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FINAL

REMEDIAL INVESTIGATION REPORT FOR THE CAMP SUMMIT SITE FULTON, NEW YORK

NYSDEC SITE NO. 4-48-006

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1.0 INTRODUCTION

1.1 Background

Camp Summit (the Site) is a large complex for the New York State Department of Environmental Conservation (NYSDEC) crew headquarters and a New York State Department of Correctional Services (NYSDCS) active incarceration facility. The incarceration facility is operated by the NYSDCS but is located on property managed by the NYSDEC. Work activities formerly performed by the inmates at the Site included the operation of a sawmill and wood treatment facility. Wood treatment operations were conducted from approximately 1962 until 1975. The Site is located in the Town of Fulton, Schoharie County, New York (**Figure 1**).

The operation of the wood treatment facility and sawmill provided lumber and round poles for NYSDEC construction and maintenance projects. The pole treatment plant pre-dates the Division of Operations and was originally under the jurisdiction of the Division of Lands and Forests, Regional Forester. The pole treatment plant is no longer operational.

The pole treatment plant was constructed from 1962 to 1964 and designed as a dip tank process. Initial treatment, which began during the fall of 1964, and continued for approximately one year, used copper napthenate. The process consisted of soaking poles and lumber in copper naphthenate-filled dip tanks, hanging the wood over the tanks to allow a majority of the treating material to drip off, and transporting the treated wood on a small rail cart to drip and dry in a staging area outside the building.

Pentachlorophenol (PCP) was recommended for the use in late 1965 or early 1966 to replace the copper naphthenate. PCP was mixed with fuel oil at an approximate ratio of one to eleven (1/11), and poles were treated in a manner identical to the copper naphthenate process. The plant was shut down in July of 1975 due to fish kill in the on-site pond, resulting from the flow of product through the pond to Panther Creek. The camp water supply was tested in November 1975 and found not to contain PCP. The remaining PCP product and PCP dip tanks were transferred off-site in July 1977.

Following the discontinuation of wood treatment activities, several incidents involving the potential exposure of employees to contaminants from the wood treatment process were reported by NYSDEC employees (NYSDEC *"Preliminary Investigation Report",* September

1998). In October 1997 the Division of Operations recommended that the NYSDEC perform a preliminary investigation and sampling of the water supply well at the Site.

Representatives from the Divisions of Operations, Environmental Enforcement, and Environmental Remediation participated in a site walkover as part of a scoping effort for future investigations. The Division of Operations requested the assistance of the Division of Environmental Remediation in the investigation of the Site in January 1998. As a result of this request, the Division of Environmental Remediation initiated a Preliminary Investigation (PI) at the Site. Based on the findings of this PI, it was concluded that the Site should be added to the State's Registry of Inactive Hazardous Waste Disposal Sites. In December of 1999, the Site was listed on the Registry as a Class 2 Site. A Class 2 Site represents a "significant threat" to public health and/or the environment.

NYSDEC conducted a PI of the Site in 1998. Results of the PI can be found in the *Preliminary Investigation Report* dated August 1998 and the *Supplemental PI* dated June 1999. Shaw Environmental and Infrastructure Engineering of New York, P.C. (Shaw), formerly the IT Corporation, prepared a *Remedial Investigation and Feasibility Study (RI/FS) Work Plan* (dated October 4, 2001) and conducted the associated field activities between November 2001 and January 2002. Shaw conducted additional remedial investigation activities at the Site between July 21 and July 30, 2003. These remedial investigation activities included the advancement of nine soil borings (three of which became monitoring wells), excavation of 11 test pits and the collection of four sediment samples from the seasonal overflow area, 10 background samples from locations removed from daily facility operations, and 10 samples from existing and newly-installed monitoring wells. This remedial investigation was completed to collect data to further characterize site conditions, determine the lateral and vertical distribution of the Contaminants of Concern (COCs), to accurately evaluate the potential risk to human health and/or the environment, and to determine the potential need for remedial action. The results of all Site investigative activities are discussed in the remaining portions of this report.

1.2 Objectives

The objective of this Remedial Investigation (RI) Report is to present the investigative tasks and technologies that were used to complete the remedial investigation at the Site and present the results of those investigations. In addition, the results from the Human Health Qualitative Exposure Assessment (QEA) and Step IIA Fish and Wildlife Impact Analysis (FWIA) are presented. Conclusions and Recommendations are presented based on the results of both the PI and this RI.

1.3 Site Location

The Site is located in the Town of Fulton, Schoharie County, NY. More specifically, the Site is located in a New York State Reforestation Area known as the Schoharie County Reforestation Area No. 6, Proposal G located in a rural area in the foothills of the Catskill Mountains (**Figure 1**). The property includes the former wood treatment area, the satellite areas off of the access road to the shooting ranges, and the incarceration facility. The incarceration facility is operated by the NYSDCS, but is located on property under the jurisdiction of the NYSDEC Division of Lands and Forests. The Site is bordered on the southeast by additional New York State land. The remainder of the property is bordered by private property, some of which is used for residential purposes. The local topography is characteristic of a former glaciated region, with hills and valleys. An on-site pond feeds a tributary of Panther Creek. The tributary is a Class C (fish propagation) stream and Panther Creek is a Class C (TS) (trout spawning) stream. A NYSDEC Regulated Wetland is located approximately 0.5 miles southeast of the Site.

1.4 Summary of Previous Investigations

In April of 1998 the NYSDEC finalized a work plan for the PI of the Site. The PI was planned in response to reports of the use of PCP as part of the historic wood treatment operations that were conducted at the Site. The objective of the PI was to determine whether hazardous waste was disposed at the Site and evaluate the extent of that contamination, if existing. The PI was initiated in April 1998; the final PI Report was issued by the NYSDEC in June 1999. Data generated from this report is included on **Tables 1** through **7** and **Figures 2** through **7** for comparison and discussion purposes.

1.5 Contaminants of Concern

Based on the NYSDEC's review of the treatment process at the plant and the results from the preliminary investigation, the COCs for this investigation included:

- PCP
- Fuel Oil
- Dioxins
- Furans
- Copper Napthenate

The PCP solutions used in the wood preserving process were prepared by dissolving technical grade PCP in fuel oil to produce a solution that was 4 to 8 % PCP. Technical grade PCP contained 85-90 % PCP, 2 to 6 % higher molecular weight chlorophenols, 4 to 8 % 2,3,4,6-tetrachlorophenol, and about 0.1 % tetrachlorodibenzo-p-dioxins (dioxins) and tetrachlorodibenzofurans (furans). The possible presence of dioxins and furans in PCP solutions pose the most concern to human health and the environment. PCP is slightly soluble in water (8 mg per 100 mL) and adheres strongly to soils (based on organic content, pH, and soil type). Discarded, unused formulations of PCP are regulated as acute hazardous waste (F027 waste) under RCRA. Waste waters, process residue, preservative drippings, and spent formulations from the wood preserving processes are listed as F032 waste and bottom sediment sludges from the treatment of the waste waters are listed as K001 waste.

The terms dioxin and furan refer to two classes of organic compounds. Dioxins and furans are found in technical grade PCP, and therefore could be expected to be present in areas that contain PCP. The polychlorinated dibenzo-p-dioxin (PCDD) molecule is composed of two benzene rings held together by two oxygen bridges. Chlorine atoms may be substituted for hydrogen at any of the eight positions on the benzene rings. The number and positions of the chlorine atoms determine the toxicity of the molecule. There are 75 possible configurations of dioxin, called congeners. Different configurations with the same number of substituted chlorine atoms are referred to as isomers. The most toxic dioxin congener is 2,3,7,8 tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). Dioxin congeners with fewer than four substituted chlorine atoms are generally less toxic than the other, more highly substituted congeners.

Dioxins and furans are compounds that form as byproducts during the production of certain chlorophenolic chemicals. The dioxin congener that poses the greatest risk, 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), has not been found in PCP produced in the United States. Dioxins and furans display a very low solubility in water, adsorb strongly to organic matter, and are persistent under ambient environmental conditions. Dioxins and furans migrate primarily through the movement of particulate matter (ex: dust generated by earth moving activities or sediments carried by water) and are also transported by the migration of organic solvents and carrier oils. Since the primary source of dioxins and furans at wood preserving sites is discharged PCP, these compounds can be expected to occur in areas where PCP was used or where PCP wastes were disposed.

Furans are structurally identical to dioxins except that only one oxygen bridge connects the two benzene rings. There are 135 possible furan congeners. Similar to dioxins, the most toxic furan is 2,3,7,8 tetrachlorinated dibenzofuran (2,3,7,8-TCDF).

Because 2,3,7,8-TCDD is the most toxic form of dioxin, the USEPA has established factors that equate the toxicity for other dioxin congeners and furans to that of 2,3,7,8-TCDD. Therefore, concentrations of dioxin and furan results will be discussed as the 2,3,7,8-TCDD equivalence, rather than reporting each individual congener.

Fuel oils are mixtures of aliphatic and aromatic petroleum hydrocarbons and include several polycyclic aromatic hydrocarbons (PAHs) and BTEX (benzene, toluene, ethylbenzene, and xylene) related compounds. Fuel oil number two is typically used as a home heating oil or as an industrial heating oil and is a colorless to brown liquid that is less dense than water. At this Site, fuel oil No. 2 was used as a carrier for wood preserving compounds.

1.6 Report Organization

This Remedial Investigation Report is organized into five sections as described below:

- **Section 1.0: Introduction**. Includes a summary of the project background, a statement of the project objectives, a description of the Site location, a summary of previous investigations, and describes the report organization.
- **Section 2.0: Scope of Work**. Includes a description of the scope and methodologies of the field investigation tasks completed, and describes the general parameters used when completing the human health and fish and wildlife exposure assessments.
- **Section 3.0: Investigation Results**. Presents a summary of the Site's physical characteristics and a description of the nature and extent of impacts based on field and laboratory results from the remedial investigation activities.
- **Section 4.0: Conclusions and Recommendations**. Includes a summary of the conclusions and recommendations developed based upon the data collected.
- **Section 5.0: References**. Provides a listing of references used when developing the remedial investigation report.

Due to the volume of data generated, laboratory reports have been summarized in tables and included in the *Tables* appendix. Similarly, all figures referenced in this report are included in the *Figures* appendix.

2.0 SCOPE OF WORK

Site investigative activities included the assessment of surface and subsurface soils, stream sediments and groundwater. These investigative activities are discussed below.

2.1 Field Investigation

A description of field activities performed at the Site is presented in the following sections. All Site activities were conducted in compliance with the RI Work Plan, the Site Health and Safety Plan (HASP), Field Sampling Plan (FSP), and Quality Assurance Project Plan (QAPP). Any deviations from the Department-approved plans are noted in the text.

2.1.1 Surface Soil Investigation

Surface soil samples were collected from 25 locations northeast of the treatment plant. These samples were collected to define potential impacts by surface runoff from the treatment area. Additionally, four surface soil samples were collected from the drainage swale located behind the soil backstop at the shooting range. Samples were collected from approximately 0 to 2 inches below ground surface (bgs) with a decontaminated stainless steel trowel. All surface soil samples were sent for laboratory analysis of Semivolatile Organic Compounds (SVOCs) via USEPA Method 8270. Additionally, 16 of the surface soil samples collected from the treatment plant and one surface soil sample collected from behind the backstop were submitted for analysis of dioxin and metals.

Three samples for metals analysis were collected from 0-1 foot bgs in the southwest portion of the Site to characterize “background” concentrations. Additional background samples were collected in the woods west of Building 49 and analyzed for SVOCs and dioxins in July 2003, and November 2003; five additional background samples were collected for dioxin analysis in November 2003. The samples were collected in an area that the NYSDEC proposed for the Site of a new building. The background sample locations were selected in consultation with an NYSDEC representative in an effort to establish soil conditions in areas where former treatment operations did not occur. All soil samples were placed in jars supplied by the contract laboratory. A summary of the laboratory analytical methods and quantity of samples analyzed is provided in **Table 1**. Surface soil sample locations are illustrated on **Figures 2A, 2B, 2C** and **2E**.

2.1.2 Sediment Sampling

A total of 37 sediment samples were collected from 27 sampling locations during both the PI and RI investigative activities. A total of 14 of the 37 sediment samples were collected during the formal RI from the following locations:

- SED-1, SED-2 and SED03-1 near the outflow from the Site pond, approximately 60 feet east-northeast, 115 feet. east-northeast and 25 feet northeast of Production Well 3, respectively.
- SED-3 and SED-4 from the outlet of the creek, approximately 120 and 190 feet northeast of Production Well 3.
- SED03-2 and SED03-3 west of the creek outlet, approximately 60 and 90 feet north-northeast of Production Well 3.
- SED-5, SED-6 and SED-7 from the wetlands north of the site pond, approximately 265 feet north-northeast, 265 feet north and 275 north-northeast of Production Well 3.
- SED03-4 near the south side of the Site pond, approximately 200 feet northeast of Building 50 and 220 feet southeast of Production Well 4.

Additionally, three deeper sediment samples (0-1 foot bgs) were collected from the northern end of pond bottom using a hand auger.

Sediment sampling locations are shown in **Figure 2D**.

Sediments were collected with decontaminated sampling equipment and packed in laboratory-supplied sample jars. Sediment samples were analyzed for SVOCs, dioxins, and total organic carbon (TOC). **Table 3** summarizes the laboratory analytical data.

2.1.3 Test Pit Sampling

A total of 78 test pits (shallow and deep in depth) were excavated during the PI and RI investigation activities. Thirty of these test pits were shallow test pits excavated to a maximum depth of 2 feet and examined for evidence of contamination (staining, odor, elevated PID readings, presence of a product sheen, etc.) in the fill material. The remaining 48 test pits were excavated to a zone of observed contamination, groundwater, the limits of the backhoe, or were terminated at the discretion of the on-site DEC representative. During July 25 and 28, 2003, an additional 11 test pits were excavated to a maximum of 5 bgs. Further detail of the test pit excavations are found in the following sections.

2.1.3.1 Shallow Test Pit Sampling

A total of 30 shallow test pits were excavated to collect shallow soils in the former treated lumber staging area (located behind Building 51). Sample locations are illustrated on **Figure 2C**. Gravel and shale fill has been added to these areas since wood treating activities ceased. Shallow test pits generally consisted of humic topsoil and shale fill overlying a tan glacial till. A Shaw geologist observed and recorded notes regarding the installation of the test pits.

A grab soil sample was collected from each shallow test pit and analyzed for SVOCs. In addition, 17 of the soil samples were analyzed for dioxin and metals. **Table 4** summarizes the test pit analytical results.

2.1.3.2 Test Pit Excavation and Sampling

Based upon anecdotal information supplied by former employees regarding the presence of possible buried debris, a subcontractor was retained to perform a ground penetrating radar (GPR) survey at portions of the Site. The GPR survey was used to further delineate underground anomalies that could be representative of historic disposal areas.

Several areas (GPR-1 through GPR-3) exhibited anomalies on the GPR that warranted further investigation through the installation of test pits. GPR-1 and GPR-2 are located in satellite areas off the access road to the shooting range and GPR-3 is located near former Building 52 and the drum rinse area as shown on **Figures 2B, 2C** and **2E**.

Thirty-seven test pits were excavated at the Site in 2001-2002 to further investigate subsurface soil in former treatment areas. An additional 11 test pits were excavated in 2003 using a track-mounted backhoe. A total of 53 soil samples were collected and analyzed for one or more of the following analytical constituents: Volatile Organic Compounds (VOCs), SVOCs, dioxins, metals and pesticides. Test pit locations are shown on **Figures 2B, 2C** and **2E** and were installed as follows:

- Twenty-one test pits were excavated in the general vicinity of the treatment plant. TP-31, TP-37 and TP-30 are located northeast and south of Building 48. TP-29 is located midway between Building 48 and the former Building 49. TP-28 is parallel and adjacent to the west side of former Building 49. TP-34 is perpendicular to the northeast corner of former Building 49 and directly south of MW-12. TP-33 is parallel to the rail cart track slab, west of MW-12. TP-32 is also perpendicular to the former Building 49, located west of the most northern tip of the rail cart track slab. TP-20 and TP-21 are located west of the Building 50 ruins. TP03-1 through TP03-4 and TP-19 are located between Building 51 and the Building 50 ruins. TP-22 through TP-26 are located along the edge of the woods near MW-31, MW-2 and MW-3.

- TP-13 is located south of Building 52 in area GPR-3.
- TP03-5 and TP03-6 are located in the woods south of Building 52, approximately 135 feet and 60 feet southwest of MW-10, respectively.
- TP-12, TP03-7 and TP03-8 are located at the edge of the woods, south of Building 52, between MW-10 and MW-11.
- TP-14, TP-15, TP-16 and TP-17 are in the area reported to be the drum rinse area south of MW-10.
- TP03-11 is located in the woods, south of MW-10 and north of the reported drum rinse area.
- TP-3 is in the area reported to be a disposal area located along the access road to the shale pit. TP-1 and TP-2 are located in a reported disposal area east of the access road.
- TP03-9 and TP03-10 are in the area reported to be a disposal area north of the shale pit.
- TP-18, TP-35 and TP-36 are located in the area of the shooting range backstop.

Test pit locations are illustrated on **Figures 2B, 2C** and **2E**. Test pit dimensions were largely determined by field observations. Generally, the test pits were the width of the backhoe bucket (approximately 2.5 - 3 feet); each test pit was approximately 10 - 25.5 feet long.

The field geologist prepared test pit logs that described the subsurface conditions at each location. These conditions include soil structure, apparent depth to groundwater, thickness and type of fill material, test pit dimensions, observed contamination, observed debris, and any other pertinent observations. During excavation, soils were continuously field screened for VOCs using a properly calibrated photoionization detector (PID) equipped with a 10.6 eV lamp. The test pit logs are included as **Appendix A**.

2.1.5 Soil Boring Installation and Sampling

A total of 41 soil borings were advanced at the Site during PI and RI investigative activities. Thirteen of the 41 soil borings were converted to monitoring wells. The approximate locations of the borings completed during formal RI investigative activities are as follows:

- Two borings (SB-7 and MW-9) were installed in the parking area located northwest of the NYSDEC office.
- Four borings (SB-4, SB-5, SB-6, and MW-7) were advanced in the area of the NYSDEC office.
- Boring MW-8 was advanced upgradient of the treatment facility.
- Four borings (SB-1, SB-2, SB-3, and MW-6) were installed in the area of the treatment building.

- Monitoring well MW-11 was installed southeast of Building 53.
- Monitoring well MW-10 was installed in the drum rinse area.
- Monitoring well MW-12 was installed half way between MW-2 and MW-4, near TP-7.
- Monitoring well MW-13 was installed south-southeast of Building 21.
- Monitoring well MW-14 was installed southeast of Building 8.
- Three borings (SSB03-10, SSB03-14 and SSB03-9) were installed within the footprint of the former Building 49.
- Boring SSB03-8 is located directly south of MW-14 and east of the rail cart slab.
- Boring SSB03-7 is located southwest of MW-12 and east of the rail cart slab.

The locations of the borings are shown on **Figures 2B** and **2C**. A planned boring downgradient of the treatment facility was not installed due to the proximity to overhead power lines. Two additional borings/wells (MW-10, MW-11) were added by the NYSDEC representative based upon impacts observed during test pitting activities. Disturbed areas were repaired to prevent the formation of erosion ruts from runoff following drilling activities. Drill logs are included in **Appendix A**.

Borings were advanced via air hammer drilling techniques. Split spoon soil samples were collected continuously during boring installation. The field geologist recorded soil descriptions, including any visual or olfactory evidence of contamination. Additionally, a portion of each soil sample was split for a headspace reading using a properly calibrated PID. Borings were advanced to 8 feet below the apparent water table or to a depth approved by the NYSDEC representative. Soil samples were collected for laboratory analysis from the zone of highest impact, based upon field observations which included odor, staining, presence of non-aqueous phase liquids (NAPL), and PID readings. A sample was collected at the soil/water interface if no impact was noted. Samples were sent for laboratory analysis of SVOCs and dioxins via United States Environmental Protection Agency (USEPA) Methods 8270 and 8280/8290, respectively. All down-hole drilling equipment was properly decontaminated between borings.

2.1.6 Monitoring Well Installation

Nine of the soil borings were converted to monitoring wells including:

- Monitoring well MW-6 in the treatment building.
- Monitoring well MW-7 in the vicinity of the NYSDEC office.
- Monitoring well MW-8 west of the former treatment building.
- Monitoring well MW-9 in the parking lot.

- Monitoring well MW-10 in the former drum rinsing area.
- Monitoring well MW-11 southeast of Building 53.
- Monitoring well MW-12 approximately 160 feet northeast of Building 49.
- Monitoring well MW-13 approximately 50 feet south of Building 21.
- Monitoring well MW-14 approximately 25 feet southeast of Building 8.

Monitoring well locations are illustrated on **Figures 2B** and **2C**. Borings not converted to monitoring wells were properly abandoned with a cement grout. Monitoring wells are constructed of two-inch diameter, Schedule 40 polyvinyl chloride (PVC) casing and two-inch diameter, 0.010-inch slotted, Schedule 40 PVC well screen. Monitoring wells are constructed such that the well screen intersects the water table. The annulus was backfilled with No. 1 Morie sand to 2 feet above the well screen. The remaining annulus was backfilled with a cement bentonite grout. The monitoring wells were completed with a four-inch diameter, above ground, steel protective casing. Weep holes were drilled at the base of the protective casing which will drain any water that may become entrained between the inner and outer casing. A concrete pad, approximately 2 feet by 2 feet, was constructed at the base of the protective casing to secure it in place. Due to its location in the parking lot north of the former NYSDEC building, MW-9 was completed with a flush-mount protective casing.

2.1.6.1 Monitoring Well Development

Monitoring wells installed during RI investigative activities (MW-6 through MW-13) were developed to remove sediments from the well screen and sand pack after installation. Development was accomplished using either disposable polyethylene bailers or peristaltic pumps with disposable polyethylene tubing. The monitoring wells were developed no sooner than 48 hours after completion of construction. Consistent with the requirements of the FSP, efforts were made to develop each monitoring well until pH, conductivity, and temperature had stabilized and water had a turbidity of less than 50 NTUs. Monitoring wells MW-12, MW-13 and MW-14 were purged three times until dry and had to be sampled with a turbidity greater than 50 NTUs because it would not stabilize prior to the wells becoming dry. Each monitoring well was gauged prior to and after development. Recharge rates were recorded for each well prior to development. All development water was containerized in US DOT approved 55-gallon drums staged near the former treatment building pending off-site disposal. Specific methods for sample collection as detailed in the project specific QAPP and FSP were followed.

2.1.7 Groundwater Sample Collection

Prior to sampling in 2002, the water level in each monitoring well (MW-2 through MW-13) was gauged to provide information on hydraulic gradients and groundwater flow at the Site, as well as to provide information on the occurrence of immiscible liquids. Note that a monitoring well was never installed at MW-1 during the PI because no saturated aquifer material was encountered. Measurement of water levels was obtained using an electronic water-level interface probe (IP). A sheen and fuel-like odor was detected during sample collection of MW-6 and MW-11. A sheen was not present however during well installation. Specific procedures for data collection as detailed in the project specific QAPP and FSP were followed. Gauging data is presented as **Appendix B**.

Monitoring wells MW-2 through MW-8, MW-10 and MW-11 were also gauged and sampled in July 2003 in addition to the newly installed wells (MW-12 through MW-14). Monitoring well MW-9 was not sampled because it was covered in asphalt. No product-like sheens or odors were noted during this sampling event.

2.1.8 Water Supply Well Sampling

Five previously decommissioned water supply wells (PW-1, PW-2, PW-3, PW-4, and PW-5) were sampled. The location of these wells is shown on **Figures 2A, 2B** and **2C**. Due to the depths of these wells, a casing depth indicator was used to determine the purge location just below the level of casing prior to sample collection. The supply wells were micro-purged (i.e., a low flow purge to minimize turbidity and flux in other groundwater parameters) using a Grundfos pump. Groundwater samples collected were sent for laboratory analysis of full TCL parameters using NYSDEC ASP methodologies. **Table 1** summarizes laboratory analytical methods.

2.1.9 Biota Sampling

A total of 30 trout samples were collected from various locations within Panther Creek, which is located north (down-gradient) of the Site **(Figure 3)**. Trout samples were collected by electric shock sampling methods. The entire fish was submitted for analysis for trout measuring less than six inches in length; only the filet was submitted for analysis of for trout that were more than six inches in length. All samples were analyzed for dioxins.

2.1.10 Mapping and Surveying

Following completion of the field investigation activities, a third party licensed surveyor was contracted to expand the existing site map to include the new sampling locations and Site topography. The survey shows all pertinent Site features including monitoring wells, Site

buildings, roads, test pit locations, surface sample locations, topography, and utilities. Additionally, the elevation of the top of casing for all newly installed monitoring wells was collected. This survey information has been used to produce the figures included in this RI Report.

2.2 Exposure Assessments

2.2.1 Qualitative Exposure Assessment

A QEA was to determine the current and potential future exposure pathways associated with baseline (i.e., current or unremediated) Site conditions. A field survey to collect site specific information was conducted on January 24, 2002. The QEA report was written as a stand-alone report and is included in **Appendix E**. The report is summarized in **Section 3.3.1**.

2.2.2 Fish and Wildlife Impact Assessment

A Step IIA Fish and Wildlife Impact Assessment (FWIA) was conducted to identify resource areas and associated fish and wildlife at and within the vicinity of the Site, and potential site-related impacts to those resources. A Site walk-over and area drive-by were conducted on January 24, 2002 to collect the required Site information. This FWIA report was also prepared as a stand-alone report and is included in **Appendix F**.

As described in the NYSDEC's document titled *Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites*, the Step I analysis (Contaminant-Specific Impact Assessment) consists of:

- Site maps (including topographic, cover type, and drainage maps)
- Description of the fish and wildlife resources
- Description of the fish and wildlife resource value
- Identification of applicable fish and wildlife regulatory criteria

The primary objective of Step I was to identify the wildlife resources that presently exist and that existed before contaminant introduction.

The Step II analysis (contaminant-specific impact assessment) consists of:

- Pathway analysis

The primary objective of the Step II was to determine the impacts of the Site-related contaminants on the wildlife resources. The pathway analysis identifies resources, COCs, sources of contaminants, and determines if any potential pathways of contaminant migration exist. The results of the Step IIA FWIA are discussed in **Section 3.3.2**.

3.0 INVESTIGATION RESULTS

The results from the RI are presented in the following sections. A description of the Site's physical characteristics, the nature and extent of chemical impacts, and the results from the exposure assessments are provided.

3.1 Physical Characteristics

The geologic and hydrogeologic information presented below is based on a United States Geologic Survey (USGS) publication entitled *The Groundwater Resources of Schoharie County*, NY (USGS Bulletin GW-22), local topography, test pit information, and well logs for monitoring and water supply wells.

3.1.1 Regional Geology

The Site is underlain by bedrock from the Gilboa and Hamilton Formations of the Middle Devonian. The Gilboa and Hamilton Formations are typically 325 feet and 2,175 feet thick, respectively. They consist of gray, medium to fine grained sandstone; thin bedded siltstone; and dark gray shale. The most common overburden found in the area is glacial till, a heterogeneous mixture of fragments ranging in size from boulders to clay particles. The till (also known as boulder clay or hardpan) was deposited beneath an ice sheet, and is comprised mainly of fragments of local bedrock eroded during glaciation. The till in this area also contains boulders and cobbles of resistant rock which were transported by the ice from areas farther north. Therefore, while a majority of the coarse material found in the till is comprised of sandstone and limestone, cobbles and pebbles of metamorphic and igneous rock from the Adirondacks is common. The till found in the area has a high clay content due to the large amount of shale and limestone exposed in Schoharie County and the Mohawk Valley to the north.

3.1.2 Site Specific Geology

Depth to bedrock across the Site varies greatly, ranging from zero to 95 feet bgs. This is evident by the visible rock outcrops in the shale quarry, and the water supply well logs documenting 21 to 95 feet of overburden. Water supply well logs for supply wells located at the correctional facility reported the bedrock as brown rock, blue and gray sandstone, and blue

shale. The overburden was described as brown and gray hardpan, boulders, and gray clay. The wells range in depth from 250 feet to 610 feet bgs.

Observations of the shallow overburden were made during the test pit investigation. In general, the top 2 feet of overburden consists of broken gray shale that ranges in size from gravel to boulders. Intermixed within the shale is brown silt and sand. This surface layer is likely fill material placed as a base for buildings and for staging treated and untreated lumber. A shale quarry located on the southeast portion of the Site is the likely source of the fill material. Beneath the fill is very dense glacial till consisting of clay, sand, silt, and shale cobbles and boulders varying in color; including orange, gray, tan, and brown. A geologic cross section is shown on **Figure 4**.

3.1.3 Regional Hydrogeology

The Site property is located approximately 10 miles from the Schoharie Creek, which is the nearest discharge point for Panther Creek. Regionally, groundwater would be anticipated to flow toward the Schoharie Creek. Shallow groundwater in the area of the Site is typically found in coarser-grained glacially derived sediments or as perched water over deposits of fined-grained sediments of lower permeability.

3.1.4 Site Specific Hydrogeology

Groundwater occurs within the till unit, primarily in the lenses of sand and gravel. Although these lenses appear to be discontinuous, they are likely hydraulically connected to some degree through fractures in the till. Vertical fractures found within the till would also result in the unconfined groundwater conditions observed at the Site. Shallow groundwater recharge occurs through the infiltration of precipitation; groundwater discharge, if present, appears to occur to the on-site pond.

Groundwater is known to exist in the bedrock based on the production well logs for the Site. It is expected that confined or semi-confined conditions exist within the bedrock. It was not determined if groundwater within the till and bedrock is hydraulically connected; however, this interconnectedness could reasonably be expected in areas where bedrock is relatively shallow or in areas where vertical fractures bifurcate the entire overburden aquifer. Evidence of this interconnectedness was not observed during field work conducted by Shaw.

Depth to groundwater ranged from 4 to 20 feet bgs during the latest groundwater sampling event. Gauging data indicates that groundwater flows in a northeasterly direction, generally

following surface topography in the direction of the pond. A groundwater contour map is shown on **Figure 5**.

3.2 Nature and Extent of Contamination

This section presents the analytical results from the surface, sediment, and subsurface soils, and groundwater samples collected at the Site. For screening and discussion purposes only, these results are compared to published New York State standards and/or screening criteria.

Soil criteria from the NYSDEC's *Division Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels HWR 4046* (TAGM 4046) was used for comparison of the surface and subsurface soil results. This document does not include soil clean-up objectives for dioxins and furans. Therefore, for the purposes of this report, and to be consistent with the previous investigation report for the Site, 1 part per billion (ppb) (ng/g) 2,3,7,8-TCDD equivalence has been used as the soil screening level. The NYSDEC has used 1 ppb (ug/kg) 2,3,7,8-TCDD equivalence as a remediation goal at other hazardous waste sites.

For the remaining COCs (VOCs, SVOCs and metals), TAGM 4046 was used for screening soils and *Division of Water Technical and Operational Guidance Series 1.1.1* (TOGS 1.1.1) was used for screening groundwater. The soil clean-up objective listed in TAGM 4046 for PCP is 1 parts per million (ppm) (mg/kg) for protection of groundwater. Consistent with the PI Report prepared for this Site, this value has been adopted as a groundwater protection screening level for soil. The New York State Department of Health (NYSDOH) has recommended a screening level of 1.0 ppm PCP for the protection of human health be adopted. This value is based on a one in a million risk to children in a residential setting (a conservative value given that the Site is not considered residential).

The groundwater standard for total phenolic compounds listed in TOGS 1.1.1 is 1.0 ppb (ug/l). Here again, to be consistent with the PI Report, and because PCP is the only phenolic compound detected in the groundwater at the Site, a groundwater screening level of 1.0 ppb (ug/l) has been used.

Finally, 6NYCRR Part 700-705 lists a groundwater standard of 0.0007 ng/l parts per trillion (ppt) for 2,3,7,8-TCDD. This value has been adopted as the groundwater screening level, with the other forms of dioxins and furans normalized to 2,3,7,8-TCDD using the USEPA's toxicity equivalence factors (TEFs).

Sediment sample results were compared to screening criteria provided in the *NYSDEC Technical Guidance for Screening Contaminated Sediments*, January 1999. Sediment criteria are presented as micrograms of contaminant per gram of organic carbon in sediment (ug/gOC). For each sample, the screening level is calculated based on TOC measured in the sample. A location specific benchmark was calculated since TOC was not consistent among the samples. The 2,3,7,8-TCDD fish concentration data was compared to risk calculations which evaluate possible effects on wildlife through the consumption of fish contained in the NYSDEC's *Division of Fish, Wildlife and Marine Resources Technical Guidance for Screening Contaminated Sediments* which is based on *The Niagara River Biota Contamination Project: Fish Flesh Criteria for Piscivorous Wildlife*, A.J. Newell et al. July 1987, NYSDEC Technical Report 87-3. The criteria listed are 3.0 pg/g ppt.

3.2.1 Surface Soil Results

A total of 67 surface soil samples were collected during the PI and RI and sent for analysis of SVOCs, metals, and dioxins. Three surface samples (BGM-1, BGM-2 and BGM-3) were collected during the 2003 RI investigative activities and sent for laboratory analysis to determine background concentrations of metals at the Site. In July 2003 and November 2003, a total of 10 additional samples (BGM03-1 through BGM03-10) were collected to determine background concentrations for both SVOC and dioxins. A summary of the analytical results from the PI and RI is summarized in **Table 2** and is presented on **Figures 3, 6A** and **6B**.

Thirty-four out of the 67 surface soil samples collected were sent for laboratory analysis of SVOCs. Analytical results indicated several SVOCs detected at various concentrations. PCP was the only SVOC detected above TAGM 4046 Guidance Value. Six surface soil samples (SS-6, SS-7, SS-12, SS-16, SS-19 and SS-22) located northeast of Building 49 indicate concentrations of PCP above the TAGM 4046 Guidance Value (1.0 ppm). Concentrations of PCP in these surface soil samples range from 1.6 ppm (SS-6) to 6.3 ppm (SS-16). PCP was detected above the method detection limit, but below the TAGM 4046 guidance value (1.0 ppm), in eight additional samples (SS-1, SS-3, SS-12, SS-17, SS-18, SS-23, SS-24 and SS-25) collected northeast of Building 49 at levels between 0.38 ppm (SS-1) to 0.660 ppm (SS-24).

Surface soil samples (SS-4, SS-8, SS-9, SS-25, SS-26, SS-29, and SS-32,) collected from the area just south of Building 50 and one sample (SS-37) collected near the former drum rinsing area indicated PCP concentrations greater than TAGM 4046. PCP concentrations ranged from 1.4 ppm (SS-8) to 253 ppm (SS-32). The remaining surface soil samples exhibited PCP concentrations well below the TAGM 4046 guidance value.

A total of 24 of the 67 surface soil samples collected from former treatment areas were sent for laboratory analysis of metals. For discussion purposes, the results of the "on-site" samples were compared to the average value for each metal from the background samples or to the TAGM 4046 guidance value for metals. Results from "on-site" samples that exceeded the TAGM 4046 metal guidance values or the average value of the background samples are shaded on **Table 2**.

Analytical results indicate that all 24 surface soil samples collected for metals analysis in areas northeast of Building 49 contained at least one metal in concentrations above their associative TAGM 4046 guidance value or the average background level. Beryllium and calcium most frequently exceeded the TAGM or background levels (23 out of 24 samples). Other metals detected above TAGM 4046 or background levels include nickel (22 of 24 samples), potassium (22 of 24 samples), zinc (22 of 24 samples), lead (21 of 24 samples), copper (20 of 24 samples), magnesium (19 of 24 samples), antimony (17 of 24 samples), arsenic (16 of 24 samples), chromium (12 of 24 samples) and manganese (13 of 24 samples). Surface soil sample SS-14 collected northeast of Building 49, and SS-26, which was collected from the shooting range area, contained the most metal analytes above their average background concentrations (15 of the 23 metals reported by analysis).

No surface soil samples collected exhibited barium, cadmium, sodium or vanadium concentrations above the TAGM 4046 guidance values or the average background concentration.

Three surface soil samples (BGM-1 through BGM-3) were collected to determine background concentrations for metals. Of the three COCs, arsenic was detected in all three samples at a range between 8.2 ppm (BGM-2) to 10.5 ppm (BGM-3). The average concentration was 9.1 ppm. Chromium was also detected in all three samples with a concentration range of 18.0 ppm (BGM-3) through 21.0 ppm (BGM-1) and an average concentration of 19.06 ppm. The third COC, copper, was detected in all three background samples and exhibited a range between 8.2 ppm and 14.9 ppm in BGM-2 and BGM-3, respectively. The average concentration for copper in the three background samples is equal to 10.76 ppm.

The background metal concentrations, along with the metal concentrations observed on-site, was compared to TAGM 4046 guidance values to determine the guidance values used for Site remedial actions.

Five surface soil samples (BMG03-1 through BGM03-5) were collected in July 2003 to determine background concentrations for SVOCs. PCP was below detection limits in all five

samples. No additional SVOC compounds were detected above the TAGM 4046 guidance value in the five samples.

A total of 10 surface soil samples (BGM03-1 through BGM03-10) were collected to determine background concentrations for dioxins. No dioxin or furan congeners were detected above their TEFs. All 2,3,7,8 TCDD equivalences were well below the 1.0 ppb screening level. 2,3,7,8 TCDD equivalences for the 10 background samples ranged from 0.000036 ppb (BGM03-1) to 0.402015 ppb (BGM03-7).

In addition, 37 of the 54 surface soil samples collected were sent for the analysis of dioxins. Analytical results of the samples were compared to Technical Equivalence Factors (TEFs) for individual congeners (**Table 2** and **Figures 3, 6A** and **6B**). Six samples (SS-25 and SS-38, installed south of Building 50 and SS-12, SS-17, SS-19 and SS-23 (installed northeast of Building 49) exhibited 2,3,7,8-TCDD equivalence concentrations above the 1 ppb (ng/g) screening level. Three of the six samples (SS-25, SS-38, and SS-19) with 2,3,7,8-TCDD equivalence concentrations above the screening level also possessed PCP concentrations above TAGM 4046 guidance values.

3.2.2 Sediment Soil Results

A total of 37 sediment samples were collected from 27 sampling locations during the PI and RI from the on-site pond and the seasonal overflow area along the northwest corner for analysis of SVOCs, metals, dioxins, and TOC. The analytical results are summarized on **Table 3** and presented on **Figure 7**,

All sediment samples collected were analyzed for SVOCs. No SVOCs, including PCP, were detected above the guidance criteria (as set forth in the NYSDEC *"Technical Guidance for Screening Contaminated Sediments"* guidance document (January 1999)) in any of the 37 sediment soil samples collected.

Of the 37 sediment samples collected, four samples (SED03-1 through SED03-4) were analyzed for metals. Of the three metals of concern (arsenic, chromium, and copper), arsenic was the analyte (both COC and SVOC) detected most frequently (all four samples) above the guidance criteria. Arsenic concentrations ranged from 6.4 ppm (SED03-1) to 12.1 ppm (SED03-2). Chromium and copper were not detected above the guidance criteria in any of the four samples collected for metals analysis. Even though detected, given the slightly elevated concentrations observed, arsenic does not seem to impose any significant environmental effect to the pond or biota present in the pond.

Additional metals detected above their associated guidance criteria included calcium, magnesium, manganese, nickel, and zinc. These constituents can be contributed to the lithology of the area as discussed above.

Sixteen of the 37 sediment samples collected were analyzed for dioxins. Of the 16 samples analyzed, two sediment samples collected during the PI (SED-3 and SED-10A) exhibited elevated 2,3,7,8 TCDD equivalence values.

3.2.3 Shallow Test Pit Soil Results

A total of 30 shallow test pits (STP) were excavated south of Building 51 within the former lumber storage treatment area. The soil collected was sent for laboratory analysis of SVOCs, metals and dioxins. The analytical results are summarized in **Table 4** and presented on **Figure 8A**.

Fill material was present in several shallow test pits and appeared to be widespread across the Site (as evident in the deeper test pits). This is consistent with reports of shale from satellite areas of the Site being used as a fill material.

All 30 of the shallow test pits were analyzed for SVOCs. Several SVOC compounds were detected in 19 of the 30 test pit samples. PCP was the only SVOC detected above the TAGM 4046 guidance value. Shallow test pits STP-18, STP-19, STP-21 and STP-22 all exhibited PCP concentrations above the TAGM 4046 1 ppm guidance value. PCP concentrations ranged from 1.6 ppm (STP-18) to 26 ppm (STP-19). These two test pits (STP-18 and STP-19) were located within the former lumber storage area and northwest of Building 52. Elevated concentrations of PCP found with in the lumber storage area suggests that historic Site processes contributed to subsurface impact to soil.

Sixteen of the pit soil samples were sent for laboratory analysis of metals. For discussion purposes, the results of the shallow test pit samples were compared to TAGM 4046 and the average background value (guidance criteria) for each metal (as observed in surface soil samples). Results from shallow test pit samples that exceeded the higher concentration of the two criteria are shaded on **Table 4**. When the data was evaluated by this method, all 16 shallow test pit samples had at least one analyte that exceeded the guidance criteria.

Of the three metals of concern (arsenic, chromium, and copper), arsenic was detected above the guidance criteria in six (STP-3, STP-13, STP-15, STP-25, STP-26, and STP-27) of the 16 shallow test pit soil samples collected. Arsenic concentrations ranged from 9.4 ppm (STP-3) to 13.9 ppm (STP-25) within these shallow test pit samples. Chromium was detected above

guidance criteria in 12 (STP-1, STP-5, STP-7, STP-9, STP-10, STP-13, STP-15, STP-19, STP-20, STP-23, STP-25, and STP-26) of the 16 shallow test pit samples collected for metals analysis. Concentrations of chromium ranged from 19.3 ppm (STP-5) to 24.3 ppm (STP-10). Eleven (STP-1, STP-7, STP-9, STP-10, STP-13, STP-15, STP-17, STP-19, STP-20, STP-25, and STP-26) of the 16 shallow test pit samples collected for metals analysis exhibited concentrations of copper above the guidance criteria. Copper concentrations ranged from 12.3 ppm (STP-15 and STP-17) to 23.8 ppm (STP-10). These elevated chemicals of concern concentrations suggest that historic Site operations have impacted the surface soils in the former treated lumber storage area.

Calcium, nickel, and potassium were the analytes that most frequently exceeded the guidance criteria for metals. These three analytes were detected above the guidance criteria in all 16 shallow test pit soil samples collected. Calcium was also commonly observed in the surface soil samples collected. As stated above, the occurrence of calcium in the shallow test pits can be attributed to the minerals present in the bedrock found in the area of the Site. Potassium is a metal found in abundance in basement rock and can be excused for similar reasons. Furthermore, given the continued use of off-site fill to raise the grade on-site, these exceedances in guidance criteria can be attributed to non-site specific processes (e.g., are not related to the wood treatment process).

As described above, TAGM 4046 does not include a soil clean-up objective for dioxins and furans, but a screening level of 1 ppb (ng/g) has been used at other hazardous waste sites and has been adopted as a screening concentration for the Site. Also as described above, because 2,3,7,8-TCDD is the most toxic form of dioxin, the USEPA has established factors that equate the toxicity for other dioxin and furan cogeners to that of 2,3,7,8-TCDD. Therefore, the concentrations of dioxin and furan results are discussed in this report as the 2,3,7,8-TCDD-equivalance by reporting the exceedance of the 1 ppb (ng/g) screening concentration rather than by reporting each individual cogener.

A total of 17 shallow test pit samples were sent for laboratory analysis of dioxins. While several congeners were detected in several of the samples, only STP-17 and STP-19 exhibited a 2,3,7,8-TCDD equivalence above the 1ppb (ng/g) screening level at an estimated and qualified equivalence of 1.3861 and 1.8969 respectively. The elevated 2,3,7,8-TCDD equivalence in STP-19 (1.8969) is consistent with the elevated PCP concentrations detected in this sample. Both STP-17 and STP-19 are located in the former treated lumber storage area and north of Building 52.

3.2.4 Test Pit Soil Results

A total of 48 test pits were excavated across the Site; 53 samples were collected from these locations for analysis of SVOCs, VOCs, metals, and dioxins. The test pit analytical results are summarized on **Table 4** and presented on **Figures 6B, 8A** and **8B.**

Test pits TP-1 and TP-2 were excavated in response to the GPR survey (GPR Area 1). Three rusted drums and other debris were uncovered approximately 28 inches bgs in TP-1. PID readings of 813 ppm were recorded within this pit. Shale fill was also noted in the test pit. At the request of the NYSDEC representative, samples were sent to the laboratory for analysis of VOCs and pesticides in addition to SVOCs, dioxins and metals. Undisturbed soils were noted in TP-2, which was excavated approximately 100 feet northeast of TP-1. No issues of potential concern were noted within TP-2.

Test pit TP-3 was excavated in GPR Area 2. Metal banding along with wood debris, was found to 6 feet bgs in the test pit.

Test pits TP-4 through TP-11 were excavated in the shale pit disposal area. Wood and other debris such as tires and metal banding were observed in several test pits (TP-4, TP-6, TP-8, TP-9, and TP-11) and an empty, rusted drum was encountered in TP-11. No elevated PID readings were noted in any of the test pits installed in this area.

Test pits TP-12 and TP-13 were installed south of Building 53 in response to the GPR investigation (GPR Area 3). Metal banding, believed to be the source of the GPR anomaly, was discovered in both pits. Both test pits contained non-native fill to about 4 feet bgs.

Test pits TP-14, TP-15, TP-16 and TP-17 were located in the former drum rinse area. TP-16 was a long, shallow trench running north-south and TP-14, TP-15, TP-17 branched west into the woods. TP-14 contained drum lids on the surface and unimpacted overburden soils (based upon field observations). TP-15 was excavated to 4 feet bgs. The overburden soils were stained in the 2-3 foot interval, exhibiting PID readings of 384 PPM. TP-16 contained stained soils with a petroleum-like odor and elevated PID readings.

Test pits TP-18, TP-35 and TP-36 were excavated in the area of the shooting range backstop. No visual impacts were noted in this area.

TP03-1 through TP03-4 are located between Buildings 51 and 50. Excavated soils consisted of light brown, brown, orange and gray clayey silt, shale, organics, gray silt and clay and light brown to brown till. A concrete slab was also encountered in TP03-3. Test pits TP03-1, TP03-2 and TP03-4 did not encounter any groundwater nor have PID detections. Groundwater was

noted percolating into TP03-3 from under the concrete slab at approximately 2.5 feet bgs. The highest PID reading in this test pit was 13.7 ppm.

Test pits TP03-5 through TP03-8 and TP03-11 were excavated in the woods between the gravel road and Building 53, directly south of Building 52. Each test pit was excavated to a depth of 2-3 feet bgs. Excavated soils consisted of brown and gray silt, clay, shale and organics. Till was encountered in TP03-5, TP03-7 and TP03-8. Decaying wood was noted in TP03-7 and TP03-8. Concrete was found in TP03-7. Groundwater was not encountered in any of these test pits. There were also no PID detections from these test pit soils.

Test pits TP03-9 and TP03-10 were located between Buildings 50 and 52. TP03-9 was located perpendicular to Building 52. Soils in this excavation were topsoil, shale/organics, clayey silt, silt and till. The highest PID detection from the south end of the excavation was 50.1 ppm. There were no PID detections from the north end of the excavation. A soil sample was collected from both the north and south ends of the excavation. Groundwater was encountered at approximately 5 feet bgs in the south end of the excavation. TP03-10 was located perpendicular to TP03-9 in the south end of the TP03-9 excavation where strong odors and PID readings were noted. It extended 9 feet east and west of TP03-9. Soil in the west end of the excavation consisted of sandy silt, clay, shale, organics, silty clay, clayey silt and till. The soil consisted of sandy silt, clay, shale, organics and clayey silt in the east end of the excavation. A strong odor was noted throughout the excavation with the highest PID reading in this excavation at 8.1 ppm. Groundwater was only noted in the intersection of test pits TP03-9 and TP03-10.

Soil excavated from TP03-1 through TP03-11 was temporarily staged on plastic sheeting next to the excavation. All test pits were backfilled with the excavated soils in a reverse manner (i.e., last out, first in). The backhoe was manually swept of all soils and debris above the test pit and the backhoe bucket was steam cleaned over the decontamination pad.

Soils that were visually impacted and or contained elevated PID readings, odor, or other anomalies were collected for laboratory analysis. At least one sample from each test pit was submitted for analysis for SVOCs (with the exception of TP-2, TP-4 and TP-10 at the request of the NYSDEC representative). A total of 27 of the samples exhibiting the most evidence of contamination were submitted for analysis for dioxins. Additionally, soil from TP-1 and TP-16 was submitted for laboratory analysis of metals at the request of the NYSDEC representative.

Four (TP-1, TP –16, TP-32, and TP-33) of the 53 test pit samples collected were sent for laboratory analysis of VOCS. Total VOC concentrations ranged from 318 ppm (TP-16) to 58,717 ppm (TP-1). Acetone, 2-butanone, methylene chloride and total xylenes were detected in TP-1 in concentrations above TAGM 4046 guidance values. Total xylenes were in

exceedance of TAGM 4046 guidance values in TP-33. Test Pit TP-1 was located in a former satellite disposal area (GPR Area 1) and TP-33 was located just east of the railroad slab attached to the former treatment building. These elevated concentrations suggest that Site-related processes have impacted the subsurface soil in these areas.

A total of 50 of the 53 test pit samples collected across the Site were analyzed for SVOCs. PCP was detected above the TAGM 4046 guidance value in seven (TP-1, TP-12, TP –32, TP-33, TP03-7W, TP03-9N, and TP03-10E) of the 50 test pit samples. Test pit TP-12 and TP03-7W were located in GPR Area 3, TP-32 was located northwest of the former treatment building, TP-33 was located adjacent to the east side of the former treatment building railroad slab and TP-03E was located between Buildings 50 and 52. PCP concentrations ranged from 1.2 ppm (TP-12) to 130 ppm (TP-1). TP-1 was located in area GPR-1, while the remaining test pit locations are located on-site in the former treatment areas.

Several SVOCs were detected in three (TP-18, TP-32, TP-33) of the 53 test pit soil samples above the TAGM 4046 guidance values. Total SVOC concentrations in these three samples ranged from 3.32 ppm (TP-18) to 115 ppm (TP-32). The elevated concentrations observed at TP-18 (shooting range area) can be contributed to wood debris and high organics in soil as observed during the excavation of TP-18. Test pits TP-32 and 33 were located in the former treatment process area and the observed impacts were likely caused by the former treatment processes on-site.

Eighteen test pit soil samples (TP-1, TP-16, TP03-1 through TP03-11E) were collected from the former treatment areas and the area of GPR-1 (TP-1) for analysis of metals. All collected samples for metals analysis exhibited concentrations above the guidance criteria (TAGM 4046 and background averages) for at least one metal. Of the three metals of concern (arsenic, chromium, and copper) arsenic was detected above the guidance criteria in 16 of the 18 test pit samples (those mentioned above with the exception of TP03-1 and TP03-9S). Concentrations for arsenic ranged from 9.9 ppm (TP03-8) to 28.6 ppm (TP-1). Chromium concentrations exceeded the guidance criteria in all test pit samples collected for metals analysis with the exception of TP03-9S. Chromium concentrations ranged from 19.6 ppm (TP03-11E) to 37.2 ppm (TP-1). Copper was detected above the guidance criteria in all the samples collected for metals analysis. Concentration of copper ranged from 11.8 ppm (TP03-6SW) to 125 ppm (TP-16). The elevated concentrations of COCs suggest that historic site operations have impacted the subsurface soil in these areas.

Calcium, magnesium, nickel, potassium, and sodium was also detected above background levels in all 18 test pit soil samples. The elevated concentrations could be contributed to the lithology and fill found in the area of the Site.

A total of 32 test pit soil samples were collected and sent for the laboratory analysis of dioxins. Only three test pit soil samples (TP-1, TP-3, and TP03-9S) of the 32 samples analyzed contained 2,3,7,8-TCDD equivalence above the 1ppb (ng/g) screening level. Test pits TP-1 (GPR Area 1) and TP- 3 (GPR Area 2) exhibited concentrations for 2,3,7,8-TCDD equivalence of 7.41 ppb (ng/g) and 1.3564 ppb (ng/g) respectively. The 2,3,7,8-TCDD equivalence for TP03-9S (former treated lumber storage area) was 1.7483 ppb.

Only one test pit soil sample (TP-33) was collected for analysis of pesticides. Concentrations of 4,4 DDD and 4,4 DDT exceeded the TAGM 4046 guidance value in TP-33 with values of 37 ppm and 20 ppm, respectively.

A total of 48 test pits were installed in the area of the former treatment building, the treated lumber staging area, the drum rinse area, and several satellite areas near the access road to the shooting range. Test pits soil samples were analyzed for VOCs, SVOCs, and dioxins. Test pit depth, on average, extended 5 feet bgs. A complete summary of the test pit analytical results are in **Table 4** and presented on **Figures 6B**, **8A**, and **8B** of this report. The results of the test pit program show that the primary impacts were observed around the rail cart slab, TP-12 (PI), TP-32 and TP-33.

3.2.5 Monitoring Well and Soil Boring Results

A total of 56 subsurface soil samples were collected from 41 soil boring locations across the Site and analyzed for VOCs, SVOCs, metals, dioxins, and pesticides. Thirteen of the 41 borings were completed as monitoring wells (MW-2 through MW-14). A summary of the soil borings completed during the formal RI are as follows:

- A weathered fuel-like odor and a sheen was noted in four (SB-1, 2, 3 and MW-6) of seven soil borings installed through the former treatment building slab. No odor or sheen was detected in SSB03-9, SSB-3-10 or SSB03-14.
- Soil borings SB-4, SB-5, SB-6 and MW-7 were installed in the location of the former NYSDEC building. Borings SB-5, SB-6 and SB-7 exhibited a fuel-like odor with PID readings up to 110 ppm. The borings were dry to a depth of 16 feet bgs. Water was detected in SB-4 at approximately 8 feet bgs.
- Soil borings SB-7 and MW-9 were installed in the parking lot, northwest of the former NYSDEC building and the former treatment building. Neither location exhibited visual or olfactory evidence of impacts.
- MW-8 is located west of the former treatment building and the former NYSDEC building. Soils from this boring, to a depth of 20 feet bgs, did not exhibit any visual evidence of impacts.

- Two additional monitoring wells/borings (MW-10, MW-11) were installed south of Building 53 at the request of the NYSDEC representative. The location of these borings was determined by the on-site NYSDEC representative based upon observations of impacts during test pitting activities. The soils collected from both of the borings did not exhibit any visual evidence of impacts.
- Soil borings SSB03-8 and SSB03-7 are located west of the rail cart slab near the former treatment building. A strong odor was noted from 3 feet bgs to 10 feet bgs in SSB03-8. A slight sheen was noted at the 4-6 foot interval in this boring. No odor or sheen was noted in SSB03-7.
- Monitoring wells MW-12, MW-13 and MW-14, located east, northeast and northwest of the railroad slab next to the former treatment building showed no visual or olfactory signs of contamination. Wells were set at 14 feet, 20 feet and 22 feet bgs.

Eight of the 56 soil samples collected were analyzed for VOCs. There were no exceedances of TAGM 4046 in any of the eight samples sent for VOC analysis.

A total of 55 of the 56 soil samples collected were sent for laboratory analysis of SVOCs. SVOCs were sporadically detected above TAGM 4046 guidance values in 28 of the 55 soil samples. PCP was detected at concentrations above TAGM 4046 guidance values in 17 of the 55 soil samples sent for SVOC analysis. PCP concentrations ranged from 1.8 ppm (SB-5, 2-4') to 820 ppm at sample B7-3 which is located in the northwest corner of Building 49. Total SVOC concentrations ranged from 0.692 ppm (B1-1) to 8542.6 ppm (B8-3).

Of the 56 soil samples collected, eight samples (B4-3, B6-1, B7-1, B10-3, B11-3, B12, B-15, and B18-3) were analyzed for metals. Each soil sample contained at least one analyte that exceeded the guidance criteria (TAGM 4046 or background) for a particular analyte. Of the three metals which are COC, arsenic was detected in exceedance of guidance criteria in five (B4-3, B6-1, B7-1, B11-3, and B12) of the eight samples. Arsenic concentrations ranged from 9.9 ppm (B4-3) to 22.2 ppm (B6-1). Chromium was detected at concentrations above the guidance criteria in six (B4-3, B6-1, B11-3, B12, B-15, and B18-3) of the eight samples collected for metals analysis. Chromium ranged in concentration from 20.1 ppm (B18-3) to 24 ppm (B4-3). Copper was also detected above the guidance criteria in seven (B4-3, B6-1, B7-1, B11-3, B12, B-15, and B18-3) of the eight soil samples. Concentrations for copper ranged from 13.2 ppm (B4-3) to 19.2 (B-12). The majority of these impacts are likely attributable to historic site activities.

Twenty-eight samples of the 56 collected were sent for laboratory analysis of dioxins. Of the 28 analyzed for dioxins only one sample, MW-7 (2-4'), exhibited a 2,3,7,8-TCDD equivalence above the 1ppb (ng/g) screening level for dioxins with a equivalence of 1.0715. This is consistent with the elevated PCP concentrations also detected in MW-7.

A total of seven (B4-3, B7-1, B10-3, B11-3, B-12, B-15, and B18-3) of the 56 soil samples were analyzed for pesticides. Only one sample, B7-1, exhibited concentrations (3000 ppm) above the TAGM 4046 guidance value.

A complete summary of the soil boring/monitoring well analytical results is found on **Table 5** and presented on **Figure 9**. The resulting soil quality data indicates that the primary impacts were observed in subsurface soils to a depth of approximately 8 feet bgs around MW-4 and MW-7.

3.2.6 Groundwater Analytical Results

As described in **Section 2.1.7**, groundwater samples from on-site monitoring wells and production wells were collected in December 2001, January 2002, and July 2003. Groundwater samples collected were analyzed for VOCs, fuel oil, PCBs, SVOCs, pesticides, metals and dioxins. A total of 31 groundwater samples have been collected from the 13 monitoring wells and 5 production wells on-site. Of the 31 groundwater samples collected, four samples (MW-2 through MW-5 (PI)) were analyzed for VOCs. Total xylene isomers in MW-4 were the only compound that exceeded the TOGS guidance value (5 ppb) during the PI.

In addition to VOCs, nine (MW-2 through MW-11 during the 2002 sampling event) of the 31 groundwater samples were analyzed for fuel oil components. Diesel fuel was detected in MW-4 at 24,000 ug/L. No fuel oil constituents were detected in any of the other nine samples analyzed.

Four (MW-2 through MW-5 (PI)) of the 31 groundwater samples collected were analyzed for PCBs. PCBs were not detected above the laboratory or method detection limit in any of the groundwater samples collected.

All 31 groundwater samples collected during the PI and RI were analyzed for SVOCs. PCP was detected above the TOGS groundwater guidance value in eight (MW-4 (PI), MW-4 (2002), MW-6 (2002), MW-7 (2002), MW-4 (2003), MW-6 (2003), MW-7 (2003), and MW-12 (2003)) of the groundwater samples collected. PCP concentrations ranged from 11 ppb in MW-12 (2003) to 810 ppb in MW-7 (2003).

A total of nine groundwater samples (including the ones exhibiting concentrations of PCP) had at least one analyte that exceeded the TOGS guidance values. Total SVOC concentrations ranged from 10.6 (MW-10 (2003)) to 4400 ppb (MW-7 (2002)). The highest SVOC concentrations (and the most analyte detections) were encountered in monitoring well MW-7. Acenaphthene, 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dinitrotoluene, 1,4-dichlorobenzene, 4-nitrophenol, N-nitroso-di-n-propylamine, phenol, pyrene, and 1,2,4-

trichlorobenzene were all detected above TOGS 1.1.1 guidance values. Detections of bis (2-ethylhexyl) phthalate are believed to be laboratory artifacts.

The five production wells (PW-1 through PW-5) were sampled for pesticides. A pesticide (4-4' DDD) was detected in PW-3 (0.11 ug/L) ppb below NYSDEC TOGS 1.1.1 guidance values.

Fourteen groundwater samples (ten from on-site monitoring wells, and four from on-site production wells) have been collected during the PI and RI for analysis of metals. No COCs (i.e., arsenic, chromium, and copper) exceeded the TOGS guidance values. The most frequent metals detected were aluminum, iron, manganese and sodium. These metals are not considered to be associated with treatment operations and most likely represent background or naturally occurring levels.

A total of 17 groundwater samples have been collected during the PI and RI for analysis of dioxins. Of the 17 groundwater samples there have been five instances (MW-3 (2002), MW-4(2002), MW-3(2003), MW-4(2003), MW-6(2003), and MW-7(2003)) when the 0.007 ppt screening level (for 2,3,7,8 TCDD equivalence) has been exceeded. TOGS 1.1.1 lists a groundwater guidance value for 2,3,7,8 TCDD as $7x10^{-7}$ ppb (ug/l) or 0.0007 ppt (ng/l). This had been adopted as the groundwater screening level, with the concentrations of other forms of dioxins and furans normalized to 2,3,7,8 TCDD using the toxicity equivalence factors (TEQs). Dioxins equivalence values range from 0.003679 ppt (MW-6(2003)) to 0.065403 ppt (MW-4 (2002)).

The analytical results from the groundwater sampling events are summarized on **Table 6** and presented on **Figure 10**. The results of this sampling program indicate that the primary dissolved impacts have been observed in areas which correspond with elevated soil impacts (e.g., MW-4 and MW-7).

3.2.7 Biota Analytical Results

A total of 30 trout samples were collected from various locations from Panther Creek. Trout samples were collected using electric shock sampling methods as described in **Section 2.1.9**. The analytical results are summarized in **Table 7**.

Several dioxin and furan congeners were detected in these samples. A total of 14 (2PC-1 through 2PC-9, 3PC-1, 3PC-5, 3PC-8, 3PC-12, and 3PC-15) of the 30 biota samples collected exhibited 2,3,7,8 TCDD equivalences greater than the 0.0003 ppt guidance value. 2,3,7,8 TCDD equivalences ranged from 0.00053 ppt (2PC-6) to 0.0916 ppt (3PC-13).

3.2.8 Summary

Soil, sediment, groundwater, and biota data generated during several phases of Site investigative activities indicate the following:

- Overburden at the Site consists of fill and glacial lodgment till interspersed with sand lenses.
- Depth to groundwater at the Site ranges between 4 feet and 20 feet bgs as evident in the monitoring wells.
- Recharge of the water table is likely provided by precipitation infiltrating areas of the Site.
- Soils beneath the former treatment building, within the treated lumber staging areas, drum rinse area, and several satellite areas are impacted with PCP and/or dioxins.
- The sediments collected from the on-site pond and the seasonal overflow areas were shown to have no PCP concentrations above the guidance criteria.
- Two sediment samples (SED-3 and SED-10A) exhibited slightly elevated 2,3,7,8 TCDD equivalences.
- Fourteen of the 30 biota (trout) samples exhibited 2,3,7,8 TCDD concentrations greater than the guidance value.
- Several monitoring wells (MW-4, MW-6, MW-7, and MW-12) exhibited PCP concentrations greater than the 1.0 ppb guidance value during the latest round of groundwater sampling.
- A total of five groundwater samples collected from monitoring wells MW-3, MW-4, MW-6, and MW-7 exhibited 2,3,7,8 TCDD equivalence concentrations above the 0.0007 ppb guidance value.
- Groundwater impacts at the Site are generally confined to those areas where it remains in contact with impacted soils.
- Groundwater is not contiguous across the Site, occurring primarily within the more porous sand lenses or as perched water above the impermeable clay layers.
- The overburden soils are very dense and transmit water minimally based upon hydraulic conductivity values. This very low conductivity, combined with minimal lateral recharge of groundwater precludes the widespread migration of groundwater within the overburden sediments.
- Existing soil data indicates that the primary impacted areas on-site include areas beneath the former treatment building, treated lumber storage areas, drum rinse area, and localized several satellite areas. These areas are shown of **Figure 2A**.
- Widespread groundwater impacts were not observed at the Site. The primary impacts were observed within monitoring wells MW-4, MW-6, and MW-7. These well locations are shown on **Figure 2A**.

