	1.66E-03	Nails	1.34E-01	--
Eyes	1.34E-01	--	Skin	2.55E-01	--
Gastrointestinal System	6.03E-01	--	No Observed Effects	2.70E+00	--

TABLE 9.3.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--
			Benzo(a)anthracene	3.50E-05	1.44E-09	6.02E-06	4.10E-05
			Benzo(a)pyrene	3.30E-04	1.36E-08	5.68E-05	3.87E-04
			Benzo(b)fluoranthene	4.88E-05	2.00E-09	8.38E-06	5.72E-05
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	2.10E-06	8.99E-10	3.61E-07	2.46E-06
			Bis(2-ethylhexyl)phthalate	8.72E-08	5.81E-12	9.79E-09	9.70E-08
			Carbazole	1.31E-08	--	1.47E-09	1.45E-08
			Chrysene	3.67E-07	1.51E-10	6.31E-08	4.30E-07
			Dibenzo(a,h)anthracene	2.88E-05	1.29E-09	4.95E-06	3.37E-05
			Dimethylphthalate	--	--	--	--
			Di-n-octylphthalate	--	--	--	--
			Indeno(1,2,3-cd)pyrene	1.52E-05	6.22E-10	2.61E-06	1.78E-05
			Naphthalene	--	5.36E-12	--	5.36E-12
			Phenanthrene	--	--	--	--
			Dieldrin	1.22E-07	1.36E-11	--	1.22E-07
			Endosulfan II	--	--	--	--
			Endosulfan sulfate	--	--	--	--
			Endrin aldehyde	--	--	--	--
			Endrin ketone	--	--	--	--
			gamma-Chlordane	--	--	--	--
			Aroclor-1254	4.60E-07	5.10E-11	7.24E-08	5.33E-07
			Aroclor-1260	5.73E-06	6.35E-10	9.01E-07	6.63E-06
Aluminum	--	--	--	--			
Antimony	--	--	--	--			
Arsenic	8.62E-06	9.61E-09	2.90E-07	8.92E-06			

TABLE 9.3.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Barium	--	--	--	--
			Cadmium	--	1.93E-09	--	1.93E-09
			Chromium (VI)	2.45E-03	1.12E-04	--	2.57E-03
			Cobalt	--	2.25E-08	--	2.25E-08
			Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Mercury	--	--	--	--
			Nickel	--	5.44E-09	--	5.44E-09
			Silver	--	--	--	--
			Thallium	--	--	--	--
			Vanadium	--	--	--	--
			Zinc	--	--	--	--
			Chemical Total			2.93E-03	1.12E-04
Exposure Point Total						3.12E-03	
Exposure Medium Total						3.12E-03	
Medium Total						3.12E-03	
Leachate	Leachate	On-Site Leachate Areas	Chloroform	2.48E-10	--	3.33E-09	3.58E-09
			Benzo(a)anthracene	3.58E-07	--	5.81E-04	5.82E-04
			Benzo(a)pyrene	3.58E-06	--	9.96E-03	9.97E-03
			Benzo(b)fluoranthene	5.82E-08	--	1.64E-04	1.64E-04
			Benzo(g,h,i)perylene	--	--	--	--
			Benzo(k)fluoranthene	5.15E-08	--	1.42E-04	1.42E-04
			Carbazole	2.49E-09	--	3.47E-07	3.50E-07
			Chrysene	4.48E-09	--	7.26E-06	7.27E-06
			Dibenzo(a,h)anthracene	8.95E-07	--	3.85E-03	3.85E-03
			Indeno(1,2,3-cd)pyrene	2.69E-07	--	7.59E-04	7.60E-04
			Naphthalene	--	--	--	--

TABLE 9.3.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Leachate	Leachate	On-Site Leachate Areas	Phenanthrene	--	--	--	--
			alpha-Chlordane	--	--	--	--
			Dieldrin	6.84E-09	--	6.99E-07	7.06E-07
			Aroclor-1260	1.92E-08	--	5.33E-04	5.33E-04
			Aluminum	--	--	--	--
			Arsenic	1.55E-06	--	1.10E-06	2.65E-06
			Barium	--	--	--	--
			Cadmium	--	--	--	--
			Chromium (VI)	6.74E-06	--	3.35E-04	3.41E-04
			Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Nickel	--	--	--	--
			Vanadium	--	--	--	--
			Zinc	--	--	--	--
						Chemical Total	1.35E-05
			Exposure Point Total				1.63E-02
			Exposure Medium Total				1.63E-02
			Medium Total				1.63E-02
							1.95E-02

