FISH AND WILDLIFE RESOURCES IMPACT ANALYSIS
PART 1 - FISH AND WILDLIFE RESOURCE CHARACTERIZATION
Former Texaco Research Center
Beacon (Glenham), New York

Site ID #314004
EPA ID # 091894899

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LIST OF ACRONYMS

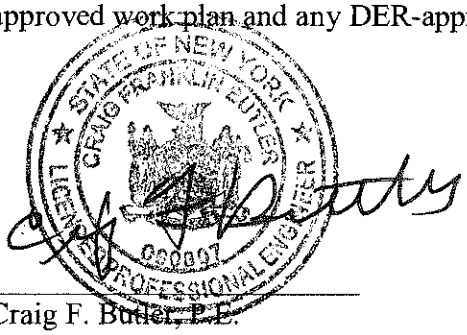
AST	Aboveground Storage Tank
AVS	Acid Volatile Sulfides
bgs	Below ground surface
BWS	Below Water Surface
COC	Constituents of Concern
COPEC	Constituents of Potential Ecological Concern
CPOI	Chemical Parameters of Interest
Creek	Fishkill Creek
DER	Division of Environmental Remediation
ECSM	Ecological Conceptual Site Model
EMC	Environmental Management Company
EPA	Environmental Protection Agency
EqP	Equilibrium Partitioning
FEMA	Federal Emergency Management Agency
FWRIA	Fish and Wildlife Resources Impact Analysis
ICM	Interim Corrective Measure
NYCRR	New York Code of Rules And Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
Main Facility	Portion of the Site North of Fishkill Creek
Mg/kg	Milligrams Per Kilogram (Parts Per Million)
Mg/l	Milligrams Per Liter
OHM	O.H. Materials Corporation
OU	Operable Unit
PAH	Polycyclic Aromatic Hydrocarbon
PCBs	Polychlorinated Biphenyls
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation

LIST OF ACRONYMS
(Continued)

SAP	Sampling and Analysis Plan
SCOs	Soil, Cleanup Objectives
SEM	Simultaneously Extracted Metals
SGV	Sediment Guidance Values
SITE	Former Texaco Research Center Beacon
SPDES	State Pollution Discharge Elimination System
SVOCs	Semivolatile Organic Compounds
TAGM	Technical and Administrative Guidance Memorandum
TAL	Target Analytes List
TOGS	Technical and Operational Guidance Series
TRCB	Texaco Research Center Beacon
TSS	Total Suspended Solids
UCL	Upper Confidence Limit of the Mean
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USL	Upper Simultaneous Limit
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds
WATF	Washington Avenue Tank Farm
WQS	Water Quality Standards

CERTIFICATION STATEMENT

I, Craig F. Butler, certify that I am currently a NYS registered professional engineer and that this Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.



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04/27/15
Date

EXECUTIVE SUMMARY

Chevron operated a research center, called the Texaco Research Center Beacon (TRCB), in the Town of Fishkill, Dutchess County, New York from 1931 until its closure in 2003. This document presents Part One of a Fish and Wildlife Resources Impact Analysis (FWRIA) for the TRCB site prepared according to guidelines by the New York State Department of Environmental Conservation (NYSDEC). The FWRIA is a two-part process intended to identify actual or potential impacts to fish and wildlife from constituents of potential ecological concern (COPECs). Part One of the FWRIA is a Resource Characterization which identifies and describes fish and wildlife resources within the Site and its vicinity, defines contaminant migration pathways and any fish and wildlife exposure pathways, identifies applicable COPECs, and draws conclusions regarding actual or potential adverse impacts based upon the resources and pathways identified. Part Two of the FWRIA is the subsequent definition and evaluation of potential impacts which is conducted following review of Part One findings, if deemed necessary by NYSDEC.

The TRCB site is located on approximately 153 acres of land and is comprised of nine operable units (OUs), the largest of which are the Main Facility (OU-1A) and the Church Property Parcel (OU-1B), both located north of Fishkill Creek, and the former Washington Avenue Tank Farm (WATF; OU-1C) and the Back 93 Acres (OU-1E) located south of the Creek. The Back 93 Acres (OU-1E) parcel comprises the majority of the area south of the creek.

The nine OUs within the TRCB facility were evaluated in terms of analytical data availability, identification of COPECs based on screening values, and potential impacts on fish and wildlife resources. A summary evaluation by individual OU is presented below. The screening of COPECs was based primarily on the following guidance:

- Surface soil: 6 NYCRR Part 375 Soil Cleanup Objectives for Protection of Ecological Resources
- Surface water quality: 6 NYCRR Part 703: Surface Water and Groundwater Quality and Groundwater Effluent Limitations (Class C)
- Sediment: NYSDEC June 2014 Screening and Assessment of Contaminated Sediment, Class A sediments

Main Facility (OU-1A)

The Main Facility consists of 33 acres of land that includes all of the developed areas located north of Fishkill Creek which was used as a laboratory complex. In 2011 and 2012, Chevron conducted a building removal project that resulted in the demolition to the basement or slab level of the vast majority of buildings on-site. Extensive surface soil data have been collected from the OU-1A parcel during previous site assessment and RCRA Facility Investigations.

Given that Parcel OU-1A was historically a fully developed industrial/commercial facility with very limited grass/green space habitat, it is not expected that wildlife receptors are present on site other than those species associated with urban environments with limited landscaped/ open areas and therefore are not at risk of adverse effects from potential direct or dietary

exposure to surface soil. Consequently, risk to wildlife at OU-1A should not be evaluated further as there is no potential exposure to surface soil. No wetlands or other surface water features were identified within the Main Facility. Aquatic habitats, while not present on site, may be connected by groundwater discharge from the OU-1A parcel into Fishkill Creek (OU-1F). Impacts to Fishkill Creek were evaluated separately.

Former Church Property (OU-1B)

The former Church Property is a 15 acre undeveloped parcel located to the northwest of the Main Facility. Parcel OU-1B was not used as an area of active operations or disposal during the TRCB operations. Mature upland hardwood forest was identified as the predominant plant community throughout the parcel OU-1B. No wetlands or surface water features are present within OU-1B.

Surface soil samples have been collected from 17 locations on the Church Parcel. Based on detected concentrations in surface soil, wildlife receptors may be at risk for adverse effects from direct or dietary exposure to a number of metals and pesticides. Surface soil data are not currently available for characterization of potential impacts on ecological resources in the central portion of the site. Additional sample collection to further characterize surface soil at parcel OU-1B will be conducted as specified in a separate sampling work plan currently under development. Further evaluation of potential ecological risk will be performed for Parcel OU-1B.

Former Washington Avenue Tank Farm (OU-1C)

The approximately 5-acre parcel OU-1C was formerly the site of over 30 above-ground storage tanks and associated facilities that were removed in the fall of 2003 and winter of 2004. Vegetation on the WATF is sparse with mostly low grasses and woody stem weeds due to routine maintenance. No wetlands or other surface water features were identified within the WATF parcel. Surface soil data are not currently available for characterization of surface soil conditions.

Impacts on terrestrial habitats were not evaluated due to the lack of analytical data. However, impacts on wildlife are believed to be limited due to the lack of habitat (urban, maintained type of environment). No wetlands or other surface water features are present. Aquatic habitats and biota, while not present on site, may be affected by groundwater discharge from the OU-1C parcel into Fishkill Creek. Impacts to Fishkill Creek (OU-1F) were evaluated separately. Further evaluation of ecological risk from exposure to surface soil in OU-1C is not anticipated due to the lack of suitable habitat.

Residential Property Parcels (OU-1D and OU-3)

The two residential property parcels OU-1D (approximately 2.1 acres) and OU-3 (approximately 0.67 acre) are located in undeveloped land not used as part of the former TRCB operations. No structures currently exist within the parcels. Most of the land is currently undisturbed and bordered by residential parcels and a road. No wetlands or surface water features are present.

Surface soil data are not currently available for characterization of potential impacts on ecological resources. It is not anticipated that wildlife impacts are occurring on OU-1D and

OU-3 because these parcels are residential lots adjacent to the road with limited habitat. An evaluation of ecological risk on the two residential parcels is not anticipated due to the lack of habitat.

Back 93 Acres Parcel (OU-1E)

The Back 93 Acres Parcel was partially developed for placement of outdoor recreational facilities and waste disposal areas associated with the TRCB operation. Contaminant sources associated with waste disposal were removed in various NYSDEC-approved soil remedial actions conducted from the mid 1980s until 2006 in accordance with NYSDEC requirements. Most of the parcel's vegetative cover can be classified as upper hardwood forest, with intermixed open fields and areas of grass/green space (former recreational areas). Small springs and wetlands are located along the parcel's eastern boundary.

Surface soil samples have been collected from 28 locations throughout the central and eastern sections of the parcel where TRCB disposal operations were formerly conducted. No surface soil sampling has been conducted in the remaining sections of OU-1E where contaminant sources are not known to be present. Surface water data for springs/wetlands areas are not available. Surface soil data screening indicated that no inorganic substances or organic compounds exceeded screening values with a single exception (minor exceedance of benzo(a)pyrene at one location). Surface soil data are not currently available for characterization of potential impacts on ecological resources in the remainder of the site. Sample collection to further characterize surface soil at parcel OU-1E will be evaluated in a comprehensive sampling work plan currently under development.

No impacts on fish and wildlife resources are anticipated for Parcel OU-1E based on results of surface soil screening. Historic contaminant sources associated with the TRCB operation have been removed in various approved soil remedial actions. No other contaminant sources are known to exist within Parcel OU-1E. However, additional sampling will be conducted to address ecological receptors in the Back 93 Acres Parcel away from previous disposal areas.

Road Parcel (OU-2)

The approximately 0.233 acre parcel is maintained by the Town of Fishkill as a major thoroughfare. The parcel contains the road and adjacent grass shoulder areas. Collection of surface soil samples is not anticipated because Parcel OU-2 is a public road where TRCB operations were not conducted. An evaluation of ecological risk in the Road Parcel is not anticipated due to the lack of suitable habitat.

Dam and Associated Hydropower Facilities Parcel (OU-4)

The parcel, approximately 4.96 acres, includes the hydroelectric buildings and the dam. Most of the west and central sections of the parcel south of Fishkill Creek contain upland hardwood forest adjacent to Fishkill Creek while the east section has sparse vegetation (mostly low grasses and woody stem weeds). The side of the parcel north of Fishkill Creek is adjacent to the Main Facility and contains no wildlife habitat. No wetlands or other surface water features were identified within Parcel OU-4. Wildlife exposure would be limited to the southern side of OU-4 only. Surface soil samples were collected from 21 locations during previous site

assessments. A need for additional sample collection has not been identified for surface soil characterization at the OU-4 Parcel.

Surface soil screening on the southern side of OU-4 indicated that receptors may be at risk for adverse effects from direct or dietary exposure to metals in surface soil (i.e., chromium, copper, lead, mercury, and zinc). There is no potential risk to wildlife on the northern side of the creek that contains the building areas without natural habitats. Further evaluation of ecological risk associated with metals exceedances will be addressed in the Alternatives Assessment and Remedial Action Work Plan for this parcel.

No wetlands or surface water features are present. Aquatic habitats, while not present on site, may be affected by groundwater discharge into Fishkill Creek from the OU-4 parcel. Impacts to Fishkill Creek were evaluated separately.

Fishkill Creek Parcel (OU-1F)

Fishkill Creek originates approximately fifteen miles east of Beacon and traverses the area from east to west. The creek segment along the TRCB facility (OU-1F parcel) was used as a hydropower source for the site in the past. A dam is located on the site within OU-4. No additional TRCB activities were conducted in or within the Fishkill Creek. Most of the Fishkill Creek watershed is located upstream of TRCB. Consequently, both surface water and sediment in the creek are expected to reflect conditions associated with multiple point and non-point contaminant sources unrelated to TRCB operations. Within the TRCB site, soil and groundwater from three parcels adjacent to the creek are potential contaminant sources: Main Facility (OU-1A), WATF (OU-1C), and Dam and Associated Hydropower Facilities parcel (OU-4)

A sediment and surface water sampling event was conducted from August 11th through September 11th, 2014 to provide a comprehensive characterization of the Fishkill Creek segment located along the TRCB. Upstream conditions were also evaluated. The scope of work for the sampling program included collection of 11 surface water samples and 43 sediment locations along 11 transects located within Fishkill Creek (Attachment 5).

No organic compounds were found at detectable concentrations in surface water samples. Metals were detected at concentrations that were either below water quality standards or upstream concentrations. Based on these findings, there is no indication of potential adverse effects of former TRBC operations on the surface water quality of Fishkill Creek. In addition, based on these findings, there is no indication that groundwater originating from the TRCB has adversely affected surface water quality in the Fishkill Creek segment.

The analysis of sediment samples indicated that organic substances, in general, were not a potential concern for exposure of sediment-associated organisms. Both VOCs and PCBs were found at concentrations below sediment guidance values (SGVs) and/or detection limits, while total PAHs were below the Class A SGV of 4,000 ug/kg in all but one sample collected downstream of the dam. In contrast, eight metals exceeded Class A SGVs at one or more locations (arsenic, chromium, copper, lead, mercury, nickel, silver, zinc). In several instances, however, those exceedances were below upstream concentrations. A subsequent screening taking into account the bioavailability of divalent metals based on the content of acid volatile sulfides (AVS) indicated that potential adverse effects of Fishkill Creek sediment may be

associated with only a limited number of samples with elevated concentrations of arsenic, chromium or mercury. Overall, the exceedances of upstream background concentrations and sediment screening values were low to moderate, limited to a few, disconnected locations, and, for metals, most detected concentrations did not appear to be bioavailable for exposure to benthic organisms. Therefore, Fishkill Creek benthic organisms are not expected to be impacted at a population level from exposure to either metals or organic substances.

SECTION 1

BACKGROUND INFORMATION

1.1 INTRODUCTION

Chevron (Chevron, also historically known as Texaco and ChevronTexaco) operated a research center, called the Texaco Research Center Beacon (TRCB), in the Hamlet of Glenham, Town of Fishkill (population 21,000), Dutchess County, New York (Figure 1.1) from 1931 until its closure in 2003. Glenham is a small residential community with churches, businesses and a fire hall in the vicinity of the Site.

This document presents a Fish and Wildlife Resources Impact Analysis (FWRIA) for the TRCB site according to guidelines by the New York State Department of Environmental Conservation (NYSDEC 1994; 2010). The FWRIA is a two-part process intended to identify actual or potential impacts to fish and wildlife from contaminants of potential ecological concern (COPECs). Part One of the FWRIA is a Resource Characterization which identifies and describes fish and wildlife resources within the Site and its vicinity, defines contaminant migration pathways and any fish and wildlife exposure pathways, identifies applicable COPECs, and draws conclusions regarding actual or potential adverse impacts based upon the resources and pathways identified. Part Two of the FWRIA is the subsequent definition and evaluation of potential impacts that is conducted following review of Part One findings, if deemed necessary by NYSDEC.

Part One of the FWRIA is a resource characterization process that consists of the following five steps:

- Identification of fish and wildlife resources within the site and its vicinity;
- Description of resources on the site and within one-quarter mile of the site;
- Identification of contaminant migration pathways and fish and wildlife exposure pathways; and
- COPEC Identification
- Assessment of potential adverse impacts to fish and wildlife resources.

The first two steps of the resource characterization (identification and description of resources) are presented in this document on a facility-wide basis in Section 2. Subsequent FWRIA steps are addressed individually by Operable Unit (OU) in Section 3.

1.2 SITE CHARACTERISTICS

The TRCB site is located on approximately 153 acres of land and is comprised of four main areas: the Main Facility (OU-1A) and the Church Property Parcel (OU-1B), both located north of Fishkill Creek, and the former Washington Avenue Tank Farm (WATF; OU-1C) and the Back 93 Acres (OU-1E) located south of the Creek. The Back 93 Acres (OU-1E) parcel comprises the majority of the area south of the creek (Figure 1.2).

The Main Facility (OU-1A) is bounded to the south by Fishkill Creek, to the north by Old Glenham Road, to the west by the Metro-North Railroad line and the former Church Property (OU-1B), and to the east by private property including parking, residential housing and businesses. The Main Facility (OU-1A) formerly included: parking areas, offices and laboratory buildings, aboveground storage tanks (ASTs), underground storage tanks (USTs), roads, a wastewater treatment plant, and storage areas. In 2011 and 2012, Chevron conducted a Sitewide Asbestos Containing Material Abatement and Building Demolition project. This project resulted in the demolition to the basement or slab level of the vast majority of buildings on-site.

The majority of utilities located on the Main Facility (OU-1A) are underground. These include potable and fire-suppression water, electrical, communication, sanitary sewer, storm sewer, industrial sewer (closed), natural gas, and fuel product lines. There is one set of aboveground electrical lines that is located in the central west part of the Main Facility (OU-1A). Central Hudson maintains a high pressure gas metering station in the Building 50 parking lot.

Sanitary and industrial wastewater was treated in the on-site wastewater treatment plant, which discharged to Fishkill Creek under a State Pollution Discharge Elimination System (SPDES) permit. The industrial wastewater conveyance and treatment system was discontinued following closure of the Industrial Sanitary Sewer in 2006.

The WATF (OU-1C) was formerly the site of approximately 30 ASTs and associated facilities. The area currently is an open lot with the remains of piping structures, and a previously operated groundwater recovery system. The ground surface in the former containment basin consists of uneven terrain left after the removal of the AST systems and the concrete containment basins. The entirety of the WATF (OU-1C) is surrounded by a chain link fence and is bounded to the north by Fishkill Creek, Washington Avenue to the east, and the Metro-North Railroad line to the south and west.

There is one drainage culvert that has been identified passing through the western part of the WATF (OU-1C). This culvert provides drainage from Washington Avenue and the marsh areas of the Back 93 Acres (OU-1E) to Fishkill Creek. There are two fire hydrants within the Tank Farm located along the south edge of the area. Overhead electrical utilities pass through the center of the area.

Vegetation on the WATF (OU-1C) is sparse with mostly low grasses and woody stem weeds. There is a row of deciduous trees located along the creek outside of the fence.

A dam spans Fishkill Creek between the powerhouse on the north bank to a level control structure on the south side. This dam has been in place during the entire time that the Site has been in operation by Chevron. The dam underwent a refurbishment by Chevron in 2005, along with a dam reinforcement project that was completed in 2012.

The Back 93 Acres (OU-1E) includes approximately 93 acres of undeveloped property located south of Washington Avenue and Fishkill Creek. The property formerly included four structures (pump house, washroom, storage shed, and picnic shelter). Structures were removed during the Sitewide building demolition project that took place in 2011 through 2012.

1.3 SITE DESCRIPTION AND HISTORY

The TRCB facility was divided for investigative purposes into eight OUs depicted in Figure 1.2. Each OU is described in detail below.

1.3.1 Operable Units Descriptions

OU-1A – Main Facility

The Main Facility (OU-1A) consists of 33 acres of land including all of the developed areas located north of Fishkill Creek and has been used as an on-shore, non-production, non-transportation laboratory complex engaged in research, development, and technical services related to petroleum products and energy. Petroleum, coal products, and solvents have been used at the Main Facility (OU-1A) in connection with research operations. From 1811 until 1930, the Site was the location of textile mills. The mills were powered by water wheels and steam engines. Blacksmith and carpentry shops operated in support of the mills. Currently no structures exist on the OU with the exception of a few support buildings and the only activities that take place on, or are occupied on this parcel are:

- General landscaping activities performed by local contractor;
- General field activities performed by Chevron Environmental Management Company (EMC) contractor (e.g., water sampling, erosion and sediment control inspections, etc.);
- Local landscaping contractor uses a section of Building 58/83 Area as a base of operations (e.g., landscaping material storage, vehicle storage, maintenance on equipment, etc.);
- Storage for site documents (Building 58/83 Area);
- Chevron site personnel occupy Building 31 and perform general site duties, mainly administrative; and
- Local utility performs weekly inspections of natural gas line located onsite (Parking lot west of Building 50).

OU-1B – Church Property

The former Church Property (OU-1B) is a 15 acre undeveloped parcel located to the northwest of the Main Facility (OU-1A) that once contained a local church that was relocated. No TRCB activities were conducted on this property. Currently no structures exist on the OU and no activities or occupants currently exist on this parcel.

OU-1C – Former Washington Avenue Tank Farm (WATF)

WATF (OU-1C) consists of 5 acres of land located south of Fishkill Creek and north of Washington Avenue where Texaco and Chevron once maintained over thirty ASTs. All tanks were decommissioned in 2003. Currently no structures exist on the OU. The following activities are taking place on the parcel:

- General landscaping activities performed by local contractor.
- General field activities performed by Chevron EMC contractor (e.g., water sampling, erosion and sediment control inspections, etc.).

OU-1D and OU-3 – Residential Property Parcels

OU-1D and OU-3 are 2.06 acre and 0.67 acre, respectively, vacant parcels on Washington Avenue. No TRCB activities were conducted on these properties. Currently no structures or activities exist on the OUs.

OU-1E – Back 93 Acres Parcel

The Former Recreation Area, now known as the Back 93 Acre Parcel (OU-1E) is an undeveloped property located south of Washington Avenue. The Back 93 Acre Parcel is listed as an Inactive Hazardous Waste Site (IHWS) due to the former use of isolated portions of the property as a disposal site. The Back 93 Acre Parcel included a sludge lagoon, a "new" sludge lagoon permitted under Resource Conservation and Recovery Act (RCRA) Part B status, three chemical burial sites, a disposal pit, and a container disposal site (Figure 1.3). Additionally, four areas were identified which contained a variety of non-hazardous materials, which were referred to as Trash Piles "A" through "D". These four separate areas were utilized for the disposal of non-hazardous materials during the history of the facility. Materials disposed in these trash pile locations primarily consisted of wood and metal debris, grass clippings, old empty drums, and general trash. The Back 93 Acres Parcel formerly had a baseball field, tennis courts and recreation pavilion (Figure 1.3). Currently no structures exist on the OU with the exception of a Potable Water Well Pumping System Shed and a Concrete Reservoir All known hazardous waste sites and disposal sites within the Back 93 Acres Parcel have been remediated. Remedial activities are described in Section 1.3.3.

The following activities are taking place on the parcel:

- General landscaping activities performed by a local contractor.
- General field activities performed by Chevron EMC contractor (e.g., water sampling, erosion and sediment control inspections, etc.).
- Local landscaping contractor uses section of parcel as storage area for landscaping materials (e.g., boulders).

OU-1F – Fishkill Creek

Fishkill Creek (OU-1F) is a surface water body located south of the Main Facility (OU-1A) and north of the WATF (OU-1C). The Creek was used as a hydropower source for the site in the past, as well as a water source for fire control. No additional TRCB activities were conducted in or with the Creek. A more in-depth description of the Creek can be found in the Surface Water and Hydrogeology Sections of this report (Sections 1.6 and 1.7, respectively). Currently a Dam exists on the Creek and the following activities are taking place in the Creek (off-site):

- Recreational fishing.
- Non-contact recreational boating (e.g., kayaking, canoeing).

OU-2 – Road Parcel

OU-2 is a 0.233 acre road parcel along and underneath Washington Avenue that has been dedicated to the Town of Fishkill. This parcel is located outside of the fence line of the main property and is maintained by the Town of Fishkill. No TRCB activities were conducted on this

property as it has historically been a street parcel. Other the roadway and its associated traffic, currently no structures or activities exist on the OU.

OU-4 – Dam and Associated Hydropower Facilities

OU-4, also known as the "Hydroelectric Facility & Dam," includes the hydroelectric buildings and the dam itself with access on the north side via an easement to Old Glenham Road, and on the south side via an easement to Washington Avenue. The parcel is approximately 4.96 acres. Currently structures exist on this OU and the following activities are taking place:

- General maintenance performed by local hydroelectric contractor.
- Dam inspections performed by local hydroelectric contractor and State regulatory agencies.
- General field activities performed by Chevron EMC contractor (e.g., water sampling, erosion and sediment control inspections, etc.).

1.3.2 Previous Investigations

Previous investigations have included follow-on investigations to specific activities such as tank removals and spill investigations. A Phase III RCRA Facility Investigation was completed by Texaco in March 2001 (IT 2001a). In 2006, Chevron completed the closure of the Industrial Sewer System and the completion of the Back 93 Acre Parcel interim corrective measure (ICM). In the fall of 2006, a Sitewide RCRA Facility Investigation (RFI) was conducted by Parsons (Parsons, 2007) for Chevron and in the fall of 2007 a Supplemental RFI was conducted by Parsons (Parsons, 2009). In 2010, various subsurface investigations were conducted to determine soil and groundwater quality (e.g., Sitewide Soil and Groundwater Sampling Events, Mill Building Investigation and neighboring property (Westage Property) investigation). In 2012, three subsurface investigations were conducted (Concrete Foundation Drilling Investigation, Undeveloped Property Investigation (property located south of main facility), and Sitewide Groundwater Sampling Event) to also determine soil and groundwater quality. In 2013 additional groundwater monitoring wells were installed to provide additional data to fully delineate groundwater plume boundaries for three volatile organic compound (VOC) plumes on the main facility, identified at Buildings 28/29, 42, and 52 during the Concrete Foundation Drilling program that took place in the Fall of 2012, and delineate plume boundary north of Building 58 Area.

Since the facility is now closed, NYSDEC has coordinated with Chevron to execute the administrative transition of the site out from the RCRA program, into an Order on Consent (essentially a CERCLA regulatory approach), to facilitate additional site investigations and remediation process.

1.3.3 Back 93 Acres Parcel (OU-1E) Remediation

All known hazardous waste sites and disposal sites have been remediated to the applicable NYSDEC and USEPA standards in effect at the time of remediation. From August 1985 through March 1986, O.H. Materials Corporation (OHM) performed remedial actions of the inactive disposal sites within the parcel known as the Recreation Area (now known as the Back 93 Acres Parcel or OU-1E) per directive by the NYSDEC (OHM, 1986). Remedial actions included excavating waste materials and impacted soils from individual disposal areas located within the

Back 93 Acres Parcel and transporting excavated material to an approved disposal facility. Excavated areas included the following sites (Figure 1.3):

- Container Disposal Site
- Old Sludge Lagoon
- New Sludge Lagoon
- Trash Piles A and B
- Disposal Pit
- Chemical Burial Site No. 1 (CBS-1)
- Chemical Burial Site No. 2 (CBS-2)
- Chemical Burial Site No. 3 (CBS-3)
- Open Dig Area (Area North of CBS-1 and CBS-2)

Additional remedial activities also took place within the Back 93 Acres Parcel which involved the excavation of soils and debris located in Trash Pile "C" (IT Corporation, 2001). Remedial activities were performed by the IT Group (December 2000) and soil was excavated from depths of 3 feet (ft) below ground surface (bgs) to 9 ft bgs, depending on the area of excavation. Confirmatory soil samples were collected from the bottom and sides of the excavation which indicated no impacted soils were left in-place and concentrations observed were most likely indicative of soil background concentrations. Excavation was backfilled with a minimum of 3 ft of clean soil back to grade, in accordance with the approved work plan, in compliance with NYSDEC Technical and Administrative Guidance Memo (TAGM) 4046 guidance values.

Following remedial action activities, a comprehensive soil sampling program was conducted by the IT Group in August 2001 to investigate the former disposal locations (fourteen locations total) within the Back 93 Acres Parcel (IT Corporation, 2002). The investigation was conducted to provide the NYSDEC and NYS Department of Health (NYSDOH) with data to complete their review of the potential health risks related to potential future exposures at the Back 93 Acres Parcel and to evaluate conditions of the various remediated disposal areas located within the parcel. Of the fourteen areas investigated (DB-6B, DB-8A, DC-1, DL-6, DL-8, New Sludge Lagoon, Old Sludge Lagoon, Container Disposal Site, CBS-1, CBS-2, CBS-3, Trash Pile A, Trash Pile B, and Trash Pile D), the analytical data from most sample locations indicated non-detectable or trace levels of chemical constituents. However, in eight areas (New Sludge Lagoon, Container Disposal Site, Trash Pile D, Trash Pile A, Trash Pile B, CBS-1, CBS- 3, and Old Sludge Lagoon), chemical constituents were detected in soil at concentrations exceeding the NYSDEC TAGM 4046 recommended soil cleanup objectives (SCOs). The highest concentrations of chemical constituents in soils were detected in the subsurface in the area of former Trash Pile "D". CBS-1 and CBS-3 were also identified as areas of concern due to the presence of polycyclic aromatic hydrocarbon (PAH) concentrations exceeding NYSDEC standards in shallow surface soils.

Remedial actions were conducted in five areas prior to 2001 (New Sludge Lagoon, Container Disposal Site, Trash Pile A, Trash Pile B, and Old Sludge Lagoon). Subsequently, in 2005, Parsons performed Interim Corrective Measures which involved excavating and disposing

of impacted soils and debris associated with of Trash Pile "D", CBS-1, and CBS-3. Soils were excavated to an average depth of 12 ft bgs at Trash Pile "D" and 2 feet at CBS-1 and CBS-3. Confirmatory soil samples were collected from the bottom of each excavation that indicated that soil left in-place, with minor exceptions for CBS-1 and CBS-3, were within NYSDEC cleanup standards published in TAGM 4046. Both disposal areas indicated PAH compounds remained in the soil but not in concentrations high enough to be of concern. A minimum of 2 ft of clean backfill was placed over each excavation. NYSDEC issued a letter to Chevron in 2006 indicating the removal action was performed in accordance with the work plan and no further action was needed at this time. The groundwater monitoring program continues as agreed (Parsons, 2006).

1.3.4 Summary of Fishkill Creek (OU-1F) Sampling

In May 1997, Fluor Daniel GTI collected eight sediment and surface water samples (four locations upstream of Building 83, one location adjacent to Building 83, and three locations downstream of Building 83) from Fishkill Creek to determine if these media were impacted by constituents of concern (COCs) present within Building 83 (Former Hazardous Storage Area). Sediment samples were also collected to determine the physical characteristics of the sediment that affect the mobility of the COCs. All samples were analyzed for VOCs and semi-volatile organic compounds (SVOCs), while all sediment samples were also analyzed for particle size and percent organic carbon. Analytical results of the investigation indicated the presence of one VOC (acetone) in one sediment sample, and four SVOCs in sediment. Constituents detected above regulatory criteria were not indicative of COCs used/stored at Building 83 and were explained as being related to other adjacent activities (i.e., Washington Avenue, railroad, etc.). Fluor Daniel GTI concluded that Building 83 was not a potential source of contamination to Fishkill Creek because VOC or SVOC concentrations did not exceed regulatory criteria applicable to sediment or surface water (Fluor Daniel, 1997).

On December 2nd, 2003, O'Brien & Gere Engineers, Inc. (OB&G) collected three sediment samples from the bottom of the Fishkill Creek as part of a Beneficial Use Determination Request for a small-scale dredging/excavation project, associated with rehabilitation activities of the Beacon Technology Center Dam (Dam located adjacent to onsite Wastewater Treatment Plant). All three samples were collected upstream of the Dam, along the south side of the Creek and analyzed for VOCs, SVOCs, Pesticides, and Toxic Metals. Analytical results indicated that parameter concentrations detected in the sediment samples did not exceed regulatory criteria and were "uncontaminated", as stated in OB&G report. The NYSDEC reviewed the sediment results and agreed with OB&G's conclusion (OB&G, 2004).

On May 18th, 2006, Parsons collected two surface water samples located upstream and downstream of the site. The samples were collected to satisfy a request from NYSDEC to determine water quality upstream and downstream of the Fishkill Creek. The upstream sample was collected along the west bank of the Creek adjacent to Jean Van Pelt Park (Town of Fishkill Public Park) and the downstream sample location was collected by the north bank of the Creek west (downstream) of the railroad bridge. Both samples were analyzed for VOCs, SVOCs, and metals. Laboratory results indicated no VOCs or SVOCs present in the surface water, while two metals (aluminum and iron) were detected above screening values in both upstream and downstream sample locations (Parsons, 2006).

A sediment and surface water sampling event was conducted from August 11th through September 11th, 2014 to provide a comprehensive characterization of the Fishkill Creek segment located along the TRCB. Upstream conditions were also evaluated. The scope of work for the sampling program included collection of 11 surface water samples and 43 sediment samples along 11 transects located within Fishkill Creek. Samples were collected to obtain background data on chemical parameters of interest (CPOIs) and characterize surface water and sediment quality both upstream and downstream of the on-site hydroelectric dam and adjacent to the Site. A summary discussion of findings is provided in Section 3.9. Attachment 5 presents methods and detailed results of the sampling program.

1.4 CLIMATE AND METEOROLOGY

The Site is located in the eastern part of New York State in the lower Hudson Valley. The climate in the region consists of moderately cold, snowy winters and warm, humid summers. During the winter, the temperature averages near 26°Fahrenheit (°F). The highest average daily mean temperature of 75°F is found in July. Temperatures of 90°F or higher occur from 8 to 12 days per year between early June and late August (United States Geological Survey [USGS], 1980).

Normal annual precipitation is 43.14 inches based on the thirty-year period from 1951 through 1980 as recorded at the Glenham weather station, located on the Chevron property. The average annual potential evapotranspiration is 28.65 inches (USGS, 1980). Snowfall typically occurs between mid-December and mid-March. The lower Hudson Valley receives an average annual snowfall of 40 to 60 inches. Snow cover persists from mid-December through early March with maximum depths recorded in February of most years.

Winds are predominantly from the northwest and southwest at average speeds between 8 to 15 miles per hour. The winds are predominantly from the northwest from early fall to mid-winter and predominantly from the southwest from spring to mid-fall.

1.5 GEOLOGY

The Site is located in the Hudson Highlands physiographic province of New York State. Elevations in the area extend from the bottom of the Hudson River (240 meters below sea level) to the top of Mount Beacon (405 meters above sea level).

The site is within a regional area characterized by bedrock that was deposited by volcanic and sedimentary processes and were later metamorphosed into gneiss and marble. The bedrock was severely folded and faulted during the Grenville Orogeny approximately 1.3 billion years ago. The faults and folds have determined the positions of the areas ridges and valleys (Isachsen, et al, 2000).

Two distinct types of bedrock have been identified at the Site. In the northwest part of the Site, the bedrock is a hornblende granite and granitic gneiss (Fisher, 1970). The southern and eastern part of the Site is underlain by the dolomitic limestone (Dolostone) of the Wappingers Group. These two units meet along an overthrust fault trending northeast-southwest from the northeast corner of the Site to the lower area near the wastewater treatment plant (Building 45). The presumed fault line is also evident along the Fishkill Creek towards the western part of the

Site. Downstream of the Site, the Creek becomes more channelized with the banks becoming steep cliffs. The alignment of the channel matches that of the presumed fault.

Bedrock mapping performed during the summer of 2006 indicates an overthrust fault with the dolostone overriding the granite. The granitic rock is highly folded and bedrock mapping indicated that two predominant fracture orientations existed within the bedrock formation: 10 to 20 degrees northeast (north-northeast) and 60 to 80 degrees northeast (east-northeast). A stereonet plot of the data collected from the bedrock mapping event also shows that most of the fractures have a dip greater than 45 degrees and more than half have a dip greater than 60 degrees to the west.

When drilling a number of well locations, a condition was found where dolostone bedrock was encountered. Upon proceeding to drill through the bedrock using air-hammer techniques, a zone of unconsolidated material was encountered. This material consisted of a mixture of silt, clay and fine-medium well rounded gravel. In some of the borings drilled, this zone was saturated. Below the unconsolidated zone, dolostone was again encountered to depth. It is believed that this zone indicates the margin of the overthrust zone which was infilled by sediments from a buried stream valley. The position of the affected borings matches with the general position and orientation of the fault line.

To the south of the fault line, the Main Facility (OU-1A) area, as well as the WATF (OU-1C) area, generally has a thickness of unconsolidated silt, sand, clay and gravel ranging in thickness from 4 to 12 ft. North of the fault line, the thickness of the unconsolidated material is thinner, while in many locations in the western part of the Site, bedrock is exposed.

The unconsolidated (overburden) deposits are almost entirely glacial in origin. In some areas of the Site, varied glacio-lacustrine silts and clays were identified overlying the till. Post depositional erosion of this unit has resulted in its varying thicknesses. Overlying the glacio-lacustrine silts and clays and directly over the glacial till, where the lacustrine soils are absent, is a complex sequence of fluvial and alluvial sediments deposited along the south side of Fishkill Creek. This unit is generally thickest and coarsest immediately adjacent to the creek and thins to the south. Discontinuous lenses of silt and organic silt representing overbank and quieter water deposits are present contemporaneously across the site.

1.6 SURFACE WATER

The Fishkill Creek is the dominant surface water body in the vicinity of the Site with a watershed of approximately 190 square miles. The Creek originates approximately fifteen miles east of Beacon and traverses the area from east to west with a fall of approximately 23 ft per mile. The USGS maintained a stream gauging station on Fishkill Creek at Beacon from 1944-68. The stream flow ranged from 0.4 cubic feet per second (ft^3/sec) to 8,800 ft^3/sec with an average of 279 ft^3/sec. The flow duration curve of daily flow for Fishkill creek at Beacon indicates that the creek exceeded 170 ft^3/sec fifty percent the time and equaled or exceeded 8.8 ft^3/sec ninety-nine percent of the time (Dunn Geoscience, 1989).

The surface water elevations of the Creek are controlled by dams. The upper dam (Texaco Dam) is located on the Site between Building 5 on the north side and the dam access (OU-4) on the south side (See Figure 1.2). The elevation of the top of the dam is 196.0 ft according to the Texaco Site Datum (Texaco, 1998). The height of the dam is approximately 22 ft.

The second dam is located approximately 1,400 ft downstream from the Texaco Dam. A third dam is located just above East Main Street in Beacon downstream.

The Creek above the Texaco Dam is wide and generally quiescent with an accumulated thickness of sediment. Below the Texaco Dam, the river narrows significantly and the Creek flows through a steep-sided channel. The velocity downstream of the Texaco Dam is much greater than that upstream, although direct data are not available. Downstream of the Site, Fishkill Creek passes through the City of Beacon and discharges to the Hudson River.

Based on the mapping provided by the Federal Emergency Management Agency (FEMA), the majority of the Main Facility (OU-1A) is located within a Zone C area (minimal potential for flooding). The lower section of the Main Facility (OU-1A), near the wastewater treatment area, is within the 100-year floodplain (FEMA 1984). The WATF (OU-1C) is mainly located within the 100-year floodplain, classified as Zone A, with some extension into Zone B (500-year flood plain).

Historical records indicate that flooding of the Site has occurred. Most notable among these was a 1955 flood event when lower sections of the Site, near the wastewater treatment plant, were under water.

Various overburden and bedrock groundwater elevation contour maps were developed from field data collected during investigation activities where both overburden and bedrock groundwater monitoring wells were installed. Mapping indicates a general overburden groundwater flow direction to the south on the Main Facility (OU-1A) and a northerly flow direction at the Tank Farm (OU-1C), while mapping indicates a general bedrock groundwater flow direction south-southwest toward Fishkill Creek on the Main Facility (OU-1A).

1.7 HYDROGEOLOGY

The significant aquifers within the Hudson River basin consist of unconsolidated glacial deposits or bedrock. There are four aquifers within the Hudson River valley that have been identified by the NYSDEC as primary water supply aquifers (USGS, 1996). The nearest of those to the site is the Fishkill-Sprout Creek Aquifer.

The Fishkill-Sprout Creek Aquifer was mapped by the USGS in 1996. An examination of the available mapping indicates that the Site may be located at the southwesterly end of the aquifer. This is consistent with the mapping of wells completed by the USGS in 1980 that shows the majority of the wells in the area located to the northeast of the Site in alluvial aquifers.

A review of the interaction between the surficial geology at the Site and the Fishkill Sprout Creek aquifer was included in the Tank Farm Groundwater Quality Assessment completed by Dunn Geoscience in 1984. In this report, Dunn concluded that the on-site groundwater monitoring data indicated that the flow direction was horizontal toward the Fishkill Creek and that there was little likelihood of any interaction between the Site groundwater and the Fishkill-Sprout Creek Aquifer. Based on examination of hydraulic conductivity results from slug testing, groundwater analytical results, and geologic cross-sections, overburden groundwater and bedrock groundwater appear to be connected. This understanding is based on the observation of similar contaminant concentrations both in the overburden and bedrock groundwater at well pairs. Also, there appears to be a dominating downward hydraulic gradient at the site. With this

downward gradient and the presence of fractured bedrock within the upper portion of the bedrock formation, there is the potential for migration of soluble constituents from the overburden groundwater to deeper zones. The presence of a potential groundwater confining lithologic unit was only observed in the WATF. The Tank Farm exhibited a silt/clay layer at approximately 12 to 13 ft bgs.

Based on slug test results, hydraulic conductivity values were found to range from a high of $2x10^{-1}$ cm/second to a low of $2x10^{-6}$ cm/second. The conductivity values were compared to their respective lithological units and variation of conductivity values were observed for each unit. In addition, there appears to be little correlation between hydraulic conductivity values and different lithological units that exist at the site. Furthermore, no correlation to special distribution (i.e., well defined zones of similar hydraulic conductivity) was found.

SECTION 2

FISH AND WILDLIFE RESOURCE CHARACTERIZATION

According to NYSDEC guidelines (NYSDEC 1994; 2010), Part 1 of the FWRIA is a Resource Characterization that identifies and describes fish and wildlife resources within the Site and its vicinity; defines contaminant migration pathways and any fish and wildlife exposure pathways; identifies applicable COPECs; and draws conclusions regarding potential adverse impacts based upon the resources and pathways identified. The first two steps of the resource characterization (identification and description of resources) are presented in this document on a facility-wide basis. Subsequent FWRIA steps are addressed individually by Operable Unit in Section 3.

2.1 RESOURCE IDENTIFICATION

Fish and wildlife resources identified within one-half mile of the TRCB site are presented in Figure 2.1 (resources mapping) and Figure 2.2 (general land cover). Figure 2.1 is a topographic map of the site indicating fish and wildlife resources identified within one-half mile of the site. The map is based on a data search from the sources listed below along with the search findings.

- National Wetland Inventory, U.S. Fish and Wildlife Service (http://www.fws.gov/wetlands). Search identified wetlands along Fishkill Creek and other locations within the one-half mile of the site, as shown in Figure 2.1. No wetlands are identified within the TRCB site.
- New York State Freshwater Wetlands Maps as described in Article 24-0301 of the Environmental Conservation Law. Data source: NYSDEC– 2002 (https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1274). Identified wetlands are limited to one location approximately one-half mile north of the TRCB site (Figure 2.1).
- Bird Conservation Areas, NYSDEC. This data set shows point locations of New York State lands that have been officially designated for their value to bird conservation. No bird conservation areas are located within 1/2 miles of TRCB site.
- Accessible Recreation Destination, New York State Department of Environmental Conservation. Accessible recreation sites throughout New York State that are owned, maintained, or jointly managed by DEC. No sites are located within 1/2 mile of TRCB site.
- DEC Lands and Campgrounds, NYSDEC. Data set identifies lands under the care, custody and control of DEC, including Wildlife Management areas, Unique Areas, State Forests, Forest Preserve, and DEC-operated campgrounds. No DEC lands are located within 1/2 mile of TRCB site.
- Significant Coastal Fish and Wildlife Habitats, NYS Department of State, Division of Coastal Resources. No significant coastal fish and wildlife habitats were identified within 1/2 mile of TRCB site.

- Public Land Boundaries, New York State Office of Cyber Security, downloaded from NYS GIS Program office. File identifies state and federal recreation and non-recreation lands, and county and municipal recreation areas. A correctional facility located approximately one half mile northwest of the TRBC site is the only state/public land identified (Figure 1.2).
- Wild, Scenic, and Recreational Rivers List, NYSDEC (http://www.dec.ny.gov/permits/32739.html). Fishkill Creek is not included in the list of rivers of the state that possess outstanding scenic, ecological, recreational, historic, and scientific values.

Figure 2.2 is a general land cover map within ½ mile of the TRCB site. The map is based on the 2011 National Land Cover Dataset by the Multi-Resolution Land Characteristics Consortium. The TRCB section north of Fishkill Creek falls primarily in the medium-intensity, developed land cover (Main Facility, OU-1A) and deciduous forest cover (Church Parcel, OU-1B). South of Fishkill Creek, the land cover is largely deciduous forest intermixed with patches of pasture areas and evergreen forest (Back 93 Acres Parcel, OU-1E). To the east of TRBC, residential developments are predominant (developed land, low density and open space categories). Terrestrial habitats within the TRCB site are subsequently discussed in Section 2.2.

2.2 RESOURCE DESCRIPTION

A qualitative walking field survey of the TRCB properties was conducted June, 2014. The purpose of the survey was to map the habitats on the former TRCB with emphasis on any unique habitats or habitats that may propose an encumbrance on future development of the site. Another component to the habitat evaluation was to identify wetlands and other waters of the U.S. on the TRCB parcels that could be regulated and could provide an encumbrance for future development of the site. Detailed results of the survey are presented in Attachment 1.

2.2.1 Terrestrial Habitats

The primary habitat types identified during the June 2014 survey are: upland forest, successional upland forest, riparian forest, old field, grass/green space, wet hill-slope savannah, oak-heath barren, and developed land. Figure 2.3 illustrates the habitats on the TRCB parcels. The following is a general discussion of the primary habitat types and sizes observed on the TRCB site (Table 2.1).

Table 2.1 Terrestrial Habitat Type Summary

Habitat Type	Size (acres)	Notes
Upland Forest	80.2	Characterized primarily by mature trees and closed canopy with a mixture of hard and soft mast producing trees.
Successional Upland Forest	16.7	Upland forest with light mast producing trees as dominants, thick understory, forest openings, and late stage successional growth of previous old fields.
Riparian Forest	2.58	Primarily associated with Fishkill Creek and TRCB wetlands.
Old Field	2.06	Previously maintained open fields that are experiencing succession

Habitat Type	Size (acres)	Notes
		as perennials and woody plants become established.
Grass/Green Space	11.1	Open fields and mowed/maintained lawn areas on the facility.
Wet Hill-Slope Savannah	1.85	This habitat type is unique and was likely the result of ash decline from borers that has eliminated the tree canopy.
Oak-Heath Barren	1.03	This habitat is unique in its glade-like appearance.
Developed land	39.7	Developed areas and maintained grass areas.

Upland Forest. Approximately 80.2 acres of mature upland forest were identified on the TRCB parcels. Most of the mature upland forest habitat was found on OU-1E (Back 93 Acres Parcel), OU-1B (Church Property Parcel), and the western half of OU-4 (Dam and Associated Hydropower Facilities). The mature upland hardwood forest on TRCB was less disturbed, likely due to steep topography, and the understory was sparse due to the closed canopy of the mature trees and excessive deer browsing. This community had a mixture of hardwood trees including sugar maple, pignut hickory, shagbark hickory, black oak, and northern red oak. The shrub layer was also variable and patchy in distribution, with maple-leaf viburnum, coralberry, witch-hazel, spicebush, and lowbush blueberry, with saplings of various maples, oaks, and hickories, and flowering dogwood, among the common species. Although the mature upland forest stands were not large tracts, they may provide habitat for forest interior neotropical migrant birds.

Successional Upland Forest. Approximately 16.7 acres of successional upland forest habitat were identified on the TRCB parcels, primarily on OU-3 (Residential Property Parcel), OU-1D (Residential Property Parcel), and the west central portion of OU-1E (Back 93 Acres Parcel). The successional upland forest community was characterized by a younger forest stand with a higher percentage of light mast producing species, such as various maple and ash trees. Some of these successional areas were a few years past an old field community, and there were many small forest openings that were dominated by invasive plants, such as multiflora rose and honeysuckle.

Riparian Forest. Approximately 2.58 acres of riparian forest were identified on the TRCB parcels and was primarily associated with the TRCB wetlands and the narrow band along Fishkill Creek. Since the floodplain of Fishkill Creek is so narrow, the riparian habitat is met almost immediately with various upland habitats. Dominant species included silver maple, green ash, cottonwood, and to a lesser extent tulip poplar.

Old Field. Approximately 2.06 acres of old field habitat were identified on the TRCB parcels. Some of the older stands of old field habitat were mapped as part of the successional upland forest due to the size of the trees and shrubs that had become established. Most of the old field habitats were fields that were maintained/mowed until recently, i.e., within the last 3-4 years. The old fields are experiencing successional growth from woody plants, especially light mast producing trees such as maples and ash trees.

Grass/Green Space. Approximately 11.1 acres of grass/green space or open fields were identified on the TRCB parcels. Some of these areas were maintained as lawns or landscaped areas on OU-1A (Main Facility Parcel) or as recreational areas, such as the ballfield on OU-1E

(Back 93 Acres Parcel). The area that was part of the remediation of Trash Pile D area in 2005 has been mowed and is primarily a maintained herbaceous field.

Wet Hill-Slope Savannah. Approximately 1.85 acres of wet hill-slope savannah were identified on the TRCB parcels. Nearly all of the overstory ash trees in this area have been killed or are severely stressed. The absence of a tree canopy allows light to penetrate to the former forest floor, which has produced a dense stand of herbaceous vegetation. The area resembles a savannah-like open habitat, which is unique to TRCB. Although the area is in a 10-15% slope, groundwater appears to be near the surface at times during the growing season. The combination of the ash tree die-off and the high groundwater table has led to a wetland dominated plant community. Various sedges and a thick stand of Japanese stiltgrass dominate the hill-slope.

Oak-Heath Barren. Oak-Heath Barren habitat was observed in the OU-1B (Church Property Parcel) and to a lesser extent on the northwestern portion of OU-4 (Dam and Associated Hydropower Facilities) adjacent to Fishkill Creek. This habitat type is typically found on ridge tops with exposed bedrock and thin well-drained soils. Some oak-heath communities support a low grassland community characterized by a mixture of drought tolerant grasses, sedges, mosses, lichens, and open (natural) rock pavement. Chinkapin oak was a dominant tree in this habitat with some scattered eastern red cedar. The cedar trees were disappearing from the plant community likely due to the lack of disturbance, especially fire and logging. This habitat type is very limited in size. Approximately 1.03 acres of oak-heath barrens were identified on the TRCB parcels.

Developed Land. Developed land included those areas with buildings, parking lots, roadways, tennis courts, and recently demolished buildings/facilities. Most of OU-1A (Main Facility Parcel) and OU-1C (Tank Farm Parcel) were considered as developed land with some smaller, less significant habitats present on each. Lawn grasses, such as Kentucky bluegrass and fecue, dominate the maintained areas, and early invading species such as ragweed, dandelion, and goldenrods have become established in the recently demolished facilities on OU-1A (Main Facility Parcel) and OU-1C (Tank Farm Parcel). Approximately 39.7 acres of developed land was identified on the TRCB parcels.

2.2.2 Wetlands

In addition to terrestrial habitats, various wetland features were mapped during the June 9-13, 2014 survey. The specific objectives of the survey were to identify potential wetlands occurring within and immediately adjacent to the TRCB parcels, and to characterize the wetland resources in terms of wetland type, size, and functional value. Wetlands are defined by the U.S. Army Corps of Engineers (USACE) as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (USACE, 1987). Wetlands have hydrophytic vegetation, hydric soils, and occur in areas that are permanently or periodically inundated or saturated with water. Wetlands generally include swamps, marshes, bogs and similar areas. Section 404 of the Clean Water Act extends authorization to the USACE to regulate activities that affect waters of the United States, including wetlands.

A walking survey of all of the parcels was completed. No wetlands or other Waters of the U.S. were identified on any of the parcels except OU-1E (Back 93 Acres Parcel). Wetland boundaries were flagged and marked with a GPS unit during the field surveys. The GPS data was converted to shape files and polygons were produced and overlain on aerial photographs. Figure 2.4 illustrates the waters of the U.S., including wetlands that were identified during the survey.

Six primary areas (Wetland 1, Central Wetland, Ballfield Wetland, Wetland 2, wet swale, and wet hillslope) were identified for detailed wetland delineations. All six areas were on the OU-1E (Back 93 Acres Parcel). Four (Wetland 1, Central Wetland, Ballfield Wetland, and Wetland 2) of the six areas are potential jurisdictional wetlands based upon the wetland delineation parameters and their adjacency to other waters of the U.S. It is estimated that a significant nexus exists between these waters and regulated streams. Jurisdictional status denotes water bodies that are regulated by USACE under Section 404 of the Clean Water Act. Table 2.2 summarizes size and characteristics of wetlands identified within the Back 93 Acres Parcel and potential jurisdictional status. Detailed descriptions are provided in the field survey report provided in Attachment 5.

Table 2.2 Wetlands Summary for Texaco Research Center in Beacon, New York

Feature	Size (acres)	Wetland Type	Potential Jurisdictional Status and Functional Values
Wetland 1	0.2	Riparian/ emergent	Jurisdictional. Due to its small size, Wetland 1 has low functional values for flood protection, water quality improvements, and groundwater recharge, but it does have moderate value for wildlife habitat and the surrounding habitats are largely undisturbed.
Wet Swale	0.21	Forested/ emergent	Non-jurisdictional. Due to its small size the Wet Swale has low functional values for flood protection, water quality improvements, and groundwater recharge, but it does have limited value for wildlife habitat with the surrounding habitats mostly undisturbed.
Wetland 2	0.78	Riparian/ emergent	Jurisdictional. Wetland 2 has low functional values for flood protection, and moderate values for water quality improvements, groundwater recharge, and wildlife.
Central Wetland	0.99	Riparian/ emergent	Jurisdictional. The Central Wetland has low functional values for flood protection, and moderate values for water quality improvements, groundwater recharge, and wildlife.
Ballfield Wetland	1.61	Emergent/ savannah	Jurisdictional. The Ballfield Wetland has low functional values for flood protection, and moderate values for water quality improvements, groundwater recharge, and wildlife.

2.2.3 Surface Waters

Fishkill Creek and five surface water features were mapped and evaluated during the June 9-13, 2014 survey of the TRCB Site (Figure 2.4). A summary table of surface water features identified during the survey is presented in Table 2.3.

Table 2.3 Stream Summary Table for Texaco Research Center in Beacon, New York

Name	Length (feet)	Stream Type	Notes
Fishkill Creek	2,245	Perennial	Fishkill Creek has a lacustrine or pool-like quality upstream from the dam/structure and more riverine below.
Stream 1	888	Intermittent headwater	Stream flowing during field survey, but likely to become intermittent during dry periods.
Stream 1A	257	Ephemeral headwater	Small ephemeral tributary to Stream 1.
Ballfield Stream	201	Intermittent headwater	Enters drop box culvert at downstream end.
North Stream	371	Perennial	Area upstream from spring is intermittent, but the stretch below the spring appears to be perennial as evidenced by the presence of water cress.
WWC 1	304	Drainage ditch	This ditch would not be jurisdictional waters of the U.S.

Fishkill Creek

Fishkill Creek bisects the TRCB parcels with OU-1A (Main Facility Parcel) and OU-1B (Church Property Parcel) north of the creek, OU-1C (Tank Farm Parcel) south of the creek, and OU-4 (Dam and Associated Hydropower Facilities) on both sides of the creek. At least one of these four TRCB parcels borders Fishkill Creek for approximately 2,345 ft. In the area above the dam, Fishkill Creek appears more lacustrine in the pool created by the dam. There are areas of aquatic macropytes within the pool and emergent vegetation was evident on the pool perimeter. Just downstream from the dam the creek appeared to be more riverine in character, however this area is also affected by another downstream dam that limits what would probably be a riffle/pool steam complex.

Other Surface Water Features

Three stream segments were mapped in OU-1E (Back 93 Acres Parcel), and they all had defined bed and bank with flowing water at the time of the survey. These included: Stream 1/Stream 1A; Ballfield Stream; and the North Stream. Stream 1/Stream 1A and the Ballfield Stream are likely intermittent streams during dry periods; however the North Stream has an active spring and likely has a perennial flow.

Stream 1/Stream 1A is a headwater tributary in the most southeastern end of the parcel. It flows to the northeast off of the OU-1E (Back 93 Acres Parcel) and appears to flow north and parallel to the east boundary of the parcel. It is believed that this stream then proceeds to the east northeast through several culverts and empties into Fishkill Creek. The Central Wetland is adjacent to and parallels this stream, although the stream is outside of the facility boundary.

The Ballfield Stream generally flows to the north in the northeastern portion of OU-1E (Back 93 Acres Parcel) through the Ballfield Wetland and into a drop box culvert at the base of the main north-south running ridge on OU-1E (Back 93 Acres Parcel). It is believed that the culvert carries the water north into the North Stream that flows through Wetland 2 into a culvert

that goes under Washington Avenue, Parcel OU-1D, Parcel OU-4, and Parcel OU-1C into Fishkill Creek.

A spring was identified in the North Stream, and a wet weather conveyance (WWC 1), a dry drainage ditch, entered Wetland 2 from the west. The stretch of stream upstream from spring would be considered braided and intermittent, but the stretch below the spring appears to be perennial as evidenced by the presence of water cress in the stream channel. Another drop box culvert was identified at the south end (upstream) of the North Stream.

2.2.4 Threatened and Endangered Species and Significant Habitats

The U.S. Fish and Wildlife Service (USFWS) and the NYSDEC were contacted to determine the potential for any rare or protected species or their habitat on TRCB. The consultation letters are provided in Attachment 2.

The NYSDEC Natural Heritage Program consultation listed three animal species as documented in the vicinity of the TRCB site: the State-threatened bald eagle; State-threatened timber rattlesnake; and the State and Federally endangered Indiana bat. There were no plant species listed in the NYSDEC coordination letter, however four noteworthy natural communities were listed as occurring within the vicinity of the TRCB including: floodplain forest; pitch pine-oak-heath rocky summit; oak-tulip tree forest; and Appalachian oak-hickory forest.

According to the USFWS consultation, five Federal-listed threatened, endangered, or candidate species may be present within one mile of TRCB site: Indiana bat, New England Cottontail rabbit, Northern long-eared bat, Bog turtle, and Dwarf wedge mussel. No critical habitat was identified for any of those species within the TRCB vicinity.

SECTION 3

POTENTIAL IMPACTS BY OPERABLE UNIT

This section describes potential impacts on fish and wildlife resources by individual Operable Unit. Following a brief OU description, an ecological conceptual model (ECSM) is presented. The ECSM identify pathways for potential exposure of fish and wildlife resources to site contaminants. If a potentially complete exposure pathway is identified, then a discussion is presented on data availability by media, identification of COPECs based on screening values, and potential impacts on fish and wildlife resources. Following a description of COPEC screening process, the OUs are discussed according to the following sequence:

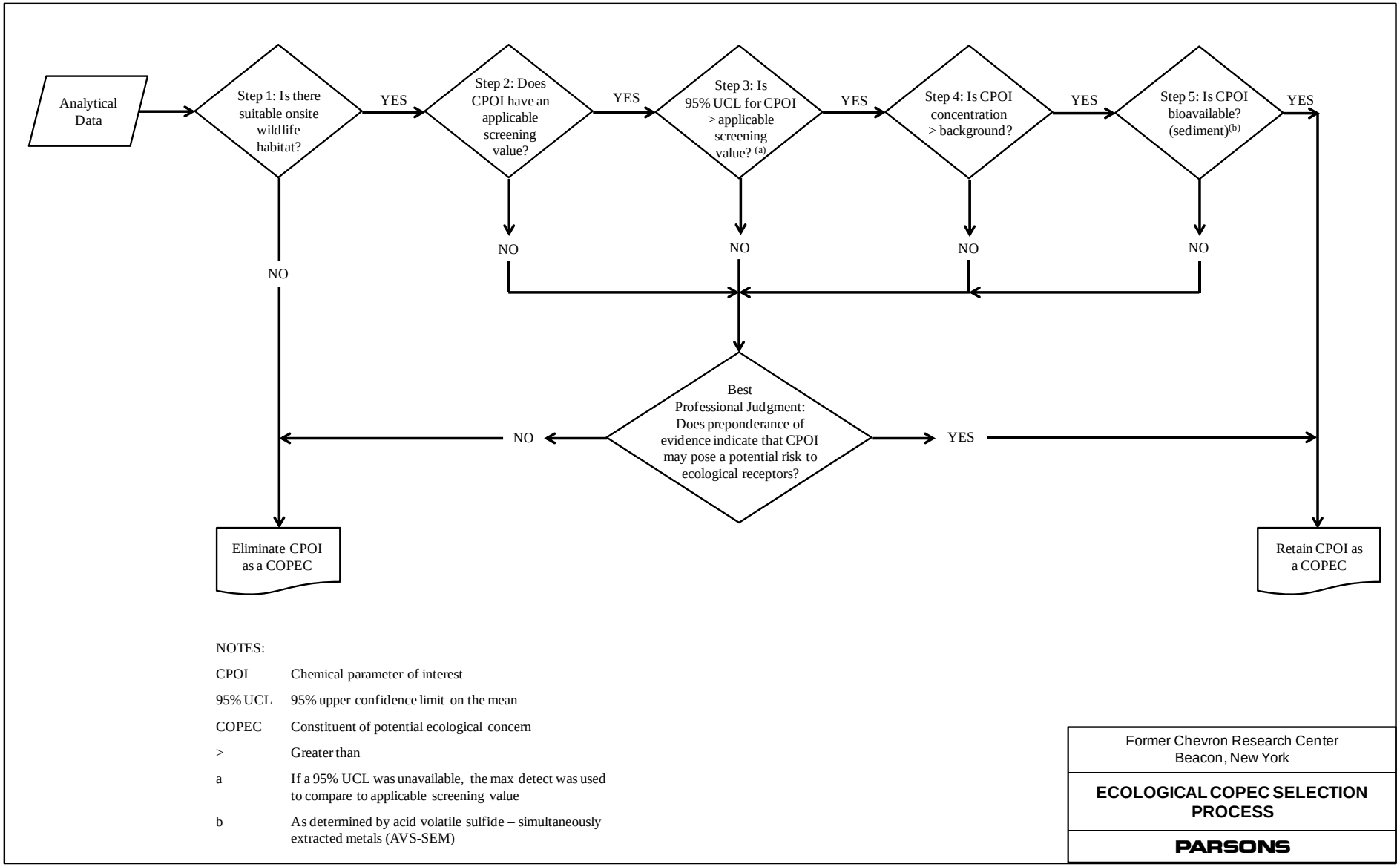
- Main Facility Parcel (OU-1A)
- Former Church Property Parcel (OU-1B)
- Former Washington Avenue Tank Farm (OU-1C)
- Residential Property Parcels (OU-1D and OU-3)
- Back 93 Acres Parcel (OU-1E)
- Road Parcel (OU-2)
- Dam and Associated Hydropower Facilities Parcel (OU-4)
- Fishkill Creek Parcel (OU-1F)

3.1 COPEC SCREENING

3.1.1 Screening Process

The screening process consisted of the following steps leading to the identification of COPECs for a given parcel, as illustrated in the flowchart below:

- Analytical data were compiled for every parcel. Chemical compounds found at detectable concentrations were retained for further evaluation as CPOI.
- An evaluation was made of the suitability of the parcel as wildlife habitat. The COPEC selection process was applied to those parcels that presented significant natural resources or wildlife habitat.
- Analytical data were compared to applicable screening values for further COPEC identification. For soil, the comparison was based on the 95% Upper Confidence Limit of the Mean (95% UCL) of historical data collected for a given parcel. If sufficient data were not available to calculate a 95% UCL, then comparison was based on maximum detectable concentrations of historical data for a given parcel.
- An evaluation of background concentration was conducted (when sufficient background data were available) for those CPOI retained on the basis of screening values. CPOI were retained for further COPEC screening if background concentrations in a given media (*e.g.*, surface water and sediment) were significantly exceeded.



NOTES:

CPOI	Chemical parameter of interest
95% UCL	95% upper confidence limit on the mean
COPEC	Constituent of potential ecological concern
>	Greater than
a	If a 95% UCL was unavailable, the max detect was used to compare to applicable screening value
b	As determined by acid volatile sulfide – simultaneously extracted metals (AVS-SEM)

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ECOLOGICAL COPEC SELECTION PROCESS

PARSONS

- For sediment, an additional screening step was conducted based on the bioavailability of divalent cationic metals.

3.1.2 Surface Soil Screening Values

NYSDEC applies the soil remediation guidelines established under their Brownfield Sites Cleanup program, promulgated under 6 New York Code of Rules and Regulations (NYCRR) Part 375, to establish cleanup goals for sites regulated under multiple environmental programs. The Part 375 SCOs include cleanup "tiers", corresponding to the proposed end uses of the property including the "Protection of Ecological Resources." This tier of SCOs was used to define the screening values to determine COPECs in surface soil based on 95% UCL of historical data collected for a given parcel. Maximum concentrations were used for screening when not enough data were available for 95% UCL calculation. Surface soil is defined as soil samples collected within a 0 to 2 ft bgs interval.

The NYSDEC Technical Guidance DER-10 for Site Investigation and Remediation indicates that, to assess ecological resource exposure to soil contamination, soil samples should be collected from 1) a soil depth of 0 to 6 inches below the vegetative cover, and 2) a deeper soil horizon, typically from 12 to 24 inches. However, historically soil sample data at the TRCB has not been collected primarily for determination of impacts on ecological resources. Consequently, historical data includes multiple depth ranges that may extend below the 2 ft bgs depth. For the screening process, data were obtained from any samples whose upper depth start was less than 2 ft bgs. When available, data were listed separately from samples collected within the depth ranges of 0 to 6 inches, greater than 6 inches to 12 inches, and greater than 12 inches to 24 inches. Table 3.1 presents the soil screening values for analytes detected in surface soil samples.

3.1.3 Surface Water Screening Values

Water Quality Standards for protection of aquatic life were established by NYSDEC in 6 NYCRR Part 703: Surface Water and Groundwater Quality and Groundwater Effluent Limitations (http://www.dec.ny.gov/regs/4590.html). Water Quality Standards are the basis for programs to protect the state waters. Standards set forth the maximum allowable levels of chemical pollutants and are used as the regulatory targets for permitting, compliance, enforcement, and monitoring and assessing the quality of the state's waters. Waters are classified for their best uses (fishing, source of drinking water, etc.) and standards (and guidance values) are set to protect those uses. All waters in New York State are assigned a letter classification that denotes their best uses. Water Class "C" applies to Fishkill Creek at the TRCB. Class C waters should be suitable for fish, shellfish, and wildlife propagation and survival, as well as secondary contact recreation (e.g., fishing and boating).

Table 3.1 Surface Soil Screening Values

Analyte	Units	Screening Values*
Metals		
Arsenic	mg/kg	13
Barium	mg/kg	433
Beryllium	mg/kg	10
Cadmium	mg/kg	4
Chromium	mg/kg	1
Copper	mg/kg	50
Lead	mg/kg	63
Manganese	mg/kg	1600
Mercury	mg/kg	0.18
Nickel	mg/kg	30
Selenium	mg/kg	3.9
Silver	mg/kg	2
Zinc	mg/kg	109
Organic Compounds		
1,2-Dichloroethane	ug/kg	10000
1,4-Dichlorobenzene	ug/kg	20000
2-Butanone (Methyl ethyl ketone)	ug/kg	100000
4,4'-DDD	ug/kg	3.3
4,4'-DDE	ug/kg	3.3
4,4'-DDT	ug/kg	3.3
Acenaphthene	ug/kg	20000
Acetone	ug/kg	2200
Aldrin	ug/kg	140
Alpha-BHC	ug/kg	40
alpha-Chlordane	ug/kg	1300
Anthracene	ug/kg	1000
Aroclor 1016	ug/kg	1000
Aroclor 1221	ug/kg	1000
Aroclor 1232	ug/kg	1000
Aroclor 1242	ug/kg	1000
Aroclor 1248	ug/kg	1000
Aroclor 1254	ug/kg	1000
Aroclor 1260	ug/kg	1000
Benzene	ug/kg	70000
Benzo(a)Pyrene	ug/kg	2600
Beta-BHC	ug/kg	600
Chlorobenzene	ug/kg	40000
Chloroform	ug/kg	12000
Delta-BHC	ug/kg	40
Dieldrin	ug/kg	6
Endrin	ug/kg	14
Fluorene	ug/kg	30000
Gamma-BHC (Lindane)	ug/kg	6000
Heptachlor	ug/kg	140
Methylene chloride (Dichloromethane)	ug/kg	12000
Pentachlorophenol	ug/kg	800
Phenol	ug/kg	30000
Tetrachloroethene	ug/kg	2000
Toluene	ug/kg	36000
Trichloroethene (Trichloroethylene)	ug/kg	2000

* Soil Cleanup Objectives (SCOs) - NYSDEC Brownfield Sites Cleanup Program 6 NYCRR Part 375-6.8(b) - Protection of Ecological Resources

For the COPEC identification, Water Quality Standards, as identified in 6 NYCRR Part 703, surface water Class C, were compared to surface water samples collected from Fishkill Creek in the vicinity of the TRCB site. Selected criteria represent the lowest of values listed in the categories Aquatic (Chronic), Wildlife, and Health (Fish Consumption). In the absence of established water quality standards, numeric guidance values were obtained from the 1998 NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Groundwater Quality Standards and Groundwater Effluent Limitations (http://www.dec.ny.gov/docs/water_pdf/togs1112.pdf). Per Part 703 guidance, metals were evaluated based on dissolved concentrations, except for barium, beryllium and iron. It was assumed that the dissolved concentration also represents aluminum and silver in ionic form, and thallium and vanadium in the acid-soluble form.

Screening of COPECs in groundwater discharge into Fishkill Creek was based on a direct comparison of maximum concentration in wells located within 100 ft of the creek and Water Quality Standards as specified in NYCRR Part 703, surface water Class C supplemented with 1998 TOGS 1.1.1 values (http://www.dec.ny.gov/docs/water_pdf/togs111.pdf). Table 3.2 presents the surface water screening values.

3.1.4 Sediment Screening Values

Class A sediments, considered to be of low risk to aquatic life, as identified in NYSDEC draft Screening and Assessment of Contaminated Sediment (NYSDEC 2013) (http://www.dec.ny.gov/docs/fish_marine_pdf/contamsedimentrev.pdf), were used as sediment screening values. Detected concentrations were compared to Class A values to determine COPECs in sediment samples. Table 3.3 presents the sediment screening values. In the COPEC selection, upstream background values were also taken into consideration. Background values represent the 95% Upper Simultaneous Limit (95% USL) of sediment samples collected from Fishkill Creek to a depth of 2 ft at 12 sampling sites located upstream of TBRC in August 2014 (Attachment 6, Table 4). Sediment data are presented in Attachment 5. A discussion of results is presented in Section 3.9.

Table 3.2 Surface Water Screening Values

Analyte	Units	Screening Values*	Analyte	Units	Screening Values*
Metals			**Organic Compounds (cont.)**		
Aluminum (ionic)	mg/L	0.1	Anthracene	ug/L	3.8
Arsenic (dissolved)	mg/L	0.15	Aroclor 1016	ug/L	0.000001
Beryllium	mg/L	1.1	Aroclor 1221	ug/L	0.000001
Cadmium (dissolved)**	mg/L	0.0029	Aroclor 1232	ug/L	0.000001
Chromium (dissolved)**	mg/L	0.103	Aroclor 1242	ug/L	0.000001
Cobalt	mg/L	0.005	Aroclor 1248	ug/L	0.000001
Copper (dissolved)**	mg/L	0.02	Aroclor 1254	ug/L	0.000001
Lead (dissolved)**	mg/L	0.0058	Aroclor 1260	ug/L	0.000001
Mercury (dissolved)	mg/L	0.0000026	Benzene	ug/L	10
Nickel (dissolved)**	mg/L	0.073	Benzo(a)anthracene	ug/L	0.03
Selenium (dissolved)	mg/L	0.0046	Benzo(a)Pyrene	ug/L	0.0012
Silver (ionic)	mg/L	0.0001	bis(2-Ethylhexyl)phthalate	ug/L	0.6
Vanadium (acid soluble)	mg/L	0.014	Chlorobenzene	ug/L	5
Zinc (dissolved)**	mg/L	0.117	Chloromethane	ug/L	200
Organic Compounds			Ethylbenzene	ug/L	17
1,2,3-Trichlorobenzene	ug/L	5	Fluorene	ug/L	0.54
1,2,4-Trichlorobenzene	ug/L	5	Hexachlorobenzene	ug/L	0.00003
1,2,4-Trimethylbenzene	ug/L	33	Hexachlorobutadiene	ug/L	0.01
1,2-Dichlorobenzene	ug/L	5	Hexachlorocyclopentadiene	ug/L	0.45
1,3-Dichlorobenzene	ug/L	5	Hexachloroethane	ug/L	0.6
1,4-Dichlorobenzene	ug/L	5	Isopropylbenzene	ug/L	2.6
2,4,5-Trichlorophenol	ug/L	1	Methylene chloride	ug/l	200
2,4,6-Trichlorophenol	ug/L	1	Naphthalene	ug/l	13
2,4-Dichlorophenol	ug/L	1	p-Cresol	ug/l	5
2,4-Dimethylphenol	ug/L	5	Pentachlorophenol	ug/l	1
2,4-Dinitrophenol	ug/L	400	Phenanthrene	ug/l	5
2-Chlorophenol	ug/L	1	Phenol	ug/l	5
2-Methyl-naphthlalene	ug/L	4.7	Pyrene	ug/l	4.6
2-Methylphenol	ug/L	5	Tetrachloroethene	ug/l	1
2-Nitrophenol	ug/L	5	Thallium	mg/l	0.008
4,6-Dinitro-2-methylphenol	ug/L	5	Toluene	ug/l	6000
Acenaphthene	ug/L	5.3	Trichloroethene	ug/l	40
Aldrin	ug/L	0.001	Xylenes, Total	ug/l	65

* NYSDEC Surface Water Quality Standards, Water Class C (6 NYCRR Part 703.5, Table 1) supplemented with NYSDEC 1998 Technical and Operational Guidance Series (TOGs 1.1.1)

** Water hardness-dependent parameter. Criteria were calculated at a 150 mg/L total hardness (site-specific value for Fishkill Creek at TRCB).

Table 3.3 Sediment Screening Values

Analyte	Units	Class A Guidance Values*	Analyte	Units	Class A Guidance Values*
Metals			**Organic Compounds (cont.)**		
Arsenic	mg/kg	< 10	Heptachlor epoxide	ug/kg	< 2.5
Cadmium	mg/kg	< 1	Hexachlorobutadiene	ug/kg	< 1,200
Chromium	mg/kg	< 43	*gamma*-Hexachlorocyclohexane		< 2.4
Copper	mg/kg	< 32	Hexachlorocyclopentadiene	ug/kg	< 810
Lead	mg/kg	< 36	Isopropylbenzene (cumene)	ug/kg	< 210
Mercury	mg/kg	< 0.2	Imidacloprid	ug/kg	< 0.004
Nickel	mg/kg	< 23	Malathion	ug/kg	< 0.42
Silver	mg/kg	< 1	Methoxychlor	ug/kg	< 59
Zinc	mg/kg	< 120	Methylene chloride	ug/kg	< 41
Organic Compounds			Metalochlor	ug/kg	< 240
Azinphosmethyl	ug/kg	< 0.06	Mirex	ug/kg	< 120
Benzene	ug/kg	< 530	Nonylphenol	ug/kg	< 54,000
Benefin (benfluralin)	ug/kg	< 1,900	Pendimethalin	ug/kg	< 3,400
Benzidine	ug/kg	< 0.04	Pentachlorobenzene	ug/kg	< 150
Bifenthrin	ug/kg	< 1.6	Pentachlorophenol	ug/kg	< 14,000
Bis(2-ethylhexyl)phthalate	ug/kg	< 360,000	Prometon	ug/kg	< 1,700
Carbaryl	ug/kg	< 6	TCDD equivalent	ug/kg	< 0.0045
Carbofuran	ug/kg	< 4	1,2,3,4-Tetrachlorobenzene	ug/kg	< 1,000
Carbon tetrachloride	ug/kg	< 1,070	1,2,3,5-Tetrachlorobenzene	ug/kg	< 2,500
Chlordane	ug/kg	< 3.2	1,2,4,5-Tetrachlorobenzene	ug/kg	< 3,000
Chlorobenzene	ug/kg	< 200	1,1,1,2 Tetrachloroethane	ug/kg	< 9,000
Chlorpyrifos	ug/kg	< 12	1,1,2,2 Tetrachloroethane	ug/kg	< 2,800
Chlorothalonil	ug/kg	< 7	Tetrachloroethene	ug/kg	< 16,000
DDD	ug/kg	< 4.9	Toluene	ug/kg	< 930
DDE	ug/kg	< 3.2	Total PAHs	ug/kg	< 4,000
DDT	ug/kg	< 4.2	Total PCB	ug/kg	< 100
Diazanon	ug/kg	< 9	Toxaphene	ug/kg	< 6
Dicamba	ug/kg	< 180	Triadimefon	ug/kg	< 220
1,2-Dichlorobenzene	ug/kg	< 280	1,2,3-Trichlorobenzene	ug/kg	< 230
1,3-Dichlorobenzene	ug/kg	< 1,800	1,2,4-Trichlorobenzene	ug/kg	< 35,000
1,4-Dichlorobenzene	ug/kg	< 720	Trichloroethanes	ug/kg	< 1,900
1,2-Dichloroethane	ug/kg	< 1,700	Trichloroethene	ug/kg	< 1,800
1,1-Dichloroethene	ug/kg	< 520	1,2,4-Trimethylbenzene	ug/kg	< 3,400
trans-1,2-Dichloroethene	ug/kg	< 1,200	1,2-Xylene	ug/kg	< 820
Dieldrin	ug/kg	< 19	1,3-Xylene	ug/kg	< 480
Endosulfan	ug/kg	< 1	1,4-Xylene	ug/kg	< 530
Endrin	ug/kg	< 2.2	Xylene, isomer unspecified	ug/kg	< 590
Ethylbenzene	ug/kg	< 430			

* Class A Sediment Guidance Values represent sediments considered to be of low risk to aquatic life

NYSDEC *Screening and Assessment of Contaminated Sediment* (Table 1a, January 24, 2013)

(http://www.dec.ny.gov/docs/fish_marine_pdf/contamsedimentrev.pdf)

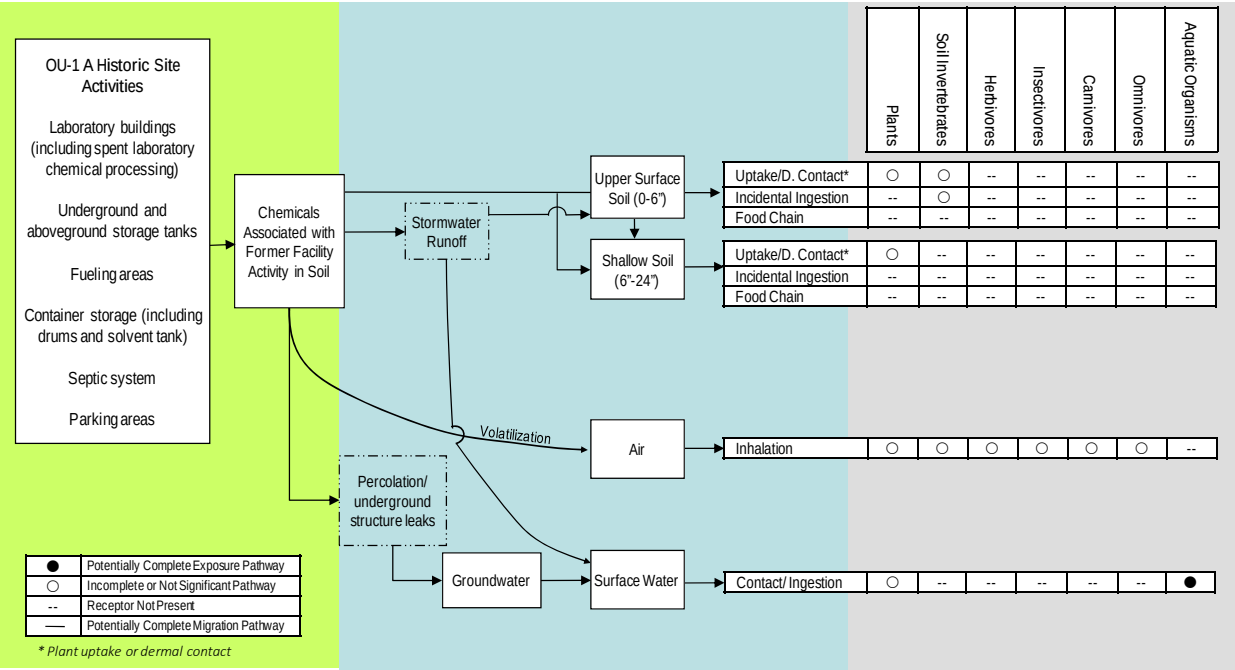
3.2 MAIN FACILITY (OU-1A)

The Main Facility (OU-1A) consists of 33 acres of land and includes all of the developed areas located north of Fishkill Creek which has been used as an on-shore, non-production, non-transportation laboratory complex engaged in research, development, and technical services related to petroleum products and energy for many years. The Main Facility is bounded to the south by Fishkill Creek, to the north by Old Glenham Road, to the west by the Metro-North Railroad line and the former Church Property (OU-1B), and to the east by private property including parking, residential housing and businesses.

The Main Facility formerly included: parking areas, offices and laboratory buildings, aboveground and underground storage tanks, roads, and storage areas. In 2011 and 2012, Chevron conducted a building removal project that resulted in the demolition to the basement or slab level of the vast majority of buildings on-site. Currently no structures exist on the OU with the exception of a few support buildings, and all storage tanks have been removed. The predominantly developed areas include limited grass/green space habitat in the east section, as well as limited fringe upland forest adjacent to the Church Parcel (OU-1B) and along Fishkill Creek. No wetlands or other surface water features are located within the Main Facility. Virtually all of the facility has pavement, old foundations, and non-vegetated areas (Figure 3.1).

3.2.1 Ecological Conceptual Site Model (ECSM)

This section describes the main elements of the ECSM for the Main Parcel (OU-1A), illustrated in the diagram below.



Sources: Contaminated surface soil from former operations of laboratory facilities; underground and aboveground storage tanks; fueling areas. A description of formerly conducted operations is provided in Section 1.3.1. Petroleum, coal products, and solvents have been used at the Main Facility in connection with research operations.

Contaminant Release and Transport Mechanisms: Constituents may infiltrate, percolate and leach to groundwater. Additional release mechanisms may include transport in storm water runoff and volatilization.

Exposure Media: Predominant exposure media are surface soil, and surface water at the point of groundwater discharge into Fishkill Creek.

Primary Exposure Routes: Uptake and direct contact with surface soil for vegetation and soil invertebrates. Fishkill Creek aquatic biota and shore vegetation may be exposed to groundwater constituents and eroded soil transported by storm water.

Ecological Receptors: Parcel OU-1A was historically a fully developed industrial/ commercial facility; the majority of the buildings/structures have been removed. Wildlife receptors are not typically expected to be present other than those species associated with urban environments with limited green space. For this reason the exposure pathway for terrestrial wildlife is considered incomplete.

The surface water and groundwater pathways are discussed separately in Section 3.9 for Parcel OU-1F (Fishkill Creek).

3.2.2 Data Availability

Extensive surface soil data have been collected from the Main Facility (OU-1A) parcel during previous site assessment and RCRA Facility Investigations. The extent of those assessments and related investigations are described in Section 1.3.2. The surface soil data set covers multiple sampling events conducted from 2000 to 2013. Surface soil data are available for 138 locations distributed throughout OU-1A. Figure 3.1 indicates locations of surface soil samples (0 to 2 ft bgs) collected from OU-1A. At each location, a color code is used to indicate sample collection from one of three depth intervals: from 0 to 6 inches bgs; >6 inches to 12 inches bgs; and >12 inches to 24 inches bgs. Given the wide distribution of surface soil sampling locations, a need for additional samples was not identified for the characterization of surface soil in parcel OU-1A.

3.2.3 Potential Impacts on Fish and Wildlife Resources

Terrestrial habitats. The Main Facility parcel was extensively commercialized and developed during the TRCB operations and includes very limited grass/green space habitat. An evaluation of potential risk on wildlife species from exposure to surface soil is not appropriate due to the developed nature of this parcel for over 50 years. Therefore potential impacts are not expected to wildlife species from surface soil and Parcel OU-1A should be excluded from further ecological risk analysis due to the lack of habitat and potential exposure.

Aquatic habitats. No wetlands or other surface water features were identified within the Main Facility based on mapping and findings of the June 9-13, 2014 field survey (Section 2.2). Aquatic habitat, however, may be impacted by contaminant migration from the OU-1A parcel into Fishkill Creek. Section 3.9 presents an evaluation of surface water and sediment quality in the Fishkill Creek segment along the TRCB facility (OU-1F), as well the potential groundwater discharge into Fishkill Creek from adjacent parcels, including the Main Facility (OU-1A).

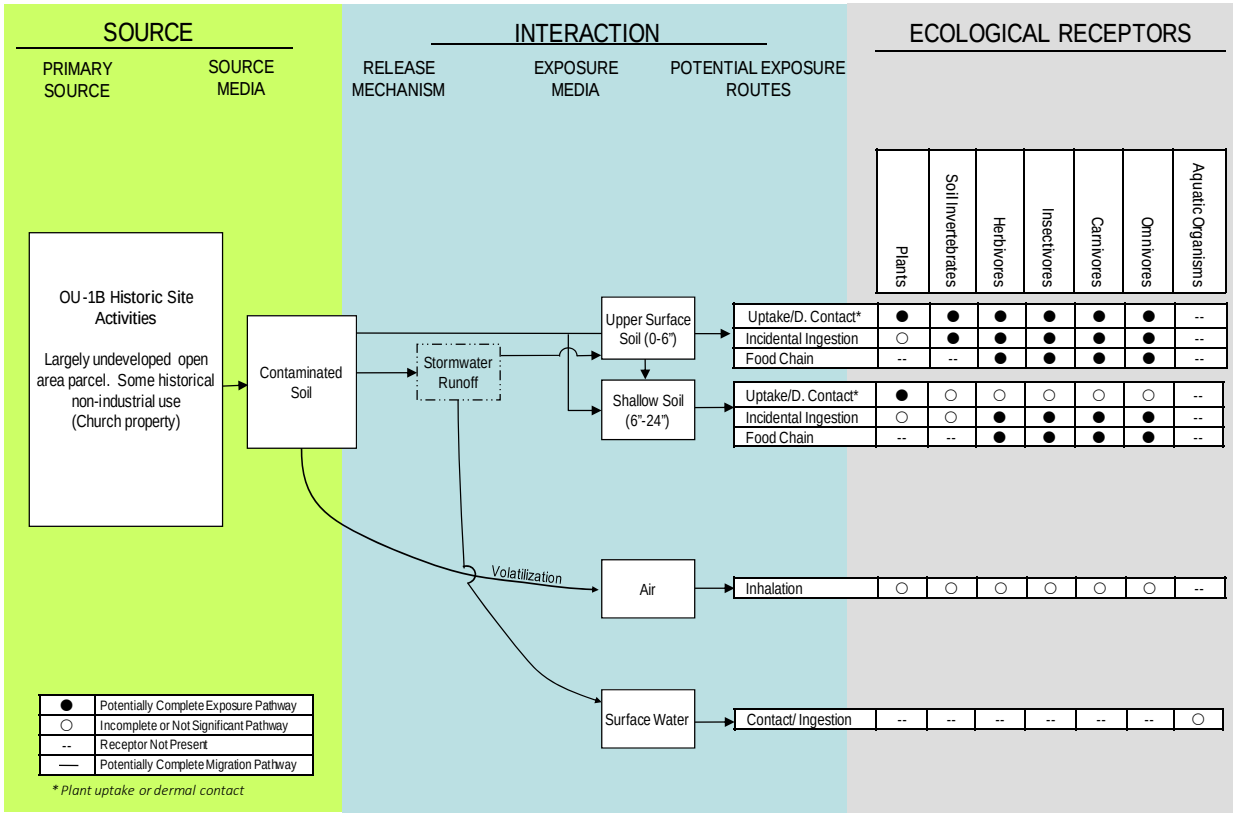
3.3 CHURCH PROPERTY PARCEL (OU-1B)

The former Church Property (OU-1B) is a 15 acre undeveloped parcel located to the northwest of the Main Facility (OU-1A) that once contained a local church which was relocated off the OU-1B parcel. Currently no structures exist on the OU and no activities or occupants currently exist on this parcel. Main areas that have been used are limited to the access road along the west side of the parcel and the southeast corner where a church and parsonage were located. Parcel OU-1B was not used as an area of active operations or disposal during the TRCB operations. This parcel is bounded on the north via public road and residential properties, the east by the Main Facility, the west by residential properties, and the south by Fishkill Creek (Figure 3.2).