3.3 Exposure Assessments

3.3.1 Qualitative Human Health Exposure Assessment

The QEA (Shaw, 2004) was used to determine the current and potential future exposure pathways associated with current or unremediated (baseline) site conditions (**Appendix E**). The QEA identified COPCs and complete exposure pathways (mechanisms by which receptors may come into contact with Site-related contaminants). The risk to receptors via complete pathways were then assessed based upon comparison to screening levels in the context of current and reasonably foreseeable site exposures. The role of completed, ongoing and proposed remedial activities at the Site in mitigating exposures was addressed where appropriate. The QEA used data from the PI (NYSDEC, 1998 and 1999) and this RI.

The QEA process was derived from the guidance set forth in the USEPA's Risk Assessment Guidance for Superfund (RAGS; 1989, 1991). The complete exposure assessment report is included as **Appendix E**. The following sections present a brief summary of the pertinent results from the report.

3.3.1.1 Exposure Setting

The Site is a large complex of NYSDEC crew headquarters and an active NYSDCS incarceration facility, situated in the town of Fulton, Schoharie County, NY. The Site is bordered on the southeast by New York State land and the remainder of the facility is bordered by private property, some of which is used for residential purposes. A small pond is located on-site; its outlet feeds a tributary of Panther Creek. The outlet is a Class C (fish propagation) stream and Panther Creek is a Class C (TS) (trout spawning) stream. A NYSDEC Regulated Wetland is located approximately 0.5 miles southeast of the Site. The surrounding area is rural, generally consisting of undeveloped forest and farmland.

Wood treatment operations were conducted at the Site between 1962 and 1975. Based on previous investigations, several areas potentially impacted by releases at the Site have been identified, including:

- The NYSDEC office (Building 48).
- The former wood treatment plant (Building 49).
- The planer room in the old sawmill (Building 51).

- The former staging areas for treated lumber.
- The shale pit and several satellite areas previously used for waste disposal.
- The pond and associated drainage area on-site.

Each of these areas is indicated on **Figure 2A**.

3.3.1.2 Chemicals of Potential Concern

The following media were addressed during the Site investigative activities: surface soils, sediment, subsurface soils, and groundwater. Samples were collected from each media during the investigative activities and laboratory analysis was performed to determine chemicals present. Detected chemicals were compared to NYSDEC TAGM and NYSDEC Ambient Groundwater Quality Standards to determine COPCs. The following substances were identified as COPCs:

- Pentachlorophenol (PCP)
- Dioxin
- Fuel Oil
- Copper
- Arsenic
- Chromium

3.3.1.3 Identification of Exposure Pathways

The exposure pathway is the route a chemical may take from its source to the receptor. An exposure pathway has five elements:

- contaminant source
- contaminant release and transport mechanisms
- point of exposure
- route of exposure
- potential receptor

Sources of Contamination

Contaminant sources exist at the Site and are associated with historical releases and surficial spills of wood treatment products (PCP, copper napthenate, and fuel oil) to soil.

Fate and Transport

Contaminant release and transport mechanisms carry contaminants from the source to points where individuals may be exposed. Chemical migration between media such as soil and groundwater is influenced by the chemical's characteristics such as water solubility or molecular size or shape, in addition to the chemical and physical characteristics particular to a Site's media. Information about the fate and transport of the source chemicals is summarized below.

Pentachlorophenol

PCP has a low water solubility and a strong tendency to adsorb onto soil or sediment particles in the environment. Adsorption to soils and sediments is highly pH-dependent, and is more likely to occur under acidic conditions than under neutral or basic conditions. Therefore, leaching of PCP from soil to groundwater may be possible, particularly at lower pHs. Disassociated forms of PCP may be rapidly photolyzed by sunlight; PCP may also undergo biodegradation by microorganisms, animals, and plants, although degradation is generally slow (Howard, 1991).

PCP is lipid-soluble and therefore has a tendency to bioaccumulate in organisms. Bioaccumulation is largely pH-dependent, with considerable variation among species. Significant biomagnification of PCP in either terrestrial or aquatic food chains, however, has not been demonstrated (ATSDR, 2000).

PCP products often contain impurities such as chlorophenols, dioxins, and furans. Once released to the environment, these compounds generally adsorb to soil or sediment particles. Due to their high adsorption rate, these compounds are not expected to leach from soil. Volatilization from either subsurface soil or water is not expected to be a major transport pathway, although may be significant for surficial impacts (ATSDR, 2000).

Fuel Oil

PCP is a preservative which uses oil as an emulsifier. At the Site, PCP was mixed with number two fuel oil as the carrier fluid. Fuel oils are mixtures of numerous aliphatic and aromatic hydrocarbons. Individual components of fuel oil include n-alkanes, branched alkanes, benzene and alkylbenzenes, naphthalenes, and PAHs (ATSDR, 2000). Primary constituents identified in soil and/or groundwater at the Site are PAHs. Soil adsorption, volatilization to air, and leaching potential depend on a PAH's individual chemical characteristics; however, as a class of compounds, they are generally insoluble in water, with a strong tendency to bind to soil or sediment particles. Degradation may occur through photolysis, oxidation, biological action, and other mechanisms.

As nonpolar organic compounds, PAHs may be accumulated in organisms from water, soil, sediments, and food.

Copper Naphthenate

Copper naphthenate is a wood preservative/biocide comprised of copper compounds and naphthenic acid. The USEPA classifies copper naphthenate as a general-use (unrestricted) pesticide. Most preparations consist of 6-8% copper as copper naphthenate is typically diluted in solvents such as diesel fuel or mineral spirits (Merichem, 1999). Naphthenic acids are predominantly alicyclic (saturated, non-aromatic), and are naturally-occurring byproducts of petroleum.

Horizontal and vertical migration of copper naphthenate from a release area is not anticipated to be significant, as the preservative has a strong tendency to bind to soil and/or organic particles. Adsorption of copper is particularly dependent on the soil's chemical and physical composition, such as pH, amount of organic matter, and cation exchange capacity, with the greatest potential for leaching occurring in acidic, sandy soils (ATSDR, 2000). In water, copper naphthenate will generally adsorb to or complex with mineral or organic constituents. At higher pHs, copper may precipitate out of solution (ATSDR, 2000). Volatilization and biodegradation of copper naphthenate may occur in soil and groundwater (Merichem, 1999).

The bioconcentration factor (BCF) of copper may range considerably among species, from 10 in fish to 30,000 in mollusks; the potential for uptake may be influenced by feeding mechanisms, such as filter-feeding, as opposed to dermal or gill absorption (ATSDR, 2000). Copper is not known to biomagnify through the food chain (ATSDR, 2000). There is little information regarding the bioconcentration potential of napthenic acids.

Points of Exposure

The exposure point is a location where actual or potential human contact with a contaminated medium may occur. Analytical results for samples collected at the Site indicate that soil, sediment and groundwater have been impacted by numerous contaminants, including the following:

- PCP and other phenolic compounds.
- Polychlorinated dioxins (CDDs) and dibenzofurans (CDFs).
- Petroleum hydrocarbons.
- PAHs.
- Metals, including arsenic, chromium and copper.

Exposure Routes and Potential Receptors

The Site is currently maintained as a NYSDEC maintenance facility and as a NYSDCS correctional facility. Although the area is posted as off-limits and the treatment building is demolished/sealed off, inmates and NYSDEC/NYSDCS employees occasionally utilize Buildings 52 and 53 as part of their wood management operations. There are currently no deed restrictions on the property that would restrict future land use. Therefore, the following receptors have been identified for the Site under current and reasonable foreseeable future land use scenarios:

- Adult inmates and staff at the Site.
- Construction workers performing excavation activities.
- Future NYSDEC maintenance and/or operation activities.

Based on the nature of the chemicals of potential concern, the types of media impacted at the Site, and land use scenarios, the following exposure routes were identified:

- Direct contact with exposed surficial soil. Exposure routes include incidental ingestion of, dermal contact with, and inhalation of, volatile or particulate-bound contaminants.
- Direct contact with subsurface soil and/or groundwater. Future construction activities involving excavation in the area of concern may allow exposure to impacted soil and shallow groundwater. Exposure routes include incidental ingestion of and dermal contact with soil and groundwater, and the inhalation of volatile or particulate-bound contaminants.
- Direct contact with groundwater used as a future drinking water source. Routes of exposure include ingestion and dermal contact. Currently, there are eight water supply wells located at the Site. Samples previously collected from these wells confirmed that contaminants related to the wood processing activities were not present at detectable levels. Recent analysis of samples from five other water supply wells currently not in use have also shown that contaminants related to the wood processing activities are not present. However, there are no restrictions on the property that would limit the future placement of a water supply well in any area of the Site.
- Ingestion of fish or of game species such as deer or wild turkey. As the Site and surrounding area provide ample habitat for game species and the opportunity for hunting, there is the potential for Site-associated compounds (like dioxin) to accumulate in tissues of animals that forage at the Site. Hunters may later ingest these contaminated tissues. Analysis of fish tissue samples have shown the presence of dioxins and furans that may or may not be related to wood processing activities.

3.3.1.4 Conclusions

Complete exposure pathways have been identified for potential current and future human receptors based on exposure to contaminated soil, groundwater, fish tissue and sediment.

Under current conditions, prison inmates, NYSDEC and NYSDCS staff, and other receptors may visit impacted soil areas of the Site. Additionally, Panther Creek and the tributary to Panther Creek are trout spawning and fish propagation streams, respectively, and fishing may occur in these areas. Therefore, fishermen may come into contact with sediment in the pond and fish tissue through consumption of fish caught in the tributary or Panther Creek.

Surface and subsurface soils are impacted with dioxins and PCP in various areas around the Site, including in and around Buildings 48, 49, 50, 51, and 52. In addition, several suspected disposal locations have been shown to be impacted as well as the drum rinsing area. Recent groundwater data show impacts from the Site releases in wells close to Buildings 48 and 49.

There is considerable uncertainty about levels of exposure to consumers of game species. Terrestrial game likely to be hunted in this area would include species such as white-tailed deer and turkey. Both species consume vegetation; additionally, turkeys are opportunistic feeders that will also include invertebrates in their diet. Heavy metals and, to a lesser degree, dioxins and associated compounds are known persistent and bioaccumulative substances in plants. Dioxins, dibenzofurans, PCP and metals may accumulate in invertebrate tissue. There is the potential for bioaccumulation of these compounds in game species through dietary consumption, and therefore, people who ingest these species may likewise be exposed to these contaminants.

3.3.2 Step IIA Fish and Wildlife Impact Analysis

A Step IIA FWIA was prepared by a Shaw Scientist/Risk Assessor to determine if potential impacts to fish and wildlife resources exist at the Site from the former wood treatment operations. The FWIA consisted of the following steps:

- **Step IIA**: Pathway Analysis

The complete FWIA report is included as **Appendix D**. The following sections present a brief summary of the pertinent results of the report.

3.3.2.1 Contaminant-Specific Impact Assessment

Site conditions indicate that: 1) various species of fish and wildlife are likely to be present at the Site; 2) compounds that are mobile, persistent, or have the potential to bioaccumulate have been documented on the Site; and 3) these compounds exist at or near the surface of soil, and have the potential to be taken up by plants and animals. Therefore, the following pathways of chemical movement and exposure to fish and wildlife were considered possible:

- Dermal contact with chemicals present in the surface soil, groundwater and sediments.
- Ingestion of chemicals in surface soil, groundwater, sediment and food sources.
- Direct uptake of chemicals in soil, sediment or groundwater by terrestrial and aquatic plants.

3.3.2.2 Conclusions

A Step IIA FWIA was prepared for the Site. Chemical impacts have been identified in soil, groundwater and sediment. Various terrestrial and rivertine ecosystems are found at the Site and within the surrounding area. Potential biological receptors include the fish and wildlife species indigenous to the area.

Given the nature of the chemicals present at the Site (i.e., dioxins, phenols, PAHs and heavy metals) and the distribution of impact, complete exposure pathways were identified for terrestrial and aquatic receptors. Aquatic invertebrate tissue analysis was conducted and dioxins were not detected above the appropriate wildlife protection criteria beyond the on-site pond.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

Background

- A PI was conducted at the Site by the NYSDEC to determine if historic wood treatment processes had impacted the subsurface soil and groundwater. Data summarized in the PI report showed that further soil and groundwater investigations were required at the Site. The RI discussed herein further delineates the horizontal and aerial extent of impacts to soil and groundwater across the Site.

Site Specific Geology

- Overburden materials across the Site consist of 2 to 3 feet of fill (most likely originating from the shale quarry located northeast of the on-site buildings) underlain by very dense glacial till. Depth to bedrock across the Site ranges between zero and 95 feet bgs. Bedrock at the Site consists of blue and gray sandstone and blue shales as indicated by water supply well logs and local outcrops.

Site Specific Hydrogeology

- Groundwater occurs within the till unit, primarily in the lenses of sand and gravel under unconfined conditions. Recharge of the water table is likely provided by precipitation infiltrating areas of the Site. Depth to groundwater observed in the on-site monitoring wells ranges from 4 to 20 feet bgs and generally flows in a northeasterly direction towards the on-site pond.

Nature and Extent of Impacts

Surface Soil Results

- A total of 67 surface soil samples were collected during PI and RI investigative activities. Surface soil samples were collected from the former treatment building area, the treated lumber storage area south of former Building 50, the drum rinse area, and from the shooting range area. Surface soil samples collected were analyzed for SVOCs, metals and dioxins. Impacts to surface soil were mainly observed in the treated lumber storage area and in close proximity to the former treatment building. Surface soil sample, SS-32, located within the treated lumber storage area, exhibited the highest concentration for PCP. Surface soil analytical indicates that impacts are not widespread and are limited to the above-mentioned areas. Analytical results are summarized on **Table 2** and presented on **Figures 6A** and **6B**.

Sediment Soil Results

- A total of 37 sediment samples were collected from 27 sampling locations during the PI and RI. Sample locations include the outflow of the on-site pond, the outlet of the creek, the wetlands north of the pond, and the south side of the on-site pond. Sediment samples were analyzed for SVOCs, TOC, and dioxins. No significant impacts were observed in the samples collected from the selected sampling locations. Sediment sample analytical results are summarized on **Table 3** and presented on **Figure 7**.

Shallow Test Pit Results

- A total of 30 shallow test pit samples were collected south of Building 51 (treated lumber storage area) and analyzed for SVOCs, metals, and dioxins. Shallow tests were excavated to a depth of 2 to 3 feet bgs. STP-19, which is located north of Building 52, exhibited the highest concentration of PCP. Concentrations of the PCP and dioxins suggest that historic treatment processes have impacted the shallow subsurface. A complete summary of the shallow test pit soil analytical is in **Table 4** and presented on **Figure 8A**.

Test Pit Soil Results

- Forty-eight test pits were excavated across the Site to further investigate impacts to subsurface soil and to determine potential water bearing horizons that may act as migrational pathways for contaminants. A total of 53 soil samples were collected from the 48 test pits. Test pit soils were analyzed for VOCs, SVOCs, metals, and dioxins. Test pits were excavated in areas of the former treatment building, treated lumber storage area, drum rinse area, and several satellite areas along the shooting range access road. Test pits were excavated to an average depth of 6 to 8 feet bgs; the deepest test pit excavated to 15 feet bgs. Test pits in the area of the rail cart slab exhibited the highest concentrations of Site-related contaminants but impacts were also observed in the drum rinse area and the satellite areas along the shooting range access road. A complete summary of the test pit analytical is given in **Table 4** and presented on **Figures 6B**, **8A**, and **8B**.

Monitoring Well and Soil Boring Results

- A total of 56 subsurface soil samples were collected from 41 soil boring locations across the Site and analyzed for VOCs, SVOCs, metals, dioxins, and pesticides. Thirteen of the 41 borings were completed as monitoring wells MW-2 through MW-14. MW-1 was not installed during the PI because no aquifer bearing material was encountered during installation of this boring. Soil borings were completed in the areas of the former treatment building, treated lumber storage area, and drum rinse area. Impacts to subsurface soils were observed at depths greater than the groundwater table in wells/borings. Boring B8, located adjacent to the cart rail slab, exhibited the highest concentration of Site-related compounds. A complete summary of the subsurface soil analytical is depicted on **Table 5** and shown on **Figure 9**.

Groundwater Analytical Results

- Groundwater samples were collected during three separate sampling events (PI, 2002, and 2003). On-site monitoring wells were sampled for VOCs, SVOCs, fuel oil, PCBs, pesticides, metals and dioxins. Results from the three sampling events indicate that historic treatment processes completed at the Site have contributed to groundwater impacts. These impacts were observed in the former treatment building area and correspond with subsurface soil impacts (e.g., the impacted soils appear to be the source of impact) in the area of the former treatment building. The analytical results from the groundwater sampling events are summarized on **Table 6** and presented on **Figure 10**.

Biota Analytical Results

- Dioxins detected in fish samples collected from the Panther Creek suggest minimal Site-related impacts to the aquatic life in close proximity to the Site. **Table 7** summarizes the biota analytical results.

Qualitative Human Health Exposure Assessment

- The assessment indicated that sources of contamination to the environment exist at the Site. These sources are associated with historic releases and surficial spills of wood treatment products to soil. COCs identified were PCP, dioxin, fuel oil, and copper naphthenate. Points of exposure include surficial soil, groundwater, and sediments of the on-site pond through four potential exposure routes under current land uses. The QEA is included in **Appendix E** of this report.

Fish and Wildlife Impacts Analysis

- A Step IIA FWIA was prepared for the Site. Chemical impacts have been identified in soil, groundwater and sediment. Various terrestrial and rivertine ecosystems are found at the Site and within the surrounding area. Potential biological receptors include the fish and wildlife species indigenous of the area. Given the nature of the chemicals present at the Site and the distribution of impacts, complete exposure pathways were identified for terrestrial and aquatic receptors. Aquatic invertebrate tissue analysis was conducted and dioxins were not detected above the appropriate wildlife protection criteria beyond the on-site pond. The FWIA report is included as **Appendix F** of this report.

4.2 Recommendations

A feasibility study should be completed for further remedial action at this Site.

5.0 REFERENCES

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TABLES

Table 1
Sample and Analytical Method Summary
Camp Summit

Test Pits					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290/8280	TAL	8080	8260
TP-1	1	1	1	1	1
TP-2	0	0	0	0	0
TP-3	1	1	0	0	0
TP-4	0	0	0	0	0
TP-5	1	0	0	0	0
TP-6	1	0	0	0	0
TP-7	1	1	0	0	0
TP-8	1	1	0	0	0
TP-9	1	1	0	0	0
TP-10	0	0	0	0	0
TP-11	1	0	0	0	0
TP-12	1	0	0	0	0
TP-13	1	0	0	0	0
TP-14	1	1	0	0	0
TP-15	1	0	0	0	0
TP-16	1	1	1	0	1
TP-17	1	0	0	0	0
TP-18	1	1	0	0	1
TP-19	1	1	0	0	0
TP-20	1	0	0	0	0
TP-21	1	1	0	0	0
TP-22	1	0	0	0	0
TP-23	1	0	0	0	0
TP-24	1	1	0	0	0
TP-25	1	0	0	0	0
TP-26	1	1	0	0	0
TP-27	1	1	0	0	0
TP-28	1	1	0	0	0
TP-29	1	0	0	0	0
TP-30	1	0	0	0	0
TP-31	1	0	0	0	0
TP-32	1	1	0	0	1
TP-33	1	1	0	1	1
TP-34	1	0	0	0	0
TP-35	1	0	0	0	0
TP-36	1	0	0	0	0
TP-37	1	0	0	0	0

Monitoring Well Soil Samples					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290/8280	TAL	8080	8260
MW-6	1	1	0	0	0
MW-7	1	1	0	0	0
MW-8	1	1	0	0	0
MW-9	1	1	0	0	0
MW-10	1	1	0	0	0
MW-11	1	1	0	0	0

Deep Sediment Samples					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290/8280	TAL	8080	8260
DSED-1	1	1	0	0	0
DSED-2	1	1	0	0	0
DSED-3	1	1	0	0	0
DSED-4	1	1	0	0	0

Surface Soil Samples					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290/8280	TAL	8080	8260
SS-1	1	1	0	0	0
SS-2	1	1	1	0	0
SS-3	1	1	1	0	0
SS-4	1	0	0	0	0
SS-5	1	1	1	0	0
SS-6	1	0	0	0	0
SS-7	1	0	0	0	0
SS-8	1	1	1	0	0
SS-9	1	0	0	0	0
SS-10	1	1	1	0	0
SS-11	1	1	1	0	0
SS-12	1	1	1	0	0
SS-13	1	0	0	0	0
SS-14	1	1	1	0	0
SS-15	1	0	0	0	0
SS-16	1	0	0	0	0
SS-17	1	1	1	0	0
SS-18	1	0	0	0	0
SS-19	1	1	1	0	0
SS-20	1	0	0	0	0
SS-21	1	1	1	0	0
SS-22	1	1	1	0	0
SS-23	1	1	1	0	0
SS-24	1	1	1	0	0
SS-25	1	1	1	0	0
SS-26	1	1	1	0	0
SS-27	1	0	0	0	0
SS-28	1	0	0	0	0
SS-29	1	0	0	0	0
BGM-1	0	0	1	0	0
BGM-2	0	0	1	0	0
BGM-3	0	0	1	0	0

Soil Boring Soil Samples					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290/8280	TAL	8080	8260
SB-1	1	1	0	0	0
SB-2	1	1	0	0	0
SB-3	1	1	0	0	0
SB-4	1	1	0	0	0
SB-5	1	1	0	0	0
SB-6	1	1	0	0	0
SB-7	1	1	0	0	0

Sediment Samples					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290/8280	TAL	8080	8260
SED-1	1	1	0	0	0
SED-2	1	1	0	0	0
SED-3	1	1	0	0	0
SED-4	1	1	0	0	0
SED-5	1	1	0	0	0
SED-6	1	1	0	0	0
SED-7	1	1	0	0	0

Table 1
Sample and Analytical Method Summary
Camp Summit

Shallow Test Pit Soil Samples					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290/8280	TAL	8080	8260
STP-1	1	1	1	0	0
STP-2	1	1	0	0	0
STP-3	1	1	1	0	0
STP-4	1	0	0	0	0
STP-5	1	1	1	0	0
STP-6	1	0	0	0	0
STP-7	1	1	1	0	0
STP-8	1	0	0	0	0
STP-9	1	1	1	0	0
STP-10	1	1	1	0	0
STP-11	1	1	1	0	0
STP-12	1	0	0	0	0
STP-13	1	1	1	0	0
STP-14	1	0	0	0	0
STP-15	1	1	1	0	0
STP-16	1	0	0	0	0
STP-17	1	1	1	0	0
STP-18	1	0	0	0	0
STP-19	1	1	1	0	0
STP-20	1	1	1	0	0
STP-21	1	0	0	0	0
STP-22	1	0	0	0	0
STP-23	1	1	1	0	0
STP-24	1	0	0	0	0
STP-25	1	1	1	0	0
STP-26	1	1	1	0	0
STP-27	1	1	1	0	0
STP-28	1	0	0	0	0
STP-29	1	0	0	0	0
STP-30	1	0	0	0	0

Production Wells Groundwater					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290/8280	TAL	8080	8260
PW-1	1	0	1	1	1
PW-2	1	0	1	1	1
PW-3	1	0	1	1	1
PW-4	1	0	1	1	1
PW-5	1	0	1	1	1

Fish Samples					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290	TAL	8080	8260
2PC-1	0	1	0	0	0
2PC-2	0	1	0	0	0
2PC-3	0	1	0	0	0
2PC-4	0	1	0	0	0
2PC-5	0	1	0	0	0
2PC-6	0	1	0	0	0
2PC-7	0	1	0	0	0
2PC-8	0	1	0	0	0
2PC-9	0	1	0	0	0
2PC-10	0	1	0	0	0
2PC-11	0	1	0	0	0
3PC-12	0	1	0	0	0
3PC-13	0	1	0	0	0
3PC-14	0	1	0	0	0
3PC-15	0	1	0	0	0
3PC-16	0	1	0	0	0
3PC-17	0	1	0	0	0
3PC-18	0	1	0	0	0
3PC-19	0	1	0	0	0

Existing Wells Groundwater					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290/8280	TAL	8080	8260
MW-2	1	1	0	0	1
MW-3	1	1	0	0	1
MW-4	1	1	0	0	1
MW-5	1	1	0	0	1

New Wells Groundwater					
Location	SVOC	Dioxins	Metals	PEST/PCB	VOC
Analytical Method	8270	8290/8280	TAL	8080	8260
MW-6	1	0	1	1	1
MW-7	1	0	1	1	1
MW-8	1	0	1	1	1
MW-9	1	0	1	1	1
MW-10	1	0	1	1	1
MW-11	1	0	1	1	1

Table 1
Sample and Analytical Method Summary
Camp Summit

Task	# of Samples	Depth of Sample Collection	Reason for Additional Samples	Laboratory Analysis	Laboratory Method
Monitoring Well Soil					
MW - 12	up to 2	Field Observations	Depth info past 5 ft. bgs. needed	Svoc/Dioxin	8270/8280
MW - 13	up to 2	Field Observations	Further Investigation	Svoc/Dioxin	8270/8280
MW - 14	up to 2	Field Observations	Further Investigation	Svoc/Dioxin	8270/8280
Soil Boring Soil					
SSB03 - 7	up to 2	Greater than 2 ft. bgs.	Depth info past 2 ft. bgs. needed.	Svoc/Dioxin	8270/8280
SSB03 - 8	up to 2	Greater than 5 ft. bgs.	Depth info past 5 ft. bgs. needed	Svoc/Dioxin	8270/8280
SSB03 - 9	up to 2	Greater than 4 ft. bgs.	Depth info past 4 ft. bgs. needed.	Svoc/Dioxin	8270/8280
SSB03 - 10	up to 2	Greater than 4 ft. bgs.	Depth info past 4 ft. bgs. needed.	Svoc/Dioxin	8270/8280
SSB03 - 14	up to 2	Greater than 4 ft. bgs.	Depth info past 4 ft. bgs. needed.	Svoc/Dioxin	8270/8280
SSB03 - 15	up to 2	Greater than 5 ft. bgs.	Depth info past 5 ft. bgs. needed	Svoc/Dioxin	8270/8280
SSB03 - 16	up to 2	Greater than 5 ft. bgs.	Depth info past 5 ft. bgs. needed	Svoc/Dioxin	8270/8280
SSB03 - 17	up to 2	Greater than 5 ft. bgs.	Depth info past 5 ft. bgs. needed	Svoc/Dioxin	8270/8280
SSB03 - 18	up to 2	Greater than 5 ft. bgs.	Depth info past 5 ft. bgs. needed	Svoc/Dioxin	8270/8280
SSB03 - 19	up to 2	Greater than 5 ft. bgs.	Depth info past 5 ft. bgs. needed	Svoc/Dioxin	8270/8280
Field Dupe	3	NA	NA	Svoc/Dioxin	8270/8280
MS	3	NA	NA	Svoc/Dioxin	8270/8280
MSD	3	NA	NA	Svoc/Dioxin	8270/8280
Test Pits					
TP03 - 1	1 Composite	Field Observations	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M
TP03 - 2	1 Composite	Field Observations	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M
TP03 - 3	1 Composite	Field Observations	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M
TP03 - 4	1 Composite	Field Observations	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M
TP03 - 5	1 Composite	Field Observations	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M
TP03 - 6	1 Composite	Field Observations	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M
TP03 - 7	1 Composite	Field Observations	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M
TP03 - 8	1 Composite	Field Observations	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M
TP03 - 9	2 Composites	1 from the north part of the	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M
		excavation; 1 from the south			
		part of the excavation			
TP03-10	1 Composite	Field Observations	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M
TP03-11	1 Composite	Field Observations	Further Investigation	Svoc/Dioxin/Metals	8270/8280/CLP-M

Table 1
Sample and Analytical Method Summary
Camp Summit

Background Surface Soils					
BGM03 - 1	1 Composite	0-2"	Background Concentrations	Dioxins	8280
BGM03 - 2	1 Composite	0-2"	Background Concentrations	Dioxins	8280
BGM03 - 3	1 Composite	0-2"	Background Concentrations	Dioxins	8280
BGM03 - 4	1 Composite	0-2"	Background Concentrations	Dioxins	8280
BGM03 - 5	1 Composite	0-2"	Background Concentrations	Dioxins	8280
Sediment Samples					
SED03 - 1	1 Composite	0-2"	To address seasonal overflow	Svoc/Dioxin/TOC	8270/8290/TOC
SED03 - 2	1 Composite	0-2"	To address seasonal overflow	Svoc/Dioxin/TOC	8270/8290/TOC
SED03 - 3	1 Composite	0-2"	To address seasonal overflow	Svoc/Dioxin/TOC	8270/8290/TOC
SED03 - 4	1 Composite	0-2"	Further Delineation	Svoc/Dioxin/TOC	8270/8290/TOC
Monitoring Well Water					
MW - 2	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW - 3	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW- 4	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW - 5	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW - 6	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW - 7	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW - 8	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW - 9	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW - 10	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW - 11	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW - 12 (new)	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW - 13 (new)	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
MW-14 (new)	1	NA	Further Investigation	Svoc/Dioxin	8270/8290
Field Dupe	3	NA	NA	Svoc/Dioxin	8270/8290
MS	3	NA	NA	Svoc/Dioxin	8270/8290
MSD	3	NA	NA	Svoc/Dioxin	8270/8290

Table 2
Surface Soil Analytical Results
Camp Summit

		Preliminary Investigation											
Analyte (units) **SVOC/PAH *(mg/kg)***	**TAGM**	**SS-1**	**SS-2**	**SS-3**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**	**SS-9**	**SS-10**	**SS-11**	**SS-12**
Acenaphthene	50	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	50	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{a}anthracene	0.33	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{b}fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{k}fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(ghi) perylene	50	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (a) Pyrene	0.33	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	2.7	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NP	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	0.4	--	--	--	--	--	--	--	--	--	--	--	--
Bis (2-Ethylhexyl) Phthalate	50	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	6.2	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl Phthalate	8.1	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	7.1	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalte	120	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	50	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	50	--	--	--	--	--	--	--	--	--	--	--	--
Indeno (1,2,3-cd) pyrene	3.2	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	36.4	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	13	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1*	**0.73**	**0.88**	**0.13**	**1.09**	**0.87**	**0.4**	**0.47**	**1.4**	**3.28**	**0.37**	**0.3**	ND
Phenanthrene	50	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	50	--	--	--	--	--	--	--	--	--	--	--	--
Total SVOC	500	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
Only analytes detected at or above laboratory method detection limits included on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated
< = Below MDL
-- = Not Sampled

SVOC Data Qualifiers:

All results in mg/kg or parts per million
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 2
Surface Soil Analytical Results
Camp Summit

		Preliminary Investigation											
Analyte (units)													
SVOC/PAH *(mg/kg)*	**TAGM**	**SS-13**	**SS-14**	**SS-15**	**SS-16**	**SS-17**	**SS-18**	**SS-19**	**SS-20**	**SS-21**	**SS-22**	**SS-23**	**SS-24**
Acenaphthene	50	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	50	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{a}anthracene	0.33	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{b}fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{k}fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(ghi) perylene	50	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (a) Pyrene	0.33	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	2.7	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NP	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	0.4	--	--	--	--	--	--	--	--	--	--	--	--
Bis (2-Ethylhexyl) Phthalate	50	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	6.2	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl Phthalate	8.1	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	7.1	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalte	120	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	50	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	50	--	--	--	--	--	--	--	--	--	--	--	--
Indeno (1,2,3-cd) pyrene	3.2	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	36.4	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	13	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1*	**0.32**	**0.31**	**0.55**	ND	**0.24**	**0.34**	**1.86**	**1.59**	ND	**0.56**	**0.5**	**0.6**
Phenanthrene	50	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	50	--	--	--	--	--	--	--	--	--	--	--	--
Total SVOC	500	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
Only analytes detected at or above laboratory method detection limits included on tables
*PCP results from PIR Immunoassay Results
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SVOC Data Qualifiers:

All results in mg/kg or parts per million
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 2
Surface Soil Analytical Results
Camp Summit

		Preliminary Investigation													
Analyte (units)	**TAGM**														
SVOC/PAH *(mg/kg)*		**SS-25**	**SS-26**	**SS-27**	**SS-28**	**SS-29**	**SS-30**	**SS-31**	**SS-32**	**SS-33**	**SS-34**	**SS-35**	**SS-36**	**SS-37**	**SS-38**
Acenaphthene	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{a}anthracene	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{b}fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{k}fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(ghi) perylene	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (a) Pyrene	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	2.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis (2-Ethylhexyl) Phthalate	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	6.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl Phthalate	8.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	7.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalte	120	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Indeno (1,2,3-cd) pyrene	3.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	36.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1*	**4.79**	**1.14**	**0.14**	**0.74**	**1.7**	**0.7**	**0.98**	**253**	**0.18**	ND	**0.36**	**0.12**	**80**	**1.55**
Phenanthrene	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total SVOC	500	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:
Only analytes detected at or above laboratory method detection limits included on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated
< = Below MDL
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SVOC Data Qualifiers:

All results in mg/kg or parts per million
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 2
Surface Soil Analytical Results
Camp Summit

		Remedial Investigation															
Analyte (units)	**TAGM**																
SVOC/PAH *(mg/kg)*		**SS-1**	**SS-2**	**SS-3**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**	**SS-9**	**SS-10**	**SS-11**	**SS-12**	**SS-13**	**SS-14**	**SS-15**	**SS-16**
Acenaphthene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Anthracene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Benzo{a}anthracene	0.33	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.035 J**	<0.330	<0.330	<0.330	**0.089 J**	**0.024 J**	<0.330	<0.330
Benzo{b}fluoranthene	1.1	<0.330	<0.330	<0.330	<0.330	**0.024 J**	<0.330	<0.330	<0.330	**0.035 J**	<0.330	<0.330	<0.330	**0.068 J**	**0.039 J**	<0.330	<0.330
Benzo{k}fluoranthene	1.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.034 J**	<0.330	<0.330	<0.330	**0.082 J**	<0.330	<0.330	<0.330
Benzo(ghi) perylene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Benzo (a) Pyrene	0.33	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.024 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Benzoic Acid	2.7	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6
Carbazole	NP	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Chrysene	0.4	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.040 J**	<0.330	<0.330	<0.330	**0.078 J**	**0.030 J**	<0.330	<0.330
Bis (2-Ethylhexyl) Phthalate	50	<0.330	<0.330	<0.330	<0.330	**0.023 J**	<0.330	<0.330	<0.330	**0.023 J**	<0.330	<0.330	**0.031 J**	<0.330	<0.330	<0.330	<0.330
Dibenzofuran	6.2	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Di-n-butyl Phthalate	8.1	<0.330	<0.330	<0.330	**0.039 J**	**0.040 J**	<0.330	<0.330	**0.042 J**	<0.330	<0.330	**0.071 J**	<0.330	<0.330	<0.330	<0.330	<0.330
Diethylphthalate	7.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Di-n-octyl phthalte	120	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.025 J**	<0.330	<0.330
Fluoranthene	50	<0.330	<0.330	<0.330	<0.330	**0.027 J**	<0.330	<0.330	<0.330	**0.041 J**	<0.330	<0.330	<0.330	**0.054 J**	**0.046 J**	**0.021 J**	<0.330
Fluorene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Indeno (1,2,3-cd) pyrene	3.2	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
2-Methylnaphthalene	36.4	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.220 J**
Naphthalene	13	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Pentachlorophenol	1*	**0.038 J**	<1.6	**0.062 J**	<1.6	<1.6	**1.6**	**2**	<1.6	<1.6	<1.6	<1.6	**1**	<1.6	<1.6	<1.6	**6.3**
Phenanthrene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.110 J**
Pyrene	50	<0.330	<0.330	<0.330	<0.330	**0.025 J**	<0.330	<0.330	<0.330	**0.039 J**	<0.330	<0.330	<0.330	**0.055 J**	**0.044 J**	**0.020 J**	**0.071 J**
Total SVOC	500	**0.038 J**	BDL	**0.062 J**	**0.039 J**	**0.139 J**	**1.6**	**2**	**0.042 J**	**0.271 J**	BDL	**71 J**	**1.03**	**0.426 J**	**0.208 J**	**0.041 J**	**6.701 J**

Notes:
Only analytes detected at or above laboratory method detection limits included on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
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SVOC Data Qualifiers:

All results in mg/kg or parts per million
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 2
Surface Soil Analytical Results
Camp Summit

		Remedial Investigation																			
Analyte (units)	**TAGM**																				
SVOC/PAH *(mg/kg)*		**SS-17**	**SS-18**	**SS-19**	**SS-20**	**SS-21**	**SS-22**	**SS-23**	**SS-24**	**SS-25**	**SS-26**	**SS-27**	**SS-28**	**SS-29**	**BGM-1**	**BGM-2**	**BGM-3**	**BGM03-1**	**BGM03-2**	**BGM03-3**	**BGM03-4**	**BGM03-5**
Acenaphthene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<0.410	<0.440	<0.900	<0.420
Anthracene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<0.410	<0.440	<0.900	<0.420
Benzo{a}anthracene	0.33	<0.330	<0.330	**0.110 J**	**0.072 J**	<0.330	**0.040 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<0.410	<0.440	<0.900	<0.420
Benzo{b}fluoranthene	1.1	<0.330	<0.330	**0.110 J**	**0.047 J**	<0.330	**0.044 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<0.410	<0.440	<0.900	<0.420
Benzo{k}fluoranthene	1.1	<0.330	<0.330	**0.130 J**	**0.052 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<0.410	<0.440	<0.900	<0.420
Benzo(ghi) perylene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<0.410	<0.440	<0.900	<0.420
Benzo (a) Pyrene	0.33	<0.330	<0.330	<0.330	**0.046 J**	<0.330	**0.025 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<0.410	<0.440	<0.900	<0.420
Benzoic Acid	2.7	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	**0.550 J**	<1.6	-	-	-	<1.0	<1.0	<1.1	<2.2	<0.420
Carbazole	NP	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<0.410	<0.440	<0.900	<0.420
Chrysene	0.4	<0.330	<0.330	**0.210 J**	**0.079 J**	<0.330	**0.047 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<0.410	<0.440	<0.900	<0.420
Bis (2-Ethylhexyl) Phthalate	50	<0.330	**0.032 J**	<0.330	**0.030 J**	<0.330	<0.330	<0.330	<0.330	**0.098 J**	<0.330	<0.330	<0.330	<0.330	-	-	-	**0.024J**	**0.031J**	<0.440	**0.048J**	**0.360J**
Dibenzofuran	6.2	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<410	<0.440	<0.900	<0.420
Di-n-butyl Phthalate	8.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<410	<0.440	<0.900	<0.420
Diethylphthalate	7.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<410	<0.440	<0.900	<0.420
Di-n-octyl phthalte	120	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.049 J**	<0.330	-	-	-	<0.400	<410	<0.440	<0.900	<0.420
Fluoranthene	50	<0.330	<0.330	**0.290 J**	**0.160 J**	<0.330	**0.061 J**	<0.330	**0.021 J**	**0.028 J**	**0.050 J**	**0.037 J**	<0.330	<0.330	-	-	-	<0.400	**0.026J**	<0.440	<0.900	<0.420
Fluorene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<410	<0.440	<0.900	<0.420
Indeno (1,2,3-cd) pyrene	3.2	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<410	<0.440	<0.900	<0.420
2-Methylnaphthalene	36.4	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<410	<0.440	<0.900	<0.420
Naphthalene	13	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<410	<0.440	<0.900	<0.420
Pentachlorophenol	1*	**0.400 J**	**0.460 J**	**1.6**	**0.045 J**	<1.6	**1.6 J**	**0.110 J**	**0.660 J**	**0.470 J**	<1.6	<1.6	<1.6	<1.6	-	-	-	<1.000	<1,000	<1.1	<2.2	<0.420
Phenanthrene	50	<0.330	<0.330	<0.330	**0.046 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	-	-	<0.400	<410	<0.440	<0.900	<0.420
Pyrene	50	<0.330	<0.330	**0.35**	**0.140 J**	<0.330	**0.110 J**	<0.330	**0.022 J**	**0.028 J**	**0.051 J**	**0.034 J**	<0.330	<0.330	-	-	-	<0.400	<410	<0.440	<0.900	<0.420
Total SVOC	500	**0.400 J**	**0.492 J**	**2.8 J**	**0.717 J**	BDL	**1.927 J**	**0.110 J**	**0.703 J**	**0.624 J**	**0.101 J**	**0.071 J**	**0.599 J**	BDL	-	-	-	**0.024J**	**0.057J**	ND	**0.048J**	**0.360J**

Notes:
Only analytes detected at or above laboratory method detection limits included on tables
*PCP results from PIR Immunoassay Results
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SVOC Data Qualifiers:

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J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 2
Surface Soil Analytical Results
Camp Summit

			Preliminary Investigation											
Metals *(mg/kg)*	**TAGM**	**BGM Average**	**SS-4**	**SS-6**	**SS-8**	**SS-9**	**SS-19**	**SS-20**	**SS-25**	**SS-26**	**SS-29**	**SS-32**	**SS-36**	**SS-38**
Aluminum	NV	**18866.6**	--	**13000**	--	--	--	--	--	--	--	--	**16700**	--
Antimony	NV	**0.283**	--	ND	--	--	--	--	--	--	--	--	ND	--
Arsenic	7.5	**9.1**	--	**6.7**	--	--	--	--	--	--	--	--	**15**	--
Barium	**300**	54.6	--	**116**	--	--	--	--	--	--	--	--	**59.3**	--
Berillium	0.16	**0.54**	--	**1.1**	--	--	--	--	--	--	--	--	**0.78 B**	--
Cadmium	**1**	0.15	--	**0.6 B**	--	--	--	--	--	--	--	--	ND	--
Calcium	NV	**110.6**	--	**2090**	--	--	--	--	--	--	--	--	**2370**	--
Chromium	10	**19.06**	--	**10.8**	--	--	--	--	--	--	--	--	**25.1**	--
Cobalt	**30**	9.33	--	**9**	--	--	--	--	--	--	--	--	**21.8**	--
Copper	0.25	**10.76**	--	**5.9**	--	--	--	--	--	--	--	--	**25.7**	--
Iron	2000	**30633.3**	--	**15200**	--	--	--	--	--	--	--	--	**36700**	--
Lead	NV	**17.86**	--	**17.3**	--	--	--	--	--	--	--	--	**36.5**	--
Magnesium	NV	**2300**	--	**1380**	--	--	--	--	--	--	--	--	**5410**	--
Manganese	NV	**929**	--	**1970**	--	--	--	--	--	--	--	--	**1770**	--
Nickel	13	**14.9**	--	**18.6**	--	--	--	--	--	--	--	--	**39.8**	--
Potassium	NV	**561**	--	**401 B**	--	--	--	--	--	--	--	--	**1470**	--
Selenium	**2**	1.5	--	**0.84 B**	--	--	--	--	--	--	--	--	ND	--
Silver	NV	**0.0**	--	ND	--	--	--	--	--	--	--	--	ND	--
Mercury	**0.1**	0.045	--	ND	--	--	--	--	--	--	--	--	**0.06**	--
Sodium	NV	NP	--	**368 B**	--	--	--	--	--	--	--	--	**68.7**	--
Thallium	NV	**6.3**	--	ND	--	--	--	--	--	--	--	--	ND	--
Vanadium	**150**	27.16	--	**10.1**	--	--	--	--	--	--	--	--	**16.6**	--
Zinc	20	**67.36**	--	**67.2**	--	--	--	--	--	--	--	--	**141**	--
Total Metals			--	**15279.1**	--	--	--	--	--	--	--	--	**42291.88**	--

Notes:
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*PCP results from PIR Immunoassay Results
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< = Below MDL
-- = Not Sampled

Metal Data Qualifiers:

All results in mg/kg or parts per million
D=Result obtained from dilution
B=Indicates a value greater than or equal to the instrument detection limit but less than the quantitation limit
NV=Indicates TAGM recommened soil clean-up objective is site background
Metals SCGs used for comparison were either TAGM 4046 or Site Background average, which ever is higher
Bold Text=SCG used for Regulatory Comparison
The SCG for Cadmium (10 ppm) and Chromium (50 ppm) are generally accepted clean-up levels
The SCG for Lead (400 ppm) was adopted from the EPA

Table 2
Surface Soil Analytical Results
Camp Summit

			Remedial Investigation											
Metals *(mg/kg)*	**TAGM**	**BGM Average**	**SS-1**	**SS-2**	**SS-3**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**	**SS-9**	**SS-10**	**SS-11**	**SS-12**
Aluminum	NV	**18866.6**	-	**13700**	**15300**	-	**12800**	-	-	**13800**	-	**14800**	**12400**	**14100**
Antimony	NV	**0.283**	-	**0.91 B**	**0.80 B**	-	**0.66 B**	-	-	**0.70 B**	-	<0.65	**0.65 B**	<0.60
Arsenic	7.5	**9.1**	-	**17.9**	**6.8**	-	**6.5**	-	-	**9.5**	-	**9.3**	**9.2**	**9**
Barium	**300**	54.6	-	**36.7**	**21.6 B**	-	**43.1**	-	-	**24.1**	-	**39**	**23**	**45.9**
Berillium	0.16	**0.54**	-	**0.66**	**0.79**	-	**0.62**	-	-	**0.69**	-	**0.76**	**0.55 B**	**0.66**
Cadmium	**1**	0.15	-	**0.30 B**	**0.33 B**	-	**0.33 B**	-	-	**0.30 B**	-	**0.38 B**	**0.23 B**	**0.38 B**
Calcium	NV	**110.6**	-	**703**	**469 B**	-	**2300**	-	-	**1770**	-	**7830**	**379**	**2360**
Chromium	10	**19.06**	-	**22.5**	**21.7**	-	**19.1**	-	-	**20.6**	-	**22**	**18.1**	**19.8**
Cobalt	**30**	9.33	-	**20.1**	**17.3**	-	**13.3**	-	-	**15.4**	-	**15.1**	**21.9**	**15.2**
Copper	0.25	**10.76**	-	**18.5**	**21.7**	-	**15.5**	-	-	**20**	-	**19.3**	**10.9**	**25.9**
Iron	2000	**30633.3**	-	**32200**	**35800**	-	**29300**	-	-	**33000**	-	**37300**	**29300**	**30700**
Lead	NV	**17.86**	-	**42.1**	**24.1**	-	**21.6**	-	-	**24**	-	**24.9**	**18.1**	**22.8**
Magnesium	NV	**2300**	-	**4060**	**4900**	-	**4080**	-	-	**4870**	-	**5300**	**3960**	**4190**
Manganese	NV	**929**	-	**784**	**428**	-	**939**	-	-	**603**	-	**826**	**726**	**955**
Nickel	13	**14.9**	-	**31.6**	**32.7**	-	**29.3**	-	-	**33.6**	-	**34**	**29.4**	**30.4**
Potassium	NV	**561**	-	**783**	**826**	-	**904**	-	-	**903**	-	**1070**	**729**	**804**
Selenium	**2**	1.5	-	**1.7**	**1.1**	-	**1.2**	-	-	**1.2**	-	**1.8**	**1.1**	**1.2**
Silver	NV	**0.0**	-	<0.09	<0.10	-	<0.10	-	-	<0.10	-	<0.12 U	<0.011	<0.11
Mercury	**0.1**	0.045	-	<0.011	<0.011	-	**0.029 B**	-	-	<0.013	-	**0.014 B**	<0.10	<0.012
Sodium	NV	NP	-	**29.4 B**	**46.6 B**	-	**44.4 B**	-	-	**53.3 B**	-	**85.8**	**30.5**	**43.8 B**
Thallium	NV	**6.3**	-	**4.3**	**5.6**	-	**4.5**	-	-	**5**	-	**5**	**4.6**	**5**
Vanadium	**150**	27.16	-	**18.2**	**13.3**	-	**15.3**	-	-	**16.3**	-	**17.8**	**14.5**	**17.5**
Zinc	20	**67.36**	-	**62.9**	**120**	-	**71.7**	-	-	**70**	-	**124**	**52.5**	**80.9**
Total Metals			-	**52,537.77**	**58,057.42**	-	**50,610.14**	-	-	**52,240.69**	-	**67,525.15**	**47.729.43**	**53,427.44**

Notes:
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Table 2
Surface Soil Analytical Results
Camp Summit

			Remedial Investigation													
Metals *(mg/kg)*	**TAGM**	**BGM Average**	**SS-13**	**SS-14**	**SS-15**	**SS-16**	**SS-17**	**SS-18**	**SS-19**	**SS-20**	**SS-21**	**SS-22**	**SS-23**	**SS-24**	**SS-25**	**SS-26**
Aluminum	NV	**18866.6**	-	**16700 E**	-	-	**17700 E**	-	**13000 E**	-	**13100 E**	**17900 E**	**13800 E**	**15000 E**	**13500 E**	**19900 E**
Antimony	NV	**0.283**	-	**1.8 B**	-	-	**1.0 B**	-	**0.77 B**	-	**0.70 B**	**1.1 B**	**0.98 B**	**1.3 B**	**0.88 B**	**1.3 B**
Arsenic	7.5	**9.1**	-	**11.6**	-	-	**13.4**	-	**11.6**	-	**10.8**	**12.9**	**9.9**	**13.7**	**9.7**	**13.8**
Barium	**300**	54.6	-	**47.2 E**	-	-	**52.5 E**	-	**42.0 E**	-	**39.7 E**	**75.4 E**	**47.1 E**	**44.4 E**	**42.9 E**	**103 E**
Berillium	0.16	**0.54**	-	**0.97**	-	-	**0.79**	-	**0.65**	-	**0.6**	**0.68 B**	**0.59 B**	**0.7**	**0.63 B**	**1.4**
Cadmium	**1**	0.15	-	**0.39 B**	-	-	**0.19 B**	-	**0.83**	-	**0.20 B**	**0.29 B**	**0.20 B**	**0.19 B**	**0.11 B**	**0.62 B**
Calcium	NV	**110.6**	-	**2900 E**	-	-	**2410 E**	-	**4450 E**	-	**47900 E**	**3060 E**	**2750 E**	**2270 E**	**3450 E**	**3790 E**
Chromium	10	**19.06**	-	**23.6 E**	-	-	**24.0 E**	-	**18.0 E**	-	**17.8 E**	**19.7 E**	**17.2 E**	**19.0 E**	**18.8 E**	**16.8 E**
Cobalt	**30**	9.33	-	**18.1 E**	-	-	**16.69 E**	-	**15.4 E**	-	**12.1 E**	**12.1 E**	**12.1 E**	**17.3 E**	**13.9 E**	**46.2 E**
Copper	0.25	**10.76**	-	**16.5 E**	-	-	**23.5 E**	-	**26.5 E**	-	**15.8 E**	**15.1 E**	**16.6 E**	**25.6 E**	**17.7 E**	**18.8 E**
Iron	2000	**30633.3**	-	**40300 E**	-	-	**39100 E**	-	**29900 E**	-	**31300 E**	**31800 E**	**26700 E**	**31400 E**	**29500 E**	**26700 E**
Lead	NV	**17.86**	-	**26.7 E**	-	-	**27.1 E**	-	**25.9 E**	-	**25.3 E**	**45.9 E**	**25.4 E**	**32.9 E**	**26.7 E**	**104 E**
Magnesium	NV	**2300**	-	**5060 E**	-	-	**4890 E**	-	**5400 E**	-	**5570 E**	**2970 E**	**3120 E**	**3690 E**	**4170 E**	**190 E**
Manganese	NV	**929**	-	**1180 E**	-	-	**1130 E**	-	**821 E**	-	**646 E**	**1240 E**	**1150 E**	**1950 E**	**828 E**	**4510 E**
Nickel	13	**14.9**	-	**35.3 E**	-	-	**36.4 E**	-	**29.0 E**	-	**29.5 E**	**21.4 E**	**23.0 E**	**30.0 E**	**29.1 E**	**17.6 E**
Potassium	NV	**561**	-	**1410**	-	-	**1150**	-	**988**	-	**941**	**970**	**959**	**950**	**1120**	**889 B**
Selenium	**2**	1.5	-	**2.2**	-	-	**1.7**	-	**1.4**	-	**1.3**	**2**	**1.7**	**1.6**	**1.4**	**2.7**
Silver	NV	**0.0**	-	**0.28 B**	-	-	<0.12	-	<0.10	-	<0.09	<0.13	<0.12	<0.11	<0.12	**0.21 B**
Mercury	**0.1**	0.045	-	**0.044 B**	-	-	**0.037 B**	-	**0.034 B**	-	<0.010	**0.048 B**	<0.014	<0.012	<0.015	**0.256**
Sodium	NV	NP	-	**56.7 B**	-	-	**61.5 B**	-	**56.5 B**	-	**95.7 B**	**139 B**	**161 B**	**73.4 B**	**91.2 B**	<59.9
Thallium	NV	**6.3**	-	**3.5**	-	-	**3**	-	**1.7**	-	<0.53	**2.7**	**2.2**	**2**	**1.6**	**3.3**
Vanadium	**150**	27.16	-	**19.5 E**	-	-	**21.7 E**	-	**15.5 E**	-	**15.3 E**	**25.3 E**	**18.5 E**	**19.1 E**	**16.7 E**	**26.5 E**
Zinc	20	**67.36**	-	**122 E**	-	-	**131 E**	-	**255 E**	-	**79.4 E**	**106 E**	**101 E**	**86.5 E**	**129 E**	**96.5 E**
Total Metals			-	**67,936.38**	-	-	**66,749.51**	-	**55,059.78**	-	**99,801.20**	**58,419.62**	**48,916.47**	**55,627.69**	**52,968.32**	**56,431.99**

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Table 2
Surface Soil Analytical Results
Camp Summit

			Remedial Investigation										
Metals *(mg/kg)*	**TAGM**	**BGM Average**	**SS-27**	**SS-28**	**SS-29**	**BGM-1**	**BGM-2**	**BGM-3**	**BGM03-1**	**BGM03-2**	**BGM03-3**	**BGM03-4**	**BGM03-5**
Aluminum	NV	**18866.6**	**14800 E**	**16200 E**	**14200 E**	**21800 E***	**17800 E***	**17000 E***	-	-	-	-	-
Antimony	NV	**0.283**	**1.3 B**	**0.75 B**	<0.71	**0.85 BN**	<6.9 N	<8.0 N	-	-	-	-	-
Arsenic	7.5	**9.1**	**10.8**	**9.8**	**5.8**	**8.6**	**8.2**	**10.5**	-	-	-	-	-
Barium	**300**	54.6	**91.0 E**	**51.7 E**	**52.1 E**	**50.3 E***	**54.4 E***	**59.3 E***	-	-	-	-	-
Berillium	0.16	**0.54**	**0.85**	**0.72**	**0.62 B**	**0.57 B**	**0.46 B**	**0.60 B**	-	-	-	-	-
Cadmium	**1**	0.15	**0.47 B**	**0.09 B**	**0.18 B**	**0.16 B**	**0.17 B**	**0.12 B**	-	-	-	-	-
Calcium	NV	**110.6**	**2710 E**	**475 BE**	**845 E**	**128 B**	**81.0 B**	**123 B**	-	-	-	-	-
Chromium	10	**19.06**	**15.2 E**	**17.4 E**	**15.7 E**	**21.0 E***	**18.2 E***	**18.0 E***	-	-	-	-	-
Cobalt	**30**	9.33	**28.4 E**	**23.1 E**	**14.2 E**	**7.1 E**	**10.5 E**	**10.4 E**	-	-	-	-	-
Copper	0.25	**10.76**	**11.6 E**	**9.4 E**	**6.7 E**	**9.2 E**	**8.2 E**	**14.9 E**	-	-	-	-	-
Iron	2000	**30633.3**	**23900 E**	**23300 E**	**20000 E**	**32700E***	**27700 E***	**31500 E***	-	-	-	-	-
Lead	NV	**17.86**	**51.2 E**	**37.2 E**	**30.3 E**	**15.7**	**22.1**	**15.8**	-	-	-	-	-
Magnesium	NV	**2300**	**1980 E**	**2630 E**	**2510 E**	**2260 E**	**2090 E**	**2550 E**	-	-	-	-	-
Manganese	NV	**929**	**1410 E**	**393 E**	**411 E**	**330 E***	**1500 E***	**957 E***	-	-	-	-	-
Nickel	13	**14.9**	**16.8 E**	**17.3 E**	**15.9 E**	**14.2 E**	**13.0 E**	**17.6 E**	-	-	-	-	-
Potassium	NV	**561**	**751 B**	**798**	**773**	**565 B**	**574 B**	**544 B**	-	-	-	-	-
Selenium	**2**	1.5	**1.9**	**1.8**	**1.3**	**1.5***	**1.5 ***	**1.5 ***	-	-	-	-	-
Silver	NV	**0.0**	**0.2 B**	<0.12	<0.12	<1.2	<1.2	<1.3	-	-	-	-	-
Mercury	**0.1**	0.045	**0.13**	**0.046**	**0.018 B**	**0.044 B**	**0.072**	**0.018 B**	-	-	-	-	-
Sodium	NV	NP	**61.1 B**	**37.1 B**	**41.8 B**	<606	<577	<671	-	-	-	-	-
Thallium	NV	**6.3**	**1.9**	**1.3 B**	**2.5**	**6.4***	**6.5***	**6.1***	-	-	-	-	-
Vanadium	**150**	27.16	**23.8 E**	**23.7 E**	**21.6 E**	**31.6 E***	**26.7 E***	**23.2 E***	-	-	-	-	-
Zinc	20	**67.36**	**112 E**	**107 E**	**93.3 E**	**70.2 E***	**63.3 E***	**68.6 E***	-	-	-	-	-
Total Metals			**45,979.65**	**44,134.41**	**39,041.02**	**58,020.72**	**49,978.30**	**52,920.64**	-	-	-	-	-

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Table 2
Surface Soil Analytical Results
Camp Summit

		Preliminary Investigation											
Dioxins *(ng/g)*	**TEFs**	**SS-4**	**SS-6**	**SS-8**	**SS-9**	**SS-19**	**SS-20**	**SS-25**	**SS-26**	**SS-29**	**SS-32**	**SS-36**	**SS-38**
Total TCDF	NP	**0.0173**	--	**0.057**	**0.0542**	**0.0718**	**0.0379**	**0.118**	**0.028**	**0.0544**	**0.0643**	--	**0.0857**
Total PeCDF	NP	**0.0976**	--	**0.179**	**0.189**	**0.312**	**0.174**	**0.601**	**0.143**	**0.235**	**0.24**	--	**0.59**
TotalHxCDF	NP	**0.758**	--	**1.38**	**1.78**	**3**	**1.58**	**8.03**	**1.61**	**2.08**	**2.29**	--	**7.99**
Total HpCDF	NP	**6.46**	--	**11.6**	**14.1**	**18.9**	**18.1**	**57.2**		**12.8**	**17.5**	--	**61.8**
Total TCDD	NP	**0.0173**	--	**0.0432**	**0.0432**	**0.0773**	**0.035**	**0.141**	**0.0363**	**0.0323**	**0.0507**	--	**0.212**
Total PeCDD	NP	**0.0709**	--	**0.23**	**0.23**	**0.442**	**0.211**	**0.949**	**0.219**	**0.112**	**0.189**	--	**1.01**
Total HxCDD	NP	**0.82**	--	**1.84**	**2.3**	**3.92**	**1.85**	**3.93**	**1.97**	**2.07**	**2.66**	--	**6.8**
Total HpCDD	NP	**2.79**	--	**5.89**	**4.73**	**6.54**	**4.98**	**37.8**	**2.11**	**4.71**	**7.27**	--	**50**
2,3,7,8-TCDD	1	**0.00401**	--	**0.0082**	**0.00683**	**0.0138**	**0.00748**	**0.0225**	**0.00507**	**0.00835**	**0.0124**	--	**0.0144**
1,2,3,7,8-PeCDD	0.5	**0.0201**	--	**0.0433**	**0.0425**	**0.0889**	**0.0441**	**0.185**	**0.0446**	**0.0621**	**0.0576**	--	**0.141**
1,2,3,4,7,8-HxCDD	0.1	**0.0433**	--	**0.0943**	**0.107**	**0.203**	**0.105**	**0.452**	**0.123**	**0.137**	**0.0957**	--	**0.265**
1,2,3,6,7,8-HxCDD	0.1	**0.132**	--	**0.268**	**0.399**	**0.635**	**0.665**	**2.08**	**0.37**	**0.477**	**0.616**	--	**2.42**
1,2,3,7,8,9-HxCDD	0.1	**0.0748**	--	**0.192**	**0.208**	**0.399**	**0.212**	**1.03**	**0.225**	**0.29**	**0.227**	--	**0.707**
1,2,3,4,6,7,8-HpCDD	0.01	**3.84**	--	**7.01**	**8.93**	**12.1**	**11.3**	**37.7**		**8.26**	**11.5**	--	**41**
OCDD	0.0001	**24.1**	--	**29**	**53.7**	**61.4**	**75.4**	**159**		**64.3**	**96.8**	--	**426**
2,3,7,8-TCDF	0.1	**0.0012**	--	**0.0032**	**0.00314**	**0.00424**	**0.00199**	**0.00758**	**0.00159**	**0.00211**	**0.0041**	--	**0.0233**
1,2,3,7,8-PeCDF	0.05	**0.0033**	--	**0.0102**	**0.0103**	**0.0145**	**0.00677**	**0.0251**	**0.00477**	**0.00575**	**0.0124**	--	**0.0788**
2,3,4,7,8-PeCDF	0.5	**0.00301**	--	**0.00671**	**0.00829**	**0.0123**	**0.00478**	**0.0235**	**0.00435**	**0.00512**	**0.009**	--	**0.0753**
1,2,3,4,7,8-HxCDF	0.1	**0.0191**	--	**0.0456**	**0.0518**	**0.0862**	**0.0421**	**0.193**	**0.0408**	**0.0434**	**0.062**	--	**0.491**
1,2,3,6,7,8-HxCDF	0.1	**0.0169**	--	**0.0383**	**0.0377**	**0.077**	**0.0351**	**0.159**	**0.0329**	**0.0394**	**0.0466**	--	**0.313**
2,3,4,6,7,8-HxCDF	0.1	**0.00571**	--	**0.00202**	<1.90	<2.84	<3.55	<22.9	<4.25	**0.00194**	<3.3	--	<14.6
1,2,3,7,8,9-HxCDF	0.1	**0.0144**	--	**0.0294**	**0.0264**	**0.0568**	**0.0283**	**0.148**	**0.028**	**0.0317**	**0.0375**	--	**0.195**
1,2,3,4,6,7,8-HpCDF	0.01	**0.746**	--	**1.78**	**2**	**3.49**	**1.79**	**9.07**	**2**	**2.34**	**2.98**	--	**12.7**
1,2,3,4,7,8,9-HpCDF	0.01	**0.0415**	--	**0.0815**	**0.0997**	**0.193**	**0.0995**	**0.505**	**0.0856**	**0.125**	**0.165**	--	**0.508**
OCDF	0.0001	**3.1**	--	**3.95**	**9.42**	**8.77**	**7.09**	**29.3**		**7.42**	**9.31**	--	**58.4**
2,3,7,8-TCDD Equivalence	1	**0.12**	--	**0.102**	**0.289**	**0.439**	**0.323**	**1.196**	**0.317**	**0.323**	**0.408**	--	**1.594**

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Dioxin Data Qualifiers:

All results in ng/kg or parts per trillion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