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 9.4.1 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: Construction / Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient									
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total				
Soil	Subsurface Soil (0 - 10 ft)	On-Site Subsurface Soil (0 - 10ft) & Ambient Air	Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	--		
			Benzo(a)anthracene	4.95E-08	1.29E-09	6.37E-08	1.14E-07	--	--	--	--	--	--	--	--	--	
			Benzo(a)pyrene	4.63E-07	1.20E-08	5.95E-07	1.07E-06	--	--	--	--	--	--	--	--	--	--
			Benzo(b)fluoranthene	6.10E-08	1.59E-09	7.85E-08	1.41E-07	--	--	--	--	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Benzo(k)fluoranthene	2.03E-09	5.29E-10	2.61E-09	5.17E-09	--	--	--	--	--	--	--	--	--	--
			Carbazole	1.67E-10	--	1.65E-10	3.32E-10	--	--	--	--	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	3.71E-08	1.06E-09	4.78E-08	8.60E-08	--	--	--	--	--	--	--	--	--	--
			Dimethylphthalate	--	--	--	--	--	--	--	1.58E-06	--	1.56E-06	3.14E-06	--	--	--
			Di-n-octylphthalate	--	--	--	--	--	Kidneys, Liver	--	1.55E-05	--	1.54E-05	3.09E-05	--	--	--
			Indeno(1,2,3-cd)pyrene	2.33E-08	6.06E-10	2.99E-08	5.38E-08	--	--	--	--	--	--	--	--	--	--
			Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Dieldrin	1.66E-09	8.23E-11	--	1.74E-09	--	Liver	--	2.90E-04	--	--	2.90E-04	--	--	--
			Endosulfan II	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Aroclor-1254	4.36E-09	2.15E-10	6.04E-09	1.06E-08	--	Eyes, Nails, Immune System	--	6.10E-03	--	8.46E-03	1.46E-02	--	--	--
			Aroclor-1260	5.10E-08	2.51E-09	7.07E-08	1.24E-07	--	--	--	--	--	--	--	--	--	--
			Antimony	--	--	--	--	--	Longevity, Blood Glucose, Cholesterol	--	3.52E-02	--	--	3.52E-02	--	--	--
			Arsenic	8.55E-08	4.24E-08	2.54E-08	1.53E-07	--	Skin	Developmental, Central Nervous System, Cardiovascular System	2.66E-02	9.19E-02	7.90E-03	1.26E-01	--	--	--
			Chromium (VI)	2.68E-06	7.79E-05	--	8.06E-05	--	No Observed Effects	Lungs	3.76E-02	4.33E-01	--	4.70E-01	--	--	--
			Cobalt	--	9.87E-08	--	9.87E-08	--	Iodine Uptake	Respiratory System	8.88E-04	2.56E-01	--	2.57E-01	--	--	--
			Copper	--	--	--	--	--	Gastrointestinal System	--	3.08E-02	--	--	3.08E-02	--	--	--
			Iron	--	--	--	--	--	Gastrointestinal System	--	4.97E-02	--	--	4.97E-02	--	--	--
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Manganese	--	--	--	--	--	Central Nervous System	Central Nervous System	2.86E-02	2.37E+00	--	2.40E+00	--	--	--			
Thallium	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Vanadium	--	--	--	--	--	Decreased Hair Cystine	--	7.98E-03	--	--	7.98E-03	--	--	--			
Chemical Total				3.46E-06	7.81E-05	9.20E-07	8.25E-05	--	2.24E-01	3.15E+00	1.64E-02	3.39E+00	--	--			
Exposure Point Total								8.25E-05					3.39E+00				
Exposure Medium Total								8.25E-05					3.39E+00				
Medium Total								8.25E-05					3.39E+00				
Groundwater	Groundwater	Shallow Groundwater in Excavations 10ft bgs	Chloroform	--	--	1.21E-12	1.21E-12	Liver	Liver	--	--	5.46E-07	5.46E-07	--			
			Tetrachloroethene	--	--	1.62E-10	1.62E-10	Liver	Central Nervous System	--	--	4.21E-06	4.21E-06	--	--		
			Benzo(a)anthracene	--	--	3.53E-08	3.53E-08	--	--	--	--	--	--	--	--		
			Benzo(a)pyrene	--	--	6.04E-07	6.04E-07	--	--	--	--	--	--	--	--		
			Benzo(b)fluoranthene	--	--	9.97E-09	9.97E-09	--	--	--	--	--	--	--	--		
			Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--	--		
			Benzo(k)fluoranthene	--	--	8.99E-09	8.99E-09	--	--	--	--	--	--	--	--		
			Carbazole	--	--	1.26E-10	1.26E-10	--	--	--	--	--	--	--	--		
			Chrysene	--	--	4.41E-10	4.41E-10	--	--	--	--	--	--	--	--		
			Dibenzo(a,h)anthracene	--	--	2.33E-07	2.33E-07	--	--	--	--	--	--	--	--		
			Indeno(1,2,3-cd)pyrene	--	--	4.61E-08	4.61E-08	--	--	--	--	--	--	--	--		
			Naphthalene	--	--	--	--	--	Body Weight	Respiratory Epithelium	--	--	5.92E-07	5.92E-07	--		
			Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--		
			Dieldrin	--	--	2.54E-10	2.54E-10	--	Liver	--	--	--	4.45E-05	4.45E-05	--		
			Endosulfan I	--	--	--	--	--	--	--	--	--	--	--	--		

TABLE 9.4.1 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient							
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total		
Groundwater	Groundwater	Shallow Groundwater in Excavations 10ft bgs	Endrin aldehyde	--	--	--	--	--	--	--	--	--	--	--	
			Aroclor-1260	--	--	1.94E-07	1.94E-07	--	--	--	--	--	--	--	
			Aluminum	--	--	--	--	Central Nervous System	Psychomotor, Cognitive Impairment	--	--	1.69E-04	1.69E-04	--	
			Antimony	--	--	--	--	Longevity, Blood Guucose, Cholesterol	--	--	--	5.02E-04	5.02E-04	--	
			Arsenic	--	--	1.23E-09	1.23E-09	Skin	Developmental, Central Nervous System, Cardiovascular System	--	--	3.81E-04	3.81E-04	--	
			Barium	--	--	--	--	Kidneys	Developmental	--	--	3.52E-04	3.52E-04	--	
			Beryllium	--	--	--	--	Small Intestine	--	--	--	3.20E-04	3.20E-04	--	
			Cadmium	--	--	--	--	Kidneys	Kidneys	--	--	5.35E-04	5.35E-04	--	
			Chromium (VI)	--	--	3.88E-07	3.88E-07	No Observed Effects	Lungs	--	--	5.44E-03	5.44E-03	--	
			Cobalt	--	--	--	--	Iodine Uptake	Respiratory System	--	--	6.12E-06	6.12E-06	--	
			Copper	--	--	--	--	Gastrointestinal System	--	--	--	1.73E-05	1.73E-05	--	
			Lead	--	--	--	--	--	--	--	--	--	--	--	
			Manganese	--	--	--	--	Central Nervous System	Central Nervous System	--	--	2.60E-02	2.60E-02	--	
			Mercury	--	--	--	--	Immune System	Central Nervous System	--	--	1.99E-07	1.99E-07	--	
			Nickel	--	--	--	--	Body Weight	Respiratory System	--	--	1.39E-04	1.39E-04	--	
			Silver	--	--	--	--	Skin	--	--	--	8.19E-05	8.19E-05	--	
			Vanadium	--	--	--	--	Decreased Hair Cystine	--	--	--	9.90E-04	9.90E-04	--	
			Zinc	--	--	--	--	Decreases in erythrocyte Cu, Zn superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	--	--	4.86E-06	4.86E-06	--	
						Chemical Total	--	--	1.52E-06	1.52E-06	--	--	3.50E-02	3.50E-02	--
						Exposure Point Total					1.52E-06				
			Exposure Medium Total					1.52E-06					3.50E-02		
Medium Total							1.52E-06					3.50E-02			
							8.40E-05	Receptor HI Total				3.43E+00			