During the June 2014 habitat survey, mature upland forest was identified as the predominant plant community throughout OU-1B (Section 2.2). This community had a mixture of hardwood trees including sugar maple, pignut hickory, shagbark hickory, black oak, and northern red oak. The shrub layer is variable and patchy in distribution due to the closed canopy of the mature trees. The mature upland hardwood forest in the Church Property parcel is relatively undisturbed. The soil layer is generally thin over much of the Church Property, and exposed rock areas are found throughout the central section of the parcel. No wetlands or surface water features are present within OU-1B.

3.3.1 Ecological Conceptual Site Model

This section describes the main elements of the ECSM for the Church Property Parcel (OU-1A), illustrated in the diagram below.



Sources: The parcel was not developed for TRCB operations and contains no known industrial contaminant sources. Potential contaminant sources include non-industrial historical use.

Contaminant Release and Transport Mechanisms: Discharge of storm water runoff into Fishkill Creek. An additional release mechanism may include volatilization.

Exposure Media: Surface soil is the predominant exposure media. No wetlands or surface water features are present within OU-1B.

Primary Exposure Routes: Primary exposure routes for vegetation and soil invertebrates to surface soil are uptake and direct contact; wildlife may be exposed via food consumption and incidental soil ingestion.

Ecological Receptors: Upper hardwood forest is the predominant vegetation cover in the Church Property Parcel. Typical ecological receptors are wildlife species associated with upland wooded areas.

3.3.2 Data Availability and COPEC Screening

Surface soil samples (0 to 2 ft bgs depth range) were collected from 17 locations on the Church Parcel during the Supplemental RFI (Parsons 2009). Figure 3.2 shows the location of surface soil samples collected from OU-1B. For each location, a color code is used to indicate the sample collection depth intervals (0-6 inches bgs; 6-12 inches bgs; and 12-24 inches bgs). Samples were analyzed for VOCs, SVOCs and TAL metals, as well as pesticides and PCBs. Additional sample collection to fully characterize surface soil at the former Church Property Parcel will be conducted as specified in a separate sampling work plan currently under development.

Table 3.4 presents summary statistics for parameters in Parcel OU-1B surface soil (0-2 ft bgs) that exceeded SCO screening values for protection of ecological resources. Summary statistics by individual parameter indicate number of samples collected, number of detections, average and maximum detected concentrations, 95% UCL, and number of samples that exceed SCOs. Detailed data are provided in Appendix 6 Table 1.

For the Church Property parcel, the screening of surface soil data identified as COPECs the following compounds based on detected concentrations (95% UCL) and SCOs for protection of ecological resources:

- Inorganic compounds: copper, lead, mercury, nickel, and zinc.
- Pesticides: 4,4’-DDE; and 4,4’-DDT.

Summary statistics by sampling depth for all analyzed parameters are provided in Attachment 3.

The spatial distribution of parameters exceeding surface soil screening values in the former Church Property parcel is depicted in Figure 3.3 for VOCs, Figure 3.4 for SVOCs and pesticides, and Figure 3.5 for metals. Exceedances of one or more screening values for metals were found throughout most of the parcel. No screening values were exceeded for VOCs at any sampling locations (Figure 3.3). Exceedances of SVOCs and pesticides, depicted in Figure 3.4, were limited to 4,4’-DDT and 4,4’-DDE.

Table 3.4. Parcel OU-1B Summary of Screening Value Exceedances in Surface Soil

Parameter	Units	Screening Criteria*	Mean Detected Conc.	95% UCL**	Maximum Conc.	Number of Samples	No. Samples Exceeding Criteria	Percent Exceedance	Within 0-6" Depth?	Within 6-12" Depth?	Within 12-24" Depth?
4,4'-DDD	ug/kg	3.3	2.42	1.20	6.10	33	2	6.1%	yes	yes	not sampled
4,4'-DDE	**ug/kg**	**3.3**	**15.2**	**21.0**	**59**	**33**	**20**	**60.6%**	**yes**	**yes**	**not sampled**
4,4'-DDT	**ug/kg**	**3.3**	**15.1**	**21.0**	**73**	**33**	**18**	**54.5%**	**yes**	**yes**	**not sampled**
Arsenic	mg/kg	13	10.1	12.0	34	33	6	18.2%	yes	yes	not sampled
Chromium	mg/kg	41	21.9	30.0	61.7	33	2	6.1%	yes	yes	not sampled
Copper	**mg/kg**	**50**	**32.8**	**51.0**	**112**	**33**	**7**	**21.2%**	**yes**	**yes**	**not sampled**
Lead	**mg/kg**	**63**	**137.2**	**191**	**564**	**33**	**17**	**51.5%**	**yes**	**yes**	**not sampled**
Manganese	mg/kg	1600	664.5	779	1960	33	1	3.0%	yes	-	not sampled
Mercury	**mg/kg**	**0.18**	**0.21**	**0.28**	**0.66**	**33**	**16**	**48.5%**	**yes**	**yes**	**not sampled**
Nickel	**mg/kg**	**30**	**22.1**	**32.0**	**89.9**	**33**	**2**	**6.1%**	**yes**	**-**	**not sampled**
Selenium	mg/kg	3.9	2.10	1.50	5.04	33	1	3.0%	yes	-	not sampled
Silver	mg/kg	2.0	0.44	0.54	2.93	33	1	3.0%	yes	-	not sampled
Zinc	**mg/kg**	**109**	**131.7**	**237**	**804**	**33**	**10**	**30.3%**	**yes**	**yes**	**not sampled**

* NYSDEC, Soil Cleanup Objectives for Protection of Ecological Resources (6 NYCRR 375-6.8, Table b)

** 95% Upper Confidence Limit (UCL) on the mean (ProUCL v.5, EPA 2013). Boldface indicates 95% UCL values exceeding screening criteria.

3.3.3 Potential Impacts on Fish and Wildlife Resources

Terrestrial habitats. Screening of soil concentrations against SCOs indicated that wildlife receptors may be at risk for adverse effects from direct or dietary exposure to metals (copper, lead, mercury, nickel, and zinc) and pesticides (4,4'-DDE and 4,4'-DDT) in surface soil. An evaluation of potential risk to wildlife species from exposure to surface soil is warranted for the OU-1B parcel given the COPEC determination and habitat quality (predominantly undisturbed upland forest habitat). In addition, a sampling plan is under development to further evaluate soil background conditions at Parcel OU-1B.

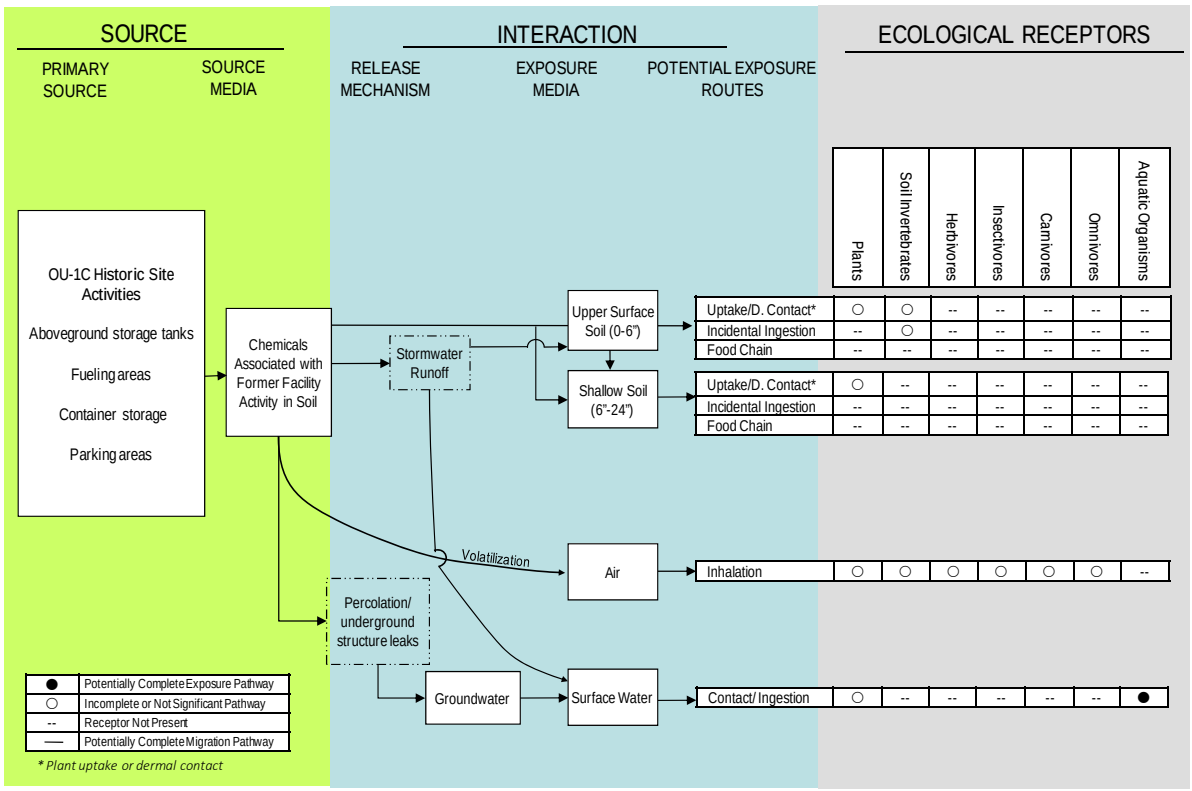
Aquatic habitats. No wetlands or other surface water features were identified within the Church Property Parcel based on mapping and findings of the June 9-13, 2014 field survey (Section 2.2).

3.4 FORMER WASHINGTON AVENUE TANK FARM (OU-1C)

The WATF (OU-1C) consists of five acres of land that is located south of Fishkill Creek and north of Washington Avenue. The WATF was formerly the site of over thirty above-ground storage tanks and associated facilities. The tanks and containment structures were removed in the fall of 2003 and winter of 2004. The area currently is an open lot with the remains of piping structures, and a previously operated groundwater recovery system. Vegetation on the WATF is sparse with mostly low grasses and woody stem weeds due to routine maintenance. There is a row of deciduous trees located along the Creek outside of the fence. No wetlands or surface water features are present within OU-1C. Figure 3.6 indicates the location of the WATF parcel and surrounding areas.

3.4.1 Ecological Conceptual Site Model

This section describes the main elements of the ECSM for the WATF (OU-1C), illustrated in the diagram below.



Sources: Contaminated surface soil and groundwater from former aboveground storage tanks, piping, and fueling areas.

Contaminant Release and Transport Mechanisms: Transport of contaminated surface soil in storm water runoff. Constituents may infiltrate, percolate and leach to groundwater. Additional release mechanisms may include volatilization.

Exposure Media: The predominant exposure media are surface soil and potentially surface water at the point of groundwater discharge into Fishkill Creek. The groundwater pathway is discussed separately in Section 3.9 for Parcel OU-1F (Fishkill Creek).

Primary Exposure Routes: Uptake and direct contact for vegetation and soil invertebrates. Fishkill Creek aquatic biota and shore vegetation may be exposed to groundwater constituents, if discharging to the creek.

Ecological Receptors: The Tank Farm parcel was historically fully developed; in 2003 /2004, all buildings/structures were removed. Wildlife receptors throughout most of the parcel would be predominantly small species associated with urban environments, and would be transient due to the lack of habitat.

3.4.2 Data Availability and COPEC Screening

Previous sampling at the WATF Parcel (OU-1C) has been limited to subsurface soil and groundwater investigations. No data are available for the characterization of surface soil (0 to 2 ft bgs) and evaluation of potential for adverse effects on wildlife and terrestrial habitat. Therefore, no COPEC screening was conducted for surface soil at OU-1C.

3.4.3 Potential Impacts on Fish and Wildlife Resources

Terrestrial habitats. An evaluation of potential risk to wildlife species from exposure to surface soil is not appropriate due to the developed nature of this parcel. Therefore potential impacts are not expected to wildlife species from surface soil and Parcel OU-1C should be excluded from further ecological risk analysis due to the lack of habitat and potential exposure.

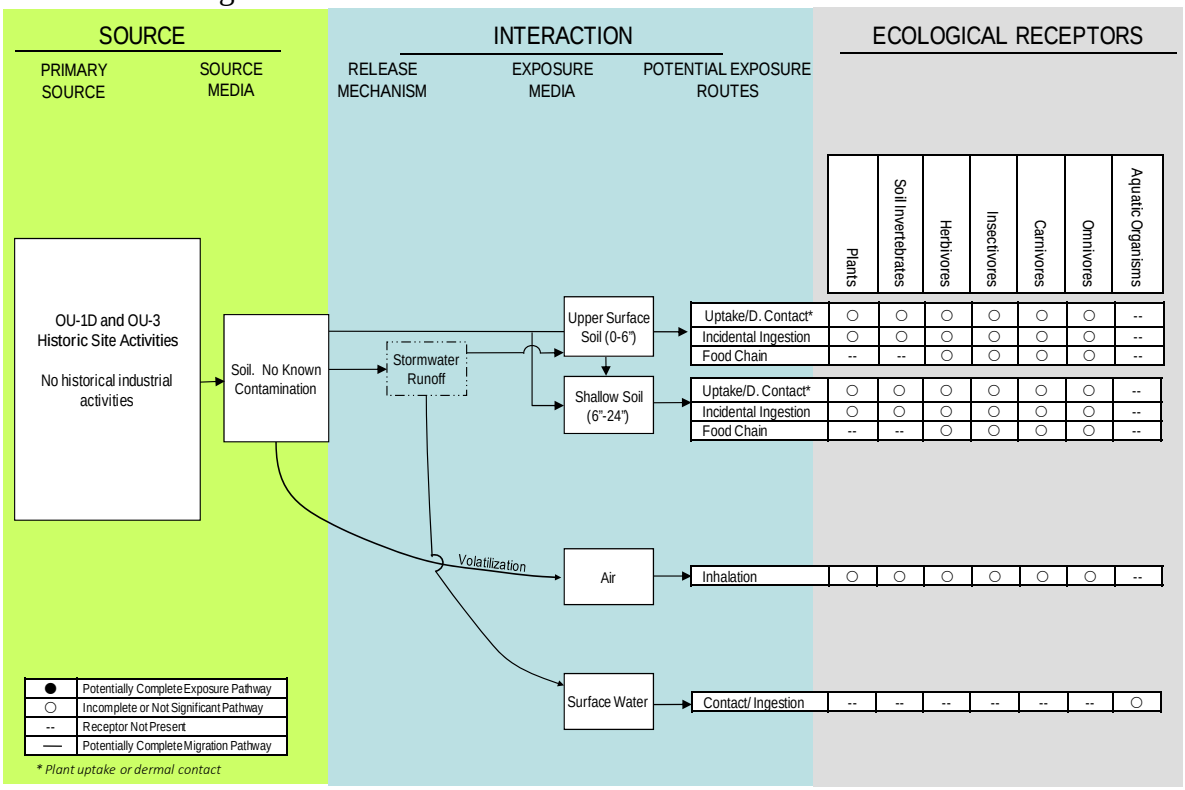
Aquatic habitats. No wetlands or other surface water features were identified within the WATF parcel based on mapping and findings of the June 9-13, 2014 field survey (Section 2.2). Aquatic habitat, however, may be impacted by contaminant migration from the OU-1C parcel into Fishkill Creek. Section 3.9 presents an evaluation of surface water and sediment quality in the Fishkill Creek segment along the TRCB facility (OU-1F), as well the potential groundwater discharge into Fishkill Creek.

3.5 RESIDENTIAL PROPERTY PARCELS (OU-1D AND OU-3)

Parcels OU-1D (approximately 2.1 acres) and OU-3 (approximately 0.67 acre) are located in undeveloped land never used as part of former TRCB operations. These two small parcels, adjacent to Washington Avenue and residential properties, are designated for future residential use. Figure 3.6 indicates the location of parcels OU-1D and OU-3. No structures currently exist within those parcels. Most of the land is currently wooded (primarily successional upland forest). No wetlands or surface water features are present within residential parcels OU-1D and OU-3. There are no known contaminant sources on site.

3.5.1 Ecological Conceptual Site Model

This section describes the main elements of the ECSM for parcels OU-1D or OU-3, illustrated in the diagram below.



Sources: The parcel was not developed for TRCB operations and contains no known industrial contaminant sources.

Contaminant Release and Transport Mechanisms: Storm water runoff from OU-1E is a potential contaminant transport mechanism. Volatilization is a secondary pathway.

Exposure Media: Surface soil is the predominant exposure media. No wetlands or surface water features are present within parcels OU-1D or OU-3.

Primary Exposure Routes: Primary exposure routes for vegetation and soil invertebrates to surface soil are uptake and direct contact.

Ecological Receptors: The parcels are undeveloped lots surrounded by the road and other residential parcels that do not provide significant wildlife habitat. No wetlands or surface water features are present.

3.5.2 Data Availability and COPEC Screening

Surface soil data are not currently available for characterization of potential impacts on ecological resources. However, the parcels have no known contaminant sources.

3.5.3 Potential Impacts on Fish and Wildlife Resources

It is not anticipated that wildlife impacts are occurring on OU-1D and OU-3 because these parcels are residential lots adjacent to the road with limited habitat and surrounded by other residential parcels. No further evaluation of OU-1D and OU-3 is anticipated in terms of ecological risk evaluation due to limited habitat.

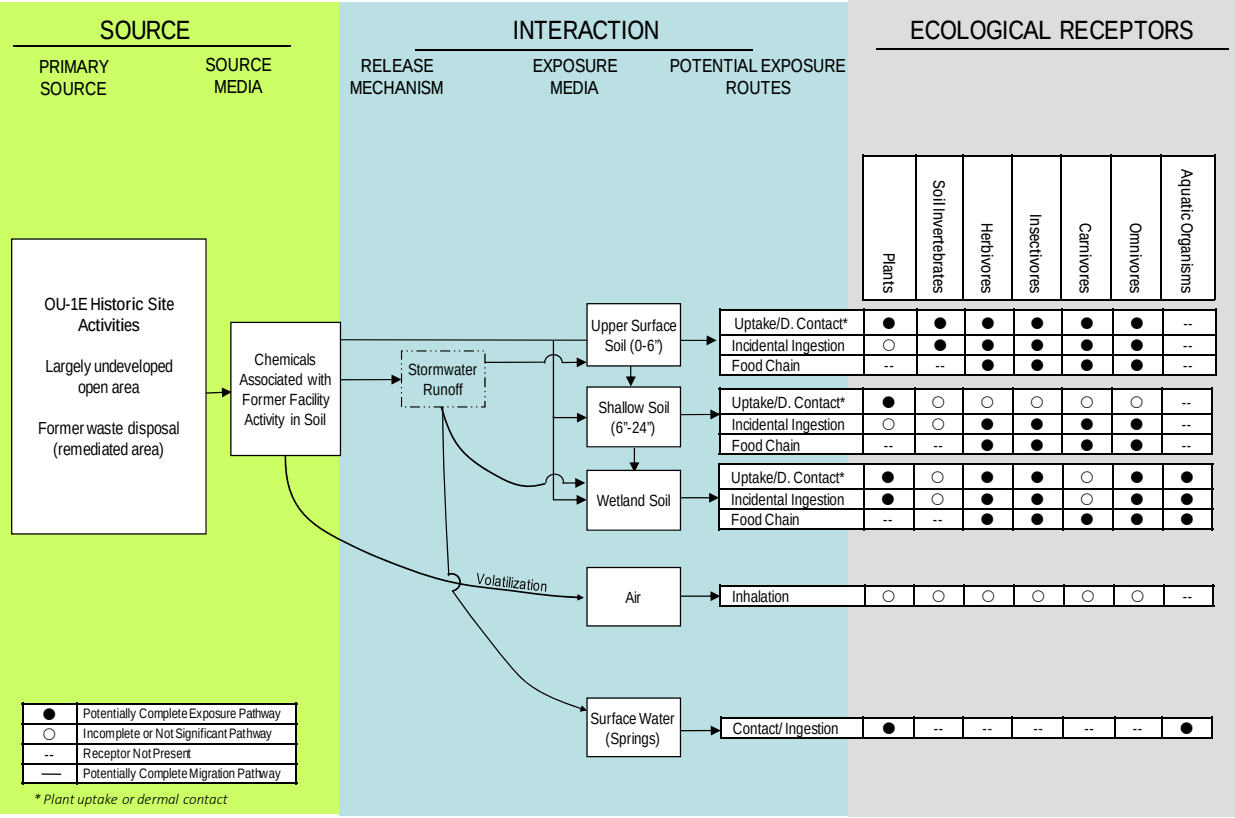
3.6 BACK 93 ACRES PARCEL (OU-1E)

The Back 93 Acres Parcel was partially developed for placement of outdoor sports and other recreational facilities associated with the TRCB. Those facilities were located mostly along the northeast section of the parcel. Figure 3.7 indicates Parcel OU-1E boundaries, former recreational areas locations, boundaries of former disposal sites and excavation areas, and surface soil sampling locations. Contaminant sources associated with the TRCB operation were removed in various approved soil remedial actions conducted from the mid 1980's until 2006 according to NYSDEC requirements. Remedial actions at twelve former disposal areas, described in Section 1.3.3, included soil excavation, confirmation sampling, clean backfill placement, and transport of excavated materials to offsite disposal facilities. Backfill analysis results for the 2005/2006 excavations, presented in Attachment 4, confirm that clean backfill soil was utilized (no parameters exceeded SCO screening values).

A qualitative survey conducted on June 9-13, 2014, described in Section 2.2, indicates that most of the parcel's vegetative cover can be classified as upper hardwood forest, with intermixed open fields and areas of grass/green space in the former recreational areas located within the northeast sections of OU-1E. Small springs and wetlands are located along the parcel's eastern boundary (Figure 2.4). Wetlands and other surface water features located within the Back 93 Acres Parcel were previously discussed in Sections 2.2.2 and 2.2.3.

3.6.1 Ecological Conceptual Site Model

This section describes the main elements of the ECSM for the Back 93 Acres Parcel (OU-1E), illustrated in the diagram below.



Contaminant Source: Contaminant surface soil. Contaminant sources associated with the TRCB operation were removed in various approved removal actions from the mid 1980's until 2006.

Contaminant Release and Transport Mechanisms: Transport in storm water runoff is the primary mechanism for migration of soil constituents. An additional release mechanism may include volatilization.

Exposure Media: Predominant exposure media are surface soil, wetlands sediment, and springs.

Primary Exposure Routes: Primary exposure routes for vegetation and soil invertebrates to surface soil are uptake and direct contact; wildlife may be exposed via food consumption, water ingestion, and incidental soil/sediment ingestion. Direct contact and ingestion is also a potential exposure pathway for aquatic biota and vegetation associated with wetlands and springs.

Ecological Receptors: Typical ecological receptors are those wildlife species associated with upland forested areas, springs, and wetlands.

3.6.2 Data Availability and COPEC Screening

Surface soil samples have been collected from 28 locations throughout the central and eastern sections of the Back 93 Acre Parcel (OU-1E) where TRCB disposal operations were formerly conducted. Figure 3.7 indicates sampling location and depth (0-6 inches bgs and 6-12 inches bgs). No surface soil sampling has been conducted in the remaining sections of the OU-1E parcel because TRCB operations were not conducted and contaminant sources are not

known to be present. Surface water data for springs/wetlands areas are not available. Additional sample collection to further characterize surface soil at parcel OU-1E, as well as water resources, will be conducted as specified in a separate sampling work plan currently under development.

Table 3.5 summarizes the screening of Parcel OU-1E surface soil data versus SCO criteria for protection of ecological resources. Summary statistics by sampling depth for all analyzed parameters are provided in Attachment 3. With the single exception of benzo(a)pyrene, no other organic compounds or inorganic substances exceeded SCO screening values. The screening value for benzo(a)pyrene (2,600 mg/kg) was moderately exceeded in 1 out of 21 surface soil samples analyzed (location ITSB-46, Chemical Burial Site No. 2 remedial area). However, the 95% UCL was well below the SCO and, thus, benzo(a)pyrene was not identified as a COPEC at OU-1E (Attachment 6, Table 2). No other PAHs were detected at a concentration above their respective screening values in any of the surface soil samples collected from OU-1E.

Table 3.5. Parcel OU-1E Summary of Screening Value Exceedances in Surface Soil

Parameter	Units	Screening Criteria*	Mean Detected Conc.	95% UCL**	Maximum Conc.	Number of Samples	No. Samples Exceeding Criteria	Percent Exceedance	Within 0-6" Depth?	Within 6-12" Depth?	Within 12-24" Depth?
Benzo(a)Pyrene	ug/kg	2600	656	876	3000	21	1	4.8%	yes	yes	not sampled

* NYSDEC, Soil Cleanup Objectives for Protection of Ecological Resources (6 NYCRR 375-6.8, Table b)

** 95% Upper Confidence Limit (UCL) on the mean (ProUCL v.5, EPA 2013).

3.6.3 Potential Impacts on Fish and Wildlife Resources

No impacts on fish and wildlife resources are anticipated for Parcel OU-1E. Historic contaminant sources associated with the TRCB operation have been removed in various approved soil remedial actions conducted according to NYSDEC requirements from the mid 1980's until 2006. No other contaminant sources are known to exist within Parcel OU-1E. Further evaluation of soil conditions and ecological risk will be conducted based on results of additional sampling to be conducted in the Back 93 Acres parcel.

3.7 ROAD PARCEL (OU-2)

Parcel OU-2 is a 0.233 acre parcel along and underneath Washington Avenue (Figure 3.6). This parcel is located outside of the fence line of the main property and is maintained by the Town of Fishkill as a major thoroughfare. No known TRCB activities were conducted on this property. The parcel is fully developed, containing the road and adjacent grass service areas. No surface water features or other ecological resources are located within OU-2. No surface soil data are available for Parcel OU-2 and no samples are anticipated to be collected as this is a public road. An evaluation of ecological risk is not anticipated for the Road Parcel due to the lack of habitat.

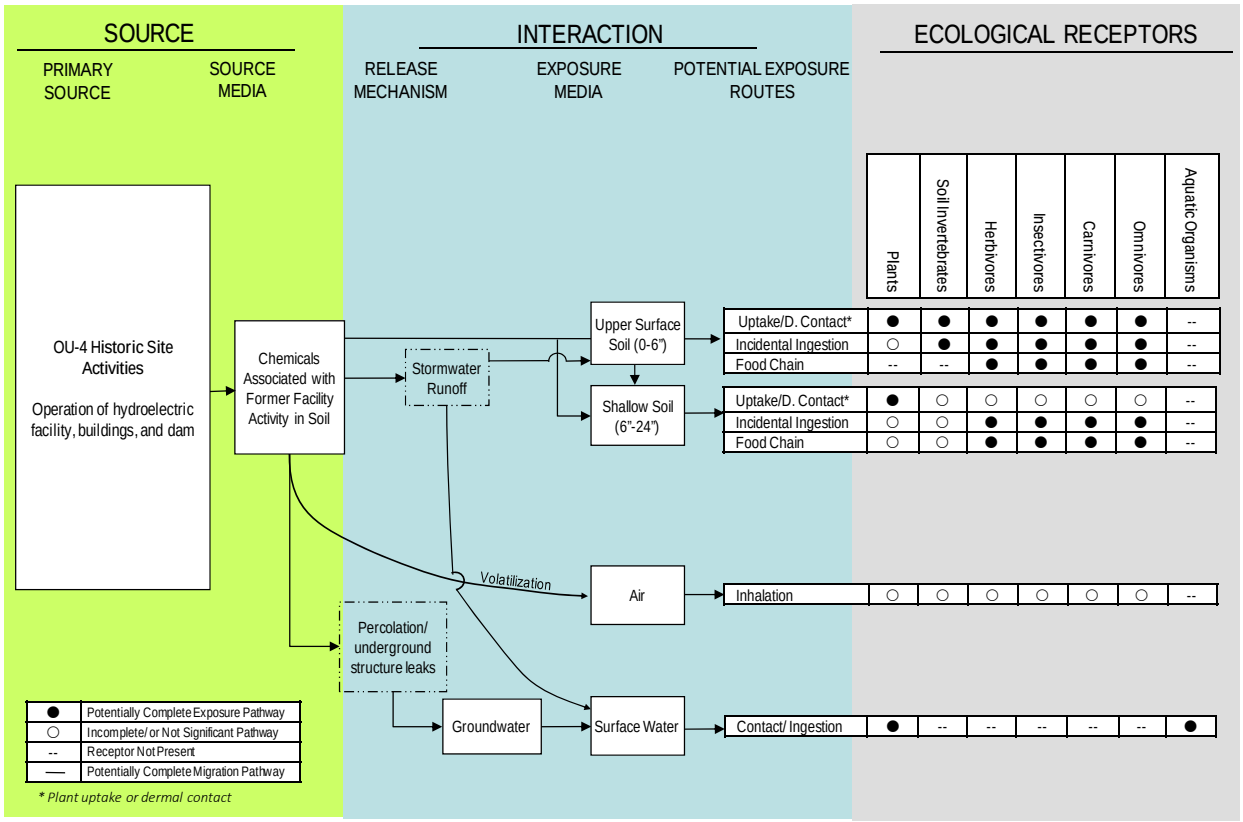
3.8 DAM AND ASSOCIATED HYDROPOWER FACILITIES (OU-4)

Parcel OU-4 is described as the "Hydroelectric Facility & Dam". The operable unit includes the hydroelectric buildings and the dam itself with access on the north side via an easement to Old Glenham Road, and on the south side via an easement to Washington Avenue (Figure 3.8). The parcel is approximately 4.96 acres. Most of the west and central sections of OU-4 contain upland hardwood forest adjacent to Fishkill Creek. The east section of the parcel, adjacent to the WATF, is sparse with mostly low grasses and woody stem weeds due to routine lawn

maintenance. The hydroelectric facilities are located in a fully developed area north of Fishkill Creek, adjacent to the Main Facility. No wetlands or surface water features are present within Parcel OU-4.

3.8.1 Ecological Conceptual Site Model

This section describes the main elements of the ECSM for Parcel OU-4, illustrated in the diagram below.



Contaminant Sources: Contaminated surface soil associated with operation of the hydroelectric dam and facilities is the primary contaminant source.

Contaminant Release and Transport Mechanisms: Surface soil constituents may infiltrate, percolate and leach to groundwater. Additional release mechanisms are transport in storm water runoff and volatilization.

Exposure Media: Predominant exposure media are surface soil and surface water at the point of groundwater discharge into Fishkill Creek.

Primary Exposure Routes: Uptake and direct contact for vegetation and soil invertebrates; food consumption and incidental soil ingestion for wildlife species. Fishkill Creek aquatic biota and shore vegetation may be exposed to groundwater constituents.

Ecological Receptors: Typical ecological receptors are wildlife species associated with small wooded areas adjacent to the creek and small urban wildlife associated with limited green space.

Data for surface soil exposure are discussed below. The groundwater pathway is discussed separately in Section 3.9 for Parcel OU-1F (Fishkill Creek) based on data from the OU-4 and two other parcels adjacent to the creek (OU-1A and OU-1C).

3.8.2 Data Availability and COPEC Screening

Surface soil samples (0 to 2 ft bgs depth range) were collected from 21 locations on the OU-4 Parcel during previous site assessment and RCRA Facility Investigations (Section 1.3.2). Figure 3.8 shows the location of surface soil samples collected from OU-4. For each location, a color code is used to indicate the sample collection depth intervals (0-6 inches bgs; 6-12 inches bgs; and 12-24 inches bgs). A need for additional sample collection has not been identified for surface soil characterization at the Dam and Associated Facilities Parcel (OU-4).

Table 3.6 presents summary statistics for parameters in Parcel OU-4 that exceeded SCO surface soil screening values for protection of ecological resources. Summary statistics (Appendix 6, Table 3) by individual parameter indicate number of samples collected, number of detections, average and maximum detected concentrations, 95% UCL, and number of samples that exceed SCOs. For the OU-4 Parcel, the screening of surface soil data (0-2 ft bgs) identified as COPECs the following inorganic compounds based on detected concentrations (95% UCL) and SCOs for protection of ecological resources: chromium, copper, lead, mercury, and zinc.

The number of COPECs identified for the deeper soil interval (>12-24 inches) was limited to lead and mercury. Summary statistics by sampling depth for all analyzed parameters are provided in Attachment 3.

The spatial distribution of parameters exceeding surface soil screening values in Parcel OU-4 is depicted in Figure 3.3 for VOCs, Figure 3.4 for SVOCs and pesticides, and Figure 3.5 for metals. No organic compounds were detected at concentrations exceeding screening values (Figures 3.3 and 3.4). Exceedances of one or more screening values for metals were within two main areas on OU-4 located on the west and center portions of the parcel. Further evaluation of ecological risk associated with these exceedances will be addressed in the Alternatives Assessment and Remedial Action Work Plan for this parcel.

Table 3.6. Parcel OU-4 Summary of Screening Value Exceedances in Surface Soil

Parameter	Units	Screening Criteria*	Mean Detected Conc.	95% UCL**	Maximum Conc.	Number of Samples	No. Samples Exceeding Criteria	Percent Exceedance	Within 0-6" Depth?	Within 6-12" Depth?	Within 12-24" Depth?
Arsenic	mg/kg	13	7.1	8.0	21.0	59	2	3.1%	yes	yes	-
Chromium	**mg/kg**	**41**	**123.0**	**522**	**5410**	**59**	**3**	**4.7%**	**yes**	**yes**	**-**
Copper	**mg/kg**	**50**	**56.5**	**155**	**1340**	**59**	**4**	**6.3%**	**yes**	**yes**	**-**
Lead	**mg/kg**	**63**	**49.0**	**96.0**	**514**	**59**	**7**	**10.9%**	**yes**	**yes**	**yes**
Manganese	mg/kg	1600	674	734	1760	59	1	1.6%	yes	-	-
Mercury	mg/kg	0.18	0.35	**0.56**	1.75	59	31	48.4%	yes	yes	yes
Nickel	mg/kg	30	7.36	29.0	50.4	59	22	34.4%	yes	yes	-
Selenium	mg/kg	3.9	0.68	1.20	4.19	59	1	1.6%	yes	-	-
Zinc	mg/kg	109	93.6	**116**	331	59	10	15.6%	yes	yes	-

* NYSDEC, Soil Cleanup Objectives for Protection of Ecological Resources (6 NYCRR 375-6.8, Table b)

** 95% Upper Confidence Limit (UCL) on the mean (ProUCL v.5, EPA 2013). Boldface indicates 95% UCL values exceeding screening criteria.

3.8.3 Potential Impacts on Fish and Wildlife Resources

Terrestrial habitats. Based on 95% UCL concentrations, wildlife receptors may be at risk for adverse effects from direct or dietary exposure to five metals in surface soil. An evaluation

of potential risk on wildlife species from exposure to surface soil is warranted for the OU-4 parcel given the COPEC determination and habitat quality (predominantly upland forest habitat and maintained grass areas).

Aquatic habitats. No wetlands or other surface water features were identified within Parcel OU-4 based on mapping and findings of the June 9-13, 2014 field survey (Section 2.2). Aquatic habitat, however, may be impacted by contaminant migration from the OU-4 parcel into Fishkill Creek. Section 3.9 presents an evaluation of surface water and sediment quality in the Fishkill Creek segment along the TRCB facility (OU-1F), as well the potential groundwater discharge into Fishkill Creek from adjacent parcels, including Parcel OU-4.

3.9 FISHKILL CREEK (OU-1F)

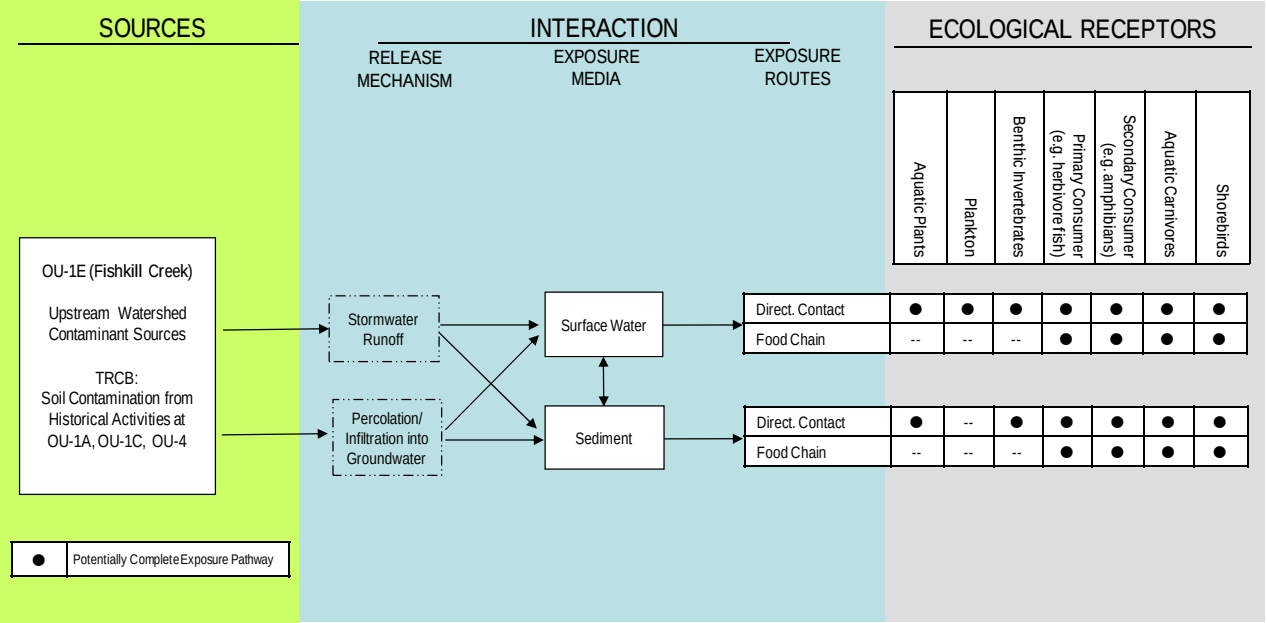
Fishkill Creek (OU-1F) is a surface water body located south of the Main Facility (OU-1A) and north of the WATF (OU-1C). The Creek was used as a hydropower source for the site in the past. No additional TRCB activities were conducted in or within the Creek. Figure 1.2 illustrates the extent of the OU-1F parcel.

Fishkill Creek originates approximately fifteen miles east of Beacon and traverses the area from east to west with a fall of approximately 23 ft per mile. The surface water elevations of the Creek are controlled by dams. The upper dam (Texaco Dam) is located on the Site, at the west end of the WATF parcel (See Figure 1.2). The height of the dam is approximately 22 ft. A second dam is located approximately 1,400 ft downstream from the Texaco Dam. A third dam is located just above East Main Street in Beacon downstream from the TRCB.

The Creek above the Texaco Dam is wide and generally quiescent with an accumulated thickness of sediment. Below the Texaco Dam, the river narrows significantly and the Creek flows through a steep-sided channel. Downstream of the Site, Fishkill Creek passes through the City of Beacon and discharges to the Hudson River. More in-depth descriptions of the Creek can be found in the Surface Water and Hydrogeology Sections of this report (Sections 1.6 and 1.7, respectively).

3.9.1 Ecological Conceptual Site Model

This section describes the main elements of the ECSM for Parcel OU-1F, illustrated in the diagram below.



Contaminant Sources: Both upstream and on-site sources potentially may affect Fishkill Creek. Most of the creek's watershed is located upstream of TRCB. Consequently, both surface water and sediment in the creek are expected to reflect conditions associated with multiple point and non-point contaminant sources unrelated to TRCB operations (e.g., municipal and industrial effluent discharges, contaminated runoff). Within OU-1F, soil and groundwater from three parcels adjacent to the creek are potential contaminant sources: Main Facility (OU-1A), WATF (OU-1C), and Hydroelectric Dam and Facilities parcel (OU-4).

Contaminant Release and Transport Mechanisms: Soil constituents from the site as well as upstream sources may reach the creek directly by migration in stormwater runoff. Surface soil constituents may also infiltrate, percolate and leach into groundwater and, in turn, discharge into the creek. Within the creek, a continuous interaction takes place between water and sediment by particle deposition from the water column, re-suspension, and by contaminant desorption from the sediment.

Exposure Media: Surface water and sediments within the OU-1F reach of Fishkill Creek.

Primary Exposure Routes: Fishkill Creek biota may be exposed to surface water and sediment contaminants by direct contact and ingestion. In addition, aquatic and semi-aquatic organisms may be exposed by food ingestion as contaminants are transferred along the food chain.

Ecological Receptors: Both aquatic and semi-aquatic organisms are potentially exposed to creek-associated contamination. The aquatic food chain includes water column microorganisms (plankton), aquatic plants, benthic invertebrates, and species representative of upper trophic levels such as foraging fish (e.g., minnows), bottom-feeding fish (e.g., carp, bullhead), and predatory fish such (e.g., smallmouth bass). Examples of semi-aquatic biota include riparian vegetation, amphibians and shorebirds.

3.9.2 Data Availability and COPEC Screening

A sediment and surface water sampling event was conducted from August 11th through September 11, 2014 to provide a comprehensive characterization of the Fishkill Creek segment located along the TRCB. Upstream conditions were also evaluated to establish anthropogenic background conditions. The scope of work for the sampling program (Parsons 2014) included collection of 11 surface water samples and 43 sediment locations along 11 transects located within Fishkill Creek. Samples were collected to obtain background data chemical parameters of interest and evaluate surface water and sediment analytical data quality both upstream and downstream of the on-site hydroelectric dam and adjacent to the Site. Sampling locations are depicted in Figure 3.9 (upstream transects 1 through 3) and Figure 3.10 (downstream transects 4 through 11). Attachment 5 presents methods and detailed results of the sediment and surface water sampling program. As depicted in Figures 3.9 and 3.10, no sediment was available for sampling at some locations of transect 3 (two locations), transect 4 (two locations), transect 8 (all locations), transect 9 (two locations), and transect 10 (two locations).

Surface Water

Data from 11 surface water samples were evaluated by comparison to water quality screening values, as described in Section 3.1.2. Three of the samples were collected upstream of the TBRC. Surface water samples were analyzed for metals and other inorganic compounds, VOCs and PAHs. Detected concentrations were compared to Surface Water Quality Standards (WQS), Class "C" waters applicable to the Fishkill Creek segment along TRBC (6 NYCRR Part 703). Detailed analytical data and a comparison to screening values are provided in Table 7 of Attachment 5. No organic compounds were found at detectable concentrations in surface water samples. No metals were detected at concentrations above WQS except for dissolved mercury at two locations: one location upstream of TRCB, at a 0.004 ug/L concentration, and another location along TRCB, at a lower concentration (0.0034 ug/L). Based on these findings, no surface water COPECs were identified for Fishkill Creek along TRCB.

Sediment

Sediment samples were collected (or attempted) from 43 sites located on three transects upstream of TRCB, four transects along TRCB upstream of the dam, and four transects downstream from the dam. Three to five samples were collected per transect at depth ranges of 0 to 6 inches, 6 to 12 inches, 12 to 24 inches, and 24 to 36 inches. Collected samples were analyzed for metals, selected VOCs, PAHs and PCBs. Detected concentrations were compared to SGVs from NYSDEC June 2014 guidance document (Section 3.1.3). Detailed analytical data and a comparison to SGVs are presented in Attachment 5.

Volatile Organic Compounds

Detailed VOC data and a comparison to SGVs are presented in Table 2 of Attachment 5. VOCs were found at concentrations near or below analytical detection limits at all sampling locations. All detected VOCs had concentrations below available Class A SGV. Based on these findings, no VOCs were identified as COPECs in Fishkill Creek sediment collected along TRCB.

Polychlorinated Biphenyls

Detailed PCB data and a comparison to SGVs are presented in Table 6 of Attachment 5. Total PCBs were below the sediment Class A threshold (100 mg/kg) at all sampling locations (maximum detected value of 16 mg/kg). Individual Aroclors were found at concentrations near or below analytical detection limits. Based on these findings, no PCBs were identified as COPECs in Fishkill Creek sediment collected along TRCB.

Polycyclic Aromatic Hydrocarbons

Detailed PAH data and a comparison to SGVs are presented in Table 3 of Attachment 5. Only one out of 101 samples exceeded the Class A SGV of 4,000 ug/kg for total PAHs (transect 9_C, downstream from the dam). Downstream of the dam, a single sample from 0-6 inches at transect 9_C was found to have a total PAH concentration greater than the Class C SQV (>45,000 ug/kg total PAHs). This sample was the only sample successfully retrieved from Transect 9 due to lack of sufficient sediment deposition in this area. Based on the isolated and limited area of PAH contamination in an area with minimal sediment deposition and lack of exceedance of total PAH Class A SQV in all other sediment samples, total PAHs are not considered a concern for adverse effects on sediment-associated organisms in sediments collected along TRCB.

An analysis was conducted on the single sample exceeding the PAH screening value to determine whether the likely source was fuel oil or other petroleum-derived sources that were historically used at the TRCB (Attachment 7). The analysis was based on the relative abundance of substituted and unsubstituted PAHs as a tool to identify the source of PAHs in a given sample. PAHs derived from crude oil, petrogenic PAHs, typically display less of the parent, unsubstituted PAH than the substituted species while pyrogenic PAHs, those derived from coal tar, wood tar, or combustion are dominated by unsubstituted PAHs. The analysis showed a clear dominance of the unsubstituted PAHs indicating that the hydrocarbons in the sample from transect 9_C are from creosote or coal tar rather than fuel oil or other petroleum-derived sources historically used at TRCB.

Metals

Screening by Sediment Guidance Values. An initial screen of metals concentrations was conducted based on SGVs, Class A and Class C sediment. Detailed data on sediment metals concentration by site and depth are presented in Table 4 of Attachment 5, along with a comparison to SGVs. Eight metals exceeded SGVs Class A at one or more locations: arsenic, chromium, copper, lead, mercury, nickel, silver, zinc. Only two metals exceeded the sediment Class C threshold: nickel in two samples, and mercury in one sample.

Screening by Background Concentrations. A second-level screening of metals concentrations was conducted based on sediment background concentrations, per NYSDEC DER-10 guidance, Section 3.8.3. Background concentrations of metals were calculated based on the 95% USL of 26 sediment samples collected from Fishkill Creek along 3 transects located upstream of the TRBC (0 to 2 ft depth) during the August 11th through September 11, 2014 investigation. Summary statistics and 95% USL values for background sediment samples, calculated using ProUCL v. 5.1, are provided in Attachment 6, Table 4. The second-level screening of metals that exceeded SGVs and background concentrations (95% USL of upstream

samples) is presented in Attachment 6, Table 5. The combined screening reduced the number of Class B sediments to 12 samples and Class C sediments to three samples. A summary of the second-level sediment screening is presented in Attachment 6, Table 6.

Fishkill Creek locations where both background concentration and SGV Class A were exceeded in at least one sample at any depth are as follows:

- Transect 02 (upstream of TRBC): copper and nickel
- Transect 05: arsenic, chromium, nickel, silver and zinc.
- Transect 06: arsenic, chromium, copper, lead, nickel and zinc
- Transect 07: arsenic, chromium, copper, lead and nickel
- Transects 09 and 10: mercury

Concentrations of metals in the Fishkill Creek segment along TRCB were further evaluated by sediment depth (0-6 inches and 6-24 inches) and sampling transect location (on-site upstream or downstream of the dam). Tables 3.7 and 3.8 present summary statistics for transects located upstream of the dam (transects 4 to 7) and downstream of the dam (transects 9 to 11), respectively. The comparison, based on detected concentrations, was intended to assess potential differences in the type of sediment present upstream of the dam (a depositional area) and downstream of the dam. However, no clear trend was observed in terms of sediment quality by depth or location relative to the dam. Upstream of the dam, the number of samples exceeding both screening values and background concentration was low, with only one or two samples exceeding those two reference values. Downstream of the dam, no metals exceeded background/screening values with the exception of mercury. It should be noted that below the dam, sediment could only be collected in a few, scattered depositional areas that provide a very limited habitat for benthic organisms. Table 3.9 depicts the sediment quality classification by sampling location and depth on the basis of screening values and background concentration.

Table 3.7 Metals Summary Statistics for Sediment Samples Collected along TRCB Upstream of the Dam

Analyte	Total Number Samples	Mean of Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Upstream Concentration* (Background, mg/kg)	Screening Value** (mg/kg)	No. Detections Exceeding Screening and Background	Percent Exceedance
Top Sediment (0-6 inches depth)							
Arsenic	16	5.48	10.9	6.9	10	1	6%
Cadmium	16	0.38	0.784	0.79	1	0	0%
Chromium	16	26.2	47.7	35	43	2	13%
Copper	16	30.1	62.4	57	32	1	6%
Lead	16	28.4	49	53	36	0	0%
Mercury	16	0.19	0.719	0.107	0.2	1	6%
Nickel	16	30.2	49.4	41	23	1	6%
Silver	16	0.2	0.61	0.45	1	0	0%
Zinc	16	127.6	266	210	120	2	13%
Deeper Sediment (6-24 inches depth)							
Arsenic	28	5.12	8.59	6.9	10	0	0%
Cadmium	28	0.36	0.85	0.79	1	0	0%
Chromium	28	24.5	55.7	35	43	1	4%
Copper	28	28.1	59	57	32	2	7%
Lead	28	26.4	56.7	53	36	2	7%
Mercury	28	0.17	0.728	0.107	0.2	1	4%
Nickel	28	30.2	47.4	41	23	1	4%
Silver	28	0.22	1.26	0.45	1	1	4%
Zinc	28	112.2	244	210	120	2	7%

* Background concentration is the Upper Simultaneous Limit of sediment samples collected from 3 upstream transects.
** NYSDEC sediment quality classification, Class A

Table 3.8 Metals Summary Statistics for Sediment Samples Collected along TRCB Downstream of the Dam

Analyte	Total Number Samples	Mean of Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Upstream Concentration* (Background, mg/kg)	Screening Value** (mg/kg)	No. Detections Exceeding Screening and Background	Percent Exceedance
Top Sediment (0-6 inches depth)							
Arsenic	4	4.18	4.74	6.9	10	0	0%
Cadmium	4	0.086	0.133	0.79	1	0	0%
Chromium	4	22.6	32.1	35	43	0	0%
Copper	4	15	17.8	57	32	0	0%
Lead	4	22.7	37.2	53	36	0	0%
Mercury	4	0.43	1.3	0.107	0.2	2	50%
Nickel	4	26.6	35.8	41	23	0	0%
Silver	4	0.047	0.118	0.45	1	0	0%
Zinc	4	80.4	108	210	120	0	0%
Deeper Sediment (6-24 inches depth)							
Arsenic	4	3.06	3.47	6.9	10	0	0%
Cadmium	4	0.067	0.076	0.79	1	0	0%
Chromium	4	30.1	39.8	35	43	0	0%
Copper	4	12.7	17.7	57	32	0	0%
Lead	4	18.1	31.8	53	36	0	0%
Mercury	4	0.06	0.116	0.107	0.2	0	0%
Nickel	4	29.7	34.6	41	23	0	0%
Silver	4	0.039	0.058	0.45	1	0	0%
Zinc	4	78.3	87.2	210	120	0	0%

* Background concentration is the Upper Simultaneous Limit of sediment samples collected from 3 upstream transects.
** NYSDEC sediment quality classification, Class A

Table 3.9. Sediment Quality Classification by Sampling Location and Depth

LOCATION/DEPTH*		Sample A	Sample B	Sample C	Sample D	Sample E
Upstream Transects (Background)						
Transect 01	0-0.5 ft depth	Class A	Class A	Class A	Class A	Class A
	0.5-1 ft depth	Class A	Class A	Class A	Class A	--
	1-2 ft depth	Class A	Class A	Class A	Class A	--
	2-3 ft depth	Class A	Class A	Class A	Class A	--
Transect 02	0-0.5 ft depth	Class A	Class A	Class A	Class A	Class A
	0.5-1 ft depth	Class A	--	--	Class A	Class B
	1-2 ft depth	--	--	--	--	Class A
	2-3 ft depth	--	--	--	--	Class A
Transect 03	0-0.5 ft depth	--	--	Class A	not collected**	
	0.5-1 ft depth	--	--	Class A		
	1-2 ft depth	--	--	Class A		
	2-3 ft depth	--	--	Class A		
Downstream Transects (Along TRCB)						
Transect 04	0-0.5 ft depth	--	--	Class A	not collected**	
	0.5-1 ft depth	--	--	Class A		
	1-2 ft depth	--	--	Class A		
	2-3 ft depth	--	--	Class A		
Transect 05	0-0.5 ft depth	Class A	Class A	Class C	Class A	Class B
	0.5-1 ft depth	Class A	Class A	Class A	Class B	Class A
	1-2 ft depth	Class A	--	--	Class B	Class A
	2-3 ft depth	Class A	--	--	Class A	Class A
Transect 06	0-0.5 ft depth	Class B	Class A	Class A	Class A	Class B
	0.5-1 ft depth	Class B	Class A	Class A	Class A	Class B
	1-2 ft depth	Class A	Class B	--	Class A	Class A
	2-3 ft depth	Class B	--	--	Class A	Class A
Transect 07	0-0.5 ft depth	Class B	Class A	Class A	Class A	Class A
	0.5-1 ft depth	Class A	Class A	Class A	Class A	Class A
	1-2 ft depth	Class B	Class A	--	Class A	Class A
	2-3 ft depth	Class A	Class A	--	Class A	Class C
Transect 09	0-0.5 ft depth	--	--	Class B	not collected**	
	0.5-1 ft depth	--	--	--		
	1-2 ft depth	--	--	--		
	2-3 ft depth	--	--	--		
Transect 10	0-0.5 ft depth	Class C	--	--		
	0.5-1 ft depth	Class A	--	--		
	1-2 ft depth	Class A	--	--		
	2-3 ft depth	--	--	--		
Transect 11	0-0.5 ft depth	--	Class A	Class A		
	0.5-1 ft depth	--	--	Class A		
	1-2 ft depth	--	--	Class A		
	2-3 ft depth	--	--	--		

* Locations/depths where sediment was not available for collection are indicated by "--"

** Only 3 samples per transect were collected in narrow stream sections.

Overall, most of the sediment samples from Fishkill Creek collected along TRCB (48 out of 63 samples) fell within the Class A category indicative of low or no potential for adverse effects on benthic organisms. In those instances where the results fell within the Class B category (12 out of 63 samples), concentrations above the sediment screening value were low, with average concentrations typically below upstream values (Tables 3.7 and 3.8). No distribution trend was observed, either in terms of depth or sampling location. Three samples within the Class C category were from disconnected locations and due to a single metal, either nickel (two locations) or mercury (a single location).

Screeening of Metals Mixtures based on Bioavailability. A third-level screening of divalent metal mixtures was conducted using the USEPA EqP methods (USEPA 2005) as described in the DER-10 guidance. For metals, equilibrium partitioning (EqP) predicts that metals, specifically the cationic divalent metals (cadmium, copper, lead, nickel, silver and zinc) partition in sediment between AVS, pore water, benthic organisms, and other sediment phases such as organic carbon. AVS binds to cationic divalent metals on a 1:1 molar basis (except silver where one mole of AVS bind two moles of silver) forming insoluble sulfides, which renders the metal non-bioavailable and, therefore, non-toxic to benthic organisms.

In this method, metals concentrations in sediment are measured as simultaneous extracted metals (SEM) after acid extraction and the sum of SEMs is calculated. When the molar concentration of AVS exceeds the molar concentration of SEM (AVS:SEM >1) then the metals present are predicted to be completely bound as insoluble precipitates and non bioavailable (no toxicity). Alternatively, if the molar concentration of SEM exceeds the molar concentration of AVS (SEM:AVS >1), then there is not enough sulfide present in the sediment to bind all of the metals present, and the unbound portion of metals could be bioavailable, and toxic. Therefore, toxicity from metals in sediment would not be anticipated unless the total combined molar concentration of the six metals (Cd, Cu, Pb, Ni, Ag, Zn) exceeds the AVS.

Detailed SEM:AVS data by individual sample are presented in Table 5 of Attachment 5. With a single exception (sample TR09_C), all samples have an AVS molar concentration high enough to offset the combined molar concentration of SEM. Therefore, based on this analysis, total SEM metals may be bioavailable and potentially toxic only for sample TR09_C. It is important to note that for sample TR09_C, none of these metals exceeded their individual Class A SGVs thus the potential impact is only associated with the additive toxicity of the metal mixture.

Based on the previous screening by SGV and background values, as well as the SEM:AVS screening, potential toxicity from metals in Fishkill Creek sediment could be associated with the following metals:

- Transect 05, 06 and 07: arsenic and chromium.
- Transect 09: SEM metals (Cd, Cu, Pb, Ni, Ag, Zn) and mercury
- Transect 10: mercury

It must be noted, however, that exceedances of background/screening values were limited to a few, disconnected locations, and in most instances detected metals concentrations were not likely bioavailable for exposure of benthic organisms. Therefore, sediment-associated organisms in Fishkill Creek are not expected to be impacted at a population level from exposure to metals.

Screening of Metals without NYSDEC Sediment Guidance Values. For metals with no SGV specified in NYSDEC guidance, screening was conducted on the basis of background concentration. Background values were calculated using the 95% USL of 26 sediment samples collected from Fishkill Creek along 3 transects located upstream of the TRBC (0 to 2 ft. depth) during the August 11th through September 11, 2014 investigation. Summary statistics and 95% USL values for background sediment samples, calculated using ProUCL v. 5.1, are provided in Attachment 6, Table 4. Exceedances of background concentrations were limited to the following sampling transects and inorganic compounds (Attachment 6, Table 7):

- Transect 05: aluminum, antimony, barium, beryllium, cobalt, iron, manganese, thallium, and vanadium
- Transect 06: barium, beryllium, manganese, and vanadium
- Transect 07: aluminum, beryllium, cobalt, iron, thallium, and vanadium

Table 3.10 presents downstream summary statistics for metals without screening values. Minimum, maximum and mean detected concentrations are listed along with the upstream concentration (background). For any of ten metals evaluated, only one to six samples out of 54 collected along the TRCB had concentrations greater than the background concentration (2% to 11% exceedance frequency). All average concentrations were below the background value, while the maximum detected concentration exceeded the background value by less than 20% in all but one instance (manganese). Based on these results, the ten metals evaluated largely reflect background conditions and were, consequently, excluded as COPECs in sediment.

Table 3.10 Downstream Location Summary Statistics – Metals Without Screening Values

Analyte	Total Number Samples	Minimum Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Mean of Detected Concentration (mg/kg)	Upstream Concentration (Background, mg/kg)	Number of Samples Exceeding Background	Percent Background Exceedance	% Maximum Concentration Exceeds Background*
Aluminum	54	6210	28300	16856	24664	3	6%	15%
Antimony	54	0.102	0.329	0.208	0.325	2	4%	1%
Barium	54	19	178	86.21	174	2	4%	2%
Beryllium	54	0.336	1.32	0.715	1.1	6	11%	20%
Cobalt	54	3.76	20.4	12	19	2	4%	7%
Iron	54	12900	47600	27822	40536	2	4%	17%
Manganese	54	248	2270	561.8	941	5	9%	141%
Selenium	54	0.124	1.63	0.55	1.826	1	2%	-11%
Thallium	54	0.0341	0.296	0.138	0.26	3	6%	14%
Vanadium	54	7.03	35.8	20.46	34.2	4	7%	5%

* Background concentration is the Upper Simultaneous Limit of sediment samples collected from 3 upstream transects.

Potential Groundwater Discharge into Fishkill Creek

The potential discharge of groundwater to Fishkill Creek from TRCB parcels has not previously been evaluated. However, there is a potential for contaminant migration into the creek because contaminant plumes have been identified in groundwater from three parcels which have monitoring wells located with a 100 ft of the creek: Main Facility (OU-1A), WATF (OU-1C) and hydroelectric facilities parcel (OU-4). Data from monitoring wells located within a 100-ft buffer from Fishkill Creek were used for initial screening of Chemical Parameters of

Interest (CPOIs) in groundwater in terms of potential exposure of aquatic organisms in the creek. Figure 3.11 illustrates the extent of the 100-ft buffer and monitoring well locations as well as contaminant plumes delineated during previous groundwater investigations at TRCB (Parsons 2007, 2009).

For the initial CPOI screening, maximum detected concentrations in monitoring wells within the 100-ft buffer were compared directly to surface water quality criteria as described in Section 3.1.2 (Class C criteria, 6 NYCRR Part 703). Table 3.11 presents summary statistics for parameters in parcels OU-1A, OU-1C and OU-4 that exceeded surface water screening values for protection of aquatic biota. Summary statistics include number of samples collected, number of detections, average and maximum detected concentrations, and number of samples with maximum concentrations that exceed screening values. Summary statistics for all analyzed parameters are provided in Attachment 3. On the basis of maximum detected concentrations and water quality screening values, the following compounds were identified as CPOI for groundwater discharge into Fishkill Creek:

- Main Facility (OU-1A): Twenty nine compounds that included 10 metals, seven VOCs, six polycyclic aromatic hydrocarbons, five other SVOCs, and one pesticide.
- Washington Avenue Tank Farm (OU-1C): Twenty one compounds that included 11 metals, four VOCs, and six SVOCs.
- Hydroelectric Facilities Parcel (OU-4): CPOI were limited to three metals and one organic compound.

These CPOIs, however, were not identified as COPECs in surface water based on results of the 2014 surface water sampling of Fishkill Creek along TRCB. Those results indicated that no organic compounds were found at detectable concentrations while all metals but one were below applicable screening values (surface WQS). Mercury was found at one site at a concentration above WQS but below upstream concentrations. Based on these findings, there is no indication that groundwater originating from the TRCB has adversely affected surface water quality in the Fishkill Creek adjacent to TRCB.

Table 3.11 Summary of Screening Value Exceedances in Groundwater in Monitoring Wells Located 100 Feet from Fishkill Creek

Operable Unit and Parameter	Report Units	Screening Criteria*	Average Concentration	Maximum Concentration	Number of Results	Number of Samples Exceeding Criteria	Percent Exceedance
MAIN CAMPUS (OU-1A)							
Aluminum	mg/l	0.1	1.94	73.1	151	109	72.2%
Cadmium	mg/l	0.002	0.0012	0.0021	152	1	0.7%
Chromium	mg/l	0.074	0.006	0.0904	151	2	1.3%
Cobalt	mg/l	0.005	0.002	0.04	151	5	3.3%
Copper	mg/l	0.013	0.005	0.10	151	9	6.0%
Lead	mg/l	0.004	0.011	0.181	152	36	23.7%
Mercury	mg/l	0.0000026	0.0005	0.033	152	13	8.6%
Nickel	mg/l	0.052	0.0048	0.0899	151	1	0.7%
Selenium	mg/l	0.0046	0.009	0.0109	152	3	2.0%
Silver	mg/l	0.0001	0.002	0.0019	152	2	1.3%
Thallium	mg/l	0.008	0.013	0.0214	151	2	1.3%
Vanadium	mg/l	0.014	0.004	0.0923	151	10	6.6%
Zinc	mg/l	0.083	0.058	1.56	150	24	16.0%
1,2,4-Trimethylbenzene	ug/L	33	236.00	480	3	2	66.7%
1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/l	5	15.94	270	176	44	25.0%
1,3-Dichlorobenzene	ug/l	5	7.62	7	174	2	1.1%
1,4-Dichlorobenzene	ug/l	5	10.01	43	175	45	25.7%
2,4-Dimethylphenol	ug/l	5	2.06	12	145	1	0.7%
2-Chlorophenol (o-Chlorophenol)	ug/l	1	1.08	17	145	12	8.3%
2-Methyl-naphthlalene	ug/l	4.7	8.90	1200	157	7	4.5%
Acenaphthene	ug/l	5.3	1.35	31	157	2	1.3%
Aldrin	ug/l	0.001	0.43	0.43	1	1	100.0%
Benzene	ug/l	10	15.95	560	212	31	14.6%
Benzo(a)anthracene	ug/l	0.03	1.06	5	157	10	6.4%
Benzo(a)Pyrene	ug/l	0.0012	1.05	5	157	12	7.6%
bis(2-Ethylhexyl)phthalate	ug/l	0.6	6.25	310	157	35	22.3%
Chlorobenzene	ug/l	5	98.88	3100	212	95	44.8%
Ethylbenzene	ug/l	17	15.57	580	173	20	11.6%
Fluorene	ug/l	0.54	1.24	12	157	27	17.2%
Isopropylbenzene	ug/L	2.6	63.37	160	3	3	100.0%
Naphthalene	ug/l	13	4.45	130	161	13	8.1%
p-Cresol	ug/l	5	1.65	38	145	1	0.7%
Phenanthrene	ug/l	5	1.43	38	157	4	2.5%
Phenol	ug/l	5	1.99	110	145	4	2.8%
Pyrene	ug/l	4.6	1.20	10	157	3	1.9%
Tetrachloroethene	ug/l	1	5.46	43	170	12	7.1%
Trichloroethene (Trichloroethylene)	ug/l	40	58.75	820	210	35	16.7%
Xylenes, Total	ug/l	65	21.49	980	172	12	7.0%
FORMER WASHINGTON AVENUE TANK FARM PARCEL (OU-1C)							
Aluminum	mg/l	0.1	1.87	25.3	73	61	83.6%
Arsenic	mg/l	0.15	0.039	0.233	73	4	5.5%
Cadmium	mg/l	0.002	0.0013	0.009	73	2	2.7%
Cobalt	mg/l	0.005	0.0033	0.0219	73	10	13.7%
Copper	mg/l	0.013	0.007	0.0929	73	6	8.2%
Lead	mg/l	0.004	0.0116	0.122	73	29	39.7%
Mercury	mg/l	0.0000026	0.00007	0.0003	73	3	4.1%
Selenium	mg/l	0.0046	0.009	0.0123	73	2	2.7%
Silver	mg/l	0.0001	0.002	0.0081	73	5	6.8%
Thallium	mg/l	0.008	0.011	0.0085	73	1	1.4%
Vanadium	mg/l	0.014	0.003	0.0319	73	2	2.7%
Zinc	mg/l	0.083	0.026	0.246	73	4	5.5%
1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/l	5	1.00	7	81	3	3.7%
2,4-Dimethylphenol	ug/l	5	2.69	23	70	3	4.3%
2-Methyl-naphthlalene	ug/l	4.7	7.22	140	73	14	19.2%
Benzene	ug/l	10	24.57	550	86	16	18.6%
Benzo(a)anthracene	ug/l	0.03	0.77	0.4	77	3	3.9%
Benzo(a)Pyrene	ug/l	0.0012	0.76	0.4	77	4	5.2%
bis(2-Ethylhexyl)phthalate	ug/l	0.6	2.32	13	76	13	17.1%
Fluorene	ug/l	0.54	1.67	7	77	29	37.7%
Naphthalene	ug/l	13	8.07	260	83	3	3.6%
Phenanthrene	ug/l	5	1.40	11	77	5	6.5%
Phenol	ug/l	5	1.63	36	70	2	2.9%
Xylenes, Total	ug/l	65	36.07	1500	79	3	3.8%
HYDROELECTRIC DAM PARCEL (OU-4)							
Aluminum	mg/l	0.1	0.97	6.73	14	12	85.7%
Cadmium	mg/l	0.002	0.002	0.0086	14	2	14.3%
Lead	mg/l	0.004	0.007	0.0106	14	2	14.3%
Zinc	mg/l	0.083	0.031	0.199	14	2	14.3%
bis(2-Ethylhexyl)phthalate	ug/l	0.6	4.00	19	14	1	7.1%

* Class C Standards from Part 703. Surface Water and Groundwater Quality Standards and Groundwater Limitiations. Values used are the lowest of Class C chronic criteria, wildlife protection, and fish consumption.[http://www.dec.ny.gov/regs/4590.html].

3.9.3 Potential Impacts on Fish and Wildlife Resources

Surface Water. Data from 11 surface water samples, including three samples collected upstream of the TBRC, were evaluated by comparison to water quality screening values, as described in Section 3.1.2. No organic compounds were found at detectable concentrations in surface water samples. No metals were detected at concentrations above WQS except for dissolved mercury at one location along TRCB, but at a lower concentration than upstream values. Based on these findings, there is no indication of potential adverse effects of former TRBC operations on the surface water quality of Fishkill Creek.

Sediment. Sediment samples were collected from 43 sites located on three transects upstream of TRCB, four transects along TRCB upstream of the dam, and four transects downstream from the dam. Samples were evaluated both for organic substances (VOCs, PCBs, PAHs) and metals. Organic substances, in general, were not a potential concern for exposure of sediment-associated organisms. Both VOCs and PCBs were found at concentrations below SGVs and/or detection limits, while total PAHs were below a SGV Class A of 4,000 ug/kg in all but one sample collected downstream of the dam. Concentrations of eight metals exceeded Class A SGVs at one or more locations (arsenic, chromium, copper, lead, mercury, nickel, silver, zinc). In several instances, however, those values were similar or below upstream concentrations. A subsequent screening taking into account the bioavailability of metal mixtures indicated that SEM metals (Cd, Cu, Pb, Ni, Ag, Zn) are not likely to be bioavailable at most sampling locations. Based on the screening by SGV, background values, and AVS content, potential toxicity from metals in Fishkill Creek sediment may be associated with the following metals:

- Transect 05, 06 and 07: arsenic and chromium.
- Transect 09: SEM metals (Cd, Cu, Pb, Ni, Ag, Zn) and mercury
- Transect 10: mercury

However, those exceedances of background andscreening values were limited to a few, disconnected locations, and in most instances detected metals concentrations were not likely to be bioavailable for exposure to benthic organisms. Therefore, Fishkill Creek benthic organisms are not expected to be impacted at a population level from exposure to metals.

Groundwater Discharge. Potential impacts on water quality from groundwater discharge into Fishkill Creek from TRCB parcels have not been identified. Due to the presence of contaminant plumes in parcels OU-1A, OU-1C and OU-4, groundwater may be discharging to the surface water. Table 3.11 shows the results of this initial CPOI screenings. In some cases, the results show the potential for a very low percent exceedance for groundwater samples. These CPOIs, however, were not identified as COPECs in surface water based on results of the 2014 surface water sampling of Fishkill Creek along TRCB. Based on these findings, there is no indication that groundwater originating from the TRCB has adversely affected surface water quality in the Fishkill Creek.

3.10 PARCEL EVALUATION SUMMARY

Nine Operable Units within the TRCB facility were evaluated in terms of analytical data availability, identification of COPECs based on screening values, and potential impacts on fish

and wildlife resources. A summary evaluation by individual OU is presented below. The screening of COPECs was based primarily on the following guidance:

- Surface soil: 6 NYCRR Part 375 Soil Cleanup Objectives for Protection of Ecological Resources
- Surface water quality: 6 NYCRR Part 703: Surface Water and Groundwater Quality and Groundwater Effluent Limitations (Class C)
- Sediment: NYSDEC June 2014 Screening and Assessment of Contaminated Sediment, Class A sediments

3.10.1 Main Facility (OU-1A)

Description. The Main Facility consists of 33 acres of land that includes all of the developed areas located north of Fishkill Creek which was used as a laboratory complex. In 2011 and 2012, Chevron conducted a building removal project that resulted in the demolition to the basement or slab level of the vast majority of buildings on-site. Because Parcel OU-1A was historically a fully developed industrial/commercial facility, wildlife receptors are not typically expected to be present other than those species associated with urban environments with limited landscaped/open areas. No wetlands or other surface water features were identified within the Main Facility.

Data Availability. Extensive surface soil data have been collected from the OU-1A parcel during previous site assessment and RCRA Facility Investigations. A need for additional samples was not identified for the characterization of surface soil in parcel OU-1A.

Potential Impacts. Wildlife receptors are not present and therefore are not at risk for adverse effects from direct or dietary exposure to surface soil. Parcel OU-1A includes very limited grass/green space habitat. Consequently, risk to wildlife at OU-1A should not be evaluated further as there is no potential exposure to surface soil. Aquatic habitats, while not present on site, may be impacted by groundwater discharge from the OU-1A parcel into Fishkill Creek (OU-1F). However, there is no indication that groundwater originating from the TRCB has adversely affected surface water quality in the Fishkill Creek based on results of the 2014 surface water sampling survey. Survey results indicated that no organic compounds were found at detectable concentrations in surface water from Fishkill Creek while metals were below applicable screening values (surface WQS) and/or upstream background concentrations.

3.10.2 Former Church Property (OU-1B)

Description. The former Church Property is a 15 acre undeveloped parcel located to the northwest of the Main Facility. Parcel OU-1B was not used as an area of active operations or disposal during the TRCB operations. Mature upland hardwood forest was identified as the predominant plant community throughout the parcel OU-1B. No wetlands or surface water features are present within OU-1B.

Data Availability. Surface soil samples have been collected from 17 locations on the Church Parcel. Surface soil data are not currently available for characterization of potential impacts on ecological resources in the central portion of the site. Additional sample collection to characterize surface soil at parcel OU-1B will be conducted in accordance with a separate sampling work plan currently under development.

Potential Impacts. Based on 95% UCL concentrations in surface soil, wildlife receptors may be at risk for adverse effects from direct or dietary exposure to a number of metals and pesticides. Further evaluation of potential ecological risk will be conducted for Parcel OU-1B.

3.10.3 Former Washington Avenue Tank Farm (OU-1C)

Description. The approximately 5-acre parcel OU-1C was formerly the site of over thirty above-ground storage tanks and associated facilities that were removed in the fall of 2003 and winter of 2004. Vegetation on the WATF is sparse with mostly low grasses and woody stem weeds due to routine maintenance. No wetlands or surface water features are present within OU-1C. No wetlands or other surface water features were identified within the WATF parcel.

Data Availability. Surface soil data are not currently available for characterization of surface soil conditions.

Potential Impacts. No data are available for evaluation of impacts on terrestrial habitat. However, impacts on wildlife are believed to be limited due to the lack of habitat (urban, maintained type of environment). No further evaluation of ecological risk from surface soil exposure is recommended for Parcel OU-1C due to the lack of suitable habitat. No wetlands or other surface water features are present. Aquatic habitats and biota, while not present on site, may be affected by groundwater discharge from the OU-1C parcel into Fishkill Creek. However, there is no indication that groundwater originating from the TRCB has adversely affected surface water quality in Fishkill Creek based on results of the 2014 surface water sampling survey. Survey results indicated that no organic compounds were found at detectable concentrations in surface water from Fishkill Creek while metals were below applicable screening values (surface WQS) and/or upstream background concentrations.

3.10.4 Residential Property Parcels (OU-1D and OU-3)

Description. The two residential property parcels OU-1D (approximately 2.1 acres) and OU-3 (approximately 0.67 acre) are located in undeveloped land never used as part of former TRCB operations. No structures currently exist within those parcels. Most of the land is currently undisturbed and borders residential parcels and a road. No wetlands or surface water features are present.

Data Availability. Surface soil data are not currently available for characterization of potential impacts on ecological resources.

Potential Impacts. It is not anticipated that wildlife impacts are occurring on OU-1D and OU-3 because these parcels are residential lots adjacent to the road with limited habitat and no known contaminant sources. No further evaluation of of ecological risk is recommended for the residential parcels due to the lack of habitat.

3.10.5 Back 93 Acres Parcel (OU-1E)

Description. The Back 93 Acres Parcel was partially developed for placement of outdoor recreational facilities and waste disposal areas associated with the TRCB operation. Contaminant sources associated waste disposal were removed in various approved soil remedial actions conducted from the mid 1980s until 2006 in accordance with approved NYSDEC requirements. Most of the parcel's vegetative cover can be classified as upper hardwood forest,

with intermixed open fields and areas of grass/green space (former recreational areas). Small springs and wetlands are located along the parcel's eastern boundary.

Data Availability. Surface soil samples have been collected from 28 locations throughout the central and eastern sections of the parcel where TRCB disposal operations were formerly conducted. No surface soil sampling has been conducted in the remaining sections of the OU-1E parcel where contaminant sources are not known to be present. Surface water data for springs/ wetlands areas are not available. Existing surface soil data screening indicated that no inorganic substances or organic compounds exceeded screening values. Surface soil data are not currently available for characterization of potential impacts on ecological resources in the remainder of the site. Additional sample collection to characterize surface soil at parcel OU-1E will be conducted as specified in a separate sampling work plan currently under development.

Potential Impacts. No impacts on fish and wildlife resources are anticipated for Parcel OU-1E based on results of surface soil COPEC screening. Historic contaminant sources associated with the TRCB operation have been removed in various approved soil remedial actions. No other contaminant sources are known to exist within Parcel OU-1E. However, to address exposure of ecological receptors in the areas of the parcel away from the removal areas, additional soil samples will be collected for ecological risk evaluation.

3.10.6 Road Parcel (OU-2)

The approximately 0.233 acre parcel is maintained by the Town of Fishkill as a major thoroughfare. The parcel contains the road and adjacent grass shoulder areas. Collection of surface soil samples is not anticipated because Parcel OU-2 is a public road where TRCB operations were not conducted. No further evaluation of ecological risk is recommended for the Road Parcel due to lack of habitat.

3.10.7 Dam and Associated Hydropower Facilities Parcel (OU-4)

Description. The parcel, approximately 4.96 acres, includes the hydroelectric buildings and the dam. Most of the west and central sections of the southern parcel contain upland hardwood forest adjacent to Fishkill Creek while the east section has sparse vegetation (mostly low grasses and woody stem weeds). The northern side of the parcel is adjacent to the Main Facility and contains no wildlife habitat. No wetlands or other surface water features were identified within Parcel OU-4.

Data Availability. Surface soil samples were collected from 21 locations during previous site assessments. A need for additional sample collection has not been identified for surface soil characterization at the OU-4 Parcel.

Potential Impacts. Based on 95% UCL concentrations, wildlife receptors may be at risk for adverse effects from direct or dietary exposure to 5 metals in surface soil (chromium, copper, lead, mercury, and zinc). Wildlife exposure would be limited to the southern side of OU-4. There is no potential risk to wildlife on the northern side of the creek that contains building areas without natural habitats. Further evaluation of ecological risk associated with these exceedances will be addressed in the Alternatives Assessment and Remedial Action Work Plan for this parcel.

Aquatic habitats, while not present on site, may be affected by groundwater discharge into Fishkill Creek from the OU-4 parcel. However, there is no indication that groundwater originating from the TRCB has adversely affected surface water quality in Fishkill Creek based

on results of the 2014 surface water sampling survey. Survey results indicated that no organic compounds were found at detectable concentrations in surface water from Fishkill Creek while metals were below applicable screening values (surface WQS) and/or upstream background concentrations.

3.10.8 Fishkill Creek Parcel (OU-1F)

Description. Fishkill Creek originates approximately fifteen miles east of Beacon and traverses the area from east to west. The creek segment along the TRCB facility (OU-1F parcel) was used as a hydropower source for the site in the past. A dam is located on the site, at the west end of the WATF parcel. No additional TRCB activities were conducted in or within the Fishkill Creek. Most of the Fishkill Creek watershed is located upstream of TRCB. Consequently, both surface water and sediment in the creek are expected to reflect conditions associated with multiple point and non-point contaminant sources unrelated to TRCB operations. Within the TRCB site, soil and groundwater from three parcels adjacent to the creek are potential contaminant sources: Main Facility (OU-1A), WATF (OU-1C), and Hydroelectric Dam and Facilities parcel (OU-4)

Data Availability. A sediment and surface water sampling event was conducted from August 11th through September 11th, 2014 to provide a comprehensive characterization of the Fishkill Creek segment located along the TRCB. Upstream conditions were also evaluated. The scope of work for the sampling program included collection of 11 surface water samples and sediment samples from 43 sites along 11 transects located within Fishkill Creek (Attachment 5).

Potential Impacts. No organic compounds were found at detectable concentrations in surface water samples. Metals were detected at concentrations that were either below WQS or upstream concentrations. Based on these findings, there is no indication of potential adverse effects of former TRBC operations on the surface water quality of Fishkill Creek. In addition, based on these findings, there is no indication that groundwater originating from the TRCB has adversely affected surface water quality in the Fishkill Creek segment.

The analysis of sediment samples indicated that organic substances, in general, were not a potential concern for exposure of sediment-associated organisms. Both VOCs and PCBs were found at concentrations below SGVs and/or detection limits, while total PAHs were below a SGV Class A of 4,000 ug/kg in all but one sample collected downstream of the dam. In contrast, eight metals exceeded Class A SGVs at one or more locations (arsenic, chromium, copper, lead, mercury, nickel, silver, zinc). In several instances, however, those exceedances were below upstream concentrations. A subsequent screening taking into account SEM metal bioavailability indicated that potential effects of Fishkill Creek sediment may be associated primarily with a low number of samples with elevated concentrations of arsenic, chromium and mercury. It must be noted, however, that exceedances of background/screening values were limited to a few, disconnected locations, and in most instances detected metals concentrations are not likely bioavailable for exposure to benthic organisms. Therefore, Fishkill Creek benthic organisms are not expected to be impacted at a population level from exposure to metals.

SECTION 4

REFERENCES

Dunn Geoscience. 1989. Tanks Farm Hydrogeological Investigation. Texaco Research Center, Beacon, NY

FEMA. 1984. Flood Insurance Rate Map, Town of Fishkill, New York, Dutchess County. Federal Emergency Management Agency, June 1, 1984.

Fisher et al. 1970. Geologic Map of New York State consisting of 5 sheets: Niagara, Finger Lakes, Hudson-Mohawk, Adirondack, and Lower Hudson. D. W. Fisher; Y. W. Isachsen and L. V. Rickard, 1970.

Flour Daniel GTI. 1997. Stream Sediment/Water Quality Investigation, Container Storage Building 83, Texaco Fuels and Lubricant Technology Department, Beacon, New York, NYS DEC ID #3-1330-48/3-0, EPA ID #091894899, July 25, 1997.

GSC. 2005. Phase II Environmental Site Assessment, Chevron Texaco Research Center. 50 Old Glenham Road, Glenham, New York, Groundwater Sciences Corporation, June 7, 2005.

Isachsen, et al. 2000. Geology of New York State: A Simplified Account. Y. W. Isachsen; E. Landing; J. M. Lauber; L. V. Rickard, and W. B. Rogers, editors, 2nd Edition

IT Corporation. 2001a. Phase III RFI Report. Texaco Research Center, Beacon, New York, IT Corporation, March 21, 2001.

IT Corporation. 2001b. Closure Report, Trash Pile "C" Area, Recreation Area, Texaco Research Center, Beacon, New York, IT Corporation Project 103228, April 19, 2001.

IT Corporation. 2002. Soil Sampling Report Recreation Area, ChevronTexaco Research Center, Beacon, New York, NYSDEC ID #3-1330-48/16-0, April 16, 2002.

O'Brien & Gere Engineers, Inc., 2004. Letter from O'Brien & Gere Engineers, Inc. to NYSDEC describing sediment sampling field activities and analytical results from the investigation performed in the Fishkill Creek as part of a Beneficial Use Determination Request, June 30, 2004.

O.H. Materials Corporation. 1986. Report of Remedial Action at an Inactive Disposal Site, Texaco, Inc., Glenham, New York, August 20, 1986.

Parsons. 2006a. Completion Certification Report, Interim Corrective Action Measure; Soil Excavation Recreation Area, Former Texaco Research Center, Beacon (Glenham), New York, Site ID #314004, RCRA Permit #3-1330-48/16-0, October 2006.

Parsons. 2006b. Fishkill Creek Sampling Report for the Former Texaco Research Facility, Glenham, New York, December 19, 2006.

Parsons. 2007. Sitewide RCRA Facility Investigation. Former ChevronTexaco Research Facility, Glenham, New York, Parsons June 2007.

Parsons. 2009. Supplemental Sitewide RCRA Facility Investigation. Former ChevronTexaco Research Facility, Glenham, New York, Parsons June 2009.

Parsons. 2014. Draft Work Plan for the Fishkill Creek Sediment Sampling Program. Former ChevronTexaco Research Facility, Glenham, New York, Parsons August 2014.

Sullivan, J. and Stevens, G. 2005. S*ignificant Habitats in the Fishkill and Sprout Creek Corridors, Towns of Beekman, LaGrange, and Fishkill, Dutchess County, New York*; Report to the New York State Department of Environmental Conservation, the Town of Beekman, the Town of LaGrange, the Town of Fishkill, and the City of Beacon; Hudsonia Ltd.: Annandale, New York.

Texaco. 1998. Land Map – Texaco, Beacon New York (EN-34-11935E), rev 2/27/1998. Texaco, 1998

USEPA. 2005. Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESGs) for the Protection of Benthic Organisms: Metals Mixtures (Cadmium, Copper, Lead, Nickel, Silver, Zinc). U.S. Environmental Protection Agency, EPA-600-R-02-011, January 2005).

USGS. 1980. Groundwater Appraisal of The Fishkill-Beacon Area, Dutchess County, New York. United States Geological Survey, Water Resources Investigation Open File Report 80-437, Albany, NY 1980.

USGS. 1996. Water-quality Assessment of the Hudson River Basin in New York and Adjacent States. Analysis of Available Nutrient, Pesticide, Volatile Organic Compound, and Suspended–Sediment Data 1970-1990 USGS, Water-Resources Investigation Report 96-4065.