Table 2
Surface Soil Analytical Results
Camp Summit

		Preliminary Investigation											
Dioxins *(ng/g)*	**TEFs**	**SS-1**	**SS-2**	**SS-3**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**	**SS-9**	**SS-10**	**SS-11**	**SS-12**
Total TCDF	NP	<0.084	**0.012**	<0.00044	-	**0.0067**	-	-	**0.0091**	-	**0.018**	**0.013**	**0.13**
Total PeCDF	NP	<0.18	**0.068**	**0.0084**	-	**0.13**	-	-	**0.14**	-	**0.12**	**0.14**	**2.3**
TotalHxCDF	NP	<0.61	**0.53**	**0.2**	-	**1.5**	-	-	**1.3**	-	**1.1**	**1.6**	**24**
Total HpCDF	NP	**3.3**	**1.6**	**1.5**	-	**6.7**	-	-	**4.3**	-	**4.8**	**6.3**	**110**
Total TCDD	NP	<0.042	**0.0039**	<0.00044	-	**0.017**	-	-	**0.011**	-	**0.04**	**0.0074**	**0.15**
Total PeCDD	NP	<0.21	**0.057**	**0.003**	-	**0.099**	-	-	**0.1**	-	**0.23**	**0.091**	**0.93**
Total HxCDD	NP	<0.39	**0.46**	**0.19**	-	**1.2**	-	-	**1.2**	-	**1.5**	**1.4**	**17**
Total HpCDD	NP	**13**	**4.3**	**3.4**	-	**12**	-	-	**10**	-	**12**	**14**	**280**
2,3,7,8-TCDD	1	<0.042	**0.0014**	<0.00029	-	**0.0047**	-	-	**0.0044**	-	**0.008**	**0.0031**	**0.042**
1,2,3,7,8-PeCDD	0.5	<0.21	**0.012**	**0.003 J**	-	**0.03**	-	-	**0.038**	-	**0.047**	**0.037**	**0.28**
1,2,3,4,7,8-HxCDD	0.1	<0.57	**0.021**	**0.0089**	-	**0.064**	-	-	**0.075**	-	**0.08**	**0.093**	**0.78 D**
1,2,3,6,7,8-HxCDD	0.1	<0.56	**0.099**	**0.055**	-	**0.32**	-	-	**0.27**	-	**0.29**	**0.37**	**4.7 D**
1,2,3,7,8,9-HxCDD	0.1	<0.55	**0.054**	**0.022**	-	**0.16**	-	-	**0.17**	-	**0.2**	**0.23**	**2.1 D**
1,2,3,4,6,7,8-HpCDD	0.01	**7.9**	**2.7 E**	**2.2 E**	-	**7.6 D**	-	-	**6.5 E**	-	**7.2 E**	**8.9 D**	**180 DE**
OCDD	0.0001	**54**	**15 E**	**20.0 E**	-	**55.0 D**	-	-	**38 E**	-	**51 E**	**44.0 D**	**930 DE**
2,3,7,8-TCDF	0.1	<0.084	**0.0096 JCON**	<0.00018	-	**0.0014 CON**	-	-	**0.0011 JCON**	-	**0.0014**	**0.0012 CON**	**0.028 CON**
1,2,3,7,8-PeCDF	0.05	<0.18	**0.0039 J**	<0.00044	-	**0.012**	-	-	**0.01**	-	**0.0082**	**0.0085**	**0.19**
2,3,4,7,8-PeCDF	0.5	<0.18	**0.0035 J**	<0.00023	-	**0.0078**	-	-	**0.0061**	-	**0.0079**	**0.0059**	**0.12**
1,2,3,4,7,8-HxCDF	0.1	<0.059	**0.018**	**0.0041 J**	-	**0.041**	-	-	**0.034**	-	**0.037**	**0.042**	**0.74**
1,2,3,6,7,8-HxCDF	0.1	<0.059	**0.013**	**0.003 J**	-	**0.028**	-	-	**0.03**	-	**0.022**	**0.037**	**0.33**
2,3,4,6,7,8-HxCDF	0.1	<0.068	**0.012**	<0.0025	-	**0.022**	-	-	**0.025**	-	**0.018**	**0.023**	**0.25**
1,2,3,7,8,9-HxCDF	0.1	<0.068	<0.00079	<0.00085	-	<0.0025	-	-	<0.0017	-	<0.002	<0.0021	**0.045**
1,2,3,4,6,7,8-HpCDF	0.01	**0.87 J**	**0.46**	**0.32**	-	**1.5**	-	-	**1.2**	-	**1.1**	**1.5**	**24 D**
1,2,3,4,7,8,9-HpCDF	0.01	<0.14	**0.025**	**0.017**	-	**0.081**	-	-	**0.061**	-	**0.072**	**0.085**	**1.6 D**
OCDF	0.0001	**2.6 J**	**1.5**	**1.8**	-	**5.8**	-	-	**4**	-	**5**	**5.0 D**	**95 D**
2,3,7,8-TCDD Equivalence	1	**0.09336 J**	**0.06551 EJ**	**0.03835 J**	-	**0.18573**	-	-	**0.16927 E**	-	**0.19002 E**	**0.214345 D**	**3.3073 DE**

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Table 2
Surface Soil Analytical Results
Camp Summit

		Remedial Investigation													
Dioxins *(ng/g)*	**TEFs**	**SS-13**	**SS-14**	**SS-15**	**SS-16**	**SS-17**	**SS-18**	**SS-19**	**SS-20**	**SS-21**	**SS-22**	**SS-23**	**SS-24**	**SS-25**	**SS-26**
Total TCDF	NP	-	**0.03**	-	-	**0.093**	-	**0.25**	-	**0.0089**	**0.033**	**0.12**	**0.041**	**0.039**	**0.034**
Total PeCDF	NP	-	**0.28**	-	-	**1.4**	-	**3**	-	**0.086**	**0.29**	**1.4**	**0.53**	**0.55**	**0.019**
TotalHxCDF	NP	-	**2.5**	-	-	**17**	-	**38**	-	**0.82**	**4.5**	**24**	**4.4**	**4.1**	**0.049**
Total HpCDF	NP	-	**10**	-	-	**89**	-	**140**	-	**2.9**	**25**	**120**	**14**	**12**	**0.11**
Total TCDD	NP	-	**0.021**	-	-	**0.11**	-	**0.071**	-	**0.023**	**0.026**	**0.11**	**0.057**	**0.077**	**0.0048**
Total PeCDD	NP	-	**0.17**	-	-	**0.84**	-	**0.69**	-	**0.11**	**0.25**	**0.96**	**0.44**	**0.45**	**0.0057**
Total HxCDD	NP	-	**2**	-	-	**14**	-	**15**	-	**0.85**	**4.6**	**20**	**3.6**	**3.8**	**0.05**
Total HpCDD	NP	-	**19**	-	-	**210**	-	**200**	-	**7**	**72**	**320**	**36**	**34**	**0.26**
2,3,7,8-TCDD	1	-	**0.005**	-	-	**0.021**	-	**0.016**	-	**0.0071**	**0.0049**	**0.022**	**0.014**	**0.017**	<0.00045
1,2,3,7,8-PeCDD	0.5	-	**0.049**	-	-	**0.31**	-	**0.24**	-	**0.03**	**0.088**	**0.32**	**0.1**	**0.095**	<0.0017
1,2,3,4,7,8-HxCDD	0.1	-	**0.1**	-	-	**0.92**	-	**0.56**	-	**0.042**	**0.24**	**0.81**	**0.16**	**0.19**	<0.0026
1,2,3,6,7,8-HxCDD	0.1	-	**0.51**	-	-	**3.7 E**	-	**5.6 E**	-	**0.16**	**1.4**	**6.5 E**	**0.88**	**0.91**	**0.0081**
1,2,3,7,8,9-HxCDD	0.1	-	**0.26**	-	-	**2.2**	-	**1.4**	-	**0.1**	**0.62**	**2.2**	**0.44**	**0.48**	**0.0065 J**
1,2,3,4,6,7,8-HpCDD	0.01	-	**12 D**	-	-	**140 DE**	-	**130 DE**	-	**4.1 E**	**47 D**	**210 DE**	**23 D**	**21 D**	**0.16**
OCDD	0.0001	-	**89 D**	-	-	**690 DE**	-	**770 DE**	-	**30 E**	**200 D**	**1200 DE**	**130 DE**	**170 DE**	**0.94**
2,3,7,8-TCDF	0.1	-	**0.0021 CON**	-	-	**0.011 CON**	-	**0.014 CON**	-	**0.00089 JCON**	**0.0029 CON**	**0.013 CON**	**0.005 CON**	**0.0052 CON**	**0.0027 CON**
1,2,3,7,8-PeCDF	0.05	-	**0.017**	-	-	**0.067**	-	**0.15**	-	**0.0065**	**0.017**	**0.085**	**0.036**	**0.032**	<0.003
2,3,4,7,8-PeCDF	0.5	-	**0.011**	-	-	**0.045**	-	**0.13**	-	**0.0041 J**	**0.014**	**0.062**	**0.024**	**0.022**	<0.0031
1,2,3,4,7,8-HxCDF	0.1	-	**0.069**	-	-	**0.39**	-	**1.7**	-	**0.021**	**0.1**	**0.52**	**0.13**	**0.12**	**0.0053 J**
1,2,3,6,7,8-HxCDF	0.1	-	**0.051**	-	-	**0.24**	-	**0.78**	-	**0.015**	**0.08**	**0.36**	**0.088**	**0.096**	<0.0034
2,3,4,6,7,8-HxCDF	0.1	-	**0.033**	-	-	**0.2**	-	**0.51**	-	**0.0096**	**0.058**	**0.24**	**0.052**	**0.053**	**0.0038 J**
1,2,3,7,8,9-HxCDF	0.1	-	<0.0031	-	-	**0.017**	-	**0.075**	-	<0.0023	**0.0048 J**	**0.026**	**0.0085**	**0.0082**	<0.00042
1,2,3,4,6,7,8-HpCDF	0.01	-	**2.5**	-	-	**21 D**	-	**38 D**	-	**0.63**	**5.7 D**	**24 D**	**3.3 D**	**3.9 E**	**0.043**
1,2,3,4,7,8,9-HpCDF	0.01	-	**0.13**	-	-	**1.1 D**	-	**2.9 D**	-	**0.042**	**0.29 D**	**1.1 D**	**0.18 D**	**0.23**	<0.0029
OCDF	0.0001	-	**9.2 D**	-	-	**84 D**	-	**88 D**	-	**2.9**	**25 D**	**130 D**	**13 D**	**18 D**	**0.12**
2,3,7,8-TCDD Equivalence	1	-	**0.29448 D**	-	-	**2.66805 DE**	-	**3.0672 DE**	-	**0.110334 JE**	**0.85972 JD**	**3.76815 DE**	**0.53325 DE**	**0.53344 DE**	**0.00478 J**

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Table 2
Surface Soil Analytical Results
Camp Summit

		Remedial Investigation										
Dioxins *(ng/g)*	**TEFs**	**SS-27**	**SS-28**	**SS-29**	**BGM-1**	**BGM-2**	**BGM-3**	**BGM03-1**	**BGM03-2**	**BGM03-3**	**BGM03-4**	**BGM03-5**
Total TCDF	NP	-	-	-	-	-	-	<0.03	<0.02	<0.03	<0.02	<0.02
Total PeCDF	NP	-	-	-	-	-	-	<0.06	<0.05	<0.05	<0.05	<0.03
TotalHxCDF	NP	-	-	-	-	-	-	<0.05	<0.07	<0.07	**0.12**	<0.02
Total HpCDF	NP	-	-	-	-	-	-	<0.07	<0.09	<0.12	**1.1**	**0.29**
Total TCDD	NP	-	-	-	-	-	-	<0.03	<0.03	<0.03	<0.03	<0.03
Total PeCDD	NP	-	-	-	-	-	-	<0.04	<0.03	<0.04	<0.04	<0.05
Total HxCDD	NP	-	-	-	-	-	-	<0.06	<0.10	<0.10	<0.10	<0.05
Total HpCDD	NP	-	-	-	-	-	-	<0.12	**0.42**	**0.22**	**2.5**	**0.7J**
2,3,7,8-TCDD	1	-	-	-	-	-	-	<0.03	<0.03	<0.03	<0.03	<0.03
1,2,3,7,8-PeCDD	0.5	-	-	-	-	-	-	<0.04	<0.03	<0.04	<0.04	<0.05
1,2,3,4,7,8-HxCDD	0.1	-	-	-	-	-	-	<0.06	<0.10	<0.10	<0.10	<0.05
1,2,3,6,7,8-HxCDD	0.1	-	-	-	-	-	-	<0.05	<0.08	<0.08	<0.09	<0.04
1,2,3,7,8,9-HxCDD	0.1	-	-	-	-	-	-	<0.05	<0.08	<0.08	<0.09	<0.04
1,2,3,4,6,7,8-HpCDD	0.01	-	-	-	-	-	-	<0.12	**0.28**	**0.15**	**1.7**	**0.46J**
OCDD	0.0001	-	-	-	-	-	-	**0.36J**	**1.8**	**1.1**	**8.1**	**3.4**
2,3,7,8-TCDF	0.1	-	-	-	-	-	-	<0.03	<0.02	<0.03	<0.02	<0.02
1,2,3,7,8-PeCDF	0.05	-	-	-	-	-	-	<0.06	<0.05	<0.05	<0.05	<0.03
2,3,4,7,8-PeCDF	0.5	-	-	-	-	-	-	<0.06	<0.05	<0.05	<0.05	<0.03
1,2,3,4,7,8-HxCDF	0.1	-	-	-	-	-	-	<0.05	<0.06	<0.07	<0.04	<0.02
1,2,3,6,7,8-HxCDF	0.1	-	-	-	-	-	-	<0.04	<0.05	<0.06	<0.04	<0.02
2,3,4,6,7,8-HxCDF	0.1	-	-	-	-	-	-	<0.05	<0.06	<0.07	<0.04	<0.02
1,2,3,7,8,9-HxCDF	0.1	-	-	-	-	-	-	<0.05	<0.07	<0.07	<0.04	<0.02
1,2,3,4,6,7,8-HpCDF	0.01	-	-	-	-	-	-	<0.06	<0.08	<0.10	**0.28**	**0.07J**
1,2,3,4,7,8,9-HpCDF	0.01	-	-	-	-	-	-	<0.07	<0.09	<0.12	<0.07	<0.03
OCDF	0.0001	-	-	-	-	-	-	<0.05	**0.15**	**0.06**	**1.2**	**0.4J**
2,3,7,8-TCDD Equivalence	1	-	-	-	-	-	-	**0.000036**	**0.002995**	**0.001616**	**0.02073**	**0.00568**

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Table 2
Surface Soil Analytical Results
Camp Summit

		Remedial Investigation				
Dioxins *(ng/g)*	**TEFs**	**BGM03-6**	**BGM03-7**	**BGM03-8**	**BGM03-9**	**BGM03-10**
Total TCDF	NP	<0.03	<0.03	<0.38	<0.04	<0.06
Total PeCDF	NP	<0.04	<0.06 JS	<0.51	<0.07	<0.13
TotalHxCDF	NP	<0.03	2.3 S	<0.33	<0.06	<0.07
Total HpCDF	NP	**0.68 JS**	**16**	<1.5	**0.73 JS**	**1.4 JS**
Total TCDD	NP	<0.06	<0.04	<0.40	<0.05	<0.07
Total PeCDD	NP	<0.05	<0.14	<0.63	<0.06	<0.10
Total HxCDD	NP	<0.04	**1.8 JS**	<1.0	<0.26	<0.11
Total HpCDD	NP	**2.1**	**42 E/ 41**	**4.5**	**2.7**	**4.1**
2,3,7,8-TCDD	1	<0.06	<0.04	<0.40	<0.05	<0.07
1,2,3,7,8-PeCDD	0.5	<0.05	<0.14	<0.63	<0.06	<0.10
1,2,3,4,7,8-HxCDD	0.1	<0.04	**0.1 JS**	<1.0	<0.26	<0.11
1,2,3,6,7,8-HxCDD	0.1	<0.03	**0.47 JS**	<0.75	<0.19	<0.08
1,2,3,7,8,9-HxCDD	0.1	<0.03	**0.21 JS**	<0.82	<0.21	<0.09
1,2,3,4,6,7,8-HpCDD	0.01	**1.3**	**28 E/ 27**	<4.5	**1.7**	**2.6**
OCDD	0.0001	**6.2 B**	**162 EB/160 B**	**6.5 B**	**9.0 B**	**14 B**
2,3,7,8-TCDF	0.1	<0.03	<0.03	<0.38	<0.04	<0.06
1,2,3,7,8-PeCDF	0.05	<0.04	<0.06	<0.51	<0.07	<0.13
2,3,4,7,8-PeCDF	0.5	<0.04	<0.06	<0.50	<0.07	<0.13
1,2,3,4,7,8-HxCDF	0.1	<0.03	**0.04 JS**	<0.28	<0.05	<0.06
1,2,3,6,7,8-HxCDF	0.1	<0.03	<0.03	<0.24	<0.04	<0.05
2,3,4,6,7,8-HxCDF	0.1	<0.03	**0.02 JS**	<0.30	<0.05	<0.07
1,2,3,7,8,9-HxCDF	0.1	<0.03	<0.04	<0.33	<0.06	<0.07
1,2,3,4,6,7,8-HpCDF	0.01	**0.18 JS**	**3.2**	<1.0	**0.20 JS**	**0.32 JS**
1,2,3,4,7,8,9-HpCDF	0.01	<0.09	<0.05	<01.5	<0.07	<0.16
OCDF	0.0001	**0.63 JB**	**0.15**	**0.51 JB**	**0.66 JB**	**1.1 JB**
2,3,7,8-TCDD Equivalence	1	**0.015483**	**0.402015**	**0.000701**	**0.019966**	**0.03071**

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Table 3
Sediment Analytical Data
Camp Summit

Analyte	NYSDEC Guidance Criteria	Preliminary Investigation										
SVOCs (mg/kg or ppm)		**SED-1**	**SED-2**	**SED-3**	**SED-4**	**SED-5**	**SED-6A**	**SED-6B**	**SED-6C**	**SED-7A**	**SED-7B**	**SED-8**
Phenanthrene	84.41	ND	ND	**1.2**	ND	ND	--	--	--	--	--	--
Anthracene	84.41	ND	ND	**0.29 J**	ND	ND	--	--	--	--	--	--
Carbazole	NA	--	--	--	--	--	--	--	--	--	--	--
Fluoranthrene	463.87	ND	**0.29 J**	**2.1**	ND	ND	--	--	--	--	--	--
Pyrene	625.7	ND	**0.29 J**	**2**	ND	ND	--	--	--	--	--	--
Benzo(a) anthracene	1220.1	ND	ND	**0.92 J**	ND	ND	--	--	--	--	--	--
Chrysene	0.4**	ND	**0.2 J**	**1.1**	ND	ND	--	--	--	--	--	--
Benzo (l) fluoranthene	1.1**	ND	ND	**0.82 J**	ND	ND	--	--	--	--	--	--
Benzo (k) fluoranthene	1.1**	--	--	--	--	--	--	--	--	--	--	--
Benzo (b) fluoranthene	1.1**	ND	ND	**0.88 J**	ND	ND	--	--	--	--	--	--
Benzo (a) pyrene	3179.8	ND	ND	**0.78 J**	**0.53 J**	ND	--	--	--	--	--	--
Indeno (1,2,3-cd) pyrene	3.2**	ND	ND	**0.34 J**	ND	ND	--	--	--	--	--	--
Benzo(ghi) perylene	800.0**	ND	ND	**0.34 J**	ND	ND	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	597.6	ND	ND	**0.41 J**	ND	ND	--	--	--	--	--	--
Pentachlorophenol	299.5	**1.9 U**	**1.0 J**	**3.7 J**	**2.2 U**	**28.0 U**	**0.12**	**0.1**	**<0.1**	**0.4**	**0.4**	**0.1**
Di-n-octyl phthalate	120**	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	8.1	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	217	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	7.02	--	--	--	--	--	--	--	--	--	--	--
Butylbenzylphthalate	122.0**	--	--	--	--	--	--	--	--	--	--	--
Total SVOCs	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
Criteria used PIR and if no sediment criteria available used TAGM 4046 criteria for protection of groundwater
Only analytes detected at or above laboratory method detection limits included on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated
** = TAGM 4046 Value; Soil clean-up objective for the protection of groundwater

SVOC Data Qualifiers:

All results in ug/kg or parts per billion
J=Estimated result, result is less than the reporting limit
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< = Analyte was not detected above laboratory method detection limit

Table 3
Sediment Analytical Data
Camp Summit

		Preliminary Investigation		Remedial Investigation								
Dioxins (ng/g or ppb)	**TEF**	**SED-3**	**SED-10A**	**DSED-1**	**DSED-2**	**DSED-3**	**SED-1**	**SED-2**	**SED-3**	**SED-4**	**SED-5**	**SED-6**
Total TCDF	-	**0.77**	**1.07**	<0.12	<0.12	<0.14	<0.14	<0.096	<0.14	<0.13	<0.097	<0.18
Total PeCDF	-	**2.41**	**3.43**	<0.097	<0.34	<0.17	<0.080	<0.010	<0.039	<0.22	<0.071	<0.18
TotalHxCDF	-	**15.2**	**20.2**	<0.064	<0.35	<0.17	<0.072	<0.0077	<0.11	<0.12	<0.051	<0.38
Total HpCDF	-	**101**	**86.7**	<0.22	<0.64	<0.49	<0.078	<0.011	<0.33	<0.061	<0.033	<0.31
Total TCDD	-	**0.421**	**0.81**	<0.043	<0.15	<0.065	<0.041	<0.016	<0.026	<0.067	<0.051	<0.059
Total PeCDD	-	**1.19**	**1.83**	<0.14	<0.38	<0.16	<0.082	<0.027	<0.11	<0.19	<0.19	<0.54
Total HxCDD	-	**10.5**	**22.5**	<0.093	<0.45	<0.21	<0.19	<0.017	<0.10	<0.32	<0.12	<0.23
Total HpCDD	-	**65.6**	**55.8**	<0.051	<0.59	<1.1	<0.20	<0.023	<0.58	<0.11	<0.040	<0.39
2,3,7,8-TCDD	1	**0.0306**	**0.0492**	<0.043	<0.015	<0.065	<0.041	<0.016	<0.026	<0.067	<0.051	<0.059
1,2,3,7,8-PeCDD	0.14	**0.243**	**0.331**	<0.14	<0.38	<0.16	<0.082	<0.027	<0.11	<0.19	<0.19	<0.54
1,2,3,4,7,8-HxCDD	0.0048	**0.584**	**0.815**	<0.097	<0.46	<0.22	<0.19	<0.018	<0.11	<0.33	<0.12	<0.24
1,2,3,6,7,8-HxCDD	0.0016	**3.34**	**3.31**	<0.096	<0.46	<0.22	<0.19	<0.018	<0.11	<0.33	<0.12	<0.23
1,2,3,7,8,9-HxCDD	0.0016	**1.49**	**2.09**	<0.093	<0.45	<0.21	<0.19	<0.017	<0.10	<0.32	<0.12	<0.23
1,2,3,4,6,7,8-HpCDD	0.000032	**65.6**	**53.2**	<0.51	<0.59	<1.1	<0.20	<0.023	<0.58	<0.11	<0.040	<0.39
OCDD	0.000000025	**459**	**43.2**	<1.6	**3.1 J**	**8.4**	<0.61	<0.061	**4.7 J**	<0.73	<0.090	<1.7
2,3,7,8-TCDF	0.25	**0.0241**	**0.0396**	<0.12	<0.12	<0.14	<0.14	<0.096	<0.14	<0.13	<0.097	<0.18
1,2,3,7,8-PeCDF	0.010	**0.0802**	**0.0998**	<0.098	<0.34	<0.17	<0.081	<0.010	<0.040	<0.23	<0.072	<0.19
2,3,4,7,8-PeCDF	0.80	**0.0592**	**0.0691**	<0.097	<0.34	<0.17	<0.080	<0.010	<0.039	<0.22	<0.071	<0.18
1,2,3,4,7,8-HxCDF	0.0025	**0.451**	**0.532**	<0.064	<0.35	<0.17	<0.072	<0.0077	<0.0066	<0.12	<0.051	<0.095
1,2,3,6,7,8-HxCDF	0.0063	**0.332**	**0.518**	<0.064	<0.35	<0.17	<0.072	<0.0077	<0.0066	<0.12	<0.051	<0.095
2,3,4,6,7,8-HxCDF	0.022	<26.4	<25	<0.075	<0.41	<0.20	<0.083	<0.0090	<0.0076	<0.14	<0.060	<0.11
1,2,3,7,8,9-HxCDF	0.019	**0.252**	**0.363**	<0.075	<0.41	<0.20	<0.083	<0.0090	<0.0076	<0.14	<0.060	<0.11
1,2,3,4,6,7,8-HpCDF	0.000010	**16.1**	**16.6**	<0.22	<0.64	<0.24	<0.078	<0.011	<0.097	<0.061	<0.033	<0.31
1,2,3,4,7,8,9-HpCDF	0.00040	**0.677**	**0.894**	<0.28	<0.81	<0.52	<0.099	<0.014	<0.0031	<0.077	<0.041	<0.40
OCDF	0.000000032	**62.9**	**48.4**	<0.30	<1.2	<1.0	<0.084	<0.058	<0.20	<0.087	<0.093	<0.54
2,3,7,8-TCDD Equivalence	-	2.68	1.82	BDL	**0.000000077**	**0.00000021**	BDL	BDL	**0.00000012**	BDL	BDL	BDL
Total Organic Carbon %	-	32.7	34.9	50.4	40.6	3.83	78.5	30.3	15.8	61	48.6	---
Site-specific Benchmark	-	0.00654	0.00698	0.01008	0.00812	0.000766	0.0157	0.00606	0.00316	0.0122	0.00972	---

Notes:
Only analytes detected at or above laboratory method detection limits included on tables
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Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
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Dioxin Data Qualifiers:

All results in ng/kg or parts per trillion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

Table 3
Sediment Analytical Data
Camp Summit

Analyte		Preliminary Investigation	Remedial Investigation									
Metals (mg/kg)		**SED-10A**	**DSED-1**	**DSED-2**	**DSED-3**	**SED-1**	**SED-2**	**SED-3**	**SED-4**	**SED-5**	**SED-6**	**SED-7**
Aluminum	33000"	28900	---	---	---	---	---	---	---	---	---	---
Antimony	N/A"	ND	---	---	---	---	---	---	---	---	---	---
Arsenic	6.0	**10.1**	---	---	---	---	---	---	---	---	---	---
Barium	15-600"	150	---	---	---	---	---	---	---	---	---	---
Berillium	0.0-1.75"	1.5 B	---	---	---	---	---	---	---	---	---	---
Cadmium	0.60	**3.1**	---	---	---	---	---	---	---	---	---	---
Calcium	130-35000"	2220 B	---	---	---	---	---	---	---	---	---	---
Chromium	26.0	**33.8**	---	---	---	---	---	---	---	---	---	---
Cobalt	2.5-60"	20.3 B	---	---	---	---	---	---	---	---	---	---
Copper	16.0	11.5 B	---	---	---	---	---	---	---	---	---	---
Iron	200,000	**38900**	---	---	---	---	---	---	---	---	---	---
Lead	31.0	**54.9**	---	---	---	---	---	---	---	---	---	---
Magnesium	100-5000"	**5170**	---	---	---	---	---	---	---	---	---	---
Manganese	460.0	**1250**	---	---	---	---	---	---	---	---	---	---
Nickel	16.0	**42.2**	---	---	---	---	---	---	---	---	---	---
Potassium	8500-43000"	1330 B	---	---	---	---	---	---	---	---	---	---
Selenium	0.1-3.9"	ND	---	---	---	---	---	---	---	---	---	---
Silver	N/A"	ND	---	---	---	---	---	---	---	---	---	---
Mercury	0.20	ND	---	---	---	---	---	---	---	---	---	---
Sodium	6000-8000"	236	---	---	---	---	---	---	---	---	---	---
Thallium	N/A"	ND	---	---	---	---	---	---	---	---	---	---
Vanadium	N/A"	33	---	---	---	---	---	---	---	---	---	---
Zinc	120.0	**160**	---	---	---	---	---	---	---	---	---	---
Total Metals												

Only analytes detected at or above laboratory method detection limits included on tables
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Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated

Metal Data Qualifiers:

All results in mg/kg or parts per million
D=Result obtained from dilution
B=Indicates a value greater than or equal to the instrument detection limit but less than the quantitation limit
NV=Indicates TAGM recommened soil clean-up objective is site background
Metals SCGs used for comparison were either TAGM 4046 or Site Background average, which ever is higher
Bold Text=SCG used for Regulatory Comparison
" = Eastern USA background limits

Table 3
Sediment Analytical Data
Camp Summit

Analyte	NYSDEC Guidance Criteria	**Preliminary Investigation**											
SVOCs (mg/kg or ppm)		**SED-9A**	**SED-9B**	**SED-9C**	**SED-10A**	**SED-10B**	**SED-10C**	**SED-11A**	**SED-11B**	**SED-11C**	**SED-12A**	**SED-12B**	**SED-13**
Phenanthrene	84.41	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	84.41	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NA	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthrene	463.87	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	625.7	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a) anthracene	1220.1	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	0.4**	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (l) fluoranthene	1.1**	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (k) fluoranthene	1.1**	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (b) fluoranthene	1.1**	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (a) pyrene	3179.8	--	--	--	--	--	--	--	--	--	--	--	--
Indeno (1,2,3-cd) pyrene	3.2**	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(ghi) perylene	800.0**	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	597.6	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	299.5	**0.06**	**0.06**	**0.05**	**0.5**	**<0.1**	**<0.1**	**0.1**	**0.2**	**<0.1**	**0.1**	**<0.1**	**0.1**
Di-n-octyl phthalate	120**	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	8.1	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	217	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	7.02	--	--	--	--	--	--	--	--	--	--	--	--
Butylbenzylphthalate	122.0**	--	--	--	--	--	--	--	--	--	--	--	--
Total SVOCs	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
Criteria used PIR and if no sediment criteria available us
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Table 3
Sediment Analytical Data
Camp Summit

		Remedial Investigation					
Dioxins (ng/g or ppb)	**TEF**	**SED-7**	**SED03-01**	**SED03-02**	**SED03-03**	**SED03-04**	
Total TCDF	-	<0.15	<0.09	<0.25	<0.13	<0.05	
Total PeCDF	-	<0.31	<0.17	<0.83	<0.12	<0.14	
TotalHxCDF	-	<1.6	<0.10	<0.61	<0.80	<0.08	
Total HpCDF	-	<0.10	<0.16	<2.3	<0.26	**0.06JS**	
Total TCDD	-	<0.073	<0.10	<0.37	<0.22	<0.06	
Total PeCDD	-	<0.46	<0.14	<4.5	<1.4	<0.08	
Total HxCDD	-	<3.1	<0.14	<0.62	<0.45	<0.12	
Total HpCDD	-	<0.20	**0.73 J**	<0.45	**2.1**	<0.86	
2,3,7,8-TCDD	1	<0.073	<0.10	<0.37	<0.22	<0.06	
1,2,3,7,8-PeCDD	0.14	<0.46	<0.14	<4.5	<1.4	<0.08	
1,2,3,4,7,8-HxCDD	0.0048	<0.41	<0.14	<0.62	<0.45	<0.12	
1,2,3,6,7,8-HxCDD	0.0016	<0.41	<0.11	<0.48	<0.35	<0.09	
1,2,3,7,8,9-HxCDD	0.0016	<0.40	<0.12	<0.51	<0.37	<0.10	
1,2,3,4,6,7,8-HpCDD	0.000032	<0.20	**0.45 J**	<0.45	**1.3**	<0.86	
OCDD	0.000000025	<0.74	**2.5**	**1.8**	**11**	**2.3**	
2,3,7,8-TCDF	0.25	<0.15	<0.09	<0.25	<0.13	<0.05	
1,2,3,7,8-PeCDF	0.010	<0.31	<0.17	<0.83	<0.12	<0.14	
2,3,4,7,8-PeCDF	0.80	<0.31	<0.17	<0.80	<0.11	<0.14	
1,2,3,4,7,8-HxCDF	0.0025	<0.19	<0.09	<0.56	<0.72	<0.07	
1,2,3,6,7,8-HxCDF	0.0063	<0.19	<0.07	<0.47	<0.60	<0.06	
2,3,4,6,7,8-HxCDF	0.022	<0.22	<0.09	<0.57	<0.74	<0.07	
1,2,3,7,8,9-HxCDF	0.019	<0.22	<0.10	<0.61	<0.80	<0.08	
1,2,3,4,6,7,8-HpCDF	0.000010	<0.10	<0.12	<1.7	<0.19	**0.06**	
1,2,3,4,7,8,9-HpCDF	0.00040	<0.13	<0.16	<2.3	<0.26	<0.11	
OCDF	0.000000032	<0.24	<0.14	<1.2	<1.1	**0.3 J**	
2,3,7,8-TCDD Equivalence	-	BDL	1.42593E-05	4.5214E-08	4.12885E-05	6.67283E-07	
Total Organic Carbon %	-	---	---	---	---	---	---
Site-specific Benchmark	-	---	---	---	---	---	---

Notes:
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Table 3
Sediment Analytical Data
Camp Summit

Analyte		Remedial Investigation			
Metals (mg/kg)		**SED03-01**	**SED03-02**	**SED03-03**	**SED03-04**
Aluminum	33000"	**5,570**	**8,550**	**9,030**	**17,500**
Antimony	N/A"	<0.42	<0.34	<0.36	<0.51
Arsenic	6.0	**6.4**	**12.1**	**8.1**	**7.3**
Barium	15-600"	**41.6**	**87.2**	**33.7**	**66.9**
Berillium	0.0-1.75"	**0.46**	**0.51**	**0.6**	**0.86**
Cadmium	0.60	**0.31**	**3.3**	**0.31**	**0.09**
Calcium	130-35000"	**181,000**	**70,400**	**150,000**	**1,460**
Chromium	26.0	**12.6**	**18.9**	**12.3**	**22.2**
Cobalt	2.5-60"	**3.9**	**6.9**	**8.5**	**11.0**
Copper	16.0	**14.9**	**27.7**	**12.1**	**7.1**
Iron	200,000	**9,700**	**16,800**	**20,300**	**26,500**
Lead	31.0	**26.7**	**22.8**	**21**	**18.9**
Magnesium	100-5000"	**34,600**	**5,800**	**5,060**	**3,990**
Manganese	460.0	**455**	**765**	**688**	**490**
Nickel	16.0	**14.9**	**19.0**	**20.9**	**26.4**
Potassium	8500-43000"	**1,190**	**1,150**	**1,150**	**1,910**
Selenium	0.1-3.9"	<0.42	<0.34	<0.36	<0.51
Silver	N/A"	<0.12	<0.09	<0.10	<0.14
Mercury	0.20	**0.02**	**0.06**	**0.04**	**0.03**
Sodium	6000-8000"	**406**	**801**	**333**	**238**
Thallium	N/A"	<0.80	<0.64	<0.68	<0.96
Vanadium	N/A"	**36.4**	**20.9**	**12.4**	**22.1**
Zinc	120.0	**103**	**140**	**72.1**	**83.2**
Total Metals		**233,182**	**104,625**	**186,763**	**52,354**

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Metal Data Qualifiers:

All results in mg/kg or parts per million
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NV=Indicates TAGM recommened soil clean-up objectiv
Metals SCGs used for comparison were either TAGM 40
Bold Text=SCG used for Regulatory Comparison
" = Eastern USA background limits

Table 3
Sediment Analytical Data
Camp Summit

Analyte	NYSDEC Guidance Criteria	Remedial Investigation													
SVOCs (mg/kg or ppm)		**DSED-1**	**DSED-2**	**DSED-3**	**SED-1**	**SED-2**	**SED-3**	**SED-4**	**SED-5**	**SED-6**	**SED-7**	**SED03-01**	**SED03-02**	**SED03-03**	**SED03-04**
Phenanthrene	84.41	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	**0.17J**	<0.00062
Anthracene	84.41	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	<2.4	<0.00062
Carbazole	NA	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	<2.4	<0.00062
Fluoranthrene	463.87	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	**0.26J**	<0.00062
Pyrene	625.7	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	**0.27J**	<0.00062
Benzo(a) anthracene	1220.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	0.4**	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	**0.15J**	<0.00062
Benzo (l) fluoranthene	1.1**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (k) fluoranthene	1.1**	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	**0.27J**	**0.15J**	<0.00062
Benzo (b) fluoranthene	1.1**	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	<2.4	<0.00062
Benzo (a) pyrene	3179.8	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	**0.69**	<0.33	<0.33	<11.0	<5.4	<2.4	<0.00062
Indeno (1,2,3-cd) pyrene	3.2**	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	<2.4	<0.00062
Benzo(ghi) perylene	800.0**	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	<2.4	<0.00062
Bis(2-ethylhexyl) phthalate	597.6	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	**0.66J**	<5.4	<2.4	<0.00062
Pentachlorophenol	299.5	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<28.0	<13.0	<6.0	<0.0015
Di-n-octyl phthalate	120**	**0.44**	**2.1**	**1.1**	<0.44	<0.33	<1.1	**0.19 J**	<0.33	<0.33	<0.33	<11.0	<5.4	<2.4	<0.00062
Di-n-butyl phthalate	8.1	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	<2.4	<0.00062
2-Methylnaphthalene	217	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	<2.4	<0.00062
Naphthalene	7.02	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	<2.4	<0.00062
Butylbenzylphthalate	122.0**	<0.41	<0.55	<0.41	<0.44	<0.33	<1.1	<0.33	<0.33	<0.33	<0.33	<11.0	<5.4	**0.36J**	<0.00062
Total SVOCs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 4
Test Pit Soil Analytical Results
Preliminary Investigation
Camp Summit

Analyte *(units)*	TAGM (4046) or SiteBackground Average		TP-1	TP-7
Metals *(mg/kg)*				
Aluminum	NV	**18866.6**	11100	11100
Antimony	NV	**0.283**	0.47 B	0.47 B
Arsenic	7.5	**9.1**	6	6.7
Barium	**300**	54.6	59.3	45.1
Berillium	0.16	**0.54**	**0.63 B**	**0.64**
Cadmium	1 or 0.15		0.51 B	0.3 B
Calcium	NV	**110.6**	912	1070
Chromium	10	**19.06**	**13.4**	**17.1**
Cobalt	**30**	9.33	13.2	13.7
Copper	0.25	**10.76**	9.8	17.7
Iron	2000	**30633.3**	**24500**	**27400**
Lead	NV	**17.86**	31.6	17.7
Magnesium	NV	**2300**	1660	3560
Manganese	NV	**929**	542	801
Mercury	13	**14.9**	**0.12 B**	ND
Nickel	NV	**561**	14.2	28.5
Potassium	**2**	1.5	427 B	587
Selenium	NV	0.0	0.73 B	0.37 B
Silver	0.1	**0.045**	0.26 B	0.14 B
Sodium	NP	**0.047**	56.8 B	43.9
Thallium	NV	**6.3**	1.4	ND
Vanadium	**150**	27.16	17.8	10.5
Zinc	20	**67.36**	**54.2**	**61.1**

Pentachlorophenol Immunoassay Test Results (ug/kg)					
TP2-1	**TP2-2**	**TP-3**	**TP-4**	**TP-5**	**TP-6**
140	**2070**	ND	ND	690	**>10000**
Pentachlorophenol Immunoassay Test Results (ug/kg)					
TP-13	**TP-14**	**TP-15**	**TP-16**	**TP-17**	**TP-18**
ND	ND	ND	**1000**	**6430**	ND
Pentachlorophenol Immunoassay Test Results (ug/kg)					
TP-7	**TP-8**	**TP-9**	**TP-10**	**TP-11**	**TP-12**
7580	ND	**13500**	580	**128000(78000)**	**1700**
Pentachlorophenol Immunoassay Test Results (ug/kg)					
TP-19	**TP-20**	**TP-21**	**TP-22**	**TP-23**	**TP-24**
ND	ND	ND	140	ND	100

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Metal Data Qualifiers:

All results in mg/kg or parts per million
D=Result obtained from dilution
B=Indicates a value greater than or equal to the instrument detection limit but less than the quantitation limit
NV=Indicates TAGM recommened soil clean-up objective is site background
Metals SCGs used for comparison were either TAGM 4046 or Site Background average, which ever is higher
Bold Text=SCG used for Regulatory Comparison
The SCG for Cadmium (10 ppm) and Chromium (50 ppm) are generally accepted clean-up levels
The SCG for Lead (400 ppm) was adopted from the EPA

Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Analyte ***(units)***		**STP-1**	**STP-2**	**STP-3**	**STP-4**	**STP-5**	**STP-6**	**STP-7**	**STP-8**	**STP-9**	**STP-10**	**STP-11**	**STP-12**
VOC ***(mg/kg)***	**TAGM**												
Acetone	0.2	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	0.3	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	5.5	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	0.1	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	1.5	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylenes	1.2	--	--	--	--	--	--	--	--	--	--	--	--
Total VOCs		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Pesticides ***(mg/kg)***	**TAGM**	**STP-1**	**STP-2**	**STP-3**	**STP-4**	**STP-5**	**STP-6**	**STP-7**	**STP-8**	**STP-9**	**STP-10**	**STP-11**	**STP-12**
4,4-DDD	**2.9**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
4,4-DDT	**2.1**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

SVOC/PAH ***(mg/kg)***	**TAGM**	**STP-1**	**STP-2**	**STP-3**	**STP-4**	**STP-5**	**STP-6**	**STP-7**	**STP-8**	**STP-9**	**STP-10**	**STP-11**	**STP-12**
Acenaphthene	50	<0.330	<0.330	**0.031 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Anthracene	50	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{a}anthracene	0.33	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Benzo{b}fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{k}fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (a) Pyrene	0.33	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	0.4	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Bis (2-Ethylhexyl) Phthalate	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.037 J**	<0.330
Dibenzofuran	6.2	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	7.1	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl Phthalate	8.1	<0.330	<0.330	<0.330	**0.110 J**	**0.072 J**	**0.079 J**	**0.044 J**	<0.330	<0.330	**0.056 J**	<0.330	<0.330
Di-n-octyl phthalte	120	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Fluoranthene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Fluorene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Indeno(1,2,3-cd)pyrene	3.2	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	36.4	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	13	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1	<1.6	<1.6	**0.420 J**	<1.6	<1.6	**0.190 J**	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6
Phenanthrene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Pyrene	50	<0.330	<0.330	<0.330	<0.330	<0.330	**0.034 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Total SVOC		BDL	BDL	**0.451 J**	**0.110 J**	**0.072 J**	**0.303 J**	**0.044 J**	BDL	BDL	**0.056 J**	**0.037 J**	BDL

Notes:
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SVOC, VOC, Pesticide Data Qualifiers:

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Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Analyte ***(units)***		**STP-13**	**STP-14**	**STP-15**	**STP-16**	**STP-17**	**STP-18**	**STP-19**	**STP-20**	**STP-21**	**STP-22**	**STP-23**	**STP-24**
VOC ***(mg/kg)***	**TAGM**												
Acetone	0.2	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	0.3	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	5.5	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	0.1	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	1.5	--	--	--	--	--	--	--	--	--	--	--	--
Total Xylenes	1.2	--	--	--	--	--	--	--	--	--	--	--	--
Total VOCs		**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Pesticides ***(mg/kg)***	**TAGM**	**STP-13**	**STP-14**	**STP-15**	**STP-16**	**STP-17**	**STP-18**	**STP-19**	**STP-20**	**STP-21**	**STP-22**	**STP-23**	**STP-24**
4,4-DDD	**2.9**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
4,4-DDT	**2.1**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

SVOC/PAH ***(mg/kg)***	**TAGM**	**STP-13**	**STP-14**	**STP-15**	**STP-16**	**STP-17**	**STP-18**	**STP-19**	**STP-20**	**STP-21**	**STP-22**	**STP-23**	**STP-24**
Acenaphthene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Anthracene	50	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{a}anthracene	0.33	<0.330	<0.330	<0.330	<0.330	<0.330	**0.030 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Benzo{b}fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--
Benzo{k}fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (a) Pyrene	0.33	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	0.4	<0.330	<0.330	<0.330	<0.330	<0.330	**0.056 J**	**0.027 J**	<0.330	<0.330	<0.330	<0.330	<0.330
Bis (2-Ethylhexyl) Phthalate	50	<0.330	<0.330	<0.330	<0.330	<0.330	**0.047 J**	**0.038 J**	<0.330	<0.330	**0.052 J**	<0.330	<0.330
Dibenzofuran	6.2	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	7.1	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl Phthalate	8.1	<0.330	<0.330	<0.330	**0.089 J**	**0.037 J**	**0.150 J**	<0.330	<0.330	<0.330	<0.330	**0.047 J**	**0.042 J**
Di-n-octyl phthalte	120	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Fluoranthene	50	<0.330	<0.330	<0.330	<0.330	<0.330	**0.037 J**	<0.330	<0.330	<0.330	**0.045 J**	<0.330	<0.330
Fluorene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.031 J**	<0.330	<0.330	<0.330	<0.330	<0.330
Indeno(1,2,3-cd)pyrene	3.2	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	36.4	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	13	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1	<1.6	<1.6	**0.460 J**	<1.6	**0.460 J**	**1.6**	**26.0 D**	<1.6	**4.7**	**12.0 D**	<1.6	<1.6
Phenanthrene	50	<0.330	<0.330	<0.330	<0.330	<0.330	**0.190 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Pyrene	50	<0.330	<0.330	<0.330	<0.330	<0.330	**0.37**	**0.290 J**	<0.330	<0.330	**0.160 J**	<0.330	<0.330
Total SVOC		BDL	BDL	**0.460 J**	**0.089 J**	**0.497 J**	**2.450 J**	**26.125 JD**	BDL	**4.7**	**12.257 JD**	**0.047 J**	**0.042 J**

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Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Analyte *(units)*		**STP-25**	**STP-26**	**STP-27**	**STP-28**	**STP-29**	**STP-30**	**TP-1**	**TP-2**	**TP-3**	**TP-4**	**TP-5**	**TP-6**
VOC *(mg/kg)*	**TAGM**												
Acetone	0.2	--	--	--	--	--	--	**3200**	-	-	-	-	-
2-Butanone	0.3	--	--	--	--	--	--	**410**	-	-	-	-	-
Ethylbenzene	5.5	--	--	--	--	--	--	**12000 D**	-	-	-	-	-
Methylene Chloride	0.1	--	--	--	--	--	--	**7**	-	-	-	-	-
Toluene	1.5	--	--	--	--	--	--	**100**	-	-	-	-	-
Total Xylenes	1.2	--	--	--	--	--	--	**43000 D**	-	-	-	-	-
Total VOCs		**--**	**--**	**--**	**--**	**--**	**--**	**58717 D**					

Pesticides *(mg/kg)*	**TAGM**	**STP-25**	**STP-26**	**STP-27**	**STP-28**	**STP-29**	**STP-30**	**TP-1**	**TP-2**	**TP-3**	**TP-4**	**TP-5**	**TP-6**
4,4-DDD	**2.9**	**--**	**--**	**--**	**--**	**--**	**--**	<22	-	-	-	-	-
4,4-DDT	**2.1**	**--**	**--**	**--**	**--**	**--**	**--**	<22	-	-	-	-	-

SVOC/PAH *(mg/kg)*	**TAGM**	**STP-25**	**STP-26**	**STP-27**	**STP-28**	**STP-29**	**STP-30**	**TP-1**	**TP-2**	**TP-3**	**TP-4**	**TP-5**	**TP-6**
Acenaphthene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	<0.330	-	<0.330	<0.330
Anthracene	50	--	--	--	--	--	--	<0.330	-	<0.330	-	<0.330	<0.330
Benzo{a}anthracene	0.33	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	**0.062 J**	-	<0.330	<0.330
Benzo{b}fluoranthene	1.1	--	--	--	--	--	--	<0.330	-	**0.110 J**	-	<0.330	<0.330
Benzo{k}fluoranthene	1.1	--	--	--	--	--	--	<0.330	-	**0.097 J**	-	<0.330	<0.330
Benzo (a) Pyrene	0.33	--	--	--	--	--	--	<0.330	-	**0.041 J**	-	<0.330	<0.330
Chrysene	0.4	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	**0.130 J**	-	<0.330	<0.330
Bis (2-Ethylhexyl) Phthalate	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	**0.170 J**	-	<0.330	<0.330
Dibenzofuran	6.2	--	--	--	--	--	--	<0.330	-	<0.330	-	<0.330	<0.330
Diethylphthalate	7.1	--	--	--	--	--	--					<0.330	<0.330
Di-n-butyl Phthalate	8.1	<0.330	**0.130 J**	**0.039 J**	**0.083 J**	<0.330	<0.330	<0.330	-	**0.090 BJ**	-	<0.330	<0.330
Di-n-octyl phthalte	120	<0.330	**0.050 J**	**0.026 J**	**0.032 J**	<0.330	<0.330	<0.330	-	<0.330	-	<0.330	<0.330
Fluoranthene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	**0.34**	-	<0.330	<0.330
Fluorene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	<0.330	-	<0.330	<0.330
Indeno(1,2,3-cd)pyrene	3.2	--	--	--	--	--	--	<0.330	-	**0.022 J**	-	<0.330	<0.330
2-Methylnaphthalene	36.4	--	--	--	--	--	--	<0.330	-	<0.330	-	<0.330	<0.330
Naphthalene	13	--	--	--	--	--	--	<0.330	-	<0.330	-	<0.330	<0.330
Pentachlorophenol	1	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	**130 D**	-	**0.570 J**	-	**0.230 J**	<1.6
Phenanthrene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	**0.170 J**	-	<0.330	<0.330
Pyrene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	-	**0.200 J**	-	<0.330	<0.330
Total SVOC		BDL	**0.180 J**	**0.065 J**	**0.115 J**	BDL	BDL	**130 D**	-	**2.002 BJ**	-	**0.230 J**	BDL

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Remedial Investigation
Camp Summit

Analyte ***(units)***		**TP-7**	**TP-8**	**TP-9**	**TP-10**	**TP-11**	**TP-12**	**TP-13**	**TP-14**	**TP-15**	**TP-16**	**TP-17**	**TP-18**
VOC ***(mg/kg)***	**TAGM**												
Acetone	0.2	-	-	-	-	-	-	-	-	-	<25	-	-
2-Butanone	0.3	-	-	-	-	-	-	-	-	-	<25	-	-
Ethylbenzene	5.5	-	-	-	-	-	-	-	-	-	**33**	-	-
Methylene Chloride	0.1	-	-	-	-	-	-	-	-	-	**5**	-	-
Toluene	1.5	-	-	-	-	-	-	-	-	-	<5	-	-
Total Xylenes	1.2	-	-	-	-	-	-	-	-	-	**280 B**	-	-
Total VOCs											**318 B**		

Pesticides ***(mg/kg)***	**TAGM**	**TP-7**	**TP-8**	**TP-9**	**TP-10**	**TP-11**	**TP-12**	**TP-13**	**TP-14**	**TP-15**	**TP-16**	**TP-17**	**TP-18**
4,4-DDD	**2.9**	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT	**2.1**	-	-	-	-	-	-	-	-	-	-	-	-

SVOC/PAH ***(mg/kg)***	**TAGM**	**TP-7**	**TP-8**	**TP-9**	**TP-10**	**TP-11**	**TP-12**	**TP-13**	**TP-14**	**TP-15**	**TP-16**	**TP-17**	**TP-18**
Acenaphthene	50	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Anthracene	50	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Benzo{a}anthracene	0.33	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.42**
Benzo{b}fluoranthene	1.1	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.39**
Benzo{k}fluoranthene	1.1	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.280 J**
Benzo (a) Pyrene	0.33	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.39**
Chrysene	0.4	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	**0.44**
Bis (2-Ethylhexyl) Phthalate	50	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Dibenzofuran	6.2	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	**0.55**	<0.330	<0.330
Diethylphthalate	7.1	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Di-n-butyl Phthalate	8.1	<0.330	<0.330	<0.330	-	<0.330	**0.091 BJ**	<0.330	<0.330	<0.330	<0.330	**0.048 J**	<0.330
Di-n-octyl phthalte	120	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Fluoranthene	50	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	**0.040 J**	<0.330	**0.6**
Fluorene	50	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	**0.69**	<0.330	<0.330
Indeno(1,2,3-cd)pyrene	3.2	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
2-Methylnaphthalene	36.4	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	**14 D**	<0.330	<0.330
Naphthalene	13	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	**1.6**	<0.330	<0.330
Pentachlorophenol	1	<1.6	<1.6	<1.6	-	**0.890 J**	**1.2 J**	**0.160 J**	<1.6	**0.150 J**	**0.220 J**	<1.6	<1.6
Phenanthrene	50	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	**1**	<0.330	**0.120 J**
Pyrene	50	<0.330	<0.330	<0.330	-	<0.330	<0.330	<0.330	<0.330	<0.330	**0.072 J**	<0.330	**0.68**
Total SVOC		BDL	BDL	BDL	-	**0.890 J**	**1.291 BJ**	**0.160 J**	BDL	**0.150 J**	**18.972 DJ**	**0.048 J**	**3.320 J**

Notes:
Only analytes detected at or above laboratory method detection limits incluc
on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated
SVOC, VOC, Pesticide Data Qualifiers:
All results in mg/kg or parts per billion
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Analyte *(units)*		TP-19	TP-20	TP-21	TP-22	TP-23	TP-24	TP-25	TP-26	TP-27	TP-28	TP-29	TP-30
VOC *(mg/kg)*	**TAGM**												
Acetone	0.2	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	0.3	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5.5	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	1.5	-	-	-	-	-	-	-	-	-	-	-	-
Total Xylenes	1.2	-	-	-	-	-	-	-	-	-	-	-	-
Total VOCs													

Pesticides *(mg/kg)*	**TAGM**	**TP-19**	**TP-20**	**TP-21**	**TP-22**	**TP-23**	**TP-24**	**TP-25**	**TP-26**	**TP-27**	**TP-28**	**TP-29**	**TP-30**
4,4-DDD	**2.9**	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT	**2.1**	-	-	-	-	-	-	-	-	-	-	-	-

SVOC/PAH *(mg/kg)*	**TAGM**	**TP-19**	**TP-20**	**TP-21**	**TP-22**	**TP-23**	**TP-24**	**TP-25**	**TP-26**	**TP-27**	**TP-28**	**TP-29**	**TP-30**
Acenaphthene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Anthracene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Benzo{a}anthracene	0.33	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Benzo{b}fluoranthene	1.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Benzo{k}fluoranthene	1.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Benzo (a) Pyrene	0.33	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Chrysene	0.4	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Bis (2-Ethylhexyl) Phthalate	50	<0.330	**0.260 J**	<0.330	<0.330	<0.330	<0.330	<0.330	**0.021 J**	<0.330	<0.330	<0.330	<0.330
Dibenzofuran	6.2	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Diethylphthalate	7.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Di-n-butyl Phthalate	8.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Di-n-octyl phthalte	120	**0.051 J**	**0.050 J**	**0.058 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Fluoranthene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Fluorene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Indeno(1,2,3-cd)pyrene	3.2	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
2-Methylnaphthalene	36.4	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Naphthalene	13	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Pentachlorophenol	1	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	**0.065 J**	**0.420 J**	<1.6	<1.6	<1.6	<1.6
Phenanthrene	50	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Pyrene	50	**0.33**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330
Total SVOC		**0.381 J**	**0.310 J**	**0.058 J**	BDL	BDL	BDL	**0.065 J**	**0.441 J**	BDL	BDL	BDL	BDL

Notes:
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Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Analyte ***(units)***		**TP-31**	**TP-32**	**TP-33**	**TP-34**	**TP-35**	**TP-36**	**TP-37**	**TP03-1**	**TP03-2**	**TP03-3**	**TP03-4**	**TP03-5W**
VOC ***(mg/kg)***	**TAGM**								-	-	-	-	-
Acetone	0.2	-	**110**	<25	-	-	-	-	-	-	-	-	-
2-Butanone	0.3	-	**18 J**	**6 J**	-	-	-	-	-	-	-	-	-
Ethylbenzene	5.5	-	**64**	**230**	-	-	-	-	-	-	-	-	-
Methylene Chloride	0.1	-	**9**	**8**	-	-	-	-	-	-	-	-	-
Toluene	1.5	-	<5	**78**	-	-	-	-	-	-	-	-	-
Total Xylenes	1.2	-	**510 B**	**7200 D**	-	-	-	-	-	-	-	-	-
Total VOCs			**711 JB**	**7522 JD**					-	-	-	-	-

Pesticides ***(mg/kg)***	**TAGM**	**TP-31**	**TP-32**	**TP-33**	**TP-34**	**TP-35**	**TP-36**	**TP-37**	**TP03-1**	**TP03-2**	**TP03-3**	**TP03-4**	**TP03-5W**
4,4-DDD	**2.9**	-	-	**37**	-	-	-	-	-	-	-	-	-
4,4-DDT	**2.1**	-	-	**20**	-	-	-	-	-	-	-	-	-

SVOC/PAH ***(mg/kg)***	**TAGM**	**TP-31**	**TP-32**	**TP-33**	**TP-34**	**TP-35**	**TP-36**	**TP-37**	**TP03-1**	**TP03-2**	**TP03-3**	**TP03-4**	**TP03-5W**
Acenaphthene	50	<0.330	**3.5**	**0.940**	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Anthracene	50	<0.330	<0.330	**0.130 J**	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Benzo{a}anthracene	0.33	<0.330	**0.052 J**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Benzo{b}fluoranthene	1.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Benzo{k}fluoranthene	1.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Benzo (a) Pyrene	0.33	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Chrysene	0.4	<0.330	**0.079 J**	**0.020 J**	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Bis (2-Ethylhexyl) Phthalate	50	<0.330	**0.031 J**	<0.330	<0.330	**0.019 J**	**0.025 J**	<0.330	**0.130JB**	**0.082JB**	**0.100JB**	<0.370	**0.100JB**
Dibenzofuran	6.2	<0.330	**6.0**	<0.330	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Diethylphthalate	7.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Di-n-butyl Phthalate	8.1	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Di-n-octyl phthalte	120	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Fluoranthene	50	<0.330	**0.110 J**	**0.025 J**	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Fluorene	50	<0.330	**3.6**	**1.4**	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Indeno(1,2,3-cd)pyrene	3.2	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
2-Methylnaphthalene	36.4	<0.330	**73 D**	**17 D**	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Naphthalene	13	<0.330	**6.4**	**2.4**	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Pentachlorophenol	1	<1.6	**5.3**	**23 D**	<1.6	<1.6	**0.130 J**	**0.690 J**	<1.1	<0.95	<1.00	<0.93	<0.94
Phenanthrene	50	<0.330	**16.0**	**3.0**	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Pyrene	50	<0.330	**1.0**	**0.280 J**	<0.330	<0.330	<0.330	<0.330	<0.450	<0.380	<0.400	<0.370	<0.380
Total SVOC		BDL	**115.072 DJ**	**48.195 DJ**	BDL	**0.019 J**	**0.155 J**	**0.690 J**	**0.130JB**	**0.082JB**	**0.100JB**	ND	**0.100JB**

Notes:
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on tables
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Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Analyte ***(units)***		**TP03-5E**	**TP03-6NE**	**TP03-6SW**	**TP03-7W**	**TP03-8**	**TP03-9N**	**TP03-9S**	**TP03-10W**	**TP03-10E**	**TP03-11W**	**TP03-11E**
VOC ***(mg/kg)***	**TAGM**	-	-	-	-	-	-	-	-	-	-	-
Acetone	0.2	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	0.3	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5.5	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	0.1	-	-	-	-	-	-	-	-	-	-	-
Toluene	1.5	-	-	-	-	-	-	-	-	-	-	-
Total Xylenes	1.2	-	-	-	-	-	-	-	-	-	-	-
Total VOCs		-	-	-	-	-	-	-	-	-	-	-

Pesticides ***(mg/kg)***	**TAGM**	**TP03-5E**	**TP03-6NE**	**TP03-6SW**	**TP03-7W**	**TP03-8**	**TP03-9N**	**TP03-9S**	**TP03-10W**	**TP03-10E**	**TP03-11W**	**TP03-11E**
4,4-DDD	**2.9**	-	-	-	-	-	-	-	-	-	-	-
4,4-DDT	**2.1**	-	-	-	-	-	-	-	-	-	-	-

SVOC/PAH ***(mg/kg)***	**TAGM**	**TP03-5E**	**TP03-6NE**	**TP03-6SW**	**TP03-7W**	**TP03-8**	**TP03-9N**	**TP03-9S**	**TP03-10W**	**TP03-10E**	**TP03-11W**	**TP03-11E**
Acenaphthene	50	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	<0.390	<0.420	**0.110J**	<0.400	<0.440
Anthracene	50	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	**0.076J**	**0.033J**	**0.091J**	<0.400	<0.440
Benzo{a}anthracene	0.33	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	**0.039J**	<0.420	**0.029J**	<0.400	<0.440
Benzo{b}fluoranthene	1.1	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	<0.390	<0.420	<0.380	<0.400	<0.440
Benzo{k}fluoranthene	1.1	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	<0.390	<0.420	<0.380	<0.400	<0.440
Benzo (a) Pyrene	0.33	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	<0.390	<0.420	<0.380	<0.400	<0.440
Chrysene	0.4	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	**0.058J**	<0.420	**0.049J**	<0.400	<0.440
Bis (2-Ethylhexyl) Phthalate	50	**0.090JB**	**0.280JB**	**0.100JB**	**0.120JB**	**0.160JB**	<0.370	**0.040J**	**0.170JB**	**0.160JB**	**0.080JB**	**0.140JB**
Dibenzofuran	6.2	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	<0.390	<0.420	<0.380	<0.400	<0.440
Diethylphthalate	7.1	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	<0.390	<0.420	**0.620J**	<0.400	<0.440
Di-n-butyl Phthalate	8.1	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	<0.390	<0.420	<0.380	<0.400	<0.440
Di-n-octyl phthalte	120	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	<0.390	<0.420	<0.380	<0.400	<0.440
Fluoranthene	50	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	**0.079J**	**0.021J**	**0.071J**	<0.400	<0.440
Fluorene	50	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	**0.190J**	**0.120J**	**0.250J**	<0.400	<0.440
Indeno(1,2,3-cd)pyrene	3.2	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	<0.370	<0.420	<0.380	<0.400	<0.440
2-Methylnaphthalene	36.4	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	<0.390	<0.420	**2.6**	<0.400	<0.440
Naphthalene	13	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	**0.068J**	<0.420	**0.190J**	<0.400	<0.440
Pentachlorophenol	1	<1.00	<0.94	<1.00	**1.3**	**0.700J**	**6.1J**	**0.610J**	**0.410J**	**2.6**	<0.990	**0.370J**
Phenanthrene	50	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	**1.1**	**0.6**	**1.2**	<0.400	<0.440
Pyrene	50	<0.420	<0.380	<0.400	<0.510	<0.410	<0.370	**0.420J**	**0.800J**	**0.340J**	<0.400	<0.440
Total SVOC		**0.090JB**	**0.280JB**	**100JB**	**1.420JB**	**0.860JB**	**6.1J**	**2.507J**	**2.091J**	**8.031JB**	**0.080JB**	**0.510JB**