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	3.57E-02	--
Body Weight	1.39E-04	--
Cardiovascular System	--	9.19E-02
Central Nervous System	5.47E-02	2.46E+00
Cholesterol	3.57E-02	--
Decreased Hair Cystine	8.97E-03	--
Developmental	--	9.19E-02
Eyes	1.46E-02	--
Gastrointestinal System	8.08E-02	--

Target Organ	Oral / Dermal Risk	Inhalation Risk
Immune System	1.46E-02	--
Iodine Uptake	8.94E-04	--
Kidneys	9.18E-04	--
Liver	3.70E-04	--
Longevity	3.57E-02	--
Respiratory System	--	6.89E-01
Nails	1.46E-02	--
Skin	3.50E-02	--
No Observed Effect	4.30E-02	--

TABLE 9.5.1 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: Commercial / Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient									
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total				
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	--		
			Benzo(a)anthracene	3.29E-07	2.79E-11	2.82E-08	3.57E-07	--	--	--	--	--	--	--	--	--	
			Benzo(a)pyrene	3.11E-06	2.63E-10	2.67E-07	3.37E-06	--	--	--	--	--	--	--	--	--	--
			Benzo(b)fluoranthene	4.59E-07	3.88E-11	3.94E-08	4.98E-07	--	--	--	--	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Benzo(k)fluoranthene	2.06E-08	1.74E-11	1.77E-09	2.24E-08	--	--	--	--	--	--	--	--	--	--
			Bis(2-ethylhexyl)phthalate	5.54E-09	5.33E-13	3.66E-10	5.91E-09	Liver	--	2.10E-04	--	--	1.39E-05	--	2.24E-04	--	--
			Carbazole	8.30E-10	--	5.48E-11	8.85E-10	--	--	--	--	--	--	--	--	--	--
			Chrysene	3.45E-09	2.92E-12	2.96E-10	3.75E-09	--	--	--	--	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	2.71E-07	2.50E-11	2.32E-08	2.94E-07	--	--	--	--	--	--	--	--	--	--
			Dimethylphthalate	--	--	--	--	--	--	3.93E-06	--	--	2.60E-07	--	4.19E-06	--	--
			Di-n-octylphthalate	--	--	--	--	--	Kidneys, Liver	--	8.59E-06	--	5.67E-07	--	9.16E-06	--	--
			Indeno(1,2,3-cd)pyrene	1.43E-07	1.21E-11	1.22E-08	1.55E-07	--	--	--	--	--	--	--	--	--	--
			Naphthalene	--	4.91E-13	--	4.91E-13	Body Weight	Respiratory Epithelium	1.37E-05	5.11E-08	9.01E-07	1.46E-05	--	--	--	--
			Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Dieldrin	7.76E-09	1.25E-12	--	7.76E-09	Liver	--	1.03E-04	--	--	--	--	1.03E-04	--	--
			Endosulfan II	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Endosulfan sulfate	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Aroclor-1254	2.93E-08	4.68E-12	2.70E-09	3.20E-08	Eyes, Nails, Immune System	--	7.76E-03	--	--	7.17E-04	--	8.47E-03	--	--
			Aroclor-1260	3.64E-07	5.83E-11	3.36E-08	3.98E-07	--	--	--	--	--	--	--	--	--	--
			Aluminum	--	--	--	--	Central Nervous System	Psychomotor, Cognitive Impairment	4.49E-03	5.04E-04	--	4.99E-03	--	--	--	--
			Antimony	--	--	--	--	Longevity, Blood Glucose, Cholesterol	--	2.06E-02	--	--	2.06E-02	--	--	--	--
			Arsenic	5.48E-07	8.82E-10	1.08E-08	5.60E-07	Skin	Developmental, Central Nervous System, Cardiovascular System	1.29E-02	1.45E-04	2.56E-04	1.33E-02	--	--	--	--
			Barium	--	--	--	--	Kidneys	Developmental	8.94E-04	2.01E-04	--	1.10E-03	--	--	--	--
			Cadmium	--	1.77E-10	--	1.77E-10	Kidneys	Kidneys	3.72E-03	1.04E-04	4.90E-05	3.87E-03	--	--	--	--
			Chromium (VI)	2.31E-05	2.18E-06	--	2.52E-05	No Observed Effects	Lungs	1.63E-01	2.75E-03	--	1.66E-01	--	--	--	--
			Cobalt	--	2.07E-09	--	2.07E-09	Iodine Uptake	Respiratory System	1.45E-02	4.06E-04	--	1.49E-02	--	--	--	--
			Copper	--	--	--	--	Gastrointestinal System	--	1.17E-02	--	--	1.17E-02	--	--	--	--
			Iron	--	--	--	--	Gastrointestinal System	--	2.71E-02	--	--	2.71E-02	--	--	--	--
			Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Manganese	--	--	--	--	Central Nervous System	Central Nervous System	1.33E-02	3.60E-03	--	1.69E-02	--	--	--	--
			Mercury	--	--	--	--	Immune System	Central Nervous System	7.69E-04	4.32E-07	--	7.69E-04	--	--	--	--
			Nickel	--	4.99E-10	--	4.99E-10	Body Weight	Respiratory System	1.21E-03	2.26E-04	--	1.43E-03	--	--	--	--
			Silver	--	--	--	--	Skin	--	4.84E-04	--	--	4.84E-04	--	--	--	--
			Thallium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
			Vanadium	--	--	--	--	Decreased Hair Cystine	--	6.01E-03	--	--	6.01E-03	--	--	--	--
			Zinc	--	--	--	--	Decreases in erythrocyte Cu, Zn superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	1.94E-03	--	--	1.94E-03	--	--	--	--
			Chemical Total				2.84E-05	2.18E-06	4.19E-07	3.10E-05			2.91E-01	7.93E-03	1.04E-03	3.00E-01	
Exposure Point Total								3.10E-05					3.00E-01				
Exposure Medium Total								3.10E-05					3.00E-01				
Medium Total								3.10E-05					3.00E-01				