FIGURES

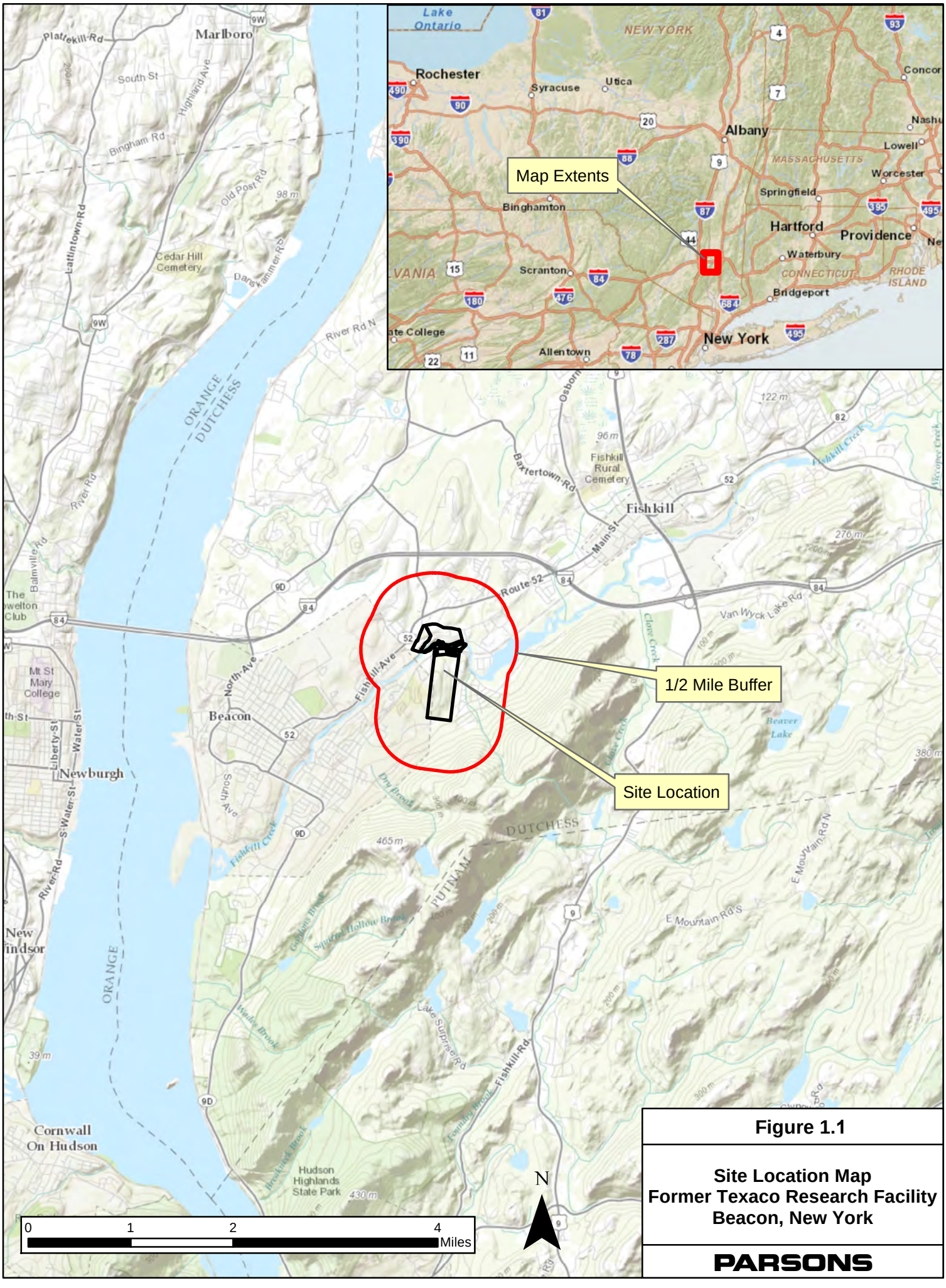


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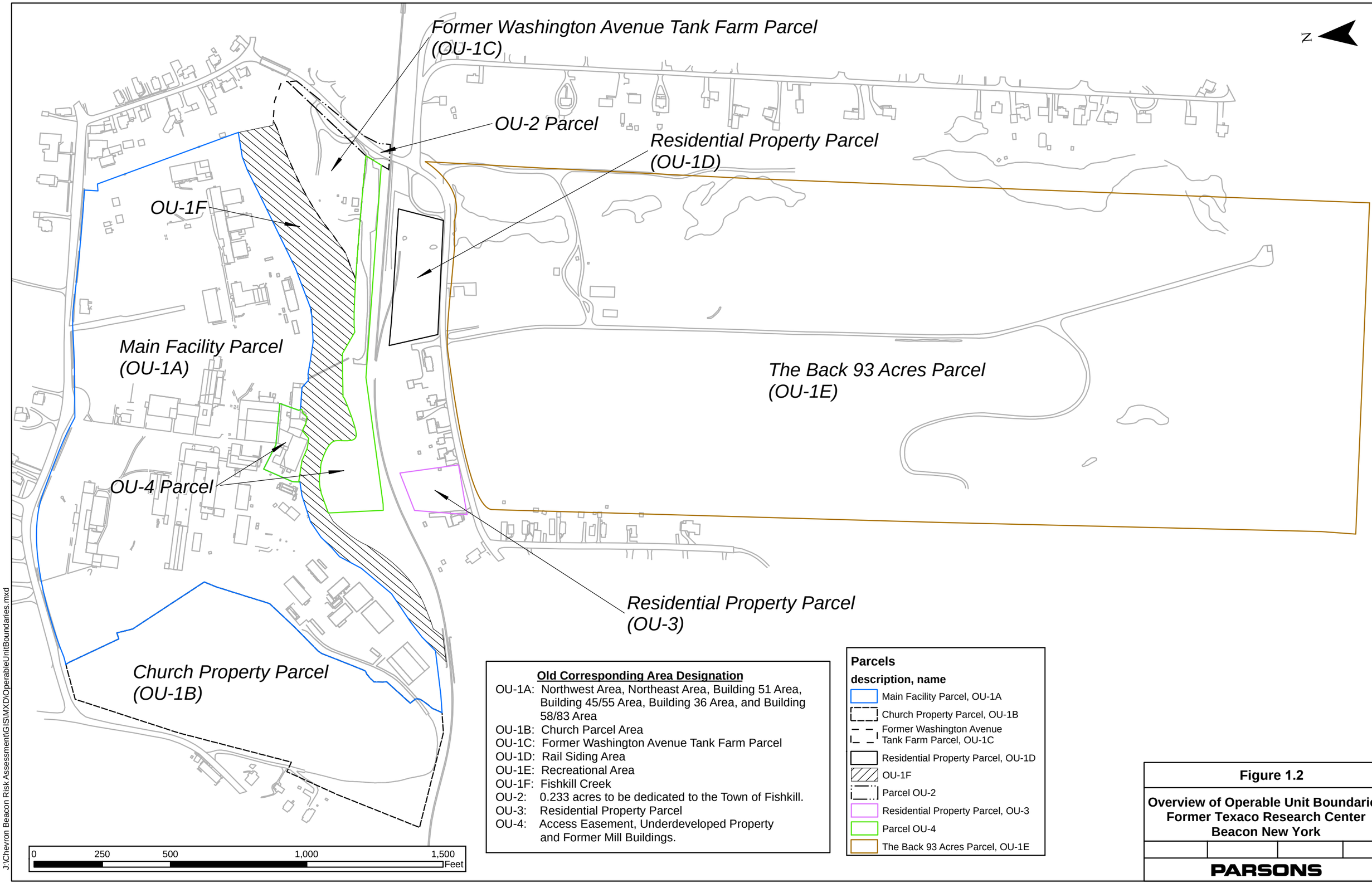
Figure 1.1

Site Location Map
Former Texaco Research Facility
Beacon, New York

PARSONS



Old Corresponding Area Designation

OU-1A: Northwest Area, Northeast Area, Building 51 Area, Building 45/55 Area, Building 36 Area, and Building 58/83 Area
OU-1B: Church Parcel Area
OU-1C: Former Washington Avenue Tank Farm Parcel
OU-1D: Rail Siding Area
OU-1E: Recreational Area
OU-1F: Fishkill Creek
OU-2: 0.233 acres to be dedicated to the Town of Fishkill.
OU-3: Residential Property Parcel
OU-4: Access Easement, Underdeveloped Property and Former Mill Buildings.

Parcels

description, name

- Main Facility Parcel, OU-1A
- Church Property Parcel, OU-1B
- Former Washington Avenue Tank Farm Parcel, OU-1C
- Residential Property Parcel, OU-1D
- OU-1F
- Parcel OU-2
- Residential Property Parcel, OU-3
- Parcel OU-4
- The Back 93 Acres Parcel, OU-1E

Figure 1.2

Overview of Operable Unit Boundaries
Former Texaco Research Center
Beacon New York

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J:\Chevron Beacon Risk Assessment\GIS\MXD\OperableUnitBoundaries.mxd

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Former Disposal Areas
Ecological Risk Assessment
Former Texaco Research Center
Beacon New York

Figure 1.3

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	11/24/2014		

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Fishkill Creek

(OU-1C)

OU-2

OU-1D

OU-1F

(OU-1A)

OU-1E

OU-4

(OU-3)

(OU-1B)

Dry Brook

N

0 250 500 1,000 Feet

Streams
NYS Regulatory Freshwater Wetlands
Wetlands
10 Foot Topographic Contours
1/4 Mile Site Buffer
1/2 Mile Site Buffer
Operable Units

Figure 2.1

Fish and Wildlife Resources within 1/2 Mile of Site

PARSONS

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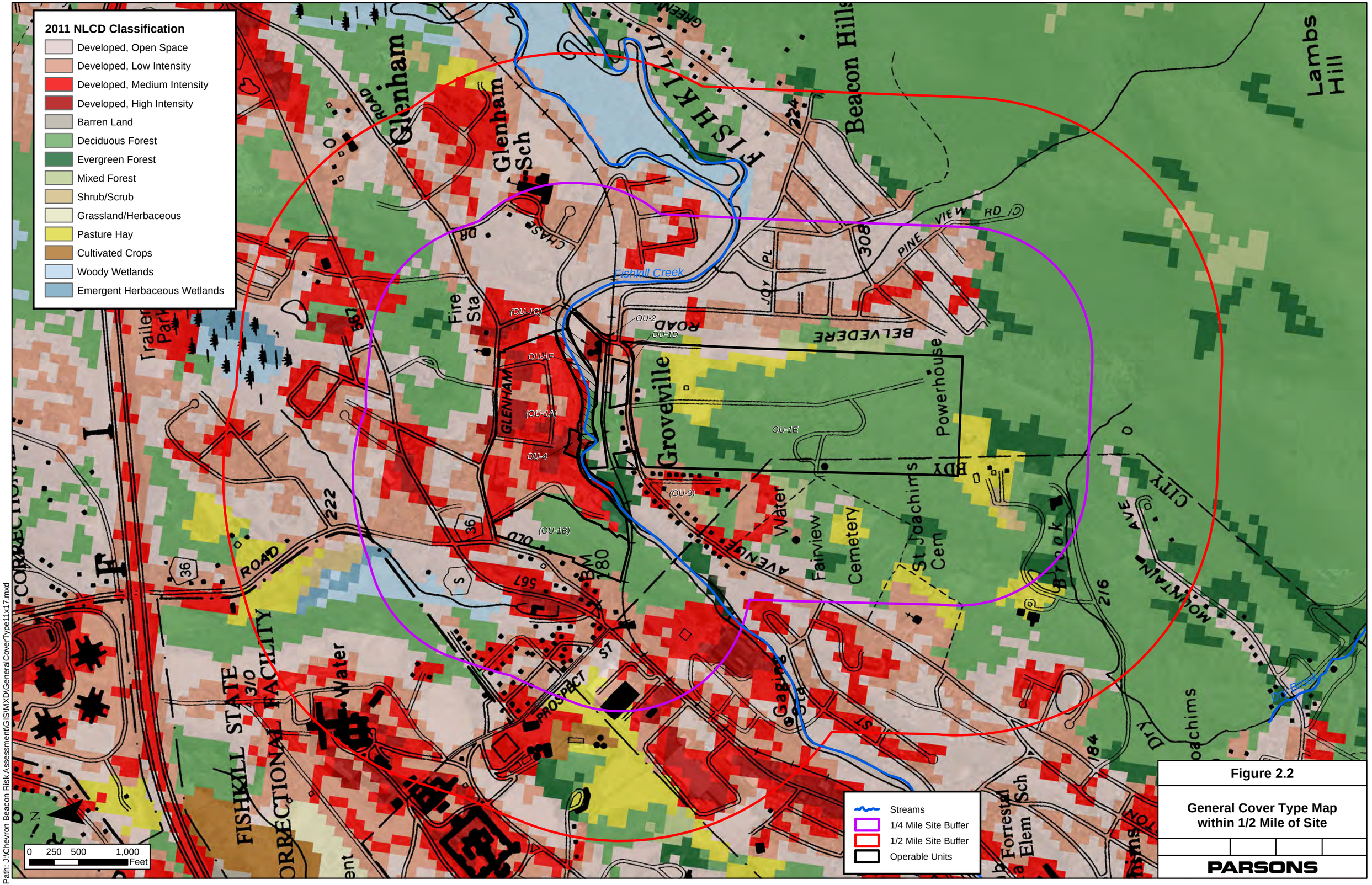

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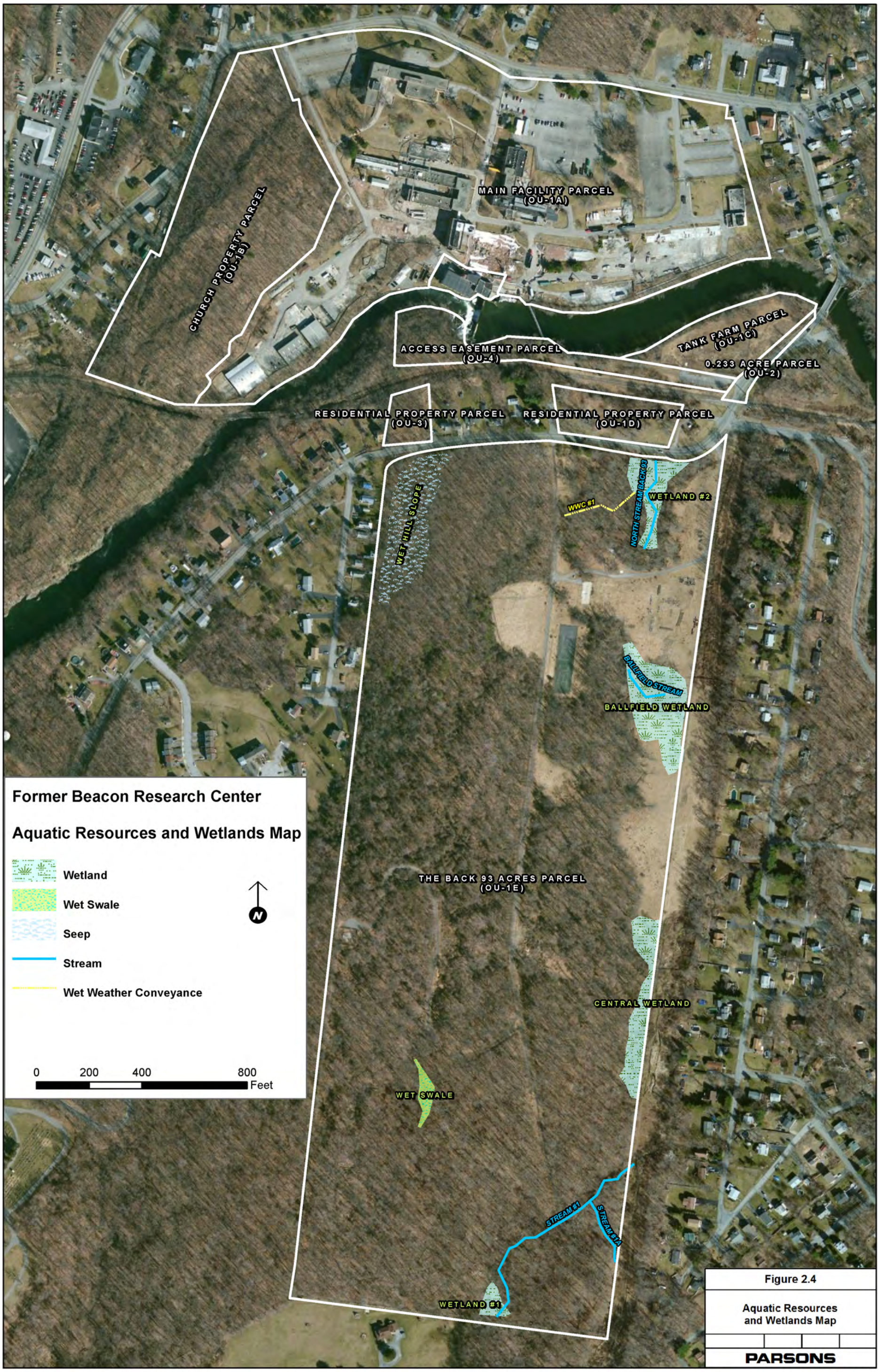
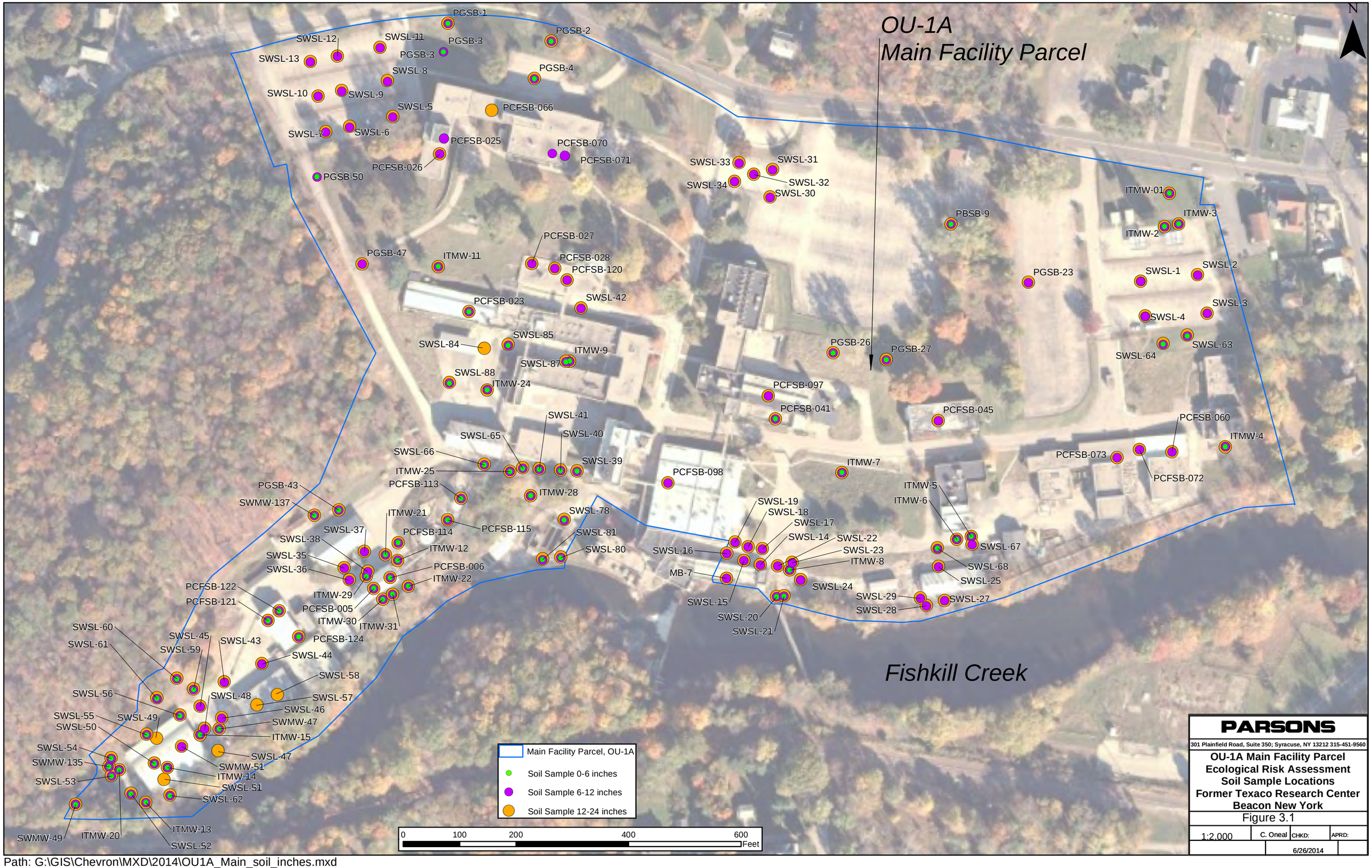
Figure 2.2

General Cover Type Map within 1/2 Mile of Site

PARSONS


MAIN FACILITY PARCEL
(OU-1A)
CHURCH PROPERTY PARCEL
(OU-1B)
ACCESS EASEMENT PARCEL
(OU-4)
TANK FARM PARCEL
(OU-1C)
0.233 ACRE PARCEL
(OU-2)
RESIDENTIAL PROPERTY PARCEL
(OU-3)
RESIDENTIAL PROPERTY PARCEL
(OU-1D)
THE BACK 93 ACRES PARCEL
(OU-1E)
Former Beacon Research Center
Existing Habitats Map
Developed
Grass/Green Space
Old Field
Exposed Rock
Riparian Forest
Upland Forest
Successional Forest
Stream
Wet Weather Conveyance
N
0
200
400
800
Feet
Figure 2.3
Existing Habitats Map
PARSONS


MAIN FACILITY PARCEL
(OU-1A)
CHURCH PROPERTY PARCEL
(OU-1B)
ACCESS EASEMENT PARCEL
(OU-4)
TANK FARM PARCEL
(OU-1C)
0.233 ACRE PARCEL
(OU-2)
RESIDENTIAL PROPERTY PARCEL
(OU-3)
RESIDENTIAL PROPERTY PARCEL
(OU-1D)
WET HILL SLOPE
WWC #1
NORTH STREAM BACK 93
WETLAND #2
BALLFIELD STREAM
BALLFIELD WETLAND
THE BACK 93 ACRES PARCEL
(OU-1E)
CENTRAL WETLAND
WET SWALE
STREAM #1
STREAM #1A
WETLAND #1
Former Beacon Research Center
Aquatic Resources and Wetlands Map
Wetland
Wet Swale
Seep
Stream
Wet Weather Conveyance
N
0
200
400
800
Feet
Figure 2.4
Aquatic Resources
and Wetlands Map
PARSONS



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OU-1A Main Facility Parcel
Ecological Risk Assessment
Soil Sample Locations
Former Texaco Research Center
Beacon New York

Figure 3.1

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	6/26/2014		

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N

Fishkill Creek

CPGP-12
CPGP-11
CPGP-13
CPGP-10
CPGP-9
CPGP-17
CPGP-15
CPGP-16
CPGP-14
CPGP-5
CPGP-4
CPGP-1
CPGP-2
CPGP-6
CPGP-7
CPGP-8
CPGP-3

OU-1B
Church Property Parcel

Church Property Parcel, OU-1B
Soil Sample 0-6 inches
Soil Sample 6-12 inches
Soil Sample 12-24 inches

0 105 210 420 630
Feet

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Church Property Parcel (OU-1B)
Ecological Risk Assessment
Soil Sample Locations
Former Texaco Research Center
Beacon New York

Figure 3.2

1:2,000	C. Oneal	CHKD:	APRD:
	7/11/2014		

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N

OU-1A
Main Facility Parcel

OU-1B
Church Property Parcel

OU-1C
Tank Farm Parcel

OU-1F
(Fishkill Creek)

OU-2

OU-3

OU-4
Parcel -Modified

OU-1D
Parcel -Modified

Main Facility Parcel, OU-1A
Church Property Parcel, OU-1B
Former Washington Avenue Tank Farm Parcel, OU-1C
Residential Property Parcel, OU-1D
The Back 93 Acres Parcel, OU-1E
Fishkill Creek, OU-1F
Parcel OU-2
Residential Property Parcel, OU-3
Parcel -Modified, OU-4
Mixed Commercial/Residential
No Development
Residential

count of parameters exceeded
parameters exceeded = 0
parameters exceeded = 1
parameters exceeded = 2
parameters exceeded = 3
parameters exceeded >=4

0 105 210 420 630
Feet

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VOCS Exceedences
0-2 ft Soil Sample Locations
Former Texaco Research Center
Beacon New York

Figure 3.3

1:2,000	C. Oneal	CHKD:	APRD:
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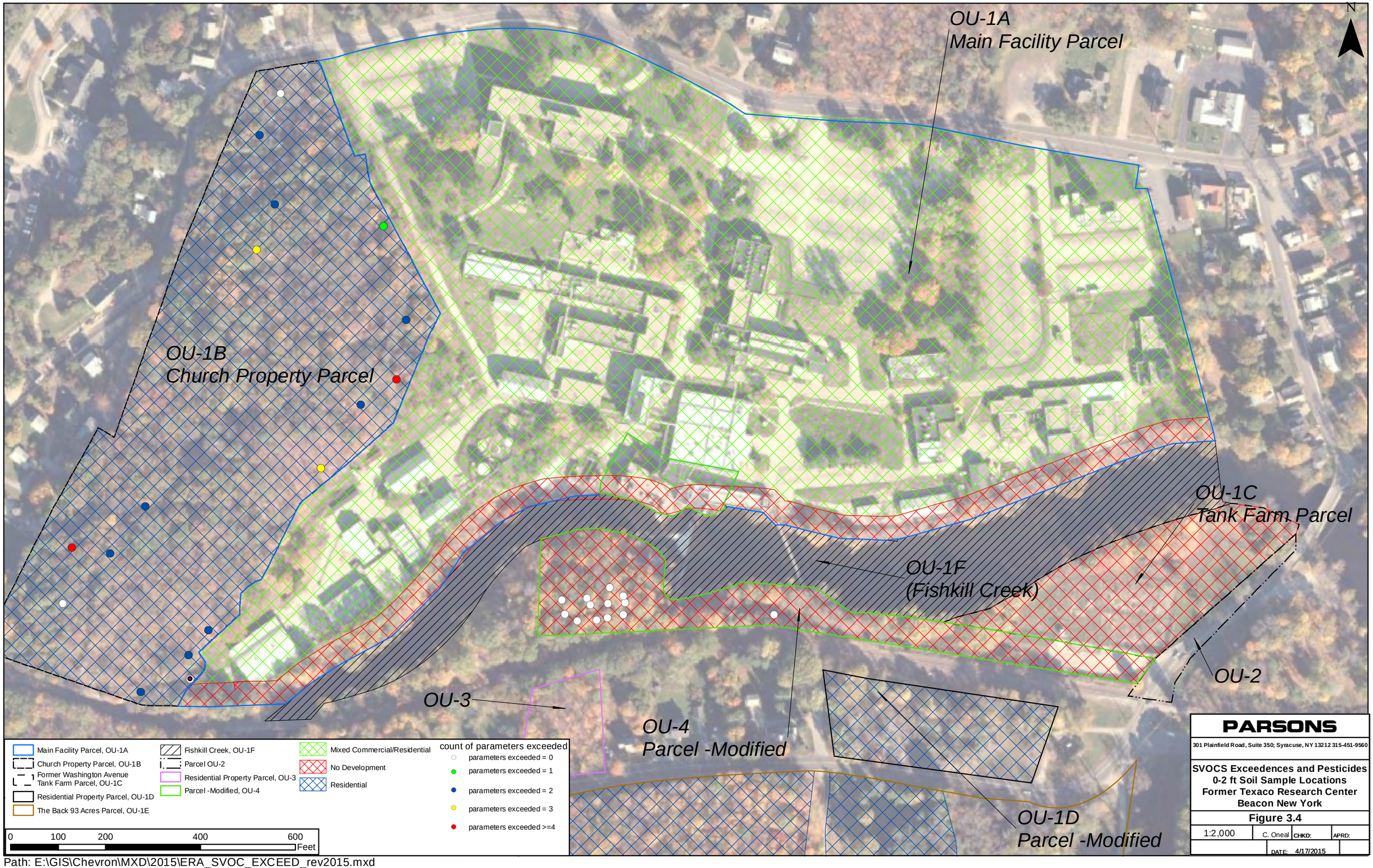

PARSONS

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SVOCS Exceedences and Pesticides
0-2 ft Soil Sample Locations
Former Texaco Research Center
Beacon New York

Figure 3.4

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N

OU-1A
Main Facility Parcel

OU-1B
Church Property Parcel

OU-1C
Tank Farm Parcel

OU-1F
(Fishkill Creek)

OU-2

OU-3

OU-4
Parcel -Modified

OU-1D
Parcel -Modified

Main Facility Parcel, OU-1A
Church Property Parcel, OU-1B
Former Washington Avenue Tank Farm Parcel, OU-1C
Residential Property Parcel, OU-1D
The Back 93 Acres Parcel, OU-1E
Fishkill Creek, OU-1F
Parcel OU-2
Residential Property Parcel, OU-3
Parcel -Modified, OU-4
Mixed Commercial/Residential
No Development
Residential

count of parameters exceeded
parameters exceeded = 0
parameters exceeded = 1
parameters exceeded = 2
parameters exceeded = 3
parameters exceeded >=4

0 95 190 380 570 Feet

Path: E:\GIS\Chevron\MXD\2015\ERA_METAL_EXCEED_rev2015.mxd

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Metals Exceedences
0-2 ft Soil Sample Locations
Former Texaco Research Center
Beacon New York

Figure 3.5

1:2,000 | C. Oneal | CHKD: | APRD:

DATE: 4/17/2015

N

OU-2
(No soil samples collected
from 0 to 24 inches)

OU-1C
Tank Farm Parcel
(No Soil Samples Collected
from 0 to 24 inches)

Fishkill Creek

OU-1D
Residential Property Parcel
(No soil samples collected
from 0 to 24 inches)

OU-3
Residential Property Parcel
(No soil samples collected
from 0 to 24 inches)

Former Washington Avenue
Tank Farm Parcel, OU-1C
Residential Property Parcel, OU-1D
Parcel OU-2
Residential Property Parcel, OU-3

0 100 200 400 600
Feet

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getma

PARSONS

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OU-1C, OU-1D, OU-2, and OU-3 Parcels
Ecological Risk Assessment
Soil Sample Locations
Former Texaco Research Center
Beacon New York

Figure 3.6

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	6/26/2014		

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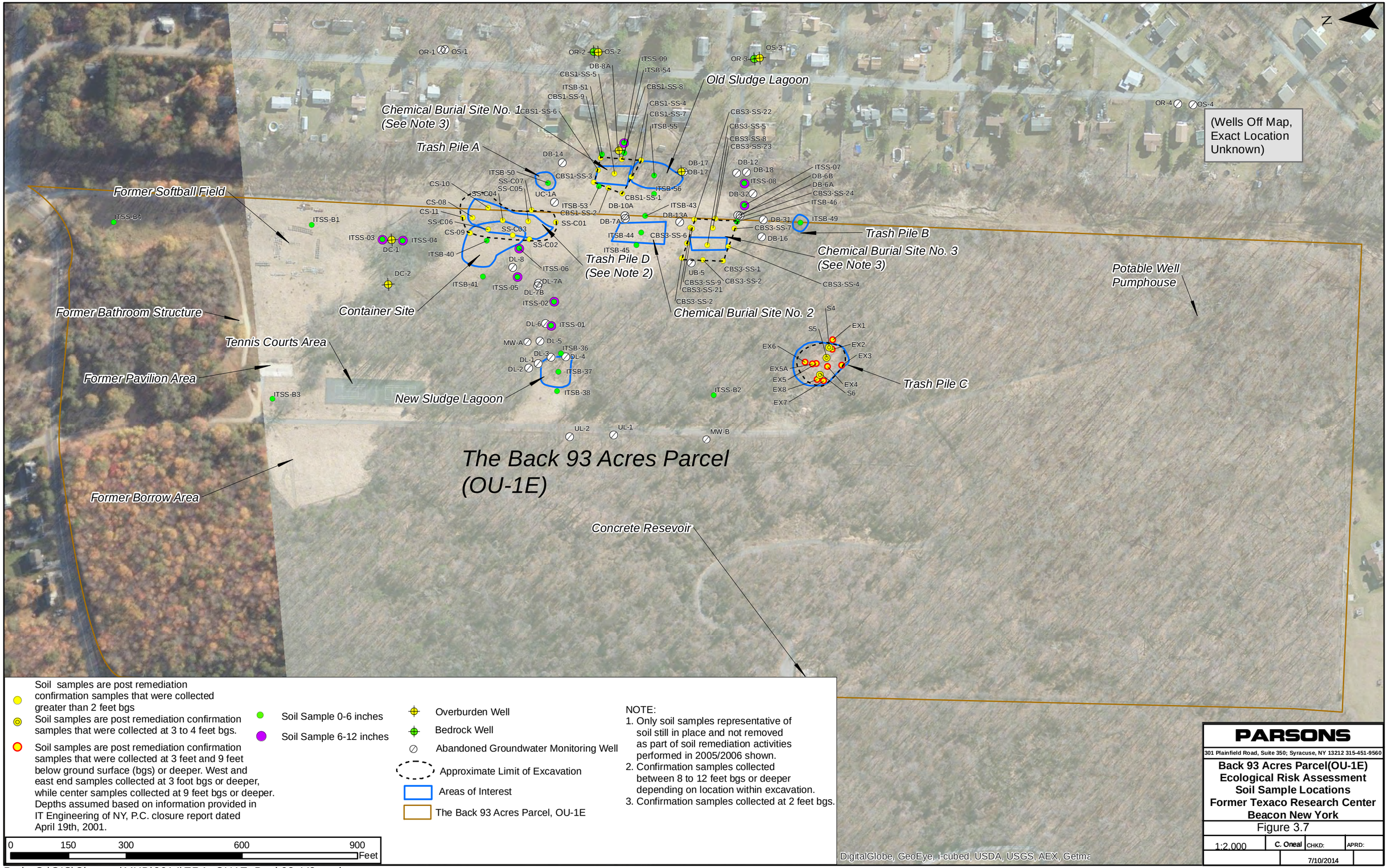

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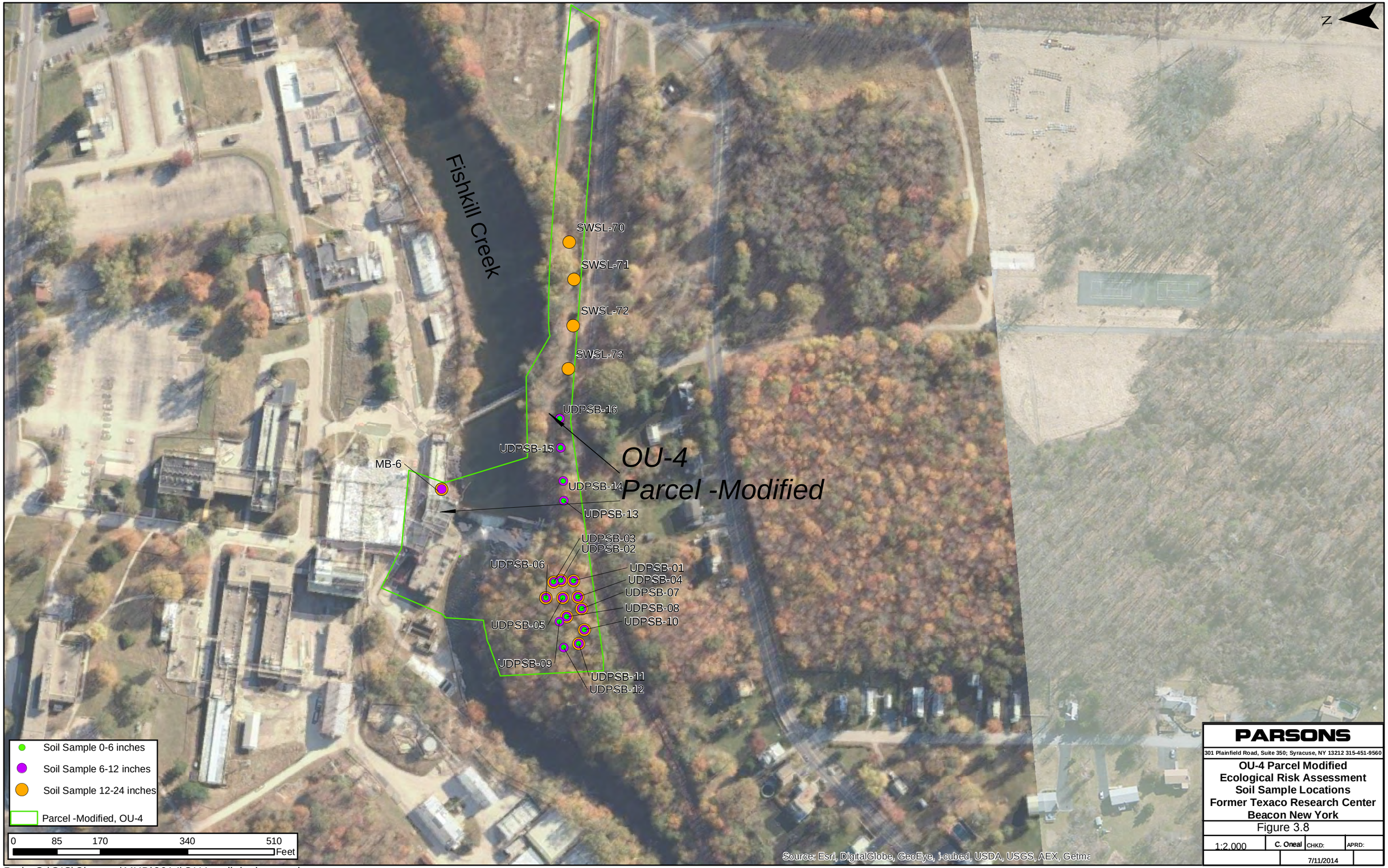

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OU-4 Parcel Modified
Ecological Risk Assessment
Soil Sample Locations
Former Texaco Research Center
Beacon New York

Figure 3.8

1:2,000	C. Oneal	CHKD:	APRD:
	7/11/2014		

Path: G:\GIS\Chevron\MXD\2014\OU4_soil_inches.mxd

PARSONS

Figure 3.9

Fishkill Creek Surface Water & Sediment Sampling Locations Transects 1 through 3 Former Texaco Research Center Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

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	DATE: 12/1/2014		

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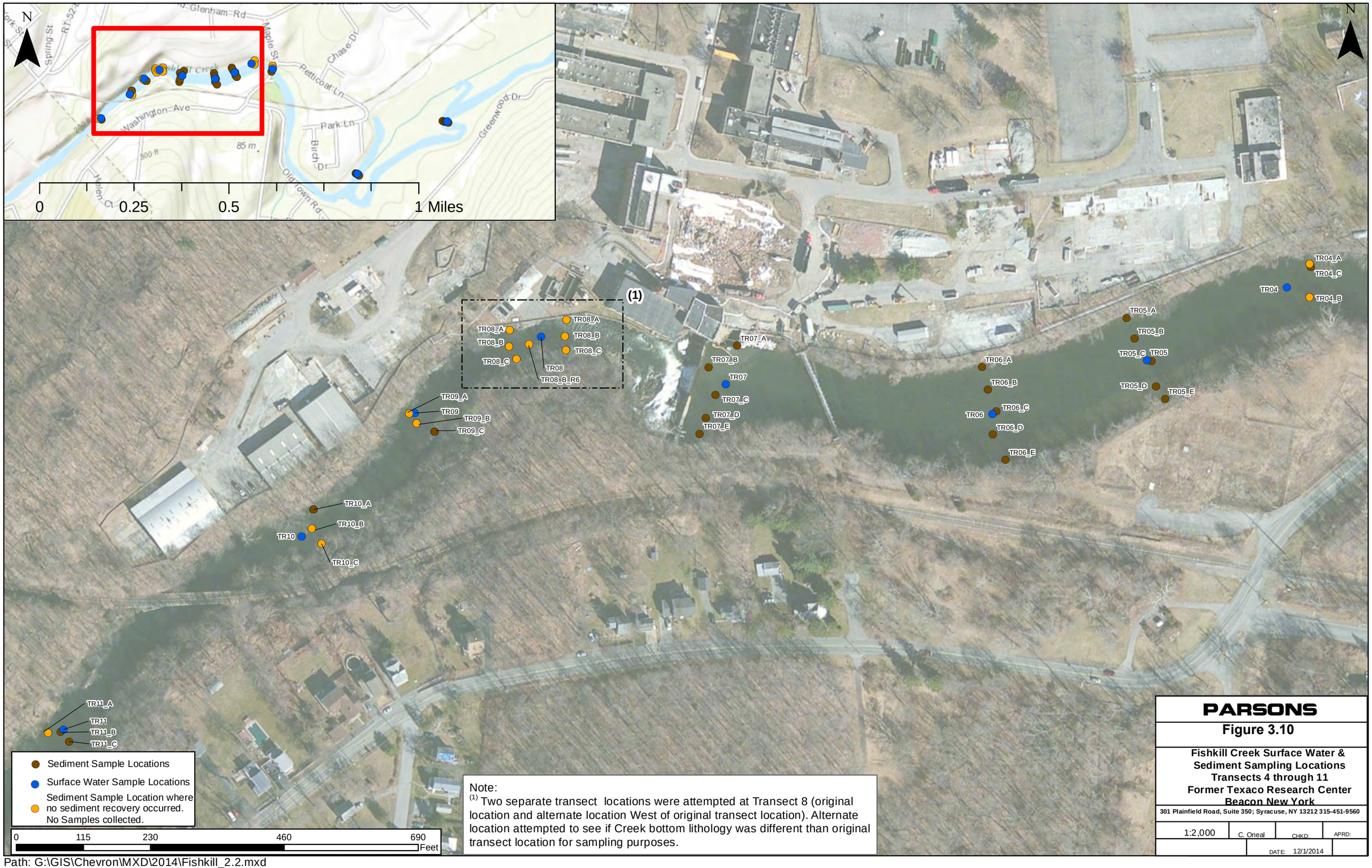

Note:
(1) Two separate transect locations were attempted at Transect 8 (original location and alternate location West of original transect location). Alternate location attempted to see if Creek bottom lithology was different than original transect location for sampling purposes.

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Figure 3.10

Fishkill Creek Surface Water & Sediment Sampling Locations
Transects 4 through 11
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

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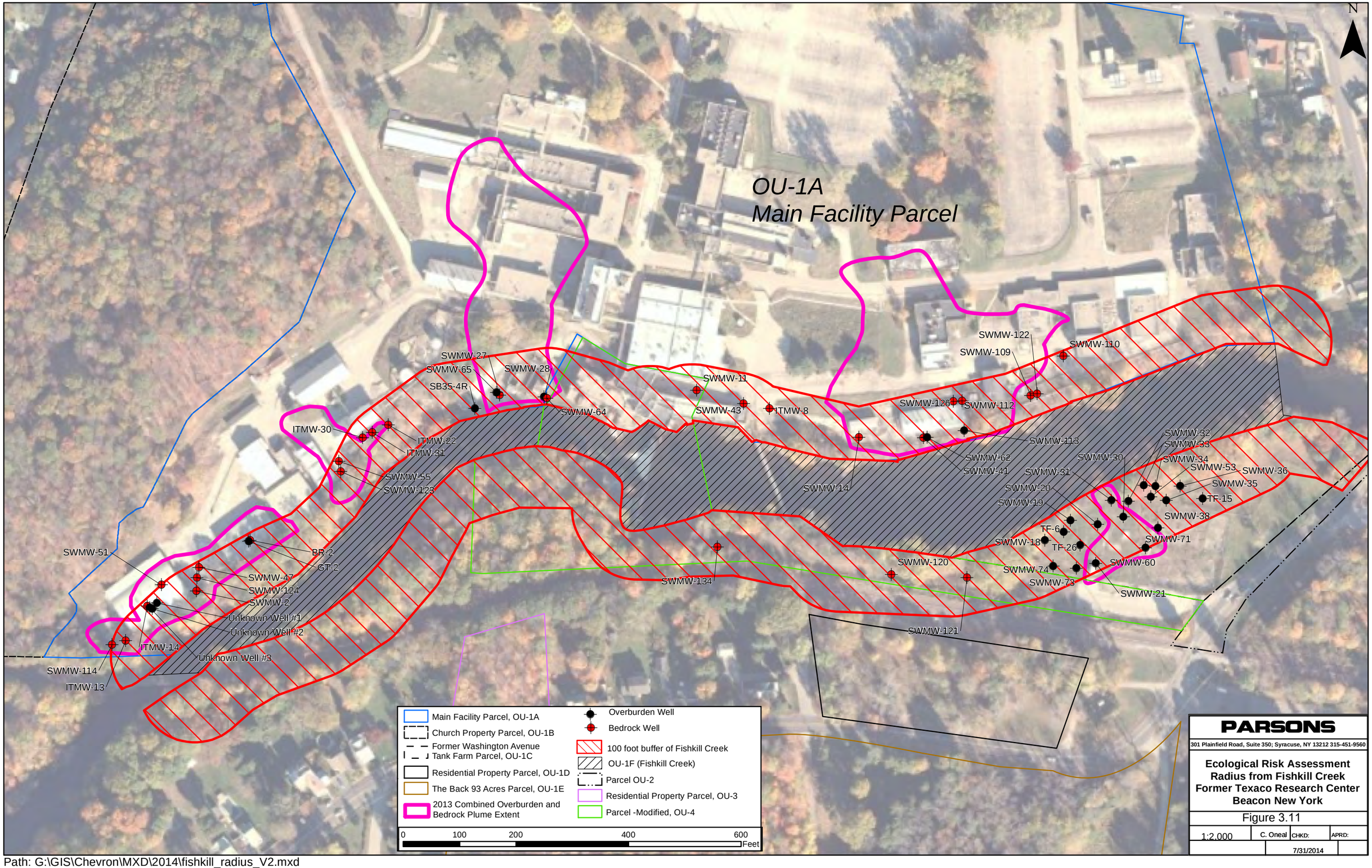

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Ecological Risk Assessment
Radius from Fishkill Creek
Former Texaco Research Center
Beacon New York

Figure 3.11

1:2,000	C. Oneal	CHKD:	APRD:
	7/31/2014		

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ATTACHMENT 1

JUNE 2014 SURVEY OF WETLANDS AND VEGETATION

Former Texaco Research Center Beacon - Ecological Assessment

Introduction

The purpose of this study effort was to study the ecology and map the habitats on nine parcels of the former Texaco Research Center Beacon (TRCB) with emphasis on any unique habitats or habitats that may propose an encumbrance on future development of the site. The U.S. Fish and Wildlife Service (USFWS) and the New York State Department of Environmental Conservation (NYDEC) were contacted to determine the potential for any rare or protected species or their habitat on TRCB. According to the NYDEC Natural Heritage Program database, there were four noteworthy natural communities occurring within the vicinity of the TRCB including: floodplain forest; pitch pine-oak-heath rocky summit; oak-tulip tree forest; and Appalachian oak-hickory forest. In addition to the natural communities, the database listed three animals including: the State-threatened bald eagle (*Haliaeetus leucocephalus*); State-threatened timber rattlesnake (*Crotalus horridus horridus*); and the State and Federally endangered Indiana bat (*Myotis sodalis*).

Another component to the habitat assessment was to identify wetlands and other waters of the U.S. on the nine TRCB parcels that could be regulated and could provide an encumbrance for future development of the site. Section 404 of the Clean Water Act (CWA) extends authorization to the U.S. Army Corps of Engineers (USACE) to regulate activities that affect waters of the United States, including wetlands. On April 21, 2014, the Environmental Protection Agency (EPA) and the USACE published for public comment a proposed rule in the Federal Register (Vol. 79, No. 76, http://www2.epa.gov/sites/production/files/2014-04/documents/fr-2014-07142.pdf) defining the scope of waters protected under the CWA, in light of the U.S. Supreme Court cases in *U.S. v. Riverside Bayview*, *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC)*, and *Rapanos v. United States* (*Rapanos*). The new proposed definition is listed as an attachment to this appendix, and should not greatly affect the overall outcome of this study effort, however it should be noted that the USACE will have the final determination on the jurisdiction of any waters of the U.S.

General Physiography, Geology, and Description of Dutchess County [adapted from the Soil Survey of Dutchess County, New York (NRCS, 1992)]

The entire TRCB lies within Dutchess County, which is in the easternmost part of the mid-Hudson Valley in New York State. According to the Natural Resources Conservation Service (NRCS) soil survey summary information, Dutchess County covers 514,600 acres, or 804 square miles. Winters are cold and summers are moderately warm with occasional hot spells. Mountains are markedly cooler than the main agricultural areas in the lowlands. Precipitation is well distributed throughout the year and is nearly always adequate for all crops. Winter snows occur frequently, occasionally as blizzards. Snow covers the ground much of the time. The growing season generally encompasses May 10 to September 29 based upon average first and last frost, with an approximately 140-day growing season.

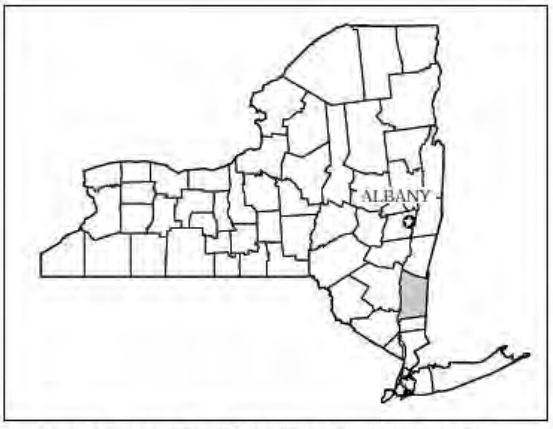


Figure 1.—Location of Dutchess County in New York.

Dutchess County is located in southeastern New York State. It is bounded to the north by Columbia County, to the west by the Hudson River, to the south of Putnam County, and to the east by the State of Connecticut. The county is divided into two major physiographic units: the Valley and Ridge Province, and the New England Province. The Valley and Ridge Province includes the Hudson Lowlands and the Low Taconics. The Hudson Lowlands extend eastward 3 to 6 miles from the Hudson River. Maximum elevations there are 400 to 500 feet above mean sea level with 100 to 250 feet of relief (Isachsen, 1991). Bedrock is predominantly easily eroded sedimentary rock, such as shale, graywacke and siltstone, which were deposited during the Cambrian and Ordovician Periods. To the east are the Low Taconics, which consist of Cambrian and Ordovician graywacke, metagraywacke, shale, phyllite, and schist. This 8 to 10 mile wide zone has 200 to 300 feet of relief, with maximum elevations of 500 to 750 feet.

Dutchess County was entirely covered by glacial ice during the last ice age. Despite evidence of four major advances and retreats of the continental ice sheet in other parts of the United States, only the last stage “the Wisconsinan” is evident in New York. A wide variety of stratified and unstratified material was deposited in association with the glacier during both advance and retreat phases. Unstratified deposits within the county called till are generally compact (dense) and clay rich. The till contains abundant rock clasts; however, they are not generally in contact with each other. This type of till is called hardpan and may contain isolated layers of stratified sand and gravel. The till is generally thin in the hilly regions where there are scattered bedrock exposures, but may be tens of feet thick adjacent to bedrock valley walls. Examples of soils formed in glacial till on TRCB include Bernardston and Hollis.

Soils Information

According to the Soil Survey of Dutchess County, New York (NRCS, 1992), there are 11 soil types listed that cover the nine TRCB parcels. The assessment of soil types is provided as background to understand habitats, wetlands, and land use history.

Urban Land (Ur) - This unit consists of areas where the soil surface is covered by impervious materials. It is in the business centers of villages and cities, mostly in the western and southern portions of the county. Areas are elongated or rectangular. They commonly range from 5 to 700 acres. Slopes range from 0 to 8 percent. Because these areas are greatly altered by construction, a typical pedon is not provided. The impervious materials include parking lots, shopping centers, industrial parks, and institutional sites. Included with this unit in mapping are areas of somewhat excessively drained and well drained.

Udorthents, smoothed (Ur) - This unit consists of very deep, somewhat excessively drained to moderately well drained soils that have been altered by cutting and filling. It is in and adjacent to urban areas, industrial areas, schoolyards, and borrow areas. Areas are rectangular or irregularly shaped. They commonly range from 5 to 275 acres. Slopes are dominantly 0 to 8 percent but range from 8 to 25 percent on the sides of excavations and along highways.

Charlton-Chatfield complex, rolling, rocky (CrC) - This unit consists of very deep, well drained Charlton soils and moderately deep, well drained and somewhat excessively drained Chatfield soils that formed in glacial till deposits. It is on hilltops and side slopes that are underlain by folded schist, granite, or gneiss bedrock. Charlton soils are commonly on lower concave slopes, and Chatfield soils are commonly on upper slopes, hilltops, and near areas of rock outcrop. This unit consists of about 50 percent Charlton soils, 30 percent Chatfield soils, and 20 percent other soils and rock outcrop. Rock outcrop covers 0.1 to 2 percent of the surface. The Charlton and Chatfield soils and areas of rock outcrop are in such an intricate pattern that they were not mapped separately by the NRCS. Areas are oval or irregularly shaped. They commonly range from 5 to 250 acres. Slopes are complex and range from 5 to 16 percent. Depth to bedrock in areas of Chatfield soils and rock outcroppings over portions of the unit are the main

limitations if this unit is used as a site for septic tank absorption fields or for dwellings with basements. Slope is also a limitation. Erosion is a moderate hazard during construction.

Chatfield-Hollis complex, rolling, very rocky (CtC) - This unit consists of moderately deep, well drained and somewhat excessively drained Chatfield soils, and shallow, well drained and somewhat excessively drained Hollis soils that formed in glacial till deposits. This unit is on hilltops, narrow ridges, and side slopes that are underlain by folded schist, granite, or gneiss bedrock. Chatfield soils are commonly on lower concave slopes and Hollis soils are commonly on upper slopes, hilltops, and near areas of rock outcrop. This unit consists of about 40 percent Chatfield soils, 40 percent Hollis soils, and 20 percent rock outcrop and other soils. Rock outcrop covers 2 to 10 percent of the surface. The Chatfield and Hollis soils and rock outcrop are in such an intricate pattern that they were not separated in mapping by the NRCS. Depth to bedrock and rock outcroppings over portions of the unit are the main limitations for dwellings with basements. The short uneven slopes are also a limitation. Erosion is a severe hazard during construction.

Table 1. General physical features of the Texaco Research Center Beacon.

Parcel #	Parcel Description	Soil Type(s)	General Hydrology	Development Limitations
OU-1A	Main Facility	Ur, CtC	Very well drained	Slope, past land use
OU-1B	Church Parcel	HoD	Very well drained	Slope, depth to bedrock, severe erosion potential, unique habitats
OU-1C	Former Washington Avenue Tank Farm Parcel	Ud	Somewhat well drained	Past land use, high water table
OU-1D	Rail Siding Area, Residential Property Parcel	PwB	Somewhat poorly drained	High water table
OU-1E	Back 93 Acres Parcel, Recreational Area	PwB, PwC, BeB, BeC, BeD, HtB, CrC	Poorly drained (e.g. PwB) to very well drained (e.g. BeC and CrC)	Slope, depth to bedrock, high water table
OU-1F	Fishkill Creek	Soil Not Mapped	Riverine / Inundated	CWA regulated waterbody/stream
OU-2	0.233-acre Parcel to Town of Fishkill	Ud	Somewhat well drained	High water table
OU-3	Residential Property Parcel	PwC	Moderately well drained	Slope, depth to bedrock
OU-4	Access Easement Parcel, south of and parallel to Fishkill Creek	PwC, Ud	Moderately well drained to very well drained	Slope, depth to bedrock, unique habitats

Soil Types:
Ur = Urban Land
Ud = Udorthents, smoothed
CrC = Charlton-Chatfield complex, rolling, rocky
CtC = Chatfield-Hollis complex, rolling, very rocky
HoD = Hollis-Chatfield-Rock outcrop complex, rolling
HtB = Hoosic channery loam, fan, 3 to 8% slopes
PwB = Pittsdown silt loam, 3 to 8% slopes
PwC = Pittsdown silt loam, 8-15% slopes
BeB = Bernardston silt loam, 3-8% slopes
BeC = Bernardston silt loam, 8-15% slopes
BeD = Bernardston silt loam, 15-25% slopes

Hollis-Chatfield-Rock outcrop complex, rolling (HoD) - This unit consists of shallow, well drained and somewhat excessively drained Hollis soils; moderately deep, well drained and somewhat excessively drained Chatfield soils; and areas of rock outcrop. It is on hills and side slopes that are underlain by folded schist, granite, or gneiss bedrock. Hollis soils are commonly on upper slopes and near areas of rock outcrop, and Chatfield soils are commonly on lower concave slopes. This unit consists of about 40 percent Hollis soils, 30 percent Chatfield soils, 15 percent rock outcrop, and 15 percent other soils. The Hollis and Chatfield soils and rock outcrop are in such an intricate pattern that they were not separated in mapping by the NRCS. Shallow depth to bedrock, frequent rock outcroppings, and slope are the main limitations if this unit is used for dwellings with basements. The short uneven slopes are also a limitation. Erosion is a severe hazard during construction.

Hoosic channery loam, fan, 3 to 8% slopes (HtB) - This unit consists of the very deep, gently sloping, and well drained Hoosic soils that formed in glacial outwash deposits. It is on outwash fans near streams. Areas are elongated or fan shaped and are traversed by tributary streams in places. They commonly range from 5 to 200 acres. Slopes are smooth. Rare flooding is the main limitation if this unit is used for dwellings with basements. The seasonal high water table is also a limitation. Droughtiness can make establishment and maintenance of lawns difficult. Building dwellings with raised foundations on higher areas of this soil will reduce the flooding and wetness limitations. Minimizing the removal of vegetation, mulching, and quickly establishing plant cover help to control erosion and sedimentation during construction. Poor filtering, the seasonal high water table, and rare flooding are the main limitations, if this unit is used for septic tank absorption fields. There is a hazard of groundwater pollution because of the seasonal high water table.

Pittsdown silt loam, 3 to 8% slopes (PwB) - This unit consists of very deep, gently sloping, and moderately well drained Pittstown soils that formed in glacial till deposits. It is on broad hilltops, concave foot slopes, and along drainageways on till plains. Areas are oval, elongated, or irregularly shaped. They commonly range from 5 to 275 acres. Slopes are smooth. This soil meets the criteria for prime farmland. The seasonal high water table is the main limitation if this unit is used for dwellings with basements. The seasonal high water table and slow percolation are the main limitations, if this unit is used for septic tank absorption fields.

Pittsdown silt loam, 8-15% slopes (PwC) - This unit consists of very deep, sloping, and moderately well drained Pittstown soils that formed in glacial till deposits. It is on hills and side slopes. Areas are elongated or irregularly shaped. They commonly range from 5 to 75 acres. Slopes are smooth. The seasonal high water table is the main limitation if this unit is used for dwellings with basements. The seasonal high water table and slow percolation are the main limitations, if this unit is used for septic tank absorption fields.

Bernardston silt loam, 3-8% slopes (BeB) - This map unit consists of very deep, gently sloping, and well drained soils that formed in glacial till deposits. It is on hilltops and broad till plains. Areas are oval or irregularly shaped. They commonly range from 5 acres to 130 acres. Slopes are smooth. The seasonal high water table and slow percolation are the main limitations, if this unit is used for dwellings with basements.

Bernardston silt loam, 8-15% slopes (BeC) - This map unit consists of very deep, strongly sloping and well drained Bernardston soils that formed in glacial till deposits. It is on hills and side slopes. Areas are oval, elongated, or irregularly shaped. They commonly range from 5 to 275 acres. Slopes are smooth. The seasonal high water table, slope, and slow percolation are the main limitations, if this map unit for dwellings with basements. Erosion is a moderate hazard during construction.

Bernardston silt loam, 15-25% slopes (BeD) - This map unit consists of very deep, moderately steep, and well drained soils that formed in glacial till deposits. It is on hills and side slopes. Areas are elongated or irregularly shaped. They commonly range from 5 to 200 acres. Slopes are smooth. Slope is the main limitation for dwellings, however a high water table is also a limitation. Erosion potential is severe.

None of the soils described above are listed as hydric soils, according to the NRCS soil survey information. Some soil types can contain inclusions of hydric soils, which would occur where soils are inundated and saturated for extended periods of time. This was the situation discovered during the field surveys, i.e. hydric or reduced soils were identified in small areas.

Habitat Survey

General habitat types were identified within the nine TRCB parcels by reviewing existing United States Geological Survey (USGS) topographic maps, NRCS soil survey maps, and aerial photographs of TRCB. Historical aerial photography showed changes in land use and succession in the TRCB habitats over time. In addition, the USFWS and the NYDEC were contacted to determine the potential for any rare or protected species and/or their habitat on TRCB.

According to the New York DEC Natural Heritage Program database, there were four noteworthy natural communities occurring within the vicinity of the TRCB including: floodplain forest; pitch pine-oak-heath rocky summit; oak-tulip tree forest; and Appalachian oak-hickory forest.

A previous study *Significant Habitats in the Fishkill and Sprout Creek Corridors, Town of Beacon, Lagrange, and Fishkill, Dutchess County, New York* (Hudsonia, 2005) was reviewed to identify areas on TRCB that the study thought were of ecological significance. This study put a 200 meter buffer around Fishkill Creek and some of its minor tributaries that included riparian and adjacent uplands. This buffer extended onto the following TRCB parcels: the southern portion of OU-1 A and OU-1B; the entire parcels of OU-4, OU-1C, and OU-2 south of Fishkill Creek; and east central and southern portion of OU-1E (Back 93 Parcel) that area associated with tributaries to Fishkill Creek. This buffer was labeled as a Priority Conservation Zone (Priority Zone 3 – Fishkill and Sprout Creeks), which is discussed in detail in their study. The primary concerns with the Priority Zone 3 include: protecting the wood turtle (*Glyptemys insculpta*), a Species of Special Concern in New York and its habitat; protecting the integrity of stream habitats; protecting riparian and adjacent upland habitats; minimizing impacts from new and existing stream crossings and roadways; maintaining broad habitat corridors that connect habitat complexes; and protecting nesting areas.

Although not specifically mapped as a Priority Zone on the nine TRCB parcels, in the 2005 Hudsonia study an Oak-Heath Barren habitat was described that appears to be present in the OU-1B (Church Property Parcel) and to a lesser extent on the southwestern end of OU-1A (Main Facility Parcel) adjacent to Fishkill Creek and the northwestern portion of OU-4 (Access Easement Parcel) adjacent to Fishkill Creek. This oak-heath barren habitat type is assumed to correlate with the pitch pine-oak-heath rocky summit habitat that was listed by the NYDEC. The NYDEC coordination letter lacked a comprehensive description of the pitch pine-oak-heath rocky summit habitat, however. The oak-heath barren habitat type is typically found on ridge tops with exposed bedrock and thin well-drained soils. Some oak-heath communities support a low grassland community characterized by a mixture of drought tolerant grasses, sedges, mosses, lichens, and open rock pavement. This habitat type may be called a glade in other parts of the eastern U.S. Although with habitat type may seem inhospitable to plants and wildlife, they often support a number of rare species that have adapted to the dry exposed conditions. Example species of concern with the oak-heath community include a set of reptiles, such as timber rattlesnakes (*Crotalus horridus horridus*), northern copperhead (*Agkistrodon contortrix mokasen*), northern fence lizard (*Sceloporus undulatus*) and five-lined skink (*Plestiodon fasciatus*) and a number of rare butterflies and moths (Hudsonia, 2005).

A qualitative walking field survey of the TRCB properties was conducted June 9-13, 2014. Annotative notes were made on aerial maps along with general descriptions of the major habitat types identified or verified in the field. General species composition for each habitat type was noted, and any unique or notable habitats were highlighted and are discussed below. The primary habitat types were: upland forest, successional upland forest, riparian forest, old field, grass/green space, wet hill-slope savannah, oak-heath barren, and developed land. In addition to these habitats, various wetland and surface water features were mapped and are discussed below under Wetlands and Surface Waters section. Figure 2

illustrates the habitats on the nine TRCB parcels. The following is a general discussion of the primary habitat types and sizes observed on the nine TRCB parcels. Acreages are estimates from GIS extrapolation.

Upland Forest Approximately 80.20 acres of mature upland forest were identified on the TRCB parcels. Most of the mature upland forest habitat was found on OU-1E (Back 93 Parcel), OU-1B (Church Property Parcel), and the western half of OU-4 (Access Easement Parcel). The mature upland hardwood forest on TRCB was less disturbed, likely due to steep topography, and the understory was sparse due to the closed canopy of the mature trees and excessive deer browsing. This community had a mixture of hardwood trees including sugar maple (*Acer saccharum*), pignut hickory (*Carya glabra*), shagbark hickory (*Carya ovata*), black oak (*Quercus velutina*), and northern red oak (*Quercus rubra*). The shrub layer was also variable and patchy in distribution, with maple-leaf viburnum (*Viburnum acerifolium*), coralberry (Symphoricarpos orbiculatus), witch-hazel (*Hamamelis virginiana*), spicebush (Lindera benzoin), and lowbush blueberry (Vaccinium angustifolium), with saplings of various maples, oaks, and hickories, and flowering dogwood (Cornus florida), among the common species. Although the mature upland forest stands were not large tracts, they probably supplied habitat for forest interior neotropical migrant birds.

Successional Upland Forest Approximately 15.66 acres of successional upland forest habitat were identified on the TRCB parcels, primarily on OU-3 (Residential Property Parcel), OU-1D (Residential Property Parcel), and the west central portion of OU-1E (Back 93 Parcel). The successional upland forest community was characterized by a younger forest stand with a higher percentage of light mast producing species, such as various maple and ash trees. Some of these successional areas were a few years past an old field community, and there were many small forest openings that were dominated by invasive plants, such as multiflora rose (*Rosa multiflora*) and honeysuckle (*Lonicera japonica*). The successional upland forest habitat provides dense cover for small game and white-tailed deer, and it is quality habitat for edge species.

Riparian Forest Approximately 2.58 acres of riparian forest were identified on the TRCB parcels and was primarily associated with the TRCB wetlands and the narrow band along Fishkill Creek. Since the floodplain of Fishkill Creek is so narrow, the riparian habitat is met almost immediately with various upland habitats. Dominant species included silver maple (*Acer saccharinum*), green ash (*Fraxinus pennsylvanica*), cottonwood (*Populus deltoides*), sycamore (*Platanus occidentalis*), and to a lesser extent tulip poplar (*Liriodendron tlipifera*).

Old Field Approximately 2.06 acres of old field habitat were identified on the TRCB parcels. Some of the older stands of old field habitat were mapped as part of the successional upland forest due to the size of the trees and shrubs that had become established. Most of the old field habitats were fields that were maintained/mowed until recently, i.e. within the last 3-4 years. The old fields are experiencing successional growth from woody plants, especially light mast producing trees such as maples and ash trees.

Grass/Green Space Approximately 11.15 acres of grass/green space or open fields were identified on the TRCB parcels. Some of these areas were maintained as lawns or landscaped areas on OU-1A (Main Facility Parcel) or as recreational areas, such as the ballfield on OU-1E (Back 93 Parcel). The area that was part of the remediation and slurry pond project in 2005 has been mowed and is primarily a maintained herbaceous field.

Wet Hill-Slope Savannah Approximately 1.85 acres of wet hill-slope savannah were identified on the TRCB parcels. Nearly all of the overstory ash trees in this area have been killed or are severely stressed. The absence of a tree canopy allows light to penetrate to the former forest floor, which has produced a

dense stand of herbaceous vegetation. The area resembles a savannah-like open habitat, which is unique to TRCB. Although the area is in a 10-15% slope, groundwater appears to be near the surface at times during the growing season. The combination of the ash tree die-off and the high groundwater table has led to a wetland dominated plant community that is unlike any other community on the facility. Various sedges and a thick stand of Japanese stiltgrass dominate the hill-slope.

Oak-Heath Barren Oak-Heath Barren habitat was observed in the OU-1B (Church Property Parcel) and to a lesser extent on the southwestern end of OU-1A (Main Facility Parcel) and the northwestern portion of OU-4 (Access Easement Parcel) adjacent to Fishkill Creek. This habitat type is typically found on ridge tops with exposed bedrock and thin well-drained soils. Some oak-heath communities support a low grassland community characterized by a mixture of drought tolerant grasses, sedges, mosses, lichens, and open (natural) rock pavement. This habitat type may be called a glade in other parts of the eastern U.S. Chinkapin oak (*Quercus muehlenbergii*) was a dominant tree in this habitat with some scattered eastern red cedar (*Juniperus virginiana*). The cedar trees were disappearing from the plant community likely due to the lack of disturbance, especially fire and logging. Although this habitat type may seem inhospitable to plants and wildlife, it often supports a number of rare species that have adapted to the dry exposed conditions. Example species of concern with the oak-heath community include a set of reptiles, such as timber rattlesnakes, northern copperhead, northern fence lizard, and five-lined skink, and a number of rare butterflies and moths (Hudsonia, 2005)). Approximately 1.03 acres of oak-heath barrens were identified on the TRCB parcels.

Developed Land Developed land included those areas with buildings, parking lots, roadways, tennis courts, and recently demolished buildings/facilities. Most of OU-1A (Main Facility Parcel) and OU-1C (Tank Farm Parcel) were considered as developed land with some smaller, less significant habitats present on each. Lawn grasses, such as Kentucky bluegrass (*Poa pratensis*) and fecue (*Festuca spp.*), dominate the maintained areas, and early invading species such as ragweed, dandelion, and goldenrods have become established in the recently demolished facilities on OU-1A (Main Facility Parcel) and OU-1C (Tank Farm Parcel). Approximately 39.73 acres of developed land was identified on the TRCB parcels.

Table 2. Habitat types on the nine parcels of the Texaco Research Center Beacon.

Habitat Type	Size (acres)	Notes:
Upland Forest	80.20	Characterized primarily by mature trees and closed canopy with a mixture of hard and soft mast producing trees.
Successional Upland Forest	15.66	Upland forest with light mast producing trees as dominants, thick understory, forest openings, and late stage successional growth of previous old fields.
Riparian Forest	2.58	Primarily associated with Fishkill Creek and TRCB wetlands.
Old Field	2.06	Previously maintained open fields that are experiencing succession as perennials and woody plants become established.
Grass/Green Space	11.15	Open fields and mowed/maintained lawn areas on the facility.
Wet Hill-Slope Savannah	1.85	This habitat type is unique and was likely the result of ash decline from borers that has eliminated the tree canopy.
Oak-Heath Barren	1.03	This habitat is unique in its glade-like appearance. It may provide habitat for rare species.
Developed Land	39.73	Primarily buildings, parking lots, roadways, and recently demolished buildings/facilities.

Note: Habitat types identified and confirmed during June 2014 field surveys, and habitat acreages were derived from GIS analysis.

Figure 2. Texaco Research Center Beacon habitat map.

Wetlands and Surface Water Survey

The specific objective of the wetland and surface water survey was to identify potential wetlands and other waters of the U.S. occurring within and immediately adjacent to the TRCB parcels; to characterize the wetland resources in terms of wetland type, size, and functional value; and to determine the potential environmental impacts that could be expected with future development and reuse of TRCB. Wetlands are defined by the USACE as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (USACE, 1987). Wetlands have hydrophytic vegetation, hydric soils, and occur in areas that are permanently or periodically inundated or saturated with water. Wetlands generally include swamps, marshes, bogs and similar areas.

Section 404 of the Clean Water Act extends authorization to the USACE to regulate activities that affect waters of the United States, including wetlands. The USACE issues Section 404 permits for the discharge of dredged or fill material into wetlands and other waters of the U.S. See Attachment 1 for the proposed list of Waters of the U.S. The USACE has the authority to determine the jurisdictional status of waters of the U.S., including wetlands, based upon the definitions listed in Attachment 1 and with regard to recent court cases that deal with isolated wetlands, juxtaposition of waters of the U.S., and significant nexus.

Significant nexus. The term significant nexus means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water of the U.S.), significantly affects the chemical, physical, or biological integrity of a regulated water. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the U.S." so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a regulated water.

Potential wetlands were preliminarily identified within the study area by reviewing existing USGS topographic maps, NRCS soil survey maps, USFWS National Wetlands Inventory (NWI) maps, aerial photographs, and the previous wetland survey (Dru Associates, Inc., 2006). Field surveys were conducted to confirm the presence or absence of wetlands within the boundaries of the nine TRCB parcels.

Wetland delineations were made utilizing the technique as described in the USACE Wetlands Delineation Manual (USACE, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation manual: Northcentral and Northeast Region, (NCNE Region, 2012). The USACE three-parameter approach (hydrology, soils, and vegetation) was applied to make routine wetlands determinations in the field. This approach requires an on-site inspection of the vegetative composition, soils, and hydrology of an area to make wetland determinations. At least one positive wetland indicator for each parameter must be evident for a positive wetland determination. General diagnostic characteristics for each parameter distinguish wetlands from non-wetland or upland areas. These characteristics are described below for each parameter (USACE, 1987 and NCNE Region, 2012).

Wetland vegetation generally consists of macrophytes that are typically adapted to areas that are at least periodically inundated or saturated by surface or groundwater. These hydrophytic species, due to morphological, physiological, and/or reproductive adaptations, have the ability to grow, compete, reproduce, and/or persist in anaerobic soil conditions, which develop in wetland soils due to inundation or prolonged saturation. Indicators of hydrophytic vegetation include more than 50 percent of the dominant

plant species having a regional indicator status of obligate wetland (OBL), facultative wetland (FACW), or facultative (FAC). In addition, morphological plant adaptations, such as buttressed trunks, adventitious roots, and floating leaves, are also considered indications of hydrophytic vegetation.

Wetland soils are classified as hydric or possess characteristics that are associated with reducing soil conditions. Indicators of hydric soils include presence of organic soils (peats or mucks), histic epipedons, sulfidic materials, gleyed soils, soils with distinct mottles and/or low chroma matrix, and presence of iron and manganese concretions, among others.

Wetland hydrology is defined by an area that is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season creating reducing soil conditions. Indicators of wetland hydrology include, but are not limited to, the presence of drainage patterns, sediment deposition, water marks, and visual observations of inundation or saturation.

A walking survey of all of the parcels was completed. No wetlands or other Waters of the U.S. were identified on any of the parcels except OU-1E (Back 93 Parcel). Wetland boundaries were flagged and marked with a GPS unit during the field surveys. The GPS data was converted to shapefiles and polygons were produced and overlain on aerial photographs. Figure 3 illustrates the waters of the U.S., including wetlands that were identified during the survey.

Wetland Summary

Six primary areas (Wetland 1, Central Wetland, Ballfield Wetland, Wetland 2, wet swale, and wet hill-slope) were identified for detailed wetland delineations. All six areas were on the OU-1E (Back 93 Parcel). Four (Wetland 1, Central Wetland, Ballfield Wetland, and Wetland 2) of the six areas are considered to be jurisdictional wetlands based upon the wetland delineation parameters and their adjacency to other waters of the U.S. It is estimated that a significant nexus exists between these waters and regulated streams. However, the USACE makes all final decisions on jurisdiction.

The areas that were of most concern and that were investigated in detail are described below.

Wetland 1 – This very small (0.20-acre) wetland is located on the south central boundary of the OU-1E. This is a wet drainage at the base of three intersecting slopes from the west, south, and southeast. There are drainage patterns, drift and debris piles visible, and the trees have a shallow root system indicative of a high water table. Hydrologic evidence suggests that the area remains saturated for long durations during the growing season and receive frequent stormwater runoff. Stream 1 bisects the wetland and eventually drains the northern (downstream) end of the wetland, where the area become riparian but not considered wetland due primarily to the lack of hydrology and wetland vegetation. Clearweed (*Pilea pumila*) provides a direct correlation with the soils and the boundaries of the wetland. The soils are reduced with a somewhat restrictive layer below 5 inches as the clay content of the soil increases.

Wetland 2 – This 0.78-acre wetland lies in the northeastern quarter of Parcel OU-1E (Back 93 Parcel) immediately south of Washington Avenue. The area is bisected by the North Stream that flows through the wetland and into a culvert that goes under Washington Avenue, Parcel OU-1D, Parcel OU-4, and Parcel OU-1C into Fishkill Creek. A spring was identified in the North Stream, and below the spring, water cress (*Nasturtium officinale*) was growing in the stream. A wet weather conveyance (WWC 1) that consisted of a dry straight drainage ditch entered the midpoint of Wetland 2 from the west. Another drop box culvert was identified at the south end (upstream end) of the North Stream, and it was presumed that this was connected to the north end (downstream end) of the Ballfield Stream. Wetland 2 receives groundwater from the adjacent ridge as evidenced by the spring and runoff from stormwater events. The

soils were reduced throughout the wetland, and they ranged from a heavy silt loam to a silty clay loam with a high percentage of organic matter. The north end of the wetland had a stand of green ash (*Fraxinus pennsylvanica*) and black ash (*Fraxinus nigra*) that appear to have some damage from borers, assumed to be emerald ash borers (*Agrilus planipennis*), which allows more light through the tree canopy and a denser stand of herbaceous plants. The northern portion of the wetland is very boggy and dominated by a stand of sensitive fern (*Onoclea sensibilis*), marsh fern (*Thelypteris palustris*), and skunk cabbage (*Syplocarpus foetidus*). There is evidence of some past disturbance and dirt work, potentially to aid in the drainage of the area, where spoil piles and rock are pushed up to form high spots in the wetland. These very small areas or humps in the wetland are included within the overall wetland boundary, because it was not practical to omit these areas from the wetland.

Ballfield Wetland – This wetland area covers approximately 1.61 acres, and it has been extensively disturbed over time. The area is bisected by a short segment of stream that flows to the north into a drop box culvert. It is assumed that this stormwater drainage structure carries most of the stormwater runoff from the Ballfield Wetland to the north into the North Stream that eventually empties into Fishkill Creek. The northern portion of the wetland extends into the former ballfield and is dominated by a herbaceous sedge community. There is a wooded riparian area in the middle of the wetland that parallels the short segment of stream before it enters the drop box culvert. The riparian trees were dominated by pin oak (*Quercus palutris*), green ash, cottonwood (*Populus deltoides*), and sycamore (*Platanus occidentalis*). In the southern third of the wetland in the former slurry pond area, the habitat is another sedge meadow. The slurry pond area was excavated in 2006, and it is known to have a high groundwater table. In the east central portion of the wetland, there is a sensitive fern and narrowleaf cattail (*Typha angustifolia*) bog that appears to be saturated for most of the growing season. The soils in this wetland range from highly disturbed backfill in the slurry pond area in the southern third of the wetland to silty clays in the more undisturbed portions of the wetland. The boggy area that is dominated by sensitive fern and cattail, has a high organic matter content and a slight sulfidic odor. The primary hydrology for the wetland appears to be groundwater seepage and stormwater runoff from the main north/south running ridge through OU-1E (Back 93 Parcel). The drop box culvert at the northwest end of the wetland likely inhibits the wetland hydrology. However, even with the modifications to the area drainage, the wetland does remain saturated and in some areas inundated for much of the growing season.

Central Wetland – This linear wetland extends offsite to the east and parallel to Stream 1, and the wetland lies at the base of the main north/south running ridge on OU-1E (Back 93 Parcel). Approximately 0.99 acres are within the TRCB boundary, and it is estimated that the total wetland acreage on and offsite is approaching 3 acres total. Stream 1 runs to the north adjacent to the TRCB property, but does not enter TRCB property where the Central Wetland is mapped. It appears that groundwater plays a role in the hydrology of this wetland, but the primary hydrology comes from surface water runoff during stormwater events. No obvious springs were identified in the wetland or at the base of the ridge. The soils vary from a very moist silt loam to a heavier saturated silty clay loam in the wetter portions of the wetland. The soils have a dark matrix throughout the wetland and all appear to have been reduced by long periods of saturation or inundation. The western fringe of the wetland contain more mature trees including pin oak, green ash, and tulip poplar (*Liriodendron tulipifera*). It appears that the green ash trees have been adversely impacted by borers, assumed to be emerald ash borers, which allows more light through the tree canopy and a denser stand of herbaceous plants.

Wet Swale – This 0.21 acre area is located along the main north/south ridge in the south central portion of OU-1E (Back 93 Parcel). It is generally a swale between two spurs on the ridge. The area is not a vernal pool, but the swale does have wetland plants, especially at its widest point. A previous wetland report had referred to this area as a vernal pool, however there was no evidence of any inundation as

evidenced by the lack of moss trim lines. The area starts as a wet weather conveyance then is widens out into a flat swale before spilling over the edge of the ridge. The flat swale likely remains saturated to the surface following stormwater events. Sugar maple (*Acer saccharum*) and other upland trees surround the area. Wetland vegetation in the swale was dominated by Japanese stiltgrass (*Microstegium viminium*), clearweed, and poison ivy (*Toxicodendron radicans*).

Wet Hill-Slope Savannah - This 1.85 acre area is a wet hill-slope that has recently been significantly affected by borers. Nearly all of the overstory ash trees have been killed or are severely stressed. This has allowed a dense stand of herbaceous vegetation to become established, and the area resembles a savannah-like open habitat, which is unique to TRCB. Although the area is in a 10-15% slope, groundwater appears to be near the surface at times during the growing season, which has led to a wetland dominated plant community. Various sedges, such as cattail sedge (*Carex typhina*) and tussock sedge (*Carex suberecta*), and a thick stand of Japanese stiltgrass dominate the hillslope. Although the overall hydrology appears to be weak, there is some evidence of groundwater interaction and drainage patterns from stormwater runoff events. There is a mixed earthen/rock berm between this hillslope habitat and the adjacent residential areas to the west. It is presumed that the berm was constructed to reduce stormwater runoff and possibly groundwater from the TRCB property to the adjacent residences. The soils in the area showed some signs of reducing conditions, such as low matrix colors and extensive mottling. It is unlikely that this area would be considered jurisdictional, because the hydrology indicators are weak and the area is not adjacent to any other waters of the U.S. Fishkill Creek would be approximately 250 yards north of this habitat.

Table 3. Wetland summary table for Texaco Research Center Beacon.				
Feature Name	**Size (acres)**	**Wetland Type**	**Jurisdictional Status ***	**Functional Values****
Wetland 1	0.20	riparian/emergent	jurisdictional	Due to its small size, Wetland 1 has low functional values for flood protection, water quality improvements, and groundwater recharge, but it does have moderate value for wildlife habitat and the surrounding habitats are largely undisturbed.
Wet Swale	0.21	forested/emergent	non-jurisdictional	Due to its small size the Wet Swale has low functional values for flood protection, water quality improvements, and groundwater recharge, but it does have moderate value for wildlife habitat with the surrounding habitats mostly undisturbed.
Wetland 2	0.78	riparian/emergent	jurisdictional	Wetland 2 has low functional values for flood protection, and moderate values for water quality improvements, groundwater recharge, and wildlife.
Central Wetland	0.99	riparian/emergent	jurisdictional	The Central Wetland has low functional values for flood protection, and moderate values for water quality improvements, groundwater recharge, and wildlife.
Ballfield Wetland	1.61	riparian/emergent	jurisdictional	The Ballfield Wetland has low functional values for flood protection, and moderate values for water quality improvements, groundwater recharge, and wildlife.
Wet Hill-Slope Savannah	1.85	emergent/savannah	non-jurisdictional	The Wet Hill-Slope Savannah has low functional values for flood protection, and moderate values for water quality improvements, groundwater recharge, and wildlife.

**Note: Final jurisdictional determinations are made by the U.S. Army Corps of Engineers.*
***Note: Functional values are estimates based upon field observations and professional judgment for wildlife habitat, flood protection, water quality improvements, and groundwater recharge.*
Note: Wetland acreages were determined using GIS data obtained from handheld GPS unit during field surveys.

Stream Summary

Fishkill Creek Bisects the TRCB parcels with OU-1A (Main Facility Parcel) and OU-1B (Church Property Parcel) north of the creek and OU-4 (Access Easement Parcel) and OU-1C (Tank Farm Parcel) south of the creek. At least one of these four TRCB parcels borders Fishkill Creek for approximately 2,345 feet. In the area above the dam, Fishkill Creek appears more lacustrine in the pool created by the dam. There are areas of aquatic macropytes within the pool and emergent vegetation was evident on the pool perimeter. Just downstream from the dam the creek appeared to be more riverine in character, however this area is also affected by another downstream dam that limits what would probably be a riffle/pool steam complex.

Three stream segments were mapped in OU-1E (Back 93 Parcel), and they all had defined bed and bank with flowing water at the time of the survey. These included: Stream 1/Stream 1A; Ballfield Stream; and the North Stream. Stream 1/Stream 1A and the Ballfield Stream are likely intermittent streams during dry periods; however the North Stream has an active spring and likely has a perennial flow.

Stream 1/Stream 1A is a headwater tributary in the most southeastern end of the parcel. It flows to the northeast off of the OU-1E (Back 93 Parcel) and appears to flow north and parallel to the east boundary of the parcel. It is believed that this stream then proceeds to the east northeast through several culverts and empties into Fishkill Creek. The Central Wetland is adjacent to and parallels this stream, although the stream is outside of the facility boundary.

The Ballfield Stream generally flows to the north in the northeastern portion of OU-1E (Back 93 Parcel) through the Ballfield Wetland and into a drop box culvert at the base of the main north-south running ridge on OU-1E (Back 93 Parcel). It is believed that the culvert carries the water north into the North Stream that flows through Wetland 2 into a culvert that goes under Washington Avenue, Parcel OU-1D, Parcel OU-4, and Parcel OU-1C into Fishkill Creek. A spring was identified in the North Stream, and a wet weather conveyance (WWC 1), a dry drainage ditch, entered Wetland 2 from the west. The stretch of stream upstream from spring would be considered braided and intermittent, but the stretch below the spring appears to be perennial as evidenced by the presence of water cress in the stream channel. Another drop box culvert was identified at the south end (upstream) of the North Stream. The exact layout of the underground stormwater drainage system is unknown and was not mapped.

Table 4. Stream summary table for Texaco Research Center Beacon.

Stream Name	Length (feet)	Stream Type	Notes:
Fishkill Creek	2,345.0	Perennial	Fishkill Creek has a lacustrine or pool-like quality upstream from the dam/structure and more riverine below.
Stream 1	887.9	Intermittent Headwater	Stream flowing during field survey, but likely to become intermittent during dry periods.
Stream 1A	257.0	Ephemeral Headwater	Small ephemeral tributary to Stream 1.
Ballfield Stream	200.6	Intermittent Headwater	Enters drop box culvert at downstream end.
North Stream	370.7	Perennial	Area upstream from spring is intermittent, but the stretch below the spring appears to be perennial as evidenced by the presence of water cress.
WWC 1	303.9	Headwater drainage ditch in upland.	This ditch would not be jurisdictional.

Note: Stream lengths were determined using GIS data obtained from handheld GPS unit during field surveys.

Figure 3. Texaco Research Center Beacon wetlands and equality resources map.

Rare and Endangered Species

The USFWS and the NYDEC were contacted to determine the potential for any rare or protected species or their habitat on TRCB. According to the NYDEC Natural Heritage Program database, there were three animals including: the State-threatened bald eagle (*Haliaeetus leucocephalus*); State-threatened timber rattlesnake (*Crotalus horridus horridus*); and the State and Federally endangered Indiana bat (*Myotis sodalis*). There were no plant species listed in the NYDEC coordination, however they did list four noteworthy natural communities occurring within the vicinity of the TRCB including: floodplain forest; pitch pine-oak-heath rocky summit; oak-tulip tree forest; and Appalachian oak-hickory forest.

Although not listed by the USFWS or NYDEC, in a previous study *Significant Habitats in the Fishkill and Sprout Creek Corridors, Town of Beacon, Lagrange, and Fishkill, Dutchess County, New York* (Hudsonia, 2005) the wood turtle (*Glyptemys insculpta*), which is a Species of Special Concern in New York was identified as a species to be protected. The study explained that protecting the integrity of stream habitats; protecting riparian and adjacent upland habitats; minimizing impacts from new and existing stream crossings and roadways; maintaining broad habitat corridors that connect habitat complexes; and protecting nesting areas were important management considerations for the wood turtle.

Attachment 1. Proposed Definition of Waters of the U.S. Under the Clean Water Act (40 CFR 230.3)

Proposed "Defintion of 'Waters of the United States' Under the Clean Water Act"
40 CFR 230.3

(s) For purposes of all sections of the Clean Water Act, 33 U.S.C. 1251 *et seq.* and its implementing regulations, subject to the exclusions in paragraph (t) of this section, the term "waters of the United States" means:
(1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(2) All interstate waters, including interstate wetlands;
(3) The territorial seas;
(4) All impoundments of waters identified in paragraphs (s)(1) through (3) and (5) of this section;
(5) All tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
(6) All waters, including wetlands, adjacent to a water identified in paragraphs (s)(1) through (5) of this section; and
(7) On a case-specific basis, other waters, including wetlands, provided that those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (s)(1) through (3) of this section.
(t) The following are not "waters of the United States" notwithstanding whether they meet the terms of paragraphs (s)(1) through (7) of this section—
(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act.
(2) Prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act the final authority regarding Clean Water Act jurisdiction remains with EPA.
(3) Ditches that are excavated wholly in uplands, drain only uplands, and have less than perennial flow.
(4) Ditches that do not contribute flow, either directly or through another water, to a water identified in paragraphs (s)(1) through (4) of this section.
(5) The following features:
(i) Artificially irrigated areas that would revert to upland should application of irrigation water to that area cease;
(ii) Artificial lakes or ponds created by excavating and/or diking dry land and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
(iii) Artificial reflecting pools or swimming pools created by excavating and/or diking dry land;
(iv) Small ornamental waters created by excavating and/or diking dry land for primarily aesthetic reasons;
(v) Water-filled depressions created incidental to construction activity;
(vi) Groundwater, including groundwater drained through subsurface drainage systems; and
(vii) Gullies and rills and non-wetland swales.
(u) Definitions—
(1) *Adjacent.* The term *adjacent* means bordering, contiguous or neighboring. Waters, including wetlands, separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent waters."
(2) *Neighboring.* The term *neighboring,* for purposes of the term "adjacent" in this section, includes waters located within the riparian area or floodplain of a water identified in paragraphs (s)(1) through (5) of this section, or waters with a shallow subsurface hydrologic connection or confined surface hydrologic connection to such a jurisdictional water.

Proposed "Definition of 'Waters of the United States' Under the Clean Water Act" at 40 CFR 230.2

(3) *Riparian area.* The term *riparian area* means an area bordering a water where surface or subsurface hydrology directly influence the ecological processes and plant and animal community structure in that area. Riparian areas are transitional areas between aquatic and terrestrial ecosystems that influence the exchange of energy and materials between those ecosystems.
(4) *Floodplain.* The term *floodplain* means an area bordering inland or coastal waters that was formed by sediment deposition from such water under present climatic conditions and is inundated during periods of moderate to high water flows.
(5) *Tributary.* The term *tributary* means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (s)(1) through (4) of this section. In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (s)(1) through (3) of this section. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. A tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (t)(3) or (4) of this section.
(6) *Wetlands.* The term *wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.
(7) *Significant nexus.* The term *significant nexus* means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (s)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (s)(1) through (3) of this section. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (s)(1) through (3) of this section.

*****

The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency propose to make identical changes as described in the preamble to the definition of "waters of the United States" at 33 CFR 328.3 and 40 CFR 110.1, 112.2, 116.3, 117.1, 122.2, 232.2, 300.5, part 300 App. E, 302.3 and 401.11. Read the full proposed rule at http://www.gpo.gov/fdsys/pkg/FR-2014-04-21/pdf/2014-07142.pdf.