Notes:
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SVOC, VOC, Pesticide Data Qualifiers:
All results in mg/kg or parts per billion
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Metals *(mg/kg)*	TAGM (4046) or Site Background Average	STP-1	STP-2	STP-3	STP-4	STP-5	STP-6	STP-7	STP-8	STP-9	STP-10	STP-11	STP-12
Aluminum	NV **18866.6**	**16,300 E**	-	**16,900**	-	**14,900 E**	-	**22,000 E**	-	**21,200 E**	**18,000**	**12,400 E**	-
Antimony	NV **0.283**	<0.64	-	**0.88 BN**	-	<0.67	-	**0.81 B**	-	<0.62	**1.5 BN**	<0.55	-
Arsenic	7.5 **9.1**	**5.9**	-	**9.4**	-	**8.3**	-	**6.6**	-	**7.2**	**7.9**	**11.3**	-
Barium	**300** 54.6	**44.7**	-	**57.1**	-	**37**	-	**106**	-	**54**	**33.3**	**21.7**	-
Berillium	0.16 **0.54**	**0.77**	-	**0.63 B**	-	**0.54 B**	-	**1.1**	-	**0.7**	**0.88**	**0.48 B**	-
Cadmium	**1** 0.15	**0.34 B**	-	**0.06 B**	-	**0.09 B**	-	**0.34 B**	-	**0.09 B**	<0.04	<0.03	-
Calcium	NV **110.6**	**1600 E**	-	**1450**	-	**359 BE**	-	**1020 E**	-	**280 BE**	**1130**	**260 BE**	-
Chromium	10 **19.06**	**20**	-	**17.7**	-	**19.3**	-	**22.5**	-	**23**	**24.3**	**16.5**	-
Cobalt	**30** 9.33	**15.6**	-	**12.5**	-	**12.1**	-	**14**	-	**17.5**	**16.2**	**10.4**	-
Copper	0.25 **10.76**	**12.4**	-	**9.8**	-	**8.9**	-	**16.7**	-	**13.6**	**23.8**	**8.7**	-
Iron	2000 **30633.3**	**27,800 E**	-	**26,000**	-	**26,400 E**	-	**27,400 E**	-	**27,900 E**	**40,100**	**26,900 E**	-
Lead	NV **17.86**	**23.5 E**	-	**21.7 ***	-	**16.5 E**	-	**27.3 E**	-	**20.4 E**	**37.8 ***	**15.8 E**	-
Magnesium	NV **2300**	**3,780 E**	-	**2,360**	-	**3,410 E**	-	**3,310 E**	-	**3160 E**	**5250**	**3410 E**	-
Manganese	NV **929**	**453 E**	-	**527**	-	**761 E**	-	**2,640 E**	-	**660 E**	**396**	**340 E**	-
Nickel	13 **14.9**	**26.2 E**	-	**17**	-	**23.9 E**	-	**31.3 E**	-	**24.3 E**	**34.8**	**23.3 E**	-
Potassium	NV **561**	**911**	-	**770 E**	-	**824**	-	**1,060**	-	**903**	**1,210 E**	**659**	-
Selenium	**2** 1.5	**1.6**	-	**1.8**	-	**1.3**	-	**1.5**	-	**1.8**	**2.2**	**1.1**	-
Silver	NV 0.0	**0.27 B**	-	<0.12	-	<0.12	-	<0.13	-	<0.11	<0.11	**0.058**	-
Mercury	**0.1** 0.045	**0.038 B**	-	**0.035 B***	-	**0.068**	-	**0.020 B**	-	<0.048	**0.042 B***	<0.10	-
Sodium	NP **0.047**	**122 B**	-	**141 B**	-	**241 B**	-	**90.6 B**	-	**114 B**	**88.1 B**	**70.7 B**	-
Thallium	NV **6.3**	**5.3**	-	**0.91 B**	-	**5.6**	-	**5**	-	**4.2**	<0.61	**5**	-
Vanadium	**150** 27.16	**20.3**	-	**24**	-	**20**	-	**23.3**	-	**25.1**	**20.3**	**15.7**	-
Zinc	20 **67.36**	**86.3 E**	-	**72.9**	-	**68.1 E**	-	**128 E**	-	**92.0 E**	**105**	**52.9 E**	-
Total Metals		**51,229.2**	**-**	**48,394.73**	**-**	**47,116.70**	**-**	**56,845.07**	**-**	**54,500.89**	**66,482.122**	**44,222.64**	**-**

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Metals SCGs used for comparison were either TAGM 4046 or Site Background average, which ever is higher
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The SCG for Cadmium (10 ppm) and Chromium (50 ppm) are generally accepted clean-up levels
The SCG for Lead (400 ppm) was adopted from the EPA

Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Metals *(mg/kg)*	TAGM (4046) or Site Background Average	STP-13	STP-14	STP-15	STP-16	STP-17	STP-18	STP-19	STP-20	STP-21	STP-22	STP-23	STP-24
Aluminum	NV **18866.6**	**15,300 E**	-	**18,600 E**	-	**14,800 E**	-	**15,800 E**	**19200 E**	-	-	**19,200**	-
Antimony	NV **0.283**	**0.95 B**	-	**0.76 B**	-	<0.70	-	**0.83 B**	<0.75	-	-	**0.95 BN**	-
Arsenic	7.5 **9.1**	**12.6**	-	**12.7**	-	**8.1**	-	**6.3**	**6.9**	-	-	**8.2**	-
Barium	**300** 54.6	**39.5**	-	**65.9**	-	**59.5**	-	**32.2**	**63.8**	-	-	**43.3**	-
Berillium	0.16 **0.54**	**0.7**	-	**0.68**	-	**0.63 B**	-	**0.69**	**0.74**	-	-	**0.66**	-
Cadmium	**1** 0.15	**0.03 B**	-	**0.12 B**	-	**0.17 B**	-	**0.08 B**	**0.16 B**	-	-	<0.04	-
Calcium	NV **110.6**	**1,430 E**	-	**505 BE**	-	**977 E**	-	**1,100 E**	**929 E**	-	-	**284 B**	-
Chromium	10 **19.06**	**21.4**	-	**20.5**	-	**16.5**	-	**21**	**21.8**	-	-	**21.1**	-
Cobalt	**30** 9.33	**15.6**	-	**16.1**	-	**13**	-	**12.8**	**17**	-	-	**12.9**	-
Copper	0.25 **10.76**	**20.5**	-	**12.3**	-	**12.3**	-	**16.4**	**13.4**	-	-	**10.2**	-
Iron	2000 **30633.3**	**32,500 E**	-	**29,200 E**	-	**28,200 E**	-	**33,400 E**	**30,900 E**	-	-	**31,500**	-
Lead	NV **17.86**	**23.9 E**	-	**25.5 E**	-	**25.2 E**	-	**26.0 E**	**26.5 E**	-	-	**15.8 ***	-
Magnesium	NV **2300**	**4,550 E**	-	**3,000 E**	-	**2,390 E**	-	**4,450 E**	**3,570 E**	-	-	**3190**	-
Manganese	NV **929**	**710 E**	-	**1,010 E**	-	**603 E**	-	**566 E**	**582 E**	-	-	**561**	-
Nickel	13 **14.9**	**33.9 E**	-	**22.6 E**	-	**18.7 E**	-	**29.6 E**	**25.5 E**	-	-	**25**	-
Potassium	NV **561**	**990**	-	**881**	-	**919**	-	**842**	**881**	-	-	**825 E**	-
Selenium	**2** 1.5	**1.1**	-	**1.6**	-	**1.5**	-	**1.4**	**1.9**	-	-	**1.8**	-
Silver	NV 0.0	**0.030 B**	-	<0.12	-	<0.12	-	<0.10	<0.13	-	-	<0.12	-
Mercury	**0.1** 0.045	<0.10	-	**0.062 B**	-	**0.020 B**	-	<0.11	**0.043 B**	-	-	<0.034 B*	-
Sodium	NP **0.047**	**61.3 B**	-	**93.5 B**	-	**271**	-	**65.6 B**	**223 B**	-	-	**44.5 B**	-
Thallium	NV **6.3**	**4.3**	-	**6**	-	**5.7**	-	**5.6**	**5**	-	-	**1.8**	-
Vanadium	**150** 27.16	**18.6**	-	**25.2**	-	**22.6**	-	**18.2**	**25.2**	-	-	**22.6**	-
Zinc	20 **67.36**	**79.2 E**	-	**80.3 E**	-	**92.7 E**	-	**243 E**	**154 E**	-	-	**86.6**	-
Total Metals		**55,813.61**	**-**	**53,580.38**	**-**	**48,436.62**	**-**	**56,637.70**	**56,646.94**	**-**	**-**	**55,855.41**	**-**

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Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Metals *(mg/kg)*	TAGM (4046) or Site Background Average		STP-25	STP-26	STP-27	STP-28	STP-29	STP-30	TP-1	TP-2	TP-3	TP-4	TP-5	TP-6
Aluminum	NV	**18866.6**	**16,800**	**16,600**	**17,500**	-	-	-	**25,800 E**	-	-	-	-	-
Antimony	NV	**0.283**	**1.3 BN**	**1.3 BN**	**0.94 BN**	-	-	-	**3.7 B**	-	-	-	-	-
Arsenic	7.5	**9.1**	**13.9**	**10**	**9.7**	-	-	-	**28.6**	-	-	-	-	-
Barium	**300**	54.6	**53.9**	**56.8**	**74.6**	-	-	-	**67.6 E**	-	-	-	-	-
Berillium	0.16	**0.54**	**0.75**	**0.71**	**0.59 B**	-	-	-	**1.1**	-	-	-	-	-
Cadmium	**1**	0.15	**0.07 B**	**0.12 B**	**0.04 B**	-	-	-	-	-	-	-	-	-
Calcium	NV	**110.6**	**2,930**	**4,900**	**489**	-	-	-	**228 B**	-	-	-	-	-
Chromium	10	**19.06**	**21.4**	**20.3**	**18**	-	-	-	**37.2 E**	-	-	-	-	-
Cobalt	**30**	9.33	**15.8**	**14.6**	**11.3**	-	-	-	**107 E**	-	-	-	-	-
Copper	0.25	**10.76**	**17.9**	**19.7**	**9.1**	-	-	-	**29.2 E**	-	-	-	-	-
Iron	2000	**30633.3**	**34,100**	**34,600**	**29,900**	-	-	-	**124,000**	-	-	-	-	-
Lead	NV	**17.86**	**28.2 ***	**26.4 ***	**21.8 ***	-	-	-	**173 E**	-	-	-	-	-
Magnesium	NV	**2300**	**4,180**	**3,980**	**2,190**	-	-	-	**1,100 E**	-	-	-	-	-
Manganese	NV	**929**	**1,160**	**1,160**	**812**	-	-	-	**20,000E**	-	-	-	-	-
Nickel	13	**14.9**	**39.7**	**27.7**	**15**	-	-	-	**8.7**	-	-	-	-	-
Potassium	NV	**561**	**973 E**	**1,180 E**	**786 E**	-	-	-	**708 B**	-	-	-	-	-
Selenium	**2**	1.5	**1.6**	**2.2**	**1.7**	-	-	-	**8.4**	-	-	-	-	-
Silver	NV	0.0	<0.12	<0.12	<0.12	-	-	-	**0.398**	-	-	-	-	-
Mercury	**0.1**	0.045	**0.040 B***	**0.037 B***	**0.034 B***	-	-	-	<0.16	-	-	-	-	-
Sodium	NP	**0.047**	**371 B**	**386 B**	**326 B**	-	-	-	**50.7 B**	-	-	-	-	-
Thallium	NV	**6.3**	<0.69	<0.67	**2.9**	-	-	-	**0.94**	-	-	-	-	-
Vanadium	**150**	27.16	**20.9**	**22.8**	**26.9**	-	-	-	**97.9 E**	-	-	-	-	-
Zinc	20	**67.36**	**97.1**	**89.3**	**73**	-	-	-	**116 E**	-	-	-	-	-
Total Metals			**60,826.56**	**63,098.3**	**52,268.604**	**-**	**-**	**-**	**171,858.44**	-	-	-	-	-

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Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Metals *(mg/kg)*	TAGM (4046) or Site Background Average	TP-7	TP-8	TP-9	TP-10	TP-11	TP-12	TP-13	TP-14	TP-15	TP-16	TP-17	TP-18
Aluminum	NV **18866.6**	-	-	-	-	-	-	-	-	-	**14,800 E**	-	-
Antimony	NV **0.283**	-	-	-	-	-	-	-	-	-	**1.7 BN**	-	-
Arsenic	7.5 **9.1**	-	-	-	-	-	-	-	-	-	**14.3**	-	-
Barium	**300** 54.6	-	-	-	-	-	-	-	-	-	**31.7**	-	-
Berillium	0.16 **0.54**	-	-	-	-	-	-	-	-	-	**0.64**	-	-
Cadmium	**1** 0.15	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NV **110.6**	-	-	-	-	-	-	-	-	-	**340 B**	-	-
Chromium	10 **19.06**	-	-	-	-	-	-	-	-	-	**20.8 E**	-	-
Cobalt	**30** 9.33	-	-	-	-	-	-	-	-	-	**12.6 E**	-	-
Copper	0.25 **10.76**	-	-	-	-	-	-	-	-	-	**125 E***	-	-
Iron	2000 **30633.3**	-	-	-	-	-	-	-	-	-	**31,600 E**	-	-
Lead	NV **17.86**	-	-	-	-	-	-	-	-	-	**19.2 E**	-	-
Magnesium	NV **2300**	-	-	-	-	-	-	-	-	-	**4,390 E**	-	-
Manganese	NV **929**	-	-	-	-	-	-	-	-	-	**505 E**	-	-
Nickel	13 **14.9**	-	-	-	-	-	-	-	-	-	**30.8 E**	-	-
Potassium	NV **561**	-	-	-	-	-	-	-	-	-	**883**	-	-
Selenium	**2** 1.5	-	-	-	-	-	-	-	-	-	**1.5 ***	-	-
Silver	NV 0.0	-	-	-	-	-	-	-	-	-	<0.11	-	-
Mercury	**0.1** 0.045	-	-	-	-	-	-	-	-	-	**0.017 B**	-	-
Sodium	NP **0.047**	-	-	-	-	-	-	-	-	-	**34.3 B**	-	-
Thallium	NV **6.3**	-	-	-	-	-	-	-	-	-	<0.61	-	-
Vanadium	**150** 27.16	-	-	-	-	-	-	-	-	-	**18.2 E**	-	-
Zinc	20 **67.36**	-	-	-	-	-	-	-	-	-	**64.8 E**	-	-
Total Metals		-	-	-	-	-	-	-	-	-	**52,893.55**	-	-

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Aluminum	NV	**18866.6**	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	NV	**0.283**	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	7.5	**9.1**	-	-	-	-	-	-	-	-	-	-	-	-
Barium	**300**	54.6	-	-	-	-	-	-	-	-	-	-	-	-
Berillium	0.16	**0.54**	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	**1**	0.15	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NV	**110.6**	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	10	**19.06**	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	**30**	9.33	-	-	-	-	-	-	-	-	-	-	-	-
Copper	0.25	**10.76**	-	-	-	-	-	-	-	-	-	-	-	-
Iron	2000	**30633.3**	-	-	-	-	-	-	-	-	-	-	-	-
Lead	NV	**17.86**	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NV	**2300**	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	NV	**929**	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	13	**14.9**	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	NV	**561**	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	**2**	1.5	-	-	-	-	-	-	-	-	-	-	-	-
Silver	NV	0.0	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	**0.1**	0.045	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NP	**0.047**	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	NV	**6.3**	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	**150**	27.16	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	20	**67.36**	-	-	-	-	-	-	-	-	-	-	-	-
Total Metals			-	-	-	-	-	-	-	-	-	-	-	-

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Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Metals *(mg/kg)*	TAGM (4046) or Site Background Average		TP-31	TP-32	TP-33	TP-34	TP-35	TP-36	TP-37	TP03-1	TP03-2	TP03-3	TP03-4	TP03-5W
Aluminum	NV	**18866.6**	-	-	-	-	-	-	-	**19,900**	**16,900**	**18,400**	**16,400**	**16,700N**
Antimony	NV	**0.283**	-	-	-	-	-	-	-	<0.33	<0.32	**0.45**	<0.31N	<0.27N
Arsenic	7.5	**9.1**	-	-	-	-	-	-	-	**8.2**	**10.5**	**19.6**	**10.7***	**10.6***
Barium	**300**	54.6	-	-	-	-	-	-	-	**68.6**	**47.0**	**48.9**	**36.2***	**33.8**
Berillium	0.16	**0.54**	-	-	-	-	-	-	-	**0.86**	**0.86**	**1.2**	**0.72**	**0.58**
Cadmium	**1**	0.15	-	-	-	-	-	-	-	**0.13**	<0.04	**0.13**	**0.17***	**0.34***
Calcium	NV	**110.6**	-	-	-	-	-	-	-	**860**	**471**	**650**	**469***	**202**
Chromium	10	**19.06**	-	-	-	-	-	-	-	**21.8**	**23.2**	**23.6**	**22.4**	**22.4**
Cobalt	**30**	9.33	-	-	-	-	-	-	-	**14.4**	**15.1**	**17.8**	**14.1**	**11.2**
Copper	0.25	**10.76**	-	-	-	-	-	-	-	**40.4**	**18.2**	**26.6**	**17.7**	**16.1**
Iron	2000	**30633.3**	-	-	-	-	-	-	-	**28,200**	**33,500**	**48,400**	**32500N**	**33100N**
Lead	NV	**17.86**	-	-	-	-	-	-	-	**22.9**	**20.2**	**88.2**	**19.4**	**14.1**
Magnesium	NV	**2300**	-	-	-	-	-	-	-	**3,060**	**4,810**	**4,300**	**4,900**	**4,660**
Manganese	NV	**929**	-	-	-	-	-	-	-	**792**	**819**	**1,330**	**554N**	**389N***
Nickel	13	**14.9**	-	-	-	-	-	-	-	**22.1**	**37.0**	**38.2**	**33.9**	**29.4**
Potassium	NV	**561**	-	-	-	-	-	-	-	**13,200**	**1,330**	**1,310**	**1,110**	**1150E**
Selenium	**2**	1.5	-	-	-	-	-	-	-	**0.36**	<0.32	<0.33	<0.31	**0.33***
Silver	NV	0.0	-	-	-	-	-	-	-	<0.09	<0.09	<0.09	<0.08	<0.08
Mercury	**0.1**	0.045	-	-	-	-	-	-	-	**0.08**	**0.04**	**0.06**	**0.04**	**0.07**
Sodium	NP	**0.047**	-	-	-	-	-	-	-	**57.8**	**59.2**	**54.9**	**54.7**	**47.4**
Thallium	NV	**6.3**	-	-	-	-	-	-	-	<0.63	<0.61	<0.62	<0.58	**0.54**
Vanadium	**150**	27.16	-	-	-	-	-	-	-	**27.9**	**19.3**	**22.0**	**18.7**	**21.7**
Zinc	20	**67.36**	-	-	-	-	-	-	-	**87.2**	**76.9**	**271**	**73.7**	**64.4**
Total Metals			-	-	-	-	-	-	-	**66,385**	**58,158**	**75,003**	**56,235N***	**39774N*E**

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Remedial Investigation
Camp Summit

Metals *(mg/kg)*	TAGM (4046) or Site Background Average		TP03-5E	TP03-6NE	TP03-6SW	TP03-7W	TP03-8	TP03-9N	TP03-9S	TP03-10W	TP03-10E	TP03-11W	TP03-11E
Aluminum	NV	**18866.6**	**17200N**	**15500N**	**17,500N**	**22,300N**	**15,700**	**14900N**	**11300N**	**17400N**	**15400N**	**17700N**	**16300N**
Antimony	NV	**0.283**	<0.34N	<0.32N	<0.34N	<0.39N	<0.21N	<0.32N	<0.24N	<0.32N	<0.32N	<0.34N	<0.36N
Arsenic	7.5	**9.1**	**11.3***	**14.2***	**10.3***	**11.6***	**9.9***	**11.3***	**8.5***	**10.9***	**12.7***	**10.4***	**12***
Barium	**300**	54.6	**42.6**	**37.4**	**41.0**	**58.6**	**37.9**	**49.2***	**31***	**49.7**	**33.1**	**55.9**	**48.4**
Berillium	0.16	**0.54**	**0.54**	**0.58**	**0.55**	**0.88**	**0.58**	**0.76**	**0.55**	**0.74**	**0.55**	**0.63**	**0.52**
Cadmium	**1**	0.15	**0.39***	**0.36***	**0.33***	**0.34***	**0.25***	**0.11***	**0.09***	**0.35***	**0.39***	**0.38***	**0.36***
Calcium	NV	**110.6**	**204**	**234**	**138**	**409**	**355**	**1570***	**1230***	**712**	**347**	**412**	**484**
Chromium	10	**19.06**	**20.3**	**20.7**	**20.3**	**26.1**	**22.2**	**21.3**	**16.6**	**22.4**	**21.3**	**21.3**	**19.6**
Cobalt	**30**	9.33	**13**	**13.8**	**10.9**	**16.6**	**13.4**	**13.1**	**10.7**	**15.9**	**13.5**	**12.9**	**12.6**
Copper	0.25	**10.76**	**13.2**	**18.9**	**11.8**	**14.0**	**14.8**	**20.7**	**15.1**	**20.5**	**17.9**	**14.6**	**61.3**
Iron	2000	**30633.3**	**30500N**	**32000N**	**28900N**	**34200N**	**28600N**	**31900N**	**24300N**	**32500N**	**31600N**	**29800N**	**27900N**
Lead	NV	**17.86**	**18.2**	**18.4**	**14.2**	**22.1**	**14.8**	**21.3**	**12.0**	**24.2**	**18.6**	**18.6**	**20.7**
Magnesium	NV	**2300**	**3,660**	**4,160**	**3,650**	**4360N**	**4,570**	**4,510**	**3,570**	**4,480**	**4,390**	**3,930**	**3,360**
Manganese	NV	**929**	**649N***	**700N***	**463N***	**2550N***	**580N***	**847N**	**748N**	**855N***	**875N***	**950N***	**964N***
Nickel	13	**14.9**	**23.7**	**28.3**	**24.9**	**31.4**	**31.8**	**35.6**	**28.5**	**33.8**	**29.2**	**25.8**	**21.8**
Potassium	NV	**561**	**1150E**	**1,220E**	**1160E**	**1410E**	**1010E**	**1,230**	**892**	**1320E**	**1110E**	**1430E**	**1130E**
Selenium	**2**	1.5	**0.53***	**0.55***	**0.53***	**0.65**	**0.5***	<0.32	<0.24	**0.38***	<0.32	**0.49***	**0.79***
Silver	NV	0.0	**0.14**	<0.09	<0.09	**0.11**	<0.06	<0.09	<0.07	<0.09	<0.09	**0.15**	**0.11**
Mercury	**0.1**	0.045	**0.09**	**0.07**	**0.1**	**0.18**	**0.07**	**0.03**	**0.05**	**0.08**	**0.04**	**0.09**	**0.1**
Sodium	NP	**0.047**	**87.9**	**42.3**	**42.7**	**54.6**	**41.9**	**57**	**50.4**	**80.0**	**220**	**50.2**	**42.9**
Thallium	NV	**6.3**	<0.64	<0.61	**0.65**	<0.74	**0.66**	<0.60	<0.46	**0.62**	<0.60	<0.65	<0.68
Vanadium	**150**	27.16	**23.6**	**20.4**	**22.1**	**27.7**	**19.7**	**18.9**	**14.5**	**22.9**	**20.5**	**23.1**	**22.1**
Zinc	20	**67.36**	**67.3**	**66.7**	**72.8**	**105**	**64.5**	**79.6**	**58.5**	**81.4**	**68.2**	**70.3**	**64.3**
Total Metals			**53,686N*E**	**52,877N*E**	**34,584N*E**	**43,299N*E**	**51,088N*E**	**55,286N***	**42,286N***	**57,631N*E**	**54,178N*E**	**54,527N*E**	**50,466N*E**

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Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Dioxins *(ng/g)*	TEFs	STP-1	STP-2	STP-3	STP-4	STP-5	STP-6	STP-7	STP-8	STP-9	STP-10	STP-11	STP-12
Total TCDF	NP	<0.065	<0.068	<0.072	-	<0.065	-	<0.084	-	<0.080	<0.072	<0.068	-
Total PeCDF	NP	<0.073	<0.061	<0.12	-	<0.089	-	<0.061	-	<0.082	<0.094	<0.056	-
TotalHxCDF	NP	<0.093	<0.016	<0.066	-	<0.021	-	<0.20	-	<0.027	<0.11	<0.037	-
Total HpCDF	NP	<0.33	<0.029	<0.21	-	<0.034	-	**1.5**	-	<0.031	<0.13	<0.14	-
Total TCDD	NP	<0.035	<0.044	<0.32	-	<0.048	-	<0.024	-	<0.058	<0.027	<0.040	-
Total PeCDD	NP	<0.17	<0.14	<0.18	-	<0.13	-	<0.097	-	<0.16	<0.14	<0.11	-
Total HxCDD	NP	<0.083	<0.031	<0.13	-	<0.033	-	<0.14	-	<0.051	<0.27	<0.031	-
Total HpCDD	NP	<0.49	<0.042	<0.48	-	<0.053	-	**2.8**	-	<0.027	<0.12	<0.11	-
2,3,7,8-TCDD	1	<0.035	<0.044	<0.032	-	<0.048	-	<0.024	-	<0.058	<0.027	<0.040	-
1,2,3,7,8-PeCDD	0.5	<0.17	<0.14	<0.18	-	<0.13	-	<0.097	-	<0.16	<0.14	<0.11	-
1,2,3,4,7,8-HxCDD	0.1	<0.088	<0.033	<0.14	-	<0.035	-	<0.15	-	<0.054	<0.28	<0.033	-
1,2,3,6,7,8-HxCDD	0.1	<0.094	<0.035	<0.15	-	<0.037	-	<0.16	-	<0.057	<0.30	<0.035	-
1,2,3,7,8,9-HxCDD	0.1	<0.083	<0.031	<0.13	-	<0.033	-	<0.14	-	<0.051	<0.27	<0.031	-
1,2,3,4,6,7,8-HpCDD	0.01	<0.49	<0.042	<0.48	-	<0.053	-	**0.91 J**	-	<0.027	<0.12	<0.11	-
OCDD	0.0001	**3.6 J**	<0.37	**3.6**	-	<0.25	-	**12**	-	<0.054	**1**	<0.56	-
2,3,7,8-TCDF	0.1	<0.065	<0.068	<0.072	-	<0.065	-	<0.084	-	<0.080	<0.072	<0.068	-
1,2,3,7,8-PeCDF	0.05	<0.077	<0.065	<0.13	-	<0.095	-	<0.065	-	<0.087	<0.10	<0.059	-
2,3,4,7,8-PeCDF	0.5	<0.073	<0.061	<0.12	-	<0.089	-	<0.061	-	<0.082	<0.094	<0.056	-
1,2,3,4,7,8-HxCDF	0.1	<0.093	<0.016	<0.066	-	<0.021	-	<0.073	-	<0.027	<0.11	<0.037	-
1,2,3,6,7,8-HxCDF	0.1	<0.095	<0.017	<0.067	-	<0.021	-	<0.074	-	<0.027	<0.12	<0.037	-
2,3,4,6,7,8-HxCDF	0.1	<0.10	<0.018	<0.071	-	<0.023	-	<0.078	-	<0.029	<0.12	<0.040	-
1,2,3,7,8,9-HxCDF	0.1	<0.10	<0.018	<0.072	-	<0.023	-	<0.079	-	<0.029	<0.12	<0.040	-
1,2,3,4,6,7,8-HpCDF	0.01	<0.091	<0.029	<0.19	-	<0.034	-	<0.34	-	<0.031	<0.13	<0.14	-
1,2,3,4,7,8,9-HpCDF	0.01	<0.031	<0.033	<0.21	-	<0.038	-	<0.043	-	<0.035	<0.15	<0.16	-
OCDF	0.0001	<0.36	<0.036	<0.28	-	<0.042	-	**2.4 J**	-	<0.040	<0.24	<0.19	-
2,3,7,8-TCDD Equivalence	1	**0.00036 J**	BDL	**0.00036**	-	BDL	-	**0.01054 J**	-	BDL	**0.0001 J**	BDL	-

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Dioxin Data Qualifiers:

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J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

Table 4
Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Dioxins *(ng/g)*	TEFs	STP-13	STP-14	STP-15	STP-16	STP-17	STP-18	STP-19	STP-20	STP-21	STP-22	STP-23	STP-24
Total TCDF	NP	<0.048	-	<0.079	-	<0.067	-	<0.086	<0.089	-	-	<0.065	-
Total PeCDF	NP	<0.078	-	<0.087	-	<0.20	-	<1.4	<0.14	-	-	<0.094	-
TotalHxCDF	NP	<0.22	-	**1.7**	-	**5.3**	-	**23**	<0.45	-	-	<0.37	-
Total HpCDF	NP	<0.19	-	**13**	-	**34**	-	**100**	**3.3**	-	-	<0.040	-
Total TCDD	NP	<0.030	-	<0.045	-	<0.035	-	<0.035	<0.050	-	-	<0.037	-
Total PeCDD	NP	<0.19	-	<0.15	-	<0.41	-	<0.26	<0.19	-	-	<0.20	-
Total HxCDD	NP	<0.19	-	<0.40	-	**8.4**	-	**10**	<0.24	-	-	<0.63	-
Total HpCDD	NP	<0.21	-	**17**	-	**140**	-	**160**	**5.9**	-	-	<0.054	-
2,3,7,8-TCDD	1	<0.030	-	<0.045	-	<0.035	-	<0.035	<0.050	-	-	<0.037	-
1,2,3,7,8-PeCDD	0.5	<0.19	-	<0.15	-	<0.41	-	<0.26	<0.19	-	-	<0.20	-
1,2,3,4,7,8-HxCDD	0.1	<0.12	-	<0.10	-	<0.50	-	<0.29	<0.15	-	-	<0.092	-
1,2,3,6,7,8-HxCDD	0.1	<0.12	-	<0.40	-	**2.4**	-	**3.9**	<0.21	-	-	<0.098	-
1,2,3,7,8,9-HxCDD	0.1	<0.11	-	<0.098	-	**0.97 J**	-	**0.71 J**	<0.12	-	-	<0.087	-
1,2,3,4,6,7,8-HpCDD	0.01	<0.21	-	**12**	-	**91 E**	-	**110 E**	**3.9**	-	-	<0.054	-
OCDD	0.0001	**1.4 J**	-	**80 E**	-	**630 E**	-	**480 E**	**21**	-	-	<0.29	-
2,3,7,8-TCDF	0.1	<0.048	-	<0.079	-	<0.067	-	<0.086	<0.089	-	-	<0.065	-
1,2,3,7,8-PeCDF	0.05	<0.083	-	<0.092	-	<0.21	-	<0.21	<0.15	-	-	<0.10	-
2,3,4,7,8-PeCDF	0.5	<0.078	-	<0.087	-	<0.20	-	<0.12	<0.14	-	-	<0.094	-
1,2,3,4,7,8-HxCDF	0.1	<0.061	-	<0.097	-	<0.13	-	**0.70 J**	<0.13	-	-	<0.096	-
1,2,3,6,7,8-HxCDF	0.1	<0.062	-	<0.098	-	<0.20	-	<0.33	<0.13	-	-	<0.098	-
2,3,4,6,7,8-HxCDF	0.1	<0.065	-	<0.10	-	<0.21	-	<0.24	<0.14	-	-	<0.10	-
1,2,3,7,8,9-HxCDF	0.1	<0.066	-	<0.11	-	<0.21	-	<0.16	<0.14	-	-	<0.10	-
1,2,3,4,6,7,8-HpCDF	0.01	<0.060	-	**2.4**	-	**7.2**	-	**20**	**0.88 J**	-	-	<0.040	-
1,2,3,4,7,8,9-HpCDF	0.01	<0.030	-	<0.21	-	<0.53	-	**0.83 J**	<0.12	-	-	<0.046	-
OCDF	0.0001	<0.17	-	**16**	-	**41**	-	**96**	**3.0 J**	-	-	<0.097	-
2,3,7,8-TCDD Equivalence	1	**0.00014 J**	-	**0.1536 E**	-	**1.3861 JE**	-	**1.8969 JE**	**0.0502 J**	-	-	BDL	-

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Test Pit Soil Analytical Results
Remedial Investigation
Camp Summit

Dioxins *(ng/g)*	TEFs	STP-25	STP-26	STP-27	STP-28	STP-29	STP-30	TP-1	TP-2	TP-3	TP-4	TP-5	TP-6
Total TCDF	NP	<0.069	<0.068	<0.088	-	-	-	**0.03**	-	**0.018**	-	-	-
Total PeCDF	NP	<0.16	<0.095	<0.16	-	-	-	**0.32**	-	**0.26**	-	-	-
TotalHxCDF	NP	<0.44	<0.28	<0.10	-	-	-	**27**	-	**5.1**	-	-	-
Total HpCDF	NP	<0.60	<0.23	<0.086	-	-	-	**290**	-	**30**	-	-	-
Total TCDD	NP	<0.031	<0.0049	<0.45	-	-	-	**0.2**	-	**0.039**	-	-	-
Total PeCDD	NP	<0.38	<0.32	<0.32	-	-	-	**0.27**	-	**0.5**	-	-	-
Total HxCDD	NP	<0.59	<0.31	<0.31	-	-	-	**22**	-	**9.3**	-	-	-
Total HpCDD	NP	**2.3**	<0.16	<0.19	-	-	-	**790**	-	**110**	-	-	-
2,3,7,8-TCDD	1	<0.031	<0.0049	<0.045	-	-	-	**0.2 J**	-	**0.0091**	-	-	-
1,2,3,7,8-PeCDD	0.5	<0.15	<0.027	<0.32	-	-	-	**0.17**	-	**0.19**	-	-	-
1,2,3,4,7,8-HxCDD	0.1	<0.29	<0.099	<0.32	-	-	-	**0.42**	-	**0.56**	-	-	-
1,2,3,6,7,8-HxCDD	0.1	<0.31	<0.11	<0.34	-	-	-	**9**	-	**2.3**	-	-	-
1,2,3,7,8,9-HxCDD	0.1	<0.27	<0.094	<0.31	-	-	-	**1.2**	-	**1.7**	-	-	-
1,2,3,4,6,7,8-HpCDD	0.01	**1.4 J**	<0.16	<0.19	-	-	-	**480 D**	-	**64 E**	-	-	-
OCDD	0.0001	**9.1**	<1.0	<0.53	-	-	-	**5400 D**	-	**430 E**	-	-	-
2,3,7,8-TCDF	0.1	<0.069	<0.068	<0.088	-	-	-	<0.01	-	<0.0025	-	-	-
1,2,3,7,8-PeCDF	0.05	<0.17	<0.10	<0.17	-	-	-	<0.014	-	<.00073	-	-	-
2,3,4,7,8-PeCDF	0.5	<0.16	<0.095	<0.16	-	-	-	<0.014	-	<0.0093	-	-	-
1,2,3,4,7,8-HxCDF	0.1	<0.25	<0.11	<0.16	-	-	-	**0.5**	-	**0.12**	-	-	-
1,2,3,6,7,8-HxCDF	0.1	<0.25	<0.11	<0.10	-	-	-	**0.18**	-	**0.096**	-	-	-
2,3,4,6,7,8-HxCDF	0.1	<0.27	<0.12	<0.11	-	-	-	**0.13 J**	-	**0.1**	-	-	-
1,2,3,7,8,9-HxCDF	0.1	<0.30	<0.12	<0.11	-	-	-	<0.029	-	<0.011	-	-	-
1,2,3,4,6,7,8-HpCDF	0.01	<0.059	<0.23	<0.086	-	-	-	**57**	-	**7.5**	-	-	-
1,2,3,4,7,8,9-HpCDF	0.01	<0.60	<0.26	<0.098	-	-	-	**2.7**	-	**0.39**	-	-	-
OCDF	0.0001	<0.81	<0.15	<0.16	-	-	-	**450 D**	-	**28 E**	-	-	-
2,3,7,8-TCDD Equivalence	1	**0.01491 J**	BDL	BDL	-	-	-	**7.41 DJ**	-	**1.3564 JE**	-	-	-

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Camp Summit

Dioxins *(ng/g)*	**TEFs**	**TP-7**	**TP-8**	**TP-9**	**TP-10**	**TP-11**	**TP-12**	**TP-13**	**TP-14**	**TP-15**	**TP-16**	**TP-17**	**TP-18**
Total TCDF	NP	<0.0004	**0.044**	<0.000058	-	-	-	-	**0.0095**	-	<0.00042	-	<0.094
Total PeCDF	NP	<0.0013	**0.7**	<0.00036	-	-	-	-	**0.035**	-	**0.0093**	-	<0.25
TotalHxCDF	NP	**0.042**	**5.6**	**0.0051**	-	-	-	-	**0.39**	-	**0.13**	-	<0.54
Total HpCDF	NP	<0.00045	**22**	**0.049**	-	-	-	-	**1.9**	-	**0.64**	-	**1.7**
Total TCDD	NP	**0.014**	**0.0021**	<0.000057	-	-	-	-	**0.0036**	-	**0.00095**	-	<0.067
Total PeCDD	NP	**0.3**	**0.08**	<0.00026	-	-	-	-	**0.027**	-	<0.0025	-	<0.33
Total HxCDD	NP	**0.12**	**2**	**0.0024**	-	-	-	-	**0.32**	-	**0.1**	-	<0.4
Total HpCDD	NP	<0.0002	**19**	**0.085**	-	-	-	-	**3.4**	-	**1.5**	-	**4.2**
2,3,7,8-TCDD	1	<0.0002	<0.0009	<0.000057	-	-	-	-	**0.0017**	-	<0.00019	-	<0.067
1,2,3,7,8-PeCDD	0.5	<0.00045	**0.032**	<0.00013	-	-	-	-	**0.015**	-	<0.0025	-	<0.33
1,2,3,4,7,8-HxCDD	0.1	<0.0013	**0.087**	<0.00025	-	-	-	-	**0.021**	-	**0.0046 J**	-	<0.42
1,2,3,6,7,8-HxCDD	0.1	**0.0071**	**0.66**	<0.002	-	-	-	-	**0.09**	-	**0.031**	-	<0.45
1,2,3,7,8,9-HxCDD	0.1	<0.0025	**0.25**	<0.0011	-	-	-	-	**0.046**	-	**0.013**	-	<0.4
1,2,3,4,6,7,8-HpCDD	0.01	**0.2 D**	**14 E**	**0.057**	-	-	-	-	**2.1**	-	**0.86**	-	**2.8**
OCDD	0.0001	**1.0 D**	**72 E**	**0.33**	-	-	-	-	**12 E**	-	**7.5**	-	**15**
2,3,7,8-TCDF	0.1	<0.0004	**0.011 CON**	<0.000054	-	-	-	-	**0.00095 JCON**	-	<0.00026	-	<0.094
1,2,3,7,8-PeCDF	0.05	<0.00088	**0.057**	<0.000087	-	-	-	-	<0.0023	-	<0.0013	-	<0.27
2,3,4,7,8-PeCDF	0.5	<0.00031	**0.039**	<0.000087	-	-	-	-	<0.0019	-	<0.0008	-	<0.25
1,2,3,4,7,8-HxCDF	0.1	<0.0017	**0.19**	<0.00031	-	-	-	-	**0.016**	-	**0.0061**	-	<0.13
1,2,3,6,7,8-HxCDF	0.1	<0.00061	**0.1**	<0.00022	-	-	-	-	**0.012**	-	**0.0038 J**	-	<0.13
2,3,4,6,7,8-HxCDF	0.1	<0.001	**0.075**	<0.00027	-	-	-	-	**0.008**	-	<0.0024	-	<0.14
1,2,3,7,8,9-HxCDF	0.1	<0.00046	**0.015**	<0.00028	-	-	-	-	<0.0011	-	<0.00062	-	<0.14
1,2,3,4,6,7,8-HpCDF	0.01	**0.032**	**3.7**	**0.1**	-	-	-	-	**0.6**	-	**0.15**	-	<0.58
1,2,3,4,7,8,9-HpCDF	0.01	<0.0026	**0.4**	<0.00088	-	-	-	-	**0.03**	-	**0.0089**	-	<0.1
OCDF	0.0001	**0.15 D**	**12 E**	**0.047**	-	-	-	-	**2.4**	-	**0.77**	-	<0.14
2,3,7,8-TCDD Equivalence	1	**0.003145 D**	**0.36655 E**	**0.001608**	-	-	-	-	**0.057335 EJ**	-	**0.016866 DJ**	-	**0.0295 J**

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Remedial Investigation
Camp Summit

Dioxins *(ng/g)*	TEFs	TP-19	TP-20	TP-21	TP-22	TP-23	TP-24	TP-25	TP-26	TP-27	TP-28	TP-29	TP-30
Total TCDF	NP	<0.077	-	**0.089**	-	-	<0.10	-	<0.083	<0.078	<0.064	-	-
Total PeCDF	NP	<0.12	-	<0.22	-	-	<0.15	-	**0.14**	<0.10	<0.10	-	-
TotalHxCDF	NP	<0.066	-	<0.62	-	-	<0.074	-	**1.1**	<0.044	<0.034	-	-
Total HpCDF	NP	<0.033	-	**2.2**	-	-	<0.10	-	**9.8**	<0.036	<0.043	-	-
Total TCDD	NP	<0.036	-	<0.051	-	-	<0.071	-	<0.057	<0.049	<0.036	-	-
Total PeCDD	NP	<0.17	-	<0.38	-	-	<0.75	-	<0.25	<0.074	<0.15	-	-
Total HxCDD	NP	<0.19	-	<0.41	-	-	<0.19	-	<0.61	<0.080	<0.060	-	-
Total HpCDD	NP	<0.097	-	**6.4**	-	-	<0.37	-	**16**	<0.074	<0.11	-	-
2,3,7,8-TCDD	1	<0.036	-	<0.051	-	-	<0.071	-	<0.057	<0.049	<0.036	-	-
1,2,3,7,8-PeCDD	0.5	<0.17	-	<0.38	-	-	<0.75	-	<0.25	<0.13	<0.15	-	-
1,2,3,4,7,8-HxCDD	0.1	<0.21	-	<0.43	-	-	<0.2	-	<0.071	<0.085	<0.063	-	-
1,2,3,6,7,8-HxCDD	0.1	<0.22	-	<0.46	-	-	<0.22	-	<0.40	<0.090	<0.068	-	-
1,2,3,7,8,9-HxCDD	0.1	<0.19	-	<0.41	-	-	<0.19	-	<0.11	<0.080	<0.060	-	-
1,2,3,4,6,7,8-HpCDD	0.01	<0.097	-	**4**	-	-	<0.37	-	**11**	<0.074	<0.11	-	-
OCDD	0.0001	<0.43	-	**31**	-	-	**1.3 J**	-	**59**	<0.24	<0.55	-	-
2,3,7,8-TCDF	0.1	<0.077	-	<0.089	-	-	<0.10	-	<0.083	<0.078	<0.064	-	-
1,2,3,7,8-PeCDF	0.05	<0.12	-	<0.23	-	-	<0.16	-	<0.15	<0.11	<0.11	-	-
2,3,4,7,8-PeCDF	0.5	<0.12	-	<0.22	-	-	<0.15	-	<0.14	<0.10	<0.10	-	-
1,2,3,4,7,8-HxCDF	0.1	<0.066	-	<0.096	-	-	<0.074	-	<0.073	<0.044	<0.034	-	-
1,2,3,6,7,8-HxCDF	0.1	<0.067	-	<0.098	-	-	<0.075	-	<0.075	<0.044	<0.034	-	-
2,3,4,6,7,8-HxCDF	0.1	<0.071	-	<0.10	-	-	<0.080	-	<0.079	<0.047	<0.036	-	-
1,2,3,7,8,9-HxCDF	0.1	<0.072	-	<0.10	-	-	<0.081	-	<0.080	<0.048	<0.036	-	-
1,2,3,4,6,7,8-HpCDF	0.01	<0.033	-	<0.10	-	-	<0.10	-	**1.6 J**	<0.036	<0.043	-	-
1,2,3,4,7,8,9-HpCDF	0.01	<0.038	-	<0.80	-	-	<0.12	-	<0.15	<0.042	<0.049	-	-
OCDF	0.0001	<0.072	-	**2.5 J**	-	-	<0.37	-	**10**	<0.10	<0.087	-	-
2,3,7,8-TCDD Equivalence	1	BDL	-	**0.04335 J**	-	-	**0.00013 J**	-	**0.1329 J**	BDL	BDL	-	-

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Total TCDF	NP	-	<0.021	<0.072	-	-	-	-	<0.03	<0.02	<0.01	<0.02	<0.02
Total PeCDF	NP	-	<0.076	<0.11	-	-	-	-	<0.04	<0.05	<0.02	<0.03	<0.03
TotalHxCDF	NP	-	**1.4**	**5.1**	-	-	-	-	<0.05	<0.03	**0.16J**	<0.05	<0.03
Total HpCDF	NP	-	**14**	**48**	-	-	-	-	<0.10	**1.1**	**1.2**	**0.23J**	<0.03
Total TCDD	NP	-	<0.029	<0.041	-	-	-	-	<0.04	<0.03	<0.02	<0.03	<0.03
Total PeCDD	NP	-	<0.12	<0.12	-	-	-	-	<0.05	<0.04	<0.03	<0.04	<0.04
Total HxCDD	NP	-	<0.48	**3.1**	-	-	-	-	<0.04	<0.17	<0.02	<0.06	<0.03
Total HpCDD	NP	-	**26**	**87**	-	-	-	-	<0.04	**3.5**	**3.0**	**0.68J**	<0.03
2,3,7,8-TCDD	1	-	<0.029	<0.041	-	-	-	-	<0.04	<0.03	<0.02	<0.03	<0.03
1,2,3,7,8-PeCDD	0.5	-	<0.12	<0.12	-	-	-	-	<0.05	<0.04	<0.03	<0.04	<0.04
1,2,3,4,7,8-HxCDD	0.1	-	<0.090	<0.036	-	-	-	-	<0.04	<0.17	<0.02	<0.06	<0.03
1,2,3,6,7,8-HxCDD	0.1	-	<0.48	**1.7**	-	-	-	-	<0.03	<0.14	<0.02	<0.05	<0.02
1,2,3,7,8,9-HxCDD	0.1	-	<0.041	<0.098	-	-	-	-	<0.03	<0.14	<0.02	<0.05	<0.02
1,2,3,4,6,7,8-HpCDD	0.01	-	**17**	**29**	-	-	-	-	<0.04	**2.2**	**1.9**	**0.46J**	<0.03
OCDD	0.0001	-	**5.5**	**430 E**	-	-	-	-	**0.35J**	**15**	**9.9**	**2.8**	**0.07J**
2,3,7,8-TCDF	0.1	-	<0.021	<0.072	-	-	-	-	<0.03	<0.02	<0.01	<0.02	<0.02
1,2,3,7,8-PeCDF	0.05	-	<0.081	<0.11	-	-	-	-	<0.04	<0.05	<0.02	<0.03	<0.03
2,3,4,7,8-PeCDF	0.5	-	<0.076	<0.11	-	-	-	-	<0.04	<0.04	<0.02	<0.03	<0.03
1,2,3,4,7,8-HxCDF	0.1	-	<0.061	<1.0	-	-	-	-	<0.05	<0.02	<0.02	<0.04	<0.02
1,2,3,6,7,8-HxCDF	0.1	-	<0.062	<1.1	-	-	-	-	<0.04	<0.02	<0.02	<0.04	<0.02
2,3,4,6,7,8-HxCDF	0.1	-	<0.065	<1.1	-	-	-	-	<0.05	<0.02	<0.02	<0.04	<0.02
1,2,3,7,8,9-HxCDF	0.1	-	<0.066	<1.1	-	-	-	-	<0.05	<0.03	<0.02	<0.05	<0.03
1,2,3,4,6,7,8-HpCDF	0.01	-	**2.3**	**8**	-	-	-	-	<0.08	**0.21J**	**0.18J**	**0.06JS**	<0.03
1,2,3,4,7,8,9-HpCDF	0.01	-	<0.074	<0.34	-	-	-	-	<0.10	**0.91**	**1.0**	<0.04	<0.03
OCDF	0.0001	-	**17**	**57**	-	-	-	-	**0.15**	**1.3**	**0.88**	**0.24J**	<0.02
2,3,7,8-TCDD Equivalence	1	-	**0.19525 D**	**0.5887 DJ**	-	-	-	-	**0.00005**	**0.02573**	**0.031878**	**0.005504**	**0.000007**

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Dioxins *(ng/g)*	TEFs	TP03-5E	TP03-6NE	TP03-6SW	TP03-7W	TP03-8	TP03-9N	TP03-9S	TP03-10W	TP03-10E	TP03-11W	TP03-11E
Total TCDF	NP	<0.04	<0.02	<0.03	<0.04	<0.020	<0.02	**0.6J**	<0.01	<0.01	<0.02	**0.07J**
Total PeCDF	NP	<0.07	<0.03	<0.07	<0.07	<0.04	<0.04	**1.2J**	**0.44J**	**0.44J**	<0.03	<0.08
TotalHxCDF	NP	<0.04	<0.02	<0.02	<0.03	**1.6**	<0.02	**32**	**6.8**	**11**	<0.02	**3.4**
Total HpCDF	NP	<0.04	<0.03	<0.03	<0.05	**6.0**	**0.47J**	**96**	**23**	**36**	<0.03	**33**
Total TCDD	NP	<0.04	<0.02	<0.03	<0.04	<0.03	<0.03	<0.02	<0.02	<0.02	<0.03	<0.03
Total PeCDD	NP	<0.06	<0.03	<0.05	<0.05	<0.04	<0.04	<0.03	<0.03	<0.02	<0.04	<0.05
Total HxCDD	NP	<0.08	<0.06	<0.03	<0.04	**0.79J**	<0.05	**5.6**	**1.7J**	**1.7**	<0.05	**3.1**
Total HpCDD	NP	<0.06	<0.09	<0.03	<0.05	**11**	**0.72J**	**115**	**30**	**40**	<0.08	**90**
2,3,7,8-TCDD	1	<0.04	<0.02	<0.03	<0.04	<0.03	<0.03	<0.02	<0.02	<0.02	<0.03	<0.03
1,2,3,7,8-PeCDD	0.5	<0.06	<0.03	<0.05	<0.05	<0.04	<0.04	<0.03	<0.03	<0.02	<0.04	<0.05
1,2,3,4,7,8-HxCDD	0.1	<0.08	<0.06	<0.03	<0.04	<0.04	<0.05	<0.07	<0.07	<0.04	<0.05	**0.26J**
1,2,3,6,7,8-HxCDD	0.1	<0.06	<0.05	<0.03	<0.03	**0.21J**	<0.04	**2.2**	**0.61J**	**0.67**	<0.04	**0.75**
1,2,3,7,8,9-HxCDD	0.1	<0.06	<0.05	<0.03	<0.03	**0.12J**	<0.04	**0.36J**	**0.14J**	**0.1J**	<0.04	**0.41J**
1,2,3,4,6,7,8-HpCDD	0.01	<0.06	<0.09	<0.03	<0.05	**7.2**	**0.48J**	**80**	**20**	**27**	<0.08	**53**
OCDD	0.0001	**0.14J**	**0.19J**	**0.10J**	**0.34J**	**29**	**3.1**	**457**	**118**	**140**	**0.3J**	**650**
2,3,7,8-TCDF	0.1	<0.04	<0.02	<0.03	<0.04	<0.02	<0.02	**0.6J**	<0.01	<0.01	<0.02	<0.03
1,2,3,7,8-PeCDF	0.05	<0.07	<0.03	<0.07	<0.07	<0.04	<0.04	**0.25J**	**0.06J**	**0.07J**	<0.03	<0.08
2,3,4,7,8-PeCDF	0.5	<0.07	<0.03	<0.06	<0.07	<0.04	<0.04	**0.12J**	**0.04J**	**0.06J**	<0.02	<0.08
1,2,3,4,7,8-HxCDF	0.1	<0.04	<0.02	<0.02	<0.03	**0.05J**	<0.02	**1.2**	**0.22J**	**0.4J**	<0.02	**0.09J**
1,2,3,6,7,8-HxCDF	0.1	<0.03	<0.01	<0.02	<0.03	<0.02	<0.02	**0.32J**	**0.06J**	<0.03	<0.02	<0.03
2,3,4,6,7,8-HxCDF	0.1	<0.04	<0.02	<0.02	<0.03	<0.03	<0.02	**0.82**	**0.13J**	**0.3J**	<0.02	<0.03
1,2,3,7,8,9-HxCDF	0.1	<0.04	<0.02	<0.02	<0.03	<0.03	<0.02	**1.2**	**0.13J**	**0.32J**	<0.02	<0.03
1,2,3,4,6,7,8-HpCDF	0.01	<0.03	<0.02	<0.03	<0.04	**1.5**	**0.08J**	**14**	**4.2**	**4.5**	<0.02	**6.7**
1,2,3,4,7,8,9-HpCDF	0.01	<0.04	<0.03	<0.03	<0.05	**0.04J**	<0.03	**1.5**	**0.22J**	**0.48J**	<0.03	**0.19J**
OCDF	0.0001	<0.03	<0.08	<0.05	<0.02	**5.4**	**45J**	**51**	**19**	**18**	<0.2	**41**
2,3,7,8-TCDD Equivalence	1	**0.000014**	**0.000019**	**0.00001**	**0.000034**	**0.12884**	**0.00741**	**1.7483**	**0.4099**	**0.5481**	**0.00003**	**0.819**

Notes:
Only analytes detected at or above laboratory method detection limits includ
on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated

Dioxin Data Qualifiers:

All results in ng/kg or parts per trillion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)		Preliminary Investigation															
VOCs (mg/kg)	**TAGM**	**B1-1**	**B1-5**	**B2-3**	**B3-1**	**B4-2**	**B4-3**	**B5-2**	**B5-3**	**B6-1**	**B6-4**	**B7-1**	**B7-3**	**B7-4**	**B8-3**	**B9-2**	**B10-3**
Acetone	0.2	-	-	-	-	-	**0.084**	-	-	ND	-	**0.054 J**	-	-	-	-	**0.037**
2-Butanone	0.3	-	-	-	-	-	**0.023**	-	-	ND	-	ND	-	-	-	-	**0.012 J**
Chloroform	0.3	-	-	-	-	-	ND	-	-	ND	-	ND	-	-	-	-	ND
Toluene	1.5	-	-	-	-	-	**0.003 J**	-	-	ND	-	ND	-	-	-	-	ND
Ethylbenzene	5.5	-	-	-	-	-	**0.004 J**	-	-	ND	-	ND	-	-	-	-	ND
Xylenes (total)	1.2	-	-	-	-	-	**0.011 J**	-	-	ND	-	ND	-	-	-	-	**0.002 J**
Total VOCs		-	-	-	-	-	**0.125**	-	-	ND	-	**0.054**	-	-	-	-	**0.051**

Pesticides and PCBs Analysis Results (ug/kg)	**TAGM**	**B1-1**	**B1-5**	**B2-3**	**B3-1**	**B4-2**	**B4-3**	**B5-2**	**B5-3**	**B6-1**	**B6-4**	**B7-1**	**B7-3**	**B7-4**	**B8-3**	**B9-2**	**B10-3**
4,4'-DDD	2900	-	-	-	-	-	ND	-	-	**23**	-	**410**	-	-	-	-	ND
4,4'-DDT	2100	-	-	-	-	-	ND	-	-	**39**	-	**3000**	-	-	-	-	ND
Total Pest. & PCB		-	-	-	-	-	ND	-	-	**62**	-	**3410**	-	-	-	-	ND

SVOC/PAH (mg/kg)	**TAGM**	**B1-1**	**B1-5**	**B2-3**	**B3-1**	**B4-2**	**B4-3**	**B5-2**	**B5-3**	**B6-1**	**B6-4**	**B7-1**	**B7-3**	**B7-4**	**B8-3**	**B9-2**	**B10-3**
Acenaphthene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	8.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a) anthracene	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (k) fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (b) fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (a) pyrene	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(ghi) perylene	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis (2-Ethylhexyl) Phthalate	50	**0.062 JB**	**0.076 JB**	**0.2 JB**	**0.072 JB**	**0.58 B**	**0.19 JB**	**29**	ND	**4.3 JB**	**16**	ND	ND	**12.0 JB**	**24.0 B**	**38.0 B**	**16.0 B**
Carbazole	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	0.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	7.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.9 J**	ND	ND	ND
Di-n-butyl Phthalate	8.1	ND	ND	ND	**0.046 J**	**0.048 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	6.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.6 J**	ND	ND
Di-n-octyl phthalte	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**8000 J**	ND	ND
Indeno (1,2,3-cd) pyrene	3.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	36.4	ND	ND	ND	ND	ND	**0.55**	**11.0 J**	**3.7 J**	**2.1 J**	**11.0 J**	**18.0 JD**	**15.0 J**	**4.7 J**	**63**	ND	**7.7 J**
Naphthalene	13	ND	ND	ND	ND	ND	**0.33 J**	**1.9 J**	ND	ND	ND	ND	ND	ND	**18**	ND	ND
Pentachlorophenol	1 or MDL	**0.3 J**	**1.0 U**	**1.1 U**	**0.079 J**	**1.1 U**	**1.2 U**	**35.0 U**	**4.5 J**	**87**	**6.6 J**	**400 D**	**820**	**150 D**	**420 D**	**37**	**32.0 U**
Phenanthrene	50	ND	ND	ND	ND	ND	ND	**2.6 J**	ND	**11.0 J**	**4.3 J**	**11.0 JD**	ND	**2.1J**	**13**	ND	**1.5 J**
Pyrene	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	0.03 or MDL	**0.33 J**	ND	**0.19 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total SVOCs		**0.692**	**1.076**	**1.49**	**0.197**	**1.728**	**2.27**	**79.5**	**8.2**	**104.4**	**37.9**	**429**	**835**	**170.7**	**8542.6**	**75**	**57.2**

Notes:
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Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NA or -- = compound not analyzed for.
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SVOC & VOC Qualifiers:
All results in mg/kg or parts per million
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Pesticide & PCB Data Qualifiers
All results in ug/kg or parts per billion
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Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)		Preliminary Investigation												
VOCs (mg/kg)	**TAGM**	**B11-1**	**B11-3**	**B12**	**B13**	**B14**	**B15**	**B16-2**	**B16-3**	**B17-2**	**B17-3**	**B18-3**	**B19-2**	**B19-3**
Acetone	0.2	-	**0.010 J**	ND	-	-	ND	-	-	-	-	**0.046 J**	-	-
2-Butanone	0.3	-	ND	ND	-	-	ND	-	-	-	-	ND	-	-
Chloroform	0.3	-	ND	ND	-	-	**0.002 J**	-	-	-	-	ND	-	-
Toluene	1.5	-	ND	ND	-	-	ND	-	-	-	-	ND	-	-
Ethylbenzene	5.5	-	ND	ND	-	-	ND	-	-	-	-	ND	-	-
Xylenes (total)	1.2	-	ND	ND	-	-	ND	-	-	-	-	**0.009 J**	-	-
Total VOCs		-	**0.1**	ND	-	-	**0.002**	-	-	-	-	**0.055**	-	-
Pesticides and PCBs Analysis Results (ug/kg)	**TAGM**	**B11-1**	**B11-3**	**B12**	**B13**	**B14**	**B15**	**B16-2**	**B16-3**	**B17-2**	**B17-3**	**B18-3**	**B19-2**	**B19-3**
4,4'-DDD	2900	-	ND	ND	-	-	ND	-	-	-	-	ND	-	-
4,4'-DDT	2100	-	ND	ND	-	-	ND	-	-	-	-	ND	-	-
Total Pest. & PCB		-	ND	ND	-	-	ND	-	-	-	-	ND	-	-
SVOC/PAH (mg/kg)	**TAGM**	**B11-1**	**B11-3**	**B12**	**B13**	**B14**	**B15**	**B16-2**	**B16-3**	**B17-2**	**B17-3**	**B18-3**	**B19-2**	**B19-3**
Acenaphthene	50	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2 J**	ND	ND
Anthracene	8.1	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a) anthracene	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (k) fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (b) fluoranthene	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo (a) pyrene	0.33	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(ghi) perylene	50	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis (2-Ethylhexyl) Phthalate	50	**--**	**0.042 B**	**0.089 JB**	ND	ND	**0.047 JB**	ND	**0.083 J**	**0.089 J**	ND	**1.2 J**	ND	**2700**
Carbazole	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	0.4	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	7.1	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl Phthalate	8.1	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	6.2	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalte	50	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	50	--	ND	ND	ND	ND	ND	**0.11 J**	ND	ND	ND	ND	ND	ND
Fluorene	50	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno (1,2,3-cd) pyrene	3.2	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	36.4	--	**0.32 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	13	--	**0.051 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1 or MDL	--	**0.15 J**	ND	**1.5 U**	**1.7 U**	**0.13 J**	**1.5 U**	**1.5 U**	**10**	**2.5**	**83**	**13**	**7.5**
Phenanthrene	50	--	ND	ND	ND	ND	ND	**0.099 J**	ND	ND	ND	**3.9 J**	ND	ND
Pyrene	50	--	ND	ND	ND	ND	ND	**0.079 J**	ND	ND	ND	ND	ND	ND
Phenol	0.03 or MDL	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total SVOCs		**--**	**0.563**	**0.089**	**1.5**	**1.7**	**0.177**	**1.788**	**1.583**	**10.089**	**2.5**	**88.1**	**13**	**2707.5**

Notes:
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SVOC & VOC Qualifiers:
All results in mg/kg or parts per million
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit
Pesticide & PCB Data Qualifiers
All results in ug/kg or parts per billion
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)		Remedial Investigation												
VOCs (mg/kg)	**TAGM**	**SB-1 (6-8')**	**SB-2(8-10')**	**SB-3 (6-8')**	**SB-4 (8-10')**	**SB-5 (2-4')**	**SB-6 (4-6')**	**SB-7 (3-5')**	**MW-6 (6-8')**	**MW-7 (2-4')**	**MW-8 (4-6')**	**MW-9 (8-10')**	**MW-10 (10-12')**	**MW-11 (2-4')**
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	5.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOCs		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides and PCBs Analysis Results (ug/kg)	**TAGM**	**SB-1 (6-8')**	**SB-2 (8-10')**	**SB-3 (6-8')**	**SB-4 (8-10')**	**SB-5 (2-4')**	**SB-6 (4-6')**	**SB-7 (3-5')**	**MW-6 (6-8')**	**MW-7 (2-4')**	**MW-8 (4-6')**	**MW-9 (8-10')**	**MW-10 (10-12')**	**MW-11 (2-4')**
4,4'-DDD	2900	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	2100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Pest. & PCB		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC/PAH (mg/kg)	**TAGM**	**SB-1 (6-8')**	**SB-2 (8-10')**	**SB-3 (6-8')**	**SB-4 (8-10')**	**SB-5 (2-4')**	**SB-6 (4-6')**	**SB-7 (3-5')**	**MW-6 (6-8')**	**MW-7 (2-4')**	**MW-8 (4-6')**	**MW-9 (8-10')**	**MW-10 (10-12')**	**MW-11 (2-4')**
Acenaphthene	50	<0.33	<0.33	<0.33	<0.33	<0.33	**0.25 J**	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Anthracene	8.1	<0.33	<0.8	<0.8	<0.33	<0.33	<0.33	<0.33	<0.33	<0.8	<0.33	<0.33	<0.33	<0.33
Benzo(a) anthracene	0.33	<0.33	<0.8	<0.8	<0.33	<0.33	<0.33	<0.33	<0.33	<0.8	<0.33	<0.33	<0.33	<0.33
Benzo (k) fluoranthene	1.1	<0.33	<0.8	<0.8	<0.33	<0.33	<0.33	<0.33	<0.33	<0.8	<0.33	<0.33	<0.33	<0.33
Benzo (b) fluoranthene	1.1	<0.33	<0.8	<0.8	<0.33	<0.33	<0.33	<0.33	<0.33	<0.8	<0.33	<0.33	<0.33	<0.33
Benzo (a) pyrene	0.33	<0.33	<0.8	<0.8	<0.33	<0.33	<0.33	<0.33	<0.33	<0.8	<0.33	<0.33	<0.33	<0.33
Benzo(ghi) perylene	50	<0.33	<0.8	<0.8	<0.33	<0.33	<0.33	<0.33	<0.33	<0.8	<0.33	<0.33	<0.33	<0.33
Bis (2-Ethylhexyl) Phthalate	50	<0.33	<0.33	**0.027J**	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**0.13 J**
Carbazole	NP	<0.33	<0.8	<0.8	<0.33	<0.33	<0.33	<0.33	<0.33	<0.8	<0.33	<0.33	<0.33	<0.33
Chrysene	0.4	<0.33	<0.8	<0.8	<0.33	<0.33	<0.33	<0.33	<0.33	<0.8	<0.33	<0.33	<0.33	<0.33
Diethylphthalate	7.1	<0.33	<0.8	<0.8	<0.33	<0.33	<0.33	<0.33	<0.33	<0.8	<0.33	<0.33	<0.33	<0.33
Di-n-butyl Phthalate	8.1	<0.33	**0.084 BJ**	**0.12 BJ**	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**0.1 J**
Dibenzofuran	6.2	<0.33	**0.058 J**	**0.16 J**	<0.33	<0.33	**0.19 J**	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Di-n-octyl phthalte	50	<0.33	**0.2 J**	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Fluoranthene	50	<0.33	<0.33	**0.021 J**	<0.33	<0.33	**0.024 J**	<0.33	<0.33	**0.048 J**	<0.33	<0.33	<0.33	<0.33
Fluorene	50	<0.33	**0.061 J**	**0.35**	<0.33	<0.33	**0.41**	<0.33	**0.061 J**	<0.33	<0.33	<0.33	<0.33	<0.33
Indeno (1,2,3-cd) pyrene	3.2	<0.33	<0.8	<0.8	<0.33	<0.33	<0.33	<0.33	<0.33	<0.8	<0.33	<0.33	<0.33	<0.33
2-Methylnaphthalene	36.4	<0.33	**0.39**	**1.9**	<0.33	<0.33	**2.1**	<0.33	**0.19 J**	**0.16 J**	<0.33	<0.33	<0.33	<0.33
Naphthalene	13	<0.33	**0.03J**	**0.27**	<0.33	<0.33	**0.25 J**	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
Pentachlorophenol	1 or MDL	**0.16 J**	**9.8 D**	**9.6 D**	<1.6	**1.8**	<1.6	<1.6	**0.024 J**	**29.0 D**	<1.6	<1.6	<1.6	<1.6
Phenanthrene	50	<0.33	**0.34**	**0.88**	<0.33	<0.33	**1.1**	<0.33	**0.15 J**	**0.41**	<0.33	<0.33	<0.33	<0.33
Pyrene	50	<0.33	**0.043 J**	**0.055 J**	<0.33	<0.33	<0.33	<0.33	<0.33	**0.094 J**	<0.33	<0.33	<0.33	<0.33
Phenol	0.03 or MDL	-	**-**	**-**	-	-	-	-	-	**-**	-	-	-	-
Total SVOCs		**0.16 J**	**11.006 BJD**	**13.383 BJ**	BDL	**1.8 J**	**4.14 J**	BDL	**0.425 J**	**27.712 JD**	BDL	BDL	BDL	**0.23 J**