TABLE 9.5.1 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Leachate	Leachate	On-Site Leachate Areas	Chloroform	2.82E-11	--	3.50E-10	3.78E-10	Liver	Liver	9.64E-07	--	1.20E-05	1.29E-05
			Benzo(a)anthracene	5.90E-09	--	1.02E-05	1.02E-05	--	--	--	--	--	--
			Benzo(a)pyrene	5.90E-08	--	1.75E-04	1.75E-04	--	--	--	--	--	--
			Benzo(b)fluoranthene	9.59E-10	--	2.88E-06	2.88E-06	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--
			Benzo(k)fluoranthene	8.85E-10	--	2.60E-06	2.60E-06	--	--	--	--	--	--
			Carbazole	2.83E-10	--	3.65E-08	3.68E-08	--	--	--	--	--	--
			Chrysene	7.37E-11	--	1.27E-07	1.27E-07	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	1.47E-08	--	6.75E-05	6.75E-05	--	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	4.42E-09	--	1.33E-05	1.33E-05	--	--	--	--	--	--
			Naphthalene	--	--	--	--	Body Weight	Respiratory Epithelium	4.29E-06	--	3.89E-04	3.93E-04
			Phenanthrene	--	--	--	--	--	--	--	--	--	--
			alpha-Chlordane	--	--	--	--	--	--	--	--	--	--
			Dieldrin	7.76E-10	--	7.35E-08	7.42E-08	Liver	--	1.03E-05	--	9.74E-04	9.84E-04
			Aroclor-1260	2.18E-09	--	5.60E-05	5.60E-05	--	--	--	--	--	--
			Aluminum	--	--	--	--	Central Nervous System	Psychomotor, Cognitive Impairment	1.95E-04	--	1.29E-04	3.24E-04
			Arsenic	1.76E-07	--	1.16E-07	2.92E-07	Skin	Developmental, Central Nervous System, Cardiovascular System	4.14E-03	--	2.73E-03	6.88E-03
			Barium	--	--	--	--	Kidneys	Developmental	8.68E-05	--	8.18E-04	9.05E-04
			Cadmium	--	--	--	--	Kidneys	Kidneys	4.29E-04	--	5.66E-03	6.09E-03
			Chromium (VI)	1.11E-07	--	5.87E-06	5.98E-06	No Observed Effects	Lungs	7.86E-04	--	4.15E-02	4.23E-02
			Copper	--	--	--	--	Gastrointestinal System	--	4.45E-04	--	2.93E-04	7.38E-04
			Iron	--	--	--	--	Gastrointestinal System	--	1.65E-03	--	1.09E-03	2.74E-03
			Lead	--	--	--	--	--	--	--	--	--	--
			Manganese	--	--	--	--	Central Nervous System	Central Nervous System	7.19E-04	--	1.19E-02	1.26E-02
			Nickel	--	--	--	--	Body Weight	Respiratory System	7.14E-05	--	2.36E-04	3.07E-04
			Vanadium	--	--	--	--	Decreased Hair Cystine	--	4.29E-04	--	1.09E-02	1.13E-02
			Zinc	--	--	--	--	Decreases in erythrocyte Cu, Zn superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	3.79E-04	--	1.50E-04	5.28E-04
			Chemical Total	3.76E-07	--	3.33E-04	3.34E-04			9.35E-03	--	7.67E-02	8.61E-02
		Exposure Point Total					3.34E-04						8.61E-02
	Exposure Medium Total						3.34E-04						8.61E-02
Medium Total							3.34E-04						8.61E-02
							3.65E-04				Receptor HI Total		3.86E-01

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	2.30E-02	--
Body Weight	1.92E-03	--
Cardiovascular System	--	1.45E-04
Central Nervous System	3.07E-02	4.75E-03
Cholesterol	2.06E-02	--
Decreased Hair Cystine	1.73E-02	--
Developmental	--	3.46E-04
Eyes	8.47E-03	--
Gastrointestinal System	4.23E-02	--

Target Organ	Oral / Dermal Risk	Inhalation Risk
Immune System	9.24E-03	--
Iodine Uptake	1.45E-02	--
Kidneys	1.17E-02	1.04E-04
Liver	1.33E-03	--
Longevity	2.06E-02	--
Respiratory System	--	3.38E-03
Nails	8.47E-03	--
Skin	2.05E-02	--
No Observed Effect	2.05E-01	--