Wetland Determination Data Forms – Northcentral and Northeast Region

Wetland 1 South 93

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Chevron - Beacon City/County: Fishkill Sampling Date: 6/10/14
Applicant/Owner: TRC State: NY Sampling Point:
Investigator(s): Luke Eggering Section, Township, Range:
Landform (hillslope, terrace, etc.): Base of Slope/Drainage Local relief (concave, convex, none): Concave Slope (%): 2%
Subregion (LRR or MLRA): Lat: Long: Datum:
Soil Map Unit Name: BeD NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? Yes X No
If yes, optional Wetland Site ID: Wetland 1 South 93

Remarks: (Explain alternative procedures here or in a separate report.)
This is a wet drainage at the base of three intersecting slopes. There are drainage patterns, drift & debris visible, the trees have a shallow root system, and there are obligate plants.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)
- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- X Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)
- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- X Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No X Depth (inches):
Water Table Present? Yes ____ No X Depth (inches):
Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
The area is a wet drainage that remains saturated for a long duration. There are braided channels that eventually form Stream 1. There appears to be changes in ↑ end of the area (i.e. dirt work & drainage improvements) the upstream (offsite)

ATTACHMENT 2

STATE AND FEDERAL THREATENED AND ENDANGERED SPECIES CONSULTATION

Chevron

Mark R. Hendrickson
Project Manager

Chevron Environmental Management Company
Superfund & Specialty Portfolios Business Unit
4800 Fournace Place
Room E534C
Bellaire, TX 77401
Tel (713) 432-2634
Mhendrickson@chevron.com

June 26, 2014

New York State Department of Environmental Conservation
NY Natural Heritage Program – Information Services
625 Broadway, 5th Floor
Albany, NY 12233-4757

RE: REQUEST FOR NEW YORK STATE HERITAGE PROGRAM ECOLOGICAL DATA

To Whom It May Concern:,

Chevron is performing a RCRA Remedial Investigation of a former Research Center site located in the Hamlet of Glenham, Town of Fishkill (population 21,000), Dutchess County, New York. The approximately 153-acre facility was operated from 1931 until 2003 as a laboratory complex for research and technical services related to petroleum products and energy.

As part of the remedial investigation, Chevron is preparing a Fish and Wildlife Resources Impact Analysis (FWRIA) for the NYS Department of Environmental Conservation. Chevron is kindly requesting the following information to facilitate completion of the FWRIA:

- A records search on state-listed endangered, threatened, or rare species or valued habitat within a one-mile radius of the facility.
- Within a 1.0-mile radius from the site, a map and description of 1) major vegetative communities including wetlands, aquatic habitats; 2) NYSDEC Significant Habitats, state forests, and other areas of special concern and 3) wild, scenic, or recreational rivers.

Enclosed are the site location figures to aid in locating the Former Research Center site. If you have any questions or comments, please do not hesitate to contact me at 713-432-2634.

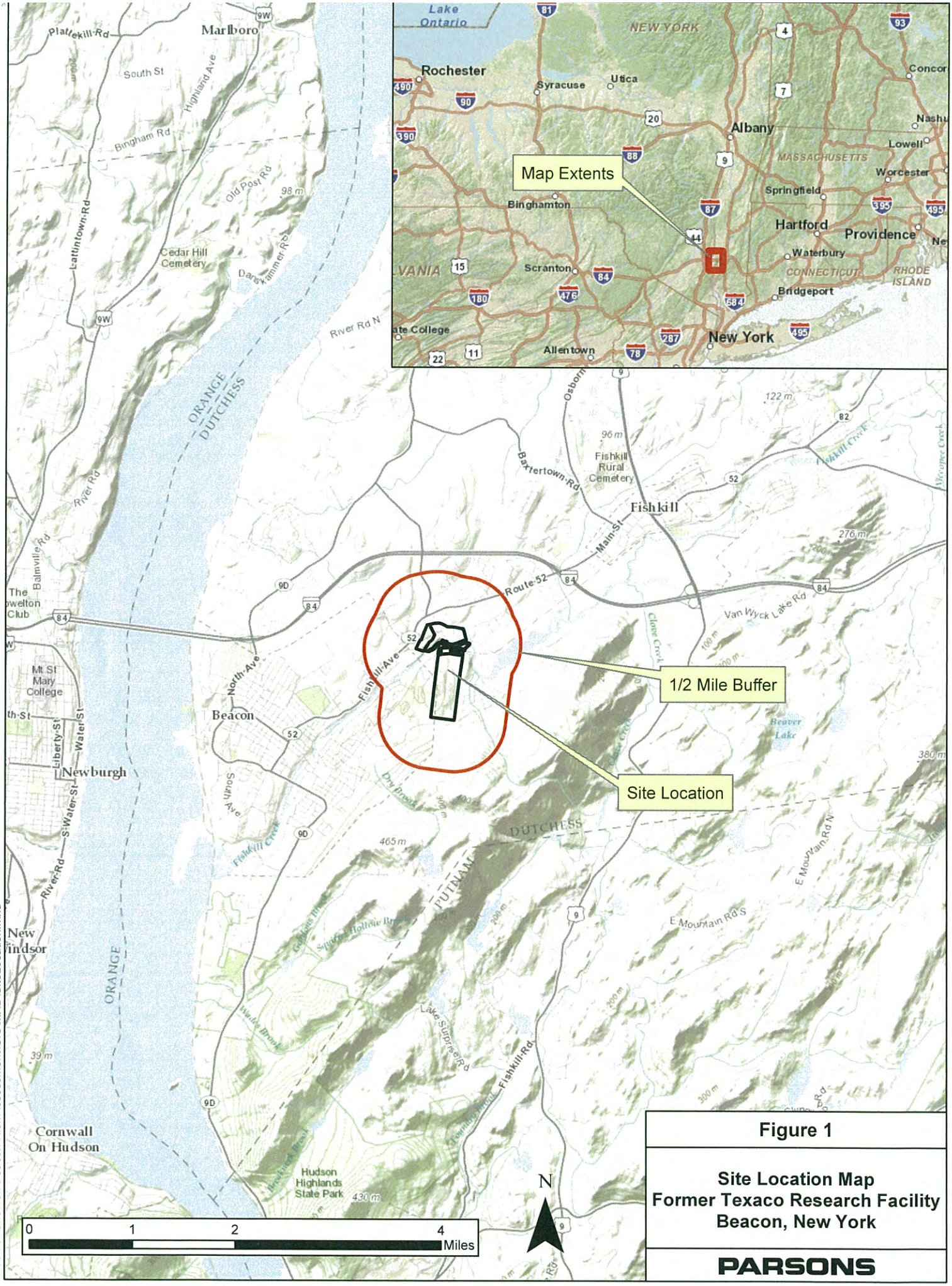
Sincerely,

Mark R. Hendrickson

Enclosures

cc (by e-mail):

Paul Patel – New York State Department of Environmental Conservation
Jennifer Dawson - New York State Department of Environmental Conservation
Kristin Kulow – New York State Department of Health
Amanda Bess – Chevron Energy Technology Company
Craig Butler – Parsons
Randy Palachek – Parsons



Path: J:\Chevron Beacon Risk Assessment\GIS\MXD\SiteLocation.mxd

Figure 1

Site Location Map
Former Texaco Research Facility
Beacon, New York

PARSONS

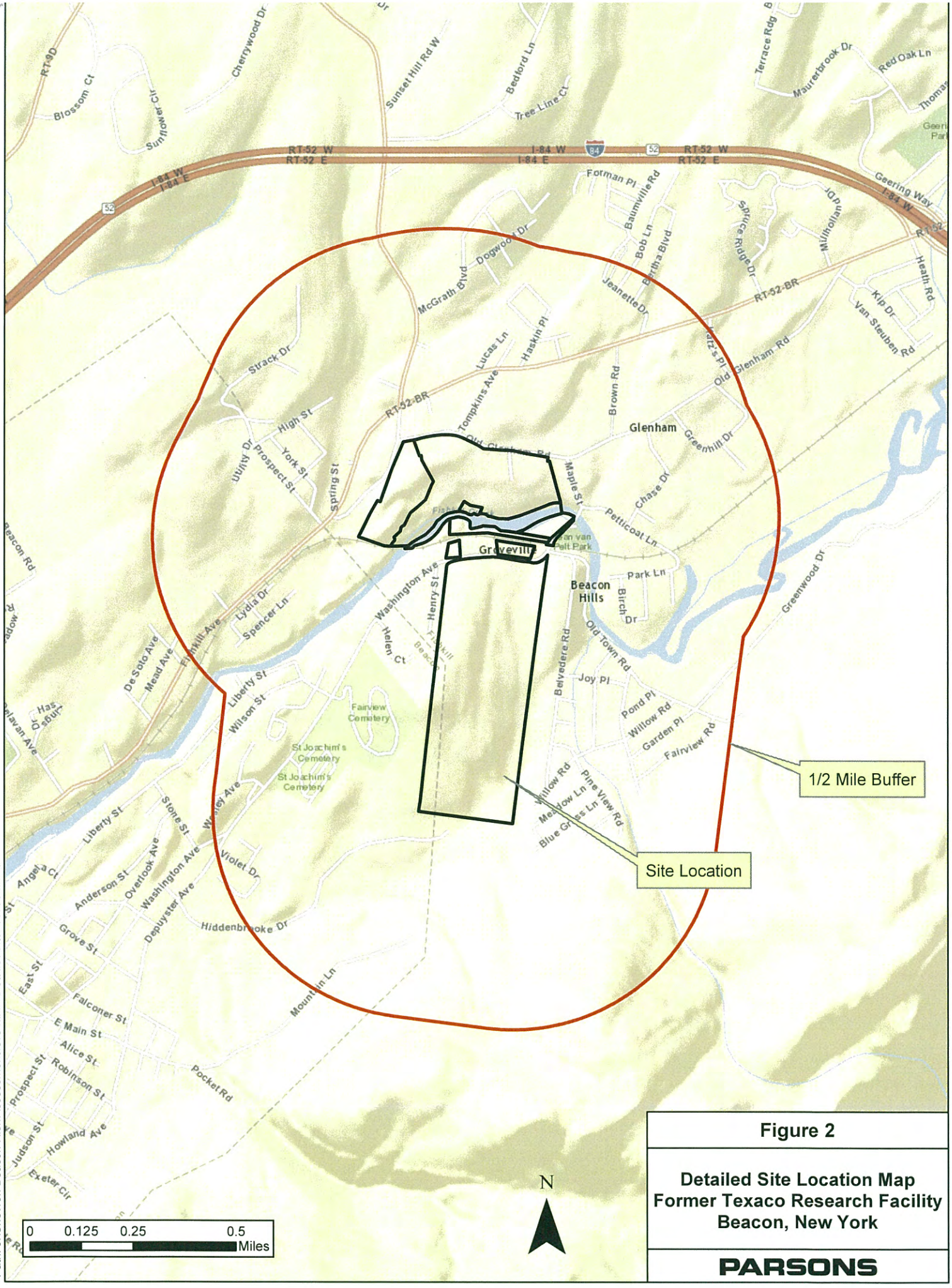


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Figure 2

Detailed Site Location Map
Former Texaco Research Facility
Beacon, New York

PARSONS

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Joe Martens
Commissioner

July 01, 2014

Mark R. Hendrickson
Chevron Environmental Management Company
4800 Fournace Place, Room E534C
Bellaire, TX 77401

Re: RCRA Remidial Investigation of former Texaco Research Center, Glenham
Town/City: Fishkill. County: Dutchess.

Dear Mark R. Hendrickson :

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project

Enclosed is a report of rare or state-listed animals and plants, and significant natural communities, which our databases indicate occur, or may occur, on your site or within one mile of your site.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Nicholas Conrad
Information Resources Coordinator
New York Natural Heritage Program

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 LUKER ROAD
CORTLAND, NY 13045
PHONE: (607)753-9334 FAX: (607)753-9699
URL: www.fws.gov/northeast/nyfo/es/section7.htm

Consultation Tracking Number: 05E1NY00-2014-SLI-0897 July 10, 2014
Project Name: Chevron Beacon

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This list can also be used to determine whether listed species may be present for projects without federal agency involvement. New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list.

Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list. If listed, proposed, or candidate species were identified as potentially occurring in the project area, coordination with our office is encouraged. Information on the steps involved with assessing potential impacts from projects can be found at: http://www.fws.gov/northeast/nyfo/es/section7.htm

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects

should follow the Services wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the ESA. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Chevron Beacon

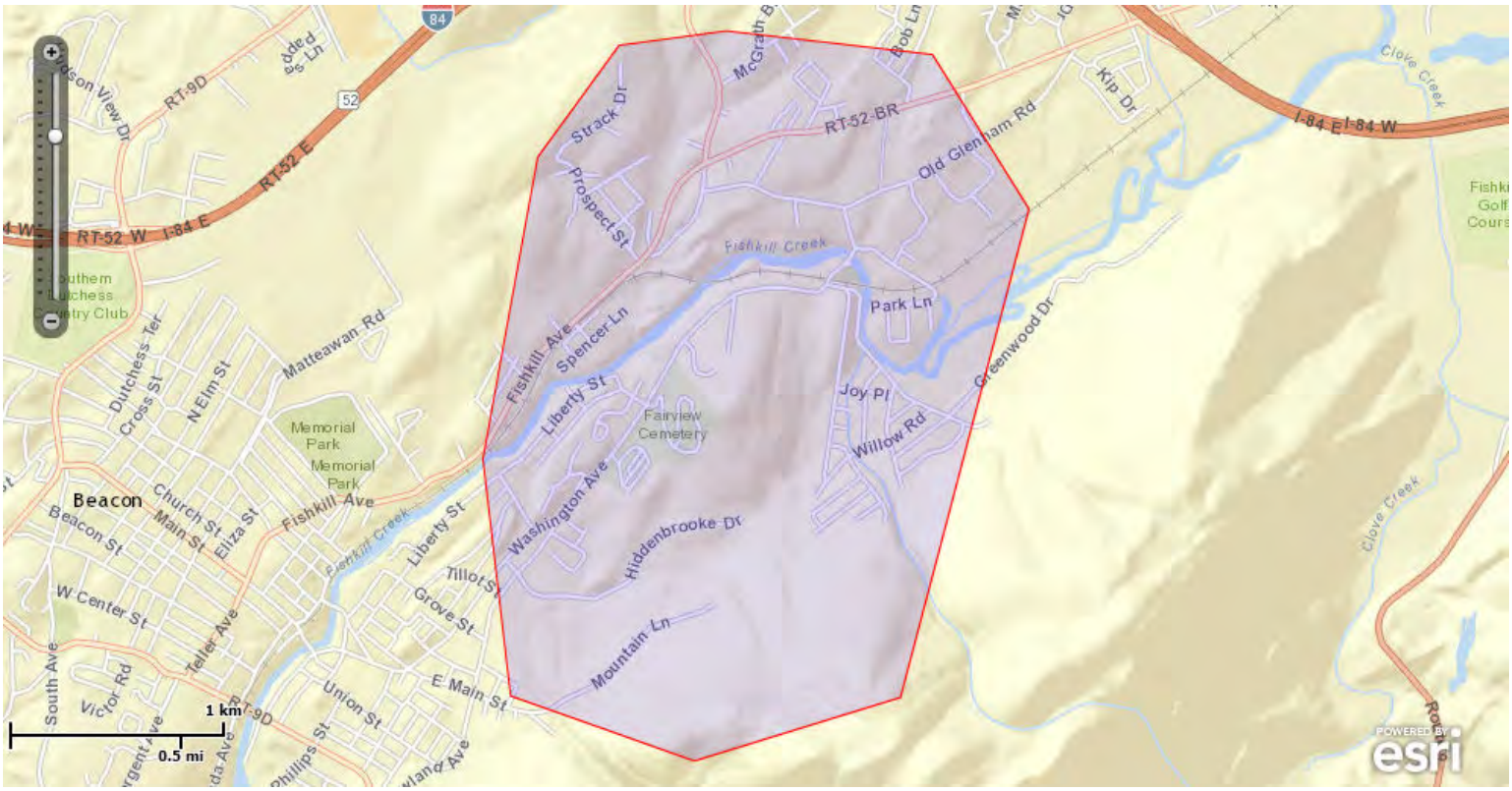
Official Species List

Provided by:

New York Ecological Services Field Office
3817 LUKER ROAD
CORTLAND, NY 13045
(607) 753-9334
http://www.fws.gov/northeast/nyfo/es/section7.htm

Consultation Tracking Number: 05E1NY00-2014-SLI-0897
Project Type: ** Other **
Project Description: The specific objective of the project is to perform a human health risk assessment (RA) and an ecological RA to determine the potential risk to human health and ecological receptors associated with exposure to chemicals in soil, groundwater, surface water, sediment, and air at the Chevron Beacon Site.

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-73.9229083 41.519164, -73.930161 41.4985351, -73.9417739 41.4958479, -73.952138 41.4985993, -73.953713 41.5086173, -73.9506316 41.5213489, -73.9460225 41.5260753, -73.9399715 41.5266857, -73.9283414 41.5256897, -73.9229083 41.519164)))

Project Counties: Dutchess, NY

Endangered Species Act Species List

There are a total of 5 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Clams	**Status**	**Has Critical Habitat**	**Condition(s)**
Dwarf wedgemussel *(Alasmidonta heterodon)* Population: Entire	Endangered		
Mammals			
Indiana bat *(Myotis sodalis)* Population: Entire	Endangered		
New England Cottontail rabbit *(Sylvilagus transitionalis)*	Candidate		
northern long-eared Bat *(Myotis septentrionalis)*	Proposed Endangered		
Reptiles			
Bog Turtle *(Clemmys muhlenbergii)* Population: northern	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

The following state-listed animals have been documented at your project site, or in its vicinity.

The following list includes animals that are listed by NYS as Endangered, Threatened, or Special Concern; and/or that are federally listed or are candidates for federal listing. The list may also include significant natural communities that can serve as habitat for Endangered or Threatened animals, and/or other rare animals and rare plants found at these habitats.

For information about potential impacts of your project on these populations, how to avoid, minimize, or mitigate any impacts, and any permit considerations, contact the Wildlife Manager or the Fisheries Manager at the NYSDEC Regional Office for the region where the project is located. A listing of Regional Offices is at http://www.dec.ny.gov/about/558.html.

The following species have been documented within 1 mile. Individual animals may travel 1 mile from documented locations.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Birds				
Bald Eagle *Nonbreeding*	*Haliaeetus leucocephalus*	Threatened		7810

The following species have been documented within 1.5 miles. Individual animals may travel 1.5 miles from documented locations.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Reptiles				
Timber Rattlesnake	*Crotalus horridus*	Threatened		2001

The following species have been documented within 1.5 miles. Individual animals may travel 2.5 miles from documented locations.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*FEDERAL LISTING*	
Mammals				
Indiana Bat *Maternity colony*	*Myotis sodalis*	Endangered	Endangered	11287

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the listed animals in New York, including habitat, biology, identification, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NYSDEC at http://www.dec.ny.gov/animals/7494.html.

Information about many of the rare plants and animals, and natural community types, in New York are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, and from NatureServe Explorer at http://www.natureserve.org/explorer.

The following significant natural communities have been documented in the vicinity of your project site.

We recommend that potential onsite and offsite impacts of the proposed project on these species or communities be addressed as part of any environmental assessment or review conducted as part of the planning, permitting and approval process, such as reviews conducted under SEQR. Field surveys of the project site may be necessary to determine the status of a species at the site, particularly for sites that are currently undeveloped and may still contain suitable habitat. Final requirements of the project to avoid, minimize, or mitigate potential impacts are determined by the lead permitting agency or the government body approving the project.

The following significant natural communities are considered significant from a statewide perspective by the NY Natural Heritage Program. They are either occurrences of a community type that is rare in the state, or a high quality example of a more common community type. By meeting specific, documented criteria, the NY Natural Heritage Program considers these community occurrences to have high ecological and conservation value.

COMMON NAME	*SCIENTIFIC NAME*	*NY STATE LISTING*	*HERITAGE CONSERVATION STATUS*

Wetland/Aquatic Communities

Floodplain Forest — High Quality Occurrence of Rare Community Type

Fishkill Creek: This is a mature forest of moderate size and in good condition with some exotic invasive species. The canopy has a good diversity of species and habitats. The landscape is impacted by the railroad and housing developments, but with an adjacent to a several thousand acre natural area. 1758

Upland/Terrestrial Communities

Pitch Pine-Oak-Heath Rocky Summit — High Quality Occurrence of Uncommon Community Type

Fishkill Ridge: This is a good example of dwarf woodland/tall shrubland variant with no exotic species and in an extensive forested landscape. 1336

Oak-Tulip Tree Forest — High Quality Occurrence of Rare Community Type

Breakneck Scofield Fishkill Ridge: This is a large and intact occurrence of this generally fragmented community located in an extensive forested landscape with natural gradients and processes intact. It is estimated that half of the occurrence is "A" grade and half is "B" grade based on 1998 surveys and interpretation of 2000 and 2004 orthoimages. 4933

Appalachian Oak-Hickory Forest — High Quality Occurrence

Breakneck Scofield Fishkill Ridge: This is a large maturing forest with a diversity of topographic positions and physiognomies and good species representation. It is part of a mosaic of several significant forest and summit communities within a landscape dominated by natural vegetation, but bordered by development on one side. 9210

This report only includes records from the NY Natural Heritage databases. For most sites, comprehensive field surveys have not been conducted, and we cannot provide a definitive statement as to the presence or absence of all rare or state-listed species. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other sources may be required to fully assess impacts on biological resources.

If any rare plants or animals are documented during site visits, we request that information on the observations be provided to the New York Natural Heritage Program so that we may update our database.

Information about many of the rare animals and plants in New York, including habitat, biology, identification, conservation, and

management, are available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org, from NatureServe Explorer at http://www.natureserve.org/explorer, and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

Information about many of the natural community types in New York, including identification, dominant and characteristic vegetation, distribution, conservation, and management, is available online in Natural Heritage's Conservation Guides at www.guides.nynhp.org. For descriptions of all community types, go to http://www.dec.ny.gov/animals/29384.html and click on Draft Ecological Communities of New York State.

ATTACHMENT 3

DETAILED SURFACE SOIL COPEC SCREENING TABLES BY OPERABLE UNIT

Surface Soil (0-2 ft bgs) Summary Statistics and Ecological Screening - Operational Units OU-1B, OU-1E, OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-1B	1,1,1-Trichloroethane	71-55-6	ug/kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	1,1,2-Trichloroethane	79-00-5	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	1,1-Dichloroethane	75-34-3	ug/kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	1,2,4-Trichlorobenzene	120-82-1	ug/Kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/Kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	1,2-Dichloroethane	107-06-2	ug/Kg	33	0.0%	1.06	2		not detected	0	10000
OU-1B	1,2-Dichloropropane	78-87-5	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	1,3-Dichlorobenzene	541-73-1	ug/Kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	1,4-Dichlorobenzene	106-46-7	ug/Kg	33	0.0%	42.45	49		not detected	0	20000
OU-1B	2,4,5-Trichlorophenol	95-95-4	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	2,4,6-Trichlorophenol	88-06-2	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	2,4-Dichlorophenol	120-83-2	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	2,4-Dimethylphenol	105-67-9	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	2,4-Dinitrophenol	51-28-5	ug/kg	33	0.0%	850.61	990		not detected	0	NS
OU-1B	2,4-Dinitrotoluene	121-14-2	ug/Kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	2,6-Dinitrotoluene	606-20-2	ug/Kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	2-Butanone (Methyl ethyl ketone)	78-93-3	ug/Kg	33	0.0%	5.03	6		not detected	0	100000
OU-1B	2-Chloronaphthalene	91-58-7	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	2-Chlorophenol (o-Chlorophenol)	95-57-8	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	2-Hexanone	591-78-6	ug/Kg	33	0.0%	3.76	5		not detected	0	NS
OU-1B	2-Methyl-naphthlalene	91-57-6	ug/kg	33	9.1%	53.61	220		No screening criteria	0	NS
OU-1B	2-Methylphenol (o-Cresol)	95-48-7	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	2-Nitrophenol (o-Nitrophenol)	88-75-5	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	3,3'-Dichlorobenzidine	91-94-1	ug/kg	33	0.0%	126.36	150		not detected	0	NS
OU-1B	3-Nitroaniline	99-09-2	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	**4,4'-DDD**	**72-54-8**	**ug/kg**	**33**	**21.2%**	**0.87**	**6.1**	**6.1%**	**Yes**	**2**	**3.3**
OU-1B	**4,4'-DDE**	**72-55-9**	**ug/kg**	**33**	**87.9%**	**13.38**	**59**	**60.6%**	**Yes**	**20**	**3.3**
OU-1B	**4,4'-DDT**	**50-29-3**	**ug/kg**	**33**	**84.8%**	**12.83**	**73**	**54.5%**	**Yes**	**18**	**3.3**
OU-1B	4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	ug/kg	33	0.0%	212.42	250		not detected	0	NS
OU-1B	4-Bromophenylphenylether	101-55-3	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	4-Chloroaniline	106-47-8	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	4-Methyl-2-pentanone	108-10-1	ug/Kg	33	0.0%	3.76	5		not detected	0	NS
OU-1B	4-Nitroaniline	100-01-6	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	4-Nitrophenol	100-02-7	ug/kg	33	0.0%	212.42	250		not detected	0	NS
OU-1B	Acenaphthene	83-32-9	ug/kg	33	15.2%	61.03	420		No	0	20000
OU-1B	Acenaphthylene	208-96-8	ug/kg	33	30.3%	80.97	430		No screening criteria	0	NS
OU-1B	Acetone	67-64-1	ug/kg	33	42.4%	13.88	74		No	0	2200
OU-1B	Aldrin	309-00-2	ug/kg	33	0.0%	0.50	0.98		not detected	0	140
OU-1B	Alpha-BHC	319-84-6	ug/kg	33	0.0%	0.26	0.5		not detected	0	40
OU-1B	alpha-Chlordane	5103-71-9	ug/kg	33	15.2%	0.34	1.7		No screening criteria	0	NS
OU-1B	Aluminum	7429-90-5	mg/kg	33	100.0%	20154.24	30000		No screening criteria	0	NS
OU-1B	Anthracene	120-12-7	ug/kg	33	33.3%	119.30	1100		No screening criteria	0	NS
OU-1B	Antimony	7440-36-0	mg/Kg	33	9.1%	1.29	2.34		No screening criteria	0	NS
OU-1B	Aroclor 1016	12674-11-2	ug/kg	33	0.0%	4.21	4.89		not detected	0	1000
OU-1B	Aroclor 1221	11104-28-2	ug/kg	33	0.0%	17.85	20.7		not detected	0	1000
OU-1B	Aroclor 1232	11141-16-5	ug/kg	33	0.0%	6.76	7.85		not detected	0	1000
OU-1B	Aroclor 1242	53469-21-9	ug/kg	33	0.0%	9.82	11.4		not detected	0	1000
OU-1B	Aroclor 1248	12672-29-6	ug/kg	33	0.0%	7.14	8.3		not detected	0	1000
OU-1B	Aroclor 1254	11097-69-1	ug/kg	33	0.0%	6.89	8		not detected	0	1000
OU-1B	Aroclor 1260	11096-82-5	ug/kg	33	15.2%	11.15	40.6		No	0	1000
OU-1B	**Arsenic**	**7440-38-2**	**mg/Kg**	**33**	**100.0%**	**10.12**	**34**	**18.2%**	**Yes**	**6**	**13**
OU-1B	Barium	7440-39-3	mg/kg	33	100.0%	99.15	315		No	0	433
OU-1B	Benzene	71-43-2	ug/kg	33	3.0%	0.64	0.8		not detected	0	70000
OU-1B	Benzo(a)anthracene	56-55-3	ug/kg	33	63.6%	319.12	2300		No screening criteria	0	NS
OU-1B	Benzo(a)Pyrene	50-32-8	ug/kg	33	66.7%	324.94	2200		No	0	2600
OU-1B	Benzo(b)Fluoranthene	205-99-2	ug/kg	33	72.7%	424.06	3200		No screening criteria	0	NS
OU-1B	Benzo(g,h,i)perylene	191-24-2	ug/kg	33	60.6%	238.15	1800		No screening criteria	0	NS
OU-1B	Benzo(k)Fluoranthene	207-08-9	ug/kg	33	54.5%	178.85	1100		No screening criteria	0	NS
OU-1B	Beryllium	7440-41-7	mg/Kg	33	100.0%	0.84	1.22		No	0	10
OU-1B	Beta-BHC	319-85-7	ug/kg	33	3.0%	0.29	0.56		not detected	0	600
OU-1B	bis(2-Chloroethoxy)methane	111-91-1	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	bis(2-Chloroethyl) ether	111-44-4	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	Bis(2-chloroisopropyl) ether	108-60-1	ug/Kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	33	63.6%	1049.67	4600		No screening criteria	0	NS
OU-1B	Bromodichloromethane	75-27-4	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Bromoform	75-25-2	ug/kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Bromomethane (Methyl bromide)	74-83-9	ug/Kg	33	0.0%	2.42	3		not detected	0	NS
OU-1B	Butylbenzylphthalate	85-68-7	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	Cadmium	7440-43-9	mg/kg	33	21.2%	0.33	1.7		not detected	0	4
OU-1B	Calcium	7440-70-2	mg/kg	33	100.0%	1263.18	5450		No screening criteria	0	NS
OU-1B	Carbazole	86-74-8	ug/kg	33	15.2%	79.21	500		No screening criteria	0	NS
OU-1B	Carbon Disulfide	75-15-0	ug/kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Carbon Tetrachloride	56-23-5	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Chlordane, gamma	5103-74-2	ug/kg	33	6.1%	0.34	2		No screening criteria	0	NS
OU-1B	Chlorobenzene	108-90-7	ug/kg	33	0.0%	1.06	2		not detected	0	40000
OU-1B	Chloroethane	75-00-3	ug/Kg	33	0.0%	2.42	3		not detected	0	NS
OU-1B	Chloroform	67-66-3	ug/Kg	33	15.2%	1.18	3		No	0	12000
OU-1B	Chloromethane (Methyl chloride)	74-87-3	ug/Kg	33	0.0%	2.42	3		not detected	0	NS
OU-1B	**Chromium**	**7440-47-3**	**mg/Kg**	**33**	**100.0%**	**21.90**	**61.7**	**6.1%**	**Yes**	**2**	**41**
OU-1B	Chrysene	218-01-9	ug/kg	33	69.7%	350.55	2400		No screening criteria	0	NS
OU-1B	cis-1,2-Dichloroethene	156-59-2	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	cis-1,3-Dichloropropene	10061-01-5	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Cobalt	7440-48-4	mg/kg	33	100.0%	9.38	13.4		No screening criteria	0	NS
OU-1B	**Copper**	**7440-50-8**	**mg/kg**	**33**	**100.0%**	**32.81**	**112**	**21.2%**	**Yes**	**7**	**50**
OU-1B	Delta-BHC	319-86-8	ug/kg	33	0.0%	0.47	0.92		not detected	0	40
OU-1B	Dibenz(a,h)anthracene	53-70-3	ug/kg	33	33.3%	76.55	390		No screening criteria	0	NS
OU-1B	Dibenzofuran	132-64-9	ug/kg	33	12.1%	60.12	360		No screening criteria	0	NS
OU-1B	Dibromochloromethane	124-48-1	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Dieldrin	60-57-1	ug/kg	33	15.2%	0.74	4.1		No	0	6
OU-1B	Diethylphthalate	84-66-2	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	Diisopropyl ether	108-20-3	ug/kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Dimethylphthalate	131-11-3	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	Di-n-butylphthalate	84-74-2	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	Di-n-octylphthalate	117-84-0	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	Endosulfan I (alpha-Endosulfan)	959-98-8	ug/kg	33	0.0%	0.33	0.65		not detected	0	NS
OU-1B	Endosulfan II	33213-65-9	ug/kg	33	0.0%	0.50	0.98		not detected	0	NS
OU-1B	Endosulfan Sulfate	1031-07-8	ug/kg	33	3.0%	0.52	1.1		No screening criteria	0	NS
OU-1B	Endrin	72-20-8	ug/kg	33	3.0%	0.51	0.98		not detected	0	14
OU-1B	Endrin Aldehyde	7421-93-4	ug/kg	33	6.1%	0.56	2.1		No screening criteria	0	NS

Surface Soil (0-2 ft bgs) Summary Statistics and Ecological Screening - Operational Units OU-1B, OU-1E, OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-1B	Endrin Ketone	53494-70-5	ug/kg	33	3.0%	0.51	0.98		not detected	0	NS
OU-1B	Ethylbenzene	100-41-4	ug/kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Ethyl-t-butylether	637-92-3	ug/kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Fluoranthene	206-44-0	ug/kg	33	69.7%	642.73	5200		No screening criteria	0	NS
OU-1B	Fluorene	86-73-7	ug/kg	33	15.2%	66.79	460		No	0	30000
OU-1B	Gamma-BHC (Lindane)	58-89-9	ug/kg	33	0.0%	0.26	0.5		not detected	0	6000
OU-1B	Heptachlor	76-44-8	ug/kg	33	0.0%	0.26	0.5		not detected	0	140
OU-1B	Heptachlor Epoxide	1024-57-3	ug/kg	33	6.1%	0.27	0.61		No screening criteria	0	NS
OU-1B	Hexachlorobenzene	118-74-1	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	Hexachlorobutadiene	87-68-3	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	Hexachlorocyclopentadiene	77-47-4	ug/kg	33	0.0%	212.42	250		not detected	0	NS
OU-1B	Hexachloroethane	67-72-1	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	33	57.6%	208.36	1500		No screening criteria	0	NS
OU-1B	IRON	7439-89-6	mg/kg	33	100.0%	28236.36	95300		No screening criteria	0	NS
OU-1B	Isophorone	78-59-1	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	**Lead**	**7439-92-1**	**mg/Kg**	**33**	**100.0%**	**137.21**	**564**	**51.5%**	**Yes**	**17**	**63**
OU-1B	Magnesium	7439-95-4	mg/kg	33	100.0%	3893.94	5880		No screening criteria	0	NS
OU-1B	**Manganese**	**7439-96-5**	**mg/kg**	**33**	**100.0%**	**664.48**	**1960**	**3.0%**	**Yes**	**1**	**1600**
OU-1B	**Mercury**	**7439-97-6**	**mg/Kg**	**33**	**100.0%**	**0.21**	**0.66**	**48.5%**	**Yes**	**16**	**0.18**
OU-1B	Methoxychlor	72-43-5	ug/kg	33	0.0%	2.58	5		not detected	0	NS
OU-1B	Methylene chloride (Dichloromethane)	75-09-2	ug/Kg	33	24.2%	18.12	92		No	0	12000
OU-1B	Methyl-t-butyl ether	1634-04-4	ug/Kg	33	0.0%	0.63	0.8		not detected	0	NS
OU-1B	Moisture	MOISTURE	%	33	100.0%	21.19	32.5		No screening criteria	0	NS
OU-1B	Naphthalene	91-20-3	ug/kg	33	9.1%	69.24	500		No screening criteria	0	NS
OU-1B	**Nickel**	**7440-02-0**	**mg/Kg**	**33**	**100.0%**	**22.05**	**89.9**	**6.1%**	**Yes**	**2**	**30**
OU-1B	Nitrobenzene	98-95-3	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	N-Nitrosodi-n-propylamine	621-64-7	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/kg	33	0.0%	42.45	49		not detected	0	NS
OU-1B	p-Chloro-m-cresol	59-50-7	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	p-Cresol	106-44-5	ug/kg	33	0.0%	85.06	99		not detected	0	NS
OU-1B	Pentachlorophenol	87-86-5	ug/kg	33	3.0%	218.79	440		No	0	800
OU-1B	Phenanthrene	85-01-8	ug/kg	33	63.6%	504.55	5100		No screening criteria	0	NS
OU-1B	Phenol	108-95-2	ug/kg	33	0.0%	42.45	49		not detected	0	30000
OU-1B	Potassium	9/7/7440	mg/kg	33	100.0%	1078.00	1770		No screening criteria	0	NS
OU-1B	Pyrene	76165-23-6	ug/kg	33	72.7%	652.97	5000		No screening criteria	0	NS
OU-1B	**Selenium**	**7782-49-2**	**mg/Kg**	**33**	**18.2%**	**1.38**	**5.04**	**3.0%**	**Yes**	**1**	**3.9**
OU-1B	**Silver**	**7440-22-4**	**mg/Kg**	**33**	**72.7%**	**0.38**	**2.93**	**3.0%**	**Yes**	**1**	**2**
OU-1B	Sodium	7440-23-5	mg/kg	33	18.2%	49.95	86.5		No screening criteria	0	NS
OU-1B	Styrene	100-42-5	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Tert-amyl methyl ether	994-05-8	ug/kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Tertiary Butyl Alcohol	75-65-0	ug/kg	33	0.0%	25.03	31		not detected	0	NS
OU-1B	Tetrachloroethene	127-18-4	ug/Kg	33	0.0%	1.06	2		not detected	0	2000
OU-1B	Thallium	7440-28-0	mg/Kg	33	57.6%	2.21	8.19		No screening criteria	0	NS
OU-1B	Toluene	108-88-3	ug/kg	33	0.0%	1.06	2		not detected	0	36000
OU-1B	Toxaphene	8001-35-2	ug/kg	33	0.0%	16.67	33		not detected	0	NS
OU-1B	trans-1,2-Dichloroethene	156-60-5	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	trans-1,3-Dichloropropene	10061-02-6	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Trichloroethene (Trichloroethylene)	79-01-6	ug/Kg	33	0.0%	1.06	2		not detected	0	2000
OU-1B	Vanadium	7440-62-2	mg/kg	33	100.0%	49.58	135		No screening criteria	0	NS
OU-1B	Vinyl chloride (Chloroethene)	75-01-4	ug/Kg	33	0.0%	1.06	2		not detected	0	NS
OU-1B	Xylenes, Total	1330-20-7	ug/kg	33	0.0%	1.06	2		not detected	0	260
OU-1B	**Zinc**	**7440-66-6**	**mg/Kg**	**33**	**100.0%**	**131.66**	**804**	**30.3%**	**Yes**	**10**	**109**
OU-1E	1,1,1,2-TETRACHLOROETHANE	630-20-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1,1-Trichloroethane	71-55-6	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1,2-Trichloroethane	79-00-5	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1-Dichloroethane	75-34-3	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1-DICHLOROPROPENE	563-58-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2,3-Trichlorobenzene	87-61-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2,3-TRICHLOROPROPANE	96-18-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2,4-Trichlorobenzene	120-82-1	ug/Kg	62	0.0%	140.01	500		not detected	0	NS
OU-1E	1,2,4-Trimethylbenzene	95-63-6	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2-Dibromoethane	106-93-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/Kg	62	1.6%	135.97	500		not detected	0	NS
OU-1E	1,2-Dichloroethane	107-06-2	ug/Kg	41	0.0%	1.23	1.5		not detected	0	10000
OU-1E	1,2-Dichloropropane	78-87-5	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,3,5-Trimethylbenzene	108-67-8	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,3-Dichlorobenzene	541-73-1	ug/Kg	62	0.0%	140.01	500		not detected	0	NS
OU-1E	1,3-DICHLOROPROPANE	142-28-9	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,4-Dichlorobenzene	106-46-7	ug/Kg	62	0.0%	140.01	500		not detected	0	20000
OU-1E	2,4-Dinitrotoluene	121-14-2	ug/Kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	2,6-Dinitrotoluene	606-20-2	ug/Kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	2-Chloronaphthalene	91-58-7	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	2-Methyl-naphthlalene	91-57-6	ug/kg	21	4.8%	395.57	500		not detected	0	NS
OU-1E	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/kg	21	0.0%	1023.81	1200		not detected	0	NS
OU-1E	3,3'-Dichlorobenzidine	91-94-1	ug/kg	21	0.0%	525.71	840		not detected	0	NS
OU-1E	3-Nitroaniline	99-09-2	ug/kg	21	0.0%	1023.81	1200		not detected	0	NS
OU-1E	4-Bromophenylphenylether	101-55-3	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	4-Chloroaniline	106-47-8	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	4-Isopropyltoluene	99-87-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	4-Nitroaniline	100-01-6	ug/kg	21	0.0%	1023.81	1200		not detected	0	NS
OU-1E	Acenaphthene	83-32-9	ug/kg	21	9.5%	385.10	500		not detected	0	20000
OU-1E	Acenaphthylene	208-96-8	ug/kg	21	4.8%	403.81	500		not detected	0	NS
OU-1E	Anthracene	120-12-7	ug/kg	21	23.8%	384.14	950		No screening criteria	0	NS
OU-1E	Benzene	71-43-2	ug/kg	41	0.0%	1.23	1.5		not detected	0	70000
OU-1E	Benzo(a)anthracene	56-55-3	ug/kg	21	23.8%	639.52	3400		No screening criteria	0	NS
OU-1E	**Benzo(a)Pyrene**	**50-32-8**	**ug/kg**	**21**	**52.4%**	**540.05**	**3000**	**4.8%**	**Yes**	**1**	**2600**
OU-1E	Benzo(b)Fluoranthene	205-99-2	ug/kg	21	57.1%	690.81	4100		No screening criteria	0	NS
OU-1E	Benzo(g,h,i)perylene	191-24-2	ug/kg	21	33.3%	390.33	1100		No screening criteria	0	NS
OU-1E	Benzo(k)Fluoranthene	207-08-9	ug/kg	21	47.6%	382.57	1500		No screening criteria	0	NS
OU-1E	BENZYL ALCOHOL	100-51-6	ug/Kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	bis(2-Chloroethoxy)methane	111-91-1	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	bis(2-Chloroethyl) ether	111-44-4	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Bis(2-chloroisopropyl) ether	108-60-1	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	21	23.8%	368.38	1300		not detected	0	NS
OU-1E	BROMOBENZENE	108-86-1	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	BROMOCHLOROMETHANE	74-97-5	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Bromodichloromethane	75-27-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Bromoform	75-25-2	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Bromomethane (Methyl bromide)	74-83-9	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS

Surface Soil (0-2 ft bgs) Summary Statistics and Ecological Screening - Operational Units OU-1B, OU-1E, OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-1E	Butylbenzylphthalate	85-68-7	ug/kg	21	4.8%	393.33	500		not detected	0	NS
OU-1E	Carbon Tetrachloride	56-23-5	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Chlorobenzene	108-90-7	ug/kg	41	0.0%	1.23	1.5		not detected	0	40000
OU-1E	Chloroethane	75-00-3	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Chloroform	67-66-3	ug/Kg	41	14.6%	1.20	1.5		not detected	0	12000
OU-1E	Chloromethane (Methyl chloride)	74-87-3	ug/Kg	41	7.3%	1.28	3.2		No screening criteria	0	NS
OU-1E	Chrysene	218-01-9	ug/kg	21	52.4%	555.05	3400		No screening criteria	0	NS
OU-1E	cis-1,2-Dichloroethene	156-59-2	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	cis-1,3-Dichloropropene	10061-01-5	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Dibenz(a,h)anthracene	53-70-3	ug/kg	21	19.0%	366.86	500		not detected	0	NS
OU-1E	Dibenzofuran	132-64-9	ug/kg	21	4.8%	400.00	500		not detected	0	NS
OU-1E	Dibromochloromethane	124-48-1	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Dibromomethane (Methylene bromide)	74-95-3	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Dichlorodifluoromethane (Freon 12)	75-71-8	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Diethylphthalate	84-66-2	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Dimethyl phthalate	64441-70-9	ug/Kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Di-n-butylphthalate	84-74-2	ug/kg	21	4.8%	394.76	500		not detected	0	NS
OU-1E	Di-n-octylphthalate	117-84-0	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Ethylbenzene	100-41-4	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Fluoranthene	206-44-0	ug/kg	21	66.7%	832.86	7100		No screening criteria	0	NS
OU-1E	Fluorene	86-73-7	ug/kg	21	14.3%	375.43	500		not detected	0	30000
OU-1E	Hexachlorobenzene	118-74-1	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Hexachlorobutadiene	87-68-3	ug/kg	62	0.0%	140.01	500		not detected	0	NS
OU-1E	Hexachlorocyclopentadiene	77-47-4	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Hexachloroethane	67-72-1	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	21	38.1%	392.19	1400		No screening criteria	0	NS
OU-1E	Isophorone	78-59-1	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Isopropylbenzene	98-82-8	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Lead	7439-92-1	mg/Kg	31	83.9%	22.18	53.6		No	0	63
OU-1E	m+p-Xylene	179601-23-1	ug/kg	41	4.9%	1.25	1.8		No screening criteria	0	NS
OU-1E	Methylene chloride (Dichloromethane)	75-09-2	ug/Kg	41	22.0%	1.39	2.4		not detected	0	12000
OU-1E	Naphthalene	91-20-3	ug/kg	21	4.8%	397.14	500		not detected	0	NS
OU-1E	n-Butylbenzene	104-51-8	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Nitrobenzene	98-95-3	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	N-Nitrosodimethylamine	62-75-9	ug/Kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	N-Nitrosodi-n-propylamine	621-64-7	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	n-Propylbenzene	103-65-1	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	o-CHLOROTOLUENE	95-49-8	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	o-Xylene	95-47-6	ug/Kg	41	2.4%	1.22	1.5		not detected	0	NS
OU-1E	p-CHLOROTOLUENE	106-43-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Phenanthrene	85-01-8	ug/kg	21	52.4%	574.19	4600		No screening criteria	0	NS
OU-1E	Pyrene	76165-23-6	ug/kg	21	61.9%	896.00	6700		No screening criteria	0	NS
OU-1E	sec-Butylbenzene	135-98-8	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	sec-DICHLOROPROPANE	594-20-7	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Styrene	100-42-5	ug/Kg	41	2.4%	1.22	1.5		not detected	0	NS
OU-1E	t-Butylbenzene	98-06-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Tetrachloroethene	127-18-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	2000
OU-1E	Toluene	108-88-3	ug/Kg	41	17.1%	1.37	3.7		No	0	36000
OU-1E	trans-1,2-Dichloroethene	156-60-5	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	trans-1,3-Dichloropropene	10061-02-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Trichloroethene (Trichloroethylene)	79-01-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	2000
OU-1E	Trichlorofluoromethane (Freon 11)	75-69-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Vinyl chloride (Chloroethene)	75-01-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-4	1,1,1-Trichloroethane	71-55-6	ug/kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	1,1,2-Trichloroethane	79-00-5	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	1,1-Dichloroethane	75-34-3	ug/kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	1,2,4-Trichlorobenzene	120-82-1	ug/Kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/Kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	1,2-Dichloroethane	107-06-2	ug/Kg	64	0.0%	8.33	130		not detected	0	10000
OU-4	1,2-Dichloropropane	78-87-5	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	1,3-Dichlorobenzene	541-73-1	ug/Kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	1,4-Dichlorobenzene	106-46-7	ug/Kg	64	0.0%	27.02	210		not detected	0	20000
OU-4	2,4,5-Trichlorophenol	95-95-4	ug/kg	64	0.0%	29.94	210		not detected	0	NS
OU-4	2,4,6-Trichlorophenol	88-06-2	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	2,4-Dichlorophenol	120-83-2	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	2,4-Dimethylphenol	105-67-9	ug/kg	64	0.0%	29.94	210		not detected	0	NS
OU-4	2,4-Dinitrophenol	51-28-5	ug/kg	64	0.0%	492.03	3800		not detected	0	NS
OU-4	2,4-Dinitrotoluene	121-14-2	ug/Kg	64	0.0%	102.02	830		not detected	0	NS
OU-4	2,6-Dinitrotoluene	606-20-2	ug/Kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	2-Butanone (Methyl ethyl ketone)	78-93-3	ug/Kg	64	3.1%	34.31	530		not detected	0	100000
OU-4	2-Chloronaphthalene	91-58-7	ug/kg	64	0.0%	13.00	88		not detected	0	NS
OU-4	2-Chlorophenol (o-Chlorophenol)	95-57-8	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	2-Hexanone	591-78-6	ug/Kg	64	0.0%	25.63	400		not detected	0	NS
OU-4	2-Methyl-naphthlalene	91-57-6	ug/kg	64	70.3%	27.59	430		No screening criteria	0	NS
OU-4	2-Methylphenol (o-Cresol)	95-48-7	ug/kg	64	0.0%	29.94	210		not detected	0	NS
OU-4	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	2-Nitrophenol (o-Nitrophenol)	88-75-5	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	3,3'-Dichlorobenzidine	91-94-1	ug/kg	64	0.0%	153.59	1300		not detected	0	NS
OU-4	3-Nitroaniline	99-09-2	ug/kg	64	0.0%	102.02	830		not detected	0	NS
OU-4	4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	ug/kg	64	0.0%	255.31	2100		not detected	0	NS
OU-4	4-Bromophenylphenylether	101-55-3	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	4-Chloroaniline	106-47-8	ug/kg	64	0.0%	29.94	210		not detected	0	NS
OU-4	4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	4-Methyl-2-pentanone	108-10-1	ug/Kg	64	0.0%	25.63	400		not detected	0	NS
OU-4	4-Nitroaniline	100-01-6	ug/kg	64	0.0%	102.02	830		not detected	0	NS
OU-4	4-Nitrophenol	100-02-7	ug/kg	64	0.0%	255.31	2100		not detected	0	NS
OU-4	Acenaphthene	83-32-9	ug/kg	64	12.5%	13.27	130		No	0	20000
OU-4	Acenaphthylene	208-96-8	ug/kg	64	57.8%	20.88	250		No screening criteria	0	NS
OU-4	Acetone	67-64-1	ug/kg	64	43.8%	77.50	930		not detected	0	2200
OU-4	Aluminum	7429-90-5	mg/kg	64	100.0%	19518.44	40600		No screening criteria	0	NS
OU-4	Anthracene	120-12-7	ug/kg	64	67.2%	34.17	490		No screening criteria	0	NS
OU-4	Antimony	7440-36-0	mg/Kg	64	23.4%	1.00	3.44		No screening criteria	0	NS
OU-4	**Arsenic**	**7440-38-2**	**mg/Kg**	**64**	**100.0%**	**7.09**	**21**	**3.1%**	**Yes**	**2**	**13**
OU-4	Barium	7440-39-3	mg/kg	64	100.0%	84.72	200		No	0	433
OU-4	Benzene	71-43-2	ug/kg	64	0.0%	4.25	67		not detected	0	70000
OU-4	Benzo(a)anthracene	56-55-3	ug/kg	64	84.4%	91.70	1500		No screening criteria	0	NS
OU-4	Benzo(a)Pyrene	50-32-8	ug/kg	64	82.8%	86.88	1300		No	0	2600
OU-4	Benzo(b)Fluoranthene	205-99-2	ug/kg	64	84.4%	105.30	1400		No screening criteria	0	NS
OU-4	Benzo(g,h,i)perylene	191-24-2	ug/kg	64	85.9%	60.11	700		No screening criteria	0	NS
OU-4	Benzo(k)Fluoranthene	207-08-9	ug/kg	64	78.1%	49.64	650		No screening criteria	0	NS

Surface Soil (0-2 ft bgs) Summary Statistics and Ecological Screening - Operational Units OU-1B, OU-1E, OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-4	Beryllium	7440-41-7	mg/Kg	64	98.4%	0.93	2.43		No	0	10
OU-4	bis(2-Chloroethoxy)methane	111-91-1	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	bis(2-Chloroethyl) ether	111-44-4	ug/kg	64	6.3%	30.94	210		not detected	0	NS
OU-4	Bis(2-chloroisopropyl) ether	108-60-1	ug/Kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	64	62.5%	365.95	2400		No screening criteria	0	NS
OU-4	Bromodichloromethane	75-27-4	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Bromoform	75-25-2	ug/kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Bromomethane (Methyl bromide)	74-83-9	ug/Kg	64	0.0%	16.97	270		not detected	0	NS
OU-4	Butylbenzylphthalate	85-68-7	ug/kg	64	0.0%	102.02	830		not detected	0	NS
OU-4	Cadmium	7440-43-9	mg/kg	64	84.4%	0.45	3.36		No	0	4
OU-4	Calcium	7440-70-2	mg/kg	64	100.0%	8822.61	139000		No screening criteria	0	NS
OU-4	Carbazole	86-74-8	ug/kg	64	7.8%	31.50	210		not detected	0	NS
OU-4	Carbon Disulfide	75-15-0	ug/kg	64	4.7%	8.34	130		not detected	0	NS
OU-4	Carbon Tetrachloride	56-23-5	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Chloride	16887-00-6	mg/kg	63	19.0%	7.92	21.6		No screening criteria	0	NS
OU-4	Chlorobenzene	108-90-7	ug/kg	64	4.7%	8.41	130		not detected	0	40000
OU-4	Chloroethane	75-00-3	ug/Kg	64	0.0%	16.97	270		not detected	0	NS
OU-4	Chloroform	67-66-3	ug/Kg	64	7.8%	8.41	130		not detected	0	12000
OU-4	Chloromethane (Methyl chloride)	74-87-3	ug/Kg	64	0.0%	16.97	270		not detected	0	NS
OU-4	**Chromium**	**7440-47-3**	**mg/Kg**	**64**	**100.0%**	**115.04**	**5410**	**4.7%**	**Yes**	**3**	**41**
OU-4	Chrysene	218-01-9	ug/kg	64	84.4%	99.89	1400		No screening criteria	0	NS
OU-4	cis-1,2-Dichloroethene	156-59-2	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	cis-1,3-Dichloropropene	10061-01-5	ug/kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Cobalt	7440-48-4	mg/kg	64	100.0%	11.88	25.9		No screening criteria	0	NS
OU-4	**Copper**	**7440-50-8**	**mg/kg**	**64**	**100.0%**	**54.01**	**1340**	**6.3%**	**Yes**	**4**	**50**
OU-4	Dibenz(a,h)anthracene	53-70-3	ug/kg	64	46.9%	18.75	240		No screening criteria	0	NS
OU-4	Dibenzofuran	132-64-9	ug/kg	64	7.8%	31.45	210		not detected	0	NS
OU-4	Dibromochloromethane	124-48-1	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Diethylphthalate	84-66-2	ug/kg	64	0.0%	102.02	830		not detected	0	NS
OU-4	Diisopropyl ether	108-20-3	ug/kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Dimethylphthalate	131-11-3	ug/kg	64	0.0%	102.02	830		not detected	0	NS
OU-4	Di-n-butylphthalate	84-74-2	ug/kg	64	0.0%	102.02	830		not detected	0	NS
OU-4	Di-n-octylphthalate	117-84-0	ug/kg	64	0.0%	102.02	830		not detected	0	NS
OU-4	Ethylbenzene	100-41-4	ug/kg	64	1.6%	8.34	130		not detected	0	NS
OU-4	Ethyl-t-butylether	637-92-3	ug/kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Fluoranthene	206-44-0	ug/kg	64	85.9%	181.81	2800		No screening criteria	0	NS
OU-4	Fluorene	86-73-7	ug/kg	64	31.3%	16.55	160		No	0	30000
OU-4	Hexachlorobenzene	118-74-1	ug/kg	64	0.0%	7.73	42		not detected	0	NS
OU-4	Hexachlorobutadiene	87-68-3	ug/kg	64	0.0%	29.94	210		not detected	0	NS
OU-4	Hexachlorocyclopentadiene	77-47-4	ug/kg	64	0.0%	255.31	2100		not detected	0	NS
OU-4	Hexachloroethane	67-72-1	ug/kg	64	0.0%	51.06	420		not detected	0	NS
OU-4	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	64	76.6%	53.64	670		No screening criteria	0	NS
OU-4	IRON	7439-89-6	mg/kg	64	100.0%	31287.50	60000		No screening criteria	0	NS
OU-4	Isophorone	78-59-1	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	**Lead**	**7439-92-1**	**mg/Kg**	**64**	**100.0%**	**47.34**	**514**	**10.9%**	**Yes**	**7**	**63**
OU-4	Magnesium	7439-95-4	mg/kg	64	100.0%	9315.00	78900		No screening criteria	0	NS
OU-4	**Manganese**	**7439-96-5**	**mg/kg**	**64**	**100.0%**	**680.84**	**1760**	**1.6%**	**Yes**	**1**	**1600**
OU-4	**Mercury**	**7439-97-6**	**mg/Kg**	**64**	**98.4%**	**0.32**	**1.75**	**48.4%**	**Yes**	**31**	**0.18**
OU-4	Methylene chloride (Dichloromethane)	75-09-2	ug/Kg	64	37.5%	28.58	640		No	0	12000
OU-4	Methyl-t-butyl ether	1634-04-4	ug/Kg	64	0.0%	4.25	67		not detected	0	NS
OU-4	Moisture	MOISTURE	%	68	100.0%	23.22	74.6		No screening criteria	0	NS
OU-4	Naphthalene	91-20-3	ug/kg	64	73.4%	29.67	300		No screening criteria	0	NS
OU-4	**Nickel**	**7440-02-0**	**mg/Kg**	**64**	**100.0%**	**26.64**	**50.4**	**34.4%**	**Yes**	**22**	**30**
OU-4	Nitrobenzene	98-95-3	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	N-Nitrosodi-n-propylamine	621-64-7	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/kg	64	0.0%	27.02	210		not detected	0	NS
OU-4	p-Chloro-m-cresol	59-50-7	ug/kg	64	0.0%	29.94	210		not detected	0	NS
OU-4	p-Cresol	106-44-5	ug/kg	64	4.7%	31.11	210		not detected	0	NS
OU-4	Pentachlorophenol	87-86-5	ug/kg	64	0.0%	62.95	420		not detected	0	800
OU-4	Phenanthrene	85-01-8	ug/kg	64	87.5%	147.64	2100		No screening criteria	0	NS
OU-4	Phenol	108-95-2	ug/kg	64	6.3%	38.98	600		No	0	30000
OU-4	Potassium	9/7/7440	mg/kg	64	100.0%	2207.44	4440		No screening criteria	0	NS
OU-4	Pyrene	76165-23-6	ug/kg	64	87.5%	170.20	2600		No screening criteria	0	NS
OU-4	**Selenium**	**7782-49-2**	**mg/Kg**	**64**	**34.4%**	**1.13**	**4.19**	**1.6%**	**Yes**	**1**	**3.9**
OU-4	Silver	7440-22-4	mg/Kg	64	42.2%	0.18	0.547		No	0	2
OU-4	Sodium	7440-23-5	mg/kg	64	100.0%	58.76	196		No screening criteria	0	NS
OU-4	Styrene	100-42-5	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Sulfate	14808-79-8	mg/kg	63	36.5%	13.10	49.1		not detected	0	NS
OU-4	Tert-amyl methyl ether	994-05-8	ug/kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Tertiary Butyl Alcohol	75-65-0	ug/kg	64	0.0%	170.66	2700		not detected	0	NS
OU-4	Tetrachloroethene	127-18-4	ug/Kg	64	0.0%	8.33	130		not detected	0	2000
OU-4	Thallium	7440-28-0	mg/Kg	64	56.3%	0.98	3.08		No screening criteria	0	NS
OU-4	Toluene	108-88-3	ug/kg	64	4.7%	8.44	130		not detected	0	36000
OU-4	trans-1,2-Dichloroethene	156-60-5	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	trans-1,3-Dichloropropene	10061-02-6	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Trichloroethene (Trichloroethylene)	79-01-6	ug/Kg	64	0.0%	8.33	130		not detected	0	2000
OU-4	Vanadium	7440-62-2	mg/kg	64	100.0%	36.19	88.2		No screening criteria	0	NS
OU-4	Vinyl chloride (Chloroethene)	75-01-4	ug/Kg	64	0.0%	8.33	130		not detected	0	NS
OU-4	Xylenes, Total	1330-20-7	ug/kg	64	4.7%	8.58	130		not detected	0	260
OU-4	**Zinc**	**7440-66-6**	**mg/Kg**	**64**	**100.0%**	**91.14**	**331**	**15.6%**	**Yes**	**10**	**109**

* NYSDEC Brownfield Sites Cleanup Program: Soil Cleanup Objectives (SCOs) for Protection of Ecological Resources (NYCRR Part 375-6.8(b)) [http://www.dec.ny.gov/regs/15507.html#15515]

NS - not specified

Surface Soil (0-6 inches bgs) Summary Statistics and Ecological Screening - Operational Units OU-1B, OU-1E, OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Total number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-1E	1,1,1,2-TETRACHLOROETHANE	630-20-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1,1-Trichloroethane	71-55-6	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1,2-Trichloroethane	79-00-5	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1-Dichloroethane	75-34-3	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,1-DICHLOROPROPENE	563-58-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2,3-Trichlorobenzene	87-61-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2,3-TRICHLOROPROPANE	96-18-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2,4-Trichlorobenzene	120-82-1	ug/Kg	62	0.0%	140.01	500		not detected	0	NS
OU-1E	1,2,4-Trimethylbenzene	95-63-6	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2-Dibromoethane	106-93-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/Kg	62	1.6%	135.97	500		not detected	0	NS
OU-1E	1,2-Dichloroethane	107-06-2	ug/Kg	41	0.0%	1.23	1.5		not detected	0	10000
OU-1E	1,2-Dichloropropane	78-87-5	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,3,5-Trimethylbenzene	108-67-8	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,3-Dichlorobenzene	541-73-1	ug/Kg	62	0.0%	140.01	500		not detected	0	NS
OU-1E	1,3-DICHLOROPROPANE	142-28-9	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	1,4-Dichlorobenzene	106-46-7	ug/Kg	62	0.0%	140.01	500		not detected	0	20000
OU-1E	2,4-Dinitrotoluene	121-14-2	ug/Kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	2,6-Dinitrotoluene	606-20-2	ug/Kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	2-Chloronaphthalene	91-58-7	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	2-Methyl-naphthlalene	91-57-6	ug/kg	21	4.8%	395.57	500		not detected	0	NS
OU-1E	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/kg	21	0.0%	1023.81	1200		not detected	0	NS
OU-1E	3,3'-Dichlorobenzidine	91-94-1	ug/kg	21	0.0%	525.71	840		not detected	0	NS
OU-1E	3-Nitroaniline	99-09-2	ug/kg	21	0.0%	1023.81	1200		not detected	0	NS
OU-1E	4-Bromophenylphenylether	101-55-3	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	4-Chloroaniline	106-47-8	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	4-Isopropyltoluene	99-87-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	4-Nitroaniline	100-01-6	ug/kg	21	0.0%	1023.81	1200		not detected	0	NS
OU-1E	Acenaphthene	83-32-9	ug/kg	21	9.5%	385.10	500		not detected	0	20000
OU-1E	Acenaphthylene	208-96-8	ug/kg	21	4.8%	403.81	500		not detected	0	NS
OU-1E	Anthracene	120-12-7	ug/kg	21	23.8%	384.14	950		No screening criteria	0	NS
OU-1E	Benzene	71-43-2	ug/kg	41	0.0%	1.23	1.5		not detected	0	70000
OU-1E	Benzo(a)anthracene	56-55-3	ug/kg	21	23.8%	639.52	3400		No screening criteria	0	NS
OU-1E	**Benzo(a)Pyrene**	**50-32-8**	**ug/kg**	**21**	**52.4%**	**540.05**	**3000**	**4.8%**	**Yes**	**1**	**2600**
OU-1E	Benzo(b)Fluoranthene	205-99-2	ug/kg	21	57.1%	690.81	4100		No screening criteria	0	NS
OU-1E	Benzo(g,h,i)perylene	191-24-2	ug/kg	21	33.3%	390.33	1100		No screening criteria	0	NS
OU-1E	Benzo(k)Fluoranthene	207-08-9	ug/kg	21	47.6%	382.57	1500		No screening criteria	0	NS
OU-1E	BENZYL ALCOHOL	100-51-6	ug/Kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	bis(2-Chloroethoxy)methane	111-91-1	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	bis(2-Chloroethyl) ether	111-44-4	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Bis(2-chloroisopropyl) ether	108-60-1	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	21	23.8%	368.38	1300		not detected	0	NS
OU-1E	BROMOBENZENE	108-86-1	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	BROMOCHLOROMETHANE	74-97-5	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Bromodichloromethane	75-27-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Bromoform	75-25-2	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Bromomethane (Methyl bromide)	74-83-9	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Butylbenzylphthalate	85-68-7	ug/kg	21	4.8%	393.33	500		not detected	0	NS
OU-1E	Carbon Tetrachloride	56-23-5	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Chlorobenzene	108-90-7	ug/kg	41	0.0%	1.23	1.5		not detected	0	40000
OU-1E	Chloroethane	75-00-3	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Chloroform	67-66-3	ug/Kg	41	14.6%	1.20	1.5		not detected	0	12000
OU-1E	Chloromethane (Methyl chloride)	74-87-3	ug/Kg	41	7.3%	1.28	3.2		No screening criteria	0	NS
OU-1E	Chrysene	218-01-9	ug/kg	21	52.4%	555.05	3400		No screening criteria	0	NS
OU-1E	cis-1,2-Dichloroethene	156-59-2	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	cis-1,3-Dichloropropene	10061-01-5	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Dibenz(a,h)anthracene	53-70-3	ug/kg	21	19.0%	366.86	500		not detected	0	NS
OU-1E	Dibenzofuran	132-64-9	ug/kg	21	4.8%	400.00	500		not detected	0	NS
OU-1E	Dibromochloromethane	124-48-1	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Dibromomethane (Methylene bromide)	74-95-3	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Dichlorodifluoromethane (Freon 12)	75-71-8	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Diethylphthalate	84-66-2	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Dimethyl phthalate	64441-70-9	ug/Kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Di-n-butylphthalate	84-74-2	ug/kg	21	4.8%	394.76	500		not detected	0	NS
OU-1E	Di-n-octylphthalate	117-84-0	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Ethylbenzene	100-41-4	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Fluoranthene	206-44-0	ug/kg	21	66.7%	832.86	7100		No screening criteria	0	NS
OU-1E	Fluorene	86-73-7	ug/kg	21	14.3%	375.43	500		not detected	0	30000
OU-1E	Hexachlorobenzene	118-74-1	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Hexachlorobutadiene	87-68-3	ug/kg	62	0.0%	140.01	500		not detected	0	NS
OU-1E	Hexachlorocyclopentadiene	77-47-4	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Hexachloroethane	67-72-1	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	21	38.1%	392.19	1400		No screening criteria	0	NS
OU-1E	Isophorone	78-59-1	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	Isopropylbenzene	98-82-8	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Lead	7439-92-1	mg/Kg	31	83.9%	22.18	53.6		No	0	63
OU-1E	m+p-Xylene	179601-23-1	ug/kg	41	4.9%	1.25	1.8		No screening criteria	0	NS
OU-1E	Methylene chloride (Dichloromethane)	75-09-2	ug/Kg	41	22.0%	1.39	2.4		not detected	0	12000
OU-1E	Naphthalene	91-20-3	ug/kg	21	4.8%	397.14	500		not detected	0	NS
OU-1E	n-Butylbenzene	104-51-8	ug/kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Nitrobenzene	98-95-3	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	N-Nitrosodimethylamine	62-75-9	ug/Kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	N-Nitrosodi-n-propylamine	621-64-7	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/kg	21	0.0%	410.95	500		not detected	0	NS
OU-1E	n-Propylbenzene	103-65-1	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	o-CHLOROTOLUENE	95-49-8	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	o-Xylene	95-47-6	ug/Kg	41	2.4%	1.22	1.5		not detected	0	NS
OU-1E	p-CHLOROTOLUENE	106-43-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Phenanthrene	85-01-8	ug/kg	21	52.4%	574.19	4600		No screening criteria	0	NS
OU-1E	Pyrene	76165-23-6	ug/kg	21	61.9%	896.00	6700		No screening criteria	0	NS
OU-1E	sec-Butylbenzene	135-98-8	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	sec-DICHLOROPROPANE	594-20-7	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Styrene	100-42-5	ug/Kg	41	2.4%	1.22	1.5		not detected	0	NS
OU-1E	t-Butylbenzene	98-06-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Tetrachloroethene	127-18-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	2000
OU-1E	Toluene	108-88-3	ug/kg	41	17.1%	1.37	3.7		No	0	36000
OU-1E	trans-1,2-Dichloroethene	156-60-5	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	trans-1,3-Dichloropropene	10061-02-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Trichloroethene (Trichloroethylene)	79-01-6	ug/Kg	41	0.0%	1.23	1.5		not detected	0	2000
OU-1E	Trichlorofluoromethane (Freon 11)	75-69-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS
OU-1E	Vinyl chloride (Chloroethene)	75-01-4	ug/Kg	41	0.0%	1.23	1.5		not detected	0	NS

Surface Soil (0-6 inches bgs) Summary Statistics and Ecological Screening - Operational Units OU-1B, OU-1E, OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Total number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-4	1,1,1-Trichloroethane	71-55-6	ug/kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	1,1,2-Trichloroethane	79-00-5	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	1,1-Dichloroethane	75-34-3	ug/kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	1,2,4-Trichlorobenzene	120-82-1	ug/Kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/Kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	1,2-Dichloroethane	107-06-2	ug/Kg	43	0.0%	10.60	130		not detected	0	10000
OU-4	1,2-Dichloropropane	78-87-5	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	1,3-Dichlorobenzene	541-73-1	ug/Kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	1,4-Dichlorobenzene	106-46-7	ug/Kg	43	0.0%	27.49	210		not detected	0	20000
OU-4	2,4,5-Trichlorophenol	95-95-4	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	2,4,6-Trichlorophenol	88-06-2	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	2,4-Dichlorophenol	120-83-2	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	2,4-Dimethylphenol	105-67-9	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	2,4-Dinitrophenol	51-28-5	ug/kg	43	0.0%	495.58	3800		not detected	0	NS
OU-4	2,4-Dinitrotoluene	121-14-2	ug/Kg	43	0.0%	109.74	830		not detected	0	NS
OU-4	2,6-Dinitrotoluene	606-20-2	ug/Kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	2-Butanone (Methyl ethyl ketone)	78-93-3	ug/Kg	43	2.3%	43.60	530		not detected	0	100000
OU-4	2-Chloronaphthalene	91-58-7	ug/kg	43	0.0%	11.49	88		not detected	0	NS
OU-4	2-Chlorophenol (o-Chlorophenol)	95-57-8	ug/Kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	2-Hexanone	591-78-6	ug/Kg	43	0.0%	32.53	400		not detected	0	NS
OU-4	2-Methyl-naphthlalene	91-57-6	ug/kg	43	83.7%	32.42	430		No screening criteria	0	NS
OU-4	2-Methylphenol (o-Cresol)	95-48-7	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	2-Nitrophenol (o-Nitrophenol)	88-75-5	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	3,3'-Dichlorobenzidine	91-94-1	ug/kg	43	0.0%	166.28	1300		not detected	0	NS
OU-4	3-Nitroaniline	99-09-2	ug/kg	43	0.0%	109.74	830		not detected	0	NS
OU-4	4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	ug/kg	43	0.0%	274.65	2100		not detected	0	NS
OU-4	4-Bromophenylphenylether	101-55-3	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	4-Chloroaniline	106-47-8	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	4-Methyl-2-pentanone	108-10-1	ug/Kg	43	0.0%	32.53	400		not detected	0	NS
OU-4	4-Nitroaniline	100-01-6	ug/kg	43	0.0%	109.74	830		not detected	0	NS
OU-4	4-Nitrophenol	100-02-7	ug/kg	43	0.0%	274.65	2100		not detected	0	NS
OU-4	Acenaphthene	83-32-9	ug/kg	43	16.3%	11.37	130		No	0	20000
OU-4	Acenaphthylene	208-96-8	ug/kg	43	72.1%	16.53	150		No screening criteria	0	NS
OU-4	Acetone	67-64-1	ug/kg	43	46.5%	93.65	930		not detected	0	2200
OU-4	Aluminum	7429-90-5	mg/kg	43	100.0%	19206.05	30900		No screening criteria	0	NS
OU-4	Anthracene	120-12-7	ug/kg	43	83.7%	32.00	370		No screening criteria	0	NS
OU-4	Antimony	7440-36-0	mg/Kg	43	20.9%	1.01	3.44		No screening criteria	0	NS
OU-4	**Arsenic**	**7440-38-2**	**mg/Kg**	**43**	**100.0%**	**7.74**	**21**	**2.3%**	**Yes**	**1**	**13**
OU-4	Barium	7440-39-3	mg/kg	43	100.0%	86.05	200		No	0	433
OU-4	Benzene	71-43-2	ug/kg	43	0.0%	5.40	67		not detected	0	70000
OU-4	Benzo(a)anthracene	56-55-3	ug/kg	43	97.7%	82.00	980		No screening criteria	0	NS
OU-4	Benzo(a)Pyrene	50-32-8	ug/kg	43	95.3%	77.93	810		No	0	2600
OU-4	Benzo(b)Fluoranthene	205-99-2	ug/kg	43	95.3%	98.74	850		No screening criteria	0	NS
OU-4	Benzo(g,h,i)perylene	191-24-2	ug/kg	43	95.3%	53.07	500		No screening criteria	0	NS
OU-4	Benzo(k)Fluoranthene	207-08-9	ug/kg	43	90.7%	45.16	530		No screening criteria	0	NS
OU-4	Beryllium	7440-41-7	mg/Kg	43	97.7%	0.94	1.6		No	0	10
OU-4	bis(2-Chloroethoxy)methane	111-91-1	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	bis(2-Chloroethyl) ether	111-44-4	ug/kg	43	9.3%	33.33	210		not detected	0	NS
OU-4	Bis(2-chloroisopropyl) ether	108-60-1	ug/Kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	43	67.4%	340.77	1400		No screening criteria	0	NS
OU-4	Bromodichloromethane	75-27-4	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Bromoform	75-25-2	ug/kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Bromomethane (Methyl bromide)	74-83-9	ug/Kg	43	0.0%	21.60	270		not detected	0	NS
OU-4	Butylbenzylphthalate	85-68-7	ug/kg	43	0.0%	109.74	830		not detected	0	NS
OU-4	Cadmium	7440-43-9	mg/kg	43	88.4%	0.47	3.36		No	0	4
OU-4	Calcium	7440-70-2	mg/kg	43	100.0%	6235.28	47800		No screening criteria	0	NS
OU-4	Carbazole	86-74-8	ug/kg	43	9.3%	31.00	210		not detected	0	NS
OU-4	Carbon Disulfide	75-15-0	ug/kg	43	4.7%	10.60	130		not detected	0	NS
OU-4	Carbon Tetrachloride	56-23-5	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Chloride	16887-00-6	mg/kg	43	18.6%	8.56	21.6		No screening criteria	0	NS
OU-4	Chlorobenzene	108-90-7	ug/kg	43	0.0%	10.60	130		not detected	0	40000
OU-4	Chloroethane	75-00-3	ug/Kg	43	0.0%	21.60	270		not detected	0	NS
OU-4	Chloroform	67-66-3	ug/Kg	43	9.3%	10.65	130		not detected	0	12000
OU-4	Chloromethane (Methyl chloride)	74-87-3	ug/Kg	43	0.0%	21.60	270		not detected	0	NS
OU-4	**Chromium**	**7440-47-3**	**mg/Kg**	**43**	**100.0%**	**156.23**	**5410**	**4.7%**	**Yes**	**2**	**41**
OU-4	Chrysene	218-01-9	ug/kg	43	97.7%	94.65	980		No screening criteria	0	NS
OU-4	cis-1,2-Dichloroethene	156-59-2	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	cis-1,3-Dichloropropene	10061-01-5	ug/kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Cobalt	7440-48-4	mg/kg	43	100.0%	11.88	25.9		No screening criteria	0	NS
OU-4	**Copper**	**7440-50-8**	**mg/kg**	**43**	**100.0%**	**63.19**	**1340**	**7.0%**	**Yes**	**3**	**50**
OU-4	Dibenz(a,h)anthracene	53-70-3	ug/kg	43	58.1%	13.95	140		No screening criteria	0	NS
OU-4	Dibenzofuran	132-64-9	ug/kg	43	9.3%	32.79	210		not detected	0	NS
OU-4	Dibromochloromethane	124-48-1	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Diethylphthalate	84-66-2	ug/kg	43	0.0%	109.74	830		not detected	0	NS
OU-4	Diisopropyl ether	108-20-3	ug/kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Dimethylphthalate	131-11-3	ug/kg	43	0.0%	109.74	830		not detected	0	NS
OU-4	Di-n-butylphthalate	84-74-2	ug/kg	43	0.0%	109.74	830		not detected	0	NS
OU-4	Di-n-octylphthalate	117-84-0	ug/kg	43	0.0%	109.74	830		not detected	0	NS
OU-4	Ethylbenzene	100-41-4	ug/kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Ethyl-t-butylether	637-92-3	ug/kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Fluoranthene	206-44-0	ug/kg	43	95.3%	178.65	2100		No screening criteria	0	NS
OU-4	Fluorene	86-73-7	ug/kg	43	41.9%	14.84	140		No	0	30000
OU-4	Hexachlorobenzene	118-74-1	ug/kg	43	0.0%	5.44	42		not detected	0	NS
OU-4	Hexachlorobutadiene	87-68-3	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	Hexachlorocyclopentadiene	77-47-4	ug/kg	43	0.0%	274.65	2100		not detected	0	NS
OU-4	Hexachloroethane	67-72-1	ug/kg	43	0.0%	54.93	420		not detected	0	NS
OU-4	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	43	93.0%	48.88	480		No screening criteria	0	NS
OU-4	IRON	7439-89-6	mg/kg	43	100.0%	31662.79	60000		No screening criteria	0	NS
OU-4	Isophorone	78-59-1	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	**Lead**	**7439-92-1**	**mg/Kg**	**43**	**100.0%**	**56.34**	**514**	**11.6%**	**Yes**	**5**	**63**
OU-4	Magnesium	7439-95-4	mg/kg	43	100.0%	7733.49	29300		No screening criteria	0	NS
OU-4	**Manganese**	**7439-96-5**	**mg/kg**	**43**	**100.0%**	**677.53**	**1760**	**2.3%**	**Yes**	**1**	**1600**
OU-4	**Mercury**	**7439-97-6**	**mg/Kg**	**43**	**97.7%**	**0.37**	**1.72**	**58.1%**	**Yes**	**25**	**0.18**
OU-4	Methylene chloride (Dichloromethane)	75-09-2	ug/Kg	43	27.9%	23.26	270		not detected	0	12000
OU-4	Methyl-t-butyl ether	1634-04-4	ug/Kg	43	0.0%	5.40	67		not detected	0	NS
OU-4	Moisture	MOISTURE	%	45	100.0%	25.09	74.6		No screening criteria	0	NS
OU-4	Naphthalene	91-20-3	ug/kg	43	88.4%	33.58	300		No screening criteria	0	NS
OU-4	**Nickel**	**7440-02-0**	**mg/Kg**	**43**	**100.0%**	**27.54**	**50.4**	**39.5%**	**Yes**	**17**	**30**
OU-4	Nitrobenzene	98-95-3	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	N-Nitrosodi-n-propylamine	621-64-7	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/kg	43	0.0%	27.49	210		not detected	0	NS
OU-4	p-Chloro-m-cresol	59-50-7	ug/kg	43	0.0%	27.49	210		not detected	0	NS

Surface Soil (0-6 inches bgs) Summary Statistics and Ecological Screening - Operational Units OU-1B, OU-1E, OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Total number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-4	p-Cresol	106-44-5	ug/kg	43	7.0%	29.23	210		not detected	0	NS
OU-4	Pentachlorophenol	87-86-5	ug/kg	43	0.0%	54.93	420		not detected	0	800
OU-4	Phenanthrene	85-01-8	ug/kg	43	97.7%	152.00	1800		No screening criteria	0	NS
OU-4	Phenol	108-95-2	ug/kg	43	9.3%	45.30	600		No	0	30000
OU-4	Potassium	9/7/7440	mg/kg	43	100.0%	2306.60	4440		No screening criteria	0	NS
OU-4	Pyrene	76165-23-6	ug/kg	43	95.3%	159.49	1800		No screening criteria	0	NS
OU-4	**Selenium**	**7782-49-2**	**mg/Kg**	**43**	**39.5%**	**1.13**	**4.19**	**2.3%**	**Yes**	**1**	**3.9**
OU-4	Silver	7440-22-4	mg/Kg	43	46.5%	0.18	0.547		No	0	2
OU-4	Sodium	7440-23-5	mg/kg	43	100.0%	55.96	112		No screening criteria	0	NS
OU-4	Styrene	100-42-5	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Sulfate	14808-79-8	mg/kg	43	39.5%	13.67	44.2		No screening criteria	0	NS
OU-4	Tert-amyl methyl ether	994-05-8	ug/kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Tertiary Butyl Alcohol	75-65-0	ug/kg	43	0.0%	217.09	2700		not detected	0	NS
OU-4	Tetrachloroethene	127-18-4	ug/Kg	43	0.0%	10.60	130		not detected	0	2000
OU-4	Thallium	7440-28-0	mg/Kg	43	62.8%	0.90	2.46		No screening criteria	0	NS
OU-4	Toluene	108-88-3	ug/kg	43	0.0%	10.60	130		not detected	0	36000
OU-4	trans-1,2-Dichloroethene	156-60-5	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	trans-1,3-Dichloropropene	10061-02-6	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Trichloroethene (Trichloroethylene)	79-01-6	ug/Kg	43	0.0%	10.60	130		not detected	0	2000
OU-4	Vanadium	7440-62-2	mg/kg	43	100.0%	40.38	88.2		No screening criteria	0	NS
OU-4	Vinyl chloride (Chloroethene)	75-01-4	ug/Kg	43	0.0%	10.60	130		not detected	0	NS
OU-4	Xylenes, Total	1330-20-7	ug/kg	43	0.0%	10.60	130		not detected	0	260
OU-4	**Zinc**	**7440-66-6**	**mg/Kg**	**43**	**100.0%**	**98.44**	**331**	**20.9%**	**Yes**	**9**	**109**

* NYSDEC Brownfield Sites Cleanup Program: Soil Cleanup Objectives (SCOs) for Protection of Ecological Resources (NYCRR Part 375-6.8(b)) [http://www.dec.ny.gov/regs/15507.html#15515]

NS - not specified

Surface Soil (6-12 inches bgs) Summary Statistics and Ecological Screening - Operational Units OU-1B, OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Total number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-1B	1,1,1-Trichloroethane	71-55-6	ug/kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	1,1,2-Trichloroethane	79-00-5	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	1,1-Dichloroethane	75-34-3	ug/kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	1,2,4-Trichlorobenzene	120-82-1	ug/Kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/Kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	1,2-Dichloroethane	107-06-2	ug/Kg	16	0.0%	1.00	1		not detected	0	10000
OU-1B	1,2-Dichloropropane	78-87-5	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	1,3-Dichlorobenzene	541-73-1	ug/Kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	1,4-Dichlorobenzene	106-46-7	ug/Kg	16	0.0%	40.63	44		not detected	0	20000
OU-1B	2,4,5-Trichlorophenol	95-95-4	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	2,4,6-Trichlorophenol	88-06-2	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	2,4-Dichlorophenol	120-83-2	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	2,4-Dimethylphenol	105-67-9	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	2,4-Dinitrophenol	51-28-5	ug/kg	16	0.0%	812.50	880		not detected	0	NS
OU-1B	2,4-Dinitrotoluene	121-14-2	ug/Kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	2,6-Dinitrotoluene	606-20-2	ug/Kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	2-Butanone (Methyl ethyl ketone)	78-93-3	ug/Kg	16	0.0%	4.81	5		not detected	0	100000
OU-1B	2-Chloronaphthalene	91-58-7	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	2-Chlorophenol (o-Chlorophenol)	95-57-8	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	2-Hexanone	591-78-6	ug/Kg	16	0.0%	3.50	4		not detected	0	NS
OU-1B	2-Methyl-naphthlalene	91-57-6	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	2-Methylphenol (o-Cresol)	95-48-7	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	2-Nitrophenol (o-Nitrophenol)	88-75-5	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	3,3'-Dichlorobenzidine	91-94-1	ug/kg	16	0.0%	120.00	130		not detected	0	NS
OU-1B	3-Nitroaniline	99-09-2	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	**4,4'-DDD**	**72-54-8**	**ug/kg**	**16**	**18.8%**	**0.92**	**6.1**	**6.3%**	**Yes**	**1**	**3.3**
OU-1B	**4,4'-DDE**	**72-55-9**	**ug/kg**	**16**	**75.0%**	**7.36**	**47**	**31.3%**	**Yes**	**5**	**3.3**
OU-1B	**4,4'-DDT**	**50-29-3**	**ug/kg**	**16**	**68.8%**	**7.25**	**73**	**12.5%**	**Yes**	**2**	**3.3**
OU-1B	4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	ug/kg	16	0.0%	203.75	220		not detected	0	NS
OU-1B	4-Bromophenylphenylether	101-55-3	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	4-Chloroaniline	106-47-8	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	4-Methyl-2-pentanone	108-10-1	ug/Kg	16	0.0%	3.50	4		not detected	0	NS
OU-1B	4-Nitroaniline	100-01-6	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	4-Nitrophenol	100-02-7	ug/kg	16	0.0%	203.75	220		not detected	0	NS
OU-1B	Acenaphthene	83-32-9	ug/kg	16	12.5%	41.38	52		No	0	20000
OU-1B	Acenaphthylene	208-96-8	ug/kg	16	18.8%	68.13	310		No screening criteria	0	NS
OU-1B	Acetone	67-64-1	ug/kg	16	31.3%	8.88	11		No	0	2200
OU-1B	Aldrin	309-00-2	ug/kg	16	0.0%	0.43	0.76		not detected	0	140
OU-1B	Alpha-BHC	319-84-6	ug/kg	16	0.0%	0.22	0.39		not detected	0	40
OU-1B	alpha-Chlordane	5103-71-9	ug/kg	16	6.3%	0.31	1.7		No screening criteria	0	NS
OU-1B	Aluminum	7429-90-5	mg/kg	16	100.0%	21408.13	30000		No screening criteria	0	NS
OU-1B	Anthracene	120-12-7	ug/kg	16	25.0%	76.00	340		No screening criteria	0	NS
OU-1B	Antimony	7440-36-0	mg/Kg	16	6.3%	1.21	1.42		No screening criteria	0	NS
OU-1B	Aroclor 1016	12674-11-2	ug/kg	16	0.0%	4.03	4.34		not detected	0	1000
OU-1B	Aroclor 1221	11104-28-2	ug/kg	16	0.0%	17.08	18.4		not detected	0	1000
OU-1B	Aroclor 1232	11141-16-5	ug/kg	16	0.0%	6.47	6.97		not detected	0	1000
OU-1B	Aroclor 1242	53469-21-9	ug/kg	16	0.0%	9.39	10.1		not detected	0	1000
OU-1B	Aroclor 1248	12672-29-6	ug/kg	16	0.0%	6.83	7.37		not detected	0	1000
OU-1B	Aroclor 1254	11097-69-1	ug/kg	16	0.0%	6.59	7.11		not detected	0	1000
OU-1B	Aroclor 1260	11096-82-5	ug/kg	16	6.3%	8.38	19.4		No	0	1000
OU-1B	**Arsenic**	**7440-38-2**	**mg/Kg**	**16**	**100.0%**	**8.79**	**15.8**	**12.5%**	**Yes**	**2**	**13**
OU-1B	Barium	7440-39-3	mg/kg	16	100.0%	85.09	171		No	0	433
OU-1B	Benzene	71-43-2	ug/kg	16	0.0%	0.61	0.7		not detected	0	70000
OU-1B	Benzo(a)anthracene	56-55-3	ug/kg	16	37.5%	209.06	1400		No screening criteria	0	NS
OU-1B	Benzo(a)Pyrene	50-32-8	ug/kg	16	37.5%	208.13	1300		No	0	2600
OU-1B	Benzo(b)Fluoranthene	205-99-2	ug/kg	16	43.8%	263.19	1800		No screening criteria	0	NS
OU-1B	Benzo(g,h,i)perylene	191-24-2	ug/kg	16	31.3%	155.19	940		No screening criteria	0	NS
OU-1B	Benzo(k)Fluoranthene	207-08-9	ug/kg	16	25.0%	124.88	730		No screening criteria	0	NS
OU-1B	Beryllium	7440-41-7	mg/Kg	16	100.0%	0.83	1.2		No	0	10
OU-1B	Beta-BHC	319-85-7	ug/kg	16	0.0%	0.25	0.44		not detected	0	600
OU-1B	bis(2-Chloroethoxy)methane	111-91-1	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	bis(2-Chloroethyl) ether	111-44-4	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	Bis(2-chloroisopropyl) ether	108-60-1	ug/Kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	16	75.0%	1623.13	3700		No screening criteria	0	NS
OU-1B	Bromodichloromethane	75-27-4	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Bromoform	75-25-2	ug/kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Bromomethane (Methyl bromide)	74-83-9	ug/Kg	16	0.0%	2.13	3		not detected	0	NS
OU-1B	Butylbenzylphthalate	85-68-7	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	Cadmium	7440-43-9	mg/kg	16	12.5%	0.33	1.7		not detected	0	4
OU-1B	Calcium	7440-70-2	mg/kg	16	100.0%	1102.38	3670		No screening criteria	0	NS
OU-1B	Carbazole	86-74-8	ug/kg	16	12.5%	57.13	250		No screening criteria	0	NS
OU-1B	Carbon Disulfide	75-15-0	ug/kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Carbon Tetrachloride	56-23-5	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Chlordane, gamma	5103-74-2	ug/kg	16	6.3%	0.331	2		No screening criteria	0	NS
OU-1B	Chlorobenzene	108-90-7	ug/kg	16	0.0%	1.00	1		not detected	0	40000
OU-1B	Chloroethane	75-00-3	ug/Kg	16	0.0%	2.13	3		not detected	0	NS
OU-1B	Chloroform	67-66-3	ug/Kg	16	6.3%	1.00	1		No	0	12000
OU-1B	Chloromethane (Methyl chloride)	74-87-3	ug/Kg	16	0.0%	2.13	3		not detected	0	NS
OU-1B	**Chromium**	**7440-47-3**	**mg/Kg**	**16**	**100.0%**	**22.09**	**61.5**	**6.3%**	**Yes**	**1**	**41**
OU-1B	Chrysene	218-01-9	ug/kg	16	37.5%	215.69	1400		No screening criteria	0	NS
OU-1B	cis-1,2-Dichloroethene	156-59-2	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	cis-1,3-Dichloropropene	10061-01-5	ug/kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Cobalt	7440-48-4	mg/kg	16	100.0%	9.78	13.4		No screening criteria	0	NS
OU-1B	**Copper**	**7440-50-8**	**mg/kg**	**16**	**100.0%**	**27.57**	**63.2**	**18.8%**	**Yes**	**3**	**50**
OU-1B	Delta-BHC	319-86-8	ug/kg	16	0.0%	0.40	0.71		not detected	0	40
OU-1B	Dibenz(a,h)anthracene	53-70-3	ug/kg	16	25.0%	66.38	270		No screening criteria	0	NS
OU-1B	Dibenzofuran	132-64-9	ug/kg	16	6.3%	44.19	95		No screening criteria	0	NS
OU-1B	Dibromochloromethane	124-48-1	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Dieldrin	60-57-1	ug/kg	16	6.3%	0.563	2.6		No	0	6
OU-1B	Diethylphthalate	84-66-2	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	Diisopropyl ether	108-20-3	ug/kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Dimethylphthalate	131-11-3	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	Di-n-butylphthalate	84-74-2	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	Di-n-octylphthalate	117-84-0	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	Endosulfan I (alpha-Endosulfan)	959-98-8	ug/kg	16	0.0%	0.28	0.5		not detected	0	NS
OU-1B	Endosulfan II	33213-65-9	ug/kg	16	0.0%	0.427	0.76		not detected	0	NS
OU-1B	Endosulfan Sulfate	1031-07-8	ug/kg	16	0.0%	0.427	0.76		not detected	0	NS
OU-1B	Endrin	72-20-8	ug/kg	16	6.3%	0.449	0.76		not detected	0	14
OU-1B	Endrin Aldehyde	7421-93-4	ug/kg	16	6.3%	0.448	1.1		No screening criteria	0	NS
OU-1B	Endrin Ketone	53494-70-5	ug/kg	16	0.0%	0.427	0.76		not detected	0	NS
OU-1B	Ethylbenzene	100-41-4	ug/kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Ethyl-t-butylether	637-92-3	ug/kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Fluoranthene	206-44-0	ug/kg	16	37.5%	370.13	3000		No screening criteria	0	NS
OU-1B	Fluorene	86-73-7	ug/kg	16	12.5%	46.94	120		No	0	30000
OU-1B	Gamma-BHC (Lindane)	58-89-9	ug/kg	16	0.0%	0.220	0.39		not detected	0	6000
OU-1B	Heptachlor	76-44-8	ug/kg	16	0.0%	0.220	0.39		not detected	0	140
OU-1B	Heptachlor Epoxide	1024-57-3	ug/kg	16	6.3%	0.236	0.48		No screening criteria	0	NS