Notes:
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ND= Non-Detect
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SVOC & VOC Qualifiers:
All results in mg/kg or parts per million
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
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Pesticide & PCB Data Qualifiers
All results in ug/kg or parts per billion
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Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)		Remedial Investigation									
VOCs (mg/kg)	**TAGM**	**MW-12 (8-10')**	**MW-12 (12-14')**	**MW-13 (4-6')**	**MW-13 (8-10')**	**MW-14 (10-12')**	**MW-14 (18-20')**	**SSB03-03 (6-7')**	**SSB03-03 (12-13')**	**SSB03-01 (6-8')**	**SSB03-02 (7-9')**
Acetone	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	5.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total VOCs		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides and PCBs Analysis Results (ug/kg)	**TAGM**	**MW-12 (8-10')**	**MW-12 (12-14')**	**MW-13 (4-6')**	**MW-13 (8-10')**	**MW-14 (10-12')**	**MW-14 (18-20')**	**SSB03-03 (6-7')**	**SSB03-03 (12-13')**	**SSB03-01 (6-8')**	**SSB03-02 (7-9')**
4,4'-DDD	2900	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	2100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Pest. & PCB		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SVOC/PAH (mg/kg)	**TAGM**	**MW-12 (8-10')**	**MW-12 (12-14')**	**MW-13 (4-6')**	**MW-13 (8-10')**	**MW-14 (10-12')**	**MW-14 (18-20')**	**SSB03-03 (6-7')**	**SSB03-03 (12-13')**	**SSB03-01 (6-8')**	**SSB03-02 (7-9')**
Acenaphthene	50	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	**0.25J**	<0.460
Anthracene	8.1	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	**0.12J**	<0.460
Benzo(a) anthracene	0.33	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	<0.120	<0.460
Benzo (k) fluoranthene	1.1	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	<0.120	<0.460
Benzo (b) fluoranthene	1.1	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	<0.120	<0.460
Benzo (a) pyrene	0.33	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	<0.120	<0.460
Benzo(ghi) perylene	50	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	<0.120	<0.460
Bis (2-Ethylhexyl) Phthalate	50	**0.13J**	**0.06J**	**0.091J**	**0.023J**	**0.016JB**	**0.49B**	**0.047J**	**0.024J**	**0.072J**	**0.053J**
Carbazole	NP	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	<0.120	<0.460
Chrysene	0.4	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	<0.120	<0.460
Diethylphthalate	7.1	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	<0.120	<0.460
Di-n-butyl Phthalate	8.1	<0.380	<0.380	<0.410	<0.370	<0.370	**0.019J**	<0.440	<0.420	<0.120	<0.460
Dibenzofuran	6.2	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	**0.37J**	<0.460
Di-n-octyl phthalte	50	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	<0.120	<0.460
Fluoranthene	50	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	**0.11J**	<0.460
Fluorene	50	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	**0.66J**	<0.460
Indeno (1,2,3-cd) pyrene	3.2	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	<0.120	<0.460
2-Methylnaphthalene	36.4	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	**7**	<0.460
Naphthalene	13	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	**0.86J**	<0.460
Pentachlorophenol	1 or MDL	<0.940	<0.940	<1.0	<0.920	<0.930	<0.940	<1.1	<1.0	**0.36**	<1.1
Phenanthrene	50	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	**2**	<0.460
Pyrene	50	<0.380	<0.380	<0.410	<0.370	<0.370	<0.380	<0.440	<0.420	**0.22J**	<0.460
Phenol	0.03 or MDL	-	-	-	-	-	-	-	-	-	-
Total SVOCs		**0.13J**	**0.06J**	**0.091J**	**0.023J**	**0.16JB**	**0.509JB**	**0.047J**	**0.024J**	**11.522J**	**0.053J**

Notes:
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SVOC & VOC Qualifiers:
All results in mg/kg or parts per million
J=Estimated result, result is less than the reporting limit
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Pesticide & PCB Data Qualifiers
All results in ug/kg or parts per billion
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B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)		Remedial Investigation				
VOCs (mg/kg)	**TAGM**	**SSB03-05 (2-4')**	**SSB03-05 (8-10')**	**SSB03-04 (3-5')**	**SSB03-04 (11-13')**	**SSB03-15 (4-6')**
Acetone	0.2	NA	NA	NA	NA	NA
2-Butanone	0.3	NA	NA	NA	NA	NA
Chloroform	0.3	NA	NA	NA	NA	NA
Toluene	1.5	NA	NA	NA	NA	NA
Ethylbenzene	5.5	NA	NA	NA	NA	NA
Xylenes (total)	1.2	NA	NA	NA	NA	NA
Total VOCs		NA	NA	NA	NA	NA
Pesticides and PCBs Analysis Results (ug/kg)	**TAGM**	**SSB03-05 (2-4')**	**SSB03-05 (8-10')**	**SSB03-04 (3-5')**	**SSB03-04 (11-13')**	**SSB03-15 (4-6')**
4,4'-DDD	2900	NA	NA	NA	NA	NA
4,4'-DDT	2100	NA	NA	NA	NA	NA
Total Pest. & PCB		NA	NA	NA	NA	NA
SVOC/PAH (mg/kg)	**TAGM**	**SSB03-05 (2-4')**	**SSB03-05 (8-10')**	**SSB03-04 (3-5')**	**SSB03-04 (11-13')**	**SSB03-15 (4-6')**
Acenaphthene	50	<0.420	<0.380	<0.440	<0.380	<0.360
Anthracene	8.1	<0.420	<0.380	<0.440	<0.380	<0.360
Benzo(a) anthracene	0.33	<0.420	<0.380	<0.440	<0.380	<0.360
Benzo (k) fluoranthene	1.1	<0.420	<0.380	<0.440	<0.380	<0.360
Benzo (b) fluoranthene	1.1	<0.420	<0.380	<0.440	<0.380	<0.360
Benzo (a) pyrene	0.33	<0.420	<0.380	<0.440	<0.380	<0.360
Benzo(ghi) perylene	50	<0.420	<0.380	<0.440	<0.380	<0.360
Bis (2-Ethylhexyl) Phthalate	50	**0.038J**	**0.031J**	**0.033J**	**0.050J**	<0.360
Carbazole	NP	<0.420	<0.380	<0.440	<0.380	<0.360
Chrysene	0.4	<0.420	<0.380	<0.440	<0.380	<0.360
Diethylphthalate	7.1	**0.022J**	<0.380	**0.024J**	**0.032J**	<0.360
Di-n-butyl Phthalate	8.1	<0.420	<0.380	<0.440	<0.380	<0.360
Dibenzofuran	6.2	<0.420	<0.380	<0.440	<0.380	<0.360
Di-n-octyl phthalte	50	<0.420	<0.380	<0.440	<0.380	<0.360
Fluoranthene	50	<0.420	<0.380	<0.440	<0.380	<0.360
Fluorene	50	<0.420	<0.380	<0.440	<0.380	<0.360
Indeno (1,2,3-cd) pyrene	3.2	<0.420	<0.380	<0.440	<0.380	<0.360
2-Methylnaphthalene	36.4	<0.420	<0.380	**0.054J**	<0.380	<0.360
Naphthalene	13	<0.420	<0.380	<0.440	<0.380	<0.360
Pentachlorophenol	1 or MDL	<1.0	<0.950	**2.9**	<0.960	<0.900
Phenanthrene	50	<0.420	<0.380	**0.083J**	<0.380	<0.360
Pyrene	50	<0.420	<0.380	<0.440	<0.380	<0.360
Phenol	0.03 or MDL	-	-	-	-	-
Total SVOCs		**0.06J**	**0.031J**	**3.094J**	**0.082J**	BDL

Notes:
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NP = Not Promulgated
SVOC & VOC Qualifiers:
All results in mg/kg or parts per million
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit
Pesticide & PCB Data Qualifiers
All results in ug/kg or parts per billion
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Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)		Preliminary Investigation															
Dioxins (ug/kg)	**TEF**	**B1-1**	**B1-5**	**B2-3**	**B3-1**	**B4-2**	**B4-3**	**B5-2**	**B5-3**	**B6-1**	**B6-4**	**B7-1**	**B7-3**	**B7-4**	**B8-3**	**B9-2**	**B10-3**
Total TCDF	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDF	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TotalHxCDF	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDF	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDD	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDD	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDD	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDD	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDD	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDD	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	0.0001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDF	0.0001	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD Equivalence	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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NA or -- = compound not analyzed for
NP = Not Promulgated
Dioxin Data Qualifiers:
All results in ug/kg or parts per billion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)		Preliminary Investigation												
Dioxins (ug/kg)	**TEF**	**B11-1**	**B11-3**	**B12**	**B13**	**B14**	**B15**	**B16-2**	**B16-3**	**B17-2**	**B17-3**	**B18-3**	**B19-2**	**B19-3**
Total TCDF	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDF	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
TotalHxCDF	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDF	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
Total TCDD	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PeCDD	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HxCDD	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
Total HpCDD	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	1	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDD	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDD	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDD	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDD	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDD	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDD	0.0001	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDF	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-PeCDF	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-PeCDF	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-HxCDF	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-HxCDF	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-HxCDF	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-HxCDF	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-HpCDF	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-HpCDF	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--
OCDF	0.0001	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD Equivalence	1.0	--	--	--	--	--	--	--	--	--	--	--	--	--

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ND= Non-Detect
NA or -- = compound not analyzed for
NP = Not Promulgated
Dioxin Data Qualifiers:
All results in ug/kg or parts per billion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)		Remedial Investigation												
Dioxins (ug/kg)	**TEF**	**SB-1 (6-8')**	**SB-2 (8-10')**	**SB-3 (6-8')**	**SB-4 (8-10')**	**SB-5 (2-4')**	**SB-6 (4-6')**	**SB-7 (3-5')**	**MW-6 (6-8')**	**MW-7 (2-4')**	**MW-8 (4-6')**	**MW-9 (8-10')**	**MW-10 (10-12')**	**MW-11 (2-4')**
Total TCDF	NP	<0.001	<0.0033	**0.046**	<0.000087	<0.000085	<0.00013	<0.000032	**0.0016**	**0.013**	<0.00013	<0.00031	<0.036	<0.22
Total PeCDF	NP	<0.0021	**0.072**	**5.2**	<0.00029	<0.00086	<0.000095	<0.000067	**0.0048**	**0.081**	<0.00013	**0.011**	<0.13	<0.073
TotalHxCDF	NP	0.016	**3.4**	**46**	**0.011**	**0.052**	<0.00077	<0.00073	**1**	**6.2**	<0.0002	**1.1**	<0.046	<0.11
Total HpCDF	NP	**0.23**	**25**	<0.0068	**0.074**	**0.39**	**0.0049**	**0.0048**	**9.1**	**57**	<0.0006	**8.2**	<0.21	<0.077
Total TCDD	NP	<0.0015	<0.0047	<0.0053	<0.000084	<0.00033	<0.000087	<0.000074	**0.0016**	**0.01**	<0.000099	**0.00061**	<0.046	<0.030
Total PeCDD	NP	<0.003	<0.0097	<0.022	<0.00028	<0.00073	<0.00026	<0.00032	**0.0081**	**0.13**	<0.00021	**0.0052**	<0.18	<0.13
Total HxCDD	NP	<0.0097	**1.8**	**3.3**	**0.0066**	**0.029**	<0.0012	<0.00049	**0.66**	**6.1**	<0.00013	**0.72**	<0.051	<0.043
Total HpCDD	NP	**0.46**	**52**	**98**	**0.16**	**0.6**	**0.044**	**0.013**	**14**	**150**	<0.00078	**17**	<0.31	<0.10
2,3,7,8-TCDD	1	<0.0015	<0.0047	<0.0053	<0.000066	<0.000083	0.000087	<0.000056	<0.00013	**0.0023**	<0.000099	**0.00061 J**	<0.046	<0.030
1,2,3,7,8-PeCDD	0.5	<0.003	<0.0097	<0.012	<0.00022	<0.00019	<0.00026	<0.000057	<0.0004	**0.041**	<0.00021	**0.0052 J**	<0.18	<0.13
1,2,3,4,7,8-HxCDD	0.1	<0.0023	<0.012	<0.021	<0.00056	<0.00027	<0.000053	<0.00006	<0.0025	**0.12**	<0.00012	**0.013**	<0.054	<0.045
1,2,3,6,7,8-HxCDD	0.1	<0.0097	**0.85**	**1.4**	**0.0031 J**	**0.013**	<0.00075	<0.00034	**0.28**	**2.3**	<0.00013	**0.28**	<0.058	<0.048
1,2,3,7,8,9-HxCDD	0.1	<0.0023	**0.055**	**0.098**	<0.0011	<0.0013	<0.00032	<0.00016	**0.016**	**0.41**	<0.00012	**0.04**	<0.051	<0.043
1,2,3,4,6,7,8-HpCDD	0.01	**0.29**	**34 D**	**64 D**	**0.096**	**0.39**	**0.025**	**0.0099**	**8.9 D**	**96 ED**	<0.00078	**11 D**	<0.31	<0.10
OCDD	0.0001	**3.1**	**310 D**	**540 D**	**0.82**	**2.7**	**0.24**	**0.08**	**63 D**	**650 ED**	<0.0046	**96 DE**	**0.81 J**	**0.6**
2,3,7,8-TCDF	0.1	<0.001	<0.0033	<0.0055	<0.000087	<0.000085	<0.00013	<0.000026	<0.00037	<0.00075	<0.00013	<0.00031	<0.036	<0.22
1,2,3,7,8-PeCDF	0.05	<0.0016	<0.019	<0.028	<0.00012	<0.00048	<0.000064	<0.000032	<0.0016	<0.004	<0.00013	<0.0014	<0.14	<0.077
2,3,4,7,8-PeCDF	0.5	<0.0016	<0.011	<0.013	<0.00011	<0.0004	<0.000063	<0.000032	<0.0011	<0.0032	<0.00013	<0.001	<0.13	<0.073
1,2,3,4,7,8-HxCDF	0.1	<0.0017	**0.098**	**0.12**	<0.00038	<0.0017	<0.000072	<0.00011	**0.013**	**0.11**	<0.00013	**0.02**	<0.046	<0.11
1,2,3,6,7,8-HxCDF	0.1	<0.0016	<0.027	<0.033	<0.00029	<0.00058	<0.000063	<0.000021	**0.0034 J**	**0.035**	<0.00011	**0.006**	<0.047	<0.11
2,3,4,6,7,8-HxCDF	0.1	<0.0017	<0.025	<0.022	<0.00035	<0.00037	<0.000078	<0.000036	<0.0024	**0.032**	<0.00014	**0.0035 J**	<0.050	<0.12
1,2,3,7,8,9-HxCDF	0.1	<0.0019	<0.0084	<0.012	<0.00011	<0.00017	<0.000083	<0.000028	<0.0011	<0.0043	<0.00015	<0.0012	<0.050	<0.12
1,2,3,4,6,7,8-HpCDF	0.01	**0.038**	**4.4**	**8**	**0.014**	**0.063**	<0.0022	<0.0014	**1.3**	**11 D**	<0.00028	**1.6**	<0.21	<0.077
1,2,3,4,7,8,9-HpCDF	0.01	<0.0033	**0.22**	**0.4**	<0.00095	<0.0024	<0.00018	<0.00018	**0.062**	**0.64 D**	<0.00015	**0.064**	<0.24	<0.088
OCDF	0.0001	**0.23**	**32 D**	**63 D**	**0.1**	**0.41**	**0.0094 J**	**0.0073 J**	**11 D**	**66 D**	<0.00073	**11 D**	<0.36	<0.12
2,3,7,8-TCDD Equivalence	1.0	**0.003613**	**0.5207 D**	**0.9461 D**	**0.001502 J**	**0.006141**	**0.000275 J**	**0.000108 J**	**0.14126 DJ**	**1.0715 ED**	BDL	**0.1768 JED**	**0.000081 J**	**0.00006**

Notes:
Only analytes detected at or above laboratory method detection limits on tables
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Bold Text=Analyte detected above laboratory method detection limit
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Dioxin Data Qualifiers:
All results in ug/kg or parts per billion
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CON=Confirmation analysis

Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)		Remedial Investigation									
Dioxins (ug/kg)	**TEF**	**MW-12 (8-10')**	**MW-12 (12-14')**	**MW-13 (4-6')**	**MW-13 (8-10')**	**MW-14 (10-12')**	**MW-14 (18-20')**	**SSB03-03 (6-7')**	**SSB03-03 (12-13')**	**SSB03-01 (6-8')**	**SSB03-02 (7-9')**
Total TCDF	NP	<0.08	<0.02	<0.03	<0.02	<0.03	<0.03	<0.03	<0.03	<0.02	<0.02
Total PeCDF	NP	<0.14	<0.08	<0.06	<0.05	<0.08	<0.05	<0.11	<0.04	<0.05	<0.04
TotalHxCDF	NP	<0.21	<0.05	<0.05	<0.05	<0.04	<0.02	<0.04	<0.07	**3.0**	<0.03
Total HpCDF	NP	<0.45	<0.10	<0.06	<0.08	<0.03	<0.02	<0.05	<0.15	**24**	<0.05
Total TCDD	NP	<0.08	<0.03	<0.04	<0.03	<0.03	<0.04	<0.04	<0.04	<0.02	<0.03
Total PeCDD	NP	<0.01	<0.04	<0.05	<0.04	<0.04	<0.07	<0.07	<0.05	<0.03	<0.05
Total HxCDD	NP	<0.22	<0.05	<0.05	<0.07	<0.02	<0.02	<0.05	<0.11	**1.6**	<0.05
Total HpCDD	NP	<0.34	<0.05	<0.06	<0.06	<0.02	<0.02	<0.04	<0.08	**58**	<0.04
2,3,7,8-TCDD	1	<0.08	<0.03	<0.04	<0.03	<0.03	<0.04	<0.04	<0.04	<0.02	<0.03
1,2,3,7,8-PeCDD	0.5	<0.01	<0.04	<0.05	<0.04	<0.04	<0.07	<0.07	<0.05	<0.03	<0.05
1,2,3,4,7,8-HxCDD	0.1	<0.22	<0.05	<0.05	<0.07	<0.02	<0.02	<0.05	<0.11	<0.06	<0.05
1,2,3,6,7,8-HxCDD	0.1	<0.17	<0.04	<0.04	<0.05	<0.02	<0.02	<0.04	<0.09	**0.66**	<0.04
1,2,3,7,8,9-HxCDD	0.1	<0.18	<0.04	<0.04	<0.06	<0.02	<0.02	<0.04	<0.10	<0.05	<0.04
1,2,3,4,6,7,8-HpCDD	0.01	<0.34	<0.05	<0.06	<0.06	<0.02	<0.02	<0.04	<0.08	**38**	<0.04
OCDD	0.0001	**3.4**	**0.08J**	**0.23J**	<0.02	**0.03J**	**0.08J**	**0.1JB**	**0.15JB**	**214B**	**0.32JB**
2,3,7,8-TCDF	0.1	<0.08	<0.02	<0.03	<0.02	<0.03	<0.03	<0.03	<0.03	<0.02	<0.02
1,2,3,7,8-PeCDF	0.05	<0.14	<0.08	<0.06	<0.05	<0.08	<0.05	<0.11	<0.04	<0.05	<0.04
2,3,4,7,8-PeCDF	0.5	<0.13	<0.08	<0.06	<0.05	<0.07	<0.05	<0.11	<0.04	<0.05	<0.04
1,2,3,4,7,8-HxCDF	0.1	<0.19	<0.05	<0.05	<0.05	<0.03	<0.01	<0.03	<0.07	<0.06	<0.03
1,2,3,6,7,8-HxCDF	0.1	<0.16	<0.04	<0.04	<0.04	<0.03	<0.01	<0.03	<0.06	<0.05	<0.03
2,3,4,6,7,8-HxCDF	0.1	<0.19	<0.05	<0.05	<0.05	<0.03	<0.01	<0.03	<0.07	<0.06	<0.03
1,2,3,7,8,9-HxCDF	0.1	<0.21	<0.05	<0.05	<0.05	<0.04	<0.02	<0.04	<0.07	<0.07	<0.03
1,2,3,4,6,7,8-HpCDF	0.01	<0.33	<0.07	<0.04	<0.06	<0.02	<0.01	<0.04	<0.12	**3.7**	<0.04
1,2,3,4,7,8,9-HpCDF	0.01	<0.45	<0.10	<0.06	<0.08	<0.03	<0.02	<0.05	<0.15	**0.16J**	<0.05
OCDF	0.0001	<1.1	<0.02	<0.03	<0.02	<0.01	<0.01	<0.04	<0.03	**28**	<0.03
2,3,7,8-TCDD Equivalence	1.0	**0.00034**	**0.000008**	**0.000023**	BDL	**0.000003**	**0.000008**	**0.00001**	**0.000015**	**0.5088**	**0.000032**

Notes:
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Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)		Remedial Investigation				
Dioxins (ug/kg)	**TEF**	**SSB03-05 (2-4')**	**SSB03-05 (8-10')**	**SSB03-04 (3-5')**	**SSB03-04 (11-13')**	**SSB03-15 (4-6')**
Total TCDF	NP	<0.04	<0.02	<0.02	<0.04	<0.02
Total PeCDF	NP	<0.10	<0.05	<0.03	<0.08	<0.03
TotalHxCDF	NP	<0.04	<0.09	**3.8**	<0.04	<0.07
Total HpCDF	NP	<0.07	<0.21	**34**	<0.07	<0.07
Total TCDD	NP	<0.05	<0.03	<0.03	<0.04	<0.02
Total PeCDD	NP	<0.10	<0.04	<0.04	<0.05	<0.03
Total HxCDD	NP	<0.06	<0.13	**1.4JS**	<0.05	<0.07
Total HpCDD	NP	<0.09	<0.08	**47**	**0.08JS**	<0.06
2,3,7,8-TCDD	1	<0.05	<0.03	<0.03	<0.04	<0.02
1,2,3,7,8-PeCDD	0.5	<0.10	<0.04	<0.04	<0.05	<0.03
1,2,3,4,7,8-HxCDD	0.1	<0.06	<0.13	<0.06	<0.05	<0.07
1,2,3,6,7,8-HxCDD	0.1	<0.04	<0.11	**0.57JS**	<0.04	<0.06
1,2,3,7,8,9-HxCDD	0.1	<0.05	<0.11	**0.04JS**	<0.04	<0.06
1,2,3,4,6,7,8-HpCDD	0.01	<0.09	<0.08	**32**	**0.08JS**	<0.06
OCDD	0.0001	**0.79JB**	**0.3JB**	**135B**	**0.69JB**	<0.14
2,3,7,8-TCDF	0.1	<0.04	<0.02	<0.02	<0.04	<0.02
1,2,3,7,8-PeCDF	0.05	<0.10	<0.05	<0.03	<0.08	<0.03
2,3,4,7,8-PeCDF	0.5	<0.10	<0.05	<0.03	<0.07	<0.02
1,2,3,4,7,8-HxCDF	0.1	<0.04	<0.09	<0.06	<0.03	<0.06
1,2,3,6,7,8-HxCDF	0.1	<0.04	<0.07	**3.2**	<0.03	<0.05
2,3,4,6,7,8-HxCDF	0.1	<0.04	<0.09	<0.06	<0.04	<0.06
1,2,3,7,8,9-HxCDF	0.1	<0.04	<0.09	<0.07	<0.04	<0.07
1,2,3,4,6,7,8-HpCDF	0.01	<0.06	<0.17	**4.1**	<0.05	<0.06
1,2,3,4,7,8,9-HpCDF	0.01	<0.07	<0.21	<0.10	<0.07	<0.07
OCDF	0.0001	<0.06	<0.03	**27**	<0.04	<0.02
2,3,7,8-TCDD Equivalence	1.0	**0.000079**	**0.00003**	**0.7582**	**0.000869**	**BDL**

Notes:
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Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)			Preliminary Investigation														
Metals (mg/kg)	TAGM (4046) or SiteBackground Average		B1-1	B1-5	B2-3	B3-1	B4-2	B4-3	B5-2	B5-3	B6-1	B6-4	B7-1	B7-3	B7-4	B8-3	B9-2	B10-3
Aluminum	NV	**18866.6**	-	-	-	-	-	**20500**	-	-	**16800**	-	**15800**	-	-	-	-	**12900**
Arsenic	7.5	**9.1**	-	-	-	-	-	**9.9**	-	-	**22.2**	-	**12.3**	-	-	-	-	**8.5**
Barium	**300**	54.6	-	-	-	-	-	**99.4**	-	-	**84.5**	-	**62.9**	-	-	-	-	**68.4**
Beryllium	0.16	**0.54**	-	-	-	-	-	**0.76 B**	-	-	**0.65 B**	-	**0.72 B**	-	-	-	-	**0.55 B**
Cadmium	**1**	0.15	-	-	-	-	-	**0.12 B**	-	-	**0.10 B**	-	ND	-	-	-	-	**0.12 B**
Calcium	NV	**110.6**	-	-	-	-	-	**899 B**	-	-	**1510**	-	**1810**	-	-	-	-	**1440**
Chromium	10	**19.06**	-	-	-	-	-	**24**	-	-	**21.2**	-	**19.7**	-	-	-	-	**15.5**
Cobalt	**30**	9.33	-	-	-	-	-	**15.5**	-	-	**16.8**	-	**14.3**	-	-	-	-	**12.4**
Copper	0.25	**10.76**	-	-	-	-	-	**13.2**	-	-	**13.8**	-	**14.1**	-	-	-	-	**10.6**
Iron	2000	**30633.3**	-	-	-	-	-	**31100**	-	-	**31000**	-	**27200**	-	-	-	-	**25400**
Lead	NV	**17.86**	-	-	-	-	-	**21.7**	-	-	**25.3**	-	**19.8**	-	-	-	-	**20.3**
Magnesium	NV	**2300**	-	-	-	-	-	**3360**	-	-	**3230**	-	**3530**	-	-	-	-	**2550**
Manganese	NV	**929**	-	-	-	-	-	**2660**	-	-	**2620**	-	**861**	-	-	-	-	**2890**
Mercury	**0.1**	0.045	-	-	-	-	-	**0.11**	-	-	**0.13**	-	**0.05 B**	-	-	-	-	**0.07 B**
Nickel	13	**14.9**	-	-	-	-	-	**27.4**	-	-	**27**	-	**27.7**	-	-	-	-	**21.4**
Potassium	NV	**561**	-	-	-	-	-	**555 B**	-	-	**898 B**	-	**915 B**	-	-	-	-	**828 B**
Selenium	**2**	1.5	-	-	-	-	-	**0.6 B**	-	-	**1.1 B**	-	**0.34 B**	-	-	-	-	**0.35 B**
Silver	NV	**0.0**	-	-	-	-	-	ND	-	-	ND	-	ND	-	-	-	-	ND
Sodium	NV	NP	-	-	-	-	-	**87.1 B**	-	-	**76.2 B**	-	**74.6 B**	-	-	-	-	**84.6 B**
Vandium	**150**	27.16	-	-	-	-	-	**22.6**	-	-	**18.9**	-	**16.7**	-	-	-	-	**15**
Zinc	20	**67.36**	-	-	-	-	-	**104**	-	-	**85.6**	-	**77.6**	-	-	-	-	**80**
Total Metals			-	-	-	-	-	**59,500.39**	-	-	**56,451.48**	-	**50,456.81**	-	-	-	-	**46,345.79**

Notes:
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Metal Data Qualifiers:

All results in mg/kg or parts per million
D=Result obtained from dilution
B=Indicates a value greater than or equal to the instrument detection limit but less than the quantitation limit
NV=Indicates TAGM recommened soil clean-up objective is site background
Metals SCGs used for comparison were either TAGM 4046 or Site Background average, which ever is higher
Bold Text=SCG used for Regulatory Comparison
The SCG for Cadmium (10 ppm) and Chromium (50 ppm) are generally accepted clean-up levels
The SCG for Lead (400 ppm) was adopted from the EPA

Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)			Preliminary Investigtion												
Metals (mg/kg)	TAGM (4046) or SiteBackground Average		B11-1	B11-3	B12	B13	B14	B15	B16-2	B16-3	B17-2	B17-3	B18-3	B19-2	B19-3
Aluminum	NV	**18866.6**	-	**17500**	**17700**	-	-	**17200**	-	-	-	-	**14300**	-	-
Arsenic	7.5	**9.1**	-	**13.7**	**14.9**	-	-	ND	-	-	-	-	ND	-	-
Barium	**300**	54.6	-	**61.2**	**52.3**	-	-	**17**	-	-	-	-	**14.8**	-	-
Beryllium	0.16	**0.54**	-	**0.78 B**	**0.82 B**	-	-	**30.7 B**	-	-	-	-	**28.7 B**	-	-
Cadmium	**1**	0.15	-	ND	ND	-	-	**0.72 B**	-	-	-	-	**0.62 B**	-	-
Calcium	NV	**110.6**	-	**1400**	**4630**	-	-	**276 B**	-	-	-	-	**254 B**	-	-
Chromium	10	**19.06**	-	**23.2**	**23.2**	-	-	**22.9**	-	-	-	-	**20.1**	-	-
Cobalt	**30**	9.33	-	**17.9**	**18.8**	-	-	**17.3**	-	-	-	-	**20.3**	-	-
Copper	0.25	**10.76**	-	**17.5**	**19.2**	-	-	**17.6**	-	-	-	-	**16.6**	-	-
Iron	2000	**30633.3**	-	**30100**	**36800**	-	-	**32700**	-	-	-	-	**29100**	-	-
Lead	NV	**17.86**	-	**20.9**	**26.1**	-	-	**21.6**	-	-	-	-	**19.8**	-	-
Magnesium	NV	**2300**	-	**4380**	**4550**	-	-	**4240**	-	-	-	-	**4820**	-	-
Manganese	NV	**929**	-	**979**	**1020**	-	-	**537**	-	-	-	-	**789**	-	-
Mercury	**0.1**	0.045	-	ND	**0.09 B**	-	-	**0.06 B**	-	-	-	-	ND	-	-
Nickel	13	**14.9**	-	**34.4**	**31.5**	-	-	**32.1**	-	-	-	-	**33.3**	-	-
Potassium	NV	**561**	-	**1040**	**851 B**	-	-	**542 B**	-	-	-	-	**899 B**	-	-
Selenium	**2**	1.5	-	**0.45**	**0.31 B**	-	-	**0.4 B**	-	-	-	-	ND	-	-
Silver	NV	**0.0**	-	**1.4**	ND	-	-	ND	-	-	-	-	ND	-	-
Sodium	NV	NP	-	**78.8**	**45.8**	-	-	**1070**	-	-	-	-	**113 B**	-	-
Vandium	**150**	27.16	-	**18.7**	**18**	-	-	**16.6**	-	-	-	-	**13.1**	-	-
Zinc	20	**67.36**	-	**87**	**116**	-	-	**116**	-	-	-	-	**69.7**	-	-
Total Metals			-	**55,774.93**	**65,918.02**	-	-	**56,857.98**	-	-	-	-	**50,512.02**	-	-

Notes:
Only analytes detected at or above laboratory method detection limits
on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NA or -- = compound not analyzed for
NP = Not Promulgated
Metal Data Qualifiers:
All results in mg/kg or parts per million
D=Result obtained from dilution
B=Indicates a value greater than or equal to the instrument detection l
than the quantitation limit
NV=Indicates TAGM recommened soil clean-up objective is site backg
Metals SCGs used for comparison were either TAGM 4046 or Site Ba
average, which ever is higher
Bold Text=SCG used for Regulatory Comparison
The SCG for Cadmium (10 ppm) and Chromium (50 ppm) are general
clean-up levels
The SCG for Lead (400 ppm) was adopted from the EPA

Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)			Remedial Investigation												
Metals (mg/kg)	TAGM (4046) or SiteBackground Average		SB-1 (6-8')	SB-2 (8-10')	SB-3 (6-8')	SB-4 (8-10')	SB-5 (2-4')	SB-6 (4-6')	SB-7 (3-5')	MW-6 (6-8')	MW-7 (2-4')	MW-8 (4-6')	MW-9 (8-10')	MW-10 (10-12')	MW-11 (2-4')
Aluminum	NV	**18866.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	7.5	**9.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	**300**	54.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.16	**0.54**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	**1**	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NV	**110.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	10	**19.06**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	**30**	9.33	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	0.25	**10.76**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	2000	**30633.3**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NV	**17.86**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NV	**2300**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NV	**929**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	**0.1**	0.045	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	13	**14.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NV	**561**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	**2**	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NV	**0.0**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NV	NP	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vandium	**150**	27.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	20	**67.36**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Only analytes detected at or above laboratory method detection limits on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NA or -- = compound not analyzed for
NP = Not Promulgated

Metal Data Qualifiers:

All results in mg/kg or parts per million
D=Result obtained from dilution
B=Indicates a value greater than or equal to the instrument detection l than the quantitation limit
NV=Indicates TAGM recommened soil clean-up objective is site backg
Metals SCGs used for comparison were either TAGM 4046 or Site Ba average, which ever is higher
Bold Text=SCG used for Regulatory Comparison
The SCG for Cadmium (10 ppm) and Chromium (50 ppm) are general clean-up levels
The SCG for Lead (400 ppm) was adopted from the EPA

Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)			Remedial Investigation									
Metals (mg/kg)	TAGM (4046) or SiteBackground Average		MW-12 (8-10')	MW-12 (12-14')	MW-13 (4-6')	MW-13 (8-10')	MW-14 (10-12')	MW-14 (18-20')	SSB03-03 (6-7')	SSB03-03 (12-13')	SSB03-01 (6-8')	SSB03-02 (7-9')
Aluminum	NV	**18866.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	7.5	**9.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	**300**	54.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	0.16	**0.54**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	**1**	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	NV	**110.6**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	10	**19.06**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	**30**	9.33	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	0.25	**10.76**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	2000	**30633.3**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	NV	**17.86**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	NV	**2300**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NV	**929**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	**0.1**	0.045	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	13	**14.9**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NV	**561**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	**2**	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	NV	**0.0**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NV	NP	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vandium	**150**	27.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	20	**67.36**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Metals			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
Only analytes detected at or above laboratory method detection limits
on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NA or -- = compound not analyzed for
NP = Not Promulgated
Metal Data Qualifiers:
All results in mg/kg or parts per million
D=Result obtained from dilution
B=Indicates a value greater than or equal to the instrument detection l
than the quantitation limit
NV=Indicates TAGM recommened soil clean-up objective is site backg
Metals SCGs used for comparison were either TAGM 4046 or Site Ba
average, which ever is higher
Bold Text=SCG used for Regulatory Comparison
The SCG for Cadmium (10 ppm) and Chromium (50 ppm) are general
clean-up levels
The SCG for Lead (400 ppm) was adopted from the EPA

Table 5
Soil Boring and Monitoring Well Soil Analytical Results
Camp Summit

Analyte (units)			Remedial Investigation				
Metals (mg/kg)	TAGM (4046) or SiteBackground Average		SSB03-05 (2-4')	SSB03-05 (8-10')	SSB03-04 (3-5')	SSB03-04 (11-13')	SSB03-15 (4-6')
Aluminum	NV	**18866.6**	NA	NA	NA	NA	NA
Arsenic	7.5	**9.1**	NA	NA	NA	NA	NA
Barium	**300**	54.6	NA	NA	NA	NA	NA
Beryllium	0.16	**0.54**	NA	NA	NA	NA	NA
Cadmium	**1**	0.15	NA	NA	NA	NA	NA
Calcium	NV	**110.6**	NA	NA	NA	NA	NA
Chromium	10	**19.06**	NA	NA	NA	NA	NA
Cobalt	**30**	9.33	NA	NA	NA	NA	NA
Copper	0.25	**10.76**	NA	NA	NA	NA	NA
Iron	2000	**30633.3**	NA	NA	NA	NA	NA
Lead	NV	**17.86**	NA	NA	NA	NA	NA
Magnesium	NV	**2300**	NA	NA	NA	NA	NA
Manganese	NV	**929**	NA	NA	NA	NA	NA
Mercury	**0.1**	0.045	NA	NA	NA	NA	NA
Nickel	13	**14.9**	NA	NA	NA	NA	NA
Potassium	NV	**561**	NA	NA	NA	NA	NA
Selenium	**2**	1.5	NA	NA	NA	NA	NA
Silver	NV	**0.0**	NA	NA	NA	NA	NA
Sodium	NV	NP	NA	NA	NA	NA	NA
Vandium	**150**	27.16	NA	NA	NA	NA	NA
Zinc	20	**67.36**	NA	NA	NA	NA	NA
Total Metals			NA	NA	NA	NA	NA

Notes:
Only analytes detected at or above laboratory method detection limits
on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NA or -- = compound not analyzed for
NP = Not Promulgated
Metal Data Qualifiers:
All results in mg/kg or parts per million
D=Result obtained from dilution
B=Indicates a value greater than or equal to the instrument detection l
than the quantitation limit
NV=Indicates TAGM recommened soil clean-up objective is site backg
Metals SCGs used for comparison were either TAGM 4046 or Site Ba
average, which ever is higher
Bold Text=SCG used for Regulatory Comparison
The SCG for Cadmium (10 ppm) and Chromium (50 ppm) are general
clean-up levels
The SCG for Lead (400 ppm) was adopted from the EPA

Table 6
Groundwater Analytical Results
Camp Summit

Analyte	TOGS														
		Preliminary Investigation				Remedial Investigation 2002									
VOCs (ug/L or ppb)		**SMW-2**	**SMW-3**	**SMW-4**	**SMW-5**	**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**
Acetone	50	ND	ND	**15**	ND	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	5	ND	ND	**2 J**	ND	--	--	--	--	--	--	--	--	--	--
Xylenes (Total)	5	ND	ND	**18**	ND	--	--	--	--	--	--	--	--	--	--
Fuel Oil	NP	--	--	--	--	<5000	<5000	**24000**	<5000	<5000	<5000	<5000	<5000	<5000	<5000
		Preliminary Investigation				Remedial Investigation 2002									
SVOCs (ug/L or ppb)		**SMW-2**	**SMW-3**	**SMW-4**	**SMW-5**	**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**
Acenaphthene	20	--	--	--	--	<10	<10	<10	<10	<10	**440 B**	<10	<10	<10	<10
Bis (2-ethylhexyl) phthalate	5	--	--	--	--	<10	**1 J**	<10	<10	**1 BJ**	<10	**2 BJ**	**4 BJ**	**3 BJ**	**0.5 BJ**
4-Chloro-3-methylphenol	1*	--	--	--	--	<10	<10	<10	<10	<10	**450 B**	<10	<10	<10	<10
2-Chlorophenol	1*	--	--	--	--	<10	<10	<10	<10	<10	**380 B**	<10	<10	<10	<10
Dibenzofuran	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butylphthalate	50	--	--	--	--	<10	<10	<10	**1 J**	**1 J**	<10	**0.9 J**	<10	<10	<10
2,4-Dichlorophenol	5	--	--	--	--	<10	<10	**8 J**	<10	<10	<10	<10	<10	<10	<10
2,4-Dinitrotoluene	5	--	--	--	--	<10	<10	<10	<10	<10	**460 B**	<10	<10	<10	<10
Di-n-octyl phthalate	50	--	--	--	--	<10	<10	<10	<10	**0.6 J**	<10	**0.7 J**	<10	**1 J**	**0.5 J**
1,4-Dichlorobenzene	3	--	--	--	--	<10	<10	<10	<10	<10	**290**	<10	<10	<10	<10
Fluorene	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	NP	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	1*	--	--	--	--	<10	<10	**0.7 J**	<10	<10	<10	<10	<10	<10	<10
4-Methylphenol	1*	ND	ND	**17**	ND	<10	<10	**8 J**	<10	<10	<10	<10	<10	<10	<10
Naphthalene	10	ND	ND	**120**	ND	<10	<10	**110**	<10	<10	<10	<10	<10	<10	<10
4-Nitrophenol	1*	--	--	--	--	<50	<50	<50	<50	<50	**360**	<50	<50	<50	<50
N-Nitroso-Di-n-propylamine	50	--	--	--	--	<10	<10	<10	<10	<10	**420 B**	<10	<10	<10	<10
Pentachlorophenol	1*	ND	ND	**300**	ND	<50	<50	**190 BD**	<50	**28 BJ**	**490 B**	**0.8 BJ**	<50	<50	<50
Phenol	1*	--	--	--	--	<10	<10	**1 BJ**	<10	<10	**290**	<10	<10	<10	<10
Phenanthrene	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	50	--	--	--	--	<10	<10	<10	<10	<10	**510 B**	<10	<10	<10	<10
1,2,4-Trichlorobenzene	5	--	--	--	--	<10	<10	<10	<10	<10	**310 B**	<10	<10	<10	<10
2,4,5-Trichlorophenol	1*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	1*	--	--	--	--	<10	<10	**2 J**	<10	<10	<10	<10	<10	<10	<10
Total SVOCs		**BDL**	**BDL**	**437**	**BDL**	**BDL**	**1J**	**319.7 JB**	**1J**	**2.6J**	**4400 B**	**4.4 BJ**	**4BJ**	**4BJ**	**1 BJ**

Notes:
Only analytes detected at or above laboratory method detection limits included on tables
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Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BRL= Below Laboratory Reporting Limit
ND= Non-Detect
NP = Not Promulgated
PW = Production Well
NA = Not Analyzed
VOC, SVOC Data Qualifiers:
All results in ug/L or parts per billion
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 6
Groundwater Analytical Results
Camp Summit

Analyte	TOGS												
		Remedial Investigation 2003											
VOCs (ug/L or ppb)		**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**	**MW-12**	**MW-13**	**MW-14**
Acetone	50	--	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	5	--	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes (Total)	5	--	--	--	--	--	--	--	--	--	--	--	--	--
Fuel Oil	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
		Remedial Investigation 2003											
SVOCs (ug/L or ppb)		**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**	**MW-12**	**MW-13**	**MW-14**
Acenaphthene	20	<10	<10	<52	<10	**0.9J**	<100	<10	<10	<10	<30	<10	<10	<10
Bis (2-ethylhexyl) phthalate	5	**5J**	**2J**	**9J**	**17**	**45**	**9J**	**27**	**3JB**	**6J**	**140**	**8JB**	**23B**	**13B**
4-Chloro-3-methylphenol	1*	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	1*	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	NP	<10	<10	**3J**	<10	**1J**	<100	<10	<10	<10	<30	<10	<10	<10
Diethylphthalate	50	<10	<10	<52	<10	**1J**	<100	<10	**1J**	<10	<30	**0.9J**	<10	**0.9J**
Di-n-butylphthalate	50	**1J**	**1J**	<52	<10	**2J**	<100	<10	**1JB**	**0.6J**	<30	**1J**	**0.8J**	**0.8J**
2,4-Dichlorophenol	5	<10	<10	<52	<10	**0.7J**	<100	<10	<10	<10	<30	<10	<10	<10
2,4-Dinitrotoluene	5	--	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	50	--	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	3	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluorene	50	<10	<10	**5J**	<10	**3J**	<100	<10	<10	<10	<30	<10	<10	<10
2-Methylnaphthalene	NP	<10	<10	**57**	<10	**6J**	<100	<10	<10	<10	<30	<10	<10	<10
2-Methylphenol	1*	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	1*	--	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	10	<10	<10	**42J**	<10	**6J**	<100	<10	<10	<10	<30	<10	<10	<10
4-Nitrophenol	1*	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitroso-Di-n-propylamine	50	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1*	<25	<26	**250**	<26	**24J**	**810**	<26	**0.8J**	<25	<76	**11J**	<26	<26
Phenol	1*	<10	**0.8J**	<52	**1J**	**1J**	<100	**0.6J**	**0.9J**	**4J**	<30	**0.7J**	<10	**1J**
Phenanthrene	50	<10	<10	**4J**	<10	**3J**	<100	<10	<10	<10	<30	<10	<10	<10
Pyrene	50	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	5	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	1*	<25	<26	<130	<26	**3J**	<250	<26	<26	<25	<76	<26	<26	<26
2,4,6-Trichlorophenol	1*	<10	<10	<52	<10	**0.7J**	<100	<10	<10	<10	<30	<10	<10	<10
Total SVOCs		**6J**	**3.8 J**	**314 J**	**18 J**	**97.3 J**	**819 J**	**27.6 J**	**6.7 JB**	**10.6 J**	**140**	**21.6 J**	**23.8**	**15.7 J**

Notes:
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*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text=Exceedence of TAGM 4046 soil cleanup objectives
BRL= Below Laboratory Reporting Limit
ND= Non-Detect
NP = Not Promulgated
PW = Production Well
NA = Not Analyzed

VOC, SVOC Data Qualifiers:

All results in ug/L or parts per billion
J=Estimated result, result is less than the reporting limit
B=Analyte was found in method blank as well as the sample
< = Analyte was not detected above laboratory method detection limit

Table 6
Groundwater Analytical Results
Camp Summit

		Preliminary Investigation				Remedial Investigation 2002									
Metals (mg/L or ppm)	**TOGS**	**SMW-2**	**SMW-3**	**SMW-4**	**SMW-5**	**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**
Aluminum	0.1	**0.456**	**0.509**	**0.698**	**2.31**	-	-	-	-	**1.150 N**	**0.229 N**	**0.98 N**	**1.87 N**	**2.180 N**	**0.602 N**
Antimony	0.003	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-
Arsenic	0.025	ND	ND	**0.0173**	**0.0247**	-	-	-	-	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034
Barium	1	**0.495**	**0.0381**	**0.0747**	**0.0274**	-	-	-	-	**0.0472 B**	**0.0773 B**	**0.0491 B**	**0.085 B**	**0.113 B**	**0.052 B**
Beryllium	0.003	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-
Cadmium	0.005	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-
Calcium	NP	**58.5**	**64.3**	**36.5**	**36.5**	-	-	-	-	**51.3**	**79.5**	**109**	**83.2**	**45.7**	**38.8**
Chromium	0.05	ND	ND	ND	ND	-	-	-	-	**0.0019 B**	<0.00008	**0.00098 B**	**0.0022 B**	**0.0025 B**	**0.0011 B**
Cobalt	0.005	ND	ND	ND	ND	-	-	-	-	**0.0072 B**	<0.0007	**0.0017 B**	**0.0022 B**	**0.0013 B**	**0.00092 B**
Copper	0.2	ND	ND	ND	ND	-	-	-	-	**0.0027 B**	**0.0010 B**	**0.0015 B**	**0.0023 B**	**0.0021 B**	**0.0016 B**
Iron	0.3	**0.972**	**1.88**	**32.7**	**6.8**	-	-	-	-	**7.93**	**0.307**	**1.53**	**2.8**	**1.66**	**0.737**
Lead	0.025	ND	ND	ND	ND	-	-	-	-	**0.0019 B**	<0.0018	<0.0018	**0.0019 B**	<0.0018	<0.0018
Magnesium	35	**9.55**	**18.4**	**8.22**	**13.9**	-	-	-	-	**12.1**	22.6	**25.3**	**23.1**	**16**	**13.1**
Manganese	0.3	**5.13**	**14.1**	**14.8**	**0.26**	-	-	-	-	**13.3**	**0.562**	**1.07**	**0.552**	**0.325**	**0.274**
Mercury	0.0007	ND	ND	ND	ND	-	-	-	-						
Nickel	0.1	ND	ND	ND	ND	-	-	-	-	**0.0073 B**	**0.0021 B**	**0.0032 B**	**0.0044 B**	**0.002 B**	**0.0017 B**
Potassium	NP	**3.21**	**2.35**	**2.26**	**6.08**	-	-	-	-	**2.63 B**	**4.56 B**	**2.77 B**	**5.37**	**4.26 B**	**2.79 B**
Selenium	0.01	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-
Silver	0.05	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-
Sodium	20	**48.7**	**19.7**	**49.4**	**9.3**	-	-	-	-	**40**	**34.8**	**22.6**	**49.7**	**8**	**10.5**
Thallium	0.0005	ND	ND	ND	**0.0118**	-	-	-	-	-	-	-	-	-	-
Vanadium	NP	ND	ND	ND	ND	-	-	-	-	**0.0016 B**	**0.00099 B**	**0.0015 B**	**0.0025 B**	**0.0037 B**	**0.0011 B**
Zinc	2	**0.0206**	**0.0154**	**0.0168**	**0.0198**	-	-	-	-	**0.0163 B**	**0.0049 B**	**0.0136 B**	**0.0097 B**	**0.0042 B**	**0.0055 B**
Total Metals		**124.7956**	**121.2925**	**144.6868**	**75.2337**	-	-	-	-	**128.4798**	**120.0442**	**163.3216**	**166.7022**	**78.2538**	**66.8669**

Notes:
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Metal Data Qualifiers:

All results in mg/L or parts per million
D=Result obtained from dilution
B=Indicates a value greater than or equal to the instrument detection limit but less than the quantitation limit
NV=Indicates TAGM recommened soil clean-up objective is site background
Metals SCGs used for comparison were either TAGM 4046 or Site Background average, which ever is higher
Bold Text=SCG used for Regulatory Comparison
The SCG for Cadmium (10 ppm) and Chromium (50 ppm) are generally accepted clean-up levels
The SCG for Lead (400 ppm) was adopted from the EPA

Table 6
Groundwater Analytical Results
Camp Summit

		Remedial Investigation 2003												
Metals (mg/L or ppm)	**TOGS**	**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**	**MW-12**	**MW-13**	**MW-14**
Aluminum	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
Antimony	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	0.025	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	1	--	--	--	--	--	--	--	--	--	--	--	--	--
Beryllium	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	0.005	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--
Cobalt	0.005	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	0.2	--	--	--	--	--	--	--	--	--	--	--	--	--
Iron	0.3	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	0.025	--	--	--	--	--	--	--	--	--	--	--	--	--
Magnesium	35	--	--	--	--	--	--	--	--	--	--	--	--	--
Manganese	0.3	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	0.0007	--	--	--	--	--	--	--	--	--	--	--	--	--
Nickel	0.1	--	--	--	--	--	--	--	--	--	--	--	--	--
Potassium	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	0.01	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	0.05	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium	20	--	--	--	--	--	--	--	--	--	--	--	--	--
Thallium	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--
Vanadium	NP	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	2	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Metals		--	--	--	--	--	--	--	--	--	--	--	--	--

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The SCG for Cadmium (10 ppm) and Chromium (50 ppm) are generally accepted clean-up levels
The SCG for Lead (400 ppm) was adopted from the EPA

Table 6
Groundwater Analytical Results
Camp Summit

		Preliminary Investigation				Remedial Investigation 2002									
Dioxins (ng/L)	**TEFs**	**SMW-2**	**SMW-3**	**SMW-4**	**SMW-5**	**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**	**MW-8**	**MW-9**	**MW-10**	**MW-11**
Total TCDF	-	--	--	--	--	<0.0019	<0.0021	<0.0017	<0.0018	-	-	-	-	-	-
Total PeCDF	-	--	--	--	--	<0.0040	<0.0053	<0.0039	<0.0036	-	-	-	-	-	-
Total HxCDF	-	--	--	--	--	<0.0040	**0.04**	**0.31**	<0.0034	-	-	-	-	-	-
Total HpCDF	-	--	--	--	--	<0.0021	**0.32**	**3.2**	<0.0068	-	-	-	-	-	-
Total TCDD	-	--	--	--	--	<0.0024	<0.0029	<0.0024	<0.0029	-	-	-	-	-	-
Total PeCDD	-	--	--	--	--	<0.0048	<0.0058	<0.0050	<0.0061	-	-	-	-	-	-
Total HxCDD	-	--	--	--	--	<0.0040	<0.024	**0.25**	<0.0048	-	-	-	-	-	-
Total HpCDD	-	--	--	--	--	**0.37**	**0.73**	**6.6**	<0.014	-	-	-	-	-	-
2,3,7,8-TCDD	1	--	--	--	--	<0.0024	<0.0029	<0.0024	<0.0029	-	-	-	-	-	-
1,2,3,7,8-PeCDD	0.5	--	--	--	--	<0.0048	<0.0058	<0.0050	<0.0061	-	-	-	-	-	-
1,2,3,4,7,8-HxCDD	0.1	--	--	--	--	<0.0036	<0.0040	<0.0040	<0.0044	-	-	-	-	-	-
1,2,3,6,7,8-HxCDD	0.1	--	--	--	--	<0.0040	<0.015	**0.12**	<0.0048	-	-	-	-	-	-
1,2,3,7,8,9-HxCDD	0.1	--	--	--	--	<0.0036	<0.0084	<0.011	<0.0044	-	-	-	-	-	-
1,2,3,4,6,7,8-HpCDD	0.01	--	--	--	--	**0.037 J**	**0.46**	**4.4**	<0.014	-	-	-	-	-	-
OCDD	0.0001	--	--	--	--	**0.26**	**3**	**35**	**0.16**	-	-	-	-	-	-
2,3,7,8-TCDF	0.1	--	--	--	--	<0.0019	<0.0021	<0.0017	<0.0018	-	-	-	-	-	-
1,2,3,7,8-PeCDF	0.05	--	--	--	--	<0.0030	<0.0033	<0.0033	<0.0036	-	-	-	-	-	-
2,3,4,7,8-PeCDF	0.5	--	--	--	--	<0.0030	<0.0032	<0.0032	<0.0035	-	-	-	-	-	-
1,2,3,4,7,8-HxCDF	0.1	--	--	--	--	<0.0036	<0.0034	<0.0072	<0.0031	-	-	-	-	-	-
1,2,3,6,7,8-HxCDF	0.1	--	--	--	--	<0.0034	<0.0033	<0.0031	<0.0029	-	-	-	-	-	-
2,3,4,6,7,8-HxCDF	0.1	--	--	--	--	<0.0037	<0.0036	<0.0034	<0.0032	-	-	-	-	-	-
1,2,3,7,8,9-HxCDF	0.1	--	--	--	--	<0.0040	<0.0039	<0.0037	<0.0034	-	-	-	-	-	-
1,2,3,4,6,7,8-HpCDF	0.01	--	--	--	--	<0.0067	**0.093**	**0.59**	<0.0037	-	-	-	-	-	-
1,2,3,4,7,8,9-HpCDF	0.01	--	--	--	--	<0.0053	<0.0044	<0.027	<0.0044	-	-	-	-	-	-
OCDF	0.0001	--	--	--	--	<0.027	**0.032**	**4**	<0.0098	-	-	-	-	-	-
2,3,7,8-TCDD Equivilance (ng/g or ppb)	0.0007	--	--	--	--	**0.000396**	**0.005833**	**0.065403**	**0.000016**	-	-	-	-	-	-

Notes:
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All results in ug/kg or parts per billion
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CON=Confirmation analysis

Table 6
Groundwater Analytical Results
Camp Summit

		Remedial Investigation 2003						
Dioxins (ng/L)	**TEFs**	**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-7**	**MW-8**
Total TCDF	-	NA	NA	NA	NA	NA	NA	NA
Total PeCDF	-	NA	NA	NA	NA	NA	NA	NA
Total HxCDF	-	NA	NA	NA	NA	NA	NA	NA
Total HpCDF	-	NA	NA	NA	NA	NA	NA	NA
Total TCDD	-	NA	NA	NA	NA	NA	NA	NA
Total PeCDD	-	NA	NA	NA	NA	NA	NA	NA
Total HxCDD	-	NA	NA	NA	NA	NA	NA	NA
Total HpCDD	-	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	1	<0.00124	<0.0012	<0.00108	<0.00192	<0.0016	<0.00208	<0.00188
1,2,3,7,8-PeCDD	0.5	<0.0026	**0.00496 J**	<0.00280	<0.00216	<0.0024	<0.00236	<0.0024
1,2,3,4,7,8-HxCDD	0.1	<0.00208	**0.0113 J**	<0.00396	<0.00164	<0.0044	<0.00104	<0.0016
1,2,3,6,7,8-HxCDD	0.1	<0.0044	**0.0249 J**	**0.394**	<0.00196	<0.0111	**0.0157 J**	<0.0008
1,2,3,7,8,9-HxCDD	0.1	<0.00268	**0.0113 J**	<0.00944	<0.0008	<0.0028	<0.0016	<0.00296
1,2,3,4,6,7,8-HpCDD	0.01	**0.0131 J**	**0.826**	**1.63**	**0.0111 J**	**0.295**	**0.91**	**0.0102 J**
OCDD	0.0001	**0.0529**	**4.95**	**11.4**	**0.0886**	**1.72**	**13.3**	**0.0536**
2,3,7,8-TCDF	0.1	<0.00232	<0.002	<0.00160	<0.0016	<0.0012	<0.0016	<0.00132
1,2,3,7,8-PeCDF	0.05	<0.0016	<0.00144	<0.002	<0.00192	<0.0016	<0.00128	<0.0016
2,3,4,7,8-PeCDF	0.5	<0.00128	<0.0016	<0.0024	<0.00064	<0.00084	<0.00052	<0.0016
1,2,3,4,7,8-HxCDF	0.1	<0.00068	**0.0114 J**	<0.00808	<0.00116	<0.00264	<0.00424	<0.0008
1,2,3,6,7,8-HxCDF	0.1	<0.0028	**0.0374**	**0.0245 J**	<0.00068	<0.00672	<0.0157	<0.00132
2,3,4,6,7,8-HxCDF	0.1	<0.00116	<0.0048	<0.0052	<0.00068	<0.0028	<0.0024	<0.0008
1,2,3,7,8,9-HxCDF	0.1	<0.002	<0.002	<0.0056	<0.0012	<0.0032	<0.001	<0.0008
1,2,3,4,6,7,8-HpCDF	0.01	**0.00324 J**	**0.12**	**0.187**	<0.00248	**0.0537**	**0.0938**	<0.00444
1,2,3,4,7,8,9-HpCDF	0.01	<0.0036	**0.0115 J**	**0.0208 J**	<0.0048	<0.00472	<0.0072	<0.0052
OCDF	0.0001	**0.00708 J**	**0.481**	**1.34**	**0.00948 J**	**0.195**	**1.12**	<0.003
2,3,7,8-TCDD Equivilance (ng/g or ppb)	0.0007	**0.000169**	**0.01285**	**0.061502**	**0.000121**	**0.003679**	**0.01305**	**0.000107**

Notes:
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Table 6
Groundwater Analytical Results
Camp Summit

Dioxins (ng/L)	TEFs	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14
Total TCDF	-	NA	NA	NA	NA	NA	NA
Total PeCDF	-	NA	NA	NA	NA	NA	NA
Total HxCDF	-	NA	NA	NA	NA	NA	NA
Total HpCDF	-	NA	NA	NA	NA	NA	NA
Total TCDD	-	NA	NA	NA	NA	NA	NA
Total PeCDD	-	NA	NA	NA	NA	NA	NA
Total HxCDD	-	NA	NA	NA	NA	NA	NA
Total HpCDD	-	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD	1	<0.002	<0.00236	<0.0016	<0.002	<0.00184	<0.0036
1,2,3,7,8-PeCDD	0.5	<0.00248	<0.00196	<0.0036	<0.0032	<0.0032	<0.00416
1,2,3,4,7,8-HxCDD	0.1	<0.0016	<0.00204	<0.00052	<0.0036	**0.00944 J**	<0.00468
1,2,3,6,7,8-HxCDD	0.1	<0.0134	<0.00072	<0.00228	<0.00528	**0.0492**	<0.00328
1,2,3,7,8,9-HxCDD	0.1	<0.0056	<0.00156	<0.0012	<0.00472	**0.0231 J**	<0.00384
1,2,3,4,6,7,8-HpCDD	0.01	**0.285**	<0.0133	**0.0157 J**	**0.0436**	**2.45**	**0.0353**
OCDD	0.0001	**2.51**	**0.386**	**0.313**	**0.537**	**23.9**	**0.412**
2,3,7,8-TCDF	0.1	<0.00052	<0.00024	<0.0012	<0.002	<0.00208	<0.0016
1,2,3,7,8-PeCDF	0.05	<0.002	<0.0012	<0.0012	<0.00096	<0.0012	<0.00152
2,3,4,7,8-PeCDF	0.5	<0.002	<0.0012	<0.0016	<0.0016	<0.0016	<0.00112
1,2,3,4,7,8-HxCDF	0.1	<0.00172	<0.0008	<0.00108	<0.0016	<0.00888	<0.00108
1,2,3,6,7,8-HxCDF	0.1	<0.00164	<0.00056	<0.00152	<0.00344	**0.0369**	<0.00140
2,3,4,6,7,8-HxCDF	0.1	<0.0024	<0.00064	<0.00104	<0.00168	<0.0032	<0.002
1,2,3,7,8,9-HxCDF	0.1	<0.00172	<0.0014	<0.00104	<0.0016	<0.0036	<0.0024
1,2,3,4,6,7,8-HpCDF	0.01	**0.0312**	<0.00264	<0.00476	<0.0121	**0.241**	<0.00532
1,2,3,4,7,8,9-HpCDF	0.01	<0.00504	<0.001	<0.0036	<0.004	**0.0199 J**	<0.0052
OCDF	0.0001	**0.218**	**0.012 J**	<0.00988	**0.0213 J**	**1.86**	<0.0151
2,3,7,8-TCDD Equivilance (ng/g or ppb)	0.0007	**0.003435**	**0.000040**	**0.000188**	**0.000492**	**0.041549**	**0.000394**