TABLE 9.6.1 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Resident (off site)
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient						
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--	
			Benzo(a)anthracene	--	--	--	--	--	--	
			Benzo(a)pyrene	--	--	--	--	--	--	
			Benzo(b)fluoranthene	--	--	--	--	--	--	
			Benzo(g,h,i)perylene	--	--	--	--	--	--	
			Carbazole	--	--	--	--	--	--	
			Dibenzo(a,h)anthracene	--	--	--	--	--	--	
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--	
			Phenanthrene	--	--	--	--	--	--	
			delta-BHC	--	--	--	--	--	--	
			Endosulfan II	--	--	--	--	--	--	
			Endrin aldehyde	--	--	--	--	--	--	
			Endrin ketone	--	--	--	--	--	--	
			gamma-Chlordane	--	--	--	--	--	--	
			Aroclor-1260	--	--	--	--	--	--	
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	4.49E-03	1.51E-03	--	6.00E-03	
			Antimony	Longevity, Blood Glucose, Cholesterol	--	9.40E-01	--	--	9.40E-01	
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	1.53E-02	5.14E-04	5.22E-04	1.63E-02	
			Barium	Kidneys	Developmental	1.83E-03	1.24E-03	--	3.07E-03	
			Cadmium	Kidneys	Kidneys	1.90E-03	1.60E-04	4.33E-05	2.10E-03	
			Chromium (VI)	No Observed Effects	Lungs	2.94E-03	1.49E-04	--	3.09E-03	
			Cobalt	Iodine Uptake	Respiratory System	1.47E-02	1.24E-03	--	1.59E-02	
			Copper	Gastrointestinal System	--	2.78E-03	--	--	2.78E-03	
			Iron	Gastrointestinal System	--	1.83E-02	--	--	1.83E-02	
			Lead	--	--	--	--	--	--	
			Manganese	Central Nervous System	Central Nervous System	1.66E-02	1.35E-02	--	3.01E-02	
			Mercury	Immune System	Central Nervous System	6.03E-04	1.02E-06	--	6.04E-04	
Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	3.59E-03	--	--	3.59E-03				
			Chemical Total			1.02E+00	1.83E-02	5.65E-04	1.04E+00	
			Exposure Point Total							1.04E+00
			Exposure Medium Total							1.04E+00
			Medium Total							1.04E+00
									Receptor HI Total	1.04E+00

TABLE 9.6.1 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	9.44E-01	--	Immune System	6.03E-04	--
Body Weight	--	--	Iodine Uptake	1.47E-02	--
Cardiovascular System	--	5.14E-04	Kidneys	3.78E-03	1.60E-04
Central Nervous System	2.11E-02	1.70E-02	Liver	--	--
Cholesterol	9.40E-01	--	Longevity	9.40E-01	--
Decreased Hair Cystine	--	--	Respiratory System	--	1.38E-03
Developmental	--	1.75E-03	Nails	--	--
Eyes	--	--	Skin	1.58E-02	--
Gastrointestinal System	2.11E-02	--	No Observed Effects	2.94E-03	--

TABLE 9.6.2 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Resident (off site)
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Acenaphthylene	--	--	--	--	--	--
			Benzo(a)anthracene	--	--	--	--	--	--
			Benzo(a)pyrene	--	--	--	--	--	--
			Benzo(b)fluoranthene	--	--	--	--	--	--
			Benzo(g,h,i)perylene	--	--	--	--	--	--
			Carbazole	--	--	--	--	--	--
			Dibenzo(a,h)anthracene	--	--	--	--	--	--
			Indeno(1,2,3-cd)pyrene	--	--	--	--	--	--
			Phenanthrene	--	--	--	--	--	--
			delta-BHC	--	--	--	--	--	--
			Endosulfan II	--	--	--	--	--	--
			Endrin aldehyde	--	--	--	--	--	--
			Endrin ketone	--	--	--	--	--	--
			gamma-Chlordane	--	--	--	--	--	--
			Aroclor-1260	--	--	--	--	--	--
			Aluminum	Central Nervous System	Psychomotor, Cognitive Impairment	4.19E-02	1.51E-03	--	4.34E-02
			Antimony	Longevity, Blood Glucose, Cholesterol	--	8.78E+00	--	--	8.78E+00
			Arsenic	Skin	Developmental, Central Nervous System, Cardiovascular System	1.43E-01	5.14E-04	4.79E-03	1.48E-01
			Barium	Kidneys	Developmental	1.71E-02	1.24E-03	--	1.84E-02
			Cadmium	Kidneys	Kidneys	1.77E-02	1.60E-04	3.97E-04	1.83E-02
			Chromium (VI)	No Observed Effects	Lungs	2.75E-02	1.49E-04	--	2.76E-02
			Cobalt	Iodine Uptake	Respiratory System	1.37E-01	1.24E-03	--	1.38E-01
			Copper	Gastrointestinal System	--	2.60E-02	--	--	2.60E-02
			Iron	Gastrointestinal System	--	1.71E-01	--	--	1.71E-01
			Lead	--	--	--	--	--	--
			Manganese	Central Nervous System	Central Nervous System	1.55E-01	1.35E-02	--	1.69E-01
			Mercury	Immune System	Central Nervous System	5.63E-03	1.02E-06	--	5.63E-03
Zinc	Decreases in erythrocyte Cu, Zn-superoxide dismutase (ESOD) activity in healthy adult male and female volunteers	--	3.35E-02	--	--	3.35E-02			
Chemical Total					9.55E+00	1.83E-02	5.19E-03	9.57E+00	
Exposure Point Total								9.57E+00	
Exposure Medium Total								9.57E+00	
Medium Total								9.57E+00	
								Receptor HI Total	9.57E+00