Surface Soil (6-12 inches bgs) Summary Statistics and Ecological Screening - Operational Units OU-1B, OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Total number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-1B	Hexachlorobenzene	118-74-1	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	Hexachlorobutadiene	87-68-3	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	Hexachlorocyclopentadiene	77-47-4	ug/kg	16	0.0%	203.75	220		not detected	0	NS
OU-1B	Hexachloroethane	67-72-1	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	16	25.0%	142.38	850		No screening criteria	0	NS
OU-1B	IRON	7439-89-6	mg/kg	16	100.0%	26287.50	31700		No screening criteria	0	NS
OU-1B	Isophorone	78-59-1	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	**Lead**	**7439-92-1**	**mg/Kg**	**16**	**100.0%**	**85.12**	**414**	**31.3%**	**Yes**	**5**	**63**
OU-1B	Magnesium	7439-95-4	mg/kg	16	100.0%	4348.75	5880		No screening criteria	0	NS
OU-1B	Manganese	7439-96-5	mg/kg	16	100.0%	578.44	1440		No	0	1600
OU-1B	**Mercury**	**7439-97-6**	**mg/Kg**	**16**	**100.0%**	**0.148**	**0.66**	**25.0%**	**Yes**	**4**	**0.18**
OU-1B	Methoxychlor	72-43-5	ug/kg	16	0.0%	2.20	3.9		not detected	0	NS
OU-1B	Methylene chloride (Dichloromethane)	75-09-2	ug/Kg	16	18.8%	17.56	42		No	0	12000
OU-1B	Methyl-t-butyl ether	1634-04-4	ug/Kg	16	0.0%	0.606	0.7		not detected	0	NS
OU-1B	Moisture	MOISTURE	%	16	100.0%	17.90	24		No screening criteria	0	NS
OU-1B	Naphthalene	91-20-3	ug/kg	16	6.3%	44.50	100		No screening criteria	0	NS
OU-1B	Nickel	7440-02-0	mg/Kg	16	100.0%	17.84	24.9		No	0	30
OU-1B	Nitrobenzene	98-95-3	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	N-Nitrosodi-n-propylamine	621-64-7	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/kg	16	0.0%	40.63	44		not detected	0	NS
OU-1B	p-Chloro-m-cresol	59-50-7	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	p-Cresol	106-44-5	ug/kg	16	0.0%	81.25	88		not detected	0	NS
OU-1B	Pentachlorophenol	87-86-5	ug/kg	16	0.0%	203.75	220		not detected	0	800
OU-1B	Phenanthrene	85-01-8	ug/kg	16	37.5%	260.00	2100		No screening criteria	0	NS
OU-1B	Phenol	108-95-2	ug/kg	16	0.0%	40.63	44		not detected	0	30000
OU-1B	Potassium	9/7/7440	mg/kg	16	100.0%	1089.63	1770		No screening criteria	0	NS
OU-1B	Pyrene	76165-23-6	ug/kg	16	43.8%	373.69	2700		No screening criteria	0	NS
OU-1B	Selenium	7782-49-2	mg/Kg	16	6.3%	1.18	1.29		No	0	3.9
OU-1B	Silver	7440-22-4	mg/Kg	16	50.0%	0.247	0.466		No	0	2
OU-1B	Sodium	7440-23-5	mg/kg	16	18.8%	48.71	70.1		No screening criteria	0	NS
OU-1B	Styrene	100-42-5	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Tert-amyl methyl ether	994-05-8	ug/kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Tertiary Butyl Alcohol	75-65-0	ug/kg	16	0.0%	23.69	27		not detected	0	NS
OU-1B	Tetrachloroethene	127-18-4	ug/Kg	16	0.0%	1.00	1		not detected	0	2000
OU-1B	Thallium	7440-28-0	mg/Kg	16	68.8%	2.08	2.65		No screening criteria	0	NS
OU-1B	Toluene	108-88-3	ug/kg	16	0.0%	1.00	1		not detected	0	36000
OU-1B	Toxaphene	8001-35-2	ug/kg	16	0.0%	14.25	25		not detected	0	NS
OU-1B	trans-1,2-Dichloroethene	156-60-5	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	trans-1,3-Dichloropropene	10061-02-6	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Trichloroethene (Trichloroethylene)	79-01-6	ug/Kg	16	0.0%	1.00	1		not detected	0	2000
OU-1B	Vanadium	7440-62-2	mg/kg	16	100.0%	32.31	53.5		No screening criteria	0	NS
OU-1B	Vinyl chloride (Chloroethene)	75-01-4	ug/Kg	16	0.0%	1.00	1		not detected	0	NS
OU-1B	Xylenes, Total	1330-20-7	ug/kg	16	0.0%	1.00	1		not detected	0	260
OU-1B	**Zinc**	**7440-66-6**	**mg/Kg**	**16**	**100.0%**	**94.93**	**236**	**25.0%**	**Yes**	**4**	**109**
OU-4	1,1,1-Trichloroethane	71-55-6	ug/kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	1,1,2-Trichloroethane	79-00-5	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	1,1-Dichloroethane	75-34-3	ug/kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	1,2,4-Trichlorobenzene	120-82-1	ug/Kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/Kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	1,2-Dichloroethane	107-06-2	ug/Kg	17	0.0%	4.29	56		not detected	0	10000
OU-4	1,2-Dichloropropane	78-87-5	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	1,3-Dichlorobenzene	541-73-1	ug/Kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	1,4-Dichlorobenzene	106-46-7	ug/Kg	17	0.0%	23.24	54		not detected	0	20000
OU-4	2,4,5-Trichlorophenol	95-95-4	ug/kg	17	0.0%	25.35	73		not detected	0	NS
OU-4	2,4,6-Trichlorophenol	88-06-2	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	2,4-Dichlorophenol	120-83-2	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	2,4-Dimethylphenol	105-67-9	ug/kg	17	0.0%	25.35	73		not detected	0	NS
OU-4	2,4-Dinitrophenol	51-28-5	ug/kg	17	0.0%	420.59	970		not detected	0	NS
OU-4	2,4-Dinitrotoluene	121-14-2	ug/Kg	17	0.0%	88.65	220		not detected	0	NS
OU-4	2,6-Dinitrotoluene	606-20-2	ug/Kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	2-Butanone (Methyl ethyl ketone)	78-93-3	ug/Kg	17	5.9%	17.82	220		not detected	0	100000
OU-4	2-Chloronaphthalene	91-58-7	ug/kg	17	0.0%	10.94	37		not detected	0	NS
OU-4	2-Chlorophenol (o-Chlorophenol)	95-57-8	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	2-Hexanone	591-78-6	ug/Kg	17	0.0%	13.41	170		not detected	0	NS
OU-4	2-Methyl-naphthlalene	91-57-6	ug/kg	17	47.1%	12.88	63		No screening criteria	0	NS
OU-4	2-Methylphenol (o-Cresol)	95-48-7	ug/kg	17	0.0%	25.35	73		not detected	0	NS
OU-4	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	2-Nitrophenol (o-Nitrophenol)	88-75-5	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	3,3'-Dichlorobenzidine	91-94-1	ug/kg	17	0.0%	131.18	320		not detected	0	NS
OU-4	3-Nitroaniline	99-09-2	ug/kg	17	0.0%	88.65	220		not detected	0	NS
OU-4	4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	ug/kg	17	0.0%	221.18	540		not detected	0	NS
OU-4	4-Bromophenylphenylether	101-55-3	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	4-Chloroaniline	106-47-8	ug/kg	17	0.0%	25.35	73		not detected	0	NS
OU-4	4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	4-Methyl-2-pentanone	108-10-1	ug/Kg	17	0.0%	13.41	170		not detected	0	NS
OU-4	4-Nitroaniline	100-01-6	ug/kg	17	0.0%	88.65	220		not detected	0	NS
OU-4	4-Nitrophenol	100-02-7	ug/kg	17	0.0%	221.18	540		not detected	0	NS
OU-4	Acenaphthene	83-32-9	ug/kg	17	5.9%	12.24	110		No	0	20000
OU-4	Acenaphthylene	208-96-8	ug/kg	17	23.5%	21.59	250		No screening criteria	0	NS
OU-4	Acetone	67-64-1	ug/kg	17	47.1%	53.00	390		not detected	0	2200
OU-4	Aluminum	7429-90-5	mg/kg	17	100.0%	21030.59	40600		No screening criteria	0	NS
OU-4	Anthracene	120-12-7	ug/kg	17	35.3%	36.06	490		No screening criteria	0	NS
OU-4	Antimony	7440-36-0	mg/Kg	17	35.3%	0.983	2.11		not detected	0	NS
OU-4	**Arsenic**	**7440-38-2**	**mg/Kg**	**17**	**100.0%**	**5.50**	**15.4**	**5.9%**	**Yes**	**1**	**13**
OU-4	Barium	7440-39-3	mg/kg	17	100.0%	86.87	192		No	0	433
OU-4	Benzene	71-43-2	ug/kg	17	0.0%	2.23	28		not detected	0	70000
OU-4	Benzo(a)anthracene	56-55-3	ug/kg	17	58.8%	103.88	1500		No screening criteria	0	NS
OU-4	Benzo(a)Pyrene	50-32-8	ug/kg	17	58.8%	89.53	1300		No	0	2600
OU-4	Benzo(b)Fluoranthene	205-99-2	ug/kg	17	64.7%	99.18	1400		No screening criteria	0	NS
OU-4	Benzo(g,h,i)perylene	191-24-2	ug/kg	17	70.6%	51.06	700		No screening criteria	0	NS
OU-4	Benzo(k)Fluoranthene	207-08-9	ug/kg	17	52.9%	46.88	650		No screening criteria	0	NS
OU-4	Beryllium	7440-41-7	mg/Kg	17	100.0%	0.97	2.43		No	0	10
OU-4	bis(2-Chloroethoxy)methane	111-91-1	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	bis(2-Chloroethyl) ether	111-44-4	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	Bis(2-chloroisopropyl) ether	108-60-1	ug/Kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	17	58.8%	492.35	2400		No screening criteria	0	NS
OU-4	Bromodichloromethane	75-27-4	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Bromoform	75-25-2	ug/kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Bromomethane (Methyl bromide)	74-83-9	ug/Kg	17	0.0%	8.76	110		not detected	0	NS
OU-4	Butylbenzylphthalate	85-68-7	ug/kg	17	0.0%	88.65	220		not detected	0	NS
OU-4	Cadmium	7440-43-9	mg/kg	17	88.2%	0.43	1.49		No	0	4
OU-4	Calcium	7440-70-2	mg/kg	17	100.0%	16457.65	139000		No screening criteria	0	NS
OU-4	Carbazole	86-74-8	ug/kg	17	5.9%	31.24	190		No screening criteria	0	NS
OU-4	Carbon Disulfide	75-15-0	ug/kg	17	5.9%	4.35	56		not detected	0	NS
OU-4	Carbon Tetrachloride	56-23-5	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Chloride	16887-00-6	mg/kg	16	12.5%	7.23	16.4		not detected	0	NS
OU-4	Chlorobenzene	108-90-7	ug/kg	17	0.0%	4.29	56		not detected	0	40000
OU-4	Chloroethane	75-00-3	ug/Kg	17	0.0%	8.76	110		not detected	0	NS
OU-4	Chloroform	67-66-3	ug/Kg	17	5.9%	4.47	56		not detected	0	12000

Surface Soil (6-12 inches bgs) Summary Statistics and Ecological Screening - Operational Units OU-1B, OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Total number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-4	Chloromethane (Methyl chloride)	74-87-3	ug/Kg	17	0.0%	8.76	110		not detected	0	NS
OU-4	**Chromium**	**7440-47-3**	**mg/Kg**	**17**	**100.0%**	**33.42**	**230**	**5.9%**	**Yes**	**1**	**41**
OU-4	Chrysene	218-01-9	ug/kg	17	58.8%	98.59	1400		No screening criteria	0	NS
OU-4	cis-1,2-Dichloroethene	156-59-2	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	cis-1,3-Dichloropropene	10061-01-5	ug/kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Cobalt	7440-48-4	mg/kg	17	100.0%	12.36	21		No screening criteria	0	NS
OU-4	**Copper**	**7440-50-8**	**mg/kg**	**17**	**100.0%**	**37.18**	**212**	**5.9%**	**Yes**	**1**	**50**
OU-4	Dibenz(a,h)anthracene	53-70-3	ug/kg	17	17.6%	20.06	240		No screening criteria	0	NS
OU-4	Dibenzofuran	132-64-9	ug/kg	17	5.9%	26.53	110		No screening criteria	0	NS
OU-4	Dibromochloromethane	124-48-1	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Diethylphthalate	84-66-2	ug/kg	17	0.0%	88.65	220		not detected	0	NS
OU-4	Diisopropyl ether	108-20-3	ug/kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Dimethylphthalate	131-11-3	ug/kg	17	0.0%	88.65	220		not detected	0	NS
OU-4	Di-n-butylphthalate	84-74-2	ug/kg	17	0.0%	88.65	220		not detected	0	NS
OU-4	Di-n-octylphthalate	117-84-0	ug/kg	17	0.0%	88.65	220		not detected	0	NS
OU-4	Ethylbenzene	100-41-4	ug/kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Ethyl-t-butylether	637-92-3	ug/kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Fluoranthene	206-44-0	ug/kg	17	70.6%	192.18	2800		No screening criteria	0	NS
OU-4	Fluorene	86-73-7	ug/kg	17	11.8%	15.82	160		No	0	30000
OU-4	Hexachlorobenzene	118-74-1	ug/kg	17	0.0%	6.41	37		not detected	0	NS
OU-4	Hexachlorobutadiene	87-68-3	ug/kg	17	0.0%	25.35	73		not detected	0	NS
OU-4	Hexachlorocyclopentadiene	77-47-4	ug/kg	17	0.0%	221.18	540		not detected	0	NS
OU-4	Hexachloroethane	67-72-1	ug/kg	17	0.0%	44.35	110		not detected	0	NS
OU-4	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	17	41.2%	47.88	670		No screening criteria	0	NS
OU-4	IRON	7439-89-6	mg/kg	17	100.0%	31923.53	57300		No screening criteria	0	NS
OU-4	Isophorone	78-59-1	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	**Lead**	**7439-92-1**	**mg/Kg**	**17**	**100.0%**	**28.49**	**176**	**5.9%**	**Yes**	**1**	**63**
OU-4	Magnesium	7439-95-4	mg/kg	17	100.0%	14209.41	78900		No screening criteria	0	NS
OU-4	Manganese	7439-96-5	mg/kg	17	100.0%	708.76	1430		No	0	1600
OU-4	**Mercury**	**7439-97-6**	**mg/Kg**	**17**	**100.0%**	**0.26**	**1.75**	**29.4%**	**Yes**	**5**	**0.18**
OU-4	Methylene chloride (Dichloromethane)	75-09-2	ug/Kg	17	52.9%	48.24	640		No	0	12000
OU-4	Methyl-t-butyl ether	1634-04-4	ug/Kg	17	0.0%	2.23	28		not detected	0	NS
OU-4	Moisture	MOISTURE	%	19	100.0%	21.15	69.6		No screening criteria	0	NS
OU-4	Naphthalene	91-20-3	ug/kg	17	47.1%	17.59	140		No screening criteria	0	NS
OU-4	**Nickel**	**7440-02-0**	**mg/Kg**	**17**	**100.0%**	**26.02**	**46**	**29.4%**	**Yes**	**5**	**30**
OU-4	Nitrobenzene	98-95-3	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	N-Nitrosodi-n-propylamine	621-64-7	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/kg	17	0.0%	23.24	54		not detected	0	NS
OU-4	p-Chloro-m-cresol	59-50-7	ug/kg	17	0.0%	25.35	73		not detected	0	NS
OU-4	p-Cresol	106-44-5	ug/kg	17	0.0%	25.35	73		not detected	0	NS
OU-4	Pentachlorophenol	87-86-5	ug/kg	17	0.0%	52.76	180		not detected	0	800
OU-4	Phenanthrene	85-01-8	ug/kg	17	70.6%	146.94	2100		No screening criteria	0	NS
OU-4	Phenol	108-95-2	ug/kg	17	0.0%	23.24	54		not detected	0	30000
OU-4	Potassium	9/7/7440	mg/kg	17	100.0%	2188.35	3360		No screening criteria	0	NS
OU-4	Pyrene	76165-23-6	ug/kg	17	76.5%	178.12	2600		No screening criteria	0	NS
OU-4	Selenium	7782-49-2	mg/Kg	17	23.5%	1.10	2.17		not detected	0	3.9
OU-4	Silver	7440-22-4	mg/Kg	17	41.2%	0.17	0.352		No	0	2
OU-4	Sodium	7440-23-5	mg/kg	17	100.0%	66.39	196		No screening criteria	0	NS
OU-4	Styrene	100-42-5	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Sulfate	14808-79-8	mg/kg	16	18.8%	11.85	49.1		not detected	0	NS
OU-4	Tert-amyl methyl ether	994-05-8	ug/kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Tertiary Butyl Alcohol	75-65-0	ug/kg	17	0.0%	88.00	1100		not detected	0	NS
OU-4	Tetrachloroethene	127-18-4	ug/Kg	17	0.0%	4.29	56		not detected	0	2000
OU-4	Thallium	7440-28-0	mg/Kg	17	52.9%	1.06	3.08		No screening criteria	0	NS
OU-4	Toluene	108-88-3	ug/kg	17	0.0%	4.29	56		not detected	0	36000
OU-4	trans-1,2-Dichloroethene	156-60-5	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	trans-1,3-Dichloropropene	10061-02-6	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Trichloroethene (Trichloroethylene)	79-01-6	ug/Kg	17	0.0%	4.29	56		not detected	0	2000
OU-4	Vanadium	7440-62-2	mg/kg	17	100.0%	28.94	50.4		No screening criteria	0	NS
OU-4	Vinyl chloride (Chloroethene)	75-01-4	ug/Kg	17	0.0%	4.29	56		not detected	0	NS
OU-4	Xylenes, Total	1330-20-7	ug/kg	17	0.0%	4.29	56		not detected	0	260
OU-4	**Zinc**	**7440-66-6**	**mg/Kg**	**17**	**100.0%**	**78.39**	**155**	**5.9%**	**Yes**	**1**	**109**

* NYSDEC Brownfield Sites Cleanup Program: Soil Cleanup Objectives (SCOs) for Protection of Ecological Resources (NYCRR Part 375-6.8(b)) [http://www.dec.ny.gov/regs/15507.html#15515]

NS - not specified

Surface Soil (12-24 inches bgs) Summary Statistics and Ecological Screening - Operational Unit OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Total number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-4	1,1,1-Trichloroethane	71-55-6	ug/kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	1,1,2-Trichloroethane	79-00-5	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	1,1-Dichloroethane	75-34-3	ug/kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	1,2,4-Trichlorobenzene	120-82-1	ug/Kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/Kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	1,2-Dichloroethane	107-06-2	ug/Kg	5	0.0%	1.00	1		not detected	0	10000
OU-4	1,2-Dichloropropane	78-87-5	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	1,3-Dichlorobenzene	541-73-1	ug/Kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	1,4-Dichlorobenzene	106-46-7	ug/Kg	5	0.0%	37.80	40		not detected	0	20000
OU-4	2,4,5-Trichlorophenol	95-95-4	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	2,4,6-Trichlorophenol	88-06-2	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	2,4-Dichlorophenol	120-83-2	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	2,4-Dimethylphenol	105-67-9	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	2,4-Dinitrophenol	51-28-5	ug/kg	5	0.0%	752.00	790		not detected	0	NS
OU-4	2,4-Dinitrotoluene	121-14-2	ug/Kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	2,6-Dinitrotoluene	606-20-2	ug/Kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	2-Butanone (Methyl ethyl ketone)	78-93-3	ug/Kg	5	0.0%	4.60	5		not detected	0	100000
OU-4	2-Chloronaphthalene	91-58-7	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	2-Chlorophenol (o-Chlorophenol)	95-57-8	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	2-Hexanone	591-78-6	ug/Kg	5	0.0%	3.20	4		not detected	0	NS
OU-4	2-Methyl-naphthlalene	91-57-6	ug/kg	5	20.0%	38.00	40		not detected	0	NS
OU-4	2-Methylphenol (o-Cresol)	95-48-7	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	2-Nitrophenol (o-Nitrophenol)	88-75-5	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	3,3'-Dichlorobenzidine	91-94-1	ug/kg	5	0.0%	112.00	120		not detected	0	NS
OU-4	3-Nitroaniline	99-09-2	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	ug/kg	5	0.0%	190.00	200		not detected	0	NS
OU-4	4-Bromophenylphenylether	101-55-3	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	4-Chloroaniline	106-47-8	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	4-Methyl-2-pentanone	108-10-1	ug/Kg	5	0.0%	3.20	4		not detected	0	NS
OU-4	4-Nitroaniline	100-01-6	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	4-Nitrophenol	100-02-7	ug/kg	5	0.0%	190.00	200		not detected	0	NS
OU-4	Acenaphthene	83-32-9	ug/kg	5	0.0%	37.80	40		not detected	0	20000
OU-4	Acenaphthylene	208-96-8	ug/kg	5	40.0%	59.00	130		No screening criteria	0	NS
OU-4	Acetone	67-64-1	ug/kg	5	20.0%	8.20	9		No	0	2200
OU-4	Aluminum	7429-90-5	mg/kg	5	100.0%	14924.00	21200		No screening criteria	0	NS
OU-4	Anthracene	120-12-7	ug/kg	5	20.0%	47.00	84		No screening criteria	0	NS
OU-4	Antimony	7440-36-0	mg/Kg	5	0.0%	1.03	1.1		not detected	0	NS
OU-4	Arsenic	7440-38-2	mg/Kg	5	100.0%	6.50	10.6		No	0	13
OU-4	Barium	7440-39-3	mg/kg	5	100.0%	63.26	78.7		No	0	433
OU-4	Benzene	71-43-2	ug/kg	5	0.0%	0.600	0.6		not detected	0	70000
OU-4	Benzo(a)anthracene	56-55-3	ug/kg	5	60.0%	131.00	360		No screening criteria	0	NS
OU-4	Benzo(a)Pyrene	50-32-8	ug/kg	5	60.0%	150.20	440		No	0	2600
OU-4	Benzo(b)Fluoranthene	205-99-2	ug/kg	5	60.0%	177.00	540		No screening criteria	0	NS
OU-4	Benzo(g,h,i)perylene	191-24-2	ug/kg	5	60.0%	147.00	460		No screening criteria	0	NS
OU-4	Benzo(k)Fluoranthene	207-08-9	ug/kg	5	60.0%	96.60	270		No screening criteria	0	NS
OU-4	Beryllium	7440-41-7	mg/Kg	5	100.0%	0.709	0.826		No	0	10
OU-4	bis(2-Chloroethoxy)methane	111-91-1	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	bis(2-Chloroethyl) ether	111-44-4	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	Bis(2-chloroisopropyl) ether	108-60-1	ug/Kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	5	40.0%	259.60	900		No screening criteria	0	NS
OU-4	Bromodichloromethane	75-27-4	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Bromoform	75-25-2	ug/kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Bromomethane (Methyl bromide)	74-83-9	ug/Kg	5	0.0%	2.00	2		not detected	0	NS
OU-4	Butylbenzylphthalate	85-68-7	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	Cadmium	7440-43-9	mg/kg	5	40.0%	0.498	1.49		No	0	4
OU-4	Calcium	7440-70-2	mg/kg	5	100.0%	31150.00	139000		No screening criteria	0	NS
OU-4	Carbazole	86-74-8	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	Carbon Disulfide	75-15-0	ug/kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Carbon Tetrachloride	56-23-5	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Chloride	16887-00-6	mg/kg	4	50.0%	3.85	4.9		No screening criteria	0	NS
OU-4	Chlorobenzene	108-90-7	ug/kg	5	60.0%	2.00	5		No	0	40000
OU-4	Chloroethane	75-00-3	ug/Kg	5	0.0%	2.00	2		not detected	0	NS
OU-4	Chloroform	67-66-3	ug/Kg	5	0.0%	1.00	1		not detected	0	12000
OU-4	Chloromethane (Methyl chloride)	74-87-3	ug/Kg	5	0.0%	2.00	2		not detected	0	NS
OU-4	Chromium	7440-47-3	mg/Kg	5	100.0%	17.46	27		No	0	41
OU-4	Chrysene	218-01-9	ug/kg	5	60.0%	144.20	420		No screening criteria	0	NS
OU-4	cis-1,2-Dichloroethene	156-59-2	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	cis-1,3-Dichloropropene	10061-01-5	ug/kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Cobalt	7440-48-4	mg/kg	5	100.0%	8.97	11.5		No screening criteria	0	NS
OU-4	Copper	7440-50-8	mg/kg	5	100.0%	24.98	43.5		No	0	50
OU-4	Dibenz(a,h)anthracene	53-70-3	ug/kg	5	40.0%	59.20	130		No screening criteria	0	NS
OU-4	Dibenzofuran	132-64-9	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	Dibromochloromethane	124-48-1	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Diethylphthalate	84-66-2	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	Diisopropyl ether	108-20-3	ug/kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Dimethylphthalate	131-11-3	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	Di-n-butylphthalate	84-74-2	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	Di-n-octylphthalate	117-84-0	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	Ethylbenzene	100-41-4	ug/kg	5	20.0%	1.20	2		No screening criteria	0	NS
OU-4	Ethyl-t-butylether	637-92-3	ug/kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Fluoranthene	206-44-0	ug/kg	5	60.0%	165.40	450		No screening criteria	0	NS
OU-4	Fluorene	86-73-7	ug/kg	5	0.0%	37.80	40		not detected	0	30000
OU-4	Hexachlorobenzene	118-74-1	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	Hexachlorobutadiene	87-68-3	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	Hexachlorocyclopentadiene	77-47-4	ug/kg	5	0.0%	190.00	200		not detected	0	NS
OU-4	Hexachloroethane	67-72-1	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	5	40.0%	110.80	310		No screening criteria	0	NS
OU-4	IRON	7439-89-6	mg/kg	5	100.0%	22280.00	28400		No screening criteria	0	NS
OU-4	Isophorone	78-59-1	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	**Lead**	**7439-92-1**	**mg/Kg**	**5**	**100.0%**	**28.28**	**73.6**	**20.0%**	**Yes**	**1**	**63**
OU-4	Magnesium	7439-95-4	mg/kg	5	100.0%	20192.00	78900		No screening criteria	0	NS
OU-4	Manganese	7439-96-5	mg/kg	5	100.0%	764.20	1430		No	0	1600
OU-4	**Mercury**	**7439-97-6**	**mg/Kg**	**5**	**100.0%**	**0.11**	**0.203**	**20.0%**	**Yes**	**1**	**0.18**
OU-4	Methylene chloride (Dichloromethane)	75-09-2	ug/Kg	5	80.0%	4.40	13		No	0	12000
OU-4	Methyl-t-butyl ether	1634-04-4	ug/Kg	5	0.0%	0.60	0.6		not detected	0	NS
OU-4	Moisture	MOISTURE	%	5	100.0%	11.46	16.1		No screening criteria	0	NS
OU-4	Naphthalene	91-20-3	ug/kg	5	20.0%	38.60	42		No screening criteria	0	NS
OU-4	Nickel	7440-02-0	mg/Kg	5	100.0%	18.78	22.4		No	0	30
OU-4	Nitrobenzene	98-95-3	ug/kg	5	0.0%	37.80	40		not detected	0	NS

Surface Soil (12-24 inches bgs) Summary Statistics and Ecological Screening - Operational Unit OU-4

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Total number of results	% detected	Average Concentration	Maximum Concentration	% results > Criteria	Is Maximum Greater than Criteria?	No. Criteria Exceedances	Soil Screening Criteria*
OU-4	N-Nitrosodi-n-propylamine	621-64-7	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/kg	5	0.0%	37.80	40		not detected	0	NS
OU-4	p-Chloro-m-cresol	59-50-7	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	p-Cresol	106-44-5	ug/kg	5	0.0%	75.20	79		not detected	0	NS
OU-4	Pentachlorophenol	87-86-5	ug/kg	5	0.0%	190.00	200		not detected	0	800
OU-4	Phenanthrene	85-01-8	ug/kg	5	60.0%	99.80	260		No screening criteria	0	NS
OU-4	Phenol	108-95-2	ug/kg	5	0.0%	37.80	40		not detected	0	30000
OU-4	Potassium	9/7/7440	mg/kg	5	100.0%	1272.00	1470		No screening criteria	0	NS
OU-4	Pyrene	76165-23-6	ug/kg	5	60.0%	227.40	670		No screening criteria	0	NS
OU-4	Selenium	7782-49-2	mg/Kg	5	20.0%	1.15	1.31		No	0	3.9
OU-4	Silver	7440-22-4	mg/Kg	5	0.0%	0.19	0.203		not detected	0	2
OU-4	Sodium	7440-23-5	mg/kg	5	100.0%	84.34	196		No screening criteria	0	NS
OU-4	Styrene	100-42-5	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Sulfate	14808-79-8	mg/kg	4	75.0%	11.95	15.1		No screening criteria	0	NS
OU-4	Tert-amyl methyl ether	994-05-8	ug/kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Tertiary Butyl Alcohol	75-65-0	ug/kg	5	0.0%	22.80	24		not detected	0	NS
OU-4	Tetrachloroethene	127-18-4	ug/Kg	5	0.0%	1.00	1		not detected	0	2000
OU-4	Thallium	7440-28-0	mg/Kg	5	0.0%	1.51	1.59		not detected	0	NS
OU-4	Toluene	108-88-3	ug/kg	5	60.0%	2.40	4		No	0	36000
OU-4	trans-1,2-Dichloroethene	156-60-5	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	trans-1,3-Dichloropropene	10061-02-6	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Trichloroethene (Trichloroethylene)	79-01-6	ug/Kg	5	0.0%	1.00	1		not detected	0	2000
OU-4	Vanadium	7440-62-2	mg/kg	5	100.0%	21.04	23.9		No screening criteria	0	NS
OU-4	Vinyl chloride (Chloroethene)	75-01-4	ug/Kg	5	0.0%	1.00	1		not detected	0	NS
OU-4	Xylenes, Total	1330-20-7	ug/kg	5	60.0%	4.20	11		No	0	260
OU-4	Zinc	7440-66-6	mg/Kg	5	100.0%	61.72	71.2		No	0	109

* NYSDEC Brownfield Sites Cleanup Program: Soil Cleanup Objectives (SCOs) for Protection of Ecological Resources (NYCRR Part 375-6.8(b)) [http://www.dec.ny.gov/regs/15507.html#15515]

NS - not specified

Groundwater Summary Statistics and Ecological Screening (OU-1A, OU-1C and OU-4): Monitoring Wells Located within 100 Feet of Fishkill Creek

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Number of results	% detected	Average Concentration	Maximum Concentration	% Results > Screening Criteria	Is Max Greater than Screening Criteria?	No. Criteria Exceedances	Surface Water Screening Criteria*
OU-1A	1,1,1,2-TETRACHLOROETHANE	630-20-6	ug/l	8	0.0%	13.75	50		not detected	0	NS
OU-1A	1,1,1-Trichloroethane	71-55-6	ug/l	170	32.4%	381.33	29000		No screening criteria	0	NS
OU-1A	1,1,2,2-Tetrachloroethane	79-34-5	ug/l	170	0.0%	5.25	500		not detected	0	NS
OU-1A	1,1,2-Trichloroethane	79-00-5	ug/l	170	0.0%	4.92	500		not detected	0	NS
OU-1A	1,1-Dichloroethane	75-34-3	ug/l	170	51.8%	15.82	500		not detected	0	NS
OU-1A	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/l	170	32.9%	22.84	680		No screening criteria	0	NS
OU-1A	1,1-DICHLOROPROPENE	563-58-6	ug/L	3	0.0%	1.00	1		not detected	0	NS
OU-1A	1,2,3-Trichlorobenzene	87-61-6	ug/L	3	0.0%	1.00	1		not detected	0	5
OU-1A	1,2,3-TRICHLOROPROPANE	96-18-4	ug/l	8	0.0%	14.13	50		not detected	0	NS
OU-1A	1,2,4,5-TETRACHLOROBENZENE	95-94-3	ug/l	4	0.0%	5.00	5		not detected	0	NS
OU-1A	1,2,4-Trichlorobenzene	120-82-1	ug/l	160	0.0%	1.13	10		not detected	0	5
OU-1A	1,2,4-Trimethylbenzene	95-63-6	ug/L	3	100.0%	236.00	480	66.67%	Yes	2	33
OU-1A	1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	ug/l	8	0.0%	27.25	100		not detected	0	NS
OU-1A	1,2-Dibromoethane	106-93-4	ug/l	7	0.0%	15.43	50		not detected	0	NS
OU-1A	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/l	176	54.5%	15.94	1000	25.00%	not detected	44	5
OU-1A	1,2-Dichloroethane	107-06-2	ug/l	170	1.8%	5.26	500		not detected	0	NS
OU-1A	1,2-Dichloroethene	540-59-0	ug/l	9	11.1%	59.07	500		not detected	0	NS
OU-1A	1,2-Dichloropropane	78-87-5	ug/l	170	0.0%	5.24	500		not detected	0	NS
OU-1A	1,3,5-Trimethylbenzene	108-67-8	ug/L	3	100.0%	50.33	110		No screening criteria	0	NS
OU-1A	1,3-Dichlorobenzene	541-73-1	ug/l	174	15.5%	7.62	1000	1.15%	not detected	2	5
OU-1A	1,3-DICHLOROPROPANE	142-28-9	ug/L	3	0.0%	1.00	1		not detected	0	NS
OU-1A	1,4-Dichlorobenzene	106-46-7	ug/l	175	41.7%	10.01	1000	25.71%	not detected	45	5
OU-1A	2,4,5-Trichlorophenol	95-95-4	ug/l	145	0.0%	0.80	1		not detected	0	1
OU-1A	2,4,6-Trichlorophenol	88-06-2	ug/l	145	0.0%	0.80	1		not detected	0	1
OU-1A	2,4-Dichlorophenol	120-83-2	ug/l	145	0.0%	0.80	1		not detected	0	1
OU-1A	2,4-Dimethylphenol	105-67-9	ug/l	145	0.7%	2.06	12	0.69%	Yes	1	5
OU-1A	2,4-Dinitrophenol	51-28-5	ug/l	145	0.0%	14.08	22		not detected	0	400
OU-1A	2,4-Dinitrotoluene	121-14-2	ug/l	157	0.0%	1.32	10		not detected	0	NS
OU-1A	2,6-Dinitrotoluene	606-20-2	ug/l	157	0.0%	1.13	10		not detected	0	NS
OU-1A	2-Butanone (Methyl ethyl ketone)	78-93-3	ug/l	159	10.1%	13.67	1000		not detected	0	NS
OU-1A	2-Chloroethyl vinyl ether	110-75-8	ug/l	9	0.0%	112.89	1000		not detected	0	NS
OU-1A	2-Chloronaphthalene	91-58-7	ug/l	157	0.0%	1.66	10		not detected	0	NS
OU-1A	2-Chlorophenol (o-Chlorophenol)	95-57-8	ug/l	145	9.0%	1.08	17	8.28%	Yes	12	1
OU-1A	2-Hexanone	591-78-6	ug/l	159	0.6%	13.11	1000		not detected	0	NS
OU-1A	2-Methyl-naphthlalene	91-57-6	ug/l	157	22.9%	8.90	1200	4.46%	Yes	7	4.7
OU-1A	2-Methylphenol (o-Cresol)	95-48-7	ug/l	145	0.0%	0.80	1		not detected	0	5
OU-1A	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/l	156	0.0%	2.21	53		not detected	0	NS
OU-1A	2-Nitrophenol (o-Nitrophenol)	88-75-5	ug/l	145	0.0%	0.80	1		not detected	0	5
OU-1A	3,3'-Dichlorobenzidine	91-94-1	ug/l	157	0.0%	2.68	21		not detected	0	NS
OU-1A	3-Nitroaniline	99-09-2	ug/l	156	0.6%	2.22	53		not detected	0	NS
OU-1A	4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	ug/l	145	0.0%	5.02	6		not detected	0	5
OU-1A	4-Bromophenylphenylether	101-55-3	ug/l	157	0.0%	1.14	10		not detected	0	NS
OU-1A	4-Chloroaniline	106-47-8	ug/l	156	0.0%	1.13	10		not detected	0	NS
OU-1A	4-Chlorophenyl phenyl ether	7005-72-3	ug/l	157	0.0%	1.69	10		not detected	0	NS
OU-1A	4-Isopropyltoluene	99-87-6	ug/L	3	100.0%	2.97	4.3		No screening criteria	0	NS
OU-1A	4-Methyl-2-pentanone	108-10-1	ug/l	159	1.3%	13.35	1000		not detected	0	NS
OU-1A	4-Nitroaniline	100-01-6	ug/l	156	0.0%	2.21	53		not detected	0	NS
OU-1A	4-Nitrophenol	100-02-7	ug/l	145	0.0%	10.00	12		not detected	0	NS
OU-1A	Acenaphthene	83-32-9	ug/l	157	29.3%	1.35	31	1.27%	Yes	2	5.3
OU-1A	Acenaphthylene	208-96-8	ug/l	157	6.4%	1.00	10		not detected	0	NS
OU-1A	Acetone	67-64-1	ug/l	151	19.9%	25.00	1000		not detected	0	NS
OU-1A	Acrolein	25314-61-8	ug/l	5	0.0%	52.00	100		not detected	0	NS
OU-1A	Acrylonitrile	107-13-1	ug/L	5	0.0%	52.00	100		not detected	0	NS
OU-1A	Aldrin	309-00-2	ug/l	1	100.0%	0.43	0.43	100.00%	Yes	1	0.001
OU-1A	Alkalinity (Total)	ALK	ugCaCO3/L	40	100.0%	191830.00	292000		No screening criteria	0	NS
OU-1A	Aluminum	7429-90-5	mg/l	151	77.5%	1.94	73.1	72.19%	Yes	109	0.1
OU-1A	Anthracene	120-12-7	ug/l	157	6.4%	1.00	10		not detected	0	3.8
OU-1A	Antimony	7440-36-0	mg/l	151	1.3%	0.01	0.0097		not detected	0	NS
OU-1A	Aroclor 1016	12674-11-2	ug/l	2	0.0%	0.00	0		not detected	0	0.000001
OU-1A	Aroclor 1221	11104-28-2	ug/l	2	0.0%	0.00	0		not detected	0	0.000001
OU-1A	Aroclor 1232	11141-16-5	ug/l	2	0.0%	0.00	0		not detected	0	0.000001
OU-1A	Aroclor 1242	53469-21-9	ug/l	2	0.0%	0.00	0		not detected	0	0.000001
OU-1A	Aroclor 1248	12672-29-6	ug/l	2	0.0%	0.00	0		not detected	0	0.000001
OU-1A	Aroclor 1254	11097-69-1	ug/l	2	0.0%	0.00	0		not detected	0	0.000001
OU-1A	Aroclor 1260	11096-82-5	ug/l	2	0.0%	0.00	0		not detected	0	0.000001
OU-1A	Arsenic	7440-38-2	mg/l	152	23.0%	0.01	0.0512		No	0	0.15
OU-1A	Barium	7440-39-3	mg/l	152	100.0%	0.09	0.687		No screening criteria	0	NS
OU-1A	Benzene	71-43-2	ug/l	212	48.6%	15.95	560	14.62%	Yes	31	10
OU-1A	Benzo(a)anthracene	56-55-3	ug/l	157	6.4%	1.06	10	6.37%	not detected	10	0.03
OU-1A	Benzo(a)Pyrene	50-32-8	ug/l	157	7.6%	1.05	10	7.64%	not detected	12	0.0012
OU-1A	Benzo(b)Fluoranthene	205-99-2	ug/l	157	7.6%	1.07	10		not detected	0	NS
OU-1A	Benzo(g,h,i)perylene	191-24-2	ug/l	157	6.4%	1.03	10		not detected	0	NS
OU-1A	Benzo(k)Fluoranthene	207-08-9	ug/l	157	5.1%	1.01	10		not detected	0	NS
OU-1A	BENZYL ALCOHOL	100-51-6	ug/L	3	0.0%	10.00	10		not detected	0	NS
OU-1A	Beryllium	7440-41-7	mg/l	151	6.6%	0.00	0.0032		No	0	1.1
OU-1A	bis(2-Chloroethoxy)methane	111-91-1	ug/l	157	0.0%	1.13	10		not detected	0	NS
OU-1A	bis(2-Chloroethyl) ether	111-44-4	ug/l	157	14.0%	2.30	21		No screening criteria	0	NS
OU-1A	Bis(2-chloroisopropyl) ether	108-60-1	ug/l	157	0.0%	1.15	10		not detected	0	NS
OU-1A	bis(2-Ethylhexyl)phthalate	117-81-7	ug/l	157	22.3%	6.25	310	22.29%	Yes	35	0.6
OU-1A	BROMOBENZENE	108-86-1	ug/L	3	0.0%	1.00	1		not detected	0	NS
OU-1A	BROMOCHLOROMETHANE	74-97-5	ug/L	8	0.0%	13.75	50		not detected	0	NS
OU-1A	Bromodichloromethane	75-27-4	ug/l	170	0.6%	5.24	500		not detected	0	NS
OU-1A	Bromoform	75-25-2	ug/l	170	0.0%	5.25	500		not detected	0	NS
OU-1A	Bromomethane (Methyl bromide)	74-83-9	ug/l	170	0.0%	8.80	1000		not detected	0	NS
OU-1A	BTEX	BTEX	ug/l	1	100.0%	600.00	600		No screening criteria	0	NS
OU-1A	Butylbenzylphthalate	85-68-7	ug/l	157	0.6%	2.41	10		not detected	0	NS
OU-1A	Cadmium	7440-43-9	mg/l	152	15.1%	0.00	0.005	0.66%	not detected	1	0.002
OU-1A	Calcium	7440-70-2	mg/l	151	100.0%	74.07	339		No screening criteria	0	NS
OU-1A	Carbazole	86-74-8	ug/l	148	2.7%	0.80	2		No screening criteria	0	NS
OU-1A	CARBON DIOXIDE	124-38-9	ug/l	40	100.0%	53000.00	170000		No screening criteria	0	NS
OU-1A	Carbon Disulfide	75-15-0	ug/l	159	0.0%	5.56	500		not detected	0	NS
OU-1A	Carbon Tetrachloride	56-23-5	ug/l	170	1.2%	5.26	500		not detected	0	NS
OU-1A	Chloride	16887-00-6	mg/l	188	97.3%	187.53	1460		No screening criteria	0	NS
OU-1A	Chlorobenzene	108-90-7	ug/l	212	62.3%	98.88	3100	44.81%	Yes	95	5
OU-1A	Chloroethane	75-00-3	ug/l	171	15.8%	11.46	1000		not detected	0	NS
OU-1A	Chloroform	67-66-3	ug/l	170	19.4%	6.24	500		not detected	0	NS
OU-1A	Chloromethane (Methyl chloride)	74-87-3	ug/l	170	0.6%	8.66	1000		not detected	0	200
OU-1A	Chromium	7440-47-3	mg/l	151	41.7%	0.01	0.0904	1.32%	Yes	2	0.074
OU-1A	Chrysene	218-01-9	ug/l	157	7.6%	1.07	10		not detected	0	NS
OU-1A	cis-1,2-Dichloroethene	156-59-2	ug/l	201	43.3%	43.17	630		No screening criteria	0	NS
OU-1A	cis-1,3-Dichloropropene	10061-01-5	ug/l	170	0.0%	5.24	500		not detected	0	NS

Groundwater Summary Statistics and Ecological Screening (OU-1A, OU-1C and OU-4): Monitoring Wells Located within 100 Feet of Fishkill Creek

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Number of results	% detected	Average Concentration	Maximum Concentration	% Results > Screening Criteria	Is Max Greater than Screening Criteria?	No. Criteria Exceedances	Surface Water Screening Criteria*
OU-1A	Cobalt	7440-48-4	mg/l	151	13.2%	0.00	0.04	3.31%	Yes	5	0.005
OU-1A	Copper	7440-50-8	mg/l	151	33.1%	0.01	0.1	5.96%	Yes	9	0.013
OU-1A	Dibenz(a,h)anthracene	53-70-3	ug/l	157	1.9%	0.98	10		not detected	0	NS
OU-1A	Dibenzofuran	132-64-9	ug/l	156	15.4%	1.22	17		No screening criteria	0	NS
OU-1A	Dibromochloromethane	124-48-1	ug/l	170	0.0%	5.25	500		not detected	0	NS
OU-1A	Dibromomethane (Methylene bromide)	74-95-3	ug/L	5	0.0%	15.60	50		not detected	0	NS
OU-1A	Dichlorodifluoromethane (Freon 12)	75-71-8	ug/L	3	0.0%	1.00	1		not detected	0	NS
OU-1A	Diethylphthalate	84-66-2	ug/l	157	0.0%	2.40	10		not detected	0	NS
OU-1A	Diisopropyl ether	108-20-3	ug/l	153	0.0%	1.44	40		not detected	0	NS
OU-1A	Dimethylphthalate	131-11-3	ug/l	157	0.0%	2.40	10		not detected	0	NS
OU-1A	Di-n-butylphthalate	84-74-2	ug/l	157	0.0%	2.40	10		not detected	0	NS
OU-1A	Di-n-octylphthalate	117-84-0	ug/l	157	1.3%	2.51	15		No screening criteria	0	NS
OU-1A	Ethane	74-84-0	ug/l	40	27.5%	1.48	3.9		No screening criteria	0	NS
OU-1A	Ethene	74-85-1	ug/l	40	5.0%	1.01	1.2		No screening criteria	0	NS
OU-1A	Ethylbenzene	100-41-4	ug/l	173	23.1%	15.57	580	11.56%	Yes	20	17
OU-1A	Ethyl-t-butylether	637-92-3	ug/l	153	0.0%	1.44	40		not detected	0	NS
OU-1A	Ferrous Iron	15438-31-0	ug/l	40	82.5%	5739.68	57700		No screening criteria	0	NS
OU-1A	Fluoranthene	206-44-0	ug/l	157	11.5%	1.19	11		No screening criteria	0	NS
OU-1A	Fluorene	86-73-7	ug/l	157	25.5%	1.24	12	17.20%	Yes	27	0.54
OU-1A	Hexachlorobenzene	118-74-1	ug/l	157	0.0%	0.98	10		not detected	0	0.00003
OU-1A	Hexachlorobutadiene	87-68-3	ug/l	160	0.0%	1.14	10		not detected	0	0.01
OU-1A	Hexachlorocyclopentadiene	77-47-4	ug/l	157	0.0%	5.12	10		not detected	0	0.45
OU-1A	Hexachloroethane	67-72-1	ug/l	157	0.0%	1.32	10		not detected	0	0.6
OU-1A	Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	157	5.7%	1.01	10		not detected	0	NS
OU-1A	Iodomethane (Methyl iodide)	74-88-4	ug/l	5	0.0%	22.00	50		not detected	0	NS
OU-1A	Iron	7439-89-6	mg/l	151	98.7%	6.15	107		No screening criteria		NS
OU-1A	Isophorone	78-59-1	ug/l	157	0.0%	1.13	10		not detected	0	NS
OU-1A	Isopropylbenzene	98-82-8	ug/L	3	100.0%	63.37	160	100.00%	Yes	3	2.6
OU-1A	Lead	7439-92-1	mg/l	152	25.0%	0.01	0.181	23.68%	Yes	36	0.004
OU-1A	Magnesium	7439-95-4	mg/l	151	99.3%	21.02	107		No screening criteria	0	NS
OU-1A	Manganese	7439-96-5	mg/l	191	99.5%	1.48	8.33		No screening criteria	0	NS
OU-1A	Mercury	7439-97-6	mg/l	152	9.2%	0.00	0.033	8.55%	Yes	13	0.0000026
OU-1A	Methane	74-82-8	ug/l	40	77.5%	544.98	5100		No screening criteria	0	NS
OU-1A	Methylene chloride (Dichloromethane)	75-09-2	ug/l	170	3.5%	6.68	500		not detected	0	200
OU-1A	Methyl-t-butyl ether	1634-04-4	ug/l	161	12.4%	1.06	25		not detected	0	NS
OU-1A	Naphthalene	91-20-3	ug/l	161	38.5%	4.45	130	8.07%	Yes	13	13
OU-1A	n-Butylbenzene	104-51-8	ug/L	3	100.0%	23.93	43		No screening criteria	0	NS
OU-1A	Nickel	7440-02-0	mg/l	151	23.2%	0.00	0.0899	0.66%	Yes	1	0.052
OU-1A	Nitrate as nitrogen	84145-82-4	ug/l	40	20.0%	498.25	4200		No screening criteria	0	NS
OU-1A	Nitrobenzene	98-95-3	ug/l	157	0.0%	1.13	10		not detected	0	NS
OU-1A	N-Nitrosodimethylamine	62-75-9	ug/L	3	0.0%	10.00	10		not detected	0	NS
OU-1A	N-Nitrosodi-n-propylamine	621-64-7	ug/l	157	0.0%	1.13	10		not detected	0	NS
OU-1A	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/l	157	1.9%	1.72	10		not detected	0	NS
OU-1A	n-Propylbenzene	103-65-1	ug/L	3	100.0%	41.00	81		No screening criteria	0	NS
OU-1A	o-CHLOROTOLUENE	95-49-8	ug/L	3	0.0%	1.00	1		not detected	0	NS
OU-1A	o-Xylene	95-47-6	ug/L	3	100.0%	95.80	250		No screening criteria	0	NS
OU-1A	p-Chloro-m-cresol	59-50-7	ug/l	145	0.0%	0.80	1		not detected	0	NS
OU-1A	p-CHLOROTOLUENE	106-43-4	ug/L	3	0.0%	1.00	1		not detected	0	NS
OU-1A	p-Cresol	106-44-5	ug/l	145	0.7%	1.65	38	0.69%	Yes	1	5
OU-1A	Pentachlorophenol	87-86-5	ug/l	145	0.0%	2.19	3		not detected	0	1
OU-1A	pH - Hydrogen Ion	12408-02-5	SU	33	100.0%	7.39	8		No screening criteria	0	NS
OU-1A	Phenanthrene	85-01-8	ug/l	157	19.1%	1.43	38	2.55%	Yes	4	5
OU-1A	Phenol	108-95-2	ug/l	145	6.2%	1.99	110	2.76%	Yes	4	5
OU-1A	Potassium	9/7/7440	mg/l	151	100.0%	4.39	43.9		No screening criteria	0	NS
OU-1A	Pyrene	76165-23-6	ug/l	157	12.7%	1.20	10	1.91%	Yes	3	4.6
OU-1A	sec-Butylbenzene	135-98-8	ug/L	3	100.0%	7.70	14		No screening criteria	0	NS
OU-1A	sec-DICHLOROPROPANE	594-20-7	ug/l	7	0.0%	15.43	50		not detected	0	NS
OU-1A	Selenium	7782-49-2	mg/l	152	2.0%	0.01	0.0109	1.97%	Yes	3	0.0046
OU-1A	Silver	7440-22-4	mg/l	152	1.3%	0.00	0.0023	1.32%	not detected	2	0.0001
OU-1A	Sodium	7440-23-5	mg/l	151	100.0%	78.42	513		No screening criteria	0	NS
OU-1A	Styrene	100-42-5	ug/l	162	0.0%	5.48	500		not detected	0	NS
OU-1A	Sulfate	14808-79-8	mg/l	188	94.1%	25.29	287		No screening criteria	0	NS
OU-1A	Sulfide, Total	12597-04-5	ug/l	40	12.5%	81.50	660		No screening criteria	0	NS
OU-1A	t-Butylbenzene	98-06-6	ug/L	3	0.0%	1.00	1		not detected	0	NS
OU-1A	Tert-amyl methyl ether	994-05-8	ug/l	153	0.0%	1.44	40		not detected	0	NS
OU-1A	Tertiary Butyl Alcohol	75-65-0	ug/l	153	0.0%	17.91	500		not detected	0	NS
OU-1A	Tetrachloroethene	127-18-4	ug/l	170	7.6%	5.46	500	7.06%	not detected	12	1
OU-1A	Thallium	7440-28-0	mg/l	151	4.0%	0.01	0.0675	1.32%	not detected	2	0.008
OU-1A	Toluene	108-88-3	ug/l	172	29.1%	12.38	500		not detected	0	6000
OU-1A	Total Hardness as CaCO3	471-34-1	mgCaCO3/L	33	100.0%	273.86	847		No screening criteria	0	NS
OU-1A	trans-1,2-Dichloroethene	156-60-5	ug/l	160	6.9%	2.13	50		not detected	0	NS
OU-1A	trans-1,3-Dichloropropene	10061-02-6	ug/l	170	0.0%	5.24	500		not detected	0	NS
OU-1A	trans-1,4-Dichloro-2-Butene	110-57-6	ug/l	4	0.0%	26.25	50		not detected	0	NS
OU-1A	Trichloroethene (Trichloroethylene)	79-01-6	ug/l	210	37.1%	58.75	820	16.67%	Yes	35	40
OU-1A	Trichlorofluoromethane (Freon 11)	75-69-4	ug/l	16	6.3%	14.64	100		not detected	0	NS
OU-1A	Vanadium	7440-62-2	mg/l	151	31.8%	0.00	0.0923	6.62%	Yes	10	0.014
OU-1A	Vinyl Acetate	108-05-4	ug/L	5	0.0%	242.00	1000		not detected	0	NS
OU-1A	Vinyl chloride (Chloroethene)	75-01-4	ug/l	210	24.3%	10.38	1000		not detected	0	NS
OU-1A	Xylenes, Total	1330-20-7	ug/l	172	26.7%	21.49	980	6.98%	Yes	12	65
OU-1A	Zinc	7440-66-6	mg/l	150	69.3%	0.06	1.56	16.00%	Yes	24	0.083
OU-1C	1,1,1,2-TETRACHLOROETHANE	630-20-6	ug/l	2	0.0%	0.00	0		not detected	0	NS
OU-1C	1,1,1-Trichloroethane	71-55-6	ug/l	75	0.0%	0.79	2		not detected	0	NS
OU-1C	1,1,2,2-Tetrachloroethane	79-34-5	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	1,1,2-Trichloroethane	79-00-5	ug/l	75	0.0%	0.79	2		not detected	0	NS
OU-1C	1,1-Dichloroethane	75-34-3	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/l	75	0.0%	0.79	2		not detected	0	NS
OU-1C	1,2,3-TRICHLOROPROPANE	96-18-4	ug/l	2	0.0%	0.00	0		not detected	0	NS
OU-1C	1,2,4-Trichlorobenzene	120-82-1	ug/l	78	0.0%	0.76	1		not detected	0	5
OU-1C	1,2,4-Trimethylbenzene	95-63-6	ug/L	4	0.0%	0.25	1		not detected	0	33
OU-1C	1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	ug/l	2	0.0%	0.00	0		not detected	0	NS
OU-1C	1,2-Dibromoethane	106-93-4	ug/l	2	0.0%	0.00	0		not detected	0	NS
OU-1C	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/l	81	9.9%	1.00	7	3.70%	Yes	3	5
OU-1C	1,2-Dichloroethane	107-06-2	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	1,2-Dichloroethene	540-59-0	ug/l	3	0.0%	0.80	0.8		not detected	0	NS
OU-1C	1,2-Dichloropropane	78-87-5	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	1,3,5-Trimethylbenzene	108-67-8	ug/L	6	16.7%	0.50	2		No screening criteria	0	NS
OU-1C	1,3-Dichlorobenzene	541-73-1	ug/l	81	0.0%	0.77	1		not detected	0	5

Groundwater Summary Statistics and Ecological Screening (OU-1A, OU-1C and OU-4): Monitoring Wells Located within 100 Feet of Fishkill Creek

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Number of results	% detected	Average Concentration	Maximum Concentration	% Results > Screening Criteria	Is Max Greater than Screening Criteria?	No. Criteria Exceedances	Surface Water Screening Criteria*
OU-1C	1,4-Dichlorobenzene	106-46-7	ug/l	81	0.0%	0.77	1		not detected	0	5
OU-1C	2,2'-oxybis(2-chloropropane)	39638-32-9	ug/l	3	0.0%	0.00	0		not detected	0	NS
OU-1C	2,4,5-Trichlorophenol	95-95-4	ug/l	70	0.0%	0.83	1		not detected	0	1
OU-1C	2,4,6-Trichlorophenol	88-06-2	ug/l	70	0.0%	0.83	1		not detected	0	1
OU-1C	2,4-Dichlorophenol	120-83-2	ug/l	70	0.0%	0.83	1		not detected	0	1
OU-1C	2,4-Dimethylphenol	105-67-9	ug/l	70	4.3%	2.69	23	4.29%	Yes	3	5
OU-1C	2,4-Dinitrophenol	51-28-5	ug/l	70	0.0%	15.76	25		not detected	0	400
OU-1C	2,4-Dinitrotoluene	121-14-2	ug/l	76	0.0%	0.96	1		not detected	0	NS
OU-1C	2,6-Dinitrotoluene	606-20-2	ug/l	73	1.4%	0.81	1		not detected	0	NS
OU-1C	2-Butanone (Methyl ethyl ketone)	78-93-3	ug/l	72	9.7%	3.26	14		No screening criteria	0	NS
OU-1C	2-Chloroethyl vinyl ether	110-75-8	ug/l	2	0.0%	2.00	2		not detected	0	NS
OU-1C	2-Chloronaphthalene	91-58-7	ug/l	76	0.0%	1.37	3		not detected	0	NS
OU-1C	2-Chlorophenol (o-Chlorophenol)	95-57-8	ug/l	70	0.0%	0.83	1		not detected	0	1
OU-1C	2-Hexanone	591-78-6	ug/l	72	1.4%	3.06	13		No screening criteria	0	NS
OU-1C	2-Methyl-naphthlalene	91-57-6	ug/l	73	24.7%	7.22	140	19.18%	Yes	14	4.7
OU-1C	2-Methylphenol (o-Cresol)	95-48-7	ug/l	70	4.3%	0.86	2		No	0	5
OU-1C	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/l	73	0.0%	0.81	1		not detected	0	NS
OU-1C	2-Nitrophenol (o-Nitrophenol)	88-75-5	ug/l	70	0.0%	0.83	1		not detected	0	5
OU-1C	3,3'-Dichlorobenzidine	91-94-1	ug/l	76	0.0%	1.93	3		not detected	0	NS
OU-1C	3-Nitroaniline	99-09-2	ug/l	73	0.0%	0.81	1		not detected	0	NS
OU-1C	4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	ug/l	70	0.0%	5.03	6		not detected	0	5
OU-1C	4-Bromophenylphenylether	101-55-3	ug/l	76	0.0%	0.78	1		not detected	0	NS
OU-1C	4-Chloroaniline	106-47-8	ug/l	73	0.0%	0.81	1		not detected	0	NS
OU-1C	4-Chlorophenyl phenyl ether	7005-72-3	ug/l	76	0.0%	1.40	3		not detected	0	NS
OU-1C	4-Isopropyltoluene	99-87-6	ug/L	4	0.0%	0.25	1		not detected	0	NS
OU-1C	4-Methyl-2-pentanone	108-10-1	ug/l	72	0.0%	2.96	6		not detected	0	NS
OU-1C	4-Nitroaniline	100-01-6	ug/l	73	0.0%	0.81	1		not detected	0	NS
OU-1C	4-Nitrophenol	100-02-7	ug/l	70	0.0%	10.07	13		not detected	0	NS
OU-1C	Acenaphthene	83-32-9	ug/l	77	24.7%	1.04	10		not detected	0	5.3
OU-1C	Acenaphthylene	208-96-8	ug/l	76	1.3%	0.64	1		not detected	0	NS
OU-1C	Acetone	67-64-1	ug/l	72	29.2%	11.49	88		No screening criteria	0	NS
OU-1C	Acrolein	25314-61-8	ug/l	2	0.0%	0.00	0		not detected	0	NS
OU-1C	Acrylonitrile	107-13-1	ug/L	2	0.0%	0.00	0		not detected	0	NS
OU-1C	Alkalinity (Total)	ALK	ugCaCO3/L	7	100.0%	291857.14	343000		No screening criteria	0	NS
OU-1C	Aluminum	7429-90-5	mg/l	73	84.9%	1.87	25.3	83.56%	Yes	61	0.1
OU-1C	Anthracene	120-12-7	ug/l	77	11.7%	0.81	10		not detected	0	3.8
OU-1C	Antimony	7440-36-0	mg/l	73	4.1%	0.01	0.033		No screening criteria	0	NS
OU-1C	Arsenic	7440-38-2	mg/l	73	49.3%	0.04	0.233	5.48%	Yes	4	0.15
OU-1C	Barium	7440-39-3	mg/l	73	100.0%	0.10	0.366		No screening criteria	0	NS
OU-1C	Benzene	71-43-2	ug/l	86	37.2%	24.57	550	18.60%	Yes	16	10
OU-1C	Benzidine	92-87-5	ug/l	3	0.0%	0.00	0		not detected	0	NS
OU-1C	Benzo(a)anthracene	56-55-3	ug/l	77	3.9%	0.77	10	3.90%	not detected	3	0.03
OU-1C	Benzo(a)Pyrene	50-32-8	ug/l	77	5.2%	0.76	10	5.19%	not detected	4	0.0012
OU-1C	Benzo(b)Fluoranthene	205-99-2	ug/l	77	5.2%	0.76	10		not detected	0	NS
OU-1C	Benzo(g,h,i)perylene	191-24-2	ug/l	77	3.9%	0.77	10		not detected	0	NS
OU-1C	Benzo(k)Fluoranthene	207-08-9	ug/l	77	0.0%	0.76	10		not detected	0	NS
OU-1C	Beryllium	7440-41-7	mg/l	73	5.5%	0.00	0.0014		not detected	0	1.1
OU-1C	bis(2-Chloroethoxy)methane	111-91-1	ug/l	76	0.0%	0.78	1		not detected	0	NS
OU-1C	bis(2-Chloroethyl) ether	111-44-4	ug/l	76	0.0%	0.78	1		not detected	0	NS
OU-1C	Bis(2-chloroisopropyl) ether	108-60-1	ug/l	73	0.0%	0.81	1		not detected	0	NS
OU-1C	bis(2-Ethylhexyl)phthalate	117-81-7	ug/l	76	17.1%	2.32	13	17.11%	Yes	13	0.6
OU-1C	BROMOCHLOROMETHANE	74-97-5	ug/L	2	0.0%	0.00	0		not detected	0	NS
OU-1C	Bromodichloromethane	75-27-4	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	Bromoform	75-25-2	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	Bromomethane (Methyl bromide)	74-83-9	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	Butylbenzylphthalate	85-68-7	ug/l	76	0.0%	1.93	3		not detected	0	NS
OU-1C	Cadmium	7440-43-9	mg/l	73	8.2%	0.00	0.009	2.74%	Yes	2	0.002
OU-1C	Calcium	7440-70-2	mg/l	73	100.0%	79.95	144		No screening criteria	0	NS
OU-1C	Carbazole	86-74-8	ug/l	73	4.1%	0.85	2		No screening criteria	0	NS
OU-1C	CARBON DIOXIDE	124-38-9	ug/l	7	100.0%	91857.14	140000		No screening criteria	0	NS
OU-1C	Carbon Disulfide	75-15-0	ug/l	72	0.0%	0.99	2		not detected	0	NS
OU-1C	Carbon Tetrachloride	56-23-5	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	Chloride	16887-00-6	mg/l	80	100.0%	187.22	740		No screening criteria	0	NS
OU-1C	Chlorobenzene	108-90-7	ug/l	82	22.0%	1.19	5	1.22%	No	1	5
OU-1C	Chloroethane	75-00-3	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	Chloroform	67-66-3	ug/l	75	1.3%	0.80	2		not detected	0	NS
OU-1C	Chloromethane (Methyl chloride)	74-87-3	ug/l	75	0.0%	0.99	2		not detected	0	200
OU-1C	Chromium	7440-47-3	mg/l	73	43.8%	0.00	0.0325		No	0	0.074
OU-1C	Chrysene	218-01-9	ug/l	77	3.9%	0.78	10		not detected	0	NS
OU-1C	cis-1,2-Dichloroethene	156-59-2	ug/l	79	2.5%	0.81	3		not detected	0	NS
OU-1C	cis-1,3-Dichloropropene	10061-01-5	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	Cobalt	7440-48-4	mg/l	73	47.9%	0.00	0.0219	13.70%	Yes	10	0.005
OU-1C	Copper	7440-50-8	mg/l	73	34.2%	0.01	0.0929	8.22%	Yes	6	0.013
OU-1C	Dibenz(a,h)anthracene	53-70-3	ug/l	77	0.0%	0.76	10		not detected	0	NS
OU-1C	Dibenzofuran	132-64-9	ug/l	73	16.4%	1.08	6		No screening criteria	0	NS
OU-1C	Dibromochloromethane	124-48-1	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	Diethylphthalate	84-66-2	ug/l	76	0.0%	1.93	3		not detected	0	NS
OU-1C	Diisopropyl ether	108-20-3	ug/l	70	0.0%	0.82	2		not detected	0	NS
OU-1C	Dimethylphthalate	131-11-3	ug/l	76	0.0%	1.93	3		not detected	0	NS
OU-1C	Di-n-butylphthalate	84-74-2	ug/l	76	1.3%	1.97	3		not detected	0	NS
OU-1C	Di-n-octylphthalate	117-84-0	ug/l	76	0.0%	1.93	3		not detected	0	NS
OU-1C	Ethane	74-84-0	ug/l	7	100.0%	3.54	8.1		No screening criteria	0	NS
OU-1C	Ethene	74-85-1	ug/l	7	0.0%	1.00	1		not detected	0	NS
OU-1C	Ethylbenzene	100-41-4	ug/l	79	6.3%	11.85	580	3.80%	Yes	3	17
OU-1C	Ethyl-t-butylether	637-92-3	ug/l	70	0.0%	0.82	2		not detected	0	NS
OU-1C	Ferrous Iron	15438-31-0	ug/l	7	100.0%	16957.14	20800		No screening criteria	0	NS
OU-1C	Fluoranthene	206-44-0	ug/l	77	9.1%	0.80	10		not detected	0	NS
OU-1C	Fluorene	86-73-7	ug/l	77	42.9%	1.67	10	37.66%	not detected	29	0.54
OU-1C	Hexachlorobenzene	118-74-1	ug/l	76	0.0%	0.64	1		not detected	0	0.00003
OU-1C	Hexachlorobutadiene	87-68-3	ug/l	78	0.0%	0.76	1		not detected	0	0.01
OU-1C	Hexachlorocyclopentadiene	77-47-4	ug/l	76	0.0%	4.83	6		not detected	0	0.45
OU-1C	Hexachloroethane	67-72-1	ug/l	76	0.0%	0.96	1		not detected	0	0.6
OU-1C	Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	77	1.3%	0.76	10		not detected	0	NS
OU-1C	Iodomethane (Methyl iodide)	74-88-4	ug/l	2	0.0%	0.00	0		not detected	0	NS
OU-1C	Iron	7439-89-6	mg/l	73	98.6%	9.19	66.2		No screening criteria		NS
OU-1C	Isophorone	78-59-1	ug/l	76	0.0%	0.78	1		not detected	0	NS
OU-1C	Isopropylbenzene	98-82-8	ug/L	4	0.0%	0.25	1		not detected	0	2.6
OU-1C	Lead	7439-92-1	mg/l	73	39.7%	0.01	0.122	39.73%	Yes	29	0.004
OU-1C	Magnesium	7439-95-4	mg/l	73	100.0%	20.89	44.1		No screening criteria	0	NS
OU-1C	Manganese	7439-96-5	mg/l	80	100.0%	3.85	17.9		No screening criteria	0	NS
OU-1C	Mercury	7439-97-6	mg/l	73	4.1%	0.00	0.0003	4.11%	Yes	3	0.0000026
OU-1C	Methane	74-82-8	ug/l	7	100.0%	5614.29	10000		No screening criteria	0	NS
OU-1C	Methylene chloride (Dichloromethane)	75-09-2	ug/l	75	0.0%	1.97	4		not detected	0	200

Groundwater Summary Statistics and Ecological Screening (OU-1A, OU-1C and OU-4): Monitoring Wells Located within 100 Feet of Fishkill Creek

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Number of results	% detected	Average Concentration	Maximum Concentration	% Results > Screening Criteria	Is Max Greater than Screening Criteria?	No. Criteria Exceedances	Surface Water Screening Criteria*
OU-1C	Methyl-t-butyl ether	1634-04-4	ug/l	77	39.0%	8.70	110		No screening criteria	0	NS
OU-1C	Naphthalene	91-20-3	ug/l	83	16.9%	8.07	260	3.61%	Yes	3	13
OU-1C	n-Butylbenzene	104-51-8	ug/L	4	0.0%	0.25	1		not detected	0	NS
OU-1C	Nickel	7440-02-0	mg/l	73	39.7%	0.01	0.0433		No	0	0.052
OU-1C	Nitrate as nitrogen	84145-82-4	ug/l	7	28.6%	420.00	1400		No screening criteria	0	NS
OU-1C	Nitrobenzene	98-95-3	ug/l	76	0.0%	0.78	1		not detected	0	NS
OU-1C	N-Nitrosodi-n-propylamine	621-64-7	ug/l	76	0.0%	0.78	1		not detected	0	NS
OU-1C	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/l	76	2.6%	1.44	4		No screening criteria	0	NS
OU-1C	n-Propylbenzene	103-65-1	ug/L	4	0.0%	0.25	1		not detected	0	NS
OU-1C	o-Xylene	95-47-6	ug/L	1	0.0%	1.00	1		not detected	0	NS
OU-1C	p-Chloro-m-cresol	59-50-7	ug/l	70	0.0%	0.83	1		not detected	0	NS
OU-1C	p-Cresol	106-44-5	ug/l	70	2.9%	1.55	4		No	0	5
OU-1C	Pentachlorophenol	87-86-5	ug/l	70	0.0%	2.33	4		not detected	0	1
OU-1C	pH - Hydrogen Ion	12408-02-5	SU	20	100.0%	7.21	7.7		No screening criteria	0	NS
OU-1C	Phenanthrene	85-01-8	ug/l	77	29.9%	1.40	11	6.49%	Yes	5	5
OU-1C	Phenol	108-95-2	ug/l	70	10.0%	1.63	36	2.86%	Yes	2	5
OU-1C	Potassium	9/7/7440	mg/l	73	100.0%	3.30	28.2		No screening criteria	0	NS
OU-1C	Pyrene	76165-23-6	ug/l	77	18.2%	0.93	10		not detected	0	4.6
OU-1C	sec-Butylbenzene	135-98-8	ug/L	4	0.0%	0.25	1		not detected	0	NS
OU-1C	sec-DICHLOROPROPANE	594-20-7	ug/l	2	0.0%	0.00	0		not detected	0	NS
OU-1C	Selenium	7782-49-2	mg/l	73	2.7%	0.01	0.0123	2.74%	Yes	2	0.0046
OU-1C	Silver	7440-22-4	mg/l	73	6.8%	0.00	0.0081	6.85%	Yes	5	0.0001
OU-1C	Sodium	7440-23-5	mg/l	73	100.0%	110.41	297		No screening criteria	0	NS
OU-1C	Styrene	100-42-5	ug/l	72	0.0%	0.99	2		not detected	0	NS
OU-1C	Sulfate	14808-79-8	mg/l	80	95.0%	14.12	208		No screening criteria	0	NS
OU-1C	Sulfide, Total	12597-04-5	ug/l	7	28.6%	60.29	82		No screening criteria	0	NS
OU-1C	t-Butylbenzene	98-06-6	ug/L	4	0.0%	0.25	1		not detected	0	NS
OU-1C	Tert-amyl methyl ether	994-05-8	ug/l	70	15.7%	1.22	7		No screening criteria	0	NS
OU-1C	Tertiary Butyl Alcohol	75-65-0	ug/l	70	0.0%	10.14	20		not detected	0	NS
OU-1C	Tetrachloroethene	127-18-4	ug/l	73	0.0%	0.82	2		not detected	0	1
OU-1C	Thallium	7440-28-0	mg/l	73	2.7%	0.01	0.014	1.37%	not detected	1	0.008
OU-1C	Toluene	108-88-3	ug/l	79	21.5%	2.34	55		No	0	6000
OU-1C	Total Hardness as CaCO3	471-34-1	mgCaCO3/L	20	100.0%	263.55	420		No screening criteria	0	NS
OU-1C	trans-1,2-Dichloroethene	156-60-5	ug/l	72	0.0%	0.79	2		not detected	0	NS
OU-1C	trans-1,3-Dichloropropene	10061-02-6	ug/l	75	0.0%	0.99	2		not detected	0	NS
OU-1C	Trichloroethene (Trichloroethylene)	79-01-6	ug/l	80	0.0%	1.01	3		not detected	0	40
OU-1C	Trichlorofluoromethane (Freon 11)	75-69-4	ug/l	5	0.0%	1.20	2		not detected	0	NS
OU-1C	Vanadium	7440-62-2	mg/l	73	42.5%	0.00	0.0319	2.74%	Yes	2	0.014
OU-1C	Vinyl chloride (Chloroethene)	75-01-4	ug/l	82	0.0%	0.98	3		not detected	0	NS
OU-1C	Xylenes, Total	1330-20-7	ug/l	79	24.1%	36.07	1500	3.80%	Yes	3	65
OU-1C	Zinc	7440-66-6	mg/l	73	69.9%	0.03	0.246	5.48%	Yes	4	0.083
OU-4	1,1,1-Trichloroethane	71-55-6	ug/l	15	0.0%	0.80	0.8		not detected	0	NS
OU-4	1,1,2,2-Tetrachloroethane	79-34-5	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	1,1,2-Trichloroethane	79-00-5	ug/l	15	0.0%	0.80	0.8		not detected	0	NS
OU-4	1,1-Dichloroethane	75-34-3	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	1,1-Dichloroethene (Dichloroethylene)	75-35-4	ug/l	15	0.0%	0.80	0.8		not detected	0	NS
OU-4	1,2,4-Trichlorobenzene	120-82-1	ug/l	14	0.0%	0.75	1		not detected	0	5
OU-4	1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	ug/l	14	0.0%	0.75	1		not detected	0	5
OU-4	1,2-Dichloroethane	107-06-2	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	1,2-Dichloropropane	78-87-5	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	1,3-Dichlorobenzene	541-73-1	ug/l	14	0.0%	0.75	1		not detected	0	5
OU-4	1,4-Dichlorobenzene	106-46-7	ug/l	14	0.0%	0.75	1		not detected	0	5
OU-4	2,4,5-Trichlorophenol	95-95-4	ug/l	14	0.0%	0.75	1		not detected	0	1
OU-4	2,4,6-Trichlorophenol	88-06-2	ug/l	14	0.0%	0.75	1		not detected	0	1
OU-4	2,4-Dichlorophenol	120-83-2	ug/l	14	0.0%	0.75	1		not detected	0	1
OU-4	2,4-Dimethylphenol	105-67-9	ug/l	14	0.0%	1.75	3		not detected	0	5
OU-4	2,4-Dinitrophenol	51-28-5	ug/l	14	0.0%	14.43	21		not detected	0	400
OU-4	2,4-Dinitrotoluene	121-14-2	ug/l	14	0.0%	1.00	1		not detected	0	NS
OU-4	2,6-Dinitrotoluene	606-20-2	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	2-Butanone (Methyl ethyl ketone)	78-93-3	ug/l	15	0.0%	3.00	3		not detected	0	NS
OU-4	2-Chloronaphthalene	91-58-7	ug/l	14	0.0%	1.20	2		not detected	0	NS
OU-4	2-Chlorophenol (o-Chlorophenol)	95-57-8	ug/l	14	0.0%	0.75	1		not detected	0	1
OU-4	2-Hexanone	591-78-6	ug/l	15	0.0%	3.00	3		not detected	0	NS
OU-4	2-Methyl-naphthlalene	91-57-6	ug/l	14	0.0%	0.55	1		not detected	0	4.7
OU-4	2-Methylphenol (o-Cresol)	95-48-7	ug/l	14	0.0%	0.75	1		not detected	0	5
OU-4	2-Nitroaniline (o-Nitroaniline)	88-74-4	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	2-Nitrophenol (o-Nitrophenol)	88-75-5	ug/l	14	0.0%	0.75	1		not detected	0	5
OU-4	3,3'-Dichlorobenzidine	91-94-1	ug/l	14	0.0%	2.00	2		not detected	0	NS
OU-4	3-Nitroaniline	99-09-2	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	534-52-1	ug/l	14	0.0%	5.00	5		not detected	0	5
OU-4	4-Bromophenylphenylether	101-55-3	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	4-Chloroaniline	106-47-8	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	4-Chlorophenyl phenyl ether	7005-72-3	ug/l	14	0.0%	1.25	2		not detected	0	NS
OU-4	4-Methyl-2-pentanone	108-10-1	ug/l	15	0.0%	3.00	3		not detected	0	NS
OU-4	4-Nitroaniline	100-01-6	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	4-Nitrophenol	100-02-7	ug/l	14	0.0%	10.29	11		not detected	0	NS
OU-4	Acenaphthene	83-32-9	ug/l	14	0.0%	0.55	1		not detected	0	5.3
OU-4	Acenaphthylene	208-96-8	ug/l	14	0.0%	0.55	1		not detected	0	NS
OU-4	Acetone	67-64-1	ug/l	15	6.7%	6.00	6		No screening criteria	0	NS
OU-4	Aluminum	7429-90-5	mg/l	14	85.7%	0.97	6.73	85.71%	Yes	12	0.1
OU-4	Anthracene	120-12-7	ug/l	14	0.0%	0.55	1		not detected	0	3.8
OU-4	Antimony	7440-36-0	mg/l	14	0.0%	0.01	0.0097		not detected	0	NS
OU-4	Arsenic	7440-38-2	mg/l	14	7.1%	0.01	0.0102		not detected	0	0.15
OU-4	Barium	7440-39-3	mg/l	14	100.0%	0.04	0.0962		No screening criteria	0	NS
OU-4	Benzene	71-43-2	ug/l	15	0.0%	0.50	0.5		not detected	0	10
OU-4	Benzo(a)anthracene	56-55-3	ug/l	14	0.0%	0.55	1		not detected	0	0.03
OU-4	Benzo(a)Pyrene	50-32-8	ug/l	14	0.0%	0.55	1		not detected	0	0.0012
OU-4	Benzo(b)Fluoranthene	205-99-2	ug/l	14	0.0%	0.55	1		not detected	0	NS
OU-4	Benzo(g,h,i)perylene	191-24-2	ug/l	14	0.0%	0.55	1		not detected	0	NS
OU-4	Benzo(k)Fluoranthene	207-08-9	ug/l	14	0.0%	0.55	1		not detected	0	NS
OU-4	Beryllium	7440-41-7	mg/l	14	0.0%	0.00	0.0014		not detected	0	1.1
OU-4	bis(2-Chloroethoxy)methane	111-91-1	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	bis(2-Chloroethyl) ether	111-44-4	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	Bis(2-chloroisopropyl) ether	108-60-1	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	bis(2-Ethylhexyl)phthalate	117-81-7	ug/l	14	7.1%	4.00	19	7.14%	Yes	1	0.6
OU-4	Bromodichloromethane	75-27-4	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Bromoform	75-25-2	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Bromomethane (Methyl bromide)	74-83-9	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Butylbenzylphthalate	85-68-7	ug/l	14	0.0%	2.00	2		not detected	0	NS

Groundwater Summary Statistics and Ecological Screening (OU-1A, OU-1C and OU-4): Monitoring Wells Located within 100 Feet of Fishkill Creek

Fish and Wildllife Resources Characterization and Impact Analysis, Former Texaco Research Center In Beacon, New York (TRCB)

Operable Unit	Parameter Name	Parameter Code	Report Units	Number of results	% detected	Average Concentration	Maximum Concentration	% Results > Screening Criteria	Is Max Greater than Screening Criteria?	No. Criteria Exceedances	Surface Water Screening Criteria*
OU-4	Cadmium	7440-43-9	mg/l	14	21.4%	0.00	0.0086	14.29%	Yes	2	0.002
OU-4	Calcium	7440-70-2	mg/l	14	100.0%	53.58	102		No screening criteria	0	NS
OU-4	Carbazole	86-74-8	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	Carbon Disulfide	75-15-0	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Carbon Tetrachloride	56-23-5	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Chloride	16887-00-6	mg/l	14	100.0%	225.45	697		No screening criteria	0	NS
OU-4	Chlorobenzene	108-90-7	ug/l	15	0.0%	0.80	0.8		not detected	0	5
OU-4	Chloroethane	75-00-3	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Chloroform	67-66-3	ug/l	15	0.0%	0.80	0.8		not detected	0	NS
OU-4	Chloromethane (Methyl chloride)	74-87-3	ug/l	15	0.0%	1.00	1		not detected	0	200
OU-4	Chromium	7440-47-3	mg/l	14	50.0%	0.00	0.0085		No	0	0.074
OU-4	Chrysene	218-01-9	ug/l	14	0.0%	0.55	1		not detected	0	NS
OU-4	cis-1,2-Dichloroethene	156-59-2	ug/l	15	0.0%	0.80	0.8		not detected	0	NS
OU-4	cis-1,3-Dichloropropene	10061-01-5	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Cobalt	7440-48-4	mg/l	14	7.1%	0.00	0.0044		No	0	0.005
OU-4	Copper	7440-50-8	mg/l	14	35.7%	0.00	0.0111		No	0	0.013
OU-4	Dibenz(a,h)anthracene	53-70-3	ug/l	14	0.0%	0.55	1		not detected	0	NS
OU-4	Dibenzofuran	132-64-9	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	Dibromochloromethane	124-48-1	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Diethylphthalate	84-66-2	ug/l	14	0.0%	2.00	2		not detected	0	NS
OU-4	Diisopropyl ether	108-20-3	ug/l	15	0.0%	0.80	0.8		not detected	0	NS
OU-4	Dimethylphthalate	131-11-3	ug/l	14	0.0%	2.00	2		not detected	0	NS
OU-4	Di-n-butylphthalate	84-74-2	ug/l	14	0.0%	2.00	2		not detected	0	NS
OU-4	Di-n-octylphthalate	117-84-0	ug/l	14	0.0%	2.00	2		not detected	0	NS
OU-4	Ethylbenzene	100-41-4	ug/l	15	0.0%	0.80	0.8		not detected	0	17
OU-4	Ethyl-t-butylether	637-92-3	ug/l	15	0.0%	0.80	0.8		not detected	0	NS
OU-4	Fluoranthene	206-44-0	ug/l	14	7.1%	0.56	1		not detected	0	NS
OU-4	Fluorene	86-73-7	ug/l	14	0.0%	0.55	1		not detected	0	0.54
OU-4	Hexachlorobenzene	118-74-1	ug/l	14	0.0%	0.55	1		not detected	0	0.00003
OU-4	Hexachlorobutadiene	87-68-3	ug/l	14	0.0%	0.75	1		not detected	0	0.01
OU-4	Hexachlorocyclopentadiene	77-47-4	ug/l	14	0.0%	5.00	5		not detected	0	0.45
OU-4	Hexachloroethane	67-72-1	ug/l	14	0.0%	1.00	1		not detected	0	0.6
OU-4	Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	14	0.0%	0.55	1		not detected	0	NS
OU-4	Iron	7439-89-6	mg/l	14	100.0%	1.45	13.6		No screening criteria	0	NS
OU-4	Isophorone	78-59-1	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	Lead	7439-92-1	mg/l	14	14.3%	0.01	0.015	14.29%	not detected	2	0.004
OU-4	Magnesium	7439-95-4	mg/l	14	100.0%	20.50	43.3		No screening criteria	0	NS
OU-4	Manganese	7439-96-5	mg/l	14	100.0%	0.04	0.232		No screening criteria	0	NS
OU-4	Mercury	7439-97-6	mg/l	14	0.0%	0.00	0.00007		not detected	0	0.0000026
OU-4	Methylene chloride (Dichloromethane)	75-09-2	ug/l	15	0.0%	2.00	2		not detected	0	200
OU-4	Methyl-t-butyl ether	1634-04-4	ug/l	15	0.0%	0.50	0.5		not detected	0	NS
OU-4	Naphthalene	91-20-3	ug/l	14	0.0%	0.55	1		not detected	0	13
OU-4	Nickel	7440-02-0	mg/l	14	21.4%	0.00	0.0111		No	0	0.052
OU-4	Nitrobenzene	98-95-3	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	N-Nitrosodi-n-propylamine	621-64-7	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	ug/l	14	0.0%	1.25	2		not detected	0	NS
OU-4	p-Chloro-m-cresol	59-50-7	ug/l	14	0.0%	0.75	1		not detected	0	NS
OU-4	p-Cresol	106-44-5	ug/l	14	0.0%	1.25	2		not detected	0	5
OU-4	Pentachlorophenol	87-86-5	ug/l	14	0.0%	2.00	3		not detected	0	1
OU-4	pH - Hydrogen Ion	12408-02-5	SU	5	100.0%	8.06	8.2		No screening criteria	0	NS
OU-4	Phenanthrene	85-01-8	ug/l	14	0.0%	0.55	1		not detected	0	5
OU-4	Phenol	108-95-2	ug/l	14	7.1%	0.76	1		not detected	0	5
OU-4	Potassium	9/7/7440	mg/l	14	100.0%	4.13	18.2		No screening criteria	0	NS
OU-4	Pyrene	76165-23-6	ug/l	14	7.1%	0.56	1		not detected	0	4.6
OU-4	Selenium	7782-49-2	mg/l	14	0.0%	0.01	0.0107		not detected	0	0.0046
OU-4	Silver	7440-22-4	mg/l	14	0.0%	0.00	0.0023		not detected	0	0.0001
OU-4	Sodium	7440-23-5	mg/l	14	100.0%	135.99	434		No screening criteria	0	NS
OU-4	Styrene	100-42-5	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Sulfate	14808-79-8	mg/l	14	100.0%	34.14	82.5		No screening criteria	0	NS
OU-4	Tert-amyl methyl ether	994-05-8	ug/l	15	0.0%	0.80	0.8		not detected	0	NS
OU-4	Tertiary Butyl Alcohol	75-65-0	ug/l	15	0.0%	10.00	10		not detected	0	NS
OU-4	Tetrachloroethene	127-18-4	ug/l	15	0.0%	0.80	0.8		not detected	0	1
OU-4	Thallium	7440-28-0	mg/l	14	0.0%	0.02	0.0675		not detected	0	0.008
OU-4	Toluene	108-88-3	ug/l	15	0.0%	0.70	0.7		not detected	0	6000
OU-4	Total Hardness as CaCO3	471-34-1	mgCaCO3/L	5	100.0%	209.30	333		No screening criteria	0	NS
OU-4	trans-1,2-Dichloroethene	156-60-5	ug/l	15	0.0%	0.80	0.8		not detected	0	NS
OU-4	trans-1,3-Dichloropropene	10061-02-6	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Trichloroethene (Trichloroethylene)	79-01-6	ug/l	15	0.0%	1.00	1		not detected	0	40
OU-4	Vanadium	7440-62-2	mg/l	14	21.4%	0.00	0.0087		No	0	0.014
OU-4	Vinyl chloride (Chloroethene)	75-01-4	ug/l	15	0.0%	1.00	1		not detected	0	NS
OU-4	Xylenes, Total	1330-20-7	ug/l	15	0.0%	0.80	0.8		not detected	0	65
OU-4	Zinc	7440-66-6	mg/l	14	57.1%	0.03	0.199	14.29%	Yes	2	0.083

* 6 NYCRR Part 703: Surface Water and Groundwater Quality and Groundwater Effluent Limitations, Water Class C (http://www.dec.ny.gov/regs/4590.html).