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Table 7
Biota Analytical Results
Camp Summit

Sample Location		**2PC-1**	**2PC-2**	**2PC-3**	**2PC-4**	**2PC-5**	**2PC-6**	**2PC-7**	**2PC-8**	**2PC-9**	**2PC-10**	**2PC-11**
Sample Species		Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout
Individual Fish/Composite		Individual	Individual	Composite	Composite	Composite	Composite	Composite	Composite	Compostie	Composite	Composite
Number of Fish in Composite		NA	NA	2	2	4	4	4	4	4	4	3
Sample Length (mm)		199	179	324	302	530	561	520	541	514	482	278
Sample Weight (g)		54	46	60	48	66	74	60	68	59	49	17
Analyte												
Dioxins (pg/g or ppt)	**TEFs**	**2PC-1**	**2PC-2**	**2PC-3**	**2PC-4**	**2PC-5**	**2PC-6**	**2PC-7**	**2PC-8**	**2PC-9**	**2PC-10**	**2PC-11**
Total TCDF	-	<1.9	<0.99	<0.72	<0.88	<0.29	<1.0	**1.2**	<1.2	<0.23	<0.26	<0.52
Total PeCDF	-	<1.4	<1.3	<1.2	<1.2	<0.17	<1.2	<1.2	<0.30	<0.18	<0.10	<0.26
Total HxCDF	-	<1.6	<1.4	<1.3	<1.4	<0.21	<1.5	<1.0	<0.27	<0.44	<0.13	<0.32
Total HpCDF	-	<0.73	<0.59	<0.62	<0.71	<0.26	<0.94	<0.68	<0.20	<0.17	<0.10	<0.11
Total TCDD	-	<0.66	<0.67	<0.89	<0.64	<0.17	<0.58	<0.70	<0.12	<0.084	<0.10	<0.08
Total PeCDD	-	<2.4	<1.7	<2.2	<2	<0.36	<2.2	<2.2	<0.20	<0.15	<0.25	<0.13
Total HxCDD	-	<1.5	<1.6	<1.5	<1.4	<0.29	<1.5	<1.4	<0.25	<0.22	<0.26	<0.38
Total HpCDD	-	<1.5	<1.7	<1.1	<0.98	<0.85	<1.0	<1.6	**13**	<0.52	<0.61	<0.84
2,3,7,8-TCDD	1	<0.66	<0.67	<0.89	<0.64	<0.17	<0.58	<0.70	<0.12	<0.084	<0.10	<0.08
1,2,3,7,8-PeCDD	0.5	<2.4	<1.7	<2.2	<2.0	<0.36	<2.2	<2.2	<0.20	<0.15	<0.17	<0.13
1,2,3,4,7,8-HxCDD	0.1	<1.4	<1.5	<1.3	<1.3	<0.091	<1.4	<1.2	<0.081	<0.07	<0.072	<0.071
1,2,3,6,7,8-HxCDD	0.1	<1.5	<1.6	<1.5	<1.4	<0.29	<1.5	<1.4	<0.25	<0.22	<0.26	<0.38
1,2,3,7,8,9-HxCDD	0.1	<1.3	<1.5	<1.3	<1.2	<0.10	<1.4	<1.2	<0.082	<0.11	<0.070	<0.10
1,2,3,4,6,7,8-HpCDD	0.01	<1.5	<1.7	<1.1	<0.98	<0.85	<1.0	<1.6	**8.4**	<0.52	<0.61	<0.84
OCDD	0.0001	**9 J**	<4.1	**6.3 J**	**8.2 J**	**7.3 J**	**5.3 J**	**9.4 J**	**47**	**5.9 J**	<3.8	<4.2
2,3,7,8-TCDF	0.1	<0.74	**0.58 J**	<0.72	<0.88	<0.29	<0.85	<0.91	<0.31	<0.23	<0.26	<0.35
1,2,3,7,8-PeCDF	0.05	<1.4	<1.3	<1.2	<1.2	<0.17	<1.2	<1.2	<0.14	<0.093	<0.079	<0.10
2,3,4,7,8-PeCDF	0.5	<1.3	<1.3	<1.1	<1.2	<0.17	<1.2	<1.2	<0.14	<0.093	<0.10	<0.10
1,2,3,4,7,8-HxCDF	0.1	<1.4	<1.3	<1.2	<1.2	<0.0084	<1.3	<0.89	<0.071	<0.075	<0.13	<0.08
1,2,3,6,7,8-HxCDF	0.1	<1.3	<1.2	<1.1	<1.2	<0.079	<1.2	<0.84	<0.054	<0.083	<0.068	<0.082
1,2,3,7,8,9-HXxCDF	0.1	<1.4	<1.3	<1.2	<1.3	<0.089	<1.4	<0.92	<0.060	<0.073	<0.076	<0.055
2,3,4,6,7,8-HxCDF	0.1	<1.6	<1.4	<1.3	<1.4	<0.10	<1.5	<1.0	<0.065	<0.078	<0.054	<0.059
1,2,3,4,6,7,8-HpCDF	0.01	<0.61	<0.49	<0.52	<0.59	<0.22	<0.79	<0.57	<0.17	<0.14	<0.086	<0.094
1,2,3,4,7,8,9-HpCDF	0.01	<0.73	<0.59	<0.62	<0.71	<0.26	<0.94	<0.68	<2.0	<0.17	<0.10	<0.072
OCDF	0.0001	<2.0	<1.9	<1.8	<1.6	<0.14	<2.0	<1.6	<0.067	<0.16	<0.15	<0.14
2,3,7,8- TCDD Equivalence	3.0	**0.0009**	**0.058**	**0.00063**	**0.00082**	**0.00073**	**0.00053**	**0.00094**	**0.0887**	**0.00059**	BDL	BDL

Notes:
Only analytes detected at or above laboratory method detection limits included on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text= Exceedance of 2,3,7,8 TCDD equivalence guidance value.
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated

Dioxin Data Qualifiers:

All results in pg/g or parts per trillion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

Table 7
Biota Analytical Results
Camp Summit

Sample Location		**3PC-1**	**3PC-2**	**3PC-3**	**3PC-4**	**3PC-5**	**3PC-6**	**3PC-7**	**3PC-8**	**3PC-9**	**3PC-10**	**3PC-11**
Sample Species		Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Stream Trout	Steam Trout	Steam Trout	Steam Trout
Individual Fish/Composite		Individual	Individual	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Number of Fish in Composite		NA	NA	3	2	3	3	3	4	3	4	5
Sample Length (mm)		162	176	434	333	405	460	408	499	390	510	599
Sample Weight (g)		52	54	61	60	56	59	54	59	51	62	61
Analyte												
Dioxins (pg/g or ppt)	**TEFs**	**3PC-1**	**3PC-2**	**3PC-3**	**3PC-4**	**3PC-5**	**3PC-6**	**3PC-7**	**3PC-8**	**3PC-9**	**3PC-10**	**3PC-11**
Total TCDF	-	<1.1	<0.12	<0.17	<0.71	<0.12	<0.63	<1.8	<0.088	<0.38	<0.66	<0.90
Total PeCDF	-	<0.23	<0.10	<0.085	<0.28	<0.090	<0.14	<0.80	<0.085	<0.86	<1.7	<1.2
Total HxCDF	-	<0.22	<0.087	<0.11	<0.12	<0.055	<0.28	<0.77	<0.15	<1.0	<2.0	<1.6
Total HpCDF	-	<0.070	<0.071	<0.059	<0.087	<0.069	<0.078	<0.23	<0.44	<0.63	<1.0	<0.64
Total TCDD	-	<0.10	<0.13	<0.11	<0.095	<0.10	<0.080	<0.069	<0.081	<0.36	<1.0	<0.46
Total PeCDD	-	<0.20	<0.24	<0.15	<0.14	<0.17	<0.16	<0.13	<0.27	<1.5	<0.53	<2.7
Total HxCDD	-	<0.086	<0.087	<0.079	<0.085	<0.079	<0.86	<0.10	<0.10	<1.2	<2.9	<1.8
Total HpCDD	-	<1.3	<0.10	<0.32	<0.12	<0.49	<0.19	<0.53	<0.72	<0.75	<2.1	<1.2
2,3,7,8-TCDD	1	<0.10	<0.13	<0.11	<0.095	<0.10	<0.080	<0.069	<0.080	<0.36	<0.47	<0.46
1,2,3,7,8-PeCDD	0.5	<0.14	<0.14	<0.14	<0.14	<0.13	<0.11	<0.13	<0.13	<1.5	<2.9	<2.7
1,2,3,4,7,8-HxCDD	0.1	<0.08	<0.081	<0.072	<0.070	<0.073	<0.080	<0.10	<0.090	<1.0	<1.9	<1.6
1,2,3,6,7,8-HxCDD	0.1	<0.086	<0.087	<0.078	<0.085	<0.079	<0.086	<0.10	<0.10	<1.2	<2.1	<1.8
1,2,3,7,8,9-HxCDD	0.1	<0.078	<0.079	<0.071	<0.069	<0.072	<0.078	<0.10	<0.076	<1.0	<1.8	<1.6
1,2,3,4,6,7,8-HpCDD	0.01	<1.3	<0.093	<0.32	<0.075	<0.49	<0.15	<0.53	<0.72	<0.75	<1.6	<1.2
OCDD	0.0001	**8.6 J**	<0.67	<2.8	<1.3	**5.4 J**	<1.7	<3.5	**6.8 J**	<3.4	<3.1	<1.8
2,3,7,8-TCDF	0.1	<0.14	<0.10	<0.10	<0.088	<0.077	<0.074	<0.10	<0.073	<0.38	<0.52	<0.90
1,2,3,7,8-PeCDF	0.05	<0.11	<0.10	<0.085	<0.10	<0.090	<0.088	<0.10	<0.085	<0.86	<1.5	<1.2
2,3,4,7,8-PeCDF	0.5	<0.11	<0.10	<0.085	<0.10	<0.090	<0.088	<0.10	<0.085	<0.84	<1.5	<1.2
1,2,3,4,7,8-HxCDF	0.1	<0.046	<0.055	<0.068	<0.039	<0.048	<0.049	<0.048	<0.089	<0.89	<1.8	<1.4
1,2,3,6,7,8-HxCDF	0.1	<0.040	<0.048	<0.046	<0.034	<0.042	<0.043	<0.18	<0.040	<0.85	<1.7	<1.3
1,2,3,7,8,9-HXxCDF	0.1	<0.049	<0.059	<0.056	<0.042	<0.052	<0.053	<0.051	<0.050	<0.93	<1.8	<1.4
2,3,4,6,7,8-HxCDF	0.1	<0.053	<0.063	<0.060	<0.044	<0.055	<0.056	<0.055	<0.053	<1.0	<2.0	<1.6
1,2,3,4,6,7,8-HpCDF	0.01	<0.059	<0.059	<0.049	<0.073	<0.058	<0.065	<0.064	<0.19	<0.53	<0.86	<0.54
1,2,3,4,7,8,9-HpCDF	0.01	<0.070	<0.071	<0.059	<0.087	<0.069	<0.078	<0.077	<0.084	<0.63	<1.0	<0.64
OCDF	0.0001	<0.14	<0.16	<0.16	<0.15	<0.14	<0.14	<0.14	<0.54	<1.2	<3.2	<2.8
2,3,7,8- TCDD Equivalence	3.0	**0.00086**	BDL	BDL	BDL	**0.00054**	BDL	BDL	**0.00068**	BDL	BDL	BDL

Notes:
Only analytes detected at or above laboratory method detection lim
on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limi
Shaded Text= Exceedance of 2,3,7,8 TCDD equivalence guidance
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated
Dioxin Data Qualifiers:
All results in pg/g or parts per trillion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

Table 7
Biota Analytical Results
Camp Summit

Sample Location		**3PC-12**	**3PC-13**	**3PC-14**	**3PC-14**	**3PC-15**	**3PC-16**	**3PC-17**	**3PC-18**	**3PC-19**			
Sample Species		Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout			
Individual Fish/Composite		Composite	Composite	Composite		Composite	Composite	Composite	Composite	Composite			
Number of Fish in Composite		17	15	15		5	6	5	5	5			
Sample Length (mm)		1139	1060	1033		605	717	586	585	561			
Sample Weight (g)		46	47	44		69	76	60	62	52			
Analyte													
Dioxins (pg/g or ppt)	**TEFs**	**3PC-12**	**3PC-13**	**3PC-14**	**3PC-14**	**3PC-15**	**3PC-16**	**3PC-17**	**3PC-18**	**3PC-19**	**TURTLE-1**	**FISH-1**	**FISH-2**
Total TCDF	-	<0.63	**1.8**	<0.68	**1.7**	<2.6	<0.68	**1.8**	<2.2	<0.87	**48.6**	**2.24**	**4.19**
Total PeCDF	-	<1.2	<1.1	<0.097	<1.3	<0.68	<1.1	<1.4	<1.2	<1.3	**206**	**6.95**	**15.6**
Total HxCDF	-	<1.5	<1.4	<1.3	<1.4	<1.1	<1.3	<1.8	<1.2	<1.6	**864**	**39.8**	**81.8**
Total HpCDF	-	<0.78	<0.82	<0.62	<0.86	<1.3	<0.67	<0.96	<0.67	<0.71	**515**	**98.5**	**356**
Total TCDD	-	<0.32	<0.42	<0.79	<0.41	<0.67	<0.80	<0.47	<0.67	<0.43	**0.35**	**0.24**	**0.96**
Total PeCDD	-	<2.2	<2.1	<1.8	<2.2	<0.080	<1.7	<204	<1.8	<2.0	**39.4**	**4.95**	**8.68**
Total HxCDD	-	<1.6	**12**	<1.3	<1.6	<1.7	<1.5	<1.7	<1.3	<1.6	**56.2**	**17.5**	**50.1**
Total HpCDD	-	<1.3	<1.6	<1.2	<1.3	<1.5	<1.2	<1.7	<1.2	<1.4	**37.4**	**22.8**	**93.3**
2,3,7,8-TCDD	1	<0.32	<0.42	<0.79	<0.41	<1.2	<0.8	<0.47	<0.67	<0.43	**48.6**	**2.07**	**3.36**
1,2,3,7,8-PeCDD	0.5	<2.2	<2.1	<1.8	<2.2	<0.80	<1.7	<2.4	<1.8	<2.0	**206**	**6.95**	**11**
1,2,3,4,7,8-HxCDD	0.1	<1.5	<1.4	<1.2	<1.4	<1.7	<1.4	<1.5	<1.2	<1.5	**124**	**4.3**	**7.07**
1,2,3,6,7,8-HxCDD	0.1	<1.6	<1.6	<1.3	<1.6	<1.4	<1.5	<1.7	<1.3	<1.6	**683**	**20.5**	**.5.9**
1,2,3,7,8,9-HxCDD	0.1	<1.4	<1.4	<1.2	<1.4	<1.5	<1.3	<1.5	<1.2	<1.5	**43.4**	**3.65**	**7.77**
1,2,3,4,6,7,8-HpCDD	0.01	<1.3	**8.8**	<1.2	<1.3	<1.3	<1.2	<1.7	<1.2	<1.4	**290**	**59.9**	**208**
OCDD	0.0001	**5.8 J**	**36**	**6.9 J**	<3.3	<1.2	**6.1 J**	<4.9	**5 J**	<2.9	**261**	**221**	**1180**
2,3,7,8-TCDF	0.1	<0.63	<0.85	<0.68	<0.68	**6.1 J**	<0.68	<0.93	<0.69	<0.87	**0.35**	**0.11**	<0.14
1,2,3,7,8-PeCDF	0.05	<1.2	<1.1	<0.97	<1.3	<0.68	<0.97	<1.4	<1.2	<1.3	**1.15**	**0.62**	**0.86**
2,3,4,7,8-PeCDF	0.5	<1.2	<1.0	<0.95	<1.2	<0.97	<0.95	<1.3	<1.1	<1.3	**36.4**	**1.28**	**2.25**
1,2,3,4,7,8-HxCDF	0.1	<1.4	<1.2	<1.2	<1.2	<0.95	<1.2	<1.6	<1.1	<1.4	**4.89**	**1.07**	**2.79**
1,2,3,6,7,8-HxCDF	0.1	<1.3	<1.2	<1.1	<1.2	<1.2	<1.1	<1.5	<1.0	<1.3	**25.7**	**1.27**	**2.95**
1,2,3,7,8,9-HXxCDF	0.1	<1.4	<1.3	<1.2	<1.3	<1.1	<1.2	<1.6	<1.1	<1.5	<0.30	<0.37	<0.55
2,3,4,6,7,8-HxCDF	0.1	<1.5	<1.4	<1.3	<1.4	<1.2	<1.3	<1.8	<1.2	<1.6	**15.2**	**2.69**	**4.93**
1,2,3,4,6,7,8-HpCDF	0.01	<0.66	<0.69	<0.52	<0.72	<1.3	<0.57	<0.81	<0.56	<0.60	**18.5**	**9.18**	**32.7**
1,2,3,4,7,8,9-HpCDF	0.01	<0.78	<0.82	<0.62	<0.86	<0.57	<0.67	<0.96	<0.67	<0.71	**0.74**	<0.58	**2.11**
OCDF	0.0001	2.9	<2.3	<2.4	<1.9	<2.6	<2.6	<3.5	<2.5	<3.0	**10.2**	**19.4**	**92.3**
2,3,7,8- TCDD Equivalence	3.0	**0.00058**	**0.0916**	**0.00069**	BDL	**0.61**	**0.00061**	BDL	**0.0005**	BDL	**263**	**10.5**	**19.8**

Notes:
Only analytes detected at or above laboratory method detection lim
on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limi
Shaded Text= Exceedance of 2,3,7,8 TCDD equivalence guidance
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated

Dioxin Data Qualifiers:

All results in pg/g or parts per trillion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

FIGURES

APPENDIX A

DRILLING AND TEST PIT LOGS

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 1 **Sheet** 1 **of** 1

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside former saw mill

Location Plan

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather:
Date/Time Start: 4/8/98
Date/Time Finish: 4/8/98

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2					Boring started in corehole drilled in concrete floor (12 inches thick).		
+1							
0					Clay, little silt, trace gravel, gravel content decreasing with depth.		
1					Becoming wet at 3 to 4 feet. Slight odor.		
2							
3							
4							
5					Boring terminated at 5 feet.		
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 2 Sheet 1 of 1

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside former saw mill

Location Plan

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather:
Date/Time Start: 4/8/98
Date/Time Finish: 4/8/98

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2					Boring started in corehole drilled in concrete floor (12 inches thick).		
+1							
0					Clay, some silt, slight odor becoming wet at about 3 feet.		
1							
2							
3							
4					Boring terminated at 4 feet.		
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 3 **Sheet** 1 **of** 1

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside former saw mill

Location Plan

Weather: Temp. in 40's, foggy

Date/Time Start: 4/9/98

Date/Time Finish: 4/9/98

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2					Boring started in corehole drilled in concrete floor (12 inches thick).		
+1							
0					Brown clay, some silt becoming wet between 1 and 3 feet.		
1							
2							
3					Boring terminated at 3 feet.		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID in hole = 64 ppm
PID in hole = 0.9 ppm

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

BORING/ WELL NO. 4 **Sheet** 1 **of** 1

Location Description: Inside former saw mill

Location Plan

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Temp. in 40's, foggy

Date/Time Start: 4/9/98

Date/Time Finish: 4/9/98

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2							
					Boring started in corehole drilled in concrete floor (12 inches thick).		
+1							
0							
					Silty clay, roots at 0 - 0.8 feet, becoming more silty below 2 feet, becoming wet at 3.5 feet with slight sheen.		
1							
2							
3							
					Boring terminated at 3.5 feet.		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID = 2800 ppm in hole (1-2 feet); 126 ppm in sample.
FID = 3600 ppm in hole (2-3 feet); 556 ppm in sample.

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 5 **Sheet** 1 **of** 1

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside former saw mill

Location Plan

Weather:
Date/Time Start: 4/9/98
Date/Time Finish: 4/9/98

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2					Boring started in corehole drilled in concrete floor (12 inches thick).		
+1							
0					Soil not logged.		
					Soil wet at 2 feet, slight sheen on water at 2-3 feet.		
1							
2							
3					Boring terminated at 3 feet.		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID: 0 ppm 0-1 foot
92 ppm (1-2 feet) over sample; 97 ppm over hole
3601 ppm (2-3 feet) in hole

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 6 **Sheet** 1 **of** 1

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside former saw mill

Location Plan

Weather:
Date/Time Start: 4/9/98
Date/Time Finish: 4/9/98

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2					Boring started in corehole drilled in concrete floor (12 inches thick).		
+1							
0					Soil not logged.		
1							
2							
3							
4					Boring terminated at 4 feet.		
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID: 197 ppm (0.2 - 2 feet) over sample; 270 ppm in hole
320 ppm (2-3 feet) over sample; 242 ppm in hole
1,000 ppm (3-4 feet) in hole; 180 ppm over sample

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 7 **Sheet** 1 **of** 1

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside former saw mill

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather:
Date/Time Start: 4/9/98
Date/Time Finish: 4/9/98

Location Plan

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2					Boring started in corehole drilled in concrete floor (12 inches thick).		
+1							
0					Soil not logged.		
1							
2					Odors at 2 to 3 feet.		
3							
4					Boring terminated at 4 feet.		
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID: 160 ppm (2-3 feet)
3,778 in hole (3-4 feet); 180 ppm over sample

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 8 **Sheet** 1 **of** 1

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside former saw mill

Location Plan

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather:
Date/Time Start: 4/10/98
Date/Time Finish: 4/10/98

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2					Boring started in corehole drilled in concrete floor (12 inches thick).		
+1							
0					Very difficult to sample, high gravel content, low recovery in split spoon driven by hand. Some odors present. Becoming wet at 3 feet.		
1							
2							
3					Boring terminated at 3 feet.		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 9 **Sheet** 1 **of** 1

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside former saw mill

Location Plan

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Weather:
Date/Time Start: 4/10/98
Date/Time Finish: 4/10/98

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2							
+1							
0							
					Very difficult to sample, high gravel content, low recovery in split spoon driven by hand. Some odors present. Becoming wet at 3 feet.		
1							
2							
3					Boring terminated at 3 feet.		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

COMMENTS:

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 10 **Sheet** 1 **of** 1

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside former saw mill

Location Plan

Weather:

Date/Time Start: 4/10/98

Date/Time Finish: 4/10/98

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2							
+1							
0							
					Difficult to sample, high gravel content. Some odors, becoming wet at 4 feet.		
1							
2							
3							
4					Boring terminated at 4 feet.		
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID = 310 ppm over sample; 26 ppm in hole

Contractor: Parsons ES **Driller:** **Inspector:** 'S. Dillman **Rig Type:** Hand-driven split spoon	**PARSONS ENGINEERING SCIENCE, INC.** **DRILLING RECORD** **PROJECT NAME:** Camp Summit **PROJECT NUMB** 733114	**BORING/ WELL NO. 11** Sheet 1 of 1 **Location Description:** Inside former saw mill.

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Sunny 60's

Date/Time Start: 4/10/98

Date/Time Finish: 4/10/98

Location Plan

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2							
+1							
0							
					Boring conducted below concrete floor.		
1					Soils not logged.		
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID:

Contractor: Parsons ES **Driller:** **Inspector:** S. Dillman **Rig Type:** Hand-driven split spoon	**PARSONS ENGINEERING SCIENCE, INC.** **DRILLING RECORD** **PROJECT NAME:** Camp Summit **PROJECT NUMB** 733114	**BORING/ WELL NO.** 12 **Sheet** 1 **of** 1 **Location Description:** Inside planer building.

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Sunny 60's

Date/Time Start: 4/13/98

Date/Time Finish: 4/13/98

Location Plan

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2					Boring conducted below concrete floor. Soils not logged.		
+1							
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID:

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 13 **Sheet** 1 **of** 1

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside planer building.

Location Plan

Weather: Sunny 60's

Date/Time Start: 4/13/98

Date/Time Finish: 4/13/98

GROUNDWATER OBSERVATIONS

Water Level				
Date				
Time				
Meas. From				

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2							
+1							
0							
1					Boring conducted below concrete floor.		
					Soils not logged.		
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID:

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. 14 **Sheet** 1 **of** 1

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

Location Description: Inside salt shed.

Location Plan

Weather: Sunny 60's

Date/Time Start: 4/13/98

Date/Time Finish: 4/13/98

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2							
+1							
0							
1					Boring conducted below asphalt floor.		
					Soils not logged.		
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID:

Contractor: Parsons ES **Driller:** **Inspector:** S. Dillman **Rig Type:** Hand-driven split spoon	**PARSONS ENGINEERING SCIENCE, INC.** **DRILLING RECORD** **PROJECT NAME:** Camp Summit **PROJECT NUMB** 733114	**BORING/ WELL NO. 15** **Sheet 1 of 1** **Location Description:** Inside salt shed.

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Sunny 60's

Date/Time Start: 4/13/98

Date/Time Finish: 4/13/98

Location Plan

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2							
+1							
0							
1					Boring conducted below asphalt floor.		
					Soils not logged.		
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID:

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

BORING/ WELL NO. 16 **Sheet** 1 **of** 1

Location Description: Around outside of office building

Location Plan

Weather: Sunny 60's
Date/Time Start: 4/13/98
Date/Time Finish: 4/13/98

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2							
					Boring started at ground surface.		
+1							
0							
					Clay, some silt, some gravel, trace sand.		
1							
2							
3					Boring terminated at 3 feet.		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID: 0 ppm

Contractor: Parsons ES
Driller:
Inspector: S. Dillman
Rig Type: Hand-driven split spoon

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

PROJECT NAME: Camp Summit
PROJECT NUMB 733114

BORING/ WELL NO. 17 **Sheet** 1 **of** 1

Location Description: Around outside of office building

Location Plan

Weather: Sunny 60's

Date/Time Start: 4/13/98

Date/Time Finish: 4/13/98

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2							
					Boring started at ground surface.		
+1							
0							
					Clay, some silt, some gravel, trace sand.		
1							
2					Boring terminated at 2 feet.		
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID: 2 ppm in hole.

Contractor: Parsons ES **Driller:** **Inspector:** S. Dillman **Rig Type:** Hand-driven split spoon	**PARSONS ENGINEERING SCIENCE, INC.** **DRILLING RECORD** **PROJECT NAME:** Camp Summit **PROJECT NUMB** 733114	**BORING/ WELL NO.** 18 **Sheet** 1 **of** 1 **Location Description:** Around outside of office building

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Sunny 60's

Date/Time Start: 4/13/98

Date/Time Finish: 4/13/98

Location Plan

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2					Boring started at ground surface.		
+1							
0					Clay, some silt, some gravel, trace sand. Slight odor (fuel?).		
1							
2							
3					Boring terminated at 3 feet.		
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
FID: 9.7 ppm

Contractor: Parsons ES **Driller:** **Inspector:** S. Dillman **Rig Type:** Hand-driven split spoon	**PARSONS ENGINEERING SCIENCE, INC.** **DRILLING RECORD** **PROJECT NAME:** Camp Summit **PROJECT NUMB** 733114	**BORING/ WELL NO.** 19 **Sheet** 1 **of** 1 **Location Description:** South of office building.

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Sunny 60's

Date/Time Start: 4/13/98

Date/Time Finish: 4/13/98

Location Plan

Sampl Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL (Depth in feet)	SCHEMATIC	COMMENTS
+2					Boring conducted below ground surface. Soils not logged.		
+1							
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

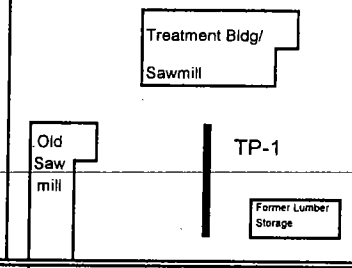
COMMENTS:
FID:

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Cloudy, drizzle, 40's.
DATE/TIME START:	April 20, 1998 / 10:30
DATE/TIME FINISH:	April 20, 1998 / 11:30
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-1

LOCATION: South of former treatment building (saw mill).



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1	Shale , some silt, trace sand, some areas have some clay mixed in	Perched water seeped into excavation at approximately 2 feet. Bottom of excavation looks dry.
2		
3	TP-1 terminate on top of bedrock (gray-brown shale).	
4	Test Pit Terminated At 3 Feet.	Pit length 37.5 feet.
5		
6		
7		
8		
9		
10		
11		
12		

SUMMARY Samples collected: Soil sample collected from spoils pile.

AIR MONITORING DATA

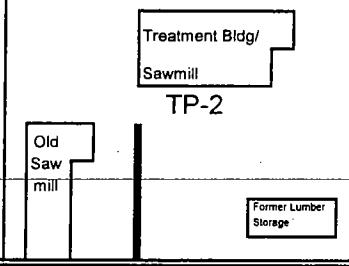
TIME/DATE	FID (PPM)	Comments
4/20/98	1.5	Reading in excavation.
4/20/98	42	Reading over spoils pile.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Cloudy, drizzle mixed with snow, 40's.
DATE/TIME START:	April 20, 1998 / 12:00
DATE/TIME FINISH:	April 20, 1998 / 1:00
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-2

LOCATION: South of former treatment building (saw mill).



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1	Tan Silt, come cobbles and shale, wood fill in middle section. No odor, stain, or sheen encountered.	Pit length 76 feet.
2	Test pit terminated on bedrock (shale, gray-brown).	
3		
4	Test Pit Terminated At 2.5 to 4 Feet.	
5		
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected from spoils pile.

AIR MONITORING DATA

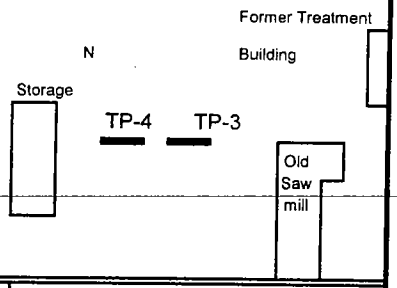
TIME/DATE	FID (PPM)	Comments
4/20/98	0.0	Reading in excavation.
4/20/98	0.0	Reading over spoils pile.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Cloudy, drizzle mixed with snow, 40's.
DATE/TIME START:	April 20, 1998 / 1:45
DATE/TIME FINISH:	April 20, 1998 / 3:00
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-3

LOCATION: Between old sawill and storage building.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1	Tan brown Silt, some clay, some cobbles and gravel. Strong sweet odor during excavation.	Pit length 18 feet.
2		
3	Test pit terminated on bedrock (shale, gray-brown).	
4		
5	Test Pit Terminated At 3 to 3.5 Feet.	
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

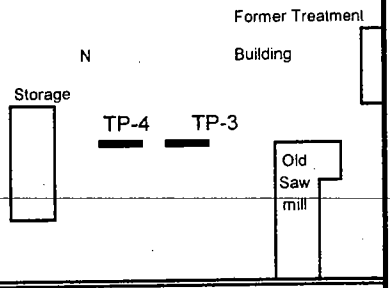
TIME/DATE	FID (PPM)	Comments
4/20/98	26	Measured in excavation.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Cloudy, drizzle mixed with snow, 40's.
DATE/TIME START:	April 20, 1998 / 3:30
DATE/TIME FINISH:	April 20, 1998 / 4:30
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-4

LOCATION: Between old sawill and storage building.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Tan brown Silt, some clay, some cobbles and gravel. No odor, stain, or sheen.	Pit length 12.5 feet
1		
2	Test pit terminated on bedrock (shale, gray-brown).	
3		
4		
5	Test Pit Terminated At 3 to 5 Feet.	
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

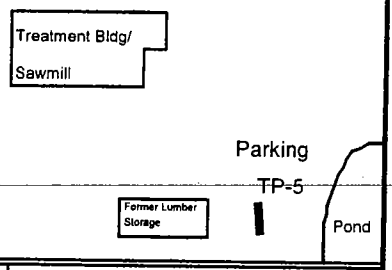
TIME/DATE	FID (PPM)	Comments
4/20/98	0.0	Measured in excavation.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Clear, cool, windy.
DATE/TIME START:	April 21, 1998 / 9:15
DATE/TIME FINISH:	April 21, 1998 / 10:15
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-5

LOCATION: Between former lumber storage and pond, near parking.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1	Brown silty Clay, some sand, gravel, and cobbles with wood fill mixed in (0-4.5 feet). No odor, no stain.	Test pit located in area of former recovery trench for fuel spill.
2		
3		
4		Pit length 15 feet.
5	Greenish-gray clay, some sand and fine gravel, roots, former soil zone (4.5-5'). Moist to wet.	
6	Test Pit 5 terminated at 5 feet.	
7		
8		
9		
10		
11		
12		

SUMMARY Samples collected: Soil sample collected from near woody fill material.

AIR MONITORING DATA

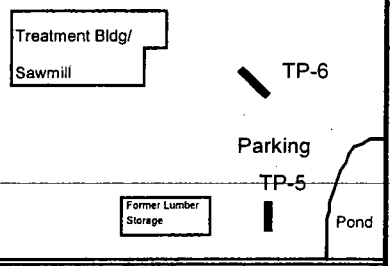
TIME/DATE	FID (PPM)	Comments
4/21/98	0.3	Reading over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Clear, cool, windy.
DATE/TIME START:	April 21, 1998 / 10:30
DATE/TIME FINISH:	April 21, 1998 / 11:40
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-6

LOCATION: At base of hill east of former treatment bldg.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1	Brown Silt, some clay, cobbles, and gravel, moist.	
2	Greenish-gray clay, some sand at bottom of pit, slight odor, native material. Wet.	
3		Pit length 12 feet.
4		
5	Test Pit 6 terminated at 3 to 5 feet.	
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

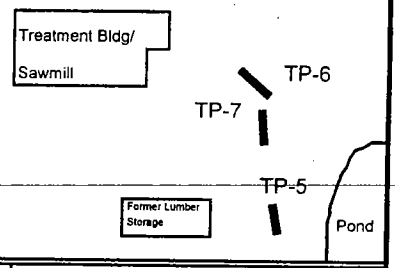
TIME/DATE	FID (PPM)	Comments
4/21/98	1.4	Maximum reading in excavation.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Clear, cool, windy.
DATE/TIME START:	April 21, 1998 / 11:50
DATE/TIME FINISH:	April 21, 1998 / 1:00
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-7

LOCATION: At base of hill east of former treatment bldg.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Brown Silt, some sand, gravel, and cobbles (0-3.5').	Pit length 13.9 feet.
1		
2		
3		
4	Yellow subsoil, Clay, some silt, wet at bottom, organic odor (3.5-5').	
5		
6	Test Pit 7 terminated at 5 feet.	
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

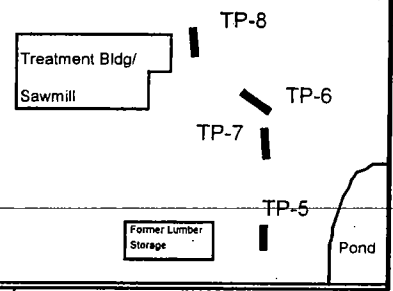
TIME/DATE	FID (PPM)	Comments
4/21/98	0.8	Maximum reading in excavation.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Clear, cool, windy.
DATE/TIME START:	April 21, 1998 / 1:10
DATE/TIME FINISH:	April 21, 1998 / 1:40
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-8

LOCATION: East end of treatment bldg., north of tracks.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Shale fill with little silty clay, tan-brown.	Pit length 8 feet.
1		
2		
3	Greenish gray silty Clay, some cobbles and gravel (2-3').	
4	Test Pit 8 terminated at 3 feet.	
5		
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected from greenish-gray material.

AIR MONITORING DATA

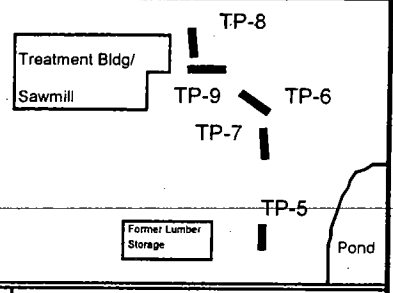
TIME/DATE	FID (PPM)	Comments
4/21/98	60	Maximum reading in excavation.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Clear, cool, windy.
DATE/TIME START:	April 21, 1998 / 1:50
DATE/TIME FINISH:	April 21, 1998 / 2:15
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-9

LOCATION: East end of treatment bldg., south of tracks (parallel).



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Shale fill (0-1.5').	Pit length 12 feet.
1		
2	Greenish-gray Silt, some gravel and clay, little fine sand , odor, (1.5-3 feet).	
3		
4	Test pit terminated at 3 feet.	
5		
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected from greenish-gray material.

AIR MONITORING DATA

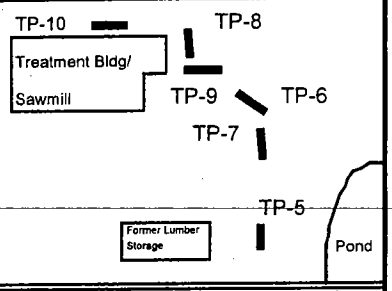
TIME/DATE	FID (PPM)	Comments
4/21/98	+1000	Maximum reading over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Clear, cool, windy.
DATE/TIME START:	April 21, 1998 / 2:30
DATE/TIME FINISH:	April 21, 1998 / 3:00
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-10

LOCATION: North side of treatment bldg., (parallel).



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Shale fill, little to some silt and clay (0-1.5').	
1		
2	Gray Clay, trace roots, little sand and gravel, strong odor (1.5-2.5').	Pit length 9.6 feet.
3	Test pit terminated at 2.5 feet.	
4		
5		
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected from upper gray clay material.

AIR MONITORING DATA

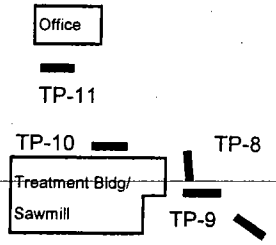
TIME/DATE	FID (PPM)	Comments
4/21/98	+1000	Maximum reading over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Clear, cool, windy.
DATE/TIME START:	April 21, 1998 / 3:00
DATE/TIME FINISH:	April 21, 1998 / 4:15
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-11

LOCATION: South of Office Porch.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1	Dark tan-brown Silt, some clay, little sand, gravel, and shale cobbles. Strong odor.	
2		Pit length 6.4 feet.
3		
4		
5		
6	Test pit terminated at 5.5 feet.	
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

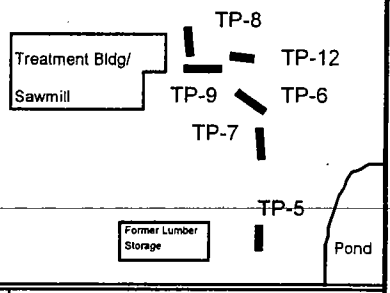
TIME/DATE	FID (PPM)	Comments
4/21/98	8	Maximum reading over spoils.
4/21/98	5.5	Mearured in excavation.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Clear, cool, windy.
DATE/TIME START:	April 22, 1998 / 9:15
DATE/TIME FINISH:	April 22, 1998 / 10:00
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-12

LOCATION: At end of concrete pad for steel tracks.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Shale fill, some silt and clay, (0-2.5'). Some odor on spoils.	Pit length 6.6 feet.
1		
2		
3	Gray Clay, some silt and gravel (2.5-4').	
4		
5	Test pit terminated at 4 feet.	
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

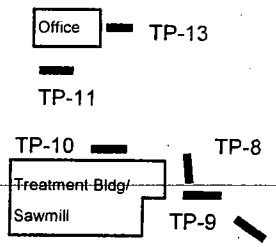
TIME/DATE	FID (PPM)	Comments

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Sunny, clear, calm.
DATE/TIME START:	April 22, 1998 / 10:00
DATE/TIME FINISH:	April 22, 1998 / 11:00
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-13

LOCATION: East of Office.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1	Brown silty Clay, some gravel and cobbles, fill (0-3 ft.). No odor in hole or in spoils.	
2		Pit length 7.6 feet.
3		
4	Rock , little gray clay (bedrock?).	
5	Test pit terminated at 3 feet.	
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

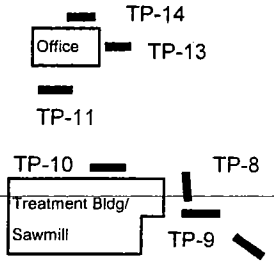
TIME/DATE	FID (PPM)	Comments
4/22/98	0.0	Measured in hole and over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Sunny, clear, calm.
DATE/TIME START:	April 22, 1998 / 11:10
DATE/TIME FINISH:	April 22, 1998 / 11:40
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-14

LOCATION: North of Office, between office and retaining wall.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1	Brown-dark tan, clayey Silt, some gravel and cobbles. No odors in soils.	
2	Water running into hole at 2 feet, no odor or sheen on water.	Pit length 7 feet.
3		
4	Rock (bedrock?) at 2.8 feet.	
5	Test pit terminated at 2.8 feet.	
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

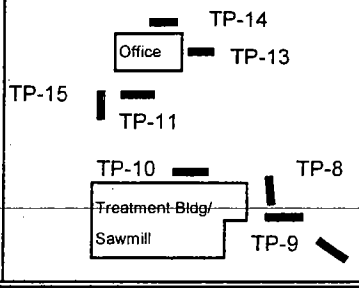
TIME/DATE	FID (PPM)	Comments
4/22/98	0.0	Measured in hole and over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Sunny, clear, calm.
DATE/TIME START:	April 22, 1998 / 11:50
DATE/TIME FINISH:	April 22, 1998 / 12:40
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-15

LOCATION: Southeast of office.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Gray-brown top soil (0-1 ft.).	
1		
	Reddish-tan-brown silty Clay, some gravel and cobbles.	
2		Pit length 9 feet.
3		
4		
5		
	Water leaking into pit at approx. 5 feet.	
6	Rock near bottom of test pit, (bedrock?).	
	Test pit terminated at 6 feet.	
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

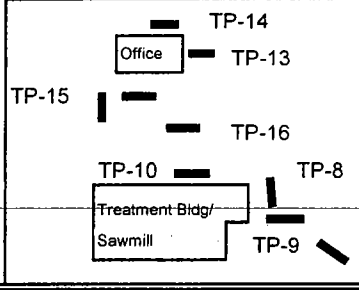
TIME/DATE	FID (PPM)	Comments
4/22/98		Measured in hole and over spoils not noted.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Sunny, clear, calm.
DATE/TIME START:	April 22, 1998 / 1:30
DATE/TIME FINISH:	April 22, 1998 / 2:40
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-16

LOCATION: Between office and sawmill, east of sidewalk.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1		
2	Reddish-brown silty Clay, little-some gravel and cobbles (0-5 ft.).	Pit length 8 feet.
3	No odors noted.	
4		
5	Grayish silty Clay, some gravel, wet. Bedrock at 5 ft.	
6	Test pit terminated at 5 feet.	
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

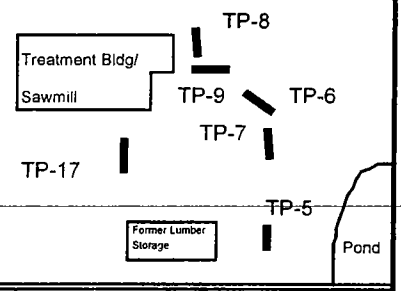
TIME/DATE	FID (PPM)	Comments
4/22/98	3	Measured in hole.
4/22/98	1.2	Measured over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Sunny, clear, calm.
DATE/TIME START:	April 22, 1998 / 3:10
DATE/TIME FINISH:	April 22, 1998 / 3:40
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-17

LOCATION: Between sawmill and gravel road.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1	Fill, brown Silt, some clay, some gravel and cobbles (0-3.5 ft).	
2		Pit length 8 feet.
3		
4	Reddish-brown silty-Clay, some gravel, little odor (3.5-5 ft.).	
5		
6	Test pit terminated at 5 feet.	
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

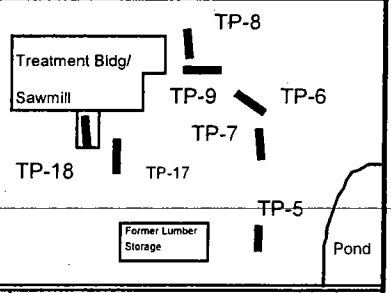
TIME/DATE	FID (PPM)	Comments
4/22/98	0.3	Measured in hole.
4/22/98	0.2	Measured over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Sunny, clear, calm.
DATE/TIME START:	April 22, 1998 / 3:55
DATE/TIME FINISH:	April 22, 1998 / 4:20
CONTRACTOR:	Delta (Operator/ Al Tay)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-18

LOCATION: In sawdust shed south of sawmill.



DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0		
1	Greenish gray Clay, some silt, gravel, and cobbles, couple boulders. (0-2.5 ft.). No odor in breathing zone.	
2		Pit length 6 feet.
3	Test pit terminated at 2.5 feet.	
4		
5		
6		
7		
8		
9		
10		
11		
12		

SUMMARY Sample collected.

AIR MONITORING DATA

TIME/DATE	FID (PPM)	Comments
4/22/98	600	Measured in hole.
4/22/98	+1000	Measured over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Overcast, light breeze, temperature in 50's
DATE/TIME START:	April 23, 1998
DATE/TIME FINISH:	April 23, 1998
CONTRACTOR:	Delta (Operator/ Brian Devine)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-19

LOCATION:
former drum storage area

See Site Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Reddish tan, silty sand, some cobbles.	
1		
	1.5	
2	Tan-gray silty clay, some shale cobbles and gravel. 2.5	Pit length 7.5 feet.
3	Gray clay, some silt and cobbles, water entering pit. 3.0	
4	Tan-gray silty clay, some shale cobbles and gravel.	
5	No odors or stains. 5.5	
	Pit terminated at 5.5 feet.	
6		
7		
8		
9		
10		
11		
12		

SUMMARY

AIR MONITORING DATA

TIME/DATE	FID (PPM)	Comments
4/23/98	No detects	Measured in hole.
4/23/98	No detects	Measured over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Overcast, light breeze, temperature in 50's
DATE/TIME START:	April 23, 1998 10:00
DATE/TIME FINISH:	April 23, 1998 10:24
CONTRACTOR:	Delta (Operator/ Brian Devine)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-20

LOCATION: former drum disposal area

See Site Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Brown silt, some sand and cobbles, little to some clay, drum lids near surface	
1		
	1.5	
2	Tan-gray silty clay, some gravel and weathered shale cobbles	Pit length 9.4 feet.
3		
4		
	4.5	
5	Pit terminated at 4.5 feet	
6		
7		
8		
9		
10		
11		
12		

SUMMARY Collected sample

AIR MONITORING DATA

TIME/DATE	FID (PPM)	Comments
4/23/98	No detects	Measured in hole.
4/23/98	No detects	Measured over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Overcast, light breeze, temperature in 50's
DATE/TIME START:	April 23, 1998 10:50
DATE/TIME FINISH:	April 23, 1998 11:15
CONTRACTOR:	Delta (Operator/ Brian Devine)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-21

LOCATION: adjacent to Building #49

See Site Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Brown and reddish brown silt, some clay	
1	1.0	
2	Gray silty clay, some cobbles and shale rock 2.0	Pit length 7.4 feet.
	Former topsoil zone 2.5	
3	Gray silty clay, some cobbles. Water entering hole at 2.5 feet with slight trace of sheen on water	
4		
5	5.0	
6		
7		
8		
9		
10		
11		
12		

SUMMARY Collected sample. Motor oil-type odor over soils, and sewage-type smell also.

AIR MONITORING DATA

TIME/DATE	FID (PPM)	Comments
4/23/98	10-12	Measured in hole.
4/23/98	1.2	Measured over spoils.
4/23/98	50	Over sample

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Overcast, light breeze, temperature in 50's
DATE/TIME START:	April 23, 1998 11:40
DATE/TIME FINISH:	April 23, 1998 12:00
CONTRACTOR:	Delta (Operator/ Brian Devine)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-22

LOCATION: south side of Building #49

See Site Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Dark brown to brown silt, some clay with cobbles and gravel	
1		
	1.5	
2	Gray fine sand lens, wet, water entering hole	Pit length 8.4 feet.
	2.0	
3	Tan-gray silty clay, some gravel and cobbles, dry rock at bottom of pit. No odors. No FID hits 3.0	
4	Pit terminated at 3.0 feet	
5		
6		
7		
8		
9		
10		
11		
12		

SUMMARY

AIR MONITORING DATA

TIME/DATE	FID (PPM)	Comments
4/98	0.4	Measured in hole.
4/98	0.2	Measured over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Overcast, light breeze, temperature in 50's
DATE/TIME START:	April 23, 1998
DATE/TIME FINISH:	April 23, 1998
CONTRACTOR:	Delta (Operator/ Brian Devine)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-23

LOCATION: east side of Building #49

See Site Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL (North / South)	COMMENTS
0	Shale fill	
1		
	1.5	
2	Reddish lens at 1.5 feet. Gray silty-clay, some gravel and cobbles, tan lens at base, apparently	
3	rock at bottom of hole.	
4	4.0	
5	Pit terminated at 4.0 - 6.0 feet.	
6	6.0	
7		
8		
9		
10		
11		
12		

SUMMARY

AIR MONITORING DATA

TIME/DATE	FID (PPM)	Comments
4/23/98	6	Measured in hole.
4/23/98	500	Measured over spoils.

PARSONS ENGINEERING SCIENCE, INC.
TEST PIT RECORD

PROJECT NAME:	NYSDEC Camp Summit
PROJECT NUMBER:	733114.01000
WEATHER	Overcast, light breeze, temperature in 50's
DATE/TIME START:	April 23, 1998
DATE/TIME FINISH:	April 23, 1998
CONTRACTOR:	Delta (Operator/ Brian Devine)
INSPECTOR:	S. Dillman

TEST PIT ID: TP-24

LOCATION: west of Planer Building #51

See Site Map

DEPTH (feet bgs)	FIELD IDENTIFICATION OF MATERIAL	COMMENTS
0	Brown shaly cobbles and gravel some silty clay	
1	1.0	
	Tan-gray clay, some cobbles and gravel	
2	Water leaking into hole at bottom.	Pit length 9 feet.
3		
4		
5		
	5.5	
6	Pit terminated at 5.5 feet.	
7		
8		
9		
10		
11		
12		

SUMMARY Collected sample.

AIR MONITORING DATA

TIME/DATE	FID (PPM)	Comments
4/23/98	0	Measured in hole.
4/23/98	0	Measured over spoils.

Contractor: Applied Earth Tech.
Driller: Kevin Hawkins
Inspector: Dillman
Rig Type: CME-55

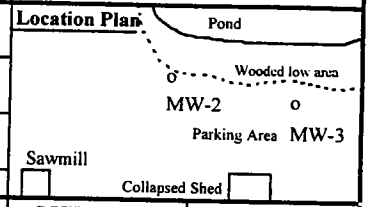
PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

PROJECT NAME: Camp Summit
PROJECT NUMBER: 733114.01000

BORING/ WELL NO. MW-2 Sheet 1 of 1

Location Description: Between pond and parking area, northern end.

Location Plan



GROUNDWATER OBSERVATIONS				
Water Level	7.67 feet			
Date	8/26/98			
Time	7:40			
Meas. From	toc/PVC 985.53			

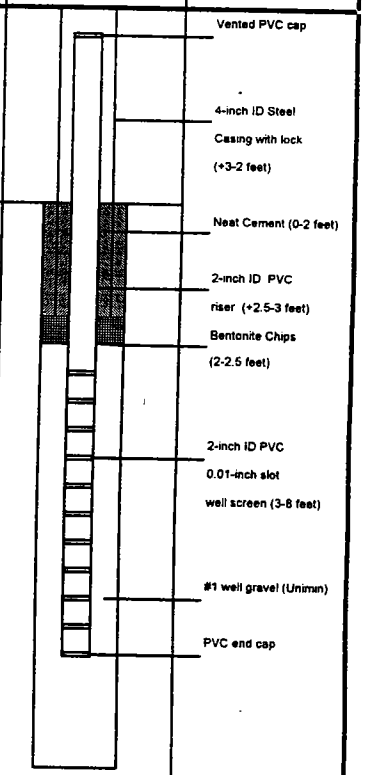
Weather: Cloudy, hot, humid, thunderstorms forecast

Date/Time Start: August 25, 1998 11:40 AM

Date/Time Finish: August 25, 1998 3:00 PM

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+3					
+2					
+1					
0					Ground elevation 982.9 feet (amsl), top PVC 985.53 feet (amsl), top steel casing 985.66 (amsl).
		3	45	NA	Tan-brown Silt, some shale gravel, dry, loose, Fill.
1		3			
		2			
2		2			
		4	40	NA	As above.
3		2			
		2			
4		3			
		5	60	0.3	As above (4-5 feet).
5		2			
		2	25	240	Fill as above over brown silt-very fine sand, some organics, trace roots, wet. Water in augers to approx. 5 feet.
6		2			
		4			
7		5			
		8	80	40	Till, tan-gray Silt, some coarse rounded sand and gravel, little clay, dense, moist-wet.
8		13			
		14			
9		14			
		12	40	140	Till as above.
10		14			Screened with FID (inside augers 40-80 ppm) & (breathing zone 0.0 ppm).
					Boring terminated at 10 feet.
11					
12					
13					
14					
15					

SCHEMATIC



COMMENTS

Contractor: Applied Earth Tech.
Driller: Kevin Hawkins
Inspector: Dillman
Rig Type: CME-55

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. MW-3 Sheet 1 of 1

PROJECT NAME: Camp Summit
PROJECT NUMBER: 733114.01000

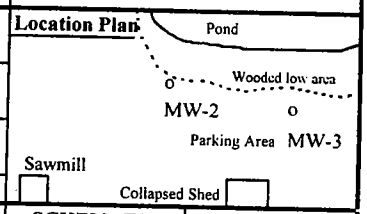
Location Description: Between pond and parking area, northern end.

Weather: Cloudy, hot, humid, thunderstorms forecast

Date/Time Start: August 25, 1998 3:30 PM

Date/Time Finish: August 25, 1998 5:15 PM

Location Plan

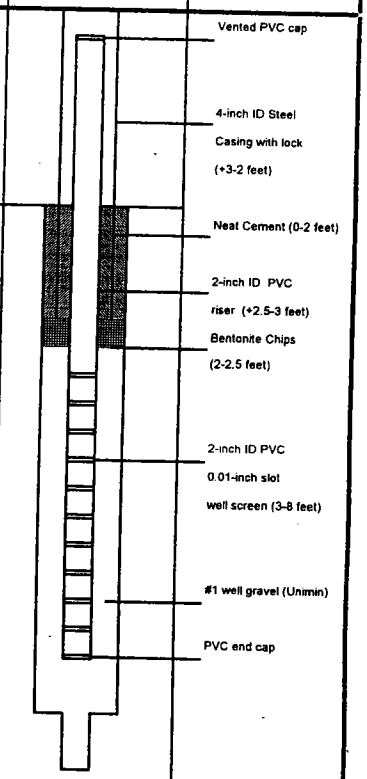


GROUNDWATER OBSERVATIONS

Water Level	7.40 ft.			
Date	8/26/98			
Time	7:45			
Meas. From	toc/pvc 983.85			

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+3					
+2					
+1					
0					Ground elevation 981.1 feet (amsl), top PVC elevation 983.85 feet (amsl), top steel casing 983.98 (amsl).
		5	70	0.1	Gray Silt-very fine sand, some gravel, shale chips, trace wood, dry, Fill.
1		13			
		6			
2		8			
		6	45	0	Tan Silt, some gravel, shale chips, dry, Fill.
3		6			
		6			
4		4			
		3	0	NA	As above? No recovery. End of sampler was wet.
5		2			
		4	80	78	Gray-brown Silt, little clay, organics, roots, (native wetland soils).
6		14			
		36			Gray Silt-very fine sand, interbedded with red weathered shale (6-7 feet).
7		18			
		17	95	15	Till, tan Silt, some coarse rounded sand and gravel, little clay, moist.
8		16			
		19			
9		18			
		5	0	NA	No recovery of sample, some auger slop, caved material from above.
10		7			
					Auger boring terminated at 9 feet. Sampling terminated at 10 feet.
11					
12					
13					
14					
15					
16					
17					
18					

SCHEMATIC



COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:

Contractor: Applied Earth Tech.
Driller: Kevin Hawkins
Inspector: Dillman
Rig Type: CME-55

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. MW-4 — Sheet 1 of 1

PROJECT NAME: Camp Summit
PROJECT NUMBER: 733114.01000

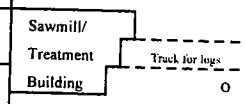
Location Description:

Weather: Partly sunny, cool, calm.

Date/Time Start: August 26, 1998 8:19 AM

Date/Time Finish: August 26, 1998 11:15 AM

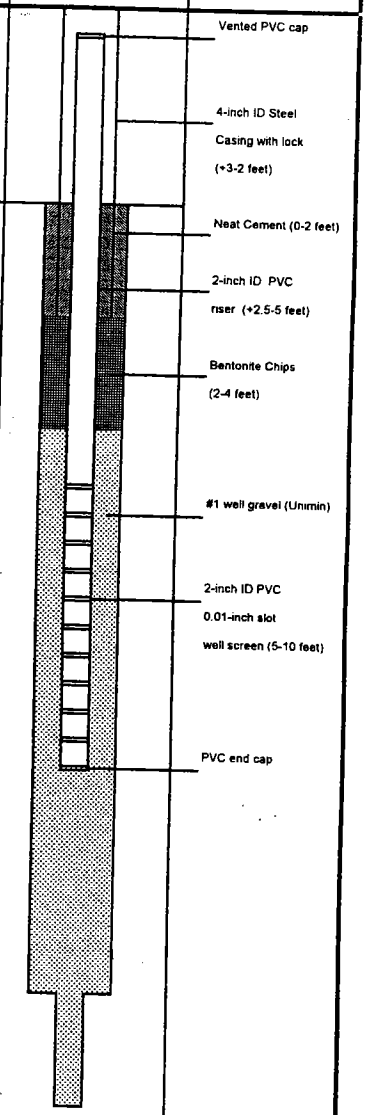
Location Plan



GROUNDWATER OBSERVATIONS				
Water Level	8.51 ft.			
Date	8/27/98			
Time	7:45			
Meas. From	toc/pvc 997.56			

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+3					
+2					
+1					
					Ground elevation 995.1 feet (amsl), top PVC elevation 997.56 feet (amsl), top steel casing 997.73 feet (amsl).
0					
		12	20	15	Tan Silt, some coarse sand and gravel, Fill, dry.
1		14			
		11			
2		8			
		7	30	4	As above.
3		7			
		4			
4		4			
		2	30	100	As above (4-5.8 feet).
5		3			
		3			
6		4			Brown Silt, some clay, moist, semiplastic.
		4	35	780	Greenish-gray Silt, some clay, some coarse sand, moist-wet, soft, semiplastic.
7		6			Odor in sample.
		8			
8		6			
		6	60	+1000	Coarse sand and gravel, wet (8-9 feet).
9		12			
		14			Gray Silt, some coarse sand/fine gravel, trace clay, Till as in other wells.
10		16			Odor, Sheen. Screened hole with FID (+100 ppm), breathing zone (0.1 ppm).
		13	65	490	Till, gray-tan Silt, some coarse sand and gravel, shale in gravel, trace clay.
11		19			Wet at top, more dense and compact at bottom, moist-wet.
		21			
12		16			
		23	80	530	Tan Till as above, dense, little clay, moist.
13		26			
		27			
14		36			
		NA	50	60	Tan dense Till, Silt, some rounded coarse sand and gravel, little-trace clay, moist, no odor.
15		NA			
		NA			
16		NA			Augering terminated at 14 feet. Sampling terminated at 16 feet. Boring plugged back to 10 feet and well set.
17					
18					

SCHEMATIC



COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:

Contractor: Applied Earth Tech.
Driller: Kevin Hawkins
Inspector: Dillman
Rig Type: CME-55

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. MW-5 **Sheet** 1 of 1

PROJECT NAME: Camp Summit
PROJECT NUMBER: 733114.01000

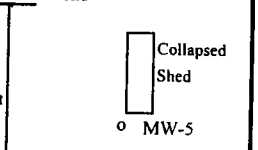
Location Description: Near northwest corner of collapsed building.

Weather: Partly cloudy, 60's, forecast low 80's.

Date/Time Start: August 28, 1998 12:00 PM

Date/Time Finish: August 28, 1998 2:40 PM

Location Plan Pond



GROUNDWATER OBSERVATIONS

Water Level	Dry			
Date	8/31/98			
Time	10:15			
Meas. From	toc/pvc 994.08			

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+3					
+2					
+1					
					Ground Elevation 991.6 feet (amsl), Top PVC Casing 994.08 (amsl),
0					Top Steel Casing 994.17 feet (amsl).
					Shale fill (0-2')
1					
2					
		8	90	7	Gray Silt-very fine Sand, moist-wet.
3		50/5"			Gray/tan silty Clay, some gravel, dry.
4					
		22	40	5.4	Tan Silt, some gravel, little clay, dry, dense, compacted.
5		20			Pushing cobble with sampler.
		10	35	8.5	Tan Silt, some gravel, little clay, dry-damp, dense, compacted. Till.
6		21			
		30			
7		15			
		18	80	0.2	Tan Silt, some coarse rounded sand and gravel, little clay, moist,
8		19			dense, compacted. Till.
		30			Water level in boring SB-1 was 8.3 feet below ground surface on 8/27/98.
9		28			
		19	80	6.2	As above, cobble/boulder (calcareous shale) in end of sampler, moist.
10		43			
		50/1"			Augered through boulder.
11					
12		14	65	2	Tan-brown Silt, some coarse rounded sand and gravel, little clay,
		21			dense, dry-damp, compact. Till.
13					Well boring terminated at 12.5 feet.
14					
15					
16					
17					
18					

SCHEMATIC

COMMENTS

COMMENTS:
Lithologic description and drilling information from boring SB-1 drilled adjacent to MW-5.

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Contractor: Applied Earth Tech.
Driller: Kevin Hawkins
Inspector: Dillman
Rig Type: CME-55

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. SB-1 — Sheet 1 of 3

PROJECT NAME: Camp Summit
PROJECT NUMBER: 733114.01000

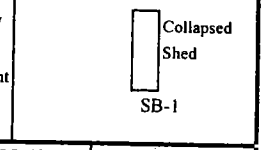
Location Description: Near northwest corner of collapsed building.

Weather: Partly cloudy, windy, passing rain and thunder storms.

Date/Time Start: August 24, 1998 1:45 PM

Date/Time Finish: August 28, 1998 11:20 AM

Location Plan Pond



GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+3					
+2					
+1					
0					Ground elevation 991.1 feet (amsl).
					Shale fill (0-2')
1					
2					
		8	90	7	Gray Silt-very fine Sand, moist-wet.
3		50/5"			Gray/tan silty Clay, some gravel, dry.
4					
		22	40	5.4	Tan Silt, some gravel, little clay, dry, dense, compacted.
5		20			Pushing cobble with sampler.
		10	35	8.5	Tan Silt, some gravel, little clay, dry-damp, dense, compacted. Till.
6		21			
		30			
7		15			
		18	80	0.2	Tan Silt, some coarse rounded sand and gravel, little clay, moist,
8		19			dense, compacted. Till.
		30			Water level standing at 8.3 feet below ground surface on 8/27/98.
9		28			
		19	80	6.2	As above, cobble/boulder (calcareous shale) in end of sampler, moist.
10		43			
		50/1"			Augered through boulder.
11					
12		14	65	2	Tan-brown Silt, some coarse rounded sand and gravel, little clay,
		21			dense, dry-damp, compact. Till.
13		24			Hole checked on 8-26-98, standing water at 12 feet.
		26	0	NA	No fresh material recovered, sloughed material as above.
14		25			
		50/4"			
15					
		50/5"	100	+10	Dense tan Silt/Till as above.
16					
		11	60	2	As above.
17		24			
		24			
18		23			

SCHEMATIC

COMMENTS

COMMENTS:

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

Contractor: Applied Earth Tech.
Driller: Kevin Hawkins
Inspector: Dillman
Rig Type: CME-55

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

PROJECT NAME: Camp Summit
PROJECT NUMB 733114.01000

BORING/ WELL NO. SB-1 Sheet 2 of 3

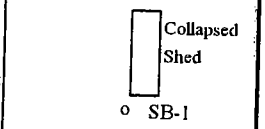
Location Description: Near northwest corner of collapsed building.