TABLE 9.6.2 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	8.81E+00	--	Immune System	5.63E-03	--
Body Weight	--	--	Iodine Uptake	1.37E-01	--
Cardiovascular System	--	5.14E-04	Kidneys	3.52E-02	1.60E-04
Central Nervous System	1.97E-01	1.70E-02	Liver	--	--
Cholesterol	8.78E+00	--	Longevity	8.78E+00	--
Decreased Hair Cystine	--	--	Respiratory System	--	1.38E-03
Developmental	--	1.75E-03	Nails	--	--
Eyes	--	--	Skin	1.47E-01	--
Gastrointestinal System	1.97E-01	--	No Observed Effects	2.75E-02	--

TABLE 9.6.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Resident (off site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface soil (0-2 ft)	Residences A-I (0-2 ft, off-site) & Ambient Air	Acenaphthylene	--	--	--	--
			Benzo(a)anthracene	5.30E-07	2.18E-11	9.27E-08	6.23E-07
			Benzo(a)pyrene	4.80E-06	1.97E-10	8.40E-07	5.64E-06
			Benzo(b)fluoranthene	1.27E-06	5.20E-11	2.22E-07	1.49E-06
			Benzo(g,h,i)perylene	--	--	--	--
			Carbazole	8.18E-10	--	9.18E-11	9.10E-10
			Dibenzo(a,h)anthracene	2.47E-06	1.11E-10	4.33E-07	2.91E-06
			Indeno(1,2,3-cd)pyrene	3.04E-07	1.25E-11	5.32E-08	3.57E-07
			Phenanthrene	--	--	--	--
			delta-BHC	--	--	--	--
			Endosulfan II	--	--	--	--
			Endrin aldehyde	--	--	--	--
			Endrin ketone	--	--	--	--
			gamma-Chlordane	--	--	--	--
			Aroclor-1260	1.06E-07	1.17E-11	1.66E-08	1.22E-07
			Aluminum	--	--	--	--
			Antimony	--	--	--	--
			Arsenic	6.38E-06	7.11E-09	2.15E-07	6.60E-06
			Barium	--	--	--	--
			Cadmium	--	6.16E-10	--	6.16E-10
Chromium (VI)	3.33E-14	1.27E-06	--	1.27E-06			
Cobalt	--	1.43E-08	--	1.43E-08			

TABLE 9.6.3 CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface soil (0-2 ft)	Residences A-I (0-2 ft, off-site) & Ambient Air	Copper	--	--	--	--
			Iron	--	--	--	--
			Lead	--	--	--	--
			Manganese	--	--	--	--
			Mercury	--	--	--	--
			Zinc	--	--	--	--
			Chemical Total	1.59E-05	1.29E-06	1.87E-06	1.90E-05
			Exposure Point Total				1.90E-05
Exposure Medium Total				1.90E-05			
Medium Total				1.90E-05			
							1.90E-05

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 10.1.3 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Current
Receptor Population:	Trespasser
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Benzo(a)anthracene	4.00E-06	1.37E-11	7.00E-07	4.70E-06
			Benzo(a)pyrene	3.77E-05	1.29E-10	6.60E-06	4.43E-05
			Benzo(b)fluoranthene	5.57E-06	1.91E-11	9.75E-07	6.55E-06
			Dibenzo(a,h)anthracene	3.29E-06	1.23E-11	5.76E-07	3.87E-06
			Indeno(1,2,3-cd)pyrene	1.73E-06	5.92E-12	3.03E-07	2.03E-06
			Arsenic	9.86E-07	9.15E-11	3.32E-08	1.02E-06
			Chromium (VI)	2.80E-04	1.07E-06	--	2.81E-04
			Chemical Total	3.35E-04	1.07E-06	9.35E-06	3.45E-04
			Exposure Point Total				3.45E-04
			Exposure Medium Total				3.45E-04
Medium Total				3.45E-04			
Leachate	Leachate	On-Site Leachate Areas	Benzo(a)anthracene	4.09E-08	--	6.64E-05	6.65E-05
			Benzo(a)pyrene	4.09E-07	--	1.14E-03	1.14E-03
			Benzo(b)fluoranthene	6.65E-09	--	1.88E-05	1.88E-05
			Benzo(k)fluoranthene	5.89E-09	--	1.62E-05	1.63E-05
			Dibenzo(a,h)anthracene	1.02E-07	--	4.40E-04	4.40E-04
			Indeno(1,2,3-cd)pyrene	3.07E-08	--	8.68E-05	8.68E-05
			Aroclor-1260	2.20E-09	--	6.09E-05	6.09E-05
			Chromium (VI)	7.71E-07	--	3.82E-05	3.90E-05
			Chemical Total	1.55E-06	--	1.87E-03	1.87E-03
			Exposure Point Total				1.87E-03
Exposure Medium Total				1.87E-03			
Medium Total				1.87E-03			
				2.21E-03			

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 10.2.3 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Recreator
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0 - 2ft) & Ambient Air	Benzo(a)anthracene	4.00E-06	1.37E-11	7.00E-07	4.70E-06
			Benzo(a)pyrene	3.77E-05	1.29E-10	6.60E-06	4.43E-05
			Benzo(b)fluoranthene	5.57E-06	1.91E-11	9.75E-07	6.55E-06
			Dibenzo(a,h)anthracene	3.29E-06	1.23E-11	5.76E-07	3.87E-06
			Indeno(1,2,3-cd)pyrene	1.73E-06	5.92E-12	3.03E-07	2.03E-06
			Arsenic	9.86E-07	1.83E-10	3.32E-08	1.02E-06
			Chromium (VI)	2.80E-04	1.07E-06	--	2.81E-04
			Chemical Total	3.35E-04	1.07E-06	9.35E-06	3.45E-04
			Exposure Point Total				3.45E-04
			Exposure Medium Total				3.45E-04
Medium Total				3.45E-04			
Leachate	Leachate	On-Site Leachate Areas	Benzo(a)anthracene	4.09E-08	--	6.64E-05	6.65E-05
			Benzo(a)pyrene	4.09E-07	--	1.14E-03	1.14E-03
			Benzo(b)fluoranthene	6.65E-09	--	1.88E-05	1.88E-05
			Benzo(k)fluoranthene	5.89E-09	--	1.62E-05	1.63E-05
			Dibenzo(a,h)anthracene	1.02E-07	--	4.40E-04	4.40E-04
			Indeno(1,2,3-cd)pyrene	3.07E-08	--	8.68E-05	8.68E-05
			Aroclor-1260	2.20E-09	--	6.09E-05	6.09E-05
			Chromium (VI)	7.71E-07	--	3.82E-05	3.90E-05
			Chemical Total	1.55E-06	--	1.87E-03	1.87E-03
			Exposure Point Total				1.87E-03
Exposure Medium Total				1.87E-03			
Medium Total				1.87E-03			