NS - not specified

ATTACHMENT 4

2005/2006 BACKFILL ANALYTICAL DATA

Backfill Soil Analytical Data - Back 93 Acres Parcel							
Former Texaco Research Center, Beacon, New York							
			Location	BACKFILL		Topsoil	
			Field Sample ID	4IN THALLE BACKFILL		BEACON-CVX-47 TOP SOIL	
			Sample Date	11/9/2005		3/8/2006	
			Matrix	Soil		Soil	
			Sample Purpose	Regular sample		Regular sample	
			Sample Type	Post Excavation		Post Excavation	
Analytical Method	Parameter Name	Units	6 NYCRR Part 375-6.8(b) Residential				
160.3	% Solid	%	NS			88	
160.3	Moisture	%	NS			12	
8151	2,4,5-T	UG/KG	NS	32	U	36	U
8151	2,4,5-TP (Silvex)	UG/KG	58000	36	U	40	U
8151	2,4-D	UG/KG	NS	250	U	280	U
SW6010	Aluminum	mg/kg	NS	6470		12000	
SW6010	Antimony	mg/Kg	NS	12	U	13	U
SW6010	Arsenic	mg/Kg	16	2.3		7	
SW6010	Barium	mg/kg	350	40	U	45	
SW6010	Beryllium	mg/Kg	14	1	U	1.1	U
SW6010	Cadmium	mg/kg	2.5	1	U	1.1	U
SW6010	Calcium	mg/kg	NS	24300		20000	
SW6010	Chromium	mg/Kg	36	12.8		13	
SW6010	Cobalt	mg/kg	NS	10	U	13	
SW6010	Copper	mg/kg	270	22.4		38	
SW6010	IRON	mg/kg	NS	16300		27000	
SW6010	Lead	mg/Kg	400	8.3		17	
SW6010	Magnesium	mg/kg	NS	13100		14000	
SW6010	Manganese	mg/kg	2000	413		940	
SW6010	Nickel	mg/Kg	140	11.9		24	
SW6010	Potassium	mg/kg	NS	732		1200	
SW6010	Selenium	mg/Kg	36	2	U	2.2	U
SW6010	Silver	mg/Kg	36	2	U	2.2	U
SW6010	Sodium	mg/kg	NS	653		110	U
SW6010	Thallium	mg/Kg	NS	2	U	2.2	U
SW6010	Vanadium	mg/kg	NS	16.3		15	
SW6010	Zinc	mg/Kg	2200	47.3		74	
SW7471	Mercury	mg/Kg	0.81	0.045	U	0.11	U
SW8081	4,4'-DDD	UG/KG	2600	3.3	U	11	UH
SW8081	4,4'-DDE	ug/kg	1800	3.3	U	11	UH
SW8081	4,4'-DDT	UG/KG	1700	3.3	U	11	UH
SW8081	Aldrin	UG/KG	19	1.6	U	5.6	UH
SW8081	Alpha-BHC	UG/KG	97	1.6	U	5.6	UH
SW8081	alpha-Chlordane	ug/kg	910			57	UH
SW8081	Beta-BHC	UG/KG	72	1.6	U	5.6	UH
SW8081	Chlordane Gamma Technical Mixture	UG/KG	NS	16	U	57	UH
SW8081	Chlordane, gamma	UG/KG	NS			57	UH
SW8081	Delta-BHC	ug/kg	100000	1.6	U	5.6	UH
SW8081	Dieldrin	UG/KG	39	3.3	U	11	UH
SW8081	Endosulfan I (alpha-Endosulfan)	UG/KG	4800	3.3	U	11	UH
SW8081	Endosulfan II	ug/kg	4800	3.3	U	11	UH
SW8081	Endosulfan Sulfate	UG/KG	4800	3.3	U	11	UH
SW8081	Endrin	UG/KG	2200	3.3	U	11	UH
SW8081	Endrin Aldehyde	UG/KG	NS	3.3	U	23	UH
SW8081	Endrin Ketone	UG/KG	NS			11	UH
SW8081	Gamma-BHC (Lindane)	UG/KG	280	1.6	U	5.6	UH
SW8081	Heptachlor	UG/KG	420	1.6	U	5.6	UH
SW8081	Heptachlor Epoxide	UG/KG	NS	1.6	U	5.6	UH
SW8081	Methoxychlor	UG/KG	NS	16	U	5.6	UH
SW8081	Toxaphene	UG/KG	NS	33	U	110	UH
SW8082	Aroclor 1016	ug/kg	1000	16	U	56	UH
SW8082	Aroclor 1221	ug/kg	1000	16	U	56	UH
SW8082	Aroclor 1232	ug/kg	1000	16	U	56	UH
SW8082	Aroclor 1242	ug/kg	1000	16	U	56	UH
SW8082	Aroclor 1248	ug/kg	1000	16	U	56	UH
SW8082	Aroclor 1254	ug/kg	1000	33	U	110	UH
SW8082	Aroclor 1260	ug/kg	1000	33	U	110	UH
SW8260B	1,1,1,2-TETRACHLOROETHANE	ug/Kg	NS	1	U	1.1	U
SW8260B	1,1,1-Trichloroethane	ug/kg	100000	1	U	1.1	U
SW8260B	1,1,2,2-Tetrachloroethane	ug/kg	NS	1	U	1.1	U
SW8260B	1,1,2-Trichloroethane	ug/Kg	NS	1	U	1.1	U
SW8260B	1,1,2-Trichlorotrifluoroethane (Freon 113)	ug/Kg	NS	1	U	1.1	U
SW8260B	1,1-Dichloroethane	ug/kg	19000	1	U	1.1	U
SW8260B	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	100000	1	U	1.1	U
SW8260B	1,1-DICHLOROPROPENE	ug/Kg	NS	1	U	1.1	U
SW8260B	1,2,3-Trichlorobenzene	ug/Kg	NS	1	U	1.1	U
SW8260B	1,2,3-TRICHLOROPROPANE	ug/Kg	NS	1	U	1.1	U

			Field Sample ID	4IN THALLE BACKFILL		BEACON-CVX-47 TOP SOIL	
			Sample Date	11/9/2005		3/8/2006	
			Matrix	Soil		Soil	
			Sample Purpose	Regular sample		Regular sample	
			Sample Type	Post Excavation		Post Excavation	
Analytical Method	Parameter Name	Units	6 NYCRR Part 375-6.8(b) Residential				
SW8260B	1,2,4,5-Tetramethylbenzene	UG/KG	NS			1.1	U
SW8260B	1,2,4-Trichlorobenzene	ug/Kg	NS	1	U	1.1	U
SW8260B	1,2,4-Trimethylbenzene	ug/kg	47000	1	U	1.1	U
SW8260B	1,2-Dibromo-3-chloropropane (DBCP)	ug/Kg	NS	1	U	1.1	U
SW8260B	1,2-Dibromoethane	ug/Kg	NS	1	U	1.1	U
SW8260B	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/Kg	100000	1	U	1.1	U
SW8260B	1,2-Dichloroethane	ug/Kg	2300	1	U	1.1	U
SW8260B	1,2-Dichloroethene	ug/Kg	NS			1.1	U
SW8260B	1,2-Dichloropropane	ug/Kg	NS	1	U	1.1	U
SW8260B	1,3,5-Trimethylbenzene	ug/kg	47000	1	U	1.1	U
SW8260B	1,3-Dichlorobenzene	ug/Kg	17000	1	U	1.1	U
SW8260B	1,3-DICHLOROPROPANE	ug/Kg	NS	1	U	1.1	U
SW8260B	1,4-Dichlorobenzene	ug/Kg	9800	1	U	1.1	U
SW8260B	2-Chloroethyl vinyl ether	ug/Kg	NS			1.1	U
SW8260B	4-Ethyltoluene	UG/KG	NS			1.1	U
SW8260B	4-Isopropyltoluene	ug/Kg	NS	1	U	1.1	U
SW8260B	Benzene	ug/kg	2900	1	U	1.1	U
SW8260B	BENZENE, (CHLOROMETHYL)-	UG/KG	NS			1.1	U
SW8260B	BROMOBENZENE	ug/Kg	NS	1	U	1.1	U
SW8260B	BROMOCHLOROMETHANE	ug/Kg	NS	1	U	1.1	U
SW8260B	Bromodichloromethane	ug/Kg	NS	1	U	1.1	U
SW8260B	Bromoform	ug/kg	NS	1	U	1.1	U
SW8260B	Bromomethane (Methyl bromide)	ug/Kg	NS	1	U	1.1	U
SW8260B	Carbon Disulfide	ug/kg	NS			1.1	U
SW8260B	Carbon Tetrachloride	ug/Kg	1400	1	U	1.1	U
SW8260B	Chlorobenzene	ug/kg	100000	1	U	1.1	U
SW8260B	Chloroethane	ug/Kg	NS	1	U	1.1	U
SW8260B	Chloroform	ug/Kg	10000	1	U	1.1	U
SW8260B	Chloromethane (Methyl chloride)	ug/Kg	NS	1	U	1.1	U
SW8260B	cis-1,2-Dichloroethene	ug/Kg	59000	1	U	1.1	U
SW8260B	cis-1,3-Dichloropropene	ug/kg	NS	1	U	1.1	U
SW8260B	Dibromochloromethane	ug/Kg	NS	1	U	1.1	U
SW8260B	Dibromomethane (Methylene bromide)	ug/Kg	NS	1	U	1.1	U
SW8260B	Dichlorodifluoromethane (Freon 12)	ug/Kg	NS	1	U	1.1	U
SW8260B	Ethylbenzene	ug/kg	30000	1	U	1.1	U
SW8260B	Heptane	UG/KG	NS			1.1	U
SW8260B	Hexachlorobutadiene	ug/kg	NS	1	U	1.1	U
SW8260B	Isopropylbenzene	ug/Kg	NS	1	U	1.1	U
SW8260B	mXylene	ug/kg	100000	1	U	1.1	U
SW8260B	Methylene chloride (Dichloromethane)	ug/Kg	51000	1.4		1.1	U
SW8260B	n-Butylbenzene	ug/kg	100000	1	U	1.1	U
SW8260B	n-Propylbenzene	ug/Kg	100000	1	U	1.1	U
SW8260B	Naphthalene	ug/kg	100000	1	U	1.1	U
SW8260B	o-CHLOROTOLUENE	ug/Kg	NS	1	U	1.1	U
SW8260B	o-Xylene	ug/Kg	100000	1	U	1.1	U
SW8260B	p-CHLOROTOLUENE	ug/Kg	NS	1	U	1.1	U
SW8260B	sec-Butylbenzene	ug/Kg	100000	1	U	1.1	U
SW8260B	sec-DICHLOROPROPANE	ug/Kg	NS	1	U	1.1	U
SW8260B	Styrene	ug/Kg	NS	1	U	1.1	U
SW8260B	t-Butylbenzene	ug/Kg	100000	1	U	1.1	U
SW8260B	Tetrachloroethene	ug/Kg	5500	1.2		1.1	U
SW8260B	Toluene	ug/kg	100000	1	U	1.1	U
SW8260B	trans-1,2-Dichloroethene	ug/Kg	100000	1	U	1.1	U
SW8260B	trans-1,3-Dichloropropene	ug/Kg	NS	1	U	1.1	U
SW8260B	trans-1,4-Dichloro-2-Butene	ug/Kg	NS			1.1	U
SW8260B	Trichloroethene (Trichloroethylene)	ug/Kg	10000	1	U	1.1	U
SW8260B	Trichlorofluoromethane (Freon 11)	ug/Kg	NS	1	U	1.1	U
SW8260B	Vinyl Acetate	ug/Kg	NS			1.1	U
SW8260B	Vinyl chloride (Chloroethene)	ug/Kg	210	1	U	1.1	U
SW8260B	Xylenes, Total	ug/kg	100000			1.1	U
SW8270C	1,2,4-Trichlorobenzene	ug/Kg	NS	330	U	360	U
SW8270C	1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/Kg	100000	330	U	360	U
SW8270C	1,2-Diphenylhydrazine	UG/KG	NS			3600	U
SW8270C	1,3-Dichlorobenzene	ug/Kg	17000	330	U	360	U
SW8270C	1,4-Dichlorobenzene	ug/Kg	9800	330	U	360	U
SW8270C	2,2'-oxybis(2-chloropropane)	ug/kg	NS	330	U	360	U
SW8270C	2,4,5-Trichlorophenol	ug/kg	NS	810	U	360	U
SW8270C	2,4,6-Trichlorophenol	ug/kg	NS	330	U	360	U
SW8270C	2,4-Dichlorophenol	ug/kg	NS	330	U	360	U
SW8270C	2,4-Dimethylphenol	ug/kg	NS	330	U	360	U

			Field Sample ID	4IN THALLE BACKFILL		BEACON-CVX-47 TOP SOIL	
			Sample Date	11/9/2005		3/8/2006	
			Matrix	Soil		Soil	
			Sample Purpose	Regular sample		Regular sample	
			Sample Type	Post Excavation		Post Excavation	
Analytical Method	Parameter Name	Units	6 NYCRR Part 375-6.8(b) Residential				
SW8270C	2,4-Dinitrophenol	ug/kg	NS	810	U	920	U
SW8270C	2,4-Dinitrotoluene	ug/Kg	NS	330	U	360	U
SW8270C	2,6-Dinitrotoluene	ug/Kg	NS	330	U	360	U
SW8270C	2-Chloronaphthalene	ug/kg	NS	330	U	360	U
SW8270C	2-Chlorophenol (o-Chlorophenol)	ug/kg	NS	330	U	360	U
SW8270C	2-Methyl-naphthlalene	ug/kg	NS	330	U	360	U
SW8270C	2-Methylphenol (o-Cresol)	ug/kg	100000	330	U	360	U
SW8270C	2-Nitroaniline (o-Nitroaniline)	ug/kg	NS	810	U	920	U
SW8270C	2-Nitrophenol (o-Nitrophenol)	ug/kg	NS	330	U	360	U
SW8270C	3 & 4-Methylphenol	UG/KG	NS	330	U		
SW8270C	3,3'-Dichlorobenzidine	ug/kg	NS	330	U	360	U
SW8270C	3-Nitroaniline	ug/kg	NS	810	U	920	U
SW8270C	4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	ug/kg	NS	810	U	920	U
SW8270C	4-Bromophenylphenylether	ug/kg	NS	330	U	360	U
SW8270C	4-Chloroaniline	ug/kg	NS	330	U	360	U
SW8270C	4-Chlorophenyl phenyl ether	ug/kg	NS	330	U	360	U
SW8270C	4-Nitroaniline	ug/kg	NS	810	U	920	U
SW8270C	4-Nitrophenol	ug/kg	NS	810	U	920	U
SW8270C	Acenaphthene	ug/kg	100000	330	U	360	U
SW8270C	Acenaphthylene	ug/kg	100000	330	U	360	U
SW8270C	Anthracene	ug/kg	100000	330	U	360	U
SW8270C	Benzidine	UG/KG	NS			360	U
SW8270C	Benzo(a)anthracene	ug/kg	1000	35	J	360	U
SW8270C	Benzo(a)Pyrene	ug/kg	1000	330	U	360	U
SW8270C	Benzo(b)Fluoranthene	ug/kg	1000	67	J	360	U
SW8270C	Benzo(g,h,i)perylene	ug/kg	100000	330	U	360	U
SW8270C	Benzo(k)Fluoranthene	ug/kg	1000	330	U	360	U
SW8270C	BENZOIC ACID	ug/kg	NS	810	U		
SW8270C	BENZYL ALCOHOL	ug/Kg	NS	330	U	360	U
SW8270C	bis(2-Chloroethoxy)methane	ug/kg	NS	330	U	360	U
SW8270C	bis(2-Chloroethyl) ether	ug/kg	NS	330	U	360	U
SW8270C	bis(2-Ethylhexyl)phthalate	ug/kg	NS	330	U	360	U
SW8270C	Butylbenzylphthalate	ug/kg	NS	330	U	360	U
SW8270C	Carbazole	ug/kg	NS			360	U
SW8270C	Chrysene	ug/kg	1000	58	J	360	U
SW8270C	Di-n-butylphthalate	ug/kg	NS	330	U	360	U
SW8270C	Di-n-octylphthalate	ug/kg	NS	330	U	360	U
SW8270C	Dibenz(a,h)anthracene	ug/kg	330	330	U	360	U
SW8270C	Dibenzofuran	ug/kg	14000	330	U	360	U
SW8270C	Diethylphthalate	ug/kg	NS	330	U	360	U
SW8270C	Dimethyl phthalate	ug/Kg	NS	330	U	360	U
SW8270C	Fluoranthene	ug/kg	100000	330	U	360	U
SW8270C	Fluorene	ug/kg	100000	330	U	360	U
SW8270C	Hexachlorobenzene	ug/kg	330	330	U	360	U
SW8270C	Hexachlorobutadiene	ug/kg	NS	330	U	360	U
SW8270C	Hexachlorocyclopentadiene	ug/kg	NS	330	U	360	U
SW8270C	Hexachloroethane	ug/kg	NS	330	U	360	U
SW8270C	Indeno(1,2,3-cd)pyrene	ug/kg	500	330	U	360	U
SW8270C	Isophorone	ug/kg	NS	330	U	360	U
SW8270C	N-Nitrosodi-n-propylamine	ug/kg	NS	330	U	360	U
SW8270C	N-Nitrosodimethylamine	ug/Kg	NS	330	U	360	U
SW8270C	N-Nitrosodiphenylamine (Diphenylamine)	ug/kg	NS	330	U	360	U
SW8270C	Naphthalene	ug/kg	100000	330	U	360	U
SW8270C	Nitrobenzene	ug/kg	NS	330	U	360	U
SW8270C	p-Chloro-m-cresol	ug/kg	NS	330	U	360	U
SW8270C	p-Cresol	ug/kg	34000			360	U
SW8270C	Pentachlorophenol	ug/kg	2400	810	U	920	U
SW8270C	Phenanthrene	ug/kg	100000	57	J	360	U
SW8270C	Phenol	ug/kg	100000	330	U	360	U
SW8270C	Pyrene	ug/kg	100000	210	J	360	U
SW8270C	PYRIDINE	UG/KG	NS			360	U
SW9010	Total Cyanide	MG/KG	27	1	U		

ATTACHMENT 5

2014 FISHKILL CREEK SEDIMENT AND SURFACE WATER SAMPLING PROGRAM REPORT

FISHKILL CREEK SEDIMENT AND SURFACE WATER SAMPLING PROGRAM REPORT
Former Texaco Research Center
Beacon (Glenham), New York

Site ID #314004
EPA ID # 091894899

Prepared For:

Mr. Mark Hendrickson
Chevron Environmental Management Company
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April 2015

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LIST OF ACRONYMS

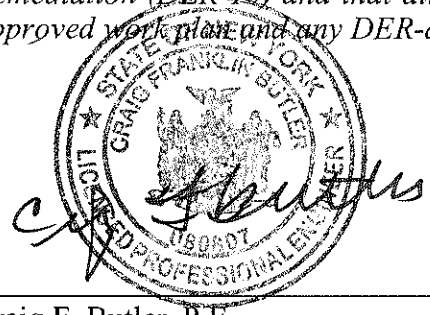
ASP	Analytical Services Protocol
AVS/SEM	Acid Volatile Sulfides and Simultaneously Extracted Metals
BCB	Below Creek Bottom
BWS	Below Water Surface
COC	Chain of Custody
CPOI	Chemical Parameters of Interest
Creek	Fishkill Creek
DOT	Department of Transportation
DER	Division of Environmental Remediation
DUSR	Data Usability Summary Report
ECO	Ecological
EIM™	Environmental Information Management
ELAP	Environmental Laboratory Approval Program
EMC	Environmental Management Company
EPA	Environmental Protection Agency
FT	Feet
HH	Human Health
ICM	Interim Corrective Measure
ISS	Industrial Sewer System
NFA	No Further Action
NYCRR	New York Code of Rules And Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
Main Facility	Portion of the Site North of Fishkill Creek
Mg/kg	Milligrams Per Kilogram (Parts Per Million)
Mg/l	Milligrams Per Liter
MS/MSD	Matrix Spike and Matrix Spike Duplicate
MTBE	Methyl Tertiary -Butyl Ether
NFA	No Further Action
OU	Operable Unit
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyls
PID	Photoionization Detector
QA/QC	Quality Assurance and Quality Control
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SAP	Sampling and Analysis Plan

SGV	Sediment Guidance Values
SITE	Former Texaco Research Center Beacon
SRFI	Supplemental RFI
SVOCs	Semivolatile Organic Compounds
TAGM	Technical and Administrative Guidance Memorandum
TAL	Target Analytes List
TOGS	Technical and Operational Guidance Series
TRCB	Texaco Research Center Beacon
TSS	Total Suspended Solids
TTU	Total Toxicity Unit
VOCs	Volatile Organic Compounds
WATF	Washington Avenue Tank Farm

ENGINEER'S CERTIFICATION

CERTIFICATION OF COMPLETION

I, Craig F. Butler, certify that I am currently a New York State registered Professional Engineer (P.E.) and that the Fishkill Creek Sediment and Surface Water Sampling Program Report was prepared in accordance with all applicable statues and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.



04/28/15

Craig F. Butler, P.E. — Date
New York, No. 080807
PARSONS

EXECUTIVE SUMMARY

The purpose of this report is to describe and document the results of the Fishkill Creek Sampling Program Investigation that was completed between August 11th through September 11th, 2014 at the former Texaco Research Center Beacon (TRCB) located in Beacon, New York (Site). A summary of results is provided below.

UPSTREAM/BACKGROUND TRANSECTS

- Transect No. 1
  - Sediment cores were advanced at five locations where the depth of water column varied from 2.08 to 3.25 feet (ft) below water surface (bws). Eighteen (18) sediment samples were collected at depths varying from 0.5 to 3 feet below the sediment surface (bss).
  - No VOCs, total PAHs, or PCBs were present in sediments at concentrations above New York State Department of Environmental Conservation (NYSDEC) Class "A" Sediment Guidance Values (SGVs), but eight (8) sediment samples . had concentrations of metals above Class "A" SGVs
  - . One (1) metal (iron) was present in the surface water sample collected along this transect at a concentration above the NYSDEC Class C Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703)
- Transect No. 2
  - Sediment cores were advanced at five locations where the depth of water column varied from 1.10 to 3.0 ft bws. Ten (10) sediment samples were collected at depths varying from 0.5 to 2.75bss;
  - No VOCs, total PAHs, or PCBs were present in sediments above Class "A" SGVs, while four (4) sediment samples had concentrations of metals above Class "A" SGVs
  - One (1) metal (mercury) was present in the surface water sample collected along this transect at a concentration above the NYSDEC Class C Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703).
- Transect No. 3
  - Three (3) sediment cores were attempted, but only one was successfully completed, at a depth of 0.0 to 0.5 bss.. Depth of water column at this transect location varied between 2.5 to 4.1 ft bws.
  - No VOCs, total PAHs, or PCBs were present in sediments at concentrations above Class "A" sediment screening values, but one metal (nickel) was detected at a concentration above the Class "A" sediment screening value.
  - No parameters detected in the surface water sample collected exceeded NYSDEC Class C Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703).

ADJACENT TO SITE TRANSECTS

- Transect No. 4
  - Three (3) sediment cores were attempted, but only one was successfully completed, at a depth varying from 0.0 to 3.0 ft bss.. The depth of water column at this transect location varied between 6.2 to 6.5 ft bws.
  - No VOCs, total PAHs, or PCBs were present in sediments at concentrations above NYSDEC Class "A" SGVs, while four (4) sediment samples had concentrations for metals above the NYSDEC Class "A" SGVs.
  - No parameters detected in the surface water sample collected exceeded NYSDEC Class C Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703)
- Transect No. 5
  - .Sediment cores were advanced at five locations where the depth of water column varied from 1.2 to 8.2 ft bws. Sixteen sediment samples were collected at depths varying from 0.5 to 3.0 ft bss
  - No VOCs, total PAHs, or PCBs were present in sediments at concentrations above Class "A" SGVs, while one sediment sample location had a metal concentration (nickel) that exceeded the Class "C" SGV. Fifteen (15) sediment samples also contained detectable metal concentrations above NYSDEC Class "A" SGVs.
  - No parameters detected in the surface water sample collected exceeded NYSDEC Class C Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703).
- Transect No. 6
  - Sediment cores were advanced at five locations where the depth of water column varied from 3.0 to 8.3 ft bws. Seventeen (17) sediment samples were collected at depths varying from 0.5 to 3.0 ft bss.
  - No VOCs, total PAHs, or PCBs were present in sediments at concentrations exceeding NYSDEC Class "A" SGVs, but sixteen (16) sediment samples had concentrations of metals above the NYSDEC Class "A" SGVs.
  - No parameters detected in the surface water sample collected exceeded
- Transect No. 7
  - Sediment cores were advanced at five locations where the depth of water column varied from 2.2 to 6.4 ft bws. Twenty-two (22) sediment samples were collected at depths varying from 0.5 to 6.0 ft
  - Analytical results for sediments indicated no VOCs, total PAHs, or PCBs above the Class "A" SGVs, while one sediment sample had a concentration for nickel exceeding NYSDEC Class "C" SGV. Fifteen (15) sediment samples also had metal concentrations exceeding than the Class "A" SGVs.
  - One metal (mercury) was present in the surface water sample at a concentration exceeding the . NYSDEC Class C Surface Water and Groundwater Quality

Standards and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703).

- Transect No. 8
  -
  - Seven (7) sediment core locations were attempted, but no core locations were successfully cored and no sediment samples were collected for analysis. Depth of water column along this transect location varied between 1.5 and 7.7 ft bws.
  - No parameters were detected at concentrations above the .NYSDEC Class C Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703)..
- Transect No. 9
  - Three (3) attempts at advancing sediment cores along this transect were attempted, but only one core was successfully completed). Depth of water column varied between 1.5 to 5.7 ft bws.
  - No VOCs or PCBs were present in sediments at concentrations above the NYSDEC Class "A" SGVs, but one sediment sample had a metal (mercury) concentration that exceeded the Class "A" SGV and total PAHs were detected at a concentrations above the NYSDEC Class "A" SGV.
  - Analytical results for the surface water sample collected indicated no parameters above the. NYSDEC Class C Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703).
- Transect No. 10
  - Three (3) attempts at advancing sediment cores along this transect were attempted, but only one was successfully completed (multiple sediment grab samples were collected from the core). Depth of water column observed varied from 8.5 to 11.3 ft bws.
  - No VOCs, total PAHs, or PCBs were detected at concentrations above the NYSDEC Class "A" SGVs, while one sediment sample exhibited a concentration for mercury that was above the NYSDEC Class "C" SGV. Three (3) sediment samples also had concentrations of metals that exceeded Class "A" SGVs.
  - Analytical results for the surface water sample collected indicated no parameters above the . NYSDEC Class C Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703)

DOWNSTREAM TRANSECT

- Transect No. 11
  - Three (3) attempts at advancing sediment cores were attempted along this transect, but only two were successfully completed. Four (4) sediment samples were collected at depths varying from 0.5 to 2 ft bss. The depth of water column varied from 7.2 to 17.8 ft bws.

- Analytical results for sediment samples indicated no presence of VOCs, total PAHs, or PCBs that exceed the NYSDEC Class "A" SGVs. However, three (3) samples had concentrations of metals (nickel) above the NYSDEC Class "A" SGV.
- Surface water analytical results indicated that no detected parameters exceeded the NYSDEC Class C Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703).

SECTION 1

INTRODUCTION

1.1 PROJECT OBJECTIVES

The purpose of this report is to describe and document the results of the Fishkill Creek sediment and surface water sampling program event that was completed from August 11th through September 11th, 2014 at the former Texaco Research Center Beacon (TRCB), New York site (herein referenced to as the "Site") (see Figure 1). The analytical results presented in this report will also be used to assess potential risks to human health and the environment as presented in the Human Health (HH) Exposure Assessment and Fish and Wildlife Resource Impact Analysis Part I: Resource Characterization for the Site.

1.2 SITE BACKGROUND

Chevron (Chevron, also historically known as Texaco and ChevronTexaco) operated a research center in Glenham, New York from 1931 until its closure in 2003. The research center has been called the Texaco Research Center and the Beacon Research Center. The Site is located on approximately 153 acres of land and includes nine distinct Operable Units (OUs) (Figure 2).

- OU-1A (Main Facility) consists of 33 acres of land, includes all of the developed areas located north of Fishkill Creek. The Main Facility has been used as an on-shore, non-production, non-transportation laboratory complex engaged in research, development, and technical services related to petroleum products and energy. Petroleum, coal products, and solvents have been used at the Main Facility in conjunction with research operations. From 1811 until 1930, the Site was the location of textile mills. The mills were powered by water wheels and steam engines. Blacksmith and carpentry shops operated in support of the mills.
- OU-1B (Church Property) is a 15 acre undeveloped parcel located to the northwest of OU-1A (Main Facility) that once contained a local church that has since been relocated.
- OU-1C (Former Washington Avenue Tank Farm [WATF]) consists of 5 acres of land located south of Fishkill Creek and north of Washington Avenue. Texaco and Chevron once maintained over thirty aboveground storage tanks. All tanks were decommissioned and removed in late 2003 to early 2004.
- OU-1D and OU-3 (Residential Property Parcels) are 2.06 acre and 0.67 acre, respectively, vacant parcels on Washington Avenue. No TRCB activities were conducted on these properties.
- OU-1E (Back 93 Acre Parcel) is an undeveloped property located south of Washington Avenue. A portion of OU-1E (Back 93 Acre Parcel) is listed as an inactive hazardous waste site due to the former use of isolated portions of the property as a disposal site.

- OU-1F (Fishkill Creek) is a surface water body located south of OU-1A (Main Facility) and north of the WATF (OU-1C). The creek was used a hydropower source for the site in the past, as well as a water source for fire control.
- OU-2 (Road Parcel) is a 0.23 acre parcel along and underneath Washington Avenue that has not been dedicated to the Town of Fishkill. This parcel is located outside of the fence line of the main property and is maintained by the Town of Fishkill.
- OU-4 (Dam and Associated Hydropower Facilities) includes the hydroelectric buildings and the dam itself with access on the north side via an easement to Old Glenham Road, and on the south side via an easement to Washington Avenue.

Previous investigations have included follow-up investigations to specific activities such as tank removals and spill investigations. A Phase III Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) was completed by Texaco in March 2001 (IT, 2001a). In 2006, Chevron completed the closure of the Industrial Sewer System (ISS) and the completion of the former Recreation Area Interim Corrective Measure (ICM). In 2005, a Phase II Environmental Site Assessment (GSC, 2005) was completed by Groundwater Sciences Corporation on behalf of a party interested in acquiring the Site. In the fall of 2006, a Sitewide RFI was conducted by Parsons (Parsons, 2007) for Chevron and in the fall of 2007 a Supplemental RFI was conducted by Parsons (Parsons, 2009). In 2010, various subsurface investigations were conducted to determine soil and groundwater quality (e.g., Sitewide Soil and Groundwater Sampling Events, Mill Building (Part of OU-4) Investigation, and neighboring property (Westage Property) investigation). In 2012, three (3) subsurface investigations were conducted (Concrete Foundation Drilling Investigation, Undeveloped Property Investigation (property located south of Main Facility) (Part of OU-4), and Sitewide Groundwater Sampling Event) to also determine soil and groundwater quality, while in 2013 two (2) subsurface investigations (Additional Well Installations and Sitewide Groundwater Sampling Event) were performed to determine subsurface conditions.

Ten (10) groundwater monitoring wells are currently sampled twice a year to monitor groundwater potentially affected by historical disposal practices in the OU-1E (Back 93 Acre Parcel). In addition, approximately forty-three (43) groundwater monitoring wells located on the OU-1A (Main Facility) and OU-1C (WATF) are currently sampled quarterly to obtain data from specific wells located at the facility in order to determine the degree of biodegradation of contaminants of concern taking place within the subsurface soil and groundwater resources, assist in the development of a site conceptual model(s), and assist in identifying potential remedial alternatives for the site.

The Fishkill Creek Sampling program detailed in this report was designed to gather data to assist in the evaluation of the potential contaminant impacts in Fishkill Creek surface water and sediments. Sampling activities included surface water and sediment sampling. Surface water samples were collected from a few feet below the creek water surface, while sediment samples were collected from the creek bottom and banks. Surface water and sediment sampling were conducted both upstream and downstream of the on-site hydroelectric dam for characterization of the creek surface water quality and sediments. The scope of work discussed within this report was also developed to assist in the refinement of a site conceptual model(s), assist in identifying potential remedial alternatives for the Site, and assist in developing a Fish and Wildlife Resource

Impact Analysis Part I: Resource Characterization and Human Health Exposure Assessment report for the site.

1.3 REPORT ORGANIZATION

This report has been organized into sections similar to those presented in the RFI, SRFI, Sitewide Groundwater Sampling Events, and the other Site reports.

Section 1 contains an introduction and includes a discussion of the organization of this report.

Section 2 provides a description of the completed scope of work. This includes the quality assurance and quality control (QA/QC) program, the database management program and a summary of the field methods used.

Section 3 provides descriptions of each of the areas investigated, the scope of work completed, and the results of the investigations in those areas.

Section 4 presents sample event conclusions.

Section 5 consists of a reference section.

SECTION 2

FIELD PROCEDURES

2.1 INTRODUCTION

The purpose of this section is to describe and document the methods used during the Creek sampling activities. The Fishkill Creek surface water and sediment sampling was completed in accordance with the Generic Work Plan, Site Investigation Activities (Parsons, 2007b) and the Project Work Plan (Parsons, 2014a) approved by the New York State Department of Environmental Conservation (NYSDEC) via electronic mail and verbally in the summer of 2014.

2.2 SUMMARY OF WORK SCOPE

The scope of work for the Fishkill Creek Sampling Program included collection of eleven (11) surface water samples and one hundred (100) individual grab sediment samples from thirty-one (31) sediment core locations along eleven (11) transects located within Fishkill Creek. Forty-seven (47) sediment core locations were cored, but only thirty-one (31) of them yielded sufficient sediment volumes for analysis. Samples were collected to obtain background data on chemical parameters of interest (CPOIs) and characterize surface water and sediment quality both upstream and downstream of the on-site hydroelectric dam and adjacent to the Site. Analytical results included in this report were validated as specified in the Project Quality Assurance Project Plan (QAPP) (Parsons, 2014b).

2.3 QA/QC PROGRAM

2.3.1 Field Duplicate and MS/MSD Samples, Wash Blanks, Trip Blanks

Field duplicate, matrix spike and matrix spike duplicate (MS/MSD) samples and sample blanks (e.g., wash blanks and trip blanks) were collected and analyzed in accordance with the QAPP included in the Project Work Plan (Parsons, 20014a).

2.3.2 Sample Custody and Custody Seals

Sample Chain-of-Custody (COC) logs and custody seals were used to ensure that sample integrity was not compromised subsequent to sample collection and during shipment to the laboratory. Shipment particulars, such as samples submitted, analyses requested, and sample custody were recorded on the COCs. The field team retained one copy of the COC and the laboratory received the remaining one copy for internal use.

2.3.3 Laboratory Analyses

The analyses were conducted using NYSDEC Analytical Services Protocol (ASP) dated September 1989 with revisions. The analytical work was performed by a laboratory approved by the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) for the categories of solid and hazardous waste. Chemical and physical analyses not covered by ASP procedures were conducted using procedures specified in the QAPP. Sample custody, laboratory procedures, and other QA/QC requirements were performed in accordance with the specifications in the QAPP.

2.3.4 Data Validation

The samples were collected by Parsons and analyzed by Eurofins-Lancaster Laboratories, Lancaster, Pennsylvania following the procedures outlined in the Project QAPP (Parsons, 20014b).

The data submitted by the laboratory have been reviewed and validated, following the guidelines outlined in the project QAPP.

The analytical data were found to be acceptable in terms of deliverable completeness, accuracy, precision, representativeness, completeness and comparability. A copy of the Data Usability Summary Report (DUSR) for both surface water and sediment samples is included in Appendix A, while copies of the analytical laboratory reports with chain-of-custody documentation are included in Appendix B.

2.4 DATABASE MANAGEMENT

The data generated during the sampling activities were stored and managed using Locus Focus Environmental Information Management (Locus EIM™) database software (Chevron's national lab data management program used on all Chevron projects). Following data validation, the Locus EIM™ database was updated to reflect any changes as a result of data validation. These changes included concentration changes, where appropriate, and removal, addition, and/or changes to data qualifiers. The data used in this report were taken from the updated master database to ensure that only current, validated analytical results were used.

In addition, all analytical data were submitted separately to the NYSDEC Project Manager (Mr. Paul Patel, P.E.) in the required EQUIS format in the form of an e-mail and the report was signed in accordance with Division of Environmental Remediation -10 Sections 1.2 and 1.5.

2.5 SELECTION OF SCREENING CRITERIA FOR ECOLOGICAL RESOURCES

NYSDEC has issued guidance for the screening of surface water and sediment analytical results for ecological resources.

Water Quality Standards for protection of aquatic life were established by NYSDEC in New York Codes, Rules and Regulations (NYCRR) Part 703: Surface Water and Groundwater Quality and Groundwater Effluent Limitations (http://www.dec.ny.gov/regs/4590.html). Water Quality Standards are the basis for programs to protect the state waters. Standards set forth the maximum allowable levels of chemical pollutants and are used as the regulatory targets for permitting, compliance, enforcement, and monitoring and assessing the quality of the state's waters. Waters are classified for their best uses (fishing, source of drinking water, etc.) and standards (and guidance values) are established to protect those uses. All waters in New York State are assigned a letter classification that denotes their best uses. Water Class "C" applies to Fishkill Creek at the TRCB. Class C waters should be suitable for fish, shellfish, and wildlife propagation and survival, as well as secondary contact recreation (e.g. fishing and boating). Selected standards represent the lowest of values listed in the categories Aquatic (Chronic), Wildlife, and Health (Fish Consumption). In the absence of established water quality standards, numeric guidance values were obtained from the 1998 NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Groundwater Quality Standards and Groundwater Effluent Limitations (http://www.dec.ny.gov/docs/water_pdf/togs1112.pdf).

On June 24th, 2014, NYSDEC, Division of Fish, Wildlife and Marine Resources, Bureau of Habitat issued the Screening and Assessment of Contaminated Sediment (NYSDEC, 2014d) document as a guidance for screening, classifying and assessing contaminated sediments in New York State.

In this report, the Class C water quality standards listed in NYCRR Part 703 and the sediment screening guidance values (Class A, B, and C) referenced in the NYSDEC document for sediments mentioned above are presented as screening criteria for the purpose of screening both surface water and sediment sample analytical results to identify areas along Fishkill Creek where potential environmental impacts may exist as a result of past operations that took place at the Site.

2.6 INVESTIGATION METHODS

2.6.1 Pre-Drilling Activities

Before subsurface intrusive field work began, the facility Superintendent and Dig Safely New York (Telephone number: *811) were contacted to identify potential buried utility locations both at the Site and outside site property boundaries that potentially were located near work areas. All available site utility maps were reviewed and transect drilling locations were chosen along the Creek to avoid any underground or aboveground utilities.

Prior to any work activities, an extensive three-day site and safety orientation was given to all Parsons' field crew members and subcontractors (i.e., drillers, crane operators, etc.) working on the project to ensure all applicable safety information and protocols were relayed and followed. Safety training was performed by Parsons' Chevron Environmental Management Company (EMC) Program Safety Officer, Rich Molta.

The Project Manager, Mr. Craig F. Butler, P.E. ensured that all Parsons and Chevron EMC protocols for performing subsurface intrusive work were followed. All appropriate documentation was completed and all appropriate approvals obtained.

2.6.2 Surface Water Sampling

As shown on Figures 2.1 and 2.2, surface water samples were collected at eleven (11) locations across eleven (11) transects within Fishkill Creek. Three (3) of the eleven (11) transects were located upstream of the Site (See Figure 2.1) to assess the background concentrations of CPOI in Fishkill Creek surface water, while the remaining eight (8) transects were located adjacent to and/or downstream of the Site (See Figure 2.2). The first upstream or background transect was located just downstream of the Washington Avenue Bridge to assess potential impacts to the creek from the bridge and stormwater runoff from the road. The other two (2) background transects located further upstream of the site were selected based on water levels at the time of sampling and predicted depositional areas of the creek. Sample results provided background conditions for comparison to analytical results collected from sample locations situated adjacent to or downstream of the Site.

Surface water samples were collected first at locations where both surface water and sediment were designated to be sampled. Surface water samples were collected following the protocols outlined in the Sampling and Analysis Plan (SAP) (Parsons, 2014c) and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs; Polycyclic

Aromatic Hyrdocarbons (PAHs) were reported), Target Analyte List (TAL) dissolved and total metals, hardness, Total Suspended Solids (TSS), and pH.

All samples were collected from a barge or jon boat, depending on the location along the stream.

2.6.3 Sediment Sampling

Following the collection of surface water samples, sediment samples were collected at three (3) to five (5) locations across the same eleven (11) transects as shown in Figures 2.1 and 2.2.

Channel sediment core samples were collected to a maximum depth of 3 feet (ft) or approximately 1-ft into an underlying confining unit (if present), whichever was encountered first. Continuous sampling was conducted at each location with a vibracore, split spoon sampler, macro core, or other appropriate sample device depending on subsurface conditions. If the sampler could not be advanced due to buried rocks or other obstructions, or if recovery was less than 70%, the sampler was moved within several feet from the original location and re-driven. If after two (2) attempts sediment recovery was still poor, alternative sample locations were considered. Sample locations were modified in the field, with concurrence from Chevron and NYSDEC representatives as required, to ensure safety and to afford access to each sample location. Figure 2.3 depicts multiple drilling attempts at applicable sample locations to either obtain additional sediment sample volume or to get initial penetration into the sediment column.

Sampling was conducted from a jon boat or a small motorized barge depending on water levels in the creek at the time of sampling. The jon boat had a small opening in the bottom to allow a macro core or split spoon type sampler to be advanced with a slide hammer. A jack was then employed to extract the sampler from the sediments. Anchors were deployed to keep the jon boat stationary while collecting sediment samples. The jon boat was also tied off to shoreline trees or other structures if necessary.

The barge used to collect samples was equipped with a spud system to hold the barge in place. Additional anchors were deployed or the barge was tied off to shoreline trees or other structures if the spuds could penetrate the creek bottom deep enough to keep the barge stationary. The barge utilized hand rails around the perimeter of the deck to prevent workers from stepping or falling off the barge. A vibracore was used to collect sediment samples; a small crane mounted to the barge was used to deploy the vibracore over the side of the barge. Absorbent booms were also deployed on the water surface, surrounding the barge to absorb potential petroleum releases that might occur (safety precaution).

If sediments were soft enough, hand collection methods were also attempted. Hand collection methods consisted of pushing a lexan, Wildco sampler, or equivalent type tube sampler into the sediments.

Samples were collected at 0-6 inch, 6-12 inch, 12-24 inch, and 24-36 inch intervals from each sample location. At two sample locations (TR07_B and TR07_E) from the transect just upstream of the Texaco Dam (Transect No. 7)., sediment was collected from those locations at 1 ft intervals at depths greater than 3 ft through the entire sediment column (Depth of sediment column was approximately 6 ft). Each sample was logged, classified in the field, and documented via photographs (see Appendix C for sediment logs). If clay or other native confining layer was encountered and recovered, separate samples were collected above and within this layer (i.e., clay was not be homogenized with sediments above or within the interval).

Each sample interval was submitted for analysis of VOCs, SVOCs (PAHs only), TAL metals, total organic carbon (TOC), acid volatile sulfides (AVS) and simultaneously extracted metals (SEM) analysis. In addition, sediment from each sample interval at one sample location in each transect was submitted for polychlorinated biphenyl (PCB) analysis. The samples were stored and shipped on ice to the analytical laboratory following chain-of-custody procedures.

In addition, one "clean" soil sample was analyzed by the laboratory to ensure organic laboratory artifacts (e.g., acetone, methanol, etc.) were not being reported with results. "Clean" samples were created by heating sand to 550°C and analyzing for CPOI. The "clean" soil sample was submitted by Chevron to the laboratory and were not representative of the Site. All sediment sampling activities followed protocols outlined in the Sampling and Analysis Plan (SAP).

2.6.4 Surveying of Sampling Locations

Each new surface water and sediment sampling location was surveyed by the driller using a portable global positioning device and depth of water was recorded at each location. Refer to Table 1 for depth of water at each sediment sample location. All coordinates were measured in the New York State Plan and Coordinate System, East Zone (NAD-1983) system for the horizontal datum, while the vertical datum used the site vertical datum established by Texaco in 1957. This datum is 1.07 ft below NAVD 1988 coordinate system.

2.6.5 Investigation Derived Waste

All liquid investigation derived waste (IDW), including decontamination water was staged in a polyurethane tank and transported to the on-site industrial wastewater treatment system for disposal.

Any excess sediment generated during field activities was staged in a secure on-site Department of Transportation (DOT), 17-H, 55-gallon drum for future disposal by Chevron EMC.

2.6.6 Photographic Log

A photographic log documenting field activities is provided in Appendix D.

SECTION 3

ANALYTICAL RESULTS

3.1 INTRODUCTION

Eleven (11) surface water samples were collected from eleven (11) transects located along Fishkill Creek, while one hundred (100) individual grab sediment samples from thirty-one (31) sediment core locations were collected along the same eleven (11) transects. Surface water samples were analyzed for VOCs, PAHs, TAL dissolved and total metals, hardness, TSS, and pH. Sediment samples were analyzed for VOCs, PAHs, TAL metals, TOC, AVS/SEM metals, and PCBs (only one location per transect). No VOCs or PAHs were detected at concentrations exceeding the NYSDEC Part 703 Class C surface water quality screening criteria in any of the surface water samples collected, while TAL metals were detected in surface water samples at concentrations exceeding the NYSDEC Part 703 Class C Water Quality Standards.

In the sediment samples collected during field activities, no VOCs, PAHs, or PCBs were detected at concentrations greater than the Class "A" Sediment Guidance Values (SGVs) with the exception of one sediment location for total PAHs, while metals were detected at concentrations exceeding Class "A" SGVs. Depth of water at sediment sampling locations varied from 1.0 ft below water surface (bws) to 17.8 ft bws. Refer to Table 1 for depth to water at each sediment sample location.

The following paragraphs provide summaries of the results of the Fishkill Creek sampling program.

3.2 UPSTREAM/BACKGROUND TRANSECTS

Three (3) transects (Transect No. 1, 2, 3) were located upstream of the Site and were used to determine background concentrations of CPOIs in surface water and sediment within the Creek upstream of the Site. Two of the three (3) transects were located east of the Washington Avenue Bridge, while one was located slightly to the east of the bridge..

3.2.1 Transect No. 1 (TRO1)

Five (5) sediment cores were advanced along TR01 (TR01A, TR01B, TR01C, TR01D, and TR01E) and varied in depth from 0.5 ft below creek bottom (bcb) to 3.0 ft bcb. The sediment consisted of fine to coarse sand and fine to coarse gravel with trace silt and organics. Depth of water column varied from 2.08 to 3.25 ft bws. Core logs for each location are provided in Appendix C. No VOCs, total PAHs, or PCBs were detected at concentrations exceeding the Class "A" SGVs, while eight (8) samples [TR01A (0.5-1 ft) (1-2 ft) (2-2.7 ft); TR01B (0.5 ft) (1-2 ft); TR01C (0-0.5 ft) (2-2.9 ft); and TR01D (0.5–1 ft)] contained metal parameters (nickel and zinc) that were detected above Class "A" SGVs. All other parameters detected were either below Class "A" SGVs or did not have corresponding SGVs.

One surface water sample was collected from TR01 and only one metal (iron) was detected at concentrations exceeding NYSDEC Part 703 Class C water quality standards.

3.2.2 Transect No. 2 (TR02)

Five (5) cores were advanced along TR02 (TR02A, TR02B, TR02C, TR02D, and TR02E) and varied in depth from 0.5 ft bcb to 2.75 ft bcb. The lithology was similar to that observed at Transect No. 1 with the exception of clay and additional amounts of silt present. Depth of water column varied from 1.0 to 3.0 ft bws. No VOCs, total PAHs, or PCB parameters were detected at concentrations exceeding Class "A" SGVs, while four (4) samples [TR02C (0-0.5ft); TR02D (0-0.5 ft); and TR02E (0-0.5 ft) (0.5-1 ft)] had metals (nickel, copper, lead, and zinc) detected above Class "A" SGVs. All other parameters detected were either below Class "A" SGVs or did not have a corresponding SGV.

One surface water sample was collected and one metal (mercury) was detected at a concentration exceeding NYSDEC Part 703 Class C water quality standards.

3.2.3 Transect No. 3 (TR03)

Three (3) cores were advanced along TR03 (TR03A, TR03B, and TR03C) and, of the three (3) cores advanced, a sediment sample was able to be obtained from only one of the cores (TR03C). Creek bottom conditions did not allow the sampling tool to advance into sediment present at sampling location to obtain samples. Multiple attempts were made at these locations, but were unsuccessful. Refer to Figure 2.3 for multiple attempt locations. Sample core TR03C was advanced to a depth of 0.5 bcb and lithology consisted of fine to coarse sand and fine to medium gravel with trace silt. Depth of water column varied between 2.5 to 4.1 ft bws. No VOCs, total PAHs, or PCBs were detected at concentrations that exceeded Class "A" SGVs. However, one metal (nickel) was detected at a concentration at TR03C (0-0.5 ft) that exceeded Class "A" SGV.

One surface water sample was collected and no analytical parameters were detected at concentrations exceeding NYSDEC Part 703 Class C water quality standards.

3.3 ADJACENT TO SITE TRANSECTS

Seven (7) transects (Transects No. 4, 5, 6, 7, 8, 9, and 10) were located adjacent to the site and were used to evaluate the surface water and sediment quality within the Creek. Four (4) of the transects (Transect 4, 5, 6, and 7) were located between the Washington Avenue Bridge and the hydroelectric dam located at the site, while the remaining three (3) transects (Transects 8, 9, and 10) were located between the dam and the furthermost western end of the property boundary (Building 58 Area).

3.3.1 Transect No. 4 (TR04)

Three (3) cores were advanced along TR04 (TR04A, TR04B, and TR04C) but a sediment sample could only be obtained from (TR04C) because of similar creek bottom conditions as those observed at TR03. Sample core TR04C was advanced to a depth of 3 ft bcb and lithology consisted of silt, fine to medium sand organics, and trace clay. Depth of water column varied between 6.2 to 6.5 ft bws. No VOCs, total PAHs, or PCBs were detected at values that exceeded Class "A" SGVs, while four (4) samples [TR04C (0-0.5 ft) (0.5-1 ft) (1-2 ft) (2-3 ft)] had metal concentrations (copper, nickel, and zinc) that exceeded Class "A" SGVs. All other parameters detected were either below Class "A" SGVs or did not have a corresponding SGV.

One surface water sample was collected from TR04 and no parameters were detected that exceeded NYSDEC Part 703 Class C water quality standards.

3.3.2 Transect No. 5 (TR05)

Five (5) cores were advanced along TR05 (TR05A, TR05B TR05C, TR05D, and TR05E) and varied in depth from 0.5 to 3 ft bcb. The lithology was similar to that encountered at the upstream transects with the exception of a fragment of debris (metal) observed within one of the sediment cores. Depth of water column varied from 1.2 to 8.2 ft bws. No VOCs, total PAHs, or PCBs parameters exceeded Class "A" SGVs, while one sample [TR05C (0-0.5 ft)] had one metal concentration that exceeded the Class "C" SGV. Nickel was detected at a concentration of 49.4J milligrams per Kilogram (mg/Kg). Fifteen sediment samples [TR05A (0.5-1 ft), (1-2 ft), (2-3 ft); TR05B (0-0.5 ft), (0.5-1 ft); TR05C (0-0.5 ft), (0.5-1 ft); TR05D (0-0.5 ft), (0.5-1 ft) (1-2 ft), (2-3 ft); and TR05E (0-0.5 ft), (0.5-1 ft) (1-2 ft), (2-3 ft)] indicated metal parameters (nickel, chromium, copper, lead, zinc, silver, and arsenic) at concentrations that exceeded Class "A" SGVs All other parameters detected were either below Class "A" SGVs or did not have corresponding criteria.

One surface water sample was collected from the transect and no parameters were detected above the NYSDEC Part 703 Class C water quality standards.

3.3.3 Transect No. 6 (TR06)

Five (5) cores were advanced along TR06 (TR06A, TR06B TR06C, TR06D, and TR06E) and varied in depths from 4 to 5 ft bcb. The lithology encountered was similar to that encountered at the upstream transects with the exception of till being present. Depth of water column varied from 3.0 to 8.3 ft bws. No VOC, total PAHs, or PCB parameter concentrations exceeded the NYSDEC Class "A' SGVs, while sixteen (16) sediment samples [TR06A (0-0.5 ft) (0.5-1 ft) (1-2 ft) (2-3 ft); TR06B (0-0.5 ft) (0.5-1 ft) (1-2 ft); TR06C (0-0.5 ft) (0.5-1 ft); TR06D (0-0.5 ft) (0.5-1 ft) (1-2 ft) (2-3 ft); and TR06E (0-0.5 ft) (0.5-1 ft) (1-2 ft), (2-3 ft)] had metals (copper lead, mercury, nickel, zinc, arsenic, and chromium) detected at concentrations that exceeded the NYSDEC Class "A" SGVs. All other parameters were either below Class "A" SGVs or did not have corresponding criteria.

One surface water same was collected along TR06 and no parameters exceeded NYSDEC Part 703 Class C water quality screening criteria.

3.3.4 Transect No. 7 (TR07)

Five (5) cores were advanced along TR07 (TR07A, TR07B TR07C, TR07D, and TR07E) and varied in depths from 0.5 to 6 ft bcb. The lithology encountered during the drilling program was similar to that observed at TR06 with the exception of no till present and a greater percentage of clay present. Depth of water column observed varied in depth from 2.2 to 6.4 ft bws. No VOCs, total PAHs, or PCBs parameters were detected at concentrations exceeding Class "A" SGVs, while one sample [TR07E (2-3 ft)] had one metal concentration that exceeded the Class "C" SGV. Nickel was detected at a concentration of 60.4 mg/Kg. Fifteen (15) sediment samples [TR07A (0-0.5 ft) (1-2 ft); TR07B (0.5-1 ft) (1-2 ft) (2-3 ft) (3-4 ft); TR07C (0.5-1 ft); TR07D (0.5-1 ft) (1-2 ft) (2-3 ft); and TR07E (0-0.5 ft) (0.5-1 ft) (1-2 ft) (2-3 ft) (3-4 ft)] had metal (chromium, arsenic, nickel, cooper, lead, and zinc) concentrations that exceeded NYSDEC Class "A" SGVs. All remaining detected parameters were either below Class "A" SGVs or did not have corresponding NYSDEC criteria.

One surface water sample was collected from the transect and only one metal (mercury) was detected at a concentration that exceeded the NYSDEC Part 703 Class C water quality standards.

3.3.5 Transect No. 8 (TR08)

Seven (7) sediment core locations were attempted, but no sediment samples were collected along TR08 because of the lithology present at the bottom of Creek. The Creek bottom consisted of cobbles and boulders and sparse sediment (similar conditions as present at TR03 and 04) making the collection of sediment impossible. Several attempts were made at the TR08 area; as well as, attempting a second transect for TR08 approximately 115 ft downstream of the original TR08 location. This second transect location was performed in hopes of encountering a different lithological creek bottom so that sediment samples could be obtained. The same creek bottom conditions were encountered and no sediment samples were collected. Refer to Figure 2.3 for second the TR08 location along with multiple coring attempt locations.

One surface water sample was collected from TR08 and no parameters exceeded NYSDEC Part 703 Class C water quality standards.

3.3.6 Transect No. 9 (TR09)

Three (3) cores were advanced along TR09 (TR09A, TR09B, and TR09C) and at only one location (TR09C) was a sediment sample collected from it due to similar creek bottom conditions as observed at TR03, TR04, and TR08. Core TR09C was advanced to a depth of 0.5 ft bcb and lithology consisted of fine to coarse sand, fine to medium gravel, and trace silt. Depth of water column varied between 1.5 and 5.7 ft bws. No VOCs or PCBs were detected at values that exceeded Class "A" SGVs. Sediment sample TR09C (0-0.5 ft) indicated one metal (mercury) was and total PAHs were detected at a concentration that exceeded the NYSDEC Class "A" SGV. All remaining parameters were either below Class "A" SGVs or did not have a criteria value.

One water sample was collected from TR09 and no parameters were detected at concentrations exceeding NYSDEC Part 703 Class C water quality standards.

3.3.7 Transect No. 10 (TR10)

Three (3) cores were advanced at TR10 (TR10A, TR10B, and TR10C) and sediment could only be collected from one core (TR10A) for the same reasons that limited sediment samples collection from TR03, TR04 , TR08, and TR09. The core was advanced to a maximum depth of 2 ft bcb and the lithology was as observed at Transect No. 9. Depth of water column observed at TR10 area varied from 8.5 to 11.3 ft bws. No VOCs, total PAHs, or PCBs exceeded the NYSDEC Class "A" SGVs, while one sample [TR10A (0-0.5ft)] contained a metal concentration that exceeded the NYSDEC Class "C" SGV. Mercury was detected at 1.3 mg/kg. Three (3) samples [TR10A (0-0.5 ft) (0.5–1 ft) (1-2 ft)] indicated metal parameters (lead and nickel) that exceeded NYSDEC Class "A" SGVs. All other parameters detected either were below Class "A" SGVs or did not have corresponding SGV criteria.

A surface water sample was collected from TR10 and no parameters were detected at concentrations exceeding NYSDEC Part 703 Class C water quality standards.

3.4 DOWNSTREAM TRANSECT

One transect (Transect No. 11) is located downstream of the site and was used to determine the surface water and sediment quality within Fishkill Creek downstream of the Main Facility. The transect is located approximately 560 ft west of Transect No. 10 and beyond the furthest westernmost property boundary.

3.4.1 Transect No. 11 (TR11)

Three (3) cores were advanced along TR11 and sediment samples were collected from only two (2) of these core locations (TR11B and TR11C). Limited sediment sampling was due to similar creek bottom lithological conditions as observed at previous transect locations mentioned above. The cores were advanced to a maximum depth of 2 ft bcb and lithology of the cores consisted of fine to coarse sand, fine to medium gravel, trace silt, and fragments of glass and paint chips. Depth of water column varied from 7.2 to 17.8 ft bws. No VOCs, total PAHs, or PCB concentrations exceeded NYSDEC Class "A" SGVs. Three (3) samples [TR11C (0-0.5 ft) (0.5-1 ft) (1-2 ft)] indicated a metal (nickel) that was detected at a concentration exceeding the NYSDEC Class "A" SGV. All other parameters detected either were below Class "A" SGVs or did not have associated SGV criteria.

One surface water sample was collected from the transect and no parameters exceeded the NYSDEC Part 703 Class C water quality standards.

A summary of the sediment analytical results are provided in Tables 2 through 6, while a summary of the surface water analytical results is provided in Table 7. Sediment analytical results for VOCs are depicted in Figures 3.1 through 3.4, total PAHs in Figures 4.1 through 4.4, TAL metals in Figures 5.1 through 5.4, and PCBs in Figures 6.1 through 6.4. Surface water analytical results are graphically depicted in Figure 7.1 for VOCs, Figure 7.2 for PAHs, Figure 7.3 for metals, and Figure 7.4 for PCBs.

Sediment core logs are provided in Appendix C, while a photographic log documenting all field activities is provided in Appendix D.

SECTION 4

SUMMARY

This section summarizes the results of the preliminary ecological screening for sediment and surface water samples collected in Fishkill Creek.

4.1 SEDIMENT AND SURFACE WATER SAMPLING EVENT CONCLUSIONS

Based on reviewing analytical results summarized in Section 3, the following conclusions can be made:

- No VOC, total PAHs, or PCB concentrations exceeded NYSDEC Class "A" SGVs in sediment samples with the exception of one sediment location for total PAHs. One sediment sample location exhibited total PAHs at concentrations greater than the Class "C" SGV.
- Sediment samples had concentrations of eight (8) metals (arsenic, chromium, copper, lead, mercury, nickel, silver, and zinc) greater than NYSDEC Class "A" SGVs.
- Sediment samples collected at three locations had concentrations for metals (nickel or mercury) that exceeded NYSDEC Class "C" SGV.
- Surface water samples from three transect locations had concentrations for TAL metals that exceeded the NYSDEC Part 703 Class C water quality standards.

SECTION 5

REFERENCES

NYSDEC. 1998, Division of Water Technical Guidance Series (1.1.1). Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. New York State Department of Environmental Conservation, June 1998.

NYSDEC. 2010, Division of Environmental Remediation, DER-10. Technical Guidance for Site Investigation and Remediation, New York State Department of Environmental Conservation, May 2010.

NYSDEC. 2014, Screening and Assessment of Contaminated Sediment, New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources Bureau of Habitat, June 24, 2014.

Parsons. 2007a, June 2007 Sitewide RCRA Facility Investigation, Former Texaco Research Center Beacon (Glenham), New York, June 2007.

Parsons. 2007b, Generic Work Plan, Site Investigation Activities, Former Chevron Research Center, Beacon, New York, August 2007, (Revised February 2008).

Parsons. 2009a, Supplemental Sitewide RCRA Facility Investigation, Former Chevron Research Center, Beacon (Glenham), New York, July 2009.

Parsons. 2009b, 2008 Sitewide Groundwater Sampling Event, Former Texaco Research Center, Beacon (Glenham), New York, April 2009.

Parsons. 2010a, 2010 Sitewide Soil Sampling Event, 2010 Sampling of Main Campus Property, Former Texaco Research Center, Beacon (Glenham), New York, December 2010.

Parsons. 2010b, 2010 Sitewide Groundwater Sampling Event, Former Texaco Research Center, Beacon (Glenham), New York, December 2010.

Parsons, 2012, Work Plan for Concrete Foundation Drilling Investigation, Former Chevron Research Center, Beacon, NY, August 2012.

Parsons. 2013, 2012 Sitewide Groundwater Sampling Event, Former Chevron Research Center (Glenham), New York, April 2013.

Parsons, 2014a, Work Plan for the Fishkill Creek Sediment Sampling Program, Former Texaco Research Center, Beacon, New York, July 2014.

Parsons. 2014b, Generic Quality Assurance Project Plan, Former Chevron Research Center, Beacon, New York, August 2007, (Revised July 2014).

Parsons. 2014c, Generic Sampling and Analysis Plan, Site Investigation Activities, Former Chevron Research Center, Beacon, New York, August 2007, (Revised July 2014).

TABLES

TABLE 1

DEPTH OF WATER COLUMN AT SEDIMENT SAMPLING LOCATONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

Sediment Sample Location ID	Start Date	Complete Date	Water Depth[(1)]	Depth Units
TR01_A	8/18/2014	8/19/2014	2.67	ft
TR01_B	8/18/2014	8/19/2014	3.25	ft
TR01_C	8/18/2014	8/19/2014	2.5	ft
TR01_D	8/18/2014	8/19/2014	2.08	ft
TR01_E	8/18/2014	8/19/2014	3.17	ft
TR02_A	8/14/2014	8/14/2014	2.17	ft
TR02_B	8/19/2014	8/20/2014	3.0	ft
TR02_C	8/19/2014	8/20/2014	2.17	ft
TR02_D	8/19/2014	8/20/2014	2.83	ft
TR02_E	8/19/2014	8/20/2014	1.0	ft
TR03_A	8/26/2014	8/26/2014	4.1	ft
TR03_B	8/26/2014	8/26/2014	4.0	ft
TR03_C	8/26/2014	8/27/2014	2.5	ft
TR04_A	8/27/2014	8/27/2014	6.2	ft
TR04_B	8/27/2014	8/27/2014	6.2	ft
TR04_C	8/27/2014	8/27/2014	6.5	ft
TR05_A	8/26/2014	8/27/2014	3.2	ft
TR05_B	8/26/2014	8/26/2014	8.2	ft
TR05_C	8/26/2014	8/27/2014	7.5	ft
TR05_D	8/25/2014	8/26/2014	1.2	ft
TR05_E	8/25/2014	8/26/2014	1.5	ft
TR06_A	8/26/2014	8/27/2014	3.2	ft
TR06_B	8/25/2014	8/26/2014	7.7	ft
TR06_C	8/25/2014	8/26/2014	8.3	ft
TR06_D	8/25/2014	8/26/2014	6.0	ft
TR06_E	8/25/2014	8/25/2014	3.0	ft
TR07_A	8/22/2014	8/25/2014	5.1	ft
TR07_B	8/21/2014	8/22/2014	5.43	ft
TR07_C	8/22/2014	8/25/2014	6.4	ft
TR07_D	8/22/2014	8/25/2014	3.3	ft
TR07_E	8/22/2014	8/25/2014	2.2	ft
TR08_A	9/9/2014	9/9/2014	5.9	ft
TR08_A-R1	9/9/2014	9/9/2014	5.5	ft
TR08_A-R2	9/9/2014	9/9/2014	5.9	ft
TR08_A-R3	9/9/2014	9/9/2014	5.8	ft
TR08_A-R4	9/9/2014	9/9/2014	6.8	ft
TR08_A-R5	9/9/2014	9/9/2014	6.5	ft
TR08_B	9/9/2014	9/9/2014	3.9	ft
TR08_B-R1	9/9/2014	9/9/2014	3.9	ft
TR08_B-R2	9/9/2014	9/9/2014	4.2	ft
TR08_B-R3	9/9/2014	9/9/2014	4.3	ft
TR08_B-R4	9/9/2014	9/9/2014	7.2	ft
TR08_B-R5	9/9/2014	9/9/2014	7.7	ft
TR08_B-R6	9/9/2014	9/9/2014	1.5	ft
TR08_C	9/9/2014	9/9/2014	1.5	ft
TR08_C-R1	9/9/2014	9/9/2014	1.7	ft

TABLE 1

DEPTH OF WATER COLUMN AT SEDIMENT SAMPLING LOCATONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

Sediment Sample Location ID	Start Date	Complete Date	Water Depth[(1)]	Depth Units
TR08_C-R2	9/9/2014	9/9/2014	1.5	ft
TR08_C-R3	9/9/2014	9/9/2014	1.5	ft
TR08_C-R4	9/9/2014	9/9/2014	1.8	ft
TR09_A	9/9/2014	9/9/2014	3.5	ft
TR09_A-R1	9/9/2014	9/9/2014	3.5	ft
TR09_A-R2	9/9/2014	9/9/2014	5.5	ft
TR09_A-R3	9/9/2014	9/9/2014	5.7	ft
TR09_B	9/9/2014	9/9/2014	5.3	ft
TR09_B-R1	9/9/2014	9/9/2014	5.3	ft
TR09_B-R2	9/9/2014	9/9/2014	5.3	ft
TR09_B-R3	9/9/2014	9/9/2014	5.1	ft
TR09_C	9/9/2014	9/10/2014	1.5	ft
TR09_C-R1	9/9/2014	9/10/2014	1.5	ft
TR09_C-R2	9/9/2014	9/10/2014	1.5	ft
TR09_C-R3	9/9/2014	9/10/2014	1.5	ft
TR10_A	9/10/2014	9/10/2014	3.6	ft
TR10_A-R1	9/10/2014	9/10/2014	2.7	ft
TR10_A-R2	9/10/2014	9/10/2014	3	ft
TR10_A-R3	9/10/2014	9/10/2014	3.6	ft
TR10_B	9/10/2014	9/10/2014	11.3	ft
TR10_B-R1	9/10/2014	9/10/2014	11.3	ft
TR10_B-R2	9/10/2014	9/10/2014	11.8	ft
TR10_B-R3	9/10/2014	9/10/2014	8.5	ft
TR10_C	9/10/2014	9/10/2014	4.3	ft
TR10_C-R1	9/10/2014	9/10/2014	4.3	ft
TR10_C-R2	9/10/2014	9/10/2014	6.7	ft
TR10_C-R3	9/10/2014	9/10/2014	8.2	ft
TR11_A	9/10/2014	9/10/2014	7.2	ft
TR11_A-R1	9/10/2014	9/10/2014	7.2	ft
TR11_A-R2	9/10/2014	9/10/2014	7.8	ft
TR11_A-R3	9/10/2014	9/10/2014	8.1	ft
TR11_B	9/10/2014	9/11/2014	17.5	ft
TR11_B-R1	9/10/2014	9/11/2014	17.5	ft
TR11_B-R2	9/10/2014	9/11/2014	17.5	ft
TR11_B-R3	9/10/2014	9/11/2014	17.5	ft
TR11_C	9/10/2014	9/11/2014	17.8	ft
TR11_C-R1	9/10/2014	9/11/2014	17.8	ft
TR11_C-R2	9/10/2014	9/11/2014	17.7	ft
TR11_C-R3	9/10/2014	9/11/2014	17.8	ft

(1) Depth of water was measured from top of water surface (Fishkill Creek) to top of creek bottom.

ft - Feet

TABLE 2

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
VOLATILE ORGANIC COMPOUNDS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

						Location	TR01_A	TR01_A	TR01_A	TR01_A	TR01_B	TR01_B	TR01_B	TR01_B	TR01_C	TR01_C	TR01_C	TR01_C
						Field Sample ID	CVX-0004-01	CVX-0004-02	CVX-0004-03	CVX-0004-08	CVX-0004-04	CVX-0004-05	CVX-0004-06	CVX-0004-07	CVX-0004-09	CVX-0004-10	CVX-0004-11	CVX-0004-12
						Sample Date	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014
						Sample Delivery Group	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485
						Sample Depth	0-0.5 FT	0.5-1 FT	1-2 FT	2-2.7 FT	0-0.5 FT	0.5-1 FT	1-2 FT	1-2 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-2.9 FT
						Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample
						Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/gOC[(1)]**	**FW Class C SGV ug/gOC[(1)]**	**Site Specific Class A SGV ug/kg**	**Site Specific Class C SGV ug/kg**												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS			12400	24400	9340	9270	6870	21700	1590	1680	9860	1050	1550	1220
Lloyd Kahn modified	Total Organic Carbon		NS	NS			0.0124	0.0244	0.00934	0.00927	0.00687	0.0217	0.00159	0.00168	0.00986	0.00105	0.00155	0.00122
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	1,1,2-Trichloroethane	ug/kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Trichloroethane	ug/kg	93.596	176.34	1400	2600	1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	138.689	268.43	2100	4000	1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	1,1-Dichloroethane	ug/kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/kg	26.079	235.952	390	3500	1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	NS	NS			5 U	5 U	4 U	4 U	4 U	5 U	4 U	3 U	5 U	4 U	4 U	3 U
SW-846 8260C	2-Hexanone	ug/Kg	NS	NS			3 U	4 U	3 U	3 U	3 U	4 U	3 U	2 U	4 U	3 U	3 U	3 U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	NS	NS			3 U	4 U	3 U	3 U	3 U	4 U	3 U	2 U	4 U	3 U	3 U	3 U
SW-846 8260C	Acetone	ug/Kg	NS	NS			15 J	10 J	24	7 U	13 J	18 J	10 J	10 J	28	24	11 J	16 J
SW-846 8260C	Benzene	ug/Kg	26.555	96.105	400	1400	0.6 U	0.6 U	0.5 U	0.5 U	0.5 U	0.6 U	0.5 U	0.4 U	0.6 U	0.5 U	0.5 U	0.4 U
SW-846 8260C	Bromodichloromethane	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Bromoform	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
SW-846 8260C	Carbon Disulfide	ug/Kg	NS	NS			3 J	7	2 J	1 U	2 J	16	1 J	2 J	8	6	1 J	5
SW-846 8260C	Carbon Tetrachloride	ug/Kg	53.291	478.407	800	7200	1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Chlorobenzene	ug/Kg	9.833	85.215	150	1300	1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Chloroethane	ug/Kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
SW-846 8260C	Chloroform	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Dibromochloromethane	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Ethylbenzene	ug/kg	21.241	187.422	320	2800	1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
SW-846 8260C	Styrene	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Tetrachloroethene	ug/Kg	814.107	2860.377	12000	43000	1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Toluene	ug/Kg	46.469	223.049	700	3300	1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	59.354	529.944	890	7900	1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	89.057	429.93	1300	6400	1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U
SW-846 8260C	Xylenes, Total	ug/Kg	NS	NS			1 U	1 U	1 U	1 U	1 U	1 U	0.9 U	0.8 U	1 U	1 U	1 U	0.9 U

TABLE 2

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
VOLATILE ORGANIC COMPOUNDS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

						Location	TR01_D	TR01_D	TR01_D	TR01_D	TR01_E	TR01_E	TR02_A	TR02_A	TR02_B	TR02_C	TR02_D	TR02_D
						Field Sample ID	CVX-0004-13	CVX-0004-14	CVX-0004-15	CVX-0004-16	CVX-0004-17	CVX-0004-18	CVX-0001-01	CVX-0001-02	CVX-0005-01	CVX-0005-04	CVX-0005-05	CVX-0005-06
						Sample Date	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/14/2014	8/14/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014
						Sample Delivery Group	1497485	1497485	1497485	1497485	1497485	1497485	1496370	1496370	1497631	1497631	1497631	1497631
						Sample Depth	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0-0.5 FT	0-0.5 FT	0.5-1 FT
						Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
						Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/gOC[(1)]**	**FW Class C SGV ug/gOC[(1)]**	**Site Specific Class A SGV ug/kg**	**Site Specific Class C SGV ug/kg**												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS			11700	27500 J+	2440	4080	116 U	110 U	21600	4860	2330	8090	10400	3560
Lloyd Kahn modified	Total Organic Carbon		NS	NS			0.0117	0.0275	0.00244	0.00408	0.000116	0.00011	0.0216	0.00486	0.00233	0.00809	0.0104	0.00356
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	1,1,2-Trichloroethane	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	R	0.9 U	1 U	1 U	1 U
SW-846 8260C	Trichloroethane	ug/kg	93.596	176.34	1400	2600	1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	138.689	268.43	2100	4000	1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	R	R	R	1 U	1 U
SW-846 8260C	1,1-Dichloroethane	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/kg	26.079	235.952	390	3500	1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	1,2-Dichloroethane	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	1,2-Dichloropropane	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/kg	NS	NS			5 U	6 U	4 U	5 U	4 U	3 U	4 U	3 U	4 U	5 U	6 U	4 UJ
SW-846 8260C	2-Hexanone	ug/kg	NS	NS			4 U	5 U	3 U	4 U	3 U	2 U	3 U	R	3 U	4 U	4 U	3 U
SW-846 8260C	4-Methyl-2-pentanone	ug/kg	NS	NS			4 U	5 U	3 U	4 U	3 U	2 U	3 U	2 U	3 U	4 U	4 U	3 U
SW-846 8260C	Acetone	ug/kg	NS	NS			53	67	11 J	22 J	6 U	6 U	45	20	9 J	24	32	26
SW-846 8260C	Benzene	ug/kg	26.555	96.105	400	1400	0.6 U	0.8 U	0.5 U	0.6 U	0.5 U	0.4 U	0.5 U	0.4 U	0.5 U	0.6 U	0.7 U	0.5 U
SW-846 8260C	Bromodichloromethane	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	Bromoform	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	R	0.9 U	1 U	1 U	1 U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/kg	NS	NS			3 U	3 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	3 U	2 U
SW-846 8260C	Carbon Disulfide	ug/kg	NS	NS			9	8	4 J	3 J	1 J	0.8 U	2 J	0.8 U	0.9 U	1 U	1 U	1 J
SW-846 8260C	Carbon Tetrachloride	ug/kg	53.291	478.407	800	7200	1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	Chlorobenzene	ug/kg	9.833	85.215	150	1300	1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	R	0.9 U	1 U	1 U	1 U
SW-846 8260C	Chloroethane	ug/kg	NS	NS			3 U	3 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	3 U	2 U
SW-846 8260C	Chloroform	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/kg	NS	NS			3 U	3 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	3 U	2 U
SW-846 8260C	cis-1,2-Dichloroethene	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	Dibromochloromethane	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	R	0.9 U	1 U	1 U	1 U
SW-846 8260C	Ethylbenzene	ug/kg	21.241	187.422	320	2800	1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	R	0.9 U	1 U	1 U	1 U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/kg	NS	NS			3 U	3 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	3 U	2 U
SW-846 8260C	Styrene	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	R	0.9 U	1 U	1 U	1 U
SW-846 8260C	Tetrachloroethene	ug/kg	814.107	2860.377	12000	43000	1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	R	0.9 U	1 U	1 U	1 U
SW-846 8260C	Toluene	ug/kg	46.469	223.049	700	3300	1 U	3 J	1 U	1 U	0.9 U	0.8 U	0.9 U	R	1 J	1 U	1 U	1 U
SW-846 8260C	trans-1,2-Dichloroethene	ug/kg	59.354	529.944	890	7900	1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	trans-1,3-Dichloropropene	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	R	0.9 U	1 U	1 U	1 U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/kg	89.057	429.93	1300	6400	1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	0.8 U	0.9 U	1 U	1 U	1 U
SW-846 8260C	Xylenes, Total	ug/kg	NS	NS			1 U	2 U	1 U	1 U	0.9 U	0.8 U	0.9 U	R	0.9 U	1 U	1 U	1 U

TABLE 2

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
VOLATILE ORGANIC COMPOUNDS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

						Location	TR02_E		TR02_E		TR02_E		TR02_E		TR03_C		TR03_C		TR04_C		TR04_C		TR04_C		TR04_C		TR04_C		TR05_A	
						Field Sample ID	CVX-0005-07		CVX-0005-08		CVX-0005-09		CVX-0005-10		CVX-0011-12		CVX-0011-13		CVX-0007-01		CVX-0007-02		CVX-0007-03		CVX-0007-04		CVX-0007-05		CVX-0011-05	
						Sample Date	8/20/2014		8/20/2014		8/20/2014		8/20/2014		8/27/2014		8/27/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/27/2014	
						Sample Delivery Group	1497631		1497631		1497631		1497631		1499492		1499492		1498092		1498092		1498092		1498092		1498092		1499492	
						Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.75 FT		0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		2-3 Ft		0-0.5 FT	
						Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
						Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample	
						Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/gOC[(1)]**	**FW Class C SGV ug/gOC[(1)]**	**Site Specific Class A SGV ug/kg**	**Site Specific Class C SGV ug/kg**																								
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS			38300		64400		16800		5720		2650	J	929	J	46800	J	42300		41800		44900	J	19400	J	8190	
Lloyd Kahn modified	Total Organic Carbon		NS	NS			0.0383		0.0644		0.0168		0.00572		0.00265		0.000929		0.0468		0.0423		0.0418		0.0449		0.0194		0.00819	
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	1,1,2-Trichloroethane	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	R		3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Trichloroethane	ug/kg	93.596	176.34	1400	2600	3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	138.689	268.43	2100	4000		R		R		R	1	U		R	1	U		R		R		R		R		R	1	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/kg	26.079	235.952	390	3500	3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	1,2-Dichloroethane	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	1,2-Dichloropropane	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/kg	NS	NS			43		49		7	U	4	UJ	4	U	4	U	23	J	11	U	17	U	10	U	11	UJ	5	U
SW-846 8260C	2-Hexanone	ug/kg	NS	NS			9	U	13	U	5	U	3	U	3	U	3	U	R		8	U	13	U	7	U	8	U	4	U
SW-846 8260C	4-Methyl-2-pentanone	ug/kg	NS	NS			9	U	13	U	5	U	3	U	3	U	3	U	12	U	8	U	13	U	7	U	8	U	4	U
SW-846 8260C	Acetone	ug/kg	NS	NS			490	J+	490		49		12	J	11	J	10	J	300	J+	100		230		95	J+	140		18	J
SW-846 8260C	Benzene	ug/kg	26.555	96.105	400	1400	2	U	2	U	0.8	U	0.5	U	0.5	U	0.5	U	2	U	1	U	2	U	1	U	1	U	0.6	U
SW-846 8260C	Bromodichloromethane	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Bromoform	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	R		3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/kg	NS	NS			6	U	9	U	3	U	2	U	2	U	2	U	8	U	6	U	8	U	5	U	5	U	3	U
SW-846 8260C	Carbon Disulfide	ug/kg	NS	NS			19		30		4	J	2	J	18		15		26		7	J	20	J	9	J	10	J	1	J
SW-846 8260C	Carbon Tetrachloride	ug/kg	53.291	478.407	800	7200	3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Chlorobenzene	ug/kg	9.833	85.215	150	1300	3	U	4	U	2	U	1	U	1	U	1	U	R		3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Chloroethane	ug/kg	NS	NS			6	U	9	U	3	U	2	U	2	U	2	U	8	U	6	U	8	U	5	U	5	U	3	U
SW-846 8260C	Chloroform	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/kg	NS	NS			6	U	9	U	3	U	2	U	2	U	2	U	8	U	6	U	8	U	5	U	5	U	3	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Dibromochloromethane	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	R		3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Ethylbenzene	ug/kg	21.241	187.422	320	2800	3	U	4	U	2	U	1	U	1	U	1	U	R		3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/kg	NS	NS			6	U	9	U	3	U	2	U	2	U	2	U	8	U	6	U	8	U	5	U	5	U	3	U
SW-846 8260C	Styrene	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	R		3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Tetrachloroethene	ug/kg	814.107	2860.377	12000	43000	3	U	4	U	2	U	1	U	1	U	1	U	R		3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Toluene	ug/kg	46.469	223.049	700	3300	3	U	4	U	2	U	1	U	1	U	1	U	8	J	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/kg	59.354	529.944	890	7900	3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	R		3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/kg	89.057	429.93	1300	6400	3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	5	J
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Xylenes, Total	ug/kg	NS	NS			3	U	4	U	2	U	1	U	1	U	1	U	R		3	U	4	U	2	U	3	U	1	U

TABLE 2

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
VOLATILE ORGANIC COMPOUNDS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

						Location	TR05_A	TR05_A	TR05_A	TR05_B	TR05_B	TR05_C	TR05_C	TR05_D	TR05_D	TR05_D	TR05_D	TR05_E
						Field Sample ID	CVX-0011-06	CVX-0011-07	CVX-0011-08	CVX-0010-19	CVX-0010-20	CVX-0011-10	CVX-0011-11	CVX-0010-08	CVX-0010-09	CVX-0010-10	CVX-0010-11	CVX-0010-01
						Sample Date	8/27/2014	8/27/2014	8/27/2014	8/26/2014	8/26/2014	8/27/2014	8/27/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014
						Sample Delivery Group	1499492	1499492	1499492	1499124	1499124	1499492	1499492	1499124	1499124	1499124	1499124	1499124
						Sample Depth	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT
						Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
						Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/gOC[(1)]**	**FW Class C SGV ug/gOC[(1)]**	**Site Specific Class A SGV ug/kg**	**Site Specific Class C SGV ug/kg**												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS			499	1150	1230	515	108 U	101000 J	42400	40500	35500	41500	14900	42900
Lloyd Kahn modified	Total Organic Carbon		NS	NS			0.000499	0.00115	0.00123	0.000515	0.000108	0.101	0.0424	0.0405	0.0355	0.0415	0.0149	0.0429
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	1,1,2-Trichloroethane	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Trichloroethane	ug/kg	93.596	176.34	1400	2600	1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	138.689	268.43	2100	4000	1 U	1 U	1 U	0.9 U	0.8 U	R	3 U	R	R	R	2 U	3 U
SW-846 8260C	1,1-Dichloroethane	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/kg	26.079	235.952	390	3500	1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	1,2-Dichloroethane	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	1,2-Dichloropropane	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/kg	NS	NS			5 U	4 U	6 J	4 U	3 U	19 J	14 J	13 U	14 U	17 U	8 U	22 J
SW-846 8260C	2-Hexanone	ug/kg	NS	NS			4 U	3 U	3 U	3 U	2 U	14 UJ	9 U	10 U	10 U	13 U	6 U	10 U
SW-846 8260C	4-Methyl-2-pentanone	ug/kg	NS	NS			4 U	3 U	3 U	3 U	2 U	14 UJ	9 U	10 U	10 U	13 U	6 U	10 U
SW-846 8260C	Acetone	ug/kg	NS	NS			17 J	13 J	63	6 U	5 U	220 J	180	120	120	110	37 J	180
SW-846 8260C	Benzene	ug/kg	26.555	96.105	400	1400	0.6 U	0.5 U	0.5 U	0.5 U	0.4 U	2 UJ	1 U	2 U	2 U	2 U	1 U	3 J
SW-846 8260C	Bromodichloromethane	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Bromoform	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	9 UJ	6 U	6 U	7 U	8 U	4 U	7 U
SW-846 8260C	Carbon Disulfide	ug/kg	NS	NS			1 U	1 U	1 J	15	1 J	18 J	17	26	13 J	18 J	5 J	20
SW-846 8260C	Carbon Tetrachloride	ug/kg	53.291	478.407	800	7200	1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Chlorobenzene	ug/kg	9.833	85.215	150	1300	1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	16 J
SW-846 8260C	Chloroethane	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	9 UJ	6 U	6 U	7 U	8 U	4 U	7 U
SW-846 8260C	Chloroform	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	9 UJ	6 U	6 U	7 U	8 U	4 U	7 U
SW-846 8260C	cis-1,2-Dichloroethene	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Dibromochloromethane	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Ethylbenzene	ug/kg	21.241	187.422	320	2800	1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	9 UJ	6 U	6 U	7 U	8 U	4 U	7 U
SW-846 8260C	Styrene	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Tetrachloroethene	ug/kg	814.107	2860.377	12000	43000	1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Toluene	ug/kg	46.469	223.049	700	3300	1 U	1 U	1 U	0.9 U	0.8 U	6 J	6 J	5 J	5 J	5 J	2 U	7 J
SW-846 8260C	trans-1,2-Dichloroethene	ug/kg	59.354	529.944	890	7900	1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	trans-1,3-Dichloropropene	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/kg	89.057	429.93	1300	6400	2 J	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	3 U
SW-846 8260C	Xylenes, Total	ug/kg	NS	NS			1 U	1 U	1 U	0.9 U	0.8 U	5 UJ	3 U	3 U	3 U	4 U	2 U	5 J