Weather: Partly cloudy, calm, 60's, forecast low 80's.

Date/Time Start: August 24, 1998 1:45 PM

Date/Time Finish: August 28, 1998 11:20 AM

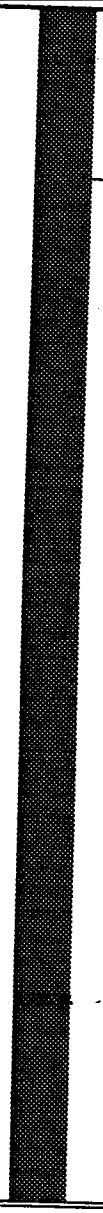
Location Plan Pond



GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
		14	80	0	As above. Refusal at 18.5 feet. Sampler bouncing on bottom. Begin drilling with roller bit.
19		25/0"			
20		50/6"	80	8.8	Very dense Till. Gray Silt, some gravel, little coarse sand, little clay. Dry-damp.
21					
22					
		50/6"	60	1.2	As above.
23					
24					
		36	60	1.4	Very dense Till, gray Silt, less coarse sand and gravel than above.
25		50/1"			
26					
27					
28					
29					
30					Gravel Seam? Based on drilling characteristics. Hole not staying open. Run 4-inch spin casing down to 30 feet. Resume roller bit drilling below spin casing. Till with cobbles/boulders (alternating layers approx. 6-inches thick).
31					
32					
33					
34					
35					
		36	90		Till, greenish-gray Silt, some coarse sand and gravel, stiff, moist-damp. No odor.
36		50/3"			
37					
38					
39					

SCHEMATIC



COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
Ground elevation 991.1 feet (amsl).

Contractor: Applied Earth Tech.
Driller: Kevin Hawkins
Inspector: Dillman
Rig Type: CME-55

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. SB-1 Sheet 3 of 3

PROJECT NAME: Camp Summit
PROJECT NUMB: 733114.01000

Location Description: Near northwest corner of collapsed building.

GROUNDWATER OBSERVATIONS

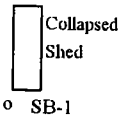
Water Level				
Date				
Time				
Meas. From				

Weather: Partly cloudy, calm, 60's, forecast low 80's.

Date/Time Start: August 24, 1998 1:45 PM

Date/Time Finish: August 28, 1998 11:20 AM

Location Plan Pond



Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC	COMMENTS
40							
		47	50	1.2	Till, Silt, come coarse sand and gravel, dense, compact, damp, no odor.		Cement/Bentonite Grout
41		49					
		50/3"					
42					Boring terminated at 41.3 feet.		
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							
59							
60							

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
Ground elevation 991.1 feet (amsl).

Contractor: Applied Earth Tech.
Driller: Kevin Hawkins
Inspector: Dillman
Rig Type: CME-55

PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

BORING/ WELL NO. SB-2 **Sheet** 1 of 1

PROJECT NAME: Camp Summit
PROJECT NUMBER: 733114.01000

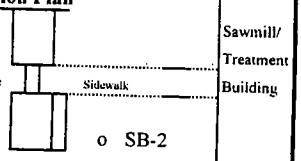
Location Description: Southwest of office, near back porch. North of sawmill/ treatment building.

Weather: Partly sunny, cool.

Date/Time Start: August 26, 1998 12:25 PM

Date/Time Finish: August 26, 1998 6:25 PM

Location Plan



GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+3					
+2					
+1					
0					
		8	20	3.6	Ground Elevation 1001.3 feet (amsl).
1		14			Tan Silt, some sand and gravel, dry, no odor.
		8			
2		6			
		6	50	98	
3		12			Tan Silt, little clay, little coarse sand and gravel, moist.
		10			
4		17			
		23	90	125	Till, tan Silt, little clay, little coarse sand and gravel, odor, dry-damp.
5		27			
		32			
6		26			
		19	50	120	Till, tan Silt, little-some clay, damp-moist, slight odor.
7		19			Screened auger cuttings (20 ppm), screened breathing zone (0.0 ppm)
		18			
8		20			
		13	70	20	Dense tan Till, little clay, some coarse rounded sand and gravel, no odor.
9		17			
		26			
10		25			
		28	40	44	As above, shale cobble in base of sample.
11		37			
		48			
12		50			
		18	60	4	Gray-tan Till, dense, Silt, some coarse sand and gravel, trace clay, shale cobble.
13		22			No odor.
		22			
14		24			
		15	50	2	As above, damp.
15		38			
		50/6"			
16					
		50/4"	100	2.5	As above. Refusal.
17					Switched to roller bit methods.
					Odors were noted in drill water, drilling was stopped.
18					Boring terminated at approximately 18.5 feet.

SCHEMATIC

COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
Boring terminated at approximately 18.5 feet. No well was set. No indication of saturated aquifer materials in boring.

Contractor: Applied Earth Tech.
Driller: Kevin Hawkins
Inspector: Dillman
Rig Type: CME-55

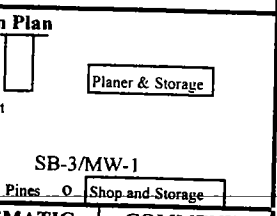
PARSONS ENGINEERING SCIENCE, INC.
DRILLING RECORD

PROJECT NAME: Camp Summit
PROJECT NUMBER: 733114.01000

BORING/ WELL NO. SB-3/MW-1 Sheet 1 of 3
Location Description: North of Shop and Wood Storage Building in pine trees.

Weather: Partly sunny, cool.
Date/Time Start: August 31, 1998 12:15 PM
Date/Time Finish: September 1, 1998 4:00 PM

Location Plan



GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+3					
+2					
+1					
0					
					Ground elevation 1012.4 feet (amsl).
		3	50	22	Tan Silt to very fine Sand, trace gravel, dry. Cobble at 1.8 to 2.5 feet.
1		13			
		25			
2		50/3"			
3		23	65	2.1	Till, clayey Silt, some coarse sand and fine gravel, weathered.
		39			
4		36			
		12	85	6.2	Tan-brown Till, Silt, some coarse sand and gravel, little-some clay.
5		16			Weathered on top grading to less weathered, damp-moist.
		27			
6		33			
		46	90	2.8	Tan-brown dense Till, Silt, some coarse sand and gravel, little clay, compacted.
7		43			
		35			
8		37			
		42			Dense Till as above. Geotech sample collected.
9		45			
		100/2"			
10					
		19	80	0.2	Dense Till as above, some coarse sand and gravel, little clay, damp-moist.
11		23			
		31			
12		27			
		50/4"	90	0.3	Dense Till as above, boulder from 12.5 feet to 14 feet.
13					Begin drilling with roller bit.
14					
		25	80	+10	Till as above.
15		27			
		50/1"			
16					
17					
		21	25	4.8	Till as above.
18		21			

SCHEMATIC

COMMENTS

SAMPLING METHOD
SS = SPLIT SPOON
A = AUGER CUTTINGS
C = CORED

COMMENTS:
No well was set in monitoring well boring (SB-3/MW-1). No saturated aquifer materials encountered.

Drilling Log

Monitoring Well **MW-12**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *14.0 ft.* North ____ East ____

Top of Casing *NA* Water Level Initial ▽ *6.0 ft.* Static *NA* Diameter *3.125 in.*

Screen: Dia *2 in.* Length *10 ft.* Type/Size *PVC/0.01 inch in.*

Casing: Dia *2 in.* Length *3.5 ft.* Type *PVC*

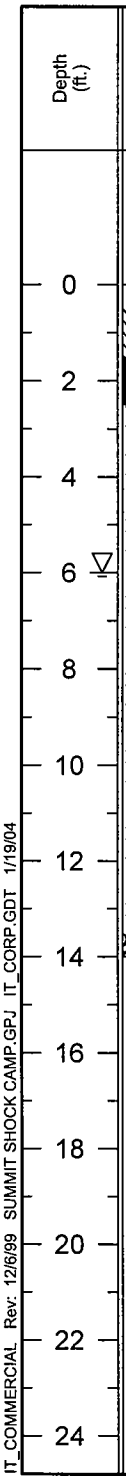
Fill Material *Sand/bentonite* Rig/Core *1R8300*

Drill Co. *Parratt Wolfe* Method *Air rotary*

Driller *Doug/Joe* Log By *JF* Date *7/23/03* Permit # *NA*

Checked By ____ License No. ____

COMMENTS



Description

(Color, Texture, Structure)

Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.

Topsoil

Brown fine SAND and fine angular GRAVEL (shale fragments). Four inches of crushed cobble(shale fragments) above SAND.

Orange brown fine SAND and coarse angular GRAVEL.

Orange brown clayey SILT, some fine angular Gravel. Two inches crushed shale on bottom.

Brown crushed SHALE (FILL); wet.

Orange and gray clayey SILT (interbedded); medium stiffness; dry.

Grayish brown SILT, some Clay and angular fine Gravel (shale); stiff.

Grayish brown SILT, some clay and fine and coarse Gravel (shale); stiff.

Crushed SHALE, some brown fine Sand, little Silt.

Grayish brown SILT, little Clay, some coarse and fine Gravel (TILL); stiff.

Crushed SHALE, little Silt.

Grayish brown SILT, little Clay and fine angular Gravel (TILL).

Light brown SILT, some fine angular Gravel (shale), little Clay (TILL); stiff. Water infiltrating into hole.

Crushed SHALE; wet.

Grayish SILT, some fine angular Gravel (shale), little Clay (TILL); stiff.

Drilling Log

Monitoring Well **MW-13**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *20.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial ▽ *17.5 ft.* Static *NA* Diameter *3.125 in.*

Screen: Dia *2 in.* Length *10 ft.* Type/Size *PVC/0.01 inch in.*

Casing: Dia *2 in.* Length *10 ft.* Type *PVC*

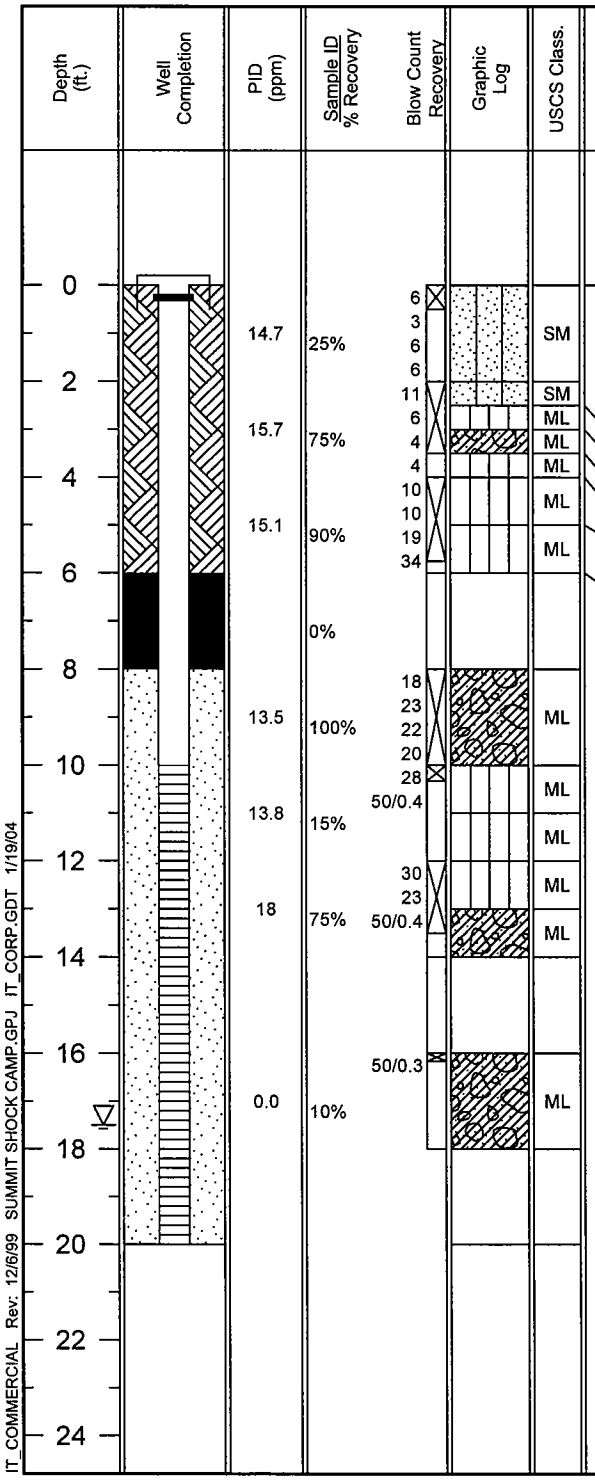
Fill Material *Sand/bentonite* Rig/Core *1R8300*

Drill Co. *Parratt Wolfe* Method *Air rotary*

Driller *Doug/Joe* Log By *JF* Date *7/24/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS



Description

(Color, Texture, Structure)

Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.

Brown silty fine SAND and fine to coarse GRAVEL (shale); fresh wood fragments.

Brown silty fine SAND and fine angular GRAVEL (shale); soft; dry.

Light brown clayey SILT, some fine Gravel; soft.

Grayish brown SILT, little Clay and fine Gravel (TILL).

Light brown clayey SILT, little fine Gravel; soft.

Light brown clayey SILT, some fine angular Gravel; soft; wet.

Grayish brown SILT, some angular fine and coarse Gravel (shale), little Clay; dry.

No recovery. Drilled through boulder 6 to 8 ft.

Grayish brown SILT, some fine and coarse Gravel (shale), little Clay (TILL); very stiff.

Grayish brown clayey SILT, little fine Gravel; soft.

Grayish brown SILT, little Clay and fine Gravel; stiff.

Grayish brown clayey SILT, little fine Gravel; soft.

Olive gray SILT, some fine angular Gravel, little Clay (TILL); stiff.

No spoon collected.

Olive brown clayey SILT, little coarse and fine Gravel (shale); soft.

No spoon collected.

Drilling Log

Monitoring Well **MW-14**

Project: Summit Shock Camp | Owner: NYSDOC

Location: Summit, New York | Proj. No.: 830271

Surface Elev.: NA | Total Hole Depth: 22.0 ft. | North: | East:

Top of Casing: NA | Water Level Initial: ▽ 17.0 ft. | Static: NA | Diameter: 3.125 in.

Screen: Dia 2 in. | Length: 10 ft. | Type/Size: PVC/0.01 inch in.

Casing: Dia 2 in. | Length: 14 ft. | Type: PVC

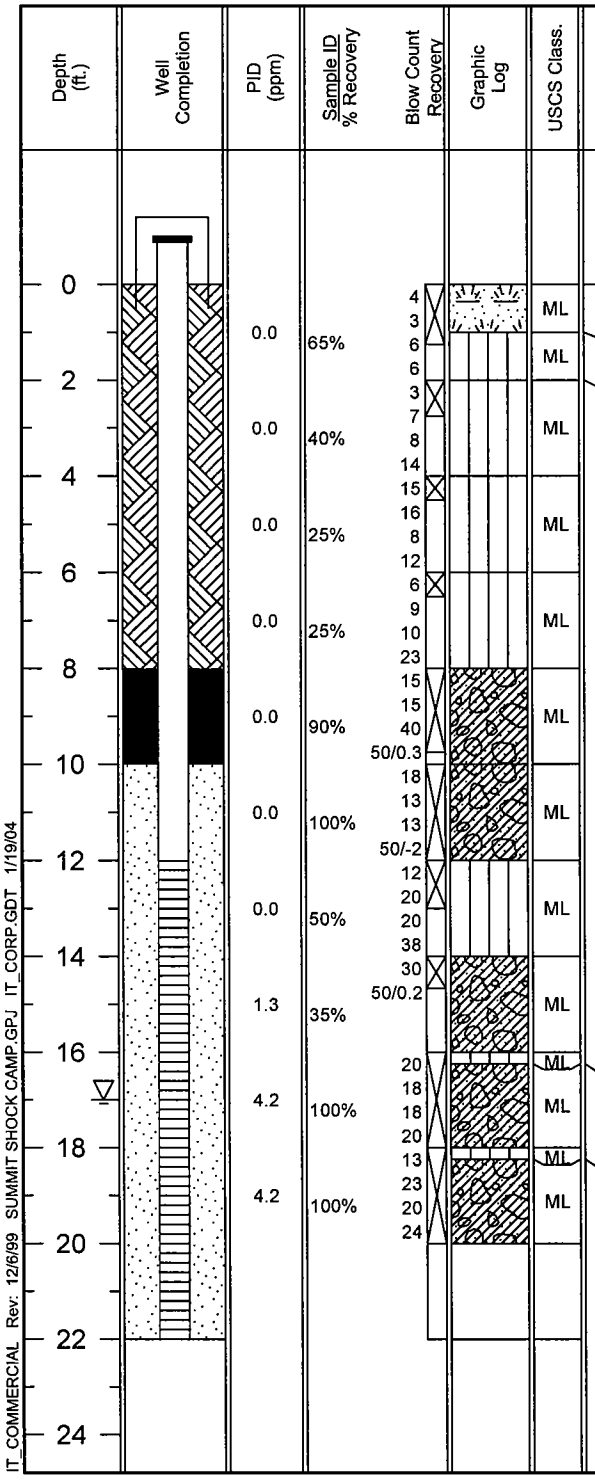
Fill Material: Sand/bentonite | Rig/Core: 1R8300

Drill Co.: Parratt Wolfe | Method: Air rotary

Driller: Doug/Joe | Log By: JF | Date: 7/25/03 | Permit #: NA

Checked By: | License No.:

COMMENTS



Description

(Color, Texture, Structure)

Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.

Brown soft clayey SILT, some fine angular Gravel, little fine Sand (Topsoil).

Brown SILT, some Clay and fine Gravel, little coarse Gravel; slightly stiff.

Brown SILT, some Clay, some fine and coarse angular Gravel (shale); slightly stiff.

Brown SILT, some Clay, some fine and coarse angular Gravel (shale); slightly stiff.

Brown SILT, some Clay, some fine and coarse angular Gravel (shale); slightly stiff.

Graysih brown SILT, some angular coarse Gravel (shale), little Clay (TILL). Last two inches crushed shale.

Brown SILT, some Clay and fine Gravel, little coarse Gravel (TILL); slightly stiff; wet.

Brown clayey SILT, little fine Gravel (shale); stiff; wet (for 4 inches). Grading into 8 inches of grayish brown silt, little clay and fine angular gravel (TILL) very stiff.

Grayish brown SILT, little Clay, little fine and coarse angular Gravel (TILL); very stiff.

Brown clayey SILT, little fine Gravel; soft.

Brown SILT, little Clay, little fine and coarse Gravel (shale) (TILL); stiff.

Grayish brown clayey SILT, little fine Gravel; soft.

Grayish brown SILT, some clay, little fine Gravel (TILL); stiff.

No spoon collected.

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Drilling Log

Soil Boring **SSB03-01**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *11.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial ▽ *6.0 ft.* Static *NA* Diameter *3.125 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Sand topped with concrete* Rig/Core _____

Drill Co. *Parratt Wolfe* Method *HSA*

Driller *Doug/Joe* Log By *JF* Date *7/21/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0						
	15.7	75%	15 16 14 12		ML	Brown SILT and coarse GRAVEL (shale), little Clay and fine SAND.
2			7 5		CL	Brown silty CLAY, little fine Gravel (shale).
	22.7	100%	5 7		ML	Grayish brown TILL and clayey SILT, little fine Gravel; stiff.
4			2 3		SM	Olive brown silty SAND, some fine and coarse Gravel; strong odor. Water at 6 ft.
	29.3	50%	3 6			
6 ▽			18 14		SM	Olive brown silty SAND, some fine and coarse Gravel; saturated; strong odorl slight sheen.
	89.1	100%	7 45			
8			17		CL	Brown silty CLAY, little fine Gravel; saturated. Sheen and strong odor grading into 6 in. of dry silt, some clay, little fine gravel (gray, white and orange banded)
	2.6	25%	50/0			
10						Refusal ~ 11 ft.
12						
14						
16						
18						
20						
22						
24						

Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.

Drilling Log

Soil Boring **SSB03-02**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *18.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial ▽ *7.0 ft.* Static *NA* Diameter *3.125 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Sand topped with concrete* Rig/Core _____

Drill Co. *Parratt Wolfe* Method *HSA/air rotary*

Driller *Doug* Log By *JF* Date *7/21/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
HSA to 13 ft; Air Rotary to 18 ft.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0						Concrete.
2	13.0	15%	17 10 10 12			Crushed CONCRETE mixed with angular fine and coarse GRAVEL and gray SILT (FILL).
4	0.0	10%	10 5 6 5		GM	Grayish brown SILT and crushed angular GRAVEL; loose
6	0.0	25%	2 3 14 3		ML	Brown clayey SILT and coarse angular SAND and fine angular GRAVEL, Grading into brown silty clay with some fine angular gravel.
▽			6		CL	Olive brown silty CLAY, some fine angular GRAVEL (shale); saturated.
8	0.0	75%	20 25 27		ML	Brown TILL and SILT (very stiff), some fine angular GRAVEL, little Clay; wet.
			9 15		ML	Olive brown clayey SILT, some angular coarse SAND and fine Gravel; slightly wet.
10	2.5	75%	17 25		ML	Brown SILT, some angular fine Gravel (shale), little Clay (TILL).
12	1.1	50%	27 50/0.4		ML	Brown SILT and angular fine GRAVEL (shale), little Clay (TILL); very stiff.
14		0%				Refusal.
16	1.5	50%	24 24 42 34		ML	Olive brown SILT, some fine angular fine and coarse GRAVEL (shale), little Clay (TILL); very stiff.
18	2.3	50%	33 50/0.4		ML	Olive brown SILT, some fine angular GRAVEL (shale) (TILL); very stiff. Refusal at 18 ft.
20						
22						
24						

Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.

Drilling Log

Soil Boring **SSB03-03**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *18.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial ▽ *12.0 ft.* Static *NA* Diameter *3.125 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Sand topped with concrete* Rig/Core _____

Drill Co. *Parratt Wolfe* Method *HSA/air hammer/air rotary*

Driller *Doug* Log By *JF* Date *7/22/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
HSA to 4 ft; Air Hammer to 6 ftt; Air Rotary to 18 ft.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0						
	7.9	50%	9 5 8 7		SM	Brown fine SAND and SILT (FILL) with angluary fine and coarse Gravel (shale); loose.
2			9			Gray crushed SHALE.
	9.7	35%	13 13 11			
4			10		SM	Brown fine SAND and SILT (FILL) with angluary fine and coarse Gravel (shale); loose.
	12.8	35%	10 20 40			
6			2 4		ML	Grayish brown clayey SILT, little fine angluar Gravel; soft; wet.
	23.8/25.1	100%	10 14		ML	Grayish brown SILT; some fine Gravel (shale); little Clay (TILL); stiff.
8						Refusal.
10			11			Grayish brown clayey SILT, some fine angular Gravel (shale) (TILL).
	21.4	75%	7 8 14		ML	
12 ▽			10		ML	Olive brown clayey SILT, some fine angular gravel; soft; wet.
	36.0/18.8	75%	13 50/0.2		ML	Olive brown SILT; some fine angular Gravel, little Clay; very stiff; dry.
14			20 21			Grayish brown SILT, some fine angular Gravel, little Clay (TILL); stiff.
	30.4	50%	44 30		ML	
16			30			Grayish brown SILT, some fine angular Gravel, little Clay (TILL); stiff.
	22.7	10%	50/0.4		ML	
18						
20						
22						
24						

Description

(Color, Texture, Structure)

Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.

Drilling Log

Soil Boring **SSB03-04**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *19.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial ▽ *5.0 ft.* Static *NA* Diameter *3.125 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Sand topped with concrete* Rig/Core _____

Drill Co. *Parratt Wolfe* Method *HSA/air rotary*

Driller *Doug/Joe* Log By *JF* Date *7/22/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
HSA to 11 ft; Air Rotary to 19 ft.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0						Concrete.
2	9.2	65%	4 4 3 7		ML	Brown clayey SILT, little angular fine and coarse Gravel. First 3 in. crushed concrete.
			5 5		SW	Grayish brown fine SAND, little angular fine Gravel; saturated.
4	8.2	40%	40 12		ML	Grayish brown clayey SILT, little fine Gravel; stiff; dry.
▽			6 19		ML	Olive brown clayey SILT, some fine Sand, little fine angular Gravel; saturated.
6	6.5/4.8/1.5	75%	14 21		ML	Brown, orange and gray banded SILT, some Clay and fine Gravel; stiff.
			22 18			Grayish brown SILT, some fine Gravel, little Clay; stiff.
8	1.1	25%	18 50/0.4		ML	Brown SILT, little Clay and angular fine and coarse Gravel (shale) (TILL).
			50/0.3			Wood Fragment.
10		10%				
			36 46		ML	Brown SILT, some fine angular Gravel, little Clay; wet.
12	3.3	50%	28 30		ML	Brown SILT, some fine angular Gravel (TILL); dry. One inch crushed shale on top.
			5 10			
14	2.9	15%	50/0.4			
			23 14			Brownish gray SILT, some fine and coarse angular Gravel (shale), little Clay (TILL); stiff.
16	0.4	50%	15 20		ML	
			10 15			Brownish gray SILT, some fine and coarse angular Gravel (shale), little Clay (TILL); stiff.
18	0.0	15%	16 17		ML	
20						
22						
24						

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Drilling Log

Soil Boring **SSB03-05**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *13.5 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *3.125 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Sand topped with concrete* Rig/Core _____

Drill Co. *Parratt Wolfe* Method *HSA/air rotary*

Driller *Doug/Joe* Log By *JF* Date *7/22/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
HSA to 8.5 ft; Air Rotary to 13.5 ft.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure)
0						Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	0.0	10%	6, 4, 5, 6			Topsoil
2	0.0	25%	4, 12, 21, 30		GM / ML	Olive brown fine and coarse angular GRAVEL, some fine Sand, little Silt (FILL); saturated. Olive brown clayey SILT, some fine angular Gravel; saturated.
4	5.1	50%	12, 17, 20, 25		ML	Brown clayey SILT, some fine angular Gravel (TILL); tight.
6	2.2	50%	33, 33, 23, 50/0.2		ML	Brown clayey SILT, some fine angular Gravel (TILL); tight.
8	7.3	50%	17, 17, 27, 50/0.1		ML	Brown clayey SILT, some fine angular Gravel (TILL); tight.
10						Refusal. No recovery.
12						Refusal.
14						
16						
18						
20						
22						
24						

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Drilling Log

Soil Boring **SSB03-15**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *5.8 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *3.125 in.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Sand topped with concrete* Rig/Core *1R8300*

Drill Co. *Parratt Wolfe* Method *HSA/air rotary*

Driller *Doug/Joe* Log By *JF* Date *7/23/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
HSA to 4 ft; Air Rotary to 5.83 ft.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	6.6	25%	3 2 3 4		SM	Brown fine SAND, some Silt and Clay, trace coarse Gravel; moist.
2			50/0.4		SM	Brown fine SAND, some Silt and Clay, trace coarse Gravel; moist.
	8.2	25%			GM	Crushed shale.
4			16			Grayish brown SILT, some fine angular Gravel (shale), little Clay; stiff.
	25.4	75%	39 40		ML	Bedrock at 5.83 ft.
6			50/0.4			
8						
10						
12						
14						
16						
18						
20						
22						
24						

Drilling Log

Test Pit **TP03-1**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *5.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wollf* Method _____

Driller _____ Log By *J. Ferngren* Date *7/25/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
Sample collected from North side of test pit.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Topsoil
						Brown Clayey SILT with layers of shale, some organics. Layer thicker at north end of excavation.
1						
2						
						Light brown clayey SILT with little fine and coarse GRAVEL.
3						
4						
5						Brown TILL
6						No Hits Recorded on PID. Dimensions of test pit are 15ftx3ftx5ft.
7						

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Drilling Log

Test Pit **TP03-10**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *4.5 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wollf* Method _____

Driller _____ Log By *J. Ferngren* Date *7/28/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Two samples collected, one from the West end and the other from the East end of the test pit.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Light brown to brown sandy SILT with some CLAY , shale and organics.
3						Gray silty CLAY, soft. This layer absent on east end of excavation.
3.5						Till-light brown clayey SILT
5						Highest PID detection 8.1ppm, strong odor detected throughout entire excavation. Dimensions of test pit are 18ftx2.5ftx4.5ft.

Drilling Log

Test Pit **TP03-11**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *3.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wollf* Method _____

Driller _____ Log By *J. Ferngren* Date *7/28/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Two samples collected, one from the West end and the other from the East end of the test pit.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Brown topsoil, SILT, some CLAY, shale and organics.
2						Gray soft silty CLAY.
4						No detections with PID. Dimensions of test pit are 17ftx3ftx3ft.

Drilling Log

Test Pit **TP03-2**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *4.5 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wollf* Method _____

Driller _____ Log By *J. Ferngren* Date *7/25/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
Sample collected from North side of test pit.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Brown clayey SILT with layers of SHALE, some organics. Layer thicker at Northeast end
3						Gray SILT and CLAY, wet in north end.
3.5						Till, Light brown SILT, some CLAY with some shale, refusal at 4.5'.
5						Detections encountered with PID at 0-3ft and 3.5-4.5ft of 13.7 and 4.9 respectively. Dimensions of test pit are 10ftx3ftx4.5ft.

Drilling Log

Test Pit **TP03-3**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *3.5 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wollf* Method _____

Driller _____ Log By *J. Ferngren* Date *7/25/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
Sample collected from North side of test pit.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Topsoil and orgaincs.
						Concrete slab present in west end of excavation. Slab is 6in. thick with groundwater percolating into pit from under concrete slab.
						Light brown to brown clayey SILT with shale.
1						
2						Orange and gray clayey SILT, slightly stiff.
						Light brown SILT with some CLAY and gravel-Till, stiff.
3						
4						No detections with PID. Dimensions of test pit are 15ftx3ftx3.5ft
5						
6						
7						

Drilling Log

Test Pit **TP03-4**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *3.5 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wollf* Method _____

Driller _____ Log By *J. Ferngren* Date *7/25/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
Sample collected from North side of test pit.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Dark brown clayey SILT with layer of shale.
1						
2						Dark orange/brown SILT some CLAY and shale. Light brown Till encountered at 3ft-3.5ft across excavation.
3						
4						No detections with PID. Dimensions of test pit are 10ftx2.5ftx3.5ft
5						
6						
7						

Drilling Log

Test Pit **TP03-5**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *2.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wollf* Method _____

Driller _____ Log By *J. Ferngren* Date *7/28/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Two samples collected, one from the East end and the other from the West end of the test pit.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Topsoil, brown SILT, little CLAY some fine and coarse gravel (shale) with organics.
1						
2						
3						No detections on PID. Dimensions of test pit are 25.5ftx2.5ftx2ft
4						
5						
6						
7						

Drilling Log

Test Pit **TP03-6**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *2.5 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wollf* Method _____

Driller _____ Log By *J. Ferngren* Date *7/28/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS

Two samples collected, one from the Northeast end and the other from the Southwest end of the test pit.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Brown topsoil-SILT, some CLAY, shale and organics.
1						
2						Gray SILT some CLAY with bands of orange and white, tight.
3						No detections with PID. Dimensions of test pit are 25ftx2.5ftx2.5ft.
4						
5						
6						
7						

Drilling Log

Test Pit **TP03-7**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *3.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wolff* Method _____

Driller _____ Log By *J. Ferngren* Date *7/28/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
Sample collected from the West side of the test pit.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Brown topsoil, SILT, some CLAY, little gravel (shale), and organics. On west end of excavation an area of decaying wood and concrete is present from 0 to 3 ft.
3						Light brown TILL, stiff.
4						No detections with PID. Dimensions of test pit are 17ftx3ftx3ft.

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Drilling Log

Test Pit **TP03-8**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *3.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wollf* Method _____

Driller _____ Log By *J. Ferngren* Date *7/28/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
Three samples collected from the West end of the test pit for the MS/MSD and Duplicate

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Brown organic topsoil-SILT, some CLAY and gravel.
1						
2						Layer of decaying wood.
						Brown organic topsoil.
3						Gray soft silty CLAY with bands of orange, little gravel. Light brown TILL.
4						No detections with PID. Dimensions of test pit are not listed
5						
6						
7						

Drilling Log

Test Pit **TP03-9**

Project *Summit Shock Camp* Owner *NYSDOC*

Location *Summit, New York* Proj. No. *830271*

Surface Elev. *NA* Total Hole Depth *5.0 ft.* North _____ East _____

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter _____

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Native Soil* Rig/Core *Track Mounted Backhoe*

Drill Co. *Parratt Wollf* Method _____

Driller _____ Log By *J. Ferngren* Date *7/25/03* Permit # *NA*

Checked By _____ License No. _____

COMMENTS
Two samples collected, one from the North end and the other from the South end of the test pit.

Depth (ft.)	PID (ppm)	Sample ID / % Recovery	Blow Count / Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						Topsoil with shale layers and organics. Depth of topsoil ranges from 0.5 to 1ft across the excavation.
1						Brown clayey SILT with organics and some shale.
2						
3						Light brown TILL. Grayish brown SILT and some CLAY encountered in southern portion of excavation.
4						
5						
6						No PID detections observed in northern portion of excavation. Strong odor and PID detections of 50.1 at southern portion of excavation. Groundwater entering pit at 5ft.
7						

APPENDIX B

WELL DEVELOPMENT LOGS

GROUND WATER MONITOR WELL DEVELOPMENT FIELD DATA SHEET

Project Name: Camp Summit Project Number: 830271/10200500

WATER LEVEL DATA Date: 7/28/03 Time: 0749 Well ID: MW-12

Initial Total Casing Length 12.95 (feet) Final Total Casing Length 13.00 (feet)

Depth to Water (from top of casing) 3.74 (feet)

(a) Height of Water Column 9.21 (feet)

*Volume Factors: 2-inch well = 0.163 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor*) = 9.21 feet x 0.163 gallons/foot = 1.50 gallons

DEVELOPMENT DATA Date: 7/28/03 Time: 1000 start 7/30/03 - finish

Method: whale pump + bailer
(Waterra, bailer, pump, etc.)

Did well dry out? Yes X No ____ Number of times 3 Actual Volume Removed: ~10 gallons

Initial Turbidity > 999.0 Final Turbidity 178.0 (measured or visual)

COMMENTS

Purged dry at least 3 times with whale pump. Tried surging with bailer + whale pump for three days.

WATER LEVEL DATA Date: 7/28/03 Time: 0741 Well ID: MW-14

Initial Total Casing Length 23.70 (feet) Final Total Casing Length 23.75 (feet)

Depth to Water (from top of casing) 11.11 (feet)

(a) Height of Water Column 12.59 (feet)

*Volume Factors: 2-inch well = 0.163 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

Well Volume ([a] x volume factor*) = 12.59 feet x 0.163 gallons/foot = 2.0 gallons

DEVELOPMENT DATA Date: 7/28 Time: 1020 start 7/30-1020 finish

Method: whale pump + bailer
(Waterra, bailer, pump, etc.)

Did well dry out? Yes X No ____ Number of times ____ Actual Volume Removed: ~8 gallons

Initial Turbidity > 999.0 Final Turbidity > 999.0 (measured or visual)

COMMENTS

Purged dry more than 3 times with whale pump. Never recovered to initial DTW. Tried surging with bailer + whale pump for three days.

Personnel: J. Ferngren

GROUND WATER MONITOR WELL DEVELOPMENT FIELD DATA SHEET

Project Name: Camp Summit Project Number: 830271/0300580

WATER LEVEL DATA Date: 7/28/03 Time: 0744 Well ID: MW-13

Initial Total Casing Length 20.35 (feet) Final Total Casing Length _____ (feet)

Depth to Water (from top of casing) 4.18 (feet)

*Volume Factors: 2-inch well = 0.163 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

(a) Height of Water Column 16.17 (feet)

Well Volume ([a] x volume factor*) = 16.17 feet x 0.163 gallons/foot = 2.6 gallons

DEVELOPMENT DATA Date: 7/28 Time: 1125 start _____ finish

Method: whale pump + bailer
(Waterra, bailer, pump, etc.)

Did well dry out? Yes X No ____ Number of times ____ Actual Volume Removed: ~10 gallons

Initial Turbidity >999.0 Final Turbidity 213.0 (measured or visual)

COMMENTS

Purged dry at least 3 times with whale pump. Tried surging with bailer + whale pump for three days. DTW never fully recovered to its inital reading

WATER LEVEL DATA Date: _____ Time: _____ Well ID: _____

Initial Total Casing Length _____ (feet) Final Total Casing Length _____ (feet)

Depth to Water (from top of casing) _____ (feet)

*Volume Factors: 2-inch well = 0.163 gal/ft
4-inch well = 0.653 gal/ft
6-inch well = 1.468 gal/ft

(a) Height of Water Column _____ (feet)

Well Volume ([a] x volume factor*) = _____ feet x _____ gallons/foot = _____ gallons

DEVELOPMENT DATA Date: _____ Time: _____ start _____ finish

Method: _____
(Waterra, bailer, pump, etc.)

Did well dry out? Yes ____ No ____ Number of times ____ Actual Volume Removed: _____ gallons

Initial Turbidity _____ Final Turbidity _____ (measured or visual)

COMMENTS

Personnel: _____

APPENDIX C

GROUNDWATER PURGE/SAMPLE COLLECTION LOGS

Groundwater Well Purging Data Sheet

Project Name: Camp Summit Well ID: MW-2 Date: 7/28/03

Water Level Data Time: 0834
A) Depth To Bottom: 11.28
B) Depth To Water: 7.56
C) Height of water column: 3.72

1 well volume = 0.6 3 well volumes= 1.8 5 well volumes= 3.0

Purge Data
Method: whale pump Flow: ~0.3 gallons per minute

1/2 gallon	1 gallon	1 1/2 gallon	2 gallons
Turb: 182	Turb: 31.6	Turb: 3.6	Turb: 7.7
	pH: 5.91		pH: 5.99
	Cond: 0.664		Cond: 0.657
	Temp: 14.72		Temp: 14.79
	DO: 8.29		DO: 6.85

2 1/2 gallons	3 gallons	3 1/2 gallons	4 gallons
Turb:	Turb:	Turb:	Turb:
	pH:		pH:
	Cond:		Cond:
	Temp:		Temp:
	DO:		DO:

Did Well Dry Out? No How Many Times?

Time Purging ended: 1330

Observations:
Color: clear Sheen?: none Odor?: none

Comments: SAMPLE COLLECTED TIME 1330

Personnel: R. thune

Groundwater Well Sampling Data Sheet

Project Name: Camp Summit Well ID: MW-2 Date: 7/24/03

Water Level Data Time: 0834
A) Depth To Bottom: 11.22
B) Depth To Water: 7.50
C) Height of water column: 3.72

Sampling Method
Method: whale pump Flow: ~0.5 gallons per minute

Prior to sampling:
Turb: 7.7
pH: 5.99
Cond: 0.657
Temp: 14.79
DO: 6.85

Dioxin Sample:
Turb: 7.7
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	2	yes (no)
Dioxin	2	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? No How Many Times?

Observations:
Color: clear Sheen?: none Odor?: none

Comments: Sample COC Time 1330

Personnel: R. Hyde

Groundwater Well Purging Data Sheet

Project Name: Camp Summit Well ID: MW-3 Date: 7/28/03

Water Level Data Time: 0832
A) Depth To Bottom: 11.04
B) Depth To Water: 6.91
C) Height of water column: _____

1 well volume = 0.7 3 well volumes= 2.1 5 well volumes= 3.5

Purge Data
Method: whale pump Flow: ~0.25 gallons per minute

1/2 gallon	1 gallon	1 1/2 gallon	2 gallons
Turb: 341	Turb: 23.0	Turb: 13.0	Turb: 24.5
	pH: 6.13		pH: 6.14
	Cond: 1.32		Cond: 1.38
	Temp: 13.85		Temp: 13.35
	DO: 7.23		DO: 6.30

2 1/2 gallons	3 gallons	3 1/2 gallons	4 gallons
Turb:	Turb:	Turb:	Turb:
	pH:		pH:
	Cond:		Cond:
	Temp:		Temp:
	DO:		DO:

Did Well Dry Out? YES How Many Times? 1

Time Purging ended: 1405

Observations:
Color: clear Sheen?: none Odor?: none

Comments: Well dry after 2 gallons purged. Let recharge and sampled at 1615. COC TIME 1615

Personnel: R. Hyde

Groundwater Well Sampling Data Sheet

Project Name: Camp Summer Well ID: MW-3 Date: 7/28/03

Water Level Data Time: 0832
A) Depth To Bottom: 11.04
B) Depth To Water: 6.91
C) Height of water column: 4.13

Sampling Method
Method: whale pump Flow: ~0.25 gallons per minute

Prior to sampling:
Turb: 24.5
pH: 6.14
Cond: 1.38
Temp: 13.35
DO: 6.30

Dioxin Sample:
Turb: 24.5
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	2	yes (no)
Dioxin	2	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? YES How Many Times? 1

Observations:
Color: clear Sheen?: none Odor?: none

Comments: Well dry after 2 gallons purged. Let recharge and sampled at 1615. COC Time 1615

Personnel: R. Hyde

Groundwater Well Purging Data Sheet

Project Name: Camp Summit Well ID: MW-4 Date: 7/28/03

Water Level Data Time: 0830
A) Depth To Bottom: 12.72
B) Depth To Water: 6.42
C) Height of water column: 6.3

1 well volume = 1 3 well volumes= 3 5 well volumes= 5

Purge Data
Method: whale pump Flow: ~0.25 gallons per minute

1/2 gallon	1 gallon	1 1/2 gallon	2 gallons
Turb: 280	Turb: 194	Turb: 129	Turb: 89.9
	pH: 6.10		pH: 6.13
	Cond: 0.607		Cond: 0.611
	Temp: 13.95		Temp: 14.15
	DO: 4.80		DO: 0.40

2 1/2 gallons	3 gallons	3 1/2 gallons	4 gallons
Turb: 41.3	Turb: 49.6	Turb: 44.9	Turb:
	pH: 6.13		pH:
	Cond: 0.608		Cond:
	Temp: 13.95		Temp:
	DO: 0.24		DO:

Did Well Dry Out? No How Many Times?

Time Purging ended: 1445

Observations:
Color: clear Sheen?: none Odor?: none

Comments: SAMPLE COC TIME 1445
BLIND DUP collected here

Personnel: R. Hyde

Groundwater Well Sampling Data Sheet

Project Name: Camp Summit Well ID: MW-4 Date: 7/28/03

Water Level Data Time: 0830
A) Depth To Bottom: 12.72
B) Depth To Water: 6.42
C) Height of water column: 6.3

Sampling Method
Method: whale pump Flow: 0.25 gallons per minute

Prior to sampling:
Turb: 44.9
pH: 6.13
Cond: 0.608
Temp: 13.95
DO: 0.24

Dioxin Sample:
Turb: 44.9
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	4	yes (no)
Dioxin	4	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? No How Many Times?

Observations:
Color: clear Sheen?: none Odor?: none

Comments: Sample CDS Time 1445.
Blind Dup collected here

Personnel: R. Hyde

Groundwater Well Purging Data Sheet

Project Name: Camp Summit Well ID: MW-5 Date: 7/28/03

Water Level Data Time: 0835
A) Depth To Bottom: 14.97
B) Depth To Water: 5.80
C) Height of water column: 9.17

1 well volume = 1.5 3 well volumes= 4.5 5 well volumes= 7.5

Purge Data
Method: _____ Flow: _____ gallons per minute

1/2 gallon
Turb: 107

1 gallon
Turb: 20.3
pH: 6.96
Cond: 0.410
Temp: 14.82
DO: 7.24

1 1/2 gallon
Turb: 18.3

2 1/2 gallons
Turb: 17.8
pH: 7.05
Cond: 0.429
Temp: 13.77
DO: 6.14

3 gallons
Turb: 22.1

4 gallons
Turb: 23.0
pH: 7.12
Cond: 0.423
Temp: 13.41
DO: 5.58

4 1/2 gallons
Turb: 20.8

5 gallons
Turb: _____
pH: _____
Cond: _____
Temp: _____
DO: _____

Did Well Dry Out? No How Many Times? _____

Time Purging ended: 1445

Observations:
Color: clear Sheen?: none Odor?: none

Comments: SAMPLE COC TIME 1445

Personnel: R. Hyde

Groundwater Well Sampling Data Sheet

Project Name: Camp Summit Well ID: MW-5 Date: 7/28/03

Water Level Data Time: 0835
A) Depth To Bottom: 14.97
B) Depth To Water: 5.80
C) Height of water column: 9.17

Sampling Method
Method: whale pump Flow: ~0.25 gallons per minute

Prior to sampling:
Turb: 20.8
pH: 7.12
Cond: 0.423
Temp: 13.41
DO: 5.58

Dioxin Sample:
Turb: 20.8
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	2	yes (no)
Dioxin	2	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? No How Many Times?

Observations:
Color: clear Sheen?: none Odor?: none

Comments: Sample COC Time 1445

Personnel: R. Hyde

Groundwater Well Sampling Data Sheet

Project Name: Camp Summit Well ID: MW-6 Date: 7/29/03

Water Level Data Time: 0813 - 7/28/03
A) Depth To Bottom: 18.09
B) Depth To Water: 6.24
C) Height of water column: 11.85

Sampling Method
Method: whale pump Flow: ~0.3 gallons per minute

Prior to sampling:
Turb: 15.1
pH: 6.09
Cond: 0.552
Temp: 15.22
DO: 4.26

Dioxin Sample:
Turb: 15.1
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	2	yes (no)
Dioxin	2	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? No How Many Times?

Observations:
Color: clear Sheen?: NONE Odor?: NONE

Comments: Sample COC Time 0800

Personnel: J. Ferngren

Groundwater Well Purging Data Sheet

Project Name: Camp Summit Well ID: MW-6 Date: 7/28/03

Water Level Data Time: 0813
A) Depth To Bottom: 18.09
B) Depth To Water: 6.24
C) Height of water column: 11.85 x .163

1 well volume = 2 3 well volumes= 6 5 well volumes= 10

Purge Data
Method: whale pump Flow: ~0.3 gallons per minute

1 gallon - 0743
Turb: 95.0

2 gallon - 0747
Turb: 27.1
pH: 6.06
Cond: 0.657
Temp: 15.20
DO: 3.81

3 gallon - 0750
Turb: 20.5

4 gallons - 0754
Turb: 15.7
pH: 6.14
Cond: 0.547
Temp: 15.35
DO: 4.14

5 - 0756 gallons
Turb: 15.0

6 - 0759 gallons
Turb: 15.1
pH: 6.09
Cond: 0.552
Temp: 15.22
DO: 4.26

3 1/2 gallons
Turb:

4 gallons
Turb:
pH:
Cond:
Temp:
DO:

Did Well Dry Out? No How Many Times?

Time Purging ended: 0759

Observations:
Color: clear Sheen?: none Odor?: none

Comments: Began purge at 0740 on 7/29/03.
SAMPLE COC TIME 0800

Personnel: J. Ferngren

Groundwater Well Sampling Data Sheet

Project Name: Camp Summit Well ID: MW-7 Date: 7/29/03

Water Level Data Time: 0628 - 7/28/03
A) Depth To Bottom: 19.05
B) Depth To Water: 8.45
C) Height of water column: 10.60

Sampling Method
Method: Whale pump Flow: ~0.2 gallons per minute

Prior to sampling:
Turb: 39
pH: 6.36
Cond: 0.648
Temp: 13.05
DO: 0.20

Dioxin Sample:
Turb: 39
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	2	yes (no)
Dioxin	2	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? No How Many Times?

Observations:
Color: clear Sheen?: none Odor?: None

Comments: Sample COC Time 0830

Personnel: R. Hyde

Groundwater Well Purging Data Sheet

Project Name: Camp Summit Well ID: MW-7 Date: 7/29/03

Water Level Data Time: 0828 - 7/28/03
A) Depth To Bottom: 19.05
B) Depth To Water: 8.45
C) Height of water column: 10.60

1 well volume = 1.7 3 well volumes= 5.1 5 well volumes= 8.5

Purge Data
Method: whale pump Flow: _____ gallons per minute

1/2 gallon	1 gallon	1 1/2 gallon	2 gallons
Turb: 125	Turb: 95	Turb: 40.1	Turb: 43
	pH: 6.12		pH: 6.18
	Cond: 0.643		Cond: 0.35
	Temp: 12.92		Temp: 13.51
	DO: 0.69		DO: 0.662
3 gallons	3 1/2 gallons	4 gallons	5 gallons
Turb: 41.6	Turb: 37.6	Turb: 39	Turb: 39
	pH: 6.32		pH: 6.36
	Cond: 0.652		Cond: 0.648
	Temp: 13.18		Temp: 13.05
	DO: 0.24		DO: 0.20

Did Well Dry Out? No How Many Times? _____

Time Purging ended: 0830

Observations:
Color: clear Sheen?: none Odor?: none

Comments: Sample COC Time 0830

Personnel: R. Hyde

Groundwater Well Sampling Data Sheet

Project Name: CAMP SUMMIT Well ID: MW-8 Date: 7/28/03

Water Level Data Time: 0841
A) Depth To Bottom: 19.06
B) Depth To Water: 6.43
C) Height of water column: 12.63

Sampling Method
Method: whale pump Flow: ~0.3 gallons per minute

Prior to sampling:
Turb: 15.1
pH: 6.60
Cond: 0.739
Temp: 11.01
DO: 0.00

Dioxin Sample:
Turb: 15.1
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	1	yes (no)
Dioxins	1	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? Yes How Many Times? 1

Observations:
Color: clear Sheen?: none Odor?: none

Comments: SAMPLE COLLECTED AT 1145
COC TIME 1145

Personnel: Bob Hyde

Groundwater Well Purging Data Sheet

Project Name: Camp Summit Well ID: MW-8 Date: 7/28/03

Water Level Data Time: 0841
A) Depth To Bottom: 19.06
B) Depth To Water: 6.43
C) Height of water column: 12.63

1 well volume = 2.0586 3 well volumes= 6.1758 5 well volumes= 10.293

Purge Data
Method: whale pump Flow: _____ gallons per minute

1 gallon - 0827
Turb: 18.4

2 - 0830
gallon
Turb: 8.7
pH: 6.33
Cond: 0.6669
Temp: 13.20
DO: 0.45

3 - 0829
gallon
Turb: 6.9

4 - 0833
gallons
Turb: 9.1
pH: 6.36
Cond: 0.767
Temp: 12.06
DO: 0.00

5 - 0836
gallons
Turb: 10.2

6 - 0839
gallons
Turb: 12.6
pH: 6.59
Cond: 0.723
Temp: 11.36
DO: 0.00

7 - [redacted]0843
gallons
Turb: 15.1

7 continued
gallons
Turb: 16.1
pH: 6.60
Cond: 0.739
Temp: 11.01
DO: 0.00

Did Well Dry Out? YES How Many Times? _____

Time Purging ended: 0843

Observations:
Color: _____ Sheen?: _____ Odor?: _____

Comments: Begin purge at 0824. Will let recharge + then sample.

Personnel: J. Ferngren

Groundwater Well Sampling Data Sheet

Project Name: Camp Summit Well ID: MW-10 Date: 7/29/03

Water Level Data Time: 0906 - 07/29/03
A) Depth To Bottom: 22.02
B) Depth To Water: 5.90
C) Height of water column: 16.12

Sampling Method
Method: whale pump Flow: 0.4 gallons per minute

Prior to sampling:
7/29 → Turb: 8.9
pH: 7.14
Cond: 0.391
Temp: 9.97
DO: 0.89

Dioxin Sample:
Turb: 8.9
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	2/2/2 - 6 total	yes (no)
Dioxins	2/2/2 - 6 total	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? YES How Many Times? 1

Observations:
Color: clear Sheen?: slight sheen Odor?: none

Comments: Purged 6 gallons on 7/28/03. Let recharge overnight.
07/29/03 Water level before sampling 7.63 ft. - MS/MSD Collected here.

Personnel: J. Ferrogeen SAMPLE TIME = 0928

Groundwater Well Purging Data Sheet

Project Name: CAMP SUMMIT Well ID: MW-10 Date: 7/28/03

Water Level Data Time: 0906
A) Depth To Bottom: 22.02
B) Depth To Water: 5.90
C) Height of water column: 16.12

1 well volume = 2.62756 3 well volumes= 7.88268 5 well volumes= 13.1378

Purge Data
Method: whale pump Flow: 0.4 gallons per minute

1 gallon -1637
Turb: 10.5

2 gallon - 1641
Turb: 7.6
pH: 7.11
Cond: 0.381
Temp: 10.19
DO: 0.73

3 gallon -1644
Turb: 12.3

4 gallons - 1647
Turb: 16.5
pH: 7.10
Cond: 0.380
Temp: 8.18
DO: 0.52

5 - 1650 gallons
Turb: 11.4

6 - 1655 gallons
Turb: 14.7
pH: 7.17
Cond: 0.359
Temp: 9.19
DO: 2.69

7 gallons
Turb:

8 gallons
Turb:
pH:
Cond:
Temp:
DO:

Did Well Dry Out? YES How Many Times?

Time Purging ended: 1655

Observations:
Color: clear Sheen? slight sheen Odor? no

Comments: Begin purge at 1634. Will let recharge + then sample

Personnel: J. Ferngren.

Groundwater Well Sampling Data Sheet

Project Name: Camp Summit Well ID: MW-11 Date: 7/29/03

Water Level Data Time: 0903 ← 07/28/03
A) Depth To Bottom: 20.40
B) Depth To Water: 4.17
C) Height of water column: 16.23

Sampling Method
Method: Whale pump Flow: ~0.5 gallons per minute

Prior to sampling:
Turb: 15.7
pH: 7.01
Cond: 0.378
Temp: 9.70
DO: 6.89

Dioxin Sample:
Turb: 15.7
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	2	yes (no)
Dioxins	2	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? Yes How Many Times? 1

Observations:
Color: clear Sheen?: none Odor?: slight odor

Comments: Well dry on 7/28/03. Let recharge. Water level at 11.72 on 7/29/03
Sample well on 7/29/03 at 1145. COC Time: 1145

Personnel: J. Ferngren

Groundwater Well Purging Data Sheet

Project Name: CAMP SUMMIT Well ID: MW-11 Date: 7/28/03

Water Level Data Time: 0905
A) Depth To Bottom: 20.40
B) Depth To Water: 4.17
C) Height of water column: 16.23

1 well volume = 2.6459 3 well volumes= 7.93647 5 well volumes= 13.2295

Purge Data
Method: whale pump Flow: ~0.5 gallons per minute

1 gallon - 16:17
Turb: 35.0

2 gallon - 16:19
Turb: 21.0
pH: 6.30
Cond: 0.380
Temp: 10.71
DO: 11.85

3 - 1621 gallon -
Turb: 10.1

4 - 1623 gallons -
Turb: 16.2
pH: 6.76
Cond: 0.410
Temp: 9.73
DO: 4.56

5 - 1625 gallons
Turb: 15.7

6 - 1627 gallons
Turb: 15.2
pH: 6.96
Cond: 0.368
Temp: 8.90
DO: 1.74

7 gallons
Turb:

8 gallons
Turb:
pH:
Cond:
Temp:
DO:

Did Well Dry Out? Yes How Many Times?

Time Purging ended: 1553

Observations:
Color: clear Sheen?: none Odor?: slight odor

Comments: Begin purge at 1615. DRY AFTER 6 gallons. Will let recharge + then sample

Personnel: J. Ferngren

Groundwater Well Sampling Data Sheet

Project Name: Cable Summit Well ID: MW-12 Date: 7/30/03

Water Level Data Time: 1400
A) Depth To Bottom: 13.00
B) Depth To Water: 4.21
C) Height of water column: 8.79

Sampling Method
Method: bailer Flow: _____ gallons per minute

Prior to sampling:
Turb: 178.0
pH: 6.27
Cond: 0.593
Temp: 14.25
DO: 6.67

Dioxin Sample:
Turb: 178.0
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	2	yes (no)
Dioxin	2	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? Yes How Many Times? 3

Observations:
Color: light Brown Sheen?: none Odor?: none

Comments: Started Development on 7/28/03. Water still silty. Sampled with bailer to attempt to get clearer water

Personnel: J. Ferngren

Sample COC Time: 1446
After sample DTW = 9.72

Groundwater Well Sampling Data Sheet

Project Name: Summit Stock Co. Well ID: MW-13 Date: 7/30/03

Water Level Data Time: 1400
A) Depth To Bottom: 20.38
B) Depth To Water: 10.40
C) Height of water column: 9.98

Sampling Method
Method: bailer Flow: _____ gallons per minute

Prior to sampling:
Turb: 213.0
pH: 7.06
Cond: 0.654
Temp: 14.34
DO: 13.51

Dioxin Sample:
Turb: 213.0
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	2	yes (no)
Dioxin	2	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? Yes-During Development How Many Times? 3

Observations:
Color: light brown Sheen?: none Odor?: none

Comments: Started development on 7/23/03. Water still very silty. Sampled with bailer to attempt to get clearer water.

Personnel: J. Ferngren

Sample COC Time: 1424
After sample DTW = 17.56

Groundwater Well Sampling Data Sheet

Project Name: Camp Summit Well ID: MW-14 Date: 7/30/03

Water Level Data Time: 1400
A) Depth To Bottom: 23.75
B) Depth To Water: 20.71
C) Height of water column: 3.04

Sampling Method
Method: bailer Flow: _____ gallons per minute

Prior to sampling:
Turb: >999.0
pH: 6.98
Cond: 0.643
Temp: 14.14
DO: 9.76

Dioxin Sample:
Turb: >999.0
(out of jar)

Constituents Sampled	# of Amber Liters Collected	Filtered? (Circle one)
BNA	1	yes (no)
Dioxin	1	yes (no)
		yes no
		yes no
		yes no

Did Well Dry Out? YES How Many Times? 3

Observations:
Color: DARK BROWN Sheen?: NONE Odor?: NONE

Comments: STARTED DEVELOPMENT ON 7/29/03. WATER STILL VERY SILTY. SAMPLED WITH BAILER TO ATTEMPT TO GET CLEARER WATER

Personnel: J. FERNGREN

SAMPLE COC TIME: 1504
After Sample DTW = 23.10

APPENDIX D

BIOTA COLLECTION LOGS

FISH COLLECTION RECORD

Project or site name: Panther Creek, Downstream Reach DEC Region 4

Collections made by (names): Kurt Jinka, Chris Fishel

Sampling method: ☒ Electrofishing; ☐ Gill netting; ☐ Trap netting; ☐ Trawling; ☐ Seining; ☐ Angling; ☐ Other

Preservation method: ☐ Freezing; ☒ Other On ice

Lab number	Field collection number	Species	Date taken	Location	Age class	Sample condition	Length (mm)	Weight (g)	Remarks
	2PC-1	ST	11-27-01	Panther Cr., DS reach			199	54	
	2PC-2						179	46	
	2PC-3						159	29	
3	↓						165	31	
	2PC-4						147	23	
4							155	25	
	2PC 5						145	20	
	2PC 5						124	15	
5	2PC 5						138	18	
	2PC 5						123	13	
	2PC 6						141	21	
	2PC 6						138	17	
6	2PC 6						140	18	
	2PC 6						142	18	
	2PC 7						125	12	
	2PC 7						135	18	
7	2PC 7						132	15	
	2PC 7						128	13	

FISH COLLECTION RECORD

Project or site name: Panther Crk, Downstream Reach DEC Region 4

Collections made by (names): Kurt Jirka, Chris Fishel

Sampling method: ☒ Electrofishing; ☐ Gill netting; ☐ Trap netting; ☐ Trawling; ☐ Seining; ☐ Angling; ☐ Other

Preservation method: ☐ Freezing; ☒ Other On ice

Lab number	Tag or collection number	Species	Date taken	Location	Age	Sex / reprod. condition	Length (mm)	Weight (g)	Remarks
	2PC 8	ST	11-27-a	Panther Creek			141	19	
	2PC 8						124	12	
8	2PC 8						140	19	
	2PC 8						136	18	
	2PC 9						136	17	
	2PC 9						128	13	
9	2PC 9						123	14	
	2PC 9						127	15	
	2PC 10						122	13	
10	2PC 10						121	12	
	2PC 10						123	13	
	2PC 10						116	11	
	2PC 11						109	8	
11	2PC 11						97	6	whole fish
	2PC 11	"	"	"			72	3	

FISH COLLECTION RECORD

Project or site name: Panther Creek 11-27-01 DEC Region 4

Collections made by (names): Kurt Jirka, Chris Fiskel

Sampling method: ☒ Electrofishing; ☐ Gill netting; ☐ Trap netting; ☐ Trawling; ☐ Seining; ☐ Angling; ☐ Other

Preservation method: ☐ Freezing; ☐ Other

Station 3PC located 500 ft downstream of trib from Russman Fly

Lab number	Tag or collection number	Species	Date taken	Location	Age	Sex, repro. condition	Length (mm)	Weight (g)	Remarks
	3PC-1	ST	11-27-01	Panther Crk			162	52	
	3PC-2						176	54	
	3PC-3						152	23	
	"						152	24	
	"						130	14	
	3PC-4						180	38	
	"						153	22	
	3PC-5						135	19	
	"						131	17	
	"						140	20	
	3PC-6						154	20	
							140	22	
							130	17	
	3PC-7						145	20	
	"						129	17	
	"						134	17	

FISH COLLECTION RECORD

Project or site name: Panther Creek DEC Region 4

Collections made by (names): Kurt Jirka, Chris Fishel

Sampling method: ☒ Electrofishing; ☐ Gill netting; ☐ Trap netting; ☐ Trawling; ☐ Seining; ☐ Angling; ☐ Other _____

Preservation method: ☐ Freezing; ☐ Other _____

Station 3PC located 500 ft. downstream of trib from Rossman Fly

Lab number	Tag or collection numbers	Species	Date taken	Location	Age	Sex, reproductive condition	Length (mm)	Weight (g)	Remarks
	3PC-8	ST	11-27-01	Panther Crk			124	16	
							124	15	
							131	15	
							120	13	
	3PC-9						125	12	
							118	12	
							147	27	
	3PC-10						136	19	
							131	16	
							125	14	Upper caudal lobe missing
							118	13	
	3PC-11						114	12	
							130	14	
							124	13	
							119	11	
							112	11	

FISH COLLECTION RECORD

Project or site name: Panther Creek DEC Region 4

Collections made by (names): Kurt Jirka, Chris Fishel

Sampling method: ☒ Electrofishing; ☐ Gill netting; ☐ Trap netting; ☐ Trawling; ☐ Seining; ☐ Angling; ☐ Other _____

Preservation method: ☐ Freezing; ☐ Other _____

Station 3PC located 500 ft. downstream of trib from Rossman fly

Lab number	Tag or collection number	Species	Date taken	Location	Age	Sex, reprod. condition	Length (cm)	Weight (g)	Remarks
	3PC 12	ST	11-27-01	Panther Crk			78	3	
							106	7	
							75	3	
							59	2	
							67	3	
							59	2	
							61	2	
							99	6	
							63	2	
							57	2	
							54	2	
							69	3	
							69	3	
							59	2	
							59	2	
							55	1	
							50	1	

FISH COLLECTION RECORD

Project or site name: Panther Creek DEC Region 4

Collections made by (names): Kurt Jirka, Chris Fishel

Sampling method: ☒ Electrofishing; ☐ Gill netting; ☐ Trap netting; ☐ Trawling; ☐ Seining; ☐ Angling; ☐ Other _____

Preservation method: ☐ Freezing; ☐ Other _____

Station 3PC-3 located 500 ft. downstream of trib from Rossman Cr

Lab number	Tag or collection number	Species	Date taken	Location	Age	Sex, reproductive condition	Length (mm)	Weight (g)	Remarks
	3PC 13	ST	11-27-01	Panther Crk			66	2	
							106	9	
							100	7	
							68	3	
							64	3	
							71	4	
							77	5	
							60	2	
							68	3	
							67	3	
							60	2	
							66	3	
							63	2	
							56	1	
							68	3	

FISH COLLECTION RECORD

Project or site name: Panther Crk. DEC Region 4

Collections made by (names): Kurt Jirka, Chris Fishel

Sampling method: ☒ Electrofishing; ☐ Gill netting; ☐ Trap netting; ☐ Trawling; ☐ Seining; ☐ Angling; ☐ Other _____

Preservation method: ☐ Freezing; ☐ Other _____

Station 3PC located 500 ft. downstream of trib from Rossman fly

Lab number	Tag or collection number	Species	Date taken	Location	Age	Sex, reproductive condition	Length (mm)	Weight (g)	Remarks
	3PC 14	ST	11-27-a	Panther Crk.			86	5	
							72	2	
							74	4	
							76	5	
							62	3	
							62	3	
							60	2	
							68	3	
							66	2	
							80	4	
							68	3	
							70	3	
							58	2	
							59	2	
							72	3	

FISH COLLECTION RECORD

Project or site name: Panther Crk. DEC Region 4

Collections made by (names): Kurt Jirka, Chris Fishel

Sampling method: ☒ Electrofishing; ☐ Gill netting; ☐ Trap netting; ☐ Trawling; ☐ Seining; ☐ Angling; ☐ Other _____

Preservation method: ☐ Freezing; ☐ Other _____

Station 3PC located 500 ft. downstream of trib from Rossman fly

Lab number	Tag # / collection number	Species	Date taken	Location	Age	Sex / reprod condition	Length (mm)	Weight (g)	Remarks
	3PC-15	St	11-27-01	Panther Crk.			119	14	
							125	14	
							128	16	
							120	14	
							113	11	
	3PC-16						119	13	
							116	9	
							122	12	
							125	16	Missing LP fin
							112	11	
							123	15	
	3PC-17						140	18	
							110	11	
							115	11	
							113	11	

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FISH COLLECTION RECORD

Project or site name: Panther Crk. DEC Region 4

Collections made by (names): Kurt Jirka, Chris Fishel

Sampling method: ☒ Electrofishing; ☐ Gill netting; ☐ Trap netting; ☐ Trawling; ☐ Seining; ☐ Angling; ☐ Other _____

Preservation method: ☐ Freezing; ☐ Other _____

Station 3PC located 500 ft. downstream of trib from Rossman Fly

Lab number	Tag or collection number	Species	Date taken	Location	Age	Sex/ reprod condition	Length (mm)	Weight (g)	Remarks
	3PC 17	ST	11-27-01	Panther Crk			108	9	
	3PC18	ST					120	14	
							126	13	
							110	10	
							114	12	
							115	13	
	3PC 19	ST					113	11	
							113	10	
							123	14	
							105	8	
							107	9	

APPENDIX E

QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT

APPENDIX E

QUALITATIVE HUMAN HEALTH EXPOSURE ASSESSMENT for the CAMP SUMMIT SITE

NYSDEC Site No. 4-48-006

May 2, 2002

Prepared for:
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7015

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1.0 QUALITATIVE HUMAN EXPOSURE ASSESSMENT

Exposure assessment is the process of identifying potential current and future receptors, and characterizing the nature of their contact with a chemical. A qualitative exposure assessment was performed for the Camp Summit site in order to determine potential exposure pathways associated with current site conditions in the absence of remediation.