TABLE 10.2.3 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment in Beer Kill	Beer Kill Creek					
			Chemical Total	2.90E-06	--	4.83E-08	2.95E-06
	Exposure Point Total						2.95E-06
	Exposure Medium Total						2.95E-06
Medium Total							2.95E-06
Surface Water	Surface Water in Beer Kill Creek	Beer Kill Creek					
			Chemical Total	--	--	--	--
	Exposure Point Total						--
	Exposure Medium Total						--
Medium Total							--
Total of Receptor Risks Across All Media							2.22E-03

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 10.3.1 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0 - 2ft) & Ambient Air							
			Chemical Total			4.65E-01	3.80E-02	2.86E-03	5.06E-01
		Exposure Point Total						5.06E-01	
		Exposure Medium Total						5.06E-01	
Medium Total									5.06E-01
Leachate	Leachate	On-Site Leachate Areas							
			Chemical Total			1.49E-02	--	2.12E-01	2.27E-01
		Exposure Point Total						2.27E-01	
		Exposure Medium Total						2.27E-01	
Medium Total									2.27E-01
								Receptor HI Total	7.32E-01

TABLE 10.3.2 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	On-Site Surface Soil (0 - 2ft) & Ambient Air	Chromium (VI)	No Observed Effects	Lungs	2.43E+00	1.32E-02	--	2.45E+00
			Chemical Total			4.34E+00	3.80E-02	2.63E-02	4.40E+00
	Exposure Point Total							4.40E+00	
	Exposure Medium Total							4.40E+00	
Medium Total									
Leachate	Leachate	On-Site Leachate Areas							
			Chemical Total			6.97E-02	--	4.85E-01	5.55E-01
	Exposure Point Total							5.55E-01	
	Exposure Medium Total							5.55E-01	
Medium Total									
								Receptor HI Total	4.96E+00

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	--	--	Immune System	--	--
Body Weight	--	--	Iodine Uptake	--	--
Cardiovascular System	--	--	Kidneys	--	--
Central Nervous System	--	--	Liver	--	--
Cholesterol	--	--	Longevity	--	--
Decreased Hair Cystine	--	--	Respiratory System	--	--
Developmental	--	--	Nails	--	--
Eyes	--	--	Skin	--	--
Gastrointestinal System	--	--	No Observed Effects	2.43E+00	--

TABLE 10.3.3 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Future
Receptor Population:	Resident (on-site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0-2ft bgs) & Ambient Air	Benzo(a)anthracene	3.50E-05	1.44E-09	6.02E-06	4.10E-05
			Benzo(a)pyrene	3.30E-04	1.36E-08	5.68E-05	3.87E-04
			Benzo(b)fluoranthene	4.88E-05	2.00E-09	8.38E-06	5.72E-05
			Benzo(k)fluoranthene	2.10E-06	8.99E-10	3.61E-07	2.46E-06
			Dibenzo(a,h)anthracene	2.88E-05	1.29E-09	4.95E-06	3.37E-05
			Indeno(1,2,3-cd)pyrene	1.52E-05	6.22E-10	2.61E-06	1.78E-05
			Aroclor-1260	5.73E-06	6.35E-10	9.01E-07	6.63E-06
			Arsenic	8.62E-06	9.61E-09	2.90E-07	8.92E-06
			Chromium (VI)	2.45E-03	1.12E-04	--	2.57E-03
			Chemical Total	2.93E-03	1.12E-04	8.04E-05	3.12E-03
Exposure Point Total			3.12E-03				
Exposure Medium Total			3.12E-03				
Medium Total			3.12E-03				
Leachate	Leachate	On-Site Leachate Areas	Benzo(a)anthracene	3.58E-07	--	5.81E-04	5.82E-04
			Benzo(a)pyrene	3.58E-06	--	9.96E-03	9.97E-03
			Benzo(b)fluoranthene	5.82E-08	--	1.64E-04	1.64E-04
			Benzo(k)fluoranthene	5.15E-08	--	1.42E-04	1.42E-04
			Chrysene	4.48E-09	--	7.26E-06	7.27E-06
			Dibenzo(a,h)anthracene	8.95E-07	--	3.85E-03	3.85E-03
			Indeno(1,2,3-cd)pyrene	2.69E-07	--	7.59E-04	7.60E-04
			Aroclor-1260	1.92E-08	--	5.33E-04	5.33E-04
			Arsenic	1.55E-06	--	1.10E-06	2.65E-06
			Chromium (VI)	6.74E-06	--	3.35E-04	3.41E-04
Chemical Total	1.35E-05	--	1.63E-02	1.63E-02			
Exposure Point Total			1.63E-02				
Exposure Medium Total			1.63E-02				
Medium Total			1.63E-02				
			1.95E-02				

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

TABLE 10.4.1 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: Construction / Utility Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Subsurface Soil (0 - 10 ft)	On-Site Subsurface	Manganese	--	--	--	--	Central Nervous System	Central Nervous System	2.86E-02	2.37E+00	--	2.40E+00
		Soil (0 - 10ft) & Ambient Air	Chemical Total	3.46E-06	7.81E-05	9.20E-07	8.25E-05			2.24E-01	3.15E+00	1.64E-02	3.39E+00
		Exposure Point Total				8.25E-05							3.39E+00
		Exposure Medium Total				8.25E-05							3.39E+00
Medium Total							8.25E-05						3.39E+00
Groundwater	Groundwater	Shallow Groundwater in Excavations to 10ft		--	--	1.52E-06	1.52E-06			--	--	3.50E-02	3.50E-02
		Chemical Total				1.52E-06						3.50E-02	
		Exposure Point Total				1.52E-06						3.50E-02	
		Exposure Medium Total				1.52E-06						3.50E-02	
Medium Total							1.52E-06						3.50E-02
							8.40E-05						Receptor HI Total 3.43E+00

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.

Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	--	--
Body Weight	--	--
Cardiovascular System	--	--
Central Nervous System	--	2.37E+00
Cholesterol	--	--
Decreased Hair Cystine	--	--
Developmental	--	--
Eyes	--	--
Gastrointestinal System	--	--
Immune System	--	--
Iodine Uptake	--	--
Kidneys	--	--
Liver	--	--
Longevity	--	--
Respiratory System	--	--
Nails	--	--
Skin	--	--
No Observed Effect	--	--

TABLE 10.5.1 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe: Future
Receptor Population: Commercial / Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient					
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	On-Site Surface Soil (0 to 2ft bgs)	On-Site Surface Soil (0 - 2ft)											
		& Ambient Air	Chemical Total	2.84E-05	2.18E-06	4.19E-07	3.10E-05			2.91E-01	7.93E-03	1.04E-03	3.00E-01
		Exposure Point Total				3.10E-05						3.00E-01	
		Exposure Medium Total				3.10E-05						3.00E-01	
Medium Total							3.10E-05					3.00E-01	
Leachate	Leachate	On-Site Leachate Areas	Benzo(a)anthracene	5.90E-09	--	1.02E-05	1.02E-05	--	--	--	--	--	
			Benzo(a)pyrene	5.90E-08	--	1.75E-04	1.75E-04	--	--	--	--	--	
			Benzo(b)fluoranthene	9.59E-10	--	2.88E-06	2.88E-06	--	--	--	--	--	
			Benzo(k)fluoranthene	8.85E-10	--	2.60E-06	2.60E-06	--	--	--	--	--	
			Dibenzo(a,h)anthracene	1.47E-08	--	6.75E-05	6.75E-05	--	--	--	--	--	
			Indeno(1,2,3-cd)pyrene	4.42E-09	--	1.33E-05	1.33E-05	--	--	--	--	--	
			Aroclor-1260	2.18E-09	--	5.60E-05	5.60E-05	--	--	--	--	--	
			Chromium (VI)	1.11E-07	--	5.87E-06	5.98E-06	--	--	--	--	--	
				Chemical Total	3.76E-07	--	3.33E-04	3.34E-04			9.35E-03	--	7.67E-02
			Exposure Point Total				3.34E-04						8.61E-02
	Exposure Medium Total				3.34E-04						8.61E-02		
Medium Total							3.34E-04				8.61E-02		
							3.65E-04				Receptor HI Total	3.86E-01	

TABLE 10.6.1 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Resident (off site)
Receptor Age:	Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient					
				Primary Target Organs(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0 - 2ft) & Ambient Air							
			Chemical Total			1.02E+00	1.83E-02	5.65E-04	1.04E+00
		Exposure Point Total						1.04E+00	
		Exposure Medium Total						1.04E+00	
Medium Total								1.04E+00	
								Receptor HI Total	1.04E+00

TABLE 10.6.2 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Resident (off site)
Receptor Age:	Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Non-Carcinogenic Hazard Quotient						
				Primary Target Organ(s) Oral, Dermal	Primary Target Organ(s) Inhalation	Ingestion	Inhalation	Dermal	Exposure Routes Total	
Soil	Surface Soil (0 - 2 ft)	On-Site Surface Soil (0 - 2ft) & Ambient Air	Antimony	Longevity, Blood Glucose, Cholesterol	--	8.78E+00	--	--	8.78E+00	
			Chemical Total			9.55E+00	1.83E-02	5.19E-03	9.57E+00	
		Exposure Point Total								9.57E+00
		Exposure Medium Total								9.57E+00
Medium Total										9.57E+00
								Receptor HI Total	9.57E+00	

Target Organ	Oral / Dermal Risk	Inhalation Risk	Target Organ	Oral / Dermal Risk	Inhalation Risk
Blood Effects	8.78E+00	--	Immune System	--	--
Body Weight	--	--	Iodine Uptake	--	--
Cardiovascular System	--	--	Kidneys	--	--
Central Nervous System	--	--	Liver	--	--
Cholesterol	8.78E+00	--	Longevity	8.78E+00	--
Decreased Hair Cystine	--	--	Respiratory System	--	--
Developmental	--	--	Nails	--	--
Eyes	--	--	Skin	--	--
Gastrointestinal System	--	--	No Observed Effects	--	--

TABLE 10.6.3 CTE
RISK SUMMARY
CENTRAL TENDENCY EXPOSURE
Ellenville Scrap Iron and Metal Site
008-RICO-02LX

Scenario Timeframe:	Current / Future
Receptor Population:	Resident (off site)
Receptor Age:	Child / Adult Aggregate

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface soil (0-2 ft)	Residences A-I (0-2 ft, off-site) & Ambient Air					
			Chemical Total	1.59E-05	1.29E-06	1.87E-06	1.90E-05
		Exposure Point Total				1.90E-05	
		Exposure Medium Total				1.90E-05	
Medium Total							1.90E-05
							1.90E-05

Note: For MMOA chemicals, aggregate risks from Table 7s were imported above.