TABLE 2

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
VOLATILE ORGANIC COMPOUNDS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

						Location	TR05_E	TR05_E	TR05_E	TR05_E	TR06_A	TR06_A	TR06_A	TR06_A	TR06_B	TR06_B	TR06_B	TR06_C
						Field Sample ID	CVX-0010-02	CVX-0010-03	CVX-0010-04	CVX-0010-05	CVX-0011-01	CVX-0011-02	CVX-0011-03	CVX-0011-04	CVX-0010-12	CVX-0010-13	CVX-0010-14	CVX-0010-06
						Sample Date	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/27/2014	8/27/2014	8/27/2014	8/27/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014
						Sample Delivery Group	1499124	1499124	1499124	1499124	1499492	1499492	1499492	1499492	1499124	1499124	1499124	1499124
						Sample Depth	0.5-1 FT	1-2 FT	2-3 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	0-0.5 FT
						Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Sample Purpose	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
						Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/gOC[(1)]**	**FW Class C SGV ug/gOC[(1)]**	**Site Specific Class A SGV ug/kg**	**Site Specific Class C SGV ug/kg**												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS			37600	214 J	401	373	24400	54300	1250	2110	2470	1550	1890	13300
Lloyd Kahn modified	Total Organic Carbon		NS	NS			0.0376	0.000214	0.000401	0.000373	0.0244	0.0543	0.00125	0.00211	0.00247	0.00155	0.00189	0.0133
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	38	41	4 J	6	1 U	0.8 U	1 U	2 U
SW-846 8260C	1,1,2-Trichloroethane	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Trichloroethane	ug/kg	93.596	176.34	1400	2600	3 U	0.9 U	0.9 U	0.8 U	38	41	4 J	6	1 U	0.8 U	1 U	2 U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	138.689	268.43	2100	4000	3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	1,1-Dichloroethane	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	130	140	26	18	1 U	0.8 U	1 U	2 U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/kg	26.079	235.952	390	3500	3 U	0.9 U	0.9 U	0.8 U	34	51	14	12	1 U	0.8 U	1 U	2 U
SW-846 8260C	1,2-Dichloroethane	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	1,2-Dichloropropane	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/kg	NS	NS			11 U	4 U	3 U	3 U	24 J	12 U	4 U	5 U	4 U	3 U	5 U	26
SW-846 8260C	2-Hexanone	ug/kg	NS	NS			8 U	3 U	3 U	2 U	10 U	9 U	3 U	4 U	3 U	3 U	3 U	5 U
SW-846 8260C	4-Methyl-2-pentanone	ug/kg	NS	NS			8 U	3 U	3 U	2 U	10 U	9 U	3 U	4 U	3 U	3 U	3 U	5 U
SW-846 8260C	Acetone	ug/kg	NS	NS			50 J	7 U	6 J	6 U	220	70	8 U	11 J	15 J	10 J	11 J	260
SW-846 8260C	Benzene	ug/kg	26.555	96.105	400	1400	8 J	1 J	0.8 J	0.8 J	33	18	1 J	1 J	0.5 U	0.4 U	0.6 U	0.9 U
SW-846 8260C	Bromodichloromethane	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Bromoform	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/kg	NS	NS			6 U	2 U	2 U	2 U	7 U	6 U	2 U	3 U	2 U	2 U	2 U	3 U
SW-846 8260C	Carbon Disulfide	ug/kg	NS	NS			11 J	3 J	1 J	0.9 J	20	7 J	4 J	2 J	8	8	6	12
SW-846 8260C	Carbon Tetrachloride	ug/kg	53.291	478.407	800	7200	3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Chlorobenzene	ug/kg	9.833	85.215	150	1300	7 J	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Chloroethane	ug/kg	NS	NS			6 U	2 U	2 U	2 U	26	6 J	2 U	3 U	2 U	2 U	2 U	3 U
SW-846 8260C	Chloroform	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/kg	NS	NS			6 U	2 U	2 U	2 U	7 U	6 U	2 U	3 U	2 U	2 U	2 U	3 U
SW-846 8260C	cis-1,2-Dichloroethene	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	34	39	6	6 J	1 U	0.8 U	1 U	2 U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Dibromochloromethane	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Ethylbenzene	ug/kg	21.241	187.422	320	2800	3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/kg	NS	NS			6 U	2 U	2 U	2 U	7 U	6 U	2 U	3 U	2 U	2 U	2 U	3 U
SW-846 8260C	Styrene	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Tetrachloroethene	ug/kg	814.107	2860.377	12000	43000	3 U	0.9 U	0.9 U	0.8 U	10 J	10 J	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Toluene	ug/kg	46.469	223.049	700	3300	5 J	0.9 U	0.9 U	0.8 U	3 J	3 U	1 U	1 U	1 U	0.8 U	1 U	4 J
SW-846 8260C	trans-1,2-Dichloroethene	ug/kg	59.354	529.944	890	7900	3 U	0.9 U	0.9 U	0.8 U	4 J	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	trans-1,3-Dichloropropene	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/kg	89.057	429.93	1300	6400	3 U	0.9 U	0.9 U	0.8 U	51	53	6	8	1 U	0.8 U	1 U	2 U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/kg	NS	NS			3 U	0.9 U	0.9 U	0.8 U	37	43	3 J	1 U	1 U	0.8 U	1 U	2 U
SW-846 8260C	Xylenes, Total	ug/kg	NS	NS			4 J	0.9 U	0.9 U	0.8 U	3 U	3 U	1 U	1 U	1 U	0.8 U	1 U	2 U

TABLE 2

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
VOLATILE ORGANIC COMPOUNDS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

						Location	TR06_C	TR06_D	TR06_D	TR06_D	TR06_D	TR06_E	TR06_E	TR06_E	TR06_E	TR07_A	TR07_A	TR07_A
						Field Sample ID	CVX-0010-07	CVX-0010-15	CVX-0010-16	CVX-0010-17	CVX-0010-18	CVX-0009-16	CVX-0009-17	CVX-0009-18	CVX-0009-19	CVX-0009-01	CVX-0009-02	CVX-0009-03
						Sample Date	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014
						Sample Delivery Group	1499124	1499124	1499124	1499124	1499124	1498701	1498701	1498701	1498701	1498701	1498701	1498701
						Sample Depth	0.5-1 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT
						Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
						Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/gOC[(1)]**	**FW Class C SGV ug/gOC[(1)]**	**Site Specific Class A SGV ug/kg**	**Site Specific Class C SGV ug/kg**												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS			2790	7620	23200	9290	12800	20400	39600	14500	8450	24700	33900	40500
Lloyd Kahn modified	Total Organic Carbon		NS	NS			0.00279	0.00762	0.0232	0.00929	0.0128	0.0204	0.0396	0.0145	0.00845	0.0247	0.0339	0.0405
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	1,1,2-Trichloroethane	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Trichloroethane	ug/kg	93.596	176.34	1400	2600	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	138.689	268.43	2100	4000	2 U	2 U	R	2 U	2 U	R	2 U	2 U	1 U	1 U	R	R
SW-846 8260C	1,1-Dichloroethane	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/kg	26.079	235.952	390	3500	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	1,2-Dichloroethane	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	1,2-Dichloropropane	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/kg	NS	NS			7 U	6 U	8 U	7 U	7 U	11 J	9 U	7 U	6 U	7 J	43	15 J
SW-846 8260C	2-Hexanone	ug/kg	NS	NS			5 U	5 U	6 U	6 U	5 U	7 U	7 U	5 U	4 U	4 U	6 U	8 U
SW-846 8260C	4-Methyl-2-pentanone	ug/kg	NS	NS			5 U	5 U	6 U	6 U	5 U	7 U	7 U	5 U	4 U	4 U	6 U	8 U
SW-846 8260C	Acetone	ug/kg	NS	NS			25 J	26 J	44	30 J	38	130	27 J	25 J	17 J	63	360	130
SW-846 8260C	Benzene	ug/kg	26.555	96.105	400	1400	0.9 U	0.8 U	1 U	0.9 U	0.8 U	1 U	1 U	0.9 U	0.7 U	0.7 U	1 U	1 U
SW-846 8260C	Bromodichloromethane	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Bromoform	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	1 U	1 U	2 U	3 U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/kg	NS	NS			4 U	3 U	4 U	4 U	3 U	5 U	4 U	4 U	3 U	3 U	4 U	5 U
SW-846 8260C	Carbon Disulfide	ug/kg	NS	NS			5 J	3 J	5 J	5 J	5 J	13	7 J	2 J	2 J	6 J	20	9 J
SW-846 8260C	Carbon Tetrachloride	ug/kg	53.291	478.407	800	7200	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Chlorobenzene	ug/kg	9.833	85.215	150	1300	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Chloroethane	ug/kg	NS	NS			4 U	3 U	4 U	4 U	3 U	5 U	4 U	4 U	3 U	3 U	4 U	5 U
SW-846 8260C	Chloroform	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/kg	NS	NS			4 U	3 U	4 U	4 U	3 U	5 U	4 U	4 U	3 U	3 U	4 U	5 U
SW-846 8260C	cis-1,2-Dichloroethene	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Dibromochloromethane	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Ethylbenzene	ug/kg	21.241	187.422	320	2800	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/kg	NS	NS			4 U	3 U	4 U	4 U	3 U	5 U	4 U	4 U	3 U	3 U	4 U	5 U
SW-846 8260C	Styrene	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Tetrachloroethene	ug/kg	814.107	2860.377	12000	43000	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Toluene	ug/kg	46.469	223.049	700	3300	2 J	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	trans-1,2-Dichloroethene	ug/kg	59.354	529.944	890	7900	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	trans-1,3-Dichloropropene	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/kg	89.057	429.93	1300	6400	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U
SW-846 8260C	Xylenes, Total	ug/kg	NS	NS			2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	2 U	3 U

TABLE 2

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
VOLATILE ORGANIC COMPOUNDS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

						Location	TR07_A	TR07_B	TR07_B	TR07_B	TR07_B	TR07_B	TR07_B	TR07_B	TR07_C	TR07_C	TR07_D	TR07_D
						Field Sample ID	CVX-0009-04	CVX-0008-01	CVX-0008-02	CVX-0008-03	CVX-0008-04	CVX-0008-05	CVX-0008-06	CVX-0008-07	CVX-0009-05	CVX-0009-06	CVX-0009-07	CVX-0009-08
						Sample Date	8/25/2014	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014
						Sample Delivery Group	1498701	1498276	1498276	1498276	1498276	1498276	1498276	1498276	1498701	1498701	1498701	1498701
						Sample Depth	1-2 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	3-4 FT	4-5 FT	5-6 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT
						Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Sample Purpose	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
						Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/gOC[(1)]**	**FW Class C SGV ug/gOC[(1)]**	**Site Specific Class A SGV ug/kg**	**Site Specific Class C SGV ug/kg**												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS			47300	118 U	23700	20400	5770	20900	13000	12600	417	216 J	11200	24500
Lloyd Kahn modified	Total Organic Carbon		NS	NS			0.0473	0.000118	0.0237	0.0204	0.00577	0.0209	0.013	0.0126	0.000417	0.000216	0.0112	0.0245
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	1,1,2-Trichloroethane	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Trichloroethane	ug/kg	93.596	176.34	1400	2600	2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	138.689	268.43	2100	4000	2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	1,1-Dichloroethane	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/kg	26.079	235.952	390	3500	2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	1,2-Dichloroethane	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	1,2-Dichloropropane	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/kg	NS	NS			17 J	5 U	9 U	9 U	6 U	8 U	6 U	5 U	5 U	4 U	5 U	5 U
SW-846 8260C	2-Hexanone	ug/kg	NS	NS			7 U	3 U	7 U	7 U	4 U	6 U	4 U	4 U	3 U	3 U	4 U	4 U
SW-846 8260C	4-Methyl-2-pentanone	ug/kg	NS	NS			7 U	3 U	7 U	7 U	4 U	6 U	4 U	4 U	3 U	3 U	4 U	4 U
SW-846 8260C	Acetone	ug/kg	NS	NS			200	9 J	58	45	10 U	42	10 U	46	8 U	7 U	24 J	20 J
SW-846 8260C	Benzene	ug/kg	26.555	96.105	400	1400	1 U	0.6 U	1 U	1 U	0.7 U	1 U	0.7 U	0.7 U	0.6 U	0.5 U	0.7 U	0.7 U
SW-846 8260C	Bromodichloromethane	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Bromoform	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/kg	NS	NS			4 U	2 U	5 U	4 U	3 U	4 U	3 U	3 U	2 U	2 U	3 U	3 U
SW-846 8260C	Carbon Disulfide	ug/kg	NS	NS			8 J	3 J	4 J	4 J	2 J	6 J	1 U	3 J	5 J	5 J	4 J	2 J
SW-846 8260C	Carbon Tetrachloride	ug/kg	53.291	478.407	800	7200	2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Chlorobenzene	ug/kg	9.833	85.215	150	1300	2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Chloroethane	ug/kg	NS	NS			4 U	2 U	5 U	4 U	3 U	4 U	3 U	3 U	2 U	2 U	3 U	3 U
SW-846 8260C	Chloroform	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/kg	NS	NS			4 U	2 U	5 U	4 U	3 U	4 U	3 U	3 U	2 U	2 U	3 U	3 U
SW-846 8260C	cis-1,2-Dichloroethene	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Dibromochloromethane	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Ethylbenzene	ug/kg	21.241	187.422	320	2800	2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/kg	NS	NS			4 U	2 U	5 U	4 U	3 U	4 U	3 U	3 U	2 U	2 U	3 U	3 U
SW-846 8260C	Styrene	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Tetrachloroethene	ug/kg	814.107	2860.377	12000	43000	2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Toluene	ug/kg	46.469	223.049	700	3300	2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	trans-1,2-Dichloroethene	ug/kg	59.354	529.944	890	7900	2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	trans-1,3-Dichloropropene	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/kg	89.057	429.93	1300	6400	2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
SW-846 8260C	Xylenes, Total	ug/kg	NS	NS			2 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U

TABLE 2

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
VOLATILE ORGANIC COMPOUNDS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

						Location	TR07_D	TR07_D	TR07_E	TR07_E	TR07_E	TR07_E	TR07_E	TR09_C	TR10_A	TR10_A	TR10_A	TR10_A
						Field Sample ID	CVX-0009-09	CVX-0009-10	CVX-0009-11	CVX-0009-12	CVX-0009-13	CVX-0009-14	CVX-0009-15	CVX-0013-01	CVX-0013-02	CVX-0013-03	CVX-0013-04	CVX-0013-05
						Sample Date	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	9/10/2014	9/10/2014	9/10/2014	9/10/2014	9/10/2014
						Sample Delivery Group	1498701	1498701	1498701	1498701	1498701	1498701	1498701	1502680	1502680	1502680	1502680	1502680
						Sample Depth	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	3-4 FT	0-0.5 FT	0-0.5 FT	0.5-1 FT	1-2 FT	1-2 FT
						Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate
						Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/gOC[(1)]**	**FW Class C SGV ug/gOC[(1)]**	**Site Specific Class A SGV ug/kg**	**Site Specific Class C SGV ug/kg**												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS			870	1920	19600	28800	8430	48700	2160	2170	3200	2280	2470	2930
Lloyd Kahn modified	Total Organic Carbon		NS	NS			0.00087	0.00192	0.0196	0.0288	0.00843	0.0487	0.00216	0.00217	0.0032	0.00228	0.00247	0.00293
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	1,1,2-Trichloroethane	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Trichloroethane	ug/kg	93.596	176.34	1400	2600	1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	138.689	268.43	2100	4000	1 U	1 U	R	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	1,1-Dichloroethane	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/kg	26.079	235.952	390	3500	1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	1,2-Dichloroethane	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 UJ	2 UJ	1 UJ	0.7 UJ	0.7
SW-846 8260C	1,2-Dichloropropane	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/kg	NS	NS			4 U	4 U	7 U	8 U	6 U	8 U	5 U	4 U	6 U	4 U	3 U	3
SW-846 8260C	2-Hexanone	ug/kg	NS	NS			3 U	3 U	6 U	6 U	4 U	6 U	4 U	3 U	5 U	3 U	2 U	2
SW-846 8260C	4-Methyl-2-pentanone	ug/kg	NS	NS			3 U	3 U	6 U	6 U	4 U	6 U	4 U	3 U	5 U	3 U	2 U	2
SW-846 8260C	Acetone	ug/kg	NS	NS			7 J	15 J	61	38	17 J	37 J	13 J	12 J	17 J	11 J	11 J	11
SW-846 8260C	Benzene	ug/kg	26.555	96.105	400	1400	0.5 U	0.6 U	0.9 U	0.9 U	0.7 U	1 U	0.6 U	0.5 U	0.8 U	0.5 J	0.4 U	0.3
SW-846 8260C	Bromodichloromethane	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Bromoform	ug/kg	NS	NS			1 U	1 U	2 U	2 UJ	1 UJ	2 UJ	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Bromomethane (Methyl bromide)	ug/kg	NS	NS			2 U	2 U	4 U	4 U	3 U	4 U	2 U	2 U	3 U	2 U	1 U	1
SW-846 8260C	Carbon Disulfide	ug/kg	NS	NS			3 J	2 J	4 J	2 U	2 J	6 J	2 J	1 U	4 J	3 J	2 J	2
SW-846 8260C	Carbon Tetrachloride	ug/kg	53.291	478.407	800	7200	1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Chlorobenzene	ug/kg	9.833	85.215	150	1300	1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Chloroethane	ug/kg	NS	NS			2 U	2 U	4 U	4 U	3 U	4 U	2 U	2 U	3 U	2 U	1 U	1
SW-846 8260C	Chloroform	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Chloromethane (Methyl chloride)	ug/kg	NS	NS			2 U	2 U	4 U	4 U	3 U	4 U	2 U	2 U	3 U	2 U	1 U	1
SW-846 8260C	cis-1,2-Dichloroethene	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Dibromochloromethane	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Ethylbenzene	ug/kg	21.241	187.422	320	2800	1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/kg	NS	NS			2 U	2 U	4 U	4 U	3 U	4 U	2 U	2 U	3 U	2 U	1 U	1
SW-846 8260C	Styrene	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Tetrachloroethene	ug/kg	814.107	2860.377	12000	43000	1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Toluene	ug/kg	46.469	223.049	700	3300	1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 J	0.9 J	0.9
SW-846 8260C	trans-1,2-Dichloroethene	ug/kg	59.354	529.944	890	7900	1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	trans-1,3-Dichloropropene	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/kg	89.057	429.93	1300	6400	1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7
SW-846 8260C	Xylenes, Total	ug/kg	NS	NS			1 U	1 U	2 U	2 U	1 U	2 U	1 U	1 U	2 U	1 U	0.7 U	0.7

TABLE 2

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
VOLATILE ORGANIC COMPOUNDS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

						Location		TR11_B		TR11_C		TR11_C		TR11_C	
						Field Sample ID		CVX-0014-01		CVX-0014-02		CVX-0014-03		CVX-0014-04	
						Sample Date		9/11/2014		9/11/2014		9/11/2014		9/11/2014	
						Sample Delivery Group		1502969		1502969		1502969		1502969	
						Sample Depth		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
						Matrix		SOIL		SOIL		SOIL		SOIL	
						Sample Purpose		Regular sample		Regular sample		Regular sample		Regular sample	
						Sample Type		Sediment		Sediment		Sediment		Sediment	
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/gOC[(1)]**	**FW Class C SGV ug/gOC[(1)]**	**Site Specific Class A SGV ug/kg**	**Site Specific Class C SGV ug/kg**									
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS				107	U	349		667		668	
Lloyd Kahn modified	Total Organic Carbon		NS	NS				0.000107		0.000349		0.000667		0.000668	
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	1,1,2-Trichloroethane	ug/kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Trichloroethane	ug/kg	93.596	176.34	1400	2600	U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	138.689	268.43	2100	4000	U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	26.079	235.952	390	3500	U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	NS	NS			UJ	1	UJ	0.8	UJ	1	UJ	0.8	UJ
SW-846 8260C	1,2-Dichloropropane	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	NS	NS			U	5	U	3	U	4	U	3	U
SW-846 8260C	2-Hexanone	ug/Kg	NS	NS			U	4	U	3	U	3	U	2	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	NS	NS			U	4	U	3	U	3	U	2	U
SW-846 8260C	Acetone	ug/Kg	NS	NS			J	10	J	32		19	J	10	J
SW-846 8260C	Benzene	ug/Kg	26.555	96.105	400	1400	U	0.6	U	0.4	U	0.5	U	0.4	U
SW-846 8260C	Bromodichloromethane	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Bromoform	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	NS	NS			U	2	U	2	U	2	U	2	U
SW-846 8260C	Carbon Disulfide	ug/Kg	NS	NS			J	2	J	2	J	3	J	4	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	53.291	478.407	800	7200	U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Chlorobenzene	ug/Kg	9.833	85.215	150	1300	U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Chloroethane	ug/Kg	NS	NS			U	2	U	2	U	2	U	2	U
SW-846 8260C	Chloroform	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	NS	NS			U	2	U	2	U	2	U	2	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Dibromochloromethane	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Ethylbenzene	ug/Kg	21.241	187.422	320	2800	U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	NS	NS			U	2	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Tetrachloroethene	ug/Kg	814.107	2860.377	12000	43000	U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Toluene	ug/Kg	46.469	223.049	700	3300	J	1	U	1	J	1	U	0.8	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	59.354	529.944	890	7900	U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	89.057	429.93	1300	6400	U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Xylenes, Total	ug/Kg	NS	NS			U	1	U	0.8	U	1	U	0.8	U

TABLE 2

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
VOLATILE ORGANIC COMPOUNDS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

Notes:

1. No criteria for Total Xylenes; however, criteria exist for individual isomers that were not reported by laboratory.
2. Site specific criteria use average sample TOC of 1.5%.

Parameter has no SGV

Parameter concentration less than Class A SGV

(1) - Sediment criteria obtained from the NYSDEC document entitled, "Screening and Assessment of Contaminated Sediment, New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources, Bureau of Habitat, June 24, 2014.

TOC - Total Organic Carbon
SGV - Sediment Guidance Value
NS - Not specified
mg/Kg - Milligrams per Kilograms
ug/Goc - Micrograms per grams of carbon
ug/Kg - Micrograms per Kilograms

J - The analyte was positively identified, but the quantitation is an estimation.
U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.
UJ - The analyte was detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
J+ - Estimated biased high at the value given
R - Unusable value

TABLE 3

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCYCLIC AROMATIC HYDROCARBONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

			Location	TR01_A		TR01_A		TR01_A		TR01_A		TR01_B		TR01_B		TR01_B		TR01_C		TR01_C		TR01_C		TR01_C		TR01_D		TR01_D	
			Field Sample ID	CVX-0004-01		CVX-0004-02		CVX-0004-03		CVX-0004-08		CVX-0004-04		CVX-0004-05		CVX-0004-06		CVX-0004-07		CVX-0004-09		CVX-0004-10		CVX-0004-11		CVX-0004-12		CVX-0004-13		CVX-0004-14	
			Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
			Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485	
			Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.7 FT		0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-2.9 FT		0-0.5 FT		0.5-1 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	SGV ug/Goc[1]																											
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NA	12400		24400		9340		9270		6870		21700		1590		1680		9860		1050		1550		1220		11700		27500	J+
SW-846 8270D SIM modified	Acenaphthene	ug/kg	NA	1	U	1	U	0.8	U	0.9	U	3		2	J	0.9	U	0.8	U	2	J	1	J	0.9	U	0.8	U	7		4	
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	NA	1	J	1	U	0.8	U	0.9	U	1	J	1	J	0.9	U	0.8	U	2	J	0.8	U	0.9	U	0.8	U	1	J	6	
SW-846 8270D SIM modified	Anthracene	ug/kg	NA	2	J	2	J	0.8	U	0.9	U	6		8		1	J	0.8	U	8		5		2	J	0.8	U	29		18	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	NA	17		12	J-	0.8	U	0.9	U	28		45		7		4		42		38		8		5		95		56	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	NA	28		18	J-	0.8	U	0.9	U	31		58		10		6		55		42		14		6		110		67	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	NA	27		18	J-	0.8	U	0.9	U	38		64		10		6		70		42		14		6		100		60	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	NA	19		14	J-	0.8	U	0.9	U	22		47		8		5		48		34		13		5		83		41	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	NA	21		18	J-	0.8	U	0.9	U	30		53		11		6		54		38		11		6		100		59	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	NA	18		14	J-	0.8	U	0.9	U	25		44		8		5		45		31		10		5		79		44	
SW-846 8270D SIM modified	Chrysene	ug/kg	NA	24		18	J-	0.8	U	0.9	U	39		66		10		6		61		44		13		6		120		69	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	NA	4		3	J-	0.8	U	0.9	U	6		10		2	J	1	J	10		7		2	J	1	J	19		11	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	NA	50		37	J-	0.8	U	2	J	87		130		18		11		130		110		26		12		300		170	
SW-846 8270D SIM modified	Fluorene	ug/kg	NA	2	J	1	J	0.8	U	0.9	U	4		3		0.9	U	0.8	U	3		2	J	2	J	0.8	U	10		13	
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	NA	21		16	J-	0.8	U	0.9	U	25		50		9		6		53		36		10		5		92		48	
SW-846 8270D SIM modified	Naphthalene	ug/kg	NA	2	J	1	J	0.8	U	0.9	U	0.9	J	2	J	0.9	U	0.8	U	1	J	0.8	U	1	J	0.8	U	2	J	3	J
SW-846 8270D SIM modified	Perylene	ug/kg	NA	41		19	J-	11		26		15		28		16		25		27		24		15		18		49		43	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	NA	13		11	J-	0.8	U	0.9	U	40		43		4		3		38		14		11		4		150		110	
SW-846 8270D SIM modified	Pyrene	ug/kg	NA	35		26	J-	0.8	U	1	J	56		87		12		8		87		73		21		9		190		100	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	NA	11		12	J-	0.8	U	0.9	U	18		33		5		3		26		52		14		3		56		120	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	NA	15		11	J-	0.8	U	0.9	U	24		38		6		4		36		30		9		4		95		52	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	NA	1	J	1	U	0.8	U	0.9	U	2	J	2	J	0.9	U	0.8	U	3		2	J	1	J	0.8	U	5		7	
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	NA	1	U	1	U	0.9	J	0.9	U	1	J	3	J	1	J	0.8	U	1	J	0.8	U	3		0.8	U	2	J	5	
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	NA	1	U	1	UJ	0.8	U	0.9	U	0.8	U	1	U	0.9	U	0.8	U	1	U	0.8	U	0.9	U	0.8	U	1	U	1	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	NA	1	U	3	J-	0.8	U	0.9	U	7		13		2	J	2		11		0.8	U	0.9	U	0.8	U	1	U	1	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	NA	1	U	1	U	0.8	U	0.9	U	0.8	U	1	U	0.9	U	0.8	U	1	U	0.8	U	0.9	U	0.8	U	1	U	1	U
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	NA	1	U	1	U	2		0.9	U	2	J	3		2	J	1	J	2	J	0.9	J	12		0.8	U	3		8	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	NA	7		5	J-	1	J	0.9	U	7		10		3		2		12		11		5		2		17		23	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	NA	1	U	2	J	0.8	U	0.9	U	5		8		0.9	U	2	J	5		6		7		0.8	U	6		1	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	NA	1	U	1	U	0.8	U	0.9	U	0.8	U	1	U	0.9	U	0.8	U	1	U	0.8	U	0.9	U	0.8	U	1	U	1	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	NA	6		2	J	2		0.9	U	2	J	4		1	J	0.8	U	3		2	J	4		0.8	U	3		9	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	NA	4		3	J-	0.8	U	0.9	U	4		6		0.9	U	2		7		6		4		2	J	9		12	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	NA	1	U	1	UJ	0.8	U	0.9	U	0.8	U	1	U	0.9	U	0.8	U	1	U	0.8	U	7		0.8	U	1	U	1	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	NA	1	J	1	U	0.8	U	0.9	U	0.8	U	1	U	0.9	U	0.8	U	2	J	1	J	3		0.8	U	2	J	6	
			Class A SGV ug/kg[1]																											
	Total PAHs	ug/kg	4000	134		94		16.9		27		183		278		52		52		260		221.9		116		42		587		495	
	Total PAH concentration greater than Class A SGV																													

TABLE 3

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCYCLIC AROMATIC HYDROCARBONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

			Location	TR01_D	TR01_D	TR01_E	TR01_E	TR02_A	TR02_A	TR02_B	TR02_C	TR02_D	TR02_D	TR02_E	TR02_E	TR02_E	TR02_E
			Field Sample ID	CVX-0004-15	CVX-0004-16	CVX-0004-17	CVX-0004-18	CVX-0001-01	CVX-0001-02	CVX-0005-01	CVX-0005-04	CVX-0005-05	CVX-0005-06	CVX-0005-07	CVX-0005-08	CVX-0005-09	CVX-0005-10
			Sample Date	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/14/2014	8/14/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014
			Sample Delivery Group	1497485	1497485	1497485	1497485	1496370	1496370	1497631	1497631	1497631	1497631	1497631	1497631	1497631	1497631
			Sample Depth	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0-0.5 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-2.75 FT
			Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
			Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	Parameter Name	Units	SGV ug/Goc[1]														
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NA	2440	4080	116 U	110 U	21600	4860	2330	8090	10400	3560	38300	64400	16800	5720
SW-846 8270D SIM modified	Acenaphthene	ug/kg	NA	0.9 U	0.8 U	0.8 U	0.7 U	0.7 U	0.7 U	0.9 U	0.9 U	1 U	0.9 U	2 U	2 U	1 U	0.9 U
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	NA	0.9 U	0.8 U	0.8 U	0.7 U	0.7 U	0.7 U	0.9 U	0.9 U	1 U	0.9 U	2 J	2 U	1 U	0.9 U
SW-846 8270D SIM modified	Anthracene	ug/kg	NA	2 J	1 J	0.8 U	0.7 U	0.7 U	0.7 U	1 J	0.9 U	1 U	0.9 U	5 J	3 J	1 U	0.9 U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	NA	10	6	3	0.7 U	0.7 UJ	0.7 U	7	3	1 U	0.9 U	32 J-	26 J-	1 U	0.9 U
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	NA	12	8	4	0.7 U	0.7 UJ	0.7 U	10	4	1 U	0.9 U	52 J-	54 J-	2 J	0.9 U
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	NA	12	9	4	0.7 U	0.8 J	0.7 U	12	5	1 J	0.9 U	51 J-	42 J-	1 U	0.9 U
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	NA	9	7	3	0.7 U	0.7 UJ	0.7 U	9	3	1 U	0.9 U	35 J-	28 J-	1 U	0.9 U
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	NA	12	7	4	0.7 U	0.7 J	0.7 U	10	4	1 U	0.9 U	41 J-	34 J-	1 U	0.9 U
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	NA	9	7	3	0.7 U	0.7 UJ	0.7 U	9	3	1 U	0.9 U	35 J-	29 J-	1 U	0.9 U
SW-846 8270D SIM modified	Chrysene	ug/kg	NA	13	9	4	0.7 U	0.9 J	0.7 U	12	5	1 U	0.9 U	50 J-	42 J-	1 U	0.9 U
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	NA	2	2 J	0.8 U	0.7 U	0.7 UJ	0.7 U	1 J	0.9 U	1 U	0.9 U	7 J-	6 J	1 U	0.9 U
SW-846 8270D SIM modified	Fluoranthene	ug/kg	NA	23	19	7	0.7 U	2 J-	0.7 U	21 J-	7 J-	2 J	0.9 UJ	90 J-	78 J-	1 UJ	0.9 UJ
SW-846 8270D SIM modified	Fluorene	ug/kg	NA	1 J	0.8 J	0.8 U	0.7 U	0.7 U	0.7 U	0.9 U	0.9 U	1 U	0.9 U	3 J	3 J	1 U	0.9 U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	NA	10	7	3	0.7 U	0.7 UJ	0.7 U	9	4	1 U	0.9 U	38 J-	31 J-	1 U	0.9 U
SW-846 8270D SIM modified	Naphthalene	ug/kg	NA	2 J	0.8 U	0.8 U	0.7 U	0.7 U	0.7 U	1 J	0.9 U	1 U	0.9 U	3 J	2 U	1 U	0.9 U
SW-846 8270D SIM modified	Perylene	ug/kg	NA	9	25	9	0.7 J	55 J-	99	23	55	610	21	86 J-	55 J-	230	19
SW-846 8270D SIM modified	Phenanthrene	ug/kg	NA	7	5	3	0.7 U	0.8 J	0.7 U	8	3	1 U	0.9 U	37 J-	31 J-	1 U	0.9 U
SW-846 8270D SIM modified	Pyrene	ug/kg	NA	15	13	5	0.7 U	1 J	0.7 U	17	6	2 J	0.9 U	76 J-	60 J-	1 U	0.9 U
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	NA	0.9 U	5	2 J	0.7 U	0.7 UJ	0.7 U	4	2 J	1 U	0.9 U	45 J-	44 J-	1 U	0.9 U
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	NA	9	6	3	0.7 U	0.9 J	0.7 U	7	2 J	1 U	0.9 U	27 J-	22 J-	1 U	0.9 U
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	NA	0.9 U	0.8 U	0.8 U	0.7 U	0.7 U	0.7 U	0.9 U	0.9 U	1 U	0.9 U	5 J	2 U	1 U	0.9 U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	NA	0.9 J	0.9 J	0.8 U	0.7 U	0.7 U	0.7 U	1 J	0.9 U	1 U	0.9 U	2 J	2 U	1 U	0.9 U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	NA	0.9 U	0.8 U	0.8 U	0.7 U	0.7 U	0.7 U	0.9 U	0.9 U	1 U	0.9 U	2 UJ	2 UJ	1 U	0.9 U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	NA	0.9 U	0.8 U	0.8 U	0.7 U	0.7 UJ	0.7 U	2 J	0.9 U	1 U	0.9 U	2 UJ	2 UJ	1 U	0.9 U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	NA	0.9 U	0.8 U	0.8 U	0.7 U	0.7 U	0.7 U	0.9 U	0.9 U	1 U	0.9 U	2 U	2 U	1 U	0.9 U
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	NA	0.9 U	1 J	1 J	0.7 U	0.7 U	0.7 U	1 J	0.9 U	1 U	0.9 U	3 J	2 J	1 U	0.9 U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	NA	3	4	2 J	0.7 U	0.8 J	0.7 U	3	2 J	1 U	0.9 U	12 J-	9 J-	1 U	0.9 U
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	NA	0.9 U	0.8 U	0.8 U	0.7 U	0.7 UJ	0.7 U	0.9 U	0.9 U	1 U	0.9 U	2 UJ	2 UJ	1 U	0.9 U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	NA	0.9 U	0.8 U	0.8 U	0.7 U	0.7 U	0.7 U	0.9 U	0.9 U	1 U	0.9 U	2 U	2 U	1 U	0.9 U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	NA	2 J	2 J	1 J	0.7 U	0.7 U	0.7 U	1 J	0.9 U	1 U	0.9 U	3 J	2 U	1 U	0.9 U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	NA	2	2	1 J	0.7 U	0.7 U	0.7 U	2	0.9 U	1 U	0.9 U	7 J-	6 J-	1 U	0.9 U
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	NA	0.9 U	0.8 U	0.8 U	0.7 U	0.7 UJ	0.7 U	0.9 U	0.9 U	1 U	0.9 U	2 UJ	2 UJ	1 U	0.9 U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	NA	0.9 U	1 J	0.8 J	0.7 U	0.7 U	0.7 U	0.9 U	0.9 U	1 U	0.9 U	2 U	2 U	1 U	0.9 U
			Class A SGV ug/kg[1]														
	Total PAHs	ug/kg	4000	47.9	64.9	27.8	0.7	58.5	99	69	70	612	21	303	229	230	19
	Total PAH concentration greater than Class A SGV																

TABLE 3

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCYCLIC AROMATIC HYDROCARBONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

			Location	TR03_C		TR03_C		TR04_C		TR04_C		TR04_C		TR04_C		TR05_A		TR05_A		TR05_A		TR05_A		TR05_B		TR05_B		TR05_C	
			Field Sample ID	CVX-0011-12		CVX-0011-13		CVX-0007-01		CVX-0007-02		CVX-0007-03		CVX-0007-04		CVX-0007-05		CVX-0011-05		CVX-0011-06		CVX-0011-07		CVX-0011-08		CVX-0010-19		CVX-0010-20		CVX-0011-10	
			Sample Date	8/27/2014		8/27/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/27/2014		8/27/2014		8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/27/2014	
			Sample Delivery Group	1499492		1499492		1498092		1498092		1498092		1498092		1498092		1499492		1499492		1499492		1499492		1499124		1499124		1499492	
			Sample Depth	0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		2-3 Ft		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	SGV ug/Goc[(1)]																											
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NA	2650	J	929	J	46800	J	42300		41800		44900	J	19400	J	8190		499		1150		1230		515		108	U	101000	J
SW-846 8270D SIM modified	Acenaphthene	ug/kg	NA	2	J	1	J	2	U	3	J	3	J	3	J	2	J	0.9	U	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	4	J
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	NA	2	J	7	J	5	J	5		5		9		6		0.9	U	0.8	U	0.8	U	0.8	U	1	J	0.7	U	3	UJ
SW-846 8270D SIM modified	Anthracene	ug/kg	NA	5	J	11	J	7		12		7		12		7		0.9	U	1	J	0.8	U	0.8	U	3		0.7	U	6	J
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	NA	22	J	39	J	38		71		23		38		22		2	J	4		0.8	U	0.8	U	11		0.7	U	30	J
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	NA	21		35		58		86		36		43		28		2	J	4		0.8	U	0.8	U	9		0.7	U	31	J
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	NA	21		39		59		86		25		35		20		3		4		0.8	U	0.8	U	8		0.7	U	42	J
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	NA	15		23		42		60		20		26		17		2	J	3		0.8	U	0.8	U	6		0.7	U	27	J
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	NA	17	J	29	J	44		70		25		31		23		2	J	3		0.8	U	0.8	U	8		0.7	U	28	J
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	NA	16		27		41		59		20		27		18		2	J	3		0.8	U	0.8	U	6		0.7	U	30	J
SW-846 8270D SIM modified	Chrysene	ug/kg	NA	26		44		59		92		34		45		29		3		5		0.8	U	0.8	U	11		0.7	U	47	J
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	NA	4		6		7	J+	14	J+	4	J+	6	J+	3	J	0.9	U	0.8	U	0.8	U	0.8	U	2	J	0.7	U	6	J
SW-846 8270D SIM modified	Fluoranthene	ug/kg	NA	49		82		130		180		66		88		59		6		10		1	J	0.8	U	28		1	J	92	J
SW-846 8270D SIM modified	Fluorene	ug/kg	NA	3		4		3	J	6		4	J	4		3	J	0.9	U	0.8	U	0.8	U	0.8	U	1	J	0.7	U	6	J
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	NA	15		25		46		67		21		28		18		2	J	3		0.8	U	0.8	U	7		0.7	U	27	J
SW-846 8270D SIM modified	Naphthalene	ug/kg	NA	1	J	3		2	J	2	J	2	J	5		2	J	0.9	U	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ
SW-846 8270D SIM modified	Perylene	ug/kg	NA	8		12		24		36		35		42		47		5		1	J	0.8	U	0.8	U	5		1	J	60	J
SW-846 8270D SIM modified	Phenanthrene	ug/kg	NA	24		41		57		80		33		61	J	29	J	2	J	3		0.8	U	0.8	U	21		0.7	U	42	J
SW-846 8270D SIM modified	Pyrene	ug/kg	NA	48		76		73		120		48		70		44		4		8		0.9	J	0.8	U	21		0.8	J	69	J
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	NA	16	J	31	J	27		50		2	U	39		23		0.9	J	1	J	0.8	U	0.8	U	8		0.7	U	26	J
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	NA	28	J	49	J	41		58		35		51		29		0.9	U	3		0.8	U	0.8	U	13		0.7	U	29	J
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	NA	4		7		2	U	2	U	2	U	1	U	2	U	0.9	U	0.8	U	0.8	U	0.8	U	2		0.7	U	4	J
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	NA	2	J	3		2	J	2	J	2	J	8		2	J	0.9	U	0.8	U	0.8	U	0.8	U	0.8	J	0.7	U	3	UJ
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	NA	18	J	43	J	2	U	32		46		54		33		0.9	J	1	J	0.8	U	0.8	U	17		0.7	U	25	J
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	NA	9	J	18	J	2	U	17		2	U	1	U	2	U	0.9	U	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	NA	0.8	UJ	5	J	2	U	2	U	2	U	1	U	2	U	0.9	U	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	NA	3		6		2	U	7		17		22		13		0.9	U	0.8	U	0.8	U	0.8	U	2	J	0.7	U	5	J
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	NA	20		32		17		24		27		42	J	20	J	0.9	U	0.8	U	0.8	U	0.8	U	10		0.7	U	16	J
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	NA	5		9		6		6		2	U	1	U	2	U	0.9	U	0.8	U	0.8	U	0.8	U	1	J	0.7	U	3	UJ
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	NA	20		14		2	U	2	U	2	U	1	U	2	U	0.9	U	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	NA	5		8		12		2	U	11		1	U	2	U	0.9	U	0.8	U	0.8	U	0.8	U	2		0.7	U	5	J
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	NA	28		25		11		11		15		22		13		0.9	U	0.8	U	0.8	U	0.8	U	5		0.7	U	14	J
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	NA	0.8	U	0.8	U	2	U	2	U	2	U	1	U	2	U	0.9	U	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	NA	18		12		9		6		7		10		11		0.9	U	0.8	U	0.8	U	0.8	U	2		0.7	U	6	J
			Class A SGV ug/kg[(1)]																											
	Total PAHs	ug/kg	4000	256		391		279		449		276		421		264		12.8		17		0.9		0		109.8		1.8		301	
	Total PAH concentration greater than Class A SGV																													

TABLE 3

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCYCLIC AROMATIC HYDROCARBONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

			Location	TR05_C	TR05_D	TR05_D	TR05_D	TR05_D	TR05_E	TR05_E	TR05_E	TR05_E	TR05_E	TR06_A	TR06_A	TR06_A	TR06_A
			Field Sample ID	CVX-0011-11	CVX-0010-08	CVX-0010-09	CVX-0010-10	CVX-0010-11	CVX-0010-01	CVX-0010-02	CVX-0010-03	CVX-0010-04	CVX-0010-05	CVX-0011-01	CVX-0011-02	CVX-0011-03	CVX-0011-04
			Sample Date	8/27/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/27/2014	8/27/2014	8/27/2014	8/27/2014
			Sample Delivery Group	1499492	1499124	1499124	1499124	1499124	1499124	1499124	1499124	1499124	1499124	1499492	1499492	1499492	1499492
			Sample Depth	0.5-1 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT
			Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample
			Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	Parameter Name	Units	SGV ug/Goc[1]														
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NA	42400	40500	35500	41500	14900	42900	37600	214 J	401	373	24400	54300	1250	2110
SW-846 8270D SIM modified	Acenaphthene	ug/kg	NA	2 J	3 J	3 J	2 UJ	2 J	7	17	3	0.8 U	1 J	120 J-	5	0.9 U	0.8 U
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	NA	2 UJ	2 U	2 U	2 UJ	3	2 U	3 J	0.8 U	0.8 U	0.8 U	5 J-	4 J	0.9 U	0.8 U
SW-846 8270D SIM modified	Anthracene	ug/kg	NA	5	6 J-	6	4 J	6 J-	3 J	5 J	0.8 U	0.8 U	0.8 U	140 J-	15	0.9 U	0.8 U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	NA	16	37 J-	29	19 J-	27 J-	13	18	0.8 U	0.8 U	0.8 U	390 J-	100	3	2 J
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	NA	17	43 J-	32	20 J-	27 J-	13	20	0.8 U	0.8 U	0.8 U	380 J-	130	3	1 J
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	NA	24	46 J-	42	19 J-	25 J-	13	20	0.8 U	0.8 U	0.8 U	350 J-	140	3	1 J
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	NA	13	35 J-	29	17 J-	20 J-	10	15	0.8 U	0.8 U	0.8 U	220 J-	86	2	1 J
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	NA	16	44 J-	29	21 J-	26 J-	14	18	0.8 U	0.8 U	0.8 U	310 J-	100	3	1 J
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	NA	19	36 J-	36	20 J-	21 J-	10	17	0.8 U	0.8 U	0.8 U	260 J-	96	3	1 J
SW-846 8270D SIM modified	Chrysene	ug/kg	NA	24	53 J-	42	25 J-	33 J-	18	25	0.8 J	0.8 U	0.8 U	430 J-	140	4	2 J
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	NA	3 J	6 J-	7	4 J	5 J-	3 J	4 J	0.8 U	0.8 U	0.8 U	53 J-	20	0.9 U	0.8 U
SW-846 8270D SIM modified	Fluoranthene	ug/kg	NA	48	110 J-	92	52 J-	62	37	46	2 J	0.8 U	0.8 U	1300 J-	240	7	3
SW-846 8270D SIM modified	Fluorene	ug/kg	NA	3 J	5	5	3 J	3 J	5	12	1 J	0.8 U	0.8 U	89 J-	6	0.9 U	0.8 U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	NA	15	38 J-	29	18 J-	22 J-	11	17	0.8 U	0.8 U	0.8 U	260 J-	100	3	1 J
SW-846 8270D SIM modified	Naphthalene	ug/kg	NA	3 J	2 J	2 U	2 UJ	3 J	2 U	3 J	0.8 U	0.8 U	0.8 U	58 J-	2 U	0.9 U	0.8 U
SW-846 8270D SIM modified	Perylene	ug/kg	NA	34	27 J-	23	20 J-	35 J-	12	23	7	2 J	2	89 J-	35	1 J	1 J
SW-846 8270D SIM modified	Phenanthrene	ug/kg	NA	25	51 J-	38	22 J-	26 J-	14	26	0.8 U	0.8 U	0.8 U	770 J-	100	2	1 J
SW-846 8270D SIM modified	Pyrene	ug/kg	NA	35	75 J-	59	35 J-	47 J-	26	41	2 J	0.8 U	0.8 J	800 J-	180	6	3
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	NA	9	2 UJ	49	2 UJ	21 J-	10	18	0.8 U	0.8 U	0.8 U	150 J-	47	1 J	0.9 J
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	NA	14	36 J-	28	20 J-	36	12	27	0.8 U	0.8 U	0.8 U	280 J-	67	2	1 J
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	NA	2 J	4 J	3 J	2 J	4	14	36	7	8	11	24 J-	3 J	0.9 U	0.8 U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	NA	2 UJ	2 J	2 U	2 UJ	3 J	10	14	0.9 J	0.8 U	0.8 U	22 J-	2 U	0.9 U	0.8 U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	NA	2 U	41 J-	19	14 J-	29 J-	9	36	0.8 U	0.8 U	0.8 U	190 J-	31	1 J	0.9 J
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	NA	2 U	2 UJ	2 U	2 UJ	12 J-	2 U	2 U	0.8 U	0.8 U	0.8 U	50 J-	16	0.9 U	0.8 U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	NA	2 UJ	2 U	2 U	2 UJ	1 U	2 U	2 U	4	4	5	9 J-	2 U	0.9 U	0.8 U
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	NA	3 J	3 J	3 J	3 J	5	23	39	0.8 U	0.8 U	0.8 U	17 J-	2 J	0.9 U	0.8 U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	NA	7	15 J-	12	12 J-	24 J-	6	23	0.8 U	0.8 U	0.8 U	87 J-	19	1 J	0.8 U
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	NA	2 U	2 UJ	2 U	2 UJ	3 J-	2 U	3 J	0.8 U	0.8 U	0.8 U	2 UJ	2 U	0.9 U	0.8 U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	NA	2 UJ	2 U	2 U	2 UJ	1 U	2 U	2 U	0.8 U	0.8 U	0.8 U	2 UJ	2 U	0.9 U	0.8 U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	NA	2 J	5	4 J	4 J	7	13	35	7	6	8	15 J-	2 J	0.9 U	0.8 U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	NA	6	10 J-	11	8 J-	12 J-	5 J	11	0.8 U	0.8 U	0.8 U	30 J-	10	0.9 U	0.8 U
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	NA	2 U	2 UJ	2 U	2 UJ	1 UJ	2 U	2 U	0.8 U	0.8 U	0.8 U	2 UJ	2 U	0.9 U	0.8 U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	NA	3 J	4 J	4 J	3 J	5	13	26	8	7	8	10 J-	2 J	0.9 U	0.8 U
			Class A SGV ug/kg[1]														
	Total PAHs	ug/kg	4000	140	273	253	143	269	167	358	35.9	27	34.8	2543	514	14	7.8
	Total PAH concentration greater than Class A SGV																

TABLE 3

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCYCLIC AROMATIC HYDROCARBONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

			Location	TR06_B		TR06_B		TR06_B		TR06_C		TR06_C		TR06_D		TR06_D		TR06_D		TR06_D		TR06_E		TR06_E		TR06_E		TR06_E		TR07_A	
			Field Sample ID	CVX-0010-12		CVX-0010-13		CVX-0010-14		CVX-0010-06		CVX-0010-07		CVX-0010-15		CVX-0010-16		CVX-0010-17		CVX-0010-18		CVX-0009-16		CVX-0009-17		CVX-0009-18		CVX-0009-19		CVX-0009-01	
			Sample Date	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
			Sample Delivery Group	1499124		1499124		1499124		1499124		1499124		1499124		1499124		1499124		1499124		1498701		1498701		1498701		1498701		1498701	
			Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	SGV ug/Goc[(1)]																											
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NA	2470		1550		1890		13300		2790		7620		23200		9290		12800		20400		39600		14500		8450		24700	
SW-846 8270D SIM modified	Acenaphthene	ug/kg	NA	0.9	U	0.8	U	0.8	U	2	J	1	J	1	J	1	U	3	J	1	J	5	U	11	J	3	U	2	U	14	
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	NA	0.9	U	0.8	U	0.8	U	3	J	3		3		6		1	U	1	J	11	J	20		4	J	2	U	13	
SW-846 8270D SIM modified	Anthracene	ug/kg	NA	0.9	U	0.8	U	0.8	U	5		3		4		6	J-	3	J	2	J	20		38		9		2	U	34	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	NA	3		2	J	2	J	31		24		23		19	J-	12		5		160		220		35		2	U	100	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	NA	3		2	J	2	J	31		41		24		18	J-	12		6		180		260		35		2	U	96	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	NA	3		2	J	1	J	32		40		23		14	J-	12		6		190		290		37		2	U	73	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	NA	2	J	2	J	1	J	21		33		18		14	J-	11		5		120		190		26		2	U	58	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	NA	2		2	J	2	J	26		30		23		14	J-	12		6		180		230		34		2	U	85	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	NA	2	J	1	J	1	J	24		28		19		15	J-	10		5		150		220		30		2	U	65	
SW-846 8270D SIM modified	Chrysene	ug/kg	NA	3		2		2	J	37		28		28		25	J-	14		7		220		300		45		2	U	130	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	NA	0.9	U	0.9	J	0.8	U	5		8		4		2	J	2	J	1	U	30		40		6	J	2	U	13	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	NA	6		4		4		69		24		52		41		32		15		340		590		77		2	J	230	
SW-846 8270D SIM modified	Fluorene	ug/kg	NA	0.9	U	0.8	U	0.8	U	3	J	2	J	2	J	1	U	3	J	2	J	8	J	20		5	J	2	U	23	
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	NA	2		2	J	1	J	24		38		19		13	J-	12		5		140		210		28		2	U	62	
SW-846 8270D SIM modified	Naphthalene	ug/kg	NA	0.9	U	0.8	U	0.8	U	4		2	J	2	J	2	J	3	J	2	J	7	J	16		6	J	2	U	10	
SW-846 8270D SIM modified	Perylene	ug/kg	NA	9		5		7		62		48		39		52	J-	65		49		200		490		230		170		80	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	NA	2		2		2	J	31		9		23		30	J-	19		12		78		190		38		2	J	190	
SW-846 8270D SIM modified	Pyrene	ug/kg	NA	4		4		3		54		20		40		42	J-	24		11		270		500		67		2	J	220	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	NA	2	J	2		2	J	22		18		19		32	J-	10		4		90		140		27		2	U	86	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	NA	3		4		3		33		18		29		55		13		8		130		220		37		2	U	150	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	NA	0.9	U	0.8	U	0.8	U	3	J	2	J	3		8		2	J	2	J	7	J	25		5	J	2	U	28	
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	NA	0.9	U	0.8	U	0.8	U	3	J	1	J	2	J	2	J	1	J	1	J	6	J	17		5	J	2	U	10	
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	NA	2	J	3		3		27		6		21		56	J-	23		6		5	U	6	U	3	U	2	U	160	
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	NA	0.9	U	0.8	U	0.8	U	11		10		10		23	J-	5		1	U	5	U	59		13		2	U	0.9	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	NA	0.9	U	0.8	U	0.8	U	1	U	0.8	U	1	U	1	U	1	U	1	U	5	U	6	U	3	U	2	U	0.9	U
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	NA	0.9	U	0.8	U	0.8	U	5		2		3	J	4		2	J	2	J	8	J	25		8	J	2	J	25	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	NA	2	J	3		3		18		6		18		56	J-	7		5		52		130		28		2	U	110	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	NA	0.9	U	0.8	U	0.8	U	4		6		4		8	J-	2	J	1	U	5	U	22		6	J	2	U	15	
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	NA	0.9	U	0.8	U	0.8	U	1	U	0.8	U	1	U	1	U	1	U	1	U	5	U	6	U	3	U	2	U	0.9	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	NA	0.9	U	0.8	J	0.8	U	6		3		4		6		3	J	3		9	J	28		8		2	J	31	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	NA	2	J	2		0.8	U	10		5		10		34	J-	5		4		32		62		18		2	U	49	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	NA	0.9	U	0.8	U	0.8	U	1	U	0.8	U	1	U	1	UJ	1	U	1	U	5	U	6	U	3	U	2	U	0.9	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	NA	0.9	U	0.8	U	0.8	U	5		2		4		6		2	J	2	J	8	J	19		7	J	2	J	17	
			Class A SGV ug/kg[(1)]																											
	Total PAHs	ug/kg	4000	26		25.8		23		294		156		229		414		183		109		890		1927		497		180		1171	
	Total PAH concentration greater than Class A SGV																													

TABLE 3

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCYCLIC AROMATIC HYDROCARBONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

			Location	TR07_A		TR07_A		TR07_A		TR07_B		TR07_B		TR07_B		TR07_B		TR07_B		TR07_B		TR07_C		TR07_C		TR07_D		TR07_D	
			Field Sample ID	CVX-0009-02		CVX-0009-03		CVX-0009-04		CVX-0008-01		CVX-0008-02		CVX-0008-03		CVX-0008-04		CVX-0008-05		CVX-0008-06		CVX-0008-07		CVX-0009-05		CVX-0009-06		CVX-0009-07		CVX-0009-08	
			Sample Date	8/25/2014		8/25/2014		8/25/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
			Sample Delivery Group	1498701		1498701		1498701		1498276		1498276		1498276		1498276		1498276		1498276		1498276		1498701		1498701		1498701		1498701	
			Sample Depth	0.5-1 FT		1-2 FT		1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		3-4 FT		4-5 FT		5-6 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	SGV ug/Goc[1]																												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NA	33900		40500		47300		118	U	23700		20400		5770		20900		13000		12600		417		216	J	11200		24500	
SW-846 8270D SIM modified	Acenaphthene	ug/kg	NA	12		9		10		0.9	J	1	UJ	3	J	9		1	U	1	U	0.9	U	1	J	0.9	J	9		3	J
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	NA	24		7		9		1	J	1	UJ	3	J	4		2	J	1	U	0.9	U	7		0.8	U	14		2	U
SW-846 8270D SIM modified	Anthracene	ug/kg	NA	31		21		19		10		2	J	10		23		3		1	U	0.9	U	6		4		27		2	U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	NA	110		79		84		30		8	J-	40		90		15		1	U	0.9	U	17		18		120		3	J
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	NA	110		89		86		28		9	J-	42		81		17		1	U	0.9	U	19		16		130		3	J
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	NA	92		88		87		25		8	J-	38		76		17		1	U	0.9	U	15		15		140		5	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	NA	69		52		62		20		7	J-	26		56		13		1	U	0.9	U	15		10		96		3	J
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	NA	80		63		88		27		9	J-	39		71		16		1	U	0.9	U	13		15		110		3	J
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	NA	77		59		67		20		7	J-	27		59		14		1	U	0.9	U	16		11		100		4	J
SW-846 8270D SIM modified	Chrysene	ug/kg	NA	140		100		120		33		10	J-	46		97		19		1	U	0.9	U	25		22		150		4	J
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	NA	15		13		14		5		2	J	7		15		3		1	U	0.9	U	3		3		22		2	U
SW-846 8270D SIM modified	Fluoranthene	ug/kg	NA	260		220		230		73		24	J-	110		190		36		2	J	0.9	U	37		44		270		8	
SW-846 8270D SIM modified	Fluorene	ug/kg	NA	28		15		17		2		1	J	4		11		2	J	1	U	0.9	U	4		2	J	16		2	U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	NA	69		59		69		22		8	J-	32		63		15		1	U	0.9	U	13		11		110		3	J
SW-846 8270D SIM modified	Naphthalene	ug/kg	NA	11		8		11		1	J	3	J-	1	U	8		2	J	1	U	0.9	U	3		0.8	U	22		2	J
SW-846 8270D SIM modified	Perylene	ug/kg	NA	140		210		290		13		41	J-	36		99		66		87		130		12		6		430		150	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	NA	220		140		140		33		10	J-	56		96		14		1	J	0.9	U	33		23		82		3	J
SW-846 8270D SIM modified	Pyrene	ug/kg	NA	260		160		180		51		19	J-	73		160		27		2	J	0.9	U	46		35		240		7	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	NA	130		46		59		13		6	J-	19		59		10		1	U	0.9	U	28		9		72		3	J
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	NA	220		79		95		22		11	J-	36		84		16		1	U	0.9	U	43		15		120		4	J
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	NA	38		9		12		2	J	2	J	3	J	7		2	J	1	U	0.9	U	7		1	J	10		2	U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	NA	10		5	J	10	J	0.8	U	2	J	1	U	5		1	J	1	J	0.9	U	5		0.8	U	8		2	U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	NA	280		79	J	3	UJ	16		12	J-	25		56		20		1	U	0.9	U	59		13		2	U	2	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	NA	1	U	1	U	3	U	7		3	J-	7		25		4		1	U	0.9	U	18		5		28		2	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	NA	1	U	1	U	3	U	1	J	1	UJ	1	U	0.9	U	1	U	1	U	0.9	U	0.8	U	0.8	U	2	U	2	U
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	NA	30		9		16		1	J	4	J-	2	J	7		3	J	2	J	0.9	U	8		0.8	U	9		2	U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	NA	220		41		54		9		6	J-	12		39		8		1	U	0.9	U	37		7		51		2	U
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	NA	1	U	1	U	3	U	6		1	UJ	2	J	9		2	J	1	U	0.9	U	9		2		13		2	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	NA	1	U	1	U	3	U	0.8	U	1	UJ	1	U	0.9	U	1	U	1	U	0.9	U	0.8	U	0.8	U	2	U	2	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	NA	38		10		18		2	J	3	J-	2	J	8		2	J	2	J	0.9	U	7		0.9	J	10		2	U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	NA	110		21		34		4		4	J-	6		18		5		1	U	0.9	U	19		4		24		2	U
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	NA	1	U	1	U	3	U	0.8	U	1	UJ	1	U	0.9	U	1	U	1	U	0.9	U	0.8	U	0.8	U	2	U	2	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	NA	27		7		13		1	J	3	J	2	J	5		1	J	1	J	0.9	U	4		0.9	J	8		2	U
			Class A SGV ug/kg[1]																												
	Total PAHs	ug/kg	4000	1723		816		921		181		126		281		677		181		96		130		335		121.8		1105		167	
	Total PAH concentration greater than Class A SGV																														

TABLE 3

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCYCLIC AROMATIC HYDROCARBONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

			Location	TR07_D		TR07_D		TR07_E		TR07_E		TR07_E		TR07_E		TR09_C		TR10_A		TR10_A		TR10_A		TR10_A		TR11_B		TR11_C	
			Field Sample ID	CVX-0009-09		CVX-0009-10		CVX-0009-11		CVX-0009-12		CVX-0009-13		CVX-0009-14		CVX-0009-15		CVX-0013-01		CVX-0013-02		CVX-0013-03		CVX-0013-04		CVX-0013-05		CVX-0014-01		CVX-0014-02	
			Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		9/10/2014		9/10/2014		9/10/2014		9/10/2014		9/10/2014		9/11/2014		9/11/2014	
			Sample Delivery Group	1498701		1498701		1498701		1498701		1498701		1498701		1498701		1502680		1502680		1502680		1502680		1502680		1502969		1502969	
			Sample Depth	1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		3-4 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT		0-0.5 FT		0-0.5 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	SGV ug/Goc[1]																											
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NA	870		1920		19600		28800		8430		48700		2160		2170		3200		2280		2470		2930		107	U	349	
SW-846 8270D SIM modified	Acenaphthene	ug/kg	NA	0.9	J	2	U	8		2	U	4		2	U	2	U	8800		8		8		4	J	17	J	8		1	J
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	NA	0.8	U	2	U	9		4	J	4		2	J	2	U	2200		19		25		6		10		2		0.7	J
SW-846 8270D SIM modified	Anthracene	ug/kg	NA	0.8	U	2	U	24		4	J	24		4	J	2	U	20000		51		60		22	J	77	J	25		5	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	NA	0.8	U	2	U	85		20		93		15		2	U	24000	J+	160		210		54	J	120	J	31		16	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	NA	0.8	U	2	U	87		24		88		17		2	U	22000	J+	150	J-	180		48	J	100	J	29		17	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	NA	0.8	U	2	U	91		25		89		19		2	U	21000	J+	120	J-	150		33	J	100	J	29		21	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	NA	0.8	U	2	U	61		18		56		14		2	U	12000	J+	74	J-	90		24	J	54	J	18		12	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	NA	0.8	U	2	U	76		24		65		16		2	U	17000	J+	130	J-	150		48	J	95	J	25		16	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	NA	0.8	U	2	U	67		21		60		16		2	U	13000	J+	92	J-	110		29	J	63	J	19		14	
SW-846 8270D SIM modified	Chrysene	ug/kg	NA	0.8	U	2	U	100		28		97		22		2	U	24000	J+	180		220		58	J	130	J	33		22	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	NA	0.8	U	2	U	14		4	J	13		3	J	2	U	3700	J+	26	J-	31		7	J	15	J	4		3	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	NA	0.8	U	2	U	220		51		210		38		2	U	58000	J+	360		460		130		300		88		41	
SW-846 8270D SIM modified	Fluorene	ug/kg	NA	0.8	U	2	U	14		3	J	6		3	J	2	U	12000		18		20		8	J	26	J	12		2	J
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	NA	0.8	U	2	U	69		21		64		15		2	U	14000	J+	88	J-	110		29	J	64	J	20		13	
SW-846 8270D SIM modified	Naphthalene	ug/kg	NA	0.8	U	2	U	9		4	J	6		4		2	U	7000		24		29		7	J	17	J	7		0.8	J
SW-846 8270D SIM modified	Perylene	ug/kg	NA	53		8		660		190		140		72		11		5400	J+	34		41		11	J	25	J	8		5	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	NA	0.8	U	2	U	120		22		95		20		2	U	70000	J+	260		300		110	J	260	J	90		22	
SW-846 8270D SIM modified	Pyrene	ug/kg	NA	0.8	U	2	U	180		44		170		32		2	U	49000	J+	310		380		110	J	240	J	70		33	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	NA	0.8	U	2	U	55		15		43		11		2	U	9500	J+	100		130		31	J	57	J	13		9	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	NA	0.8	U	2	U	91		23		77		18		2	U	21000	J+	130		150		43	J	83	J	26		13	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	NA	0.8	U	2	U	10		3	J	6		3	J	2	U	3800		14		16		6		10		5		1	J
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	NA	0.8	U	2	U	7		4	J	4		4	J	2	U	5100		9		12		4		7		9		1	J
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	NA	0.8	U	2	U	2	U	2	U	85		2	U	2	U	22000		150		180		51	J	95	J	24		9	
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	NA	0.8	U	2	U	32		10		18		2	U	2	U	3300	J+	41		54		13		22		6		4	
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	NA	0.8	U	2	U	2	U	2	U	1	U	2	U	2	U	1300		12		15		4		7		2		0.7	U
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	NA	0.8	U	2	U	10		4	J	6		4		2	U	4300		13		14		7		9		14		1	J
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	NA	0.8	U	2	U	48		14		34		11		2	U	9000		87		100		28		48		12		6	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	NA	0.8	U	2	U	2	U	2	U	1	U	2	U	2	U	8	U	13		20		4		8		2		2	
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	NA	0.8	U	2	U	2	U	2	U	1	U	2	U	2	U	8	U	0.9	U	0.8	U	0.8	U	0.9	U	0.7	U	0.7	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	NA	0.8	U	2	U	12		5	J	8		4		2	U	3200		18		21		7		11		9		1	J
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	NA	0.8	U	2	U	22		10		15		7		2	U	2800		34		42		11		19		5		3	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	NA	0.8	U	2	U	2	U	2	U	1	U	2	U	2	U	8	U	0.9	U	0.8	U	0.8	U	0.9	U	0.7	U	0.7	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	NA	0.8	U	2	U	8		4	J	7		3	J	2	U	1100		12		16		5		7		4		0.8	J
			Class A SGV ug/kg[1]																											
	Total PAHs	ug/kg	4000	53		8		1255		348		708		189		11		210800		1237		1491		445		908		299		110.8	
	Total PAH concentration greater than Class A SGV																													

TABLE 3

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCYCLIC AROMATIC HYDROCARBONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

			Location	TR11_C		TR11_C	
			Field Sample ID	CVX-0014-03		CVX-0014-04	
			Sample Date	9/11/2014		9/11/2014	
			Sample Delivery Group	1502969		1502969	
			Sample Depth	0.5-1 FT		1-2 FT	
			Matrix	SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample	
			Sample Type	Sediment		Sediment	
Analytical Method	Parameter Name	Units	SGV ug/Goc[1]				
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NA	667		668	
SW-846 8270D SIM modified	Acenaphthene	ug/kg	NA	2	J	8	
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	NA	3		2	
SW-846 8270D SIM modified	Anthracene	ug/kg	NA	7		36	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	NA	26		110	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	NA	23		91	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	NA	26		100	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	NA	16		57	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	NA	19		80	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	NA	20		64	
SW-846 8270D SIM modified	Chrysene	ug/kg	NA	33		130	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	NA	5		15	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	NA	63		240	
SW-846 8270D SIM modified	Fluorene	ug/kg	NA	3		10	
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	NA	18		64	
SW-846 8270D SIM modified	Naphthalene	ug/kg	NA	1	J	4	
SW-846 8270D SIM modified	Perylene	ug/kg	NA	9		25	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	NA	32		170	
SW-846 8270D SIM modified	Pyrene	ug/kg	NA	53		210	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	NA	18		70	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	NA	26		100	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	NA	3		11	
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	NA	2		5	
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	NA	23		110	
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	NA	10		28	
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	NA	0.7	U	10	
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	NA	3		11	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	NA	15		72	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	NA	6		11	
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	NA	0.7	U	0.8	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	NA	3		12	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	NA	8		31	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	NA	0.7	U	0.8	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	NA	3		10	
			Class A SGV ug/kg[1]				
	Total PAHs	ug/kg	4000	214		886	
	Total PAH concentration greater than Class A SGV						

TABLE 3

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCYCLIC AROMATIC HYDROCARBONS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

Notes:

Total PAH concentration greater than Class A SGV

(1) - Sediment criteria obtained from the NYSDEC document entitled, "Screening and Assessment of Contaminated Sediment, New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources, Bureau of Habitat, June 24, 2014.

SGV - Sediment Guidance Value

mg/Kg - Milligrams per Kilograms

ug/Goc - Micrograms per grams of carbon

ug/Kg - Micrograms per Kilograms

PAHs - Polycyclic Aromatic Hydrocarbons

J - The analyte was positively identified, but the quantitation is an estimation.

J- - Estimated biased low at the value given

J+ - Estimated biased high at the value given

U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.

UJ - The analyte was detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria

TABLE 4

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
TARGET ANALYTE LIST METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR01_A	TR01_A	TR01_A	TR01_A	TR01_B	TR01_B	TR01_B	TR01_B	TR01_C	TR01_C	TR01_C	TR01_C
					Field Sample ID	CVX-0004-01	CVX-0004-02	CVX-0004-03	CVX-0004-08	CVX-0004-04	CVX-0004-05	CVX-0004-06	CVX-0004-07	CVX-0004-09	CVX-0004-10	CVX-0004-11	CVX-0004-12
					Sample Date	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014
					Sample Delivery Group	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485
					Sample Depth	0-0.5 FT	0.5-1 FT	1-2 FT	2-2.7 FT	0-0.5 FT	0.5-1 FT	1-2 FT	1-2 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-2.9 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV mg/kg[(1)]**	**FW Class C SGV mg/kg[(1)]**	Derivation												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		12400	24400	9340	9270	6870	21700	1590	1680	9860	1050	1550	1220
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.0124	0.0244	0.00934	0.00927	0.00687	0.0217	0.00159	0.00168	0.00986	0.00105	0.00155	0.00122
SW-846 6020A	Aluminum	mg/kg	NS	NS		11000	16400	13900	16300	13800	9250	15300	13200	14500	8690	15100	17700
SW-846 6020A	Antimony	mg/kg	NS	NS		0.128 U	0.135 U	0.103 U	0.112 U	0.105 U	0.136 U	0.105 U	0.0995 U	0.121 U	0.103 U	0.109 U	0.105 U
SW-846 6020A	Arsenic	mg/Kg	10	33	1	2.87	2.98	3.74	4.46	3.38	1.76	2.04	2.5	3.01	1.79	1.51 J+	2.12
SW-846 6020A	Barium	mg/kg	NS	NS		50.6	70.4	36.9	46	39.9	36	52.2	36.4	73	44.6	39.2 J-	44.1
SW-846 6020A	Beryllium	mg/kg	NS	NS		0.404	0.71	0.547	0.616	0.59	0.312 J	0.708	0.464	0.712	0.442	0.412 J+	0.532
SW-846 6020A	Cadmium	mg/kg	1	5	1	0.148 J	0.113 J	0.0246 U	0.0352 J	0.0738 J	0.1 J	0.0766 J	0.0903 J	0.229 J	0.12 J	0.0708 J	0.0912 J
SW-846 6020A	Calcium	mg/kg	NS	NS		1650	1630	1170	1350	46900	1350	1510	824	2440	1790	1150 J+	1070
SW-846 6020A	Chromium	mg/kg	43	110	1	12.1	20.2	14.4	17.6	15	9.73	21.4	14.2	17.3	12.6	13.7 J+	18.8
SW-846 6020A	Cobalt	mg/kg	NS	NS		6.76	10.8	9.15	11.9	11.4	6.7	11.2	12.4	11.2	7.91	9.52 J+	13.3
SW-846 6020A	Copper	mg/kg	32	150	1	13.9	15.8	9.67	12.4	17.3	11.8	18.2	19.6	26.5	14.8	10.3 J+	12.7
SW-846 6020A	IRON	mg/kg	NS	NS		16000	28100	28400	36300	35800	14900	27100	32200	26000	16500	28700	32400
SW-846 6020A	Lead	mg/kg	36	130	1	12.7	15.8	9.84	10.8	11.1	9.14	21.6	14.3	21.3	13.2	9.71 J-	13.3
SW-846 6020A	Magnesium	mg/kg	NS	NS		3910	7950	7440	8460	33800	4340	7650	5930	6500	5300	6910	10900
SW-846 6010C	Manganese	mg/kg	NS	NS		270	270	286	292	372	357	316	441	522	300	306	324
SW-846 7471B	Mercury	mg/kg	0.2	1	1	0.289 U	0.307 U	0.241 U	0.26 U	0.243 U	0.317 U	0.243 U	0.233 U	0.296 U	0.236 U	0.267 U	0.238 U
SW-846 6020A	Nickel	mg/Kg	23	49	1	15.3	25.8	23.2	28.9	26.1	14.6	25.9	26.7	26.3	19.2	22.3 J-	28.1
SW-846 6020A	Potassium	mg/kg	NS	NS		1120	1880	1450	1700	1000	849	1780 J	823 J	1430	977	1150 J	1080
SW-846 6020A	Selenium	mg/kg	NS	NS		0.369 J	0.213 J	0.122 U	0.133 U	0.125 U	0.194 J	0.174 J	0.118 U	0.369 J	0.192 J	0.129 U	0.124 U
SW-846 6020A	Silver	mg/Kg	1	2.2	3	0.139 J	0.0912 J	0.0244 U	0.0266 U	0.0461 J	0.0548 J	0.0272 J	0.0273 J	0.142 J	0.0692 J	0.0356 J	0.0249 U
SW-846 6020A	Sodium	mg/kg	NS	NS		126	128 U	97.4 U	106 U	134	128 U	99.1 U	94.3 U	151	97.2 U	103 U	99.4 U
SW-846 6020A	Thallium	mg/kg	NS	NS		0.0793 J	0.116 J	0.0533 J	0.071 J	0.0666 J	0.0499 J	0.0828 J	0.041 J	0.111 J	0.0576 J	0.0486 J	0.0641 J
SW-846 6020A	Vanadium	mg/kg	NS	NS		13.1	22.1	17.3	18.2	17.2	9.75	19.8	12.6	17.5	12.5	13.7 J+	18.4
SW-846 6020A	Zinc	mg/kg	120	460	1	65.6	91.7	65.1	80.7	89.1	55.3	79.5	91.3	108	72.2	79.5	86.4

TABLE 4

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
TARGET ANALYTE LIST METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR01_D	TR01_D	TR01_D	TR01_D	TR01_E	TR01_E	TR02_A	TR02_A	TR02_B	TR02_C	TR02_D	TR02_D
					Field Sample ID	CVX-0004-13	CVX-0004-14	CVX-0004-15	CVX-0004-16	CVX-0004-17	CVX-0004-18	CVX-0001-01	CVX-0001-02	CVX-0005-01	CVX-0005-04	CVX-0005-05	CVX-0005-06
					Sample Date	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/14/2014	8/14/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014
					Sample Delivery Group	1497485	1497485	1497485	1497485	1497485	1497485	1496370	1496370	1497631	1497631	1497631	1497631
					Sample Depth	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0-0.5 FT	0-0.5 FT	0.5-1 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV mg/kg[(1)]**	**FW Class C SGV mg/kg[(1)]**	Derivation												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		11700	27500 J+	2440	4080	116 U	110 U	21600	4860	2330	8090	10400	3560
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.0117	0.0275	0.00244	0.00408	0.000116	0.00011	0.0216	0.00486	0.00233	0.00809	0.0104	0.00356
SW-846 6020A	Aluminum	mg/kg	NS	NS		12900	16100	11500	12300	11300	11500	6290	9120	13400	12700	17300	13300
SW-846 6020A	Antimony	mg/kg	NS	NS		0.121 U	0.152 U	0.108 U	0.103 U	0.0953 U	0.0895 U	0.0836 U	0.0836 U	0.109 U	0.115 U	0.146 U	0.112 U
SW-846 6020A	Arsenic	mg/kg	10	33	1	1.61	4.29	1.26	1.74	1.7	2.51	1.43 J	2.34	1.79	2.51	2.97	2.72
SW-846 6020A	Barium	mg/kg	NS	NS		51.1	85.6	35.8	37.1	25.9	25.4	29.3 J+	44.2	48.1	67.1	66.1	51.2
SW-846 6020A	Beryllium	mg/kg	NS	NS		0.369	0.649	0.403	0.449	0.35	0.348	0.241 J+	0.385	0.402	0.558	0.563	0.438
SW-846 6020A	Cadmium	mg/kg	1	5	1	0.103 J	0.32 J	0.0637 J	0.0921 J	0.0452 J	0.0541 J	0.079 J	0.105 J	0.0814 J	0.142 J	0.142 J	0.099 J
SW-846 6020A	Calcium	mg/kg	NS	NS		2180	3860	1100	1580	868 J	840 J	1560 J	2250 J-	3470	3860	2370	1520
SW-846 6020A	Chromium	mg/kg	43	110	1	12.8	19.8	13	13.5	13.9	10.8	6.7 J	11.8	13	15	16.8	13.4
SW-846 6020A	Cobalt	mg/kg	NS	NS		8.89	13.1	9.77	9.27	9.25	8.34	5.18 J+	9.94	9.37	10.9	11.2	9.15
SW-846 6020A	Copper	mg/kg	32	150	1	12.5	25.5	9.1	9.81	9.33	8.21	7.13 J+	11	10.5	13.3	14.6	10.6
SW-846 6020A	IRON	mg/kg	NS	NS		21000	30100	22400	24400	22200	24900	10600	15300	22800	19800	26000	21700
SW-846 6020A	Lead	mg/kg	36	130	1	9.19	20.2	9.21	10.5	6.98	6.94	5.26 J+	7.95	9	10.5	11.5	8.85
SW-846 6020A	Magnesium	mg/kg	NS	NS		5970	7880	6600	6850	6840	6480	2620 J	5270	6190	6550	6740	5690
SW-846 6010C	Manganese	mg/kg	NS	NS		438	413	261	329	302	308	145	188	327	332	379	274
SW-846 7471B	Mercury	mg/kg	0.2	1	1	0.289 U	0.359 U	0.261 U	0.247 U	0.225 U	0.21 U	0.0099 U	0.0098 U	0.0126 U	0.0137 U	0.0167 U	0.0132 U
SW-846 6020A	Nickel	mg/kg	23	49	1	20.5	28.5	21.4	21.5	19.4	19.4	10 J+	19.1	20.9	23.6	23.7	19.9
SW-846 6020A	Potassium	mg/kg	NS	NS		1160	1830	1080	1110	916	879	398 J	670	1090	1160	1210	999
SW-846 6020A	Selenium	mg/kg	NS	NS		0.175 J	0.503 J	0.128 U	0.122 U	0.113 U	0.106 U	0.313 J	0.405 J	0.193 J	0.275 J	0.385 J	0.25 J
SW-846 6020A	Silver	mg/kg	1	2.2	3	0.0408 J	0.135 J	0.0256 U	0.0287 J	0.0226 U	0.0212 U	0.0263 J	0.0198 U	0.0315 J	0.0406 J	0.0382 J	0.0266 U
SW-846 6020A	Sodium	mg/kg	NS	NS		115 U	178	102 U	97.7 U	903 U	848 U	70 J	69.2 J	103 U	109 U	138 U	107 U
SW-846 6020A	Thallium	mg/kg	NS	NS		0.0672 J	0.126 J	0.0545 J	0.0496 J	0.045 J	0.0387 J	0.0491 J	0.0493 J	0.0617 J	0.0913 J	0.0971 J	0.0895 J
SW-846 6020A	Vanadium	mg/kg	NS	NS		12.6	21.5	13.9	13.3	13.2	12.5	6.75 J+	11.1	14	16.2	17.5	14
SW-846 6020A	Zinc	mg/kg	120	460	1	78.2	126	77.5	70.2	55.1	49.3	34.5	45.1	63.5	73.7	77	61.2

TABLE 4

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
TARGET ANALYTE LIST METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR02_E	TR02_E	TR02_E	TR02_E	TR03_C	TR03_C	TR04_C	TR04_C	TR04_C	TR04_C	TR04_C	TR05_A
					Field Sample ID	CVX-0005-07	CVX-0005-08	CVX-0005-09	CVX-0005-10	CVX-0011-12	CVX-0011-13	CVX-0007-01	CVX-0007-02	CVX-0007-03	CVX-0007-04	CVX-0007-05	CVX-0011-05
					Sample Date	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/27/2014	8/27/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014	8/27/2014
					Sample Delivery Group	1497631	1497631	1497631	1497631	1499492	1499492	1498092	1498092	1498092	1498092	1498092	1499492
					Sample Depth	0-0.5 FT	0.5-1 FT	1-2 FT	2-2.75 FT	0-0.5 FT	0-0.5 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	2-3 Ft	0-0.5 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV mg/kg[(1)]**	**FW Class C SGV mg/kg[(1)]**	Derivation												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		38300	64400	16800	5720	2650 J	929 J	46800 J	42300	41800	44900 J	19400 J	8190
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.0383	0.0644	0.0168	0.00572	0.00265	0.000929	0.0468	0.0423	0.0418	0.0449	0.0194	0.00819
SW-846 6020A	Aluminum	mg/kg	NS	NS		22300	26500	14600	13500	11700	10200	22800	17800	16500	13800	20200	15700
SW-846 6020A	Antimony	mg/kg	NS	NS		0.258 U	0.325 J	0.13 U	0.115 U	0.102 U	0.0967 U	0.248 U	0.285 J	0.216 J	0.179 U	0.202 U	0.11 U
SW-846 6020A	Arsenic	mg/Kg	10	33	1	6.1	6.48	2.31	1.72	3.04	3.3	4.08	3.75	5.01	3.67	3.71	2.58
SW-846 6020A	Barium	mg/kg	NS	NS		142	169	66.7	55.3	28.8	35.3	111	97.6	104	68.2	76.4	66
SW-846 6020A	Beryllium	mg/kg	NS	NS		1.1	1.19	0.527	0.395	0.432	0.474	0.986	1.02	0.921	0.635	0.788	0.692
SW-846 6020A	Cadmium	mg/kg	1	5	1	0.693	0.629 J	0.171 J	0.0648 J	0.0727 J	0.0857 J	0.444 J	0.478 J	0.526	0.451	0.323 J	0.0843 J
SW-846 6020A	Calcium	mg/kg	NS	NS		5670	6750	2260	1070	3120	2920	5130	3960	6290	3740	3340	2230
SW-846 6020A	Chromium	mg/kg	43	110	1	26	32.3	16	13.5	25	26.2	25.9	21.6	20.4	15.5	20.3	16.6
SW-846 6020A	Cobalt	mg/kg	NS	NS		16.8	18.5	10.9	9.7	10.6	8.87	16.9	13.8	12.2	12.5	15.1	8.71
SW-846 6020A	Copper	mg/kg	32	150	1	44.4	57.4	13.6	8.86	13.8	14.7	39.1	32.9	34.1	21.6	20.9	10.1
SW-846 6020A	IRON	mg/kg	NS	NS		27100	34300	22700	22500	26900	24200	36200	26600	26300	25000	34500	19900
SW-846 6020A	Lead	mg/kg	36	130	1	52.2	50.4	10.5	7.49	12.7	16.7	31.2	33.5	34.7	28.8	30.9	12.4
SW-846 6020A	Magnesium	mg/kg	NS	NS		7160	8400	6330	6620	8040	7250	9970	6930	6350	6610	9970	5500
SW-846 6010C	Manganese	mg/kg	NS	NS		732	1040	316	283	341	297	828	569	600	448	472	248
SW-846 7471B	Mercury	mg/kg	0.2	1	1	0.0849 J	0.107 J	0.0148 U	0.0128 U	0.0121 U	0.0117 U	0.0643 J	0.0507 J	0.0784 J	0.0805 J	0.0404 J	0.0132 J
SW-846 6020A	Nickel	mg/Kg	23	49	1	36.3	42.2	22.5	21.9	29.2	28.4	38.8	29.1	26.2	24.5	33.8	19.1
SW-846 6020A	Potassium	mg/kg	NS	NS		1990	2300	1170	1080	757	820	2010	1670	1520	1060	1570	953
SW-846 6020A	Selenium	mg/kg	NS	NS		1.02 J	1.03 J	0.373 J	0.136 U	0.121 U	0.115 U	0.464 J	0.559 J	0.705 J	0.534 J	0.333 J	0.378 J
SW-846 6020A	Silver	mg/Kg	1	2.2	3	0.318 J	0.368 J	0.0308 U	0.0273 U	0.0242 U	0.0229 U	0.213 J	0.221 J	0.354 J	0.206 J	0.0917 J	0.0606 J
SW-846 6020A	Sodium	mg/kg	NS	NS		244 U	283 U	123 U	109 U	74.2 J	63.9 J	154 J	111 J	136 J	227 J	87.5 J	115
SW-846 6020A	Thallium	mg/kg	NS	NS		0.213 J	0.299 J	0.0987 J	0.0651 J	0.0475 J	0.0432 J	0.174 J	0.14 J	0.155 J	0.102 J	0.112 J	0.133 J
SW-846 6020A	Vanadium	mg/kg	NS	NS		30.1	34.5	15.4	13.4	14.7	13.5	27.3	23.1	23.1	17.9	22.8	21
SW-846 6020A	Zinc	mg/kg	120	460	1	174	204	71.7	63.3	72.8	60.3	161	143	153	113	133	61.6

TABLE 4

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
TARGET ANALYTE LIST METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR05_A	TR05_A	TR05_A	TR05_B	TR05_B	TR05_C	TR05_C	TR05_D	TR05_D	TR05_D	TR05_D	TR05_E
					Field Sample ID	CVX-0011-06	CVX-0011-07	CVX-0011-08	CVX-0010-19	CVX-0010-20	CVX-0011-10	CVX-0011-11	CVX-0010-08	CVX-0010-09	CVX-0010-10	CVX-0010-11	CVX-0010-01
					Sample Date	8/27/2014	8/27/2014	8/27/2014	8/26/2014	8/26/2014	8/27/2014	8/27/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014
					Sample Delivery Group	1499492	1499492	1499492	1499124	1499124	1499492	1499492	1499124	1499124	1499124	1499124	1499124
					Sample Depth	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV mg/kg[(1)]**	**FW Class C SGV mg/kg[(1)]**	Derivation												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		499	1150	1230	515	108 U	101000 J	42400	40500	35500	41500	14900	42900
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.000499	0.00115	0.00123	0.000515	0.000108	0.101	0.0424	0.0405	0.0355	0.0415	0.0149	0.0429
SW-846 6020A	Aluminum	mg/kg	NS	NS		16700	17800	11400	10000	9800	28300 J	13100	19900	21800	22800	17400	23500
SW-846 6020A	Antimony	mg/kg	NS	NS		0.106 U	0.108 UJ	0.0981 U	0.102 J	0.103 J	0.388 UJ	0.223 U	0.236 U	0.259 J	0.329 J	0.151 U	0.235 J
SW-846 6020A	Arsenic	mg/kg	10	33	1	4.66	7.33	6.39	3.47	3.14	9.86 J	6.03	6.27	6.19	6.96	5.03	10.9
SW-846 6020A	Barium	mg/kg	NS	NS		58.5	173 J	82.5	61.2	35.3	178 J	83.5	117	132	155	92.1	151
SW-846 6020A	Beryllium	mg/kg	NS	NS		0.684	0.641	0.54	0.57	0.592	1.32 J	0.606	0.9	0.951	1.1	0.669	1.02
SW-846 6020A	Cadmium	mg/kg	1	5	1	0.0739 J	0.502	0.35	0.0841 J	0.106 J	0.784 J	0.423 J	0.601	0.73	0.806	0.425	0.603
SW-846 6020A	Calcium	mg/kg	NS	NS		1200	1580 J-	1560	13300	18100	7620 J	4200	6920	6780	6530	3460	6370
SW-846 6020A	Chromium	mg/kg	43	110	1	24.7	31.7 J-	26.9	37.6	24.8	44.1 J	28.3	26.2	27.7	31.1	24.3	29.5
SW-846 6020A	Cobalt	mg/kg	NS	NS		10.6	12.1 J	9.06	10.1	10.1	20.4 J	9.71	18.5	16.5	18	14.5	15.8
SW-846 6020A	Copper	mg/kg	32	150	1	10.3	15.3	13.7	18.9	21.4	55.3 J	27.7	41.4	53.5	51.5	27.7	49.6
SW-846 6020A	IRON	mg/kg	NS	NS		28600	32000	24200	23500	21300	47600 J	23500	29800	28400	34000	29900	34400
SW-846 6020A	Lead	mg/kg	36	130	1	14.2	12.7 J-	8.94	10.4	9.68	49 J	20.5	37.4	40.2	48.7	36.7	47.4
SW-846 6020A	Magnesium	mg/kg	NS	NS		6500	6880 J	4400	8900	9100	9820 J	5110	7900	8010	9560	8520	8110
SW-846 6010C	Manganese	mg/kg	NS	NS		334	2270 J	1480	929	583	1500 J	707	699	718	807	611	587
SW-846 7471B	Mercury	mg/kg	0.2	1	1	0.0228 J	0.0327 J	0.0317 J	0.0109 U	0.0119 J	0.137 J	0.0605 J	0.0888 J	0.0928 J	0.122 J	0.0551 J	0.117 J
SW-846 6020A	Nickel	mg/kg	23	49	1	26.3	35.7 J-	29.4	32.7	24.4	49.4 J	27.8	34.2	34.9	39.4	31.9	35.6
SW-846 6020A	Potassium	mg/kg	NS	NS		881	1200 J	747	1200	1240	2500 J	1080	1890	1830	2210	1600	2050
SW-846 6020A	Selenium	mg/kg	NS	NS		0.146 J	0.127 U	0.116 U	0.135 J	0.151 J	1.63 J	0.808 J	0.752 J	0.851 J	0.945 J	0.316 J	1.12 J
SW-846 6020A	Silver	mg/kg	1	2.2	3	0.0337 J	0.0661 J	0.0607 J	0.0217 U	0.0326 J	0.307 J	0.118 J	0.417 J	1.26	0.752	0.156 J	0.61
SW-846 6020A	Sodium	mg/kg	NS	NS		95.3 J	90 J	79.3 J	86.9 U	83.1 U	411 J	211 J	224 U	213 U	217 U	143 U	492
SW-846 6020A	Thallium	mg/kg	NS	NS		0.0999 J	0.148 J	0.0884 J	0.0663 J	0.0605 J	0.296 J	0.112 J	0.181 J	0.222 J	0.249 J	0.162 J	0.2 J
SW-846 6020A	Vanadium	mg/kg	NS	NS		23.2	21.8 J+	16.6	14.1	15	35.7 J	17	22.3	25.8	30.3	20.6	29.8
SW-846 6020A	Zinc	mg/kg	120	460	1	66.5	67.4	55.4	63.6	64.1	217 J	92.6	178	199	221	135	193

TABLE 4

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
TARGET ANALYTE LIST METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR05_E	TR05_E	TR05_E	TR05_E	TR06_A	TR06_A	TR06_A	TR06_A	TR06_B	TR06_B	TR06_B	TR06_C
					Field Sample ID	CVX-0010-02	CVX-0010-03	CVX-0010-04	CVX-0010-05	CVX-0011-01	CVX-0011-02	CVX-0011-03	CVX-0011-04	CVX-0010-12	CVX-0010-13	CVX-0010-14	CVX-0010-06
					Sample Date	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/27/2014	8/27/2014	8/27/2014	8/27/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014
					Sample Delivery Group	1499124	1499124	1499124	1499124	1499492	1499492	1499492	1499492	1499124	1499124	1499124	1499124
					Sample Depth	0.5-1 FT	1-2 FT	2-3 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	0-0.5 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV mg/kg[(1)]**	**FW Class C SGV mg/kg[(1)]**	Derivation												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		37600	214 J	401	373	24400	54300	1250	2110	2470	1550	1890	13300
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.0376	0.000214	0.000401	0.000373	0.0244	0.0543	0.00125	0.00211	0.00247	0.00155	0.00189	0.0133
SW-846 6020A	Aluminum	mg/kg	NS	NS		24200	20400	17100	19900	15700	17700	16400	18600	12200	12300	13900	20300
SW-846 6020A	Antimony	mg/kg	NS	NS		0.286 J	0.116 J	0.106 J	0.135 J	0.227 U	0.226 U	0.108 U	0.108 J	0.107 U	0.101 U	0.158 J	0.26 J
SW-846 6020A	Arsenic	mg/Kg	10	33	1	8.59	4.59	5.59	5.73	6.03	5.91	4.76	17.5	3.14	4.77	4.38	9.47
SW-846 6020A	Barium	mg/kg	NS	NS		166	53.3	53.8	63	90.4	101	119	244	46.8	54.3	55.2	143
SW-846 6020A	Beryllium	mg/kg	NS	NS		1.12	0.523	0.461	0.559	0.679	0.786	0.709	0.857	0.388	0.515	0.591	0.924
SW-846 6020A	Cadmium	mg/kg	1	5	1	0.719	0.052 J	0.0935 J	0.122 J	0.571	0.61	0.145 J	0.276	0.0585 J	0.0681 J	0.0896 J	0.552
SW-846 6020A	Calcium	mg/kg	NS	NS		11800	582	575	647	5410	6820	1190	2040	2170	2900	4520	4300
SW-846 6020A	Chromium	mg/kg	43	110	1	31.5	16.6	16	18.7	20	21.7	19.3	30.6	35.3	40.5	55.7	30.1
SW-846 6020A	Cobalt	mg/kg	NS	NS		16.2	12.1	11.1	12.4	11.3	12.8	12.7	12.9	9.21	12.1	12.2	18.1
SW-846 6020A	Copper	mg/kg	32	150	1	46.4	21.9	22.3	24.5	62.4	59	12.5	24	12	16.8	20.2	37.3
SW-846 6020A	IRON	mg/kg	NS	NS		33100	33700	30700	34100	26300	28000	28800	40400	21700	22500	25400	35600
SW-846 6020A	Lead	mg/kg	36	130	1	46.7	12.1	13.8	15.2	37.5	41.8	13.1	15.7	8.39	11.8	13	41.5
SW-846 6020A	Magnesium	mg/kg	NS	NS		8430	7030	7000	7560	6010	7060	5840	5910	6640	8120	8780	9550
SW-846 6010C	Manganese	mg/kg	NS	NS		643	511	562	574	597	601	528	2530	271	274	423	955
SW-846 7471B	Mercury	mg/kg	0.2	1	1	0.114 J	0.0123 J	0.0194 J	0.0164 J	0.719	0.728	0.0218 J	0.0266 J	0.0144 J	0.0237 J	0.0378 J	0.0763 J
SW-846 6020A	Nickel	mg/Kg	23	49	1	34.6	27.9	25.5	29	27.8	30.2	24.7	30.6	31.1	39.4	47.4	37.2
SW-846 6020A	Potassium	mg/kg	NS	NS		2240	1110	1090	1180	1210	1370	1380	1720	1020	1360	1380	2110
SW-846 6020A	Selenium	mg/kg	NS	NS		0.944 J	0.132 J	0.111 U	0.113 U	0.806 J	0.893 J	0.231 J	0.332 J	0.296 J	0.308 J	0.287 J	0.711 J
SW-846 6020A	Silver	mg/Kg	1	2.2	3	0.593 J	0.0229 U	0.0223 U	0.0226 U	0.501 J	0.747	0.061 J	0.12 J	0.0253 U	0.0287 J	0.0366 J	0.146 J
SW-846 6020A	Sodium	mg/kg	NS	NS		574	134	130	137	290	336	104	107	101 U	95.4 U	95.4 U	163 U
SW-846 6020A	Thallium	mg/kg	NS	NS		0.258 J	0.0981 J	0.0954 J	0.103 J	0.135 J	0.166 J	0.139 J	0.248	0.0691 J	0.0801 J	0.0756 J	0.228 J
SW-846 6020A	Vanadium	mg/kg	NS	NS		28.2	17.2	15.3	16.5	21.3	23.2	21.8	30.3	13	12.6	15.5	24.6
SW-846 6020A	Zinc	mg/Kg	120	460	1	206	68.4	65.9	70.5	153	173	64.6	76.9	57.5	77.1	75.5	151

TABLE 4

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
TARGET ANALYTE LIST METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR06_C	TR06_D	TR06_D	TR06_D	TR06_D	TR06_E	TR06_E	TR06_E	TR06_E	TR07_A	TR07_A	TR07_A
					Field Sample ID	CVX-0010-07	CVX-0010-15	CVX-0010-16	CVX-0010-17	CVX-0010-18	CVX-0009-16	CVX-0009-17	CVX-0009-18	CVX-0009-19	CVX-0009-01	CVX-0009-02	CVX-0009-03
					Sample Date	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014
					Sample Delivery Group	1499124	1499124	1499124	1499124	1499124	1498701	1498701	1498701	1498701	1498701	1498701	1498701
					Sample Depth	0.5-1 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV mg/kg[(1)]**	**FW Class C SGV mg/kg[(1)]**	Derivation												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		2790	7620	23200	9290	12800	20400	39600	14500	8450	24700	33900	40500
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.00279	0.00762	0.0232	0.00929	0.0128	0.0204	0.0396	0.0145	0.00845	0.0247	0.0339	0.0405
SW-846 6020A	Aluminum	mg/kg	NS	NS		13600	17100	19600	16600	17500	21600	24000	17100	16800	11400	13600	22300
SW-846 6020A	Antimony	mg/kg	NS	NS		0.102 U	0.172 J	0.186 J	0.163 U	0.143 J	0.225 U	0.232 U	0.135 U	0.119 U	0.114 U	0.14 U	0.186 U
SW-846 6020A	Arsenic	mg/Kg	10	33	1	2.82	5.81	6	5.32 J+	3.95	6.18	7.24	3.2	3.2	4.6	4.54	7.65
SW-846 6020A	Barium	mg/kg	NS	NS		44.1	95.9	121	94	99.8	113	151	87.6	74.2	74.8	72.7	145
SW-846 6020A	Beryllium	mg/kg	NS	NS		0.487	0.732	0.791	0.68	0.578	0.968	1.19	0.741	0.558	0.46	0.566	0.991
SW-846 6020A	Cadmium	mg/kg	1	5	1	0.0689 J	0.537	0.428	0.274 J	0.289 J	0.665	0.852	0.209 J	0.145 J	0.382	0.372	0.742
SW-846 6020A	Calcium	mg/kg	NS	NS		1370	3370	2800	3270 J	2160	5250	6450	1770	1410	8570	2910	3980
SW-846 6020A	Chromium	mg/kg	43	110	1	16	21.4	23.1	20.8	18.4	27.3	32.9	21.9	16	47.7	14.3	29.6
SW-846 6020A	Cobalt	mg/kg	NS	NS		12	13.4	14.5	13.8	12.2	13.6	17.3	11.7	10.7	8.37	8.6	17.4
SW-846 6020A	Copper	mg/kg	32	150	1	15.2	28.3	27.5	21.1 J+	20.4	43.4	57.3	24.6	16.8	21.2	19.6	44.2 J
SW-846 6020A	IRON	mg/kg	NS	NS		28300	28100	30500	31700	26800	28300	32600	23700	24400	18900	20700	32700
SW-846 6020A	Lead	mg/kg	36	130	1	13.1	36.4	32.6	24.8	25.5	40.8	56.7	27.7	15	32.3	24.8	53.4
SW-846 6020A	Magnesium	mg/kg	NS	NS		7850	7210	7490	7730	6400	7480	9480	6370	5260	8090	4840	8540
SW-846 6010C	Manganese	mg/kg	NS	NS		378	597	641	659	590	564	634	316	286	493	580	706
SW-846 7471B	Mercury	mg/Kg	0.2	1	1	0.0116 U	0.0687 J	0.0675 J	0.0575 J	0.0638 J	0.504 U	0.569 U	0.325 U	0.292 U	0.276 U	0.313 U	0.417 U
SW-846 6020A	Nickel	mg/Kg	23	49	1	27.6	27.6	29.4	28.3 J+	24.9	33.4	40.8	27.5	22.9	36.2	18.9	35.9
SW-846 6020A	Potassium	mg/kg	NS	NS		1110	1320	1580	1480	1400	1780	2280	1170	923	956	1040	1610
SW-846 6020A	Selenium	mg/kg	NS	NS		0.124 J	0.442 J	0.679 J	0.511 J	0.432 J	0.937 J	1.12 J	0.63 J	0.398 J	0.47 J	0.676 J	1.19 J
SW-846 6020A	Silver	mg/Kg	1	2.2	3	0.0241 U	0.134 J	0.137 J	0.0765 J	0.0805 J	0.445 J	0.777	0.0835 J	0.0462 J	0.101 J	0.0883 J	0.249 J
SW-846 6020A	Sodium	mg/kg	NS	NS		96.4 U	124 U	151 U	154 U	128 U	256	265	112 J	80.8 J	105 J	90 J	164 J
SW-846 6020A	Thallium	mg/kg	NS	NS		0.0642 J	0.169 J	0.187 J	0.147 J	0.173 J	0.213 J	0.242 J	0.146 J	0.11 J	0.107 J	0.142 J	0.242 J
SW-846 6020A	Vanadium	mg/kg	NS	NS		14.5	19.9	22.6	19.9 J	20.8	28	35.8	22	17.6	16.2	16.6	29.1
SW-846 6020A	Zinc	mg/kg	120	460	1	107	121	127	110	105	266	244	98.4	70.1	75.2	109	167

TABLE 4

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
TARGET ANALYTE LIST METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR07_A	TR07_B	TR07_B	TR07_B	TR07_B	TR07_B	TR07_B	TR07_B	TR07_C	TR07_C	TR07_D	TR07_D
					Field Sample ID	CVX-0009-04	CVX-0008-01	CVX-0008-02	CVX-0008-03	CVX-0008-04	CVX-0008-05	CVX-0008-06	CVX-0008-07	CVX-0009-05	CVX-0009-06	CVX-0009-07	CVX-0009-08
					Sample Date	8/25/2014	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014
					Sample Delivery Group	1498701	1498276	1498276	1498276	1498276	1498276	1498276	1498276	1498701	1498701	1498701	1498701
					Sample Depth	1-2 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	3-4 FT	4-5 FT	5-6 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV mg/kg[(1)]**	**FW Class C SGV mg/kg[(1)]**	Derivation												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		47300	118 U	23700	20400	5770	20900	13000	12600	417	216 J	11200	24500
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.0473	0.000118	0.0237	0.0204	0.00577	0.0209	0.013	0.0126	0.000417	0.000216	0.0112	0.0245
SW-846 6020A	Aluminum	mg/kg	NS	NS		17300	6210	17400	18300	17900 J	19700	13200	13100	11900	13300	13700	17100
SW-846 6020A	Antimony	mg/kg	NS	NS		0.18 U	0.0971 U	0.148 U	0.165 U	0.108 UJ	0.138 U	0.124 U	0.114 U	0.0962 U	0.103 U	0.12 U	0.116 U
SW-846 6020A	Arsenic	mg/kg	10	33	1	5.79	2.55	7.14	4.55	2.8 J+	4.97	3.43	2.17	4.19	4.1	3.92	2.39
SW-846 6020A	Barium	mg/kg	NS	NS		94.6	19	94.2	104	58.1	105	56	59.4	25.8	34.3	66.4	67.2
SW-846 6020A	Beryllium	mg/kg	NS	NS		0.691	0.358	0.678	0.74	0.528	0.726	0.561	0.533	0.336	0.383	0.516	0.589
SW-846 6020A	Cadmium	mg/kg	1	5	1	0.542	0.047 J	0.409	0.383 J	0.162 J	0.384	0.127 J	0.178 J	0.0571 J	0.0416 J	0.258 J	0.113 J
SW-846 6020A	Calcium	mg/kg	NS	NS		2700	2750	3120	2430	1790	2850	1880	1810	1360	2150	2220	1010
SW-846 6020A	Chromium	mg/kg	43	110	1	18	7.53	19.2	19.2	16.1 J	19.9	13.3	14.1	13.9	14.9	14.9	17.4
SW-846 6020A	Cobalt	mg/kg	NS	NS		11.5	3.76	11.3	11.5	9.75	12.4	9.44	7.98	7.79	8.76	8.85	10.4
SW-846 6020A	Copper	mg/kg	32	150	1	24.5 J	7.48	22.5	22.7	16.4	26.1	11.8	13.7	13.4	9.45	15.4	18
SW-846 6020A	IRON	mg/kg	NS	NS		28600	12900	25800	25200	28700 J-	27800	20400	19100	28300	29900	21500	26600
SW-846 6020A	Lead	mg/kg	36	130	1	29.1	7.55	29.6	29.6	21.9	29.5	9.72	10.5	9.4	9.97	22.3	12.2
SW-846 6020A	Magnesium	mg/kg	NS	NS		5880	5370	6720	6200	7050	6510	5280	5050	6990	8430	5650	6840
SW-846 6010C	Manganese	mg/kg	NS	NS		652	277	419	476	311	420	376	260	348	279	468	429
SW-846 7471B	Mercury	mg/kg	0.2	1	1	0.418 U	0.0292 J	0.0837 J	0.0725 J	0.0665 J	0.0814 J	0.0198 J	0.0132 U	0.233 U	0.236 U	0.268 U	0.262 U
SW-846 6020A	Nickel	mg/kg	23	49	1	25	9.94	25.4	25.6	23.8 J-	26.6	19.2	18.8	21.6	24	20.6	27
SW-846 6020A	Potassium	mg/kg	NS	NS		1050	669	1490	1290	1300	1430	1080	924	727	914	972	1190
SW-846 6020A	Selenium	mg/kg	NS	NS		1.01 J	0.115 U	0.69 J	0.627 J	0.319 J	0.742 J	0.336 J	0.623 J	0.114 U	0.122 U	0.498 J	0.174 J
SW-846 6020A	Silver	mg/kg	1	2.2	3	0.117 J	0.023 U	0.0854 J	0.122 J	0.0434 J	0.0869 J	0.0294 U	0.0314 J	0.0228 U	0.0244 U	0.0507 J	0.0403 J
SW-846 6020A	Sodium	mg/kg	NS	NS		98 J	32.9 J	142	198	82.6 J	177	146	116	65.4 J	44.2 J	111 J	102 J
SW-846 6020A	Thallium	mg/kg	NS	NS		0.177 J	0.0345 U	0.186 J	0.171 J	0.106 J	0.212 J	0.0927 J	0.0972 J	0.0342 U	0.038 J	0.114 J	0.11 J
SW-846 6020A	Vanadium	mg/kg	NS	NS		19.4	7.03	21.1	20.8	17.3 J-	21.8	14.5	15.1	12.1	12.8	15.6	19.4
SW-846 6020A	Zinc	mg/kg	120	460	1	176	78.7	128	163	76.9 J	143	110	89.2	43.2	64.4	101	81.4

TABLE 4

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
TARGET ANALYTE LIST METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR07_D	TR07_D	TR07_E	TR07_E	TR07_E	TR07_E	TR07_E	TR09_C	TR10_A	TR10_A	TR10_A	TR10_A
					Field Sample ID	CVX-0009-09	CVX-0009-10	CVX-0009-11	CVX-0009-12	CVX-0009-13	CVX-0009-14	CVX-0009-15	CVX-0013-01	CVX-0013-02	CVX-0013-03	CVX-0013-04	CVX-0013-05
					Sample Date	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014	9/10/2014	9/10/2014	9/10/2014	9/10/2014	9/10/2014
					Sample Delivery Group	1498701	1498701	1498701	1498701	1498701	1498701	1498701	1502680	1502680	1502680	1502680	1502680
					Sample Depth	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	3-4 FT	0-0.5 FT	0-0.5 FT	0.5-1 FT	1-2 FT	1-2 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV mg/kg[(1)]**	**FW Class C SGV mg/kg[(1)]**	Derivation												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		870	1920	19600	28800	8430	48700	2160	2170	3200	2280	2470	2930
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.00087	0.00192	0.0196	0.0288	0.00843	0.0487	0.00216	0.00217	0.0032	0.00228	0.00247	0.00293
SW-846 6020A	Aluminum	mg/kg	NS	NS		21800	26600	19700	21100	17500	38300	12000	13400	15000	14700	14600	14600
SW-846 6020A	Antimony	mg/kg	NS	NS		0.107 UJ	0.106 U	0.158 U	0.139 U	0.139 U	0.188 U	0.121 U	0.0965 UJ	0.106 U	0.103 U	0.104 U	0.107 U
SW-846 6020A	Arsenic	mg/kg	10	33	1	4.43 J-	7.33	4.69	3.75	4.29	13.2	7.78	4.74 J-	4.53	3.22	3.14	3.42
SW-846 6020A	Barium	mg/kg	NS	NS		91.6 J	98.5	107	108	91	170	64.2	47.7	74.7	45.5	40	47.7
SW-846 6020A	Beryllium	mg/kg	NS	NS		0.909 J-	1.4	0.753	0.77	0.671	2.52	1.13	0.409 J+	0.877	0.82	0.824	0.719
SW-846 6020A	Cadmium	mg/kg	1	5	1	0.2 J	0.249 J	0.422	0.405	0.363	0.567	0.263 J	0.133 J	0.109 J	0.0621 J	0.0759 J	0.0649 J
SW-846 6020A	Calcium	mg/kg	NS	NS		1050	1380	2800	2080	2880	2420	1660	13400 J	2660	2440	2150	2570
SW-846 6020A	Chromium	mg/kg	43	110	1	20.2	25.2	21.4	21.6	19.9	42.2	16.7	17.3 J	32.1	38.4	39.8	32.5
SW-846 6020A	Cobalt	mg/kg	NS	NS		11.5	10.6	12.7	13.1	11.6	23.6	6.48	7.8 J+	12	8.57	8.73	8.73
SW-846 6020A	Copper	mg/kg	32	150	1	27.9 J-	32.3	25.5	26.7	26.9	60	22.4	17.8 J	16.3	17.7	10.3	12.4
SW-846 6020A	IRON	mg/kg	NS	NS		33200	31700	27100	29800	26700	54700	18800	30400 J	25200	26300	27700	26400
SW-846 6020A	Lead	mg/kg	36	130	1	15.2 J-	11	30.9	30.1	26.9	33.2	10.1	29.6 J	37.2	31.8	20.2	31
SW-846 6020A	Magnesium	mg/kg	NS	NS		6860 J	13100	6840	6840	6530	16000	5930	14000 J	8450	6350	6900	6650
SW-846 6010C	Manganese	mg/kg	NS	NS		461	366	502	494	373	680	436	515	436	306	352	318
SW-846 7471B	Mercury	mg/kg	0.2	1	1	0.238 U	0.254 U	0.364 U	0.34 U	0.322 U	0.435 U	0.277 U	0.319 J+	1.3	0.116 J	0.0666 J	0.116 J
SW-846 6020A	Nickel	mg/kg	23	49	1	31.1 J-	37.9	27.1	29.1	26.3	60.4	22.1	22.1 J	35.8	32.5	34.6	31.2
SW-846 6020A	Potassium	mg/kg	NS	NS		1430 J	4390	1520	1430	1210	3030	2200	1110 J+	1820	1060	854	1150
SW-846 6020A	Selenium	mg/kg	NS	NS		0.269 J	0.344 J	0.778 J	0.779 J	0.643 J	0.4 J	0.15 J	0.114 U	0.222 J	0.2 J	0.141 J	0.174 J
SW-846 6020A	Silver	mg/kg	1	2.2	3	0.0419 J	0.0838 J	0.0923 J	0.0827 J	0.0983 J	0.0572 J	0.0906 J	0.027 J	0.118 J	0.0584 J	0.0525 J	0.0621 J
SW-846 6020A	Sodium	mg/kg	NS	NS		98.8 J	117	136 J	127 J	174	185	94.8 J	84.2 J	122	57.3 J	59.4 J	75.5 J
SW-846 6020A	Thallium	mg/kg	NS	NS		0.128 J	0.209 J	0.192 J	0.218 J	0.167 J	0.408 J	0.14 J	0.0506 J	0.115 J	0.0706 J	0.0619 J	0.0767 J
SW-846 6020A	Vanadium	mg/kg	NS	NS		26.6 J-	34.4	23.7	23	20.1	52.8	29.6	15.9 J+	22.4	15.3	21.1	16.9
SW-846 6020A	Zinc	mg/kg	120	460	1	80.3	104	121	154	118	132	120	108 J	80.6	73.2	80.9	71.6

TABLE 4

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
TARGET ANALYTE LIST METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR11_B		TR11_C		TR11_C		TR11_C	
					Field Sample ID	CVX-0014-01		CVX-0014-02		CVX-0014-03		CVX-0014-04	
					Sample Date	9/11/2014		9/11/2014		9/11/2014		9/11/2014	
					Sample Delivery Group	1502969		1502969		1502969		1502969	
					Sample Depth	0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment	
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV mg/kg[(1)]**	**FW Class C SGV mg/kg[(1)]**	Derivation								
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		107	U	349		667		668	
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.000107		0.000349		0.000667		0.000668	
SW-846 6020A	Aluminum	mg/kg	NS	NS		12100		13200		14100		16700	
SW-846 6020A	Antimony	mg/Kg	NS	NS		0.0888	U	0.0927	U	0.0928	U	0.0989	UJ
SW-846 6020A	Arsenic	mg/Kg	10	33	1	4.11		3.35		2.41		3.47	
SW-846 6020A	Barium	mg/kg	NS	NS		34.6		40.3		28.6		41.9	J
SW-846 6020A	Beryllium	mg/Kg	NS	NS		0.385		0.451		0.391		0.516	
SW-846 6020A	Cadmium	mg/kg	1	5	1	0.0465	J	0.0573	J	0.0563	J	0.0719	J
SW-846 6020A	Calcium	mg/kg	NS	NS		4450		12700		1510		6490	J
SW-846 6020A	Chromium	mg/Kg	43	110	1	15		26.1		18.2		24	J
SW-846 6020A	Cobalt	mg/kg	NS	NS		10.1		8.81		9.84		9.71	J+
SW-846 6020A	Copper	mg/kg	32	150	1	14		11.8		10.7		12	
SW-846 6020A	IRON	mg/Kg	NS	NS		26100		24700		27400		29900	
SW-846 6020A	Lead	mg/Kg	36	130	1	15.1		8.85		7.89		12.5	J+
SW-846 6020A	Magnesium	mg/kg	NS	NS		7660		12000		7550		10600	J
SW-846 6010C	Manganese	mg/kg	NS	NS		375		367		358		382	
SW-846 7471B	Mercury	mg/Kg	0.2	1	1	0.0508	J	0.0569	J	0.0351	J	0.0411	J
SW-846 6020A	Nickel	mg/Kg	23	49	1	20.9		27.7		23.1		28.5	J
SW-846 6020A	Potassium	mg/kg	NS	NS		1170		1640		941		1490	J
SW-846 6020A	Selenium	mg/Kg	NS	NS		0.201	J	0.162	J	0.13	J	0.203	J
SW-846 6020A	Silver	mg/Kg	1	2.2	3	0.021	U	0.022	U	0.022	U	0.0234	U
SW-846 6020A	Sodium	mg/kg	NS	NS		57.4	J	74.5	J	43.6	J	162	J
SW-846 6020A	Thallium	mg/Kg	NS	NS		0.0341	J	0.0547	J	0.0403	J	0.0455	J
SW-846 6020A	Vanadium	mg/kg	NS	NS		13.4		14.6		13.7		18.5	J
SW-846 6020A	Zinc	mg/Kg	120	460	1	62.2		70.9		71.7		87.2	J

TABLE 4

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
TARGET ANALYTE LIST METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

Notes:

Parameter has no SGV
Parameter detected concentration less than Class A SGV
Parameter detected concentration between Class A and Class C SGV
Parameter detected concentration greater than Class C SGV

(1) - Sediment criteria obtained from the NYSDEC document entitled, "Screening and Assessment of Contaminated Sediment, New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources, Bureau of Habitat, June 24, 2014.
TOC - Total organic carbon
SGV - Sediment Guidance Value
NS - Not specified
mg/Kg - Milligrams per Kilograms
J - The analyte was positively identified, but the quantitation is an estimation.
J- - Estimated biased low at the value given
J+ - Estimated biased high at the value given
U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.
UJ - The analyte was detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria

TABLE 5

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
ACID VOLATILE SULFIDES / SIMULTANEOUSLY EXTRACTED METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

		Location	TR01_A		TR01_A		TR01_A		TR01_A		TR01_B		TR01_B		TR01_B		TR01_B		TR01_C		TR01_C		TR01_C		TR01_C		TR01_D	
		Field Sample ID	CVX-0004-01		CVX-0004-02		CVX-0004-03		CVX-0004-08		CVX-0004-04		CVX-0004-05		CVX-0004-06		CVX-0004-07		CVX-0004-09		CVX-0004-10		CVX-0004-11		CVX-0004-12		CVX-0004-13	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
		Sample Delivery Grou	1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.7 FT		0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-2.9 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units																										
Lloyd Kahn modified	Total Organic Carbon	mg/kg	12400		24400		9340		9270		6870		21700		1590		1680		9860		1050		1550		1220		11700	
Lloyd Kahn modified	Total Organic Carbon	fraction	0.0124		0.0244		0.00934		0.00927		0.00687		0.0217		0.00159		0.00168		0.00986		0.00105		0.00155		0.00122		0.0117	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	umoles/g	0.75	J	4.2		0.63	U	0.63	U	0.63	U	2.7		1.8	J	1.3	J	6.1		1.6	J	1.6	J	0.63	U	3	
SM 2540 G	Moisture	%	34.8		39.7		18.7		26.2		22.1		40.7		22.4		15.2		32.9		20.1		26.2		21.1		32.2	
SW-846 6010C	Cadmium	umoles/g	0.000604	J	0.000406	J	0.000254	J	0.000297	J	0.000375	J	0.000378	J	0.000494	J	0.000769	J	0.000706	J	0.000393	J	0.0008	J	0.000344	J	0.000634	J
SW-846 6010C	Copper	umoles/g	0.0634		0.0508		0.0461		0.0522		0.0444		0.0456		0.0371		0.0562		0.0474		0.035		0.0549	J-	0.0558		0.0329	
SW-846 6010C	Lead	umoles/g	0.0414	J+	0.0344	J+	0.0278	J+	0.0275	J+	0.0241	J+	0.0248	J+	0.0329	J+	0.0393	J+	0.0316	J+	0.0297	J+	0.0322	J+	0.029	J+	0.022	J+
SW-846 6010C	Nickel	umoles/g	0.026		0.032		0.0255		0.0271		0.0316		0.0307		0.0316		0.0425		0.0419		0.0288		0.0312		0.0311		0.0305	
SW-846 6010C	Silver	umoles/g	0.000439	U	0.000432	U	0.00043	U	0.000432	U	0.000439	U	0.000435	U	0.000423	U	0.000426	U	0.00043	U	0.000425	U		R	0.000437	U	0.000439	U
SW-846 6010C	Zinc	umoles/g	0.173	UJ	0.181	UJ	0.141	UJ	0.126	UJ	0.162	UJ	0.196	UJ	0.218	UJ	0.266	UJ	0.302	UJ	0.257	UJ	0.313	UJ	0.176	UJ	0.276	J+
	SEM total (6 metals)	umoles/g	0.30484		0.29904		0.24108		0.23353		0.26291		0.29791		0.32052		0.40520		0.42404		0.35132		0.43210		0.29268		0.36247	
	SEM total-AVS	**umoles/g**	**-0.445**		**-3.901**		**-0.389**		**-0.396**		**-0.367**		**-2.402**		**-1.479**		**-0.895**		**-5.676**		**-1.249**		**-1.168**		**-0.337**		**-2.638**	
	(SEM total-AVS)/fraction OC	**umoles/OC**	<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0	
	SEM-AVS difference greater than 0																											

TABLE 5

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
ACID VOLATILE SULFIDES / SIMULTANEOUSLY EXTRACTED METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

		Location	TR01_D		TR01_D		TR01_D		TR01_E		TR01_E		TR02_A		TR02_A		TR02_B		TR02_C		TR02_D		TR02_D		TR02_E		TR02_E	
		Field Sample ID	CVX-0004-14		CVX-0004-15		CVX-0004-16		CVX-0004-17		CVX-0004-18		CVX-0001-01		CVX-0001-02		CVX-0005-01		CVX-0005-04		CVX-0005-05		CVX-0005-06		CVX-0005-07		CVX-0005-08	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/14/2014		8/14/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014	
		Sample Delivery Grou	1497485		1497485		1497485		1497485		1497485		1496370		1496370		1497631		1497631		1497631		1497631		1497631		1497631	
		Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units																										
Lloyd Kahn modified	Total Organic Carbon	mg/kg	27500	J+	2440		4080		116	U	110	U	21600		4860		2330		8090		10400		3560		38300		64400	
Lloyd Kahn modified	Total Organic Carbon	fraction	0.0275		0.00244		0.00408		0.000116		0.00011		0.0216		0.00486		0.00233		0.00809		0.0104		0.00356		0.0383		0.0644	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	umoles/g	2.5		0.63	U	1.3	J	0.63	UJ	0.63	U	0.63	U	0.63	U	0.71	J	0.63	U	0.63	U	0.63	U	5.8		5.6	
SM 2540 G	Moisture	%	45.1		24.9		20.5		14		9.3		42.4		31.7		24.8		29		42.8		24.9		67.6		72.3	
SW-846 6010C	Cadmium	umoles/g	0.000819	J	0.0003	J	0.000363	J	0.000517	J	0.000272	J	0.000558	J	0.000543	J	0.000334	J	0.000463	J	0.000586	J	0.000436	J	0.00186	J	0.000722	J
SW-846 6010C	Copper	umoles/g	0.0696		0.0414		0.0516		0.0397		0.0327		0.0373		0.0447		0.0374		0.0321		0.0324		0.035		0.0223		0.0201	
SW-846 6010C	Lead	umoles/g	0.0267	J+	0.0241	J+	0.0272	J+	0.0221	J+	0.0195	J+	0.0156	J+	0.0205	J+	0.018		0.0202		0.022		0.0209		0.0663		0.0286	
SW-846 6010C	Nickel	umoles/g	0.0328		0.0334		0.0354		0.0212		0.0166		0.0167		0.0233		0.0223		0.0294		0.0269		0.0263		0.0347		0.0249	
SW-846 6010C	Silver	umoles/g	0.000431	U	0.000431	U	0.000427	U	0.000421	U	0.000431	U	0.00043	U	0.000425	U	0.000421	U	0.00043	U	0.000439	U	0.000427	U	0.000426	U	0.000423	U
SW-846 6010C	Zinc	umoles/g	0.312	J+	0.261	J+	0.254	J+	0.123	UJ	0.104	J+	0.158	UJ	0.146	UJ	0.14		0.165		0.176		0.166		0.457		0.229	
	SEM total (6 metals)	umoles/g	0.44235		0.36063		0.36899		0.20694		0.17350		0.22859		0.23547		0.21846		0.24759		0.25833		0.24906		0.58259		0.30375	
	SEM total-AVS	**umoles/g**	**-2.058**		**-0.269**		**-0.931**		**-0.423**		**-0.456**		**-0.401**		**-0.395**		**-0.492**		**-0.382**		**-0.372**		**-0.381**		**-5.217**		**-5.296**	
	(SEM total-AVS)/fraction OC	**umoles/OC**	<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0	
	SEM-AVS difference greater than 0																											

TABLE 5

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
ACID VOLATILE SULFIDES / SIMULTANEOUSLY EXTRACTED METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

		Location	TR02_E		TR02_E		TR03_C		TR03_C		TR04_C		TR04_C		TR04_C		TR04_C		TR04_C		TR05_A		TR05_A		TR05_A		TR05_A	
		Field Sample ID	CVX-0005-09		CVX-0005-10		CVX-0011-12		CVX-0011-13		CVX-0007-01		CVX-0007-02		CVX-0007-03		CVX-0007-04		CVX-0007-05		CVX-0011-05		CVX-0011-06		CVX-0011-07		CVX-0011-08	
		Sample Date	8/20/2014		8/20/2014		8/27/2014		8/27/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/27/2014		8/27/2014		8/27/2014		8/27/2014	
		Sample Delivery Grou	1497631		1497631		1499492		1499492		1498092		1498092		1498092		1498092		1498092		1499492		1499492		1499492		1499492	
		Sample Depth	1-2 FT		2-2.75 FT		0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		2-3 Ft		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units																										
Lloyd Kahn modified	Total Organic Carbon	mg/kg	16800		5720		2650	J	929	J	46800	J	42300		41800		44900	J	19400	J	8190		499		1150		1230	
Lloyd Kahn modified	Total Organic Carbon	fraction	0.0168		0.00572		0.00265		0.000929		0.0468		0.0423		0.0418		0.0449		0.0194		0.00819		0.000499		0.00115		0.00123	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	umoles/g	0.8	J	0.63	U	1.6	J	0.63	U	6.6		1.2	J	7.2		1.2	J	1.4	J	0.63	U	0.63	U	0.63	U	0.63	U
SM 2540 G	Moisture	%	36.9		27.4		18.3		16.9		67		59.6		60.4		53.7		59.1		26.1		20.9		22.3		17.3	
SW-846 6010C	Cadmium	umoles/g	0.000703	J	0.000451	J	0.000511	J	0.000419	J	0.000751	J	0.00104	J	0.00133	J	0.00111	J	0.00113	J	0.000252	J	0.000212	J	0.000246	J	0.00101	J
SW-846 6010C	Copper	umoles/g	0.0227		0.0272		0.0743		0.0582		0.063		0.063		0.0263		0.0552		0.0525		0.0241		0.0115		0.0076	J	0.026	
SW-846 6010C	Lead	umoles/g	0.0216		0.0206		0.0629	J	0.0348	J	0.0268		0.0386		0.0512		0.0433		0.0405		0.0156		0.0165		0.0126	J-	0.0103	
SW-846 6010C	Nickel	umoles/g	0.02		0.0256		0.068		0.0746		0.0332		0.027		0.0318		0.0199		0.0208		0.00565	J	0.00389	J	0.00859		0.0767	
SW-846 6010C	Silver	umoles/g	0.000438	U	0.000421	U	0.000427	U	0.000425	U	0.000436	U	0.000423	U	0.000427	U	0.00042	U	0.000426	U	0.000427	U	0.00042	U	0.000431	U	0.000419	U
SW-846 6010C	Zinc	umoles/g	0.18		0.168		0.198		0.16		0.237		0.325		0.443		0.274		0.29		0.0226		0.0155		0.033		0.072	
	SEM total (6 metals)	umoles/g	0.24544		0.24227		0.40414		0.32844		0.36119		0.45506		0.55406		0.39393		0.40536		0.06863		0.04802		0.06247		0.18643	
	SEM total-AVS	**umoles/g**	**-0.555**		**-0.388**		**-1.196**		**-0.302**		**-6.239**		**-0.745**		**-6.646**		**-0.806**		**-0.995**		**-0.561**		**-0.582**		**-0.568**		**-0.444**	
	(SEM total-AVS)/fraction OC	**umoles/OC**	<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0	
	SEM-AVS difference greater than 0																											

TABLE 5

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
ACID VOLATILE SULFIDES / SIMULTANEOUSLY EXTRACTED METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

		Location	TR05_B		TR05_B		TR05_C		TR05_C		TR05_D	TR05_D		TR05_D		TR05_D		TR05_E		TR05_E		TR05_E		TR05_E		TR05_E	
		Field Sample ID	CVX-0010-19		CVX-0010-20		CVX-0011-10		CVX-0011-11		CVX-0010-08	CVX-0010-09		CVX-0010-10		CVX-0010-11		CVX-0010-01		CVX-0010-02		CVX-0010-03		CVX-0010-04		CVX-0010-05	
		Sample Date	8/26/2014		8/26/2014		8/27/2014		8/27/2014		8/26/2014	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014	
		Sample Delivery Grou	1499124		1499124		1499492		1499492		1499124	1499124		1499124		1499124		1499124		1499124		1499124		1499124		1499124	
		Sample Depth	0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT	0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		2-3 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units																									
Lloyd Kahn modified	Total Organic Carbon	mg/kg	515		108	U	101000	J	42400		40500	35500		41500		14900		42900		37600		214	J	401		373	
Lloyd Kahn modified	Total Organic Carbon	fraction	0.000515		0.000108		0.101		0.0424		0.0405	0.0355		0.0415		0.0149		0.0429		0.0376		0.000214		0.000401		0.000373	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	umoles/g	0.66	J	0.63	U	5.2	J	4.2		12	9.6		6.8		4.8		13.1		0.88	J	0.63	U	0.63	U	0.63	U
SM 2540 G	Moisture	%	9.7		7.4		79.3	J	62.2		64.6	62.5		63.5		45.2		63.8		68.4		16		12.8		11.5	
SW-846 6010C	Cadmium	umoles/g	0.00217	U	0.00213	U	0.00104	J	0.000907	J	0.00215	U	0.0022	U	0.00217	U	0.00246		0.00215	U	0.00217	U	0.00217	U	0.00217	U	0.00219	U
SW-846 6010C	Copper	umoles/g	0.16		0.142		0.0254	J	0.0316		0.0389	0.0428		0.105		0.105		0.043		0.104		0.137		0.134		0.125	
SW-846 6010C	Lead	umoles/g	0.0236		0.0236		0.0335	J	0.0319		0.0318	0.0462		0.0549		0.071		0.0526		0.0409		0.0376		0.0374		0.0364	
SW-846 6010C	Nickel	umoles/g	0.138		0.0849		0.0311	J	0.0583		0.0495	0.063		0.0682		0.0691		0.071		0.0646		0.0611		0.0606		0.0576	
SW-846 6010C	Silver	umoles/g	0.00043	U	0.000421	U	0.000427	UJ	0.00043	U	0.000426	U	0.000658	J	0.00043	U	0.000433	U	0.000426	U	0.000429	U	0.00043	U	0.00043	U	0.000433	U
SW-846 6010C	Zinc	umoles/g	0.312		0.33		0.216	J	0.219		0.401	0.565		0.559		0.481		0.563		0.211		0.158		0.157		0.15	
	SEM total (6 metals)	umoles/g	0.63620		0.58305		0.30747		0.34214		0.52378	0.71986		0.78970		0.72899		0.73218		0.42310		0.39630		0.39160		0.37162	
	SEM total-AVS	**umoles/g**	**-0.024**		**-0.047**		**-4.893**		**-3.858**		**-11.476**	**-8.880**		**-6.010**		**-4.071**		**-12.368**		**-0.457**		**-0.234**		**-0.238**		**-0.258**	
	(SEM total-AVS)/fraction OC	**umoles/OC**	<0		<0		<0		<0		<0	<0		<0		<0		<0		<0		<0		<0		<0	
	SEM-AVS difference greater than 0																										

TABLE 5

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
ACID VOLATILE SULFIDES / SIMULTANEOUSLY EXTRACTED METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

		Location	TR06_A		TR06_A		TR06_A		TR06_A		TR06_B		TR06_B		TR06_B		TR06_C		TR06_C		TR06_D		TR06_D		TR06_D		TR06_D	
		Field Sample ID	CVX-0011-01		CVX-0011-02		CVX-0011-03		CVX-0011-04		CVX-0010-12		CVX-0010-13		CVX-0010-14		CVX-0010-06		CVX-0010-07		CVX-0010-15		CVX-0010-16		CVX-0010-17		CVX-0010-18	
		Sample Date	8/27/2014		8/27/2014		8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014	
		Sample Delivery Grou	1499492		1499492		1499492		1499492		1499124		1499124		1499124		1499124		1499124		1499124		1499124		1499124		1499124	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units																										
Lloyd Kahn modified	Total Organic Carbon	mg/kg	24400		54300		1250		2110		2470		1550		1890		13300		2790		7620		23200		9290		12800	
Lloyd Kahn modified	Total Organic Carbon	fraction	0.0244		0.0543		0.00125		0.00211		0.00247		0.00155		0.00189		0.0133		0.00279		0.00762		0.0232		0.00929		0.0128	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	umoles/g	9.3		0.84	J	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	2.9		6.5		2.4		4.6		2	J	3.3	
SM 2540 G	Moisture	%	63.6		62.7		24.2		21.5		22.4		17		17		51.8		18.6		36.1		47.9		48.2		39.5	
SW-846 6010C	Cadmium	umoles/g	0.00116	J	0.000498	J	0.00061	J	0.00226		0.00221	U	0.00218	U	0.0022	U	0.00214	U	0.00218	U	0.00224		0.00217	U	0.00219	U	0.00219	U
SW-846 6010C	Copper	umoles/g	0.0315		0.0215		0.024		0.0856		0.0745		0.0888		0.097		0.0892		0.0613		0.101		0.0923		0.105	J-	0.0853	
SW-846 6010C	Lead	umoles/g	0.0611		0.0302		0.024		0.0215		0.0214		0.0318		0.0269		0.0433		0.0428		0.0712		0.0476		0.0502	J-	0.0519	
SW-846 6010C	Nickel	umoles/g	0.0492		0.0189		0.0193		0.0709		0.132		0.152		0.192		0.062		0.0753		0.0702		0.0686		0.0696		0.0652	
SW-846 6010C	Silver	umoles/g	0.000437	U	0.000423	U	0.000422	U	0.000421	U	0.000437	U	0.000431	U	0.000435	U	0.000423	U	0.000431	U	0.000426	U	0.000429	U	0.000434	UJ	0.000433	U
SW-846 6010C	Zinc	umoles/g	0.394		0.108		0.0657		0.102		0.244		0.239		0.293		0.366		0.42		0.466		0.429		0.426		0.412	
	SEM total (6 metals)	umoles/g	0.53740		0.17952		0.13403		0.28268		0.47455		0.51421		0.61154		0.56306		0.60201		0.71107		0.64010		0.65342		0.61702	
	SEM total-AVS	**umoles/g**	**-8.763**		**-0.660**		**-0.496**		**-0.347**		**-0.155**		**-0.116**		**-0.018**		**-2.337**		**-5.898**		**-1.689**		**-3.960**		**-1.347**		**-2.683**	
	(SEM total-AVS)/fraction OC	**umoles/OC**	<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0	
	SEM-AVS difference greater than 0																											

TABLE 5

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
ACID VOLATILE SULFIDES / SIMULTANEOUSLY EXTRACTED METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

		Location	TR06_E		TR06_E		TR06_E		TR06_E		TR07_A		TR07_A		TR07_A		TR07_A		TR07_B		TR07_B		TR07_B		TR07_B		TR07_B	
		Field Sample ID	CVX-0009-16		CVX-0009-17		CVX-0009-18		CVX-0009-19		CVX-0009-01		CVX-0009-02		CVX-0009-03		CVX-0009-04		CVX-0008-01		CVX-0008-02		CVX-0008-03		CVX-0008-04		CVX-0008-05	
		Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014	
		Sample Delivery Grou	1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498276		1498276		1498276		1498276		1498276	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		3-4 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units																										
Lloyd Kahn modified	Total Organic Carbon	mg/kg	20400		39600		14500		8450		24700		33900		40500		47300		118	U	23700		20400		5770		20900	
Lloyd Kahn modified	Total Organic Carbon	fraction	0.0204		0.0396		0.0145		0.00845		0.0247		0.0339		0.0405		0.0473		0.000118		0.0237		0.0204		0.00577		0.0209	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	umoles/g	5.9		14.3		3.4		1.2	J	1.6	J	5.7		4.9		8		0.63	U	4.7		8.2		0.63	U	0.63	U
SM 2540 G	Moisture	%	62.9		65.4		39.4		32.6		28		40.1		55.5		55		15.6		43.6		50.8		25.3		40.5	
SW-846 6010C	Cadmium	umoles/g	0.00152	J	0.00219		0.00108	J	0.00103	J	0.00142	J	0.00149	J	0.00156	J	0.00146	J	0.000301	J	0.00175	J	0.00178	J	0.000395	J	0.00152	J
SW-846 6010C	Copper	umoles/g	0.0753		0.0413		0.0982		0.0948		0.0751		0.0607		0.0207		0.0172		0.0353		0.0246		0.0199		0.0372	J-	0.0225	
SW-846 6010C	Lead	umoles/g	0.0452		0.0608		0.0452		0.0353		0.0559		0.059		0.056		0.0552		0.0256		0.057		0.0593		0.0347	J-	0.0579	
SW-846 6010C	Nickel	umoles/g	0.0662		0.0754		0.0715		0.0745		0.029		0.0238		0.0332		0.0333		0.0239		0.0413		0.0419		0.0331		0.0439	
SW-846 6010C	Silver	umoles/g	0.00043	U	0.000425	U	0.00043	U	0.000426	U	0.000434	U	0.000428	U	0.000435	U	0.00043	U	0.00042	U	0.000436	U	0.000421	U		R	0.00043	U
SW-846 6010C	Zinc	umoles/g	0.421	J	0.644	J	0.285	J	0.289	J	0.281		0.312		0.34		0.325		0.213		0.341		0.35		0.224	J+	0.344	
	SEM total (6 metals)	umoles/g	0.60965		0.82412		0.50141		0.49506		0.44285		0.45742		0.45190		0.43259		0.29852		0.46609		0.47330		0.32940		0.47025	
	SEM total-AVS	**umoles/g**	**-5.290**		**-13.476**		**-2.899**		**-0.705**		**-1.157**		**-5.243**		**-4.448**		**-7.567**		**-0.331**		**-4.234**		**-7.727**		**-0.301**		**-0.160**	
	(SEM total-AVS)/fraction OC	**umoles/OC**	<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0	
	SEM-AVS difference greater than 0																											

TABLE 5

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
ACID VOLATILE SULFIDES / SIMULTANEOUSLY EXTRACTED METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

		Location	TR07_B		TR07_B		TR07_C		TR07_C		TR07_D		TR07_D		TR07_D		TR07_D		TR07_E		TR07_E		TR07_E		TR07_E	
		Field Sample ID	CVX-0008-06		CVX-0008-07		CVX-0009-05		CVX-0009-06		CVX-0009-07		CVX-0009-08		CVX-0009-09		CVX-0009-10		CVX-0009-11		CVX-0009-12		CVX-0009-13		CVX-0009-14		CVX-0009-15	
		Sample Date	8/22/2014		8/22/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
		Sample Delivery Grou	1498276		1498276		1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498701	
		Sample Depth	4-5 FT		5-6 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		3-4 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units																										
Lloyd Kahn modified	Total Organic Carbon	mg/kg	13000		12600		417		216	J	11200		24500		870		1920		19600		28800		8430		48700		2160	
Lloyd Kahn modified	Total Organic Carbon	fraction	0.013		0.0126		0.000417		0.000216		0.0112		0.0245		0.00087		0.00192		0.0196		0.0288		0.00843		0.0487		0.00216	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	umoles/g	4.5		0.63	U	0.63	U	0.63	U	3.7		2.2		2.1		0.63	U	2.9		3.8		2.9		1.7	J	0.63	U
SM 2540 G	Moisture	%	33.4		28.3		14.8		18.9		29.5		27.2		21.1		21.8		46.7		42.1		39.3		56.3		31.6	
SW-846 6010C	Cadmium	umoles/g	0.000827	J	0.000996	J	0.000413	J	0.000328	J	0.00103	J	0.000808	J	0.000979	J	0.000484	J	0.00177	J	0.0019	J	0.00162	J	0.00203	J	0.00142	J
SW-846 6010C	Copper	umoles/g	0.0593		0.0732		0.0551		0.0377		0.0285		0.0472		0.104	J-	0.0485		0.111		0.148		0.106		0.121		0.122	
SW-846 6010C	Lead	umoles/g	0.0248		0.0236		0.0334		0.0315		0.0464		0.0423		0.0309	J-	0.0272		0.0537		0.0586		0.0565		0.0448		0.0252	
SW-846 6010C	Nickel	umoles/g	0.0281		0.0223		0.0325		0.0382		0.0297		0.0331		0.0788		0.0194		0.0738		0.0868		0.0658		0.0766		0.0684	
SW-846 6010C	Silver	umoles/g	0.000435	U	0.000433	U	0.000439	U	0.000427	U	0.000428	U	0.000436	U	0.000432	UJ	0.000435	U	0.000434	U	0.000433	U	0.00043	U	0.00043	U	0.000435	U
SW-846 6010C	Zinc	umoles/g	0.132		0.109		0.187		0.165		0.262		0.21		0.224		0.0807		0.457	J	0.519	J	0.404		0.305		0.178	
	SEM total (6 metals)	umoles/g	0.24546		0.22953		0.30885		0.27316		0.36806		0.33384		0.43911		0.17672		0.69770		0.81473		0.63435		0.54986		0.39546	
	SEM total-AVS	**umoles/g**	**-4.255**		**-0.400**		**-0.321**		**-0.357**		**-3.332**		**-1.866**		**-1.661**		**-0.453**		**-2.202**		**-2.985**		**-2.266**		**-1.150**		**-0.235**	
	(SEM total-AVS)/fraction OC	**umoles/OC**	<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0		<0	
	SEM-AVS difference greater than 0																											

TABLE 5

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
ACID VOLATILE SULFIDES / SIMULTANEOUSLY EXTRACTED METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

		Location	TR09_C		TR10_A		TR10_A		TR10_A		TR10_A		TR11_B		TR11_C		TR11_C		TR11_C	
		Field Sample ID	CVX-0013-01		CVX-0013-02		CVX-0013-03		CVX-0013-04		CVX-0013-05		CVX-0014-01		CVX-0014-02		CVX-0014-03		CVX-0014-04	
		Sample Date	9/10/2014		9/10/2014		9/10/2014		9/10/2014		9/10/2014		9/11/2014		9/11/2014		9/11/2014		9/11/2014	
		Sample Delivery Grou	1502680		1502680		1502680		1502680		1502680		1502969		1502969		1502969		1502969	
		Sample Depth	0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units																		
Lloyd Kahn modified	Total Organic Carbon	mg/kg	2170		3200		2280		2470		2930		107	U	349		667		668	
Lloyd Kahn modified	Total Organic Carbon	fraction	0.00217		0.0032		0.00228		0.00247		0.00293		0.000107		0.000349		0.000667		0.000668	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	umoles/g	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	UJ
SM 2540 G	Moisture	%	13.4		24.5		20.8		20.9		23.4		6.8		10.7		10		15.5	
SW-846 6010C	Cadmium	umoles/g	0.000837	J	0.000394	J	0.000396	J	0.000347	J	0.000326	J	0.000548	J	0.000312	J	0.000574	J	0.000468	J
SW-846 6010C	Copper	umoles/g	0.944		0.0577		0.098		0.0498		0.074		0.0489		0.066		0.0515		0.0952	J-
SW-846 6010C	Lead	umoles/g	0.128		0.0645		0.0654		0.0632		0.0619		0.0362		0.0346		0.0363		0.0341	J+
SW-846 6010C	Nickel	umoles/g	0.0533		0.0795		0.0756		0.0678	J	0.17	J	0.0282		0.042		0.0481		0.0499	
SW-846 6010C	Silver	umoles/g	0.000426	U	0.000428	U	0.000433	U	0.000427	U	0.000427	U	0.000427	U	0.000426	U	0.000437	U	0.000428	U
SW-846 6010C	Zinc	umoles/g	0.485		0.208		0.186		0.15		0.258		0.263		0.309		0.254		0.266	J
	SEM total (6 metals)	umoles/g	1.61156		0.41052		0.42583		0.33157		0.56465		0.37728		0.45234		0.39091		0.44610	
	SEM total-AVS	**umoles/g**	**0.982**		**-0.219**		**-0.204**		**-0.298**		**-0.065**		**-0.253**		**-0.178**		**-0.239**		**-0.184**	
	(SEM total-AVS)/fraction OC	**umoles/OC**	452.3		<0		<0		<0		<0		<0		<0		<0		<0	
	SEM-AVS difference greater than 0																			

TABLE 5

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
ACID VOLATILE SULFIDES / SIMULTANEOUSLY EXTRACTED METALS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

Notes:
AVS-SEM difference greater than 0
Notes- Nondect AVS values are much higher than detected metals concentrations. This may bias the ratio.
Non-detected concentration is used at detection limit.
mg/Kg - Milligrams per Kilograms
Umoles/G - Micromoles per gram
AVS/SEM - Acid Volatile Sulfides/Simultaneously extracted metals
J - The analyte was positively identified, but the quantitation is an estimation.
J- - Estimated biased low at the value given
J+ - Estimated biased high at the value given
U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.
UJ - The analyte was detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria
R - Unusable value

TABLE 6

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCHLORINATED BIPHENYLS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR01_C		TR01_C		TR01_C		TR01_C		TR02_E		TR02_E		TR02_E		TR02_E	
					Field Sample ID	CVX-0004-09		CVX-0004-10		CVX-0004-11		CVX-0004-12		CVX-0005-07		CVX-0005-08		CVX-0005-09		CVX-0005-10	
					Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014	
					Sample Delivery Group	1497485		1497485		1497485		1497485		1497631		1497631		1497631		1497631	
					Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.9 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-2.75 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/kg[(1)]**	**FW Class C SGV ug/kg[(1)]**	**Derivation**																
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		9860		1050		1550		1220		38300		64400		16800		5720	
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.00986		0.00105		0.00155		0.00122		0.0383		0.0644		0.0168		0.00572	
SW-846 8082A	Aroclor 1016	ug/kg	NS	NS		5.4	UJ	4.5	UJ	4.9	UJ	4.6	UJ	11	UJ	13	UJ	5.7	UJ	5	UJ
SW-846 8082A	Aroclor 1221	ug/kg	NS	NS		6.9	UJ	5.8	UJ	6.2	UJ	5.8	UJ	14	UJ	17	UJ	7.3	UJ	6.3	UJ
SW-846 8082A	Aroclor 1232	ug/kg	NS	NS		12	UJ	10	UJ	11	UJ	10	UJ	25	UJ	29	UJ	13	UJ	11	UJ
SW-846 8082A	Aroclor 1242	ug/kg	NS	NS		4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ	10	UJ	12	UJ	5.2	UJ	4.5	UJ
SW-846 8082A	Aroclor 1248	ug/kg	NS	NS		4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ	10	UJ	12	UJ	5.2	UJ	4.5	UJ
SW-846 8082A	Aroclor 1254	ug/kg	NS	NS		4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ	10	UJ	12	UJ	5.2	UJ	4.5	UJ
SW-846 8082A	Aroclor 1260	ug/kg	NS	NS		7.3	UJ	6.1	UJ	6.6	UJ	6.2	UJ	15	UJ	18	UJ	7.8	UJ	6.7	UJ
SW-846 8082A	Aroclor-1262	ug/kg	NS	NS		4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ	10	UJ	12	UJ	5.2	UJ	4.5	UJ
SW-846 8082A	Aroclor-1268	ug/kg	NS	NS		4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ	10	UJ	12	UJ	5.2	UJ	4.5	UJ
SW-846 8082A	Polychlorinated biphenyls	ug/kg	100	1000	5	0		0		0		0		0		0		0		0	

TABLE 6

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCHLORINATED BIPHENYLS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR03_C		TR03_C		TR04_C		TR04_C		TR04_C		TR04_C		TR04_C		TR05_E	
					Field Sample ID	CVX-0011-12		CVX-0011-13		CVX-0007-01		CVX-0007-02		CVX-0007-03		CVX-0007-04		CVX-0007-05		CVX-0010-01	
					Sample Date	8/27/2014		8/27/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/26/2014	
					Sample Delivery Group	1499492		1499492		1498092		1498092		1498092		1498092		1498092		1499124	
					Sample Depth	0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		2-3 Ft		0-0.5 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/kg[(1)]**	**FW Class C SGV ug/kg[(1)]**	**Derivation**																
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		2650	J	929	J	46800	J	42300		41800		44900	J	19400	J	42900	
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.00265		0.000929		0.0468		0.0423		0.0418		0.0449		0.0194		0.0429	
SW-846 8082A	Aroclor 1016	ug/kg	NS	NS		4.3	U	4.3	U	11	U	8.8	U	9.1	U	7.6	U	8.7	U	9.9	U
SW-846 8082A	Aroclor 1221	ug/kg	NS	NS		5.5	U	5.4	U	14	U	11	U	12	U	9.8	U	11	U	13	U
SW-846 8082A	Aroclor 1232	ug/kg	NS	NS		9.6	U	9.5	U	24	U	20	U	20	U	17	U	19	U	22	U
SW-846 8082A	Aroclor 1242	ug/kg	NS	NS		4	U	3.9	U	10	U	8.1	U	8.3	U	7	U	8	U	9.1	U
SW-846 8082A	Aroclor 1248	ug/kg	NS	NS		4	U	3.9	U	10	U	8.1	U	8.3	U	7	U	8	U	9.1	U
SW-846 8082A	Aroclor 1254	ug/kg	NS	NS		4	U	3.9	U	11	J	9.3	J	9.5	J	16	J	14	J	9.1	U
SW-846 8082A	Aroclor 1260	ug/kg	NS	NS		5.9	U	5.8	U	15	U	12	U	12	U	10	U	12	U	14	U
SW-846 8082A	Aroclor-1262	ug/kg	NS	NS		4	U	3.9	U	10	U	8.1	U	8.3	U	7	U	8	U	9.1	U
SW-846 8082A	Aroclor-1268	ug/kg	NS	NS		4	U	3.9	U	10	U	8.1	U	8.3	U	7	U	8	U	9.1	U
SW-846 8082A	Polychlorinated biphenyls	ug/kg	100	1000	5	0		0		11		9.3		9.5		16		14		0	

TABLE 6

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCHLORINATED BIPHENYLS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR05_E		TR05_E		TR05_E		TR05_E		TR06_D		TR06_D		TR06_D		TR06_D	
					Field Sample ID	CVX-0010-02		CVX-0010-03		CVX-0010-04		CVX-0010-05		CVX-0010-15		CVX-0010-16		CVX-0010-17		CVX-0010-18	
					Sample Date	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014	
					Sample Delivery Group	1499124		1499124		1499124		1499124		1499124		1499124		1499124		1499124	
					Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/kg[(1)]**	**FW Class C SGV ug/kg[(1)]**	**Derivation**																
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		37600		214	J	401		373		7620		23200		9290		12800	
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.0376		0.000214		0.000401		0.000373		0.00762		0.0232		0.00929		0.0128	
SW-846 8082A	Aroclor 1016	ug/kg	NS	NS		11	U	4.3	U	4.1	U	4.1	U	5.6	U	6.9	U	6.9	U	6	U
SW-846 8082A	Aroclor 1221	ug/kg	NS	NS		15	U	5.5	U	5.3	U	5.2	U	7.2	U	8.8	U	8.9	U	7.6	U
SW-846 8082A	Aroclor 1232	ug/kg	NS	NS		25	U	9.5	U	9.2	U	9	U	13	U	15	U	15	U	13	U
SW-846 8082A	Aroclor 1242	ug/kg	NS	NS		10	U	3.9	U	3.8	U	3.7	U	5.2	U	6.3	U	6.4	U	5.5	U
SW-846 8082A	Aroclor 1248	ug/kg	NS	NS		10	U	3.9	U	3.8	U	3.7	U	5.2	U	6.3	U	6.4	U	5.5	U
SW-846 8082A	Aroclor 1254	ug/kg	NS	NS		14	J	3.9	U	3.8	U	3.7	U	8.7	J	6.3	U	6.4	U	9.6	J
SW-846 8082A	Aroclor 1260	ug/kg	NS	NS		16	U	5.8	U	5.6	U	5.5	U	7.7	U	9.4	U	9.5	U	8.1	U
SW-846 8082A	Aroclor-1262	ug/kg	NS	NS		10	U	3.9	U	3.8	U	3.7	U	5.2	U	6.3	U	6.4	U	5.5	U
SW-846 8082A	Aroclor-1268	ug/kg	NS	NS		10	U	3.9	U	3.8	U	3.7	U	5.2	U	6.3	U	6.4	U	5.5	U
SW-846 8082A	Polychlorinated biphenyls	ug/kg	100	1000	5	14		0		0		0		8.7		0		0		9.6	

TABLE 6

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCHLORINATED BIPHENYLS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR07_D		TR07_D		TR07_D		TR07_D		TR09_C		TR10_A		TR10_A		TR10_A	
					Field Sample ID	CVX-0009-07		CVX-0009-08		CVX-0009-09		CVX-0009-10		CVX-0013-01		CVX-0013-02		CVX-0013-03		CVX-0013-04	
					Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		9/10/2014		9/10/2014		9/10/2014		9/10/2014	
					Sample Delivery Group	1498701		1498701		1498701		1498701		1502680		1502680		1502680		1502680	
					Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/kg[(1)]**	**FW Class C SGV ug/kg[(1)]**	**Derivation**																
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		11200		24500		870		1920		2170		3200		2280		2470	
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.0112		0.0245		0.00087		0.00192		0.00217		0.0032		0.00228		0.00247	
SW-846 8082A	Aroclor 1016	ug/kg	NS	NS		5	U	4.9	U	4.5	U	4.6	U	4.1	U	4.7	U	4.5	U	4.5	U
SW-846 8082A	Aroclor 1221	ug/kg	NS	NS		6.4	U	6.3	U	5.8	U	5.8	U	5.3	U	6	U	5.8	U	5.7	U
SW-846 8082A	Aroclor 1232	ug/kg	NS	NS		11	U	11	U	10	U	10	U	9.2	U	10	U	10	U	10	U
SW-846 8082A	Aroclor 1242	ug/kg	NS	NS		4.6	U	4.5	U	4.1	U	4.2	U	3.8	U	4.3	U	4.2	U	4.1	U
SW-846 8082A	Aroclor 1248	ug/kg	NS	NS		4.6	U	4.5	U	4.1	U	4.2	U	3.8	U	4.3	U	4.2	U	4.1	U
SW-846 8082A	Aroclor 1254	ug/kg	NS	NS		7.8	J	4.5	U	4.1	U	4.2	U	3.8	U	4.3	U	4.2	U	4.1	U
SW-846 8082A	Aroclor 1260	ug/kg	NS	NS		6.8	U	6.7	U	6.1	U	6.2	U	5.6	U	6.4	U	6.2	U	6.1	U
SW-846 8082A	Aroclor-1262	ug/kg	NS	NS		4.6	U	4.5	U	4.1	U	4.2	U	3.8	U	4.3	U	4.2	U	4.1	U
SW-846 8082A	Aroclor-1268	ug/kg	NS	NS		4.6	U	4.5	U	4.1	U	4.2	U	3.8	U	4.3	U	4.2	U	4.1	U
SW-846 8082A	Polychlorinated biphenyls	ug/kg	100	1000	5	7.8		0		0		0		0		0		0		0	

TABLE 6

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCHLORINATED BIPHENYLS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

					Location	TR10_A		TR11_C		TR11_C		TR11_C	
					Field Sample ID	CVX-0013-05		CVX-0014-02		CVX-0014-03		CVX-0014-04	
					Sample Date	9/10/2014		9/11/2014		9/11/2014		9/11/2014	
					Sample Delivery Group	1502680		1502969		1502969		1502969	
					Sample Depth	1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Field Duplicate		Regular sample		Regular sample		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment	
Analytical Method	**Parameter Name**	**Units**	**FW Class A SGV ug/kg[(1)]**	**FW Class C SGV ug/kg[(1)]**	**Derivation**								
Lloyd Kahn modified	Total Organic Carbon	mg/kg	NS	NS		2930		349		667		668	
Lloyd Kahn modified	Total Organic Carbon		NS	NS		0.00293		0.000349		0.000667		0.000668	
SW-846 8082A	Aroclor 1016	ug/kg	NS	NS		4.7	U	4	U	3.9	U	4.3	U
SW-846 8082A	Aroclor 1221	ug/kg	NS	NS		5.9	U	5.1	U	5	U	5.4	U
SW-846 8082A	Aroclor 1232	ug/kg	NS	NS		10	U	8.9	U	8.7	U	9.5	U
SW-846 8082A	Aroclor 1242	ug/kg	NS	NS		4.3	U	3.7	U	3.6	U	3.9	U
SW-846 8082A	Aroclor 1248	ug/kg	NS	NS		4.3	U	3.7	U	3.6	U	3.9	U
SW-846 8082A	Aroclor 1254	ug/kg	NS	NS		4.3	U	3.7	U	3.6	U	3.9	U
SW-846 8082A	Aroclor 1260	ug/kg	NS	NS		6.3	U	5.4	U	5.4	U	5.8	U
SW-846 8082A	Aroclor-1262	ug/kg	NS	NS		4.3	U	3.7	U	3.6	U	3.9	U
SW-846 8082A	Aroclor-1268	ug/kg	NS	NS		4.3	U	3.7	U	3.6	U	3.9	U
SW-846 8082A	Polychlorinated biphenyls	ug/kg	100	1000	5	0		0		0		0	

TABLE 6

SEDIMENT ANALYTICAL DATA SUMMARY TABLE
POLYCHLORINATED BIPHENYLS
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

Notes:

Parameter detected concentration less than Class A SGV

(1) - Sediment criteria obtained from the NYSDEC document entitled, "Screening and Assessment of Contaminated Sediment, New York State Department of Environmental Conservation, Division of Fish, Wildlife and Marine Resources, Bureau of Habitat, June 24, 2014.

SGV - Sediment Guidance Value
NS - Not specified
mg/Kg - Milligrams per Kilograms
ug/Kg - Micrograms per Kilograms
J - The analyte was positively identified, bu the quantitation is an estimation.
U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.
UJ - The analyte was detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria

TABLE 7

SURFACE WATER ANALYTICAL DATA SUMMARY TABLE
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

				Location	TR01	TR02	TR03	TR04	TR05	TR06	TR07	TR07	TR08	TR09	TR10	TR11
				Field Sample ID	CVX-0003-01	CVX-0002-01	CVX-0006-01	CVX-0006-02	CVX-0006-04	CVX-0006-05	CVX-0012-01	CVX-0012-02	CVX-0015-04	CVX-0015-03	CVX-0015-02	CVX-0015-01
				Sample Date	8/15/2014	8/14/2014	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/27/2014	8/27/2014	9/11/2014	9/11/2014	9/11/2014	9/11/2014
				Sample Delivery Group	1496618	1496388	1497595	1497595	1497595	1497595	1499493	1499493	1502970	1502970	1502970	1502970
				Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
				Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample
			NYSDEC Part 703	Sample Type	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER	SURFACE WATER
Analytical Method	Parameter Name	Units	NY_Class C [1]	Filtered												
SM 2340 C-1997	Total Hardness as CaCO3	mgCaCO3/L	NS	N	124	154	199	191	185	174	179	183	198	208	218	217
SM 2540 D-1997	Total Suspended Solids	mg/l	NS	N	7	7.8	2.7 J	2.3 J	1.9 J	1.6 J	3.3	3.3	2.3 J	2.6 J	1.7 J	1.5 J
SM 4500-H+ B-2000	pH - Hydrogen Ion	SU	NS	N	8	7.7	7.8	7.9	8	7.9	8.1	8.1	8.2	8.2	8.1	8.1
SW-846 6020A	Aluminum	mg/l	NS	N	0.192 J	0.131 J	0.0797 J	0.0566 J	0.0666 J	0.057 J	0.0978 J	0.0945 J	0.0655 J	0.0734 J	0.0562 J	0.0365 J
SW-846 6020A	Aluminum	mg/l	0.1	Y	0.0088 J	0.0082 U	0.0098 J	0.011 J	0.0103 J	0.0188 J	0.0082 U	0.0082 U	0.0106 J	0.0176 J	0.0124 J	0.0139 J
SW-846 6020A	Antimony	mg/l	NS	N	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U
SW-846 6020A	Antimony	mg/l	NS	Y	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U	0.00033 U
SW-846 6020A	Arsenic	mg/l	NS	N	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.0009 J	0.00082 U	0.00082 U	0.00082 U	0.00082 U
SW-846 6020A	Arsenic	mg/l	0.15	Y	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 U	0.00082 J	0.001 J
SW-846 6020A	Barium	mg/l	NS	N	0.0133	0.0165	0.0158	0.0147	0.0165	0.0152	0.0186	0.019	0.0194	0.019	0.0177	0.0183
SW-846 6020A	Barium	mg/l	NS	Y	0.0126	0.0139	0.0146	0.0154	0.0147	0.0151	0.0184	0.0175	0.0173	0.0165	0.0187	0.0184
SW-846 6020A	Beryllium	mg/l	1.1	N	4.50E-05 U	4.50E-05 U	4.50E-05 U	4.50E-05 U	4.50E-05 U	4.50E-05 U	4.50E-05 U	4.50E-05 U	4.50E-05 U	4.50E-05 U	4.50E-05 U	4.50E-05 U
SW-846 6020A	Beryllium	mg/l	NS	Y	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U	0.000045 U
SW-846 6020A	Cadmium	mg/l	NS	N	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U
SW-846 6020A	Cadmium	mg/l	0.0029	Y	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.00017 U
SW-846 6020A	Calcium	mg/l	NS	N	34.1	39.1	45.8	47.3	43.8	42.7	48.2	47.8	53.2	52.4	52.6	53.1
SW-846 6020A	Calcium	mg/l	NS	Y	33.4	38	46.9	45.6	44.4	40.4	54.9	52.7	54	52.6	52.3	51.8
SW-846 6020A	Chromium	mg/l	NS	N	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
SW-846 6020A	Chromium	mg/l	0.103	Y	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
SW-846 6020A	Cobalt	mg/l	0.005	N	0.0002 J	0.00012 J	0.0001 U	0.00013 J	0.0001 U	0.0001 U	0.0001 J	0.0001 U	0.00012 J	0.0001 U	0.0001 U	0.0001 U
SW-846 6020A	Cobalt	mg/l	NS	Y	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.00013 J	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
SW-846 6020A	Copper	mg/l	NS	N	0.0018 J	0.0014 J	0.0018 J	0.0015 J	0.0018 J	0.002 J	0.0025 J	0.0028 J	0.0026 J	0.0027 J	0.0024 J	0.0024 J
SW-846 6020A	Copper	mg/l	0.02	Y	0.0014 J	0.0013 J	0.0017 J	0.0022 J	0.0022 J	0.0039 J	0.0022 J	0.0021 J	0.0025 J	0.0032 J	0.0028 J	0.0026 J
SW-846 6020A	IRON	mg/l	0.3	N	0.35	0.251	0.159 J	0.145 J	0.134 J	0.147 J	0.206	0.182 J	0.168 J	0.184 J	0.141 J	0.122 J
SW-846 6020A	IRON	mg/l	NS	Y	0.035 J	0.0181 J	0.0275 J	0.0318 J	0.0304 J	0.0215 J	0.0324 J	0.029 J	0.0332 J	0.0509 J	0.0395 J	0.0453 J
SW-846 6020A	Lead	mg/l	NS	N	4.10E-04 J	3.30E-04 J	2.60E-04 J	1.80E-04 J	1.90E-04 J	1.80E-04 J	2.50E-04 J	2.40E-04 J	3.10E-04 J	2.30E-04 J	2.10E-04 J	1.70E-04 J
SW-846 6020A	Lead	mg/l	0.0059	Y	0.000082 U	0.000082 U	0.000082 U	0.00014 J	0.000082 U	0.000082 U	0.000082 U	0.000082 U	0.000082 U	0.000094 J	0.000084 J	0.000082 U
SW-846 6020A	Magnesium	mg/l	NS	N	10	11.4	13.6	13.1	13.5	13.4	15.2	15.4	14.6	14.8	14.2	14.5
SW-846 6020A	Magnesium	mg/l	NS	Y	9.91	10.9	13.6	14.5	13.6	12.6	16	15.2	14.9	14.6	14.8	14.7
SW-846 6020A	Manganese	mg/l	NS	N	0.0595	0.108	0.0621	0.061	0.0647	0.064						
SW-846 6020A	Manganese	mg/l	NS	Y	0.0268	0.0749	0.051	0.0561	0.0567	0.0494						
SW-846 6010C	Manganese	mg/l	NS	N							0.0746	0.0726	0.0795	0.0836	0.0764	0.0672
SW-846 6010C	Manganese	mg/l	NS	Y							0.0553	0.0545	0.0616	0.0678	0.0589	0.0516
EPA 1631 Revision E	Mercury	mg/l	NS	N	0.0000028 U	0.0000028 U	0.0000028 U	0.0000028 U	0.0000028 U	0.0000028 U	0.00000398 J	0.00000318 J	0.0000028 U	0.0000028 U	0.00000305 J	0.0000028 U
EPA 1631 Revision E	Mercury	mg/l	0.0000026	Y	0.0000028 U	0.000004 J	0.0000028 U	0.0000028 U	0.0000028 U	0.0000028 U	0.00000344 J	0.0000028 U	0.0000028 U	0.0000028 U	0.0000028 U	0.0000028 U
SW-846 6020A	Nickel	mg/l	NS	N	0.001 J	0.0012 J	0.0012 J	0.0012 J	0.0012 J	0.0012 J	0.0015 J	0.0018 J	0.002 J	0.002 J	0.0016 J	0.0017 J
SW-846 6020A	Nickel	mg/l	0.073	Y	0.00079 U	0.0013 J	0.0011 J	0.0013 J	0.0015 J	0.0012 J	0.0017 J	0.0016 J	0.002 J	0.002 J	0.0021 J	0.0016 J
SW-846 6020A	Potassium	mg/l	NS	N	1.75	1.56	1.56	1.48	1.55	1.56	1.73	1.69	1.75	1.77	1.7	1.74
SW-846 6020A	Potassium	mg/l	NS	Y	1.66	1.48	1.6	1.73	1.59	1.48	1.89	1.73	1.79	1.76	1.8	1.8
SW-846 6020A	Selenium	mg/l	NS	N	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
SW-846 6020A	Selenium	mg/l	0.0046	Y	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
SW-846 6020A	Silver	mg/l	NS	N	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U
SW-846 6020A	Silver	mg/l	0.0001	Y	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.00013 U
SW-846 6020A	Sodium	mg/l	NS	N	43.4	67.4	81.7	77.2	79.2	74.1	85.4	86.1	93.5	92.4	89.8 J	92.6
SW-846 6020A	Sodium	mg/l	NS	Y	50.8	66.3	83.2	83.6	81.8	66.6	96.1	92.6	95	92.8	90.6	89.2
SW-846 6020A	Thallium	mg/l	NS	N	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U
SW-846 6020A	Thallium	mg/l	0.008	Y	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U	0.00015 U
SW-846 6020A	Vanadium	mg/l	NS	N	0.00062 J	0.0006 J	0.00036 J	0.00035 J	0.00052 J	0.0004 J	0.00041 J	0.00034 J	0.00046 J	0.00046 J	0.00054 J	0.00045 J
SW-846 6020A	Vanadium	mg/l	0.014	Y	0.00043 J	0.00053 J	0.00034 J	0.00027 J	0.00028 J	0.00032 J	0.00046 J	0.00027 J	0.00042 J	0.00048 J	0.00041 J	0.00039 J
SW-846 6020A	Zinc	mg/l	NS	N	0.0027 J	0.0024 U	0.0033 J	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U
SW-846 6020A	Zinc	mg/l	0.117	Y	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0025 J	0.0052 J	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U
SW-846 8260C	1,1,1-Trichloroethane	ug/l	NS	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/l	NS	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	1,1,2-Trichloroethane	ug/l	NS	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	1,1-Dichloroethane	ug/l	NS	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	1,1-Dichloroethene (Dichlo	ug/l	NS	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	1,2-Dichloroethane	ug/l	NS	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	1,2-Dichloropropane	ug/l	NS	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	2-Butanone (Methyl ethyl k	ug/l	NS	N	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 UJ	3 UJ	3 UJ	3 UJ
SW-846 8260C	2-Hexanone	ug/l	NS	N	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 UJ	3 UJ	3 UJ	3 UJ
SW-846 8260C	4-Methyl-2-pentanone	ug/l	NS	N	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 UJ	3 UJ	3 UJ	3 UJ
SW-846 8260C	Acetone	ug/l	NS	N	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
SW-846 8260C	Benzene	ug/l	10	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	Bromodichloromethane	ug/l	NS	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	Bromoform	ug/l	NS	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	Bromomethane (Methyl br	ug/l	NS	N	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
SW-846 8260C	Carbon Disulfide	ug/l	NS	N	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

TABLE 7

SURFACE WATER ANALYTICAL DATA SUMMARY TABLE
Fishkill Creek Sampling Program
Former Texaco Research Center
Beacon, New York

				Location	TR01		TR02		TR03		TR04		TR05		TR06		TR07		TR07		TR08		TR09		TR10		TR11	
				Field Sample ID	CVX-0003-01		CVX-0002-01		CVX-0006-01		CVX-0006-02		CVX-0006-04		CVX-0006-05		CVX-0012-01		CVX-0012-02		CVX-0015-04		CVX-0015-03		CVX-0015-02		CVX-0015-01	
				Sample Date	8/15/2014		8/14/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014		8/27/2014		8/27/2014		9/11/2014		9/11/2014		9/11/2014		9/11/2014	
				Sample Delivery Group	1496618		1496388		1497595		1497595		1497595		1497595		1499493		1499493		1502970		1502970		1502970		1502970	
				Matrix	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
				Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample	
			NYSDEC Part 703	Sample Type	SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
Analytical Method	Parameter Name	Units	NY_Class C [1]	Filtered																								
SW-846 8260C	Carbon Tetrachloride	ug/l	NS	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chlorobenzene	ug/l	5	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloroethane	ug/l	NS	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloroform	ug/l	NS	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloromethane (Methyl ch	ug/l	200	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/l	NS	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/l	NS	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Dibromochloromethane	ug/l	NS	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Ethylbenzene	ug/l	17	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Methylene chloride (Dichlo	ug/l	200	N	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/l	NS	N	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Tetrachloroethene	ug/l	1	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Toluene	ug/l	6000	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/l	NS	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/l	NS	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Trichloroethene (Trichloroe	ug/l	40	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Vinyl chloride (Chloroether	ug/l	NS	N	0.5	U	0.5	U	0.5	UJ	0.5	UJ	0.5	UJ	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Xylenes, Total	ug/l	65	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8270D SIM mod	Acenaphthene	ug/l	5.3	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Acenaphthylene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Anthracene	ug/l	3.8	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Benzo(a)anthracene	ug/l	0.03	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Benzo(a)Pyrene	ug/l	0.0012	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Benzo(b)Fluoranthene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Benzo(g,h,i)perylene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Benzo(k)Fluoranthene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Benzo[e]pyrene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C1-Benzanthrene/chrysene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C1-FLUORANTHRENES/PYR	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C1-Fluorenes	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C1-Naphthalenes	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C1-PHENANTHRENES/ANTI	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C2-Benzanthrene/chrysene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C2-Fluorenes	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C2-Naphthalenes	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C2-PHENANTHRENES/ANTI	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C3-Benzanthrene/chrysene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C3-Fluorenes	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C3-Naphthalenes	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C3-PHENANTHRENES/ANTI	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C4-Benzanthrene/chrysene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C4-Naphthalenes	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	C4-PHENANTHRENES/ANTI	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Chrysene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Dibenz(a,h)anthracene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Fluoranthene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Fluorene	ug/l	0.54	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Indeno(1,2,3-cd)pyrene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Naphthalene	ug/l	13	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	UJ	0.08	UJ	0.08	UJ	0.08	UJ	0.08	UJ
SW-846 8270D SIM mod	Perylene	ug/l	NS	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Phenanthrene	ug/l	5	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM mod	Pyrene	ug/l	4.6	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U	0.08	U	0.08	U

Notes:

(1) - NYSDEC Class C Surface Water and Groundwater Quality and Groundwater Effluent Limitations (New York Codes, Rules and Regulations (NYCRR) Part 703). In the absence of NYSDEC Part 703 screening criteria, numeric guidance values obtained from 1998 NYSDEC TOGS 1.1.1 groundwater screening criteria usage.

Concentration of parameters exceeds regulatory NYSDEC Part 703 Water Quality Class C screening criteria.

mg/L - Milligrams per liter

mg CaC03/L - Miligrams of calcium cabronate per liter.

SU - Standard Unit

ug/L - Milligram per liter

NS - Not specified

J - The analyte was positively identified, but the quantitation is an estimation.

U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the method detection limit.

UJ - The analyte was detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

FIGURES

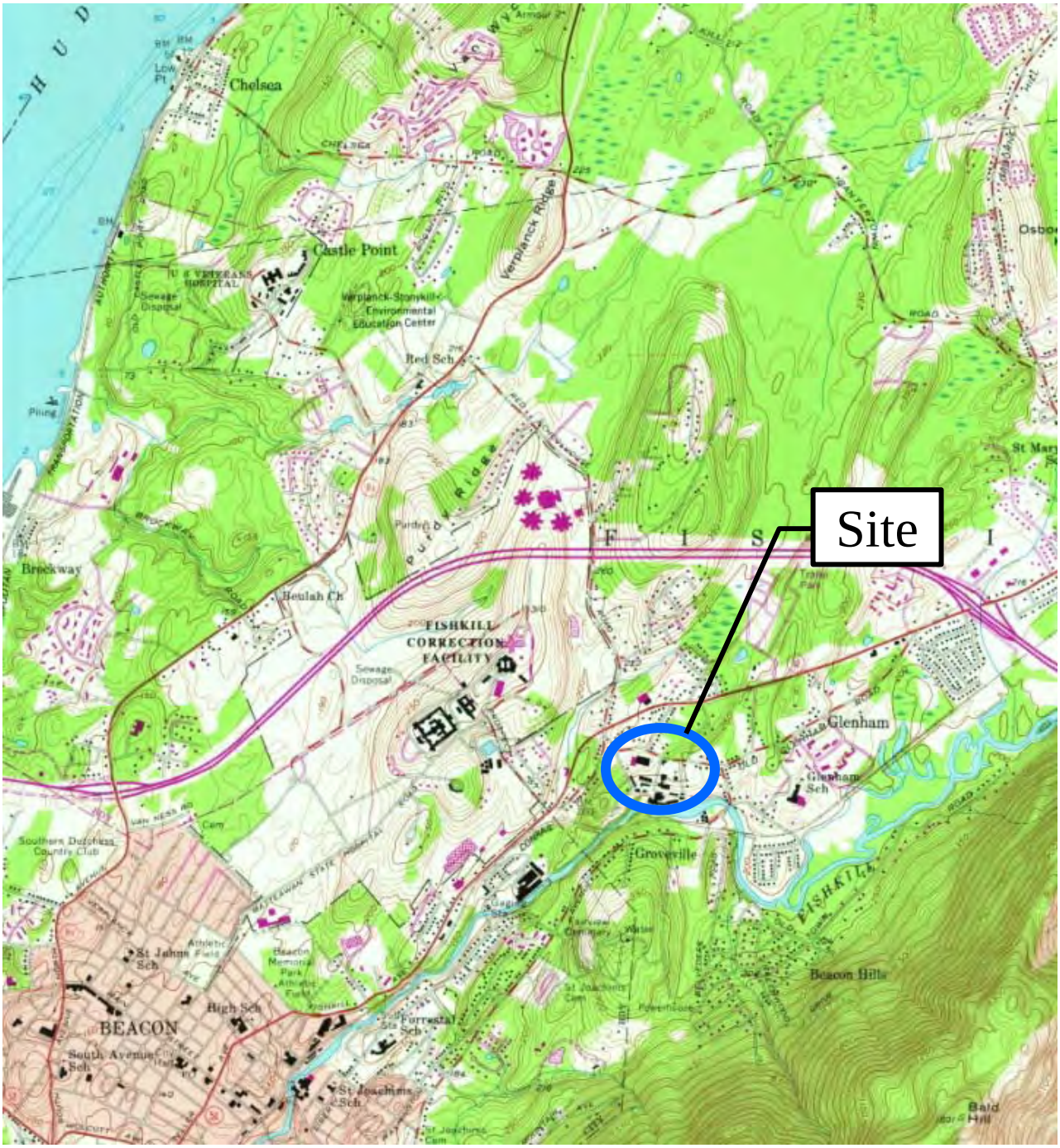
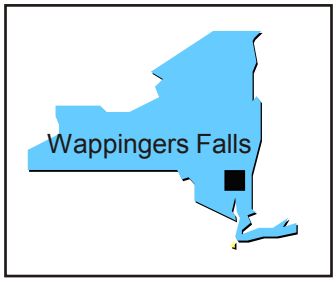


FIGURE 1



New York Quadrangle

N

SOURCE: U.S.G.S. WAPPINGERS FALLS QUADRANGLE