The qualitative exposure assessment results in the creation of site-specific exposure profiles, which provide the narrative description of the mechanisms by which exposure to contaminants may occur at a site. Chemical, physical, and toxicological parameters for the chemicals of potential concern are also identified and taken into account when developing the exposure profiles.

1.1 Exposure Setting

The exposure setting is evaluated with respect to both current and future land uses of the site and surrounding area in order to aid in the identification of potential receptors, exposure points and exposure pathways.

Camp Summit is a large complex of New York State Department of Environmental Conservation (NYSDEC) crew headquarters and an active New York Department of Corrective Services (NYDCS) incarceration facility, situated in the town of Fulton, Schoharie County, New York. Camp Summit is bordered on the southeast by New York State land and the remainder of the facility is bordered by private property, some of which is used for residential purposes. A small pond is located on-site; its outlet feeds a tributary of Panther Creek. The outlet is a Class C (fish propagation) stream, and Panther Creek is a Class C (TS) (trout spawning) stream. A NYSDEC Regulated Wetland is located approximately 0.5 miles southeast of the site. The surrounding area is rural, generally consisting of undeveloped forest and farmland.

Wood treatment operations were conducted at Camp Summit between 1962 and 1975. Based on previous investigations several areas potentially impacted by releases at the site have been identified, including:

- The NYSDEC office (Building 48);
- the former wood treatment plant (Building 49);
- the planer room in the old sawmill (Building 51);
- the former staging areas for treated lumber;
- the shale pit and several satellite areas previously used for waste disposal;
- the Pond and associated drainage area on-site.

Each of these areas is indicated on **Figure 2** in the Remedial Investigation Report.

1.2 Identification of Exposure Pathways

For identified receptors to be exposed to a chemical of potential concern at the site, a current or reasonable future potential exposure pathway must be established leading from the source to the receptor. The exposure pathway is the course that the chemical takes from the source of the material to the receptor of concern. An exposure pathway has five elements:

- a contaminant source
- contaminant release and transport mechanisms
- a point of exposure
- a route of exposure
- a potential receptor

An exposure pathway is complete when all five elements of an exposure pathway are documented; a potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway is documented. An exposure pathway may be eliminated from further evaluation when any one of the five elements comprising an exposure pathway has not existed in the past, does not exist in the present, and will never exist in the future.

1.2.1 Source of Contamination

One of the work projects at Camp Summit was the operation of a wood treatment facility and sawmill. During this time, copper naphthenate and pentachlorophenol (PCP) were the principle chemical biocides used in treating lumber at the site. The PCP was mixed with fuel oil for treatment. During the treatment process (located in Building 49), poles were lowered into dip tanks filled with the wood preservative. After treatment, poles were hoisted from the tank and allowed to drip over the tank for a period of time. Poles were finally moved to a designated treated material storage area outside the building. Therefore, the sources of release to the environment are historical surficial spills of wood treatment products (PCP, copper naphthenate, and fuel oil) to soil. In addition, there was a diesel fuel spill at the old sawmill (Building 51) in April 1990. The sawmill operations were moved to the former treatment building (Building 49) in 1990 in order to facilitate cleanup of this spill. It is possible that residual impacts from this spill remain within or near the former treatment building.

1.2.2 Fate and Transport

Contaminant release and transport mechanisms carry contaminants from the source to points where individuals may be exposed. Chemical migration between media such as soil and groundwater is influenced by chemical parameters such as water solubility or molecular size or shape, in addition to the chemical and physical characteristics particular to a site's media. This section discusses information about the fate and transport of the source chemicals present at the site.

Copper Naphthenate

Copper naphthenate is a wood preservative/biocide comprised of copper compounds and naphthenic acid. The United States Environmental Protection Agency classifies copper naphthenate as a general-use (unrestricted) pesticide. Most preparations consist of 6-8% copper as copper naphthenate is typically diluted in solvents such as diesel fuel or mineral spirits (Merichem, 1999). Naphthenic acids are predominantly alicyclic (saturated, non-aromatic), and are naturally-occurring byproducts of petroleum.

Horizontal and vertical migration of copper naphthenate from a release area is not anticipated to be significant, as the preservative has a strong tendency to bind to soil and/or organic particles. Adsorption of copper is particularly dependent on the soil's chemical and physical composition, such as pH, amount of organic matter, and cation exchange capacity, with the greatest potential for leaching occurring in acidic, sandy soils (ATSDR, 2000). In water, copper naphthenate will generally adsorb to or complex with mineral or organic constituents. At higher

pHs, copper may precipitate out of solution (ATSDR, 2000). Volatilization and biodegradation of copper naphthenate may occur in soil and groundwater (Merichem, 1999).

The bioconcentration factor (BCF) of copper may range considerably among species, from 10 in fish to 30,000 in molluscs; the potential for uptake may be influenced by feeding mechanisms, such as filter-feeding, as opposed to dermal or gill absorption (ATSDR, 2000). Copper is not known to biomagnify through the food chain (ATSDR, 2000). There is little information regarding the bioconcentration potential of napthenic acids.

Pentachlorophenol

Pentachlorophenol has low water solubility and a strong tendency to adsorb onto soil or sediment particles in the environment. Adsorption to soils and sediments is highly pH-dependent, and is more likely to occur under acidic conditions than under neutral or basic conditions; no adsorption occurs above pH 6.8 (ATSDR 2000; Howard, 1991). Therefore, leaching of PCP from soil to groundwater may be possible, particularly at lower pHs. Disassociated forms of PCP may be rapidly photolyzed by sunlight; PCP may also undergo biodegradation by microorganisms, animals, and plants, although degradation is generally slow (Howard, 1991).

PCP has an octanol-water partition coefficient (Kow) of 100,000 (Howard, 1991), which indicates that it is lipid-soluble and therefore has a tendency to bioaccumulate in organisms. Bioaccumulation is largely pH-dependent, with considerable variation among species. Bioconcentration factors (BCFs) for PCP are generally under 1,000, but some studies have reported BCFs up to 10,000. Significant biomagnification of PCP in either terrestrial or aquatic foodchains, however, has not been demonstrated (ATSDR, 2000).

Pentachlorophenol products often contain impurities such as chlorophenols, dioxins, and furans. Of particular concern are the chlorinated dibenzo-p-dioxins (CDDs) and dibenzofurans (CDFs), which may also be formed through the degradation of PCP. Once released to the environment, these compounds generally adsorb to soil or sediment particles, due to their low water solubilities. CDDs and CDFs may undergo degradation through biological action or by photolysis, with a half-life ranging from weeks to months. Photolysis and hydrolysis are generally not significant processes, however, as these compounds persist in the adsorbed phase (USEPA, 2002). Soil or sediment adsorption is highly pH-dependent (Howard, 1991).

Due to their high propensity for adsoprtion, CDDs are not expected to leach from soil, although some leaching of disassociated forms of the compounds may occur, especially at lower pHs

(USEPA, 2002). Volatilization from either subsurface soil or water is not expected to be a major transport pathway, although may be significant for surficial impacts (ATSDR, 2000). As with PCP and other lipophilic pesticides, CDDs and CDFs tend to bioaccumulate in exposed organisms, with BCFs ranging from 5,000 to 10,000 (Montgomery, 1996).

Fuel Oil

PCP and copper naphthenate are oilborne preservatives. At the site, PCP and CN were mixed with fuel oil as the carrier fluid. Fuel oils are mixtures of numerous aliphatic and aromatic hydrocarbons. Individual components of fuel oil include n-alkanes, branched alkanes, benzene and alkylbenzenes, naphthalenes, and PAHs (ATSDR, 2000). Soil adsorption, volatilization to air, and leaching potential depend on a PAH's individual chemical characteristics; however, as a class of compounds, they are generally insoluble in water, with a strong tendency to bind to soil or sediment particles. Some of the lighter-weight PAHs (such as naphthalene, acenaphthene, and phenanthrene) may volatilize from soil or groundwater into the air. Degradation may occur through photolysis, oxidation, biological action, and other mechanisms.

As nonpolar, organic compounds, PAHs may be accumulated in organisms from water, soil sediments, and food. BCFs vary among PAHs and receptor species, but in general, bioconcentration is greater for the higher molecular weight compounds than for the lower molecular weight compounds (ATSDR, 2000).

1.3 Points of Exposure

The exposure point is a location where actual or potential human contact with a contaminated medium may occur. Analytical results for samples collected at Camp Summit indicate that soil, sediment, and groundwater have been impacted by numerous contaminants, including the following:

- Pentachlorophenol (PCP) and other phenolic compounds;
- Polychlorinated dioxins (CDDs) and dibenzofurans (CDFs);
- Petroleum hydrocarbons;
- Polycyclic aromatic hydrocarbons (PAHs); and
- Metals, including arsenic, chromium, copper, lead, and zinc.

The potentially impacted media are discussed below.

1.3.1 Soil

Historical and recent analytical results from samples collected across the site indicate that shallow soils have been impacted by PCP under and on the northeast end of Building 49. Concentrations in this area were as high as 6300 ug/kg at sampling location SS-16. Samples previously collected southwest of Building 50 have also shown impacts by PCP, as evidenced by immunoassay analysis of soil samples from this area for PCP. The maximum PCP concentration in this area was 253,000 ug/kg, although the next highest result from this area was 4790 ug/kg, making the maximum concentration suspect. Surface soils in the drum-washing area, located southeast of Building 52, have also been impacted. Previous soil samples tested (using immunoassay methods) showed concentrations of PCP up to 80,000 ug/kg in this area.

Subsurface soils have also been impacted by PCP. Shallow test pit samples (generally taken 2 – 4 feet below grade) from southwest of Building 51 showed subsurface PCP concentrations ranging up to 26,000 ug/kg. The higher concentrations appeared to be found in samples taken away from Building 51 and closer to Building 52 (STP-18, 19, 21, and 22). Test Pit samples taken at various locations around the site generally included a depth interval of 0-10 feet below grade. PCP was detected in 14 of 33 test pit samples, although 10 of these detections were estimated concentrations occurring below the laboratory reporting limit of 1600 ug/kg. The highest concentration (42,000 ug/kg) was detected in TP-1, located at the suspected disposal area along the access road to the shale pit. The next highest sample result was taken from TP-33, located north of Building 49, which exhibited a PCP concentration of 23,000 ug/kg. A sample from SB-3, in the same general area as TP-33, contained 9600 ug/kg PCP at 8 -10 feet below grade. A sample from MW-7, located outside Building 48, showed PCB concentrations of 29,000 ug/kg at a depth of 2-4 feet below grade. Previous samples from borings installed around Building 48 showed PCP concentrations (as measured by immunoassay methods) as high as 83,000 ug/kg at a depth of three (3) feet below grade.

Soil samples taken from beneath the buildings during previous investigations were analyzed for PCP using immunoassay methods. The highest concentrations were reported under the northwestern side of Building 49 where concentrations were as high as 820,000 ug/kg at depths of three (3) feet below grade. In the Remedial Investigation two borings were installed in Building 49. One of these (SB-2) contained a PCP concentration of 9800 ug/kg, and the other had a low concentration of 160 ug/kg (estimated below the reporting limit). A soil sample taken from MW-6 during this investigation at a depth of 6-8 feet below grade had low concentrations of

PCP (24 ug/kg). PCP was detected historically at low concentrations (<100 ug/kg) in samples from under Building 53.

Several other SVOCs have been detected in soils at the site, including polycyclic aromatic hydrocarbons (PAHs) and phthalate esters. These compounds were generally detected at low concentrations estimated at less than the reporting limit in surface and subsurface soils. However, several test pit samples exhibited higher concentrations of some PAHs indicative of fuel oils (e.g. napthalene and 2-methylnapthalene), including TP-16, 32 and 33. TP-16 is located in the drum-washing area, and TP-32 and TP-33 are located on the north side of Building 49.

Four of the test pit samples were also analyzed for VOCs. In TP-1, several VOCs were detected at relatively high concentrations, including acetone, 2-butanone, ethyl benzene, and xylenes. Lower VOC concentrations were also detected at TP-33.

Numerous soil samples at the site have been analyzed for dioxins. The highest concentration of dioxins in surface soils was reported at surface sample SS-23 (3.8 ng/g 2,3,7,8-TCDD equivalents), located northeast of Building 49. PCP concentrations at this location was relatively low, 110 ug/kg (estimated below the reporting limit), although much higher PCP concentrations were found in other soil samples from the same area. The highest concentration reported in the subsurface was 7.4 ng/g 2,3,7,8-TCDD equivalents found at TP-1. Previous investigations reported the presence of dioxins northwest of Building 50, in the drum washing area, and under Building 49. The maximum concentration reported anywhere at the site was in soils from under the northwest corner of Building 49 at a concentration of 24.2 ng/g 2,3,7,8-TCDD equivalents.

Metals have been detected in site soils, although most are present at concentrations likely to be representative of background concentrations. Three background surface soil samples were taken south of the site on the opposite side of the access road. However, due to the expected high variability expected in background conditions, site concentrations were compared to New York State or Eastern United States background concentrations as reported in NYSDEC (1994), as well as site background concentrations. Site concentrations were considered representative of background if:

- All site concentrations were less than average site background concentrations;
- Mean site concentrations were less than average site background concentrations;

- All concentrations were less than New York State or Eastern United States or background concentrations.

Based on these considerations, arsenic, copper, lead, magnesium, nickel, mercury and zinc were identified as having site concentrations greater than background concentrations. Each of these are discussed briefly below.

The mean site background concentration of arsenic was 9.1 mg/kg and the maximum New York State background concentration was 12 mg/kg (NYSDEC 1994). A few concentrations at the site exceeded this latter value (8 out of 36 samples), however, the maximum concentration was 17.9 mg/kg at SS-2. The seven remaining samples exhibited arsenic concentrations greater than 12 mg/kg but less than 14 mg/kg. It appears possible, therefore, that arsenic concentrations are representative of background at this site given that most results were only slightly higher than the maximum state background concentration.

The mean site background concentration of copper was 10.8 mg/kg and the maximum eastern United States background concentration was 50 mg/kg. All site concentrations were less than this latter value, with the exception of one sample from TP-16 where the copper concentration was reported as 126 mg/kg. This was, however, an estimated concentration as the analysis was not within the quality control limits. This location had elevated concentrations of 2-methylnapthalene and napthalene, indicating the possible presence of fuel oil or other petroleum product comingled with the copper.

The mean site background concentration of lead was 17.8 mg/kg. NYSDEC (1994) indicates that background levels for lead can be expected to vary widely, but average levels in rural areas may range up to 61 mg/kg. Only one (1) of 36 samples exceeded this latter value. This sample was collected at SS-26, exhibiting an estimated concentration of 104 mg/kg. This location had no detected PCP or constituents that appeared to be related to fuel oil.

The mean site background concentration of magnesium was 2300 mg/kg and the maximum eastern United States background concentration was 5000 mg/kg. Five (5) of 36 site samples exceeded this latter value, with a maximum of 5570 mg/kg. Since these concentrations are close to the limit of 5000 mg/kg and there is no known source of magnesium, it appears likely that magnesium concentrations observed at the site are attributable to background conditions.

The mean site background concentration of nickel was 14.9 mg/kg and the maximum eastern United States background concentration was 25 mg/kg. Site concentrations ranged from 15.9 to 39.7 mg/kg, with 21 of 36 samples exceeding 25 mg/kg. Since the range of site concentrations is relatively narrow, and there is no known source of nickel at the site, it appears

possible that site concentrations are representative of background conditions.

The mean site background concentration of mercury was 0.045 mg/kg and the maximum eastern United States background concentration was 0.2 mg/kg. The only site concentration that exceeded this latter concentration was the surface soil sample taken from SS-26 where the mercury concentration was 0.256 mg/kg. This is the same location where the lead concentration was elevated, and may be indicative of paint chips or residual materials in the sample or localized area.

The mean site background concentration of zinc was 67.4 mg/kg, although the maximum background concentration reported for the eastern United States (NYSDEC, 1994) was 50 mg/kg. Numerous site concentrations exceeded both of these values, ranging from 52.5 to 255 mg/kg, with 33 of 36 samples having concentrations greater than 67.4 mg/kg. Some of the higher zinc concentrations were found at locations where PCP was also detected (SS-19 and STP-19), but this was not always the case. Nevertheless, it appears that zinc concentrations at the site are likely related to historical activities.

1.3.2 Sediment

In previous investigations, sediment samples were taken from the pond adjacent to the site, as well as the drainage swale that feeds the pond. No detectable PCP was found at the facility end of the drainage swale, and 1 mg/kg PCP was detected at the pond end of the drainage swale. PCP was detected in nine (9) of the eleven (11) samples taken from within the pond. The maximum concentration was 3.7 mg/kg, in a sample collected near the drainage swale outlet; all other concentrations were 0.5 mg/kg or less. PCP was not detected in a sample located at the southern end of the pond (although the detection limit for this sample was 28 mg/kg). Two of these samples were also analyzed for dioxins and furans. These constituents were detected at both locations above the 0.0114 2,3,7,8-TCDD screening level site specific at concentrations of 0.031 and 0.042 ng/g 2,3,7,8-TCDD equivalents. Several PAHs were also detected in the sample near the drainage swale outlet, although the concentrations were 1.1 mg/kg or less.

The sediment sampling conducted during the Remedial Investigation focused on the northern edge of the pond, the wetlands/creek north of the pond, and near the outlet of the creek. PCP was not detected in any of these samples (at a reporting limit of 1600 ug/kg). Benzo(a)pyrene, a PAH, was detected in one sample at a concentration of 690 ug/kg. Di-n-octyl, phthalate a common laboratory contaminant, was detected in several samples, and is not known to be site related. Of the dioxins and furans, only the octachlorodibenzo dioxins (OCDD) were detected in three (3) of the ten (10) samples. Two of these samples were from the 0-1 foot interval, and the other from 0–2 inch interval. The maximum concentration reported was 8.5 ng/g OCDD. Using

the sediment-wildlife toxic equivalence factors discussed previously, this concentration would equate to 0.00000021 ng/g as 2,3,7,8-TCDD below the location specific screening value of 0.01008 ng/g.

1.3.3 Groundwater

During previous investigations two of the eight water supply wells located on the property were sampled. Wells 7 and 8 were reportedly the only ones in use by the facility at that time (1997). These wells were sampled and analyses conducted for a wide variety of contaminants. The only contaminants that were detected were attributed to laboratory contamination. These wells are located south and south east of the facility and upgradient of site operations.

During the Remedial Investigation, five other water supply wells (Wells 1,2, 3, 4, and 5) were sampled. Of these, Well 4 is located generally downgradient of the treatment building (Building 49). The only SVOCs detected in any of these wells were phthalate esters, common laboratory contaminants. Concentrations were estimated concentrations below or slightly above the reporting limit. PCP was not detected in any of these water supply wells.

A number of metals were detected in these water supply wells, including barium, calcium, copper, iron, lead, magnesium, manganese, sodium, and zinc. Aluminum, arsenic, chromium, cobalt, nickel, and potassium were also detected, but at concentrations below the laboratory quantitation limits. Concentrations were generally lower at Well 4 compared to the other supply wells, suggesting that these concentrations may not be a result of releases at the site. These samples were not filtered and the metals results likely represent the presence of suspended solids. Total metals concentrations would likely be lower if the samples were filtered. It is also possible that groundwater concentrations of metals are indicative of background conditions in this area, however, no site specific data are available to demonstrate this comparison.

Site monitoring wells were also sampled during this investigation. Fuel oil was detected at a concentration of 24,000 ug/L in MW-4 which is immediately down gradient from Building 49. PCP was detected at this location at a concentration of 190 ug/L, as were several other phenols at much lower concentrations. Napthalene, indicative of the fuel oil, was also detected at this location at 100 ug/L. PCP concentrations were higher at MW-7 (490 ug/L), adjacent to Building 48, as were other phenols. Fuel oil or its constituents were not detected at this location. PCP was also detected at MW-6 at 28 ug/l and MW-8 at 0.8 ug/L. At other monitoring wells, the only other SVOCs detected were phthalate esters, common laboratory contaminants, were detected at estimated concentrations below reporting limits. Metals detected in monitoring wells were similar to those detected in the water supply wells.

Groundwater samples from site monitoring wells MW-2, MW-3, MW-4, and MW-5 were analyzed for dioxins and furans. Concentrations of 2,3,7,8-TCDD equivalents exceeded the screening value of 0.0007 in MW-3 and MW-4.

1.3.4 Fish Tissue

Trout samples were taken from various locations within Panther Creek which is located downgradient of the site. These samples (whole and fillets) were analyzed for dioxins and furans. Of the 30 samples analyzed, dioxins and furans were detected in 17 samples. For the most part, only octachlorodibenzo dioxins (OCDD) were detected, although TCDF and HpCDD were also detected. The maximum concentration detected was 0.00061 pg/g as 2,3,7,8-TCDD equivalents. It is possible that these concentrations are a result of site activities, but may also be related to other sources, as dioxins and furans can be found in fish tissue as a result of non-specific sources. None of the samples collected exceeded the wildlife bioaccumulation criteria of 3.0 ng/g.

1.4 Potential Receptors and Exposure Routes

Exposure assessment includes a description of the potentially exposed persons who live, work, play, visit, or otherwise come to the site or surrounding environment. Consideration is given to the characteristics of the current populations (including sensitive subpopulations) as well as those of any potential future populations that may be exposed under future site activities and uses.

Camp Summit is currently maintained as a NYSDEC management area and as a NYSDCS correctional facility, located in a heavily wooded, rural area. Inmates at Camp Summit and NYSDEC employees occasionally visit the former wood treatment areas. There are currently no deed restrictions on the property that would restrict future land use. Therefore, the following receptors have been identified for the site under current and possible future land use scenarios:

- Adult inmates and employees at Camp Summit;
- Construction workers performing excavation activities;
- Recreational user of the area (i.e., hunter, fisher, or trespasser); and
- Future adult or child resident of the site.

The route of exposure is the manner in which a contaminant actually enters or contacts the body (i.e., ingestion, inhalation, dermal absorption). The following exposure routes were identified based on the nature of the chemicals of potential concern, the types of media impacted at the site, and land use scenarios.

- Direct contact with exposed surficial soil. Exposure routes include incidental ingestion of, dermal contact with, and inhalation of volatile or particulate-bound contaminants.

- Direct contact with subsurface soil and/or groundwater. Future construction activities involving excavation in the area of concern may allow exposure to impacted soil and shallow groundwater. Exposure routes include incidental ingestion of and dermal contact with soil and groundwater, and the inhalation of volatile or particulate-bound contaminants.

- Direct contact with groundwater used as a future drinking water source. Routes of exposure include ingestion and dermal contact. Currently, there are eight water supply wells located at the site. Recent analysis of samples from five of the water supply wells currently not in use have also shown that contaminants related to the wood processing activities are not present. However, there are no restrictions on the property that would limit the future placement of a water supply well in any area of the site.

- Ingestion of fish or of game species such as deer or wild turkey. As the site and surrounding area provide ample habitat for game species and the opportunity for hunting, there is the potential for site-associated compounds (like dioxin) to accumulate in tissues of animals that forage at the site. Hunters may later ingest these contaminated tissues. Analysis of fish tissue samples have shown the presence of dioxins and furans that may or may not be related to wood processing activities.

1.5 Conclusions

Complete exposure pathways have been identified for potential current and future human receptors based on exposure to contaminated soil, groundwater, fish tissue, and sediment. Under current conditions, prison inmates, NYSDEC and NYSDCSS staff, and other receptors such as hunters may visit impacted soil areas of Camp Summit. Additionally, Panther Creek and the tributary to Panther Creek are trout spawning and fish propagation streams, respectively, and fishing may occur in these areas. Therefore, fishermen may come into contact with sediment in the pond and fish tissue through consumption of fish caught in the tributary or Panther Creek.

The supply wells Well-2,3,4 and 5 have not been shown to be impacted by site activities, and therefore do not constitute complete current exposure pathways. However, groundwater at other locations of the site has been impacted and constitutes a complete future exposure pathway.

Surface and subsurface soils are impacted with dioxins and PCP in various areas around the site, including in and around Buildings 48, 49, 50, 51, and 52. In addition, several suspected disposal locations, including the drum rinsing area have been shown to be impacted. Recent groundwater data show impacts from the site releases in wells close to Buildings 48 and 49.

Concentrations of PCP are above the applicable objectives at shallow soil locations around Building 49 (SS-6, SS-7, SS-16, SS-19, and SS-22) when compared to NYSDEC soil cleanup objectives (NYSDEC, 1995). Concentrations of PCP in subsurface soils are above the applicable objective at SB-2 and SB-3, (under and outside of Building 49); at SB-5 and MW-7 (outside of Building 48); at STP-18, STP-19, STP-21, and STP-22 (south of Building 52); at TP-1 at the suspected disposal area along the access road to the shale pit; and at TP 32 and TP-33, north of Building 49. Previous samples analyzed by immunoassay methods showed concentrations above the applicable objective at locations under Buildings 48 and 49, south of Building 50, and in the drum washing area.

The only other SVOC detected above NYSDEC cleanup objective was 2-methylnapthalene at TP-32, located north of Building 49. The VOC compounds acetone, 2-butanone, ethylbenzene, methylene chloride, and xylenes exceeded applicable cleanup objectives at TP-1, and concentrations of toluene exceeded applicable standards at TP-33.

Concentrations of dioxins (as 2,3,7,8-TCDD equivalents) are above the criteria of 1 ug/kg that NYSDEC has used at other sites at surface soil sampling locations SS-12, SS-17, SS-19, and SS-23. Concentrations of dioxins are above this criteria in subsurface soil sampling locations STP-17, STP-19 ,TP-1, TP-3, and MW-7.

Numerous metals were detected in site soils. In most cases concentrations appear to be related to background conditions. Copper and zinc are present at concentrations that may be a result of site activities since the observed concentrations are inconsistent with site background and eastern United States background. Concentrations of zinc in almost all site soil samples exceeded the soil cleanup objective of 20 mg/kg and site background. Concentrations of copper exceeded the cleanup objective of 25 mg/kg and site background at SS-12, SS-19, SS-24, and TP-16. In addition, mercury exceeded the cleanup objective of 0.1 at SS-26 and SS-27. Lead exceeded the average background concentration in rural areas at SS-26.

Concentrations of PCP in groundwater exceeded New York Groundwater Quality Standards (6NYCRR Chapter X Part 703) for total phenols of 1 ug/L at MW-4, MW-6 and MW-7. This standard is based on aesthetics, and does not necessarily imply human health impacts. Concentrations of napthalene also exceeded the Groundwater Quality Standard of 10 ug/L at MW-4 and fuel oil was also detected at 24,000 ug/L. Several other SVOCs exceeded applicable groundwater quality standards at MW-7 including acenapthene, 2,4-dinitrotoluene, 1,4-dichlorobenzene, n-nitroso-di-n-propylamine, pyrene, and 1,2,4-trichlorobenzene. The estimated concentration of 8 ug/L for bis-2-ethylhexyl phthalate at Well 3 also exceeded the applicable groundwater quality standard, although this may be a result of lab contamination.

Concentrations of dioxins and furans exceed the groundwater quality standard of 0.0007 ng/L as 2,3,7,8-TCDD equivalents at MW-3 and MW-4.

Concentrations of iron and manganese exceed the respective groundwater quality standards of 300 ug/L (iron) and 500 ug/L for the total at all sampling locations. This standard is based on aesthetics and may not imply a human health impact. In addition, the samples represent total metals and may not represent actual exposure conditions if groundwater were to be used for drinking water purposes. Sodium also exceeded the groundwater quality standard of 20,000 ug/L at almost all sampling locations. None of these metals appear to be related to site activities and may be related to the geology and typical groundwater conditions in the area of the site.

There is considerable uncertainty about levels of exposure to consumers of game species. Terrestrial game likely to be hunted in this area would include species such as white-tailed deer and turkey. Both species consume vegetation; additionally, turkeys are opportunistic feeders that will also include invertebrates to their diet. PCP, dioxins, and associated compounds are known persistent and bioaccumulative substances in plants and soil-dwelling fauna. There is also the potential for significant bioaccumulation of these compounds in game species through dietary consumption, and therefore, people who ingest these species may likewise be exposed to these contaminants. Further analysis of exposure through this pathway is warranted.

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APPENDIX F

STEP II FISH AND WILDLIFE IMPACT ASSESSMENT

APPENDIX F

STEP IIA FISH AND WILDLIFE IMPACT ASSESSMENT
For The
CAMP SUMMIT SITE

NYSDEC Site No. 4-48-006

May 2, 2002

Prepared for:
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-7015

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1.0 STEP II FISH AND WILDLIFE IMPACT ANALYSIS

Step II of the FWIA is a contaminant specific Impact Assessment that evaluates potential exposure pathways for fish and wildlife resources. This step involves reviewing data concerning fish, wildlife and natural communities on-site, the physical characteristics of the site, and the type and extent of chemical impacts documented at the site. Based on this review, potential affected wildlife receptors and complete pathways of exposure are identified.

Pathways of chemical movement and exposure are determined based on information concerning sources, transport media, chemical-specific environmental fate, exposure points, routes of exposure, and potentially exposed populations. A complete exposure pathway consists of 1) a chemical release from a source, 2) an exposure point where contact with an organism can occur, and 3) a route of exposure (oral, dermal and inhalation) through which the chemical can be taken into the organism.

A small pond is located on-site at Camp Summit and its outlet feeds a tributary of Panther Creek. The outlet is a Class C (fish propagation) stream, and Panther Creek is a Class C (TS) (trout spawning) stream. An NYSDEC Regulated Wetland is located approximately 0.5 miles southeast of the site. The surrounding area is rural, generally consisting of undeveloped forest and farmland. Based on historical information a release of PCP/fuel oil mixture into the pond caused a fish kill and resulted in the closing of the treatment plant. Fish and a turtle were collected for analysis of dioxins from the pond during the Preliminary Investigation. During the Remedial Investigation, trout samples were collected from Panther Creek to assess whether the contaminant migrated into Panther Creek and subsequently impacted fish species that habituate this environment. This report focuses on the results of the most recent fish analyzed as well as historic wildlife tissues analyzed (turtle and fish).

1.1 Potential Receptors

The Camp Summit site supports a variety of common wildlife species. The on-site pond and Panther Creek support a diverse assemblage of aquatic wildlife species. It can be assumed, therefore, that a variety of fish and wildlife (both resident and transient) have the potential to be present on, or adjacent to the site. Potential wildlife receptors at the site include plants, terrestrial wildlife such as insects, birds and mammals, and aquatic wildlife such as benthic invertebrates and fish.

1.2 Chemical Migration

Environmental sampling and analysis have determined that soil, sediment and groundwater at the site have been impacted by past releases from wood processing and treatment practices. Chemicals of potential concern include pentachlorophenol (PCP), chlorinated dioxins and dibenzofurans, and heavy metals such as arsenic, copper and chromium. There is impact in surficial soil at the site, although the greatest impacts were observed in the vicinity of the former treatment building, the former treated lumber storage area and satellite disposal area. Groundwater is impacted in the areas of where treatment activities took place, and there is evidence of site-associated chemicals in sediments of the on-site pond.

Pentachlorophenol has a low water solubility and a strong tendency to adsorb onto soil or sediment particles in the environment. Adsorption to soils and sediments is highly pH-dependent, and is more likely to occur under acidic conditions than under neutral or basic conditions; no adsorption occurs above pH 6.8 (ATSDR 2000; Howard, 1991). Disassociated forms of pentachlorophenol may be rapidly photolyzed by sunlight; PCP may also undergo biodegradation by microorganisms, animals, and plants (Howard, 1991). PCP has an octanol-water partition coefficient (Kow) of 100,000 (Howard, 1991), which indicates that it is lipid-soluble and therefore has a tendency to bioaccumulate in organisms. Bioaccumulation is largely pH-dependent, with considerable variation among species. Bioconcentration factors (BCFs) for PCP are generally under 1,000, but some studies have reported BCFs up to 10,000. Significant biomagnification of PCP in either terrestrial or aquatic foodchains, however, has not been demonstrated (ATSDR, 2000).

Pentachlorophenol products often contain impurities such as chlorophenols, dioxins, and furans. Of particular concern are the chlorinated dibenzo-p-dioxins (CDDs) and dibenzofurans (CDFs). Once released to the environment, these compounds generally adsorb to soil or sediment particles due to their low water solubilities. CDDs and CDFs may undergo degradation through biological action or by photolysis, with a half-life ranging from weeks to months. Photolysis and hydrolysis are generally not significant processes, however, as these compounds persist in the adsorbed phase (USEPA, 2002). Soil or sediment adsorption is highly dependent on pH (Howard, 1991). CDDs are not expected to leach from soil, but some leaching of disassociated forms of the compound may occur, especially at lower pHs (USEPA, 2002). Volatilization from either subsurface soil or water is not expected to be a major transport pathway (ATSDR, 2000). As with PCP and other lipophilic pesticides, CDDs and CDFs tend to bioaccumulate in exposed organisms, with BCFs reported up to approximately 10,000 (Montgomery, 1996). There is ambiguity, however, regarding potential biomagnification of these compounds through the food chain (Kamrin and Rodgers, 1985).

Metals such as arsenic, copper, and chromium are known to be persistent and mobile in soil and water. Heavy metals have also been found to move through the food chain and bioaccumulate in organisms at higher trophic levels (Howard, 1991; Merian, 1991).

Organic humus and soil cover may immobilize organic chemicals detected in subsurface media at the site, thereby limiting direct exposure to fish and wildlife. However, elevated chemical concentrations were found in surficial soils, making them potentially accessible to many species, especially those that either forage on the ground or burrow beneath the ground surface.

Drainage patterns at the site indicate that much of the surface flow moves toward the on-site pond, which suggests that this waterbody may receive some surface water run-off and eroded material from impacted areas of the site following storm events. Sediment data from the on-site pond indicate that chemical migration into this waterbody has occurred through overland flow.

Most of the site is well-vegetated by woody and herbaceous plant species. Vegetation on the site reduces (but does not eliminate) chemical migration via dust emissions, soil erosion, volatilization, and infiltrating precipitation. However, the vegetation can also take up certain compounds such as heavy metals that can then be passed on to wildlife that feed on the foliage and fruit of these plants. Since no sampling of plant tissue has been conducted, it is not known if any of the compounds documented in soil have been taken up by terrestrial or aquatic vegetation. Most of the metals documented on-site are known to be taken up by plants (Howard, 1989; Merian, 1991).

Likewise, the more lipophilic compounds like dioxins may be readily adsorbed by terrestrial or aquatic animals. Studies have demonstrated that tissue levels of TCDD, for example, are directly related to the organism's contact with soil; benthic-dwelling species, filter- or bottom-feeders, or species that live underground, burrow, or groom extensively generally will have the highest body burdens (Kamrin and Rodgers, 1988). This being the case, it is reasonable to assume that these compounds are available to numerous species of fish and wildlife representing all trophic levels.

1.3 Pathways of Chemical Movement and Exposure

Site conditions indicate that: 1) various species of fish and wildlife are likely to be present at and adjacent to the site; 2) compounds that are mobile, persistent, and have the potential to bioaccumulate have been documented on the site; and 3) these compounds exist at or near the

surface of soil, and have the potential to be taken up by plants and animals. Therefore, the following pathways of chemical movement and exposure to fish and wildlife are considered possible:

- Dermal contact with chemicals present in the surface soil, groundwater (at seep areas), and sediment;
- Ingestion of chemicals in surface soil, groundwater, sediment, and food sources; and
- Direct uptake of chemicals in soil, sediment, or groundwater by terrestrial and aquatic plants.

Future remedial activities could also result in chemical exposure to terrestrial organisms through the inhalation of volatiles from or direct contact with disturbed soil.

1.3.1 Fish Sample Results

Because 2,3,7,8-TCDD is the most toxic form of dioxin, the USEPA has established factors that equate the toxicity for other dioxin congeners and furans to that of 2,3,7,8-TCDD. Therefore, concentrations of dioxin and furan results will be discussed as the 2,3,7,8-TCDD equivalence, rather than reporting each individual congener.

The 2,3,7,8-TCDD fish concentration data was compared to risk calculations which evaluate possible effects on wildlife through the consumption of fish contained in the NYSDEC's *Division of Fish, Wildlife and Marine Resources Technical Guidance for Screening Contaminated Sediments* which is based on *The Niagra River Biota Contamination Project: Fish Flesh Criteria for Piscivorous Wildlife*, A.J. Newell et al.,July 1987, NYSDEC Technical Report 87-3. The criteria listed are 3.0 pg/g (ppt).

A total of 30 trout were collected from three stations along Panther Creek as indicated on **Figure 1** in accordance with the workplan. Fish samples were collected by electroshock sampling methods. For trout measuring less than six (6) inches in length the whole fish was submitted for analysis. For trout larger than six (6) inches the filet was submitted for analysis. Samples collected were sent for the laboratory analysis of dioxins. The analytical results are summarized on **Table 1**.

According to the Preliminary Investigation two fish and a turtle were collected from the on-site pond for dioxin analysis. Two fish possessed a 2,3,7,8-TCDD equivalence of 2.07 ppt and 3.36 ppt. The fat tissue from the turtle had a 2,3,7,8-TCDD equivalence of 48.6 ppt. All three

samples were above the 3.0 ppt screening level. Additional fish samples were collected during the Remedial Investigation to determine if fish have been affected beyond the pond.

Dioxins and furans were detected in 18 of the 30 samples analyzed. For the most part, only octachlorodibenzo dioxins (OCDD) were detected, although TCDF and HpCDD were also detected. The maximum concentration detected was 0.00061 pg/g as 2,3,7,8-TCDD equivalents. It is possible that these concentrations are a result of site activities, but may also be related to other sources, as dioxins and furans can be found in fish tissue as a result of non-specific sources. None of the samples collected exceeded the wildlife bioaccumulation criteria of 3.0 ng/g.

2.0 CONCLUSIONS

A Step IIA FWIA was prepared for the Camp Summit site. Chemical impacts have been identified in soil, groundwater, and sediment. Various terrestrial and rivertine ecosystems are found at the site and within the surrounding area. Potential biological receptors include the fish and wildlife species indigenous to the area.

Given the nature of the chemicals present at the site (i.e., dioxins, phenols, PAHs, and heavy metals) and the distribution of impact, complete exposure pathways were identified for terrestrial and aquatic receptors. Aquatic invertebrate tissue analysis was conducted and dioxins were not detected above the appropriate wildlife protection criteria beyond the on-site pond.

3.0 REFERENCES

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TABLES

Table 1
Biota Analytical Results
Camp Summit

Sample Location		**2PC-1**	**2PC-2**	**2PC-3**	**2PC-4**	**2PC-5**	**2PC-6**	**2PC-7**	**2PC-8**	**2PC-9**	**2PC-10**	**2PC-11**
Sample Species		Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout
Individual Fish/Composite		Individual	Individual	Composite	Composite	Composite	Composite	Composite	Composite	Compostie	Composite	Composite
Number of Fish in Composite		NA	NA	2	2	4	4	4	4	4	4	3
Sample Length (mm)		199	179	324	302	530	561	520	541	514	482	278
Sample Weight (g)		54	46	60	48	66	74	60	68	59	49	17
Analyte												
Dioxins (pg/g or ppt)	**TEFs**	**2PC-1**	**2PC-2**	**2PC-3**	**2PC-4**	**2PC-5**	**2PC-6**	**2PC-7**	**2PC-8**	**2PC-9**	**2PC-10**	**2PC-11**
Total TCDF	-	<1.9	<0.99	<0.72	<0.88	<0.29	<1.0	**1.2**	<1.2	<0.23	<0.26	<0.52
Total PeCDF	-	<1.4	<1.3	<1.2	<1.2	<0.17	<1.2	<1.2	<0.30	<0.18	<0.10	<0.26
Total HxCDF	-	<1.6	<1.4	<1.3	<1.4	<0.21	<1.5	<1.0	<0.27	<0.44	<0.13	<0.32
Total HpCDF	-	<0.73	<0.59	<0.62	<0.71	<0.26	<0.94	<0.68	<0.20	<0.17	<0.10	<0.11
Total TCDD	-	<0.66	<0.67	<0.89	<0.64	<0.17	<0.58	<0.70	<0.12	<0.084	<0.10	<0.08
Total PeCDD	-	<2.4	<1.7	<2.2	<2	<0.36	<2.2	<2.2	<0.20	<0.15	<0.25	<0.13
Total HxCDD	-	<1.5	<1.6	<1.5	<1.4	<0.29	<1.5	<1.4	<0.25	<0.22	<0.26	<0.38
Total HpCDD	-	<1.5	<1.7	<1.1	<0.98	<0.85	<1.0	<1.6	**13**	<0.52	<0.61	<0.84
2,3,7,8-TCDD	1	<0.66	<0.67	<0.89	<0.64	<0.17	<0.58	<0.70	<0.12	<0.084	<0.10	<0.08
1,2,3,7,8-PeCDD	0.5	<2.4	<1.7	<2.2	<2.0	<0.36	<2.2	<2.2	<0.20	<0.15	<0.17	<0.13
1,2,3,4,7,8-HxCDD	0.1	<1.4	<1.5	<1.3	<1.3	<0.091	<1.4	<1.2	<0.081	<0.07	<0.072	<0.071
1,2,3,6,7,8-HxCDD	0.1	<1.5	<1.6	<1.5	<1.4	<0.29	<1.5	<1.4	<0.25	<0.22	<0.26	<0.38
1,2,3,7,8,9-HxCDD	0.1	<1.3	<1.5	<1.3	<1.2	<0.10	<1.4	<1.2	<0.082	<0.11	<0.070	<0.10
1,2,3,4,6,7,8-HpCDD	0.01	<1.5	<1.7	<1.1	<0.98	<0.85	<1.0	<1.6	**8.4**	<0.52	<0.61	<0.84
OCDD	0.0001	**9 J**	<4.1	**6.3 J**	**8.2 J**	**7.3 J**	**5.3 J**	**9.4 J**	**47**	**5.9 J**	<3.8	<4.2
2,3,7,8-TCDF	0.1	<0.74	**0.58 J**	<0.72	<0.88	<0.29	<0.85	<0.91	<0.31	<0.23	<0.26	<0.35
1,2,3,7,8-PeCDF	0.05	<1.4	<1.3	<1.2	<1.2	<0.17	<1.2	<1.2	<0.14	<0.093	<0.079	<0.10
2,3,4,7,8-PeCDF	0.5	<1.3	<1.3	<1.1	<1.2	<0.17	<1.2	<1.2	<0.14	<0.093	<0.10	<0.10
1,2,3,4,7,8-HxCDF	0.1	<1.4	<1.3	<1.2	<1.2	<0.0084	<1.3	<0.89	<0.071	<0.075	<0.13	<0.08
1,2,3,6,7,8-HxCDF	0.1	<1.3	<1.2	<1.1	<1.2	<0.079	<1.2	<0.84	<0.054	<0.083	<0.068	<0.082
1,2,3,7,8,9-HXxCDF	0.1	<1.4	<1.3	<1.2	<1.3	<0.089	<1.4	<0.92	<0.060	<0.073	<0.076	<0.055
2,3,4,6,7,8-HxCDF	0.1	<1.6	<1.4	<1.3	<1.4	<0.10	<1.5	<1.0	<0.065	<0.078	<0.054	<0.059
1,2,3,4,6,7,8-HpCDF	0.01	<0.61	<0.49	<0.52	<0.59	<0.22	<0.79	<0.57	<0.17	<0.14	<0.086	<0.094
1,2,3,4,7,8,9-HpCDF	0.01	<0.73	<0.59	<0.62	<0.71	<0.26	<0.94	<0.68	<2.0	<0.17	<0.10	<0.072
OCDF	0.0001	<2.0	<1.9	<1.8	<1.6	<0.14	<2.0	<1.6	<0.067	<0.16	<0.15	<0.14
2,3,7,8- TCDD Equivalence	3.0	**0.0009**	**0.058**	**0.00063**	**0.00082**	**0.00073**	**0.00053**	**0.00094**	**0.0887**	**0.00059**	BDL	BDL

Notes:
Only analytes detected at or above laboratory method detection limits included on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limit
Shaded Text= Exceedance of 2,3,7,8 TCDD equivalence guidance value.
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated

Dioxin Data Qualifiers:

All results in pg/g or parts per trillion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

Table 1
Biota Analytical Results
Camp Summit

Sample Location		**3PC-1**	**3PC-2**	**3PC-3**	**3PC-4**	**3PC-5**	**3PC-6**	**3PC-7**	**3PC-8**	**3PC-9**	**3PC-10**	**3PC-11**
Sample Species		Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Stream Trout	Steam Trout	Steam Trout	Steam Trout
Individual Fish/Composite		Individual	Individual	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Number of Fish in Composite		NA	NA	3	2	3	3	3	4	3	4	5
Sample Length (mm)		162	176	434	333	405	460	408	499	390	510	599
Sample Weight (g)		52	54	61	60	56	59	54	59	51	62	61
Analyte												
Dioxins (pg/g or ppt)	**TEFs**	**3PC-1**	**3PC-2**	**3PC-3**	**3PC-4**	**3PC-5**	**3PC-6**	**3PC-7**	**3PC-8**	**3PC-9**	**3PC-10**	**3PC-11**
Total TCDF	-	<1.1	<0.12	<0.17	<0.71	<0.12	<0.63	<1.8	<0.088	<0.38	<0.66	<0.90
Total PeCDF	-	<0.23	<0.10	<0.085	<0.28	<0.090	<0.14	<0.80	<0.085	<0.86	<1.7	<1.2
Total HxCDF	-	<0.22	<0.087	<0.11	<0.12	<0.055	<0.28	<0.77	<0.15	<1.0	<2.0	<1.6
Total HpCDF	-	<0.070	<0.071	<0.059	<0.087	<0.069	<0.078	<0.23	<0.44	<0.63	<1.0	<0.64
Total TCDD	-	<0.10	<0.13	<0.11	<0.095	<0.10	<0.080	<0.069	<0.081	<0.36	<1.0	<0.46
Total PeCDD	-	<0.20	<0.24	<0.15	<0.14	<0.17	<0.16	<0.13	<0.27	<1.5	<0.53	<2.7
Total HxCDD	-	<0.086	<0.087	<0.079	<0.085	<0.079	<0.86	<0.10	<0.10	<1.2	<2.9	<1.8
Total HpCDD	-	<1.3	<0.10	<0.32	<0.12	<0.49	<0.19	<0.53	<0.72	<0.75	<2.1	<1.2
2,3,7,8-TCDD	1	<0.10	<0.13	<0.11	<0.095	<0.10	<0.080	<0.069	<0.080	<0.36	<0.47	<0.46
1,2,3,7,8-PeCDD	0.5	<0.14	<0.14	<0.14	<0.14	<0.13	<0.11	<0.13	<0.13	<1.5	<2.9	<2.7
1,2,3,4,7,8-HxCDD	0.1	<0.08	<0.081	<0.072	<0.070	<0.073	<0.080	<0.10	<0.090	<1.0	<1.9	<1.6
1,2,3,6,7,8-HxCDD	0.1	<0.086	<0.087	<0.078	<0.085	<0.079	<0.086	<0.10	<0.10	<1.2	<2.1	<1.8
1,2,3,7,8,9-HxCDD	0.1	<0.078	<0.079	<0.071	<0.069	<0.072	<0.078	<0.10	<0.076	<1.0	<1.8	<1.6
1,2,3,4,6,7,8-HpCDD	0.01	<1.3	<0.093	<0.32	<0.075	<0.49	<0.15	<0.53	<0.72	<0.75	<1.6	<1.2
OCDD	0.0001	**8.6 J**	<0.67	<2.8	<1.3	**5.4 J**	<1.7	<3.5	**6.8 J**	<3.4	<3.1	<1.8
2,3,7,8-TCDF	0.1	<0.14	<0.10	<0.10	<0.088	<0.077	<0.074	<0.10	<0.073	<0.38	<0.52	<0.90
1,2,3,7,8-PeCDF	0.05	<0.11	<0.10	<0.085	<0.10	<0.090	<0.088	<0.10	<0.085	<0.86	<1.5	<1.2
2,3,4,7,8-PeCDF	0.5	<0.11	<0.10	<0.085	<0.10	<0.090	<0.088	<0.10	<0.085	<0.84	<1.5	<1.2
1,2,3,4,7,8-HxCDF	0.1	<0.046	<0.055	<0.068	<0.039	<0.048	<0.049	<0.048	<0.089	<0.89	<1.8	<1.4
1,2,3,6,7,8-HxCDF	0.1	<0.040	<0.048	<0.046	<0.034	<0.042	<0.043	<0.18	<0.040	<0.85	<1.7	<1.3
1,2,3,7,8,9-HXxCDF	0.1	<0.049	<0.059	<0.056	<0.042	<0.052	<0.053	<0.051	<0.050	<0.93	<1.8	<1.4
2,3,4,6,7,8-HxCDF	0.1	<0.053	<0.063	<0.060	<0.044	<0.055	<0.056	<0.055	<0.053	<1.0	<2.0	<1.6
1,2,3,4,6,7,8-HpCDF	0.01	<0.059	<0.059	<0.049	<0.073	<0.058	<0.065	<0.064	<0.19	<0.53	<0.86	<0.54
1,2,3,4,7,8,9-HpCDF	0.01	<0.070	<0.071	<0.059	<0.087	<0.069	<0.078	<0.077	<0.084	<0.63	<1.0	<0.64
OCDF	0.0001	<0.14	<0.16	<0.16	<0.15	<0.14	<0.14	<0.14	<0.54	<1.2	<3.2	<2.8
2,3,7,8- TCDD Equivalence	3.0	**0.00086**	BDL	BDL	BDL	**0.00054**	BDL	BDL	**0.00068**	BDL	BDL	BDL

Notes:
Only analytes detected at or above laboratory method detection lim
on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limi
Shaded Text= Exceedance of 2,3,7,8 TCDD equivalence guidance
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated

Dioxin Data Qualifiers:

All results in pg/g or parts per trillion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

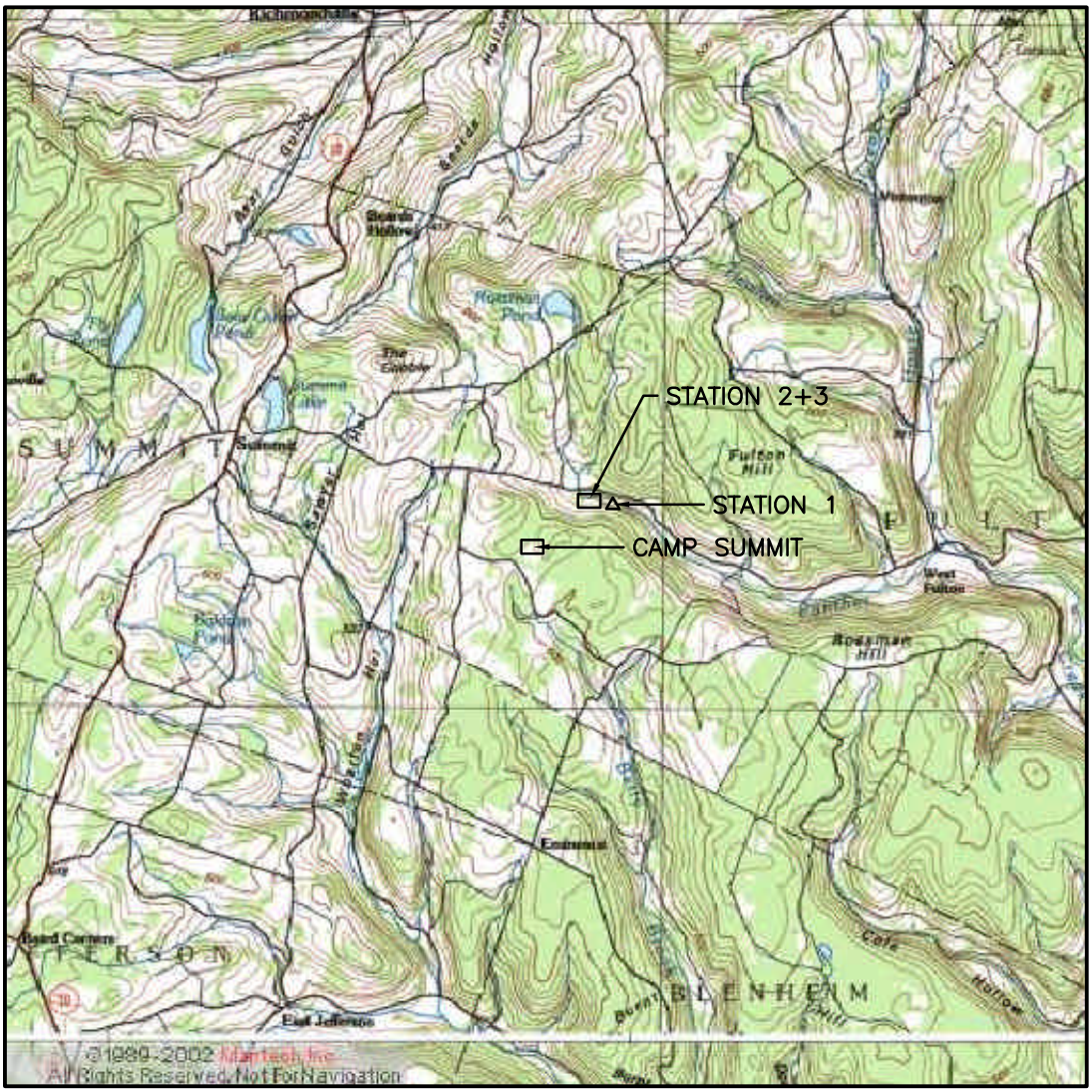
Table 1
Biota Analytical Results
Camp Summit

Sample Location		**3PC-12**	**3PC-13**	**3PC-14**	**3PC-14**	**3PC-15**	**3PC-16**	**3PC-17**	**3PC-18**	**3PC-19**			
Sample Species		Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout	Steam Trout			
Individual Fish/Composite		Composite	Composite	Composite		Composite	Composite	Composite	Composite	Composite			
Number of Fish in Composite		17	15	15		5	6	5	5	5			
Sample Length (mm)		1139	1060	1033		605	717	586	585	561			
Sample Weight (g)		46	47	44		69	76	60	62	52			
Analyte													
Dioxins (pg/g or ppt)	**TEFs**	**3PC-12**	**3PC-13**	**3PC-14**	**3PC-14**	**3PC-15**	**3PC-16**	**3PC-17**	**3PC-18**	**3PC-19**	**TURTLE-1**	**FISH-1**	**FISH-2**
Total TCDF	-	<0.63	**1.8**	<0.68	**1.7**	<2.6	<0.68	**1.8**	<2.2	<0.87	**48.6**	**2.24**	**4.19**
Total PeCDF	-	<1.2	<1.1	<0.097	<1.3	<0.68	<1.1	<1.4	<1.2	<1.3	**206**	**6.95**	**15.6**
Total HxCDF	-	<1.5	<1.4	<1.3	<1.4	<1.1	<1.3	<1.8	<1.2	<1.6	**864**	**39.8**	**81.8**
Total HpCDF	-	<0.78	<0.82	<0.62	<0.86	<1.3	<0.67	<0.96	<0.67	<0.71	**515**	**98.5**	**356**
Total TCDD	-	<0.32	<0.42	<0.79	<0.41	<0.67	<0.80	<0.47	<0.67	<0.43	**0.35**	**0.24**	**0.96**
Total PeCDD	-	<2.2	<2.1	<1.8	<2.2	<0.080	<1.7	<204	<1.8	<2.0	**39.4**	**4.95**	**8.68**
Total HxCDD	-	<1.6	**12**	<1.3	<1.6	<1.7	<1.5	<1.7	<1.3	<1.6	**56.2**	**17.5**	**50.1**
Total HpCDD	-	<1.3	<1.6	<1.2	<1.3	<1.5	<1.2	<1.7	<1.2	<1.4	**37.4**	**22.8**	**93.3**
2,3,7,8-TCDD	1	<0.32	<0.42	<0.79	<0.41	<1.2	<0.8	<0.47	<0.67	<0.43	**48.6**	**2.07**	**3.36**
1,2,3,7,8-PeCDD	0.5	<2.2	<2.1	<1.8	<2.2	<0.80	<1.7	<2.4	<1.8	<2.0	**206**	**6.95**	**11**
1,2,3,4,7,8-HxCDD	0.1	<1.5	<1.4	<1.2	<1.4	<1.7	<1.4	<1.5	<1.2	<1.5	**124**	**4.3**	**7.07**
1,2,3,6,7,8-HxCDD	0.1	<1.6	<1.6	<1.3	<1.6	<1.4	<1.5	<1.7	<1.3	<1.6	**683**	**20.5**	**.5.9**
1,2,3,7,8,9-HxCDD	0.1	<1.4	<1.4	<1.2	<1.4	<1.5	<1.3	<1.5	<1.2	<1.5	**43.4**	**3.65**	**7.77**
1,2,3,4,6,7,8-HpCDD	0.01	<1.3	**8.8**	<1.2	<1.3	<1.3	<1.2	<1.7	<1.2	<1.4	**290**	**59.9**	**208**
OCDD	0.0001	**5.8 J**	**36**	**6.9 J**	<3.3	<1.2	**6.1 J**	<4.9	**5 J**	<2.9	**261**	**221**	**1180**
2,3,7,8-TCDF	0.1	<0.63	<0.85	<0.68	<0.68	**6.1 J**	<0.68	<0.93	<0.69	<0.87	**0.35**	**0.11**	<0.14
1,2,3,7,8-PeCDF	0.05	<1.2	<1.1	<0.97	<1.3	<0.68	<0.97	<1.4	<1.2	<1.3	**1.15**	**0.62**	**0.86**
2,3,4,7,8-PeCDF	0.5	<1.2	<1.0	<0.95	<1.2	<0.97	<0.95	<1.3	<1.1	<1.3	**36.4**	**1.28**	**2.25**
1,2,3,4,7,8-HxCDF	0.1	<1.4	<1.2	<1.2	<1.2	<0.95	<1.2	<1.6	<1.1	<1.4	**4.89**	**1.07**	**2.79**
1,2,3,6,7,8-HxCDF	0.1	<1.3	<1.2	<1.1	<1.2	<1.2	<1.1	<1.5	<1.0	<1.3	**25.7**	**1.27**	**2.95**
1,2,3,7,8,9-HXxCDF	0.1	<1.4	<1.3	<1.2	<1.3	<1.1	<1.2	<1.6	<1.1	<1.5	<0.30	<0.37	<0.55
2,3,4,6,7,8-HxCDF	0.1	<1.5	<1.4	<1.3	<1.4	<1.2	<1.3	<1.8	<1.2	<1.6	**15.2**	**2.69**	**4.93**
1,2,3,4,6,7,8-HpCDF	0.01	<0.66	<0.69	<0.52	<0.72	<1.3	<0.57	<0.81	<0.56	<0.60	**18.5**	**9.18**	**32.7**
1,2,3,4,7,8,9-HpCDF	0.01	<0.78	<0.82	<0.62	<0.86	<0.57	<0.67	<0.96	<0.67	<0.71	**0.74**	<0.58	**2.11**
OCDF	0.0001	2.9	<2.3	<2.4	<1.9	<2.6	<2.6	<3.5	<2.5	<3.0	**10.2**	**19.4**	**92.3**
2,3,7,8- TCDD Equivalence	3.0	**0.00058**	**0.0916**	**0.00069**	BDL	**0.61**	**0.00061**	BDL	**0.0005**	BDL	**263**	**10.5**	**19.8**

Notes:
Only analytes detected at or above laboratory method detection lim
on tables
*PCP results from PIR Immunoassay Results
Bold Text=Analyte detected above laboratory method detection limi
Shaded Text= Exceedance of 2,3,7,8 TCDD equivalence guidance
BDL= Below Laboratory Method Detection Limit
ND= Non-Detect
NP = Not Promulgated
Dioxin Data Qualifiers:
All results in pg/g or parts per trillion
J=Estimated result, result is less than the reporting limit
E=Estimated result, result exceeds calibration range
CON=Confirmation analysis

FIGURES

OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
ALBANY, NY	S. SHKOLNIK 05-02-02			830271A12



NOT TO SCALE

REFERENCE:
MAP FROM WWW.MAPTECH.COM

Shaw Environmental, Inc.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

FIGURE 1
BIOTA SAMPLING LOCATIONS

CAMP SUMMIT
SCHOHARIE COUNTY, NEW YORK

Image: MS2-1829
Xref: .

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Plot Date/Time: 02/26/04 10:41am
Format Revised: 12/15/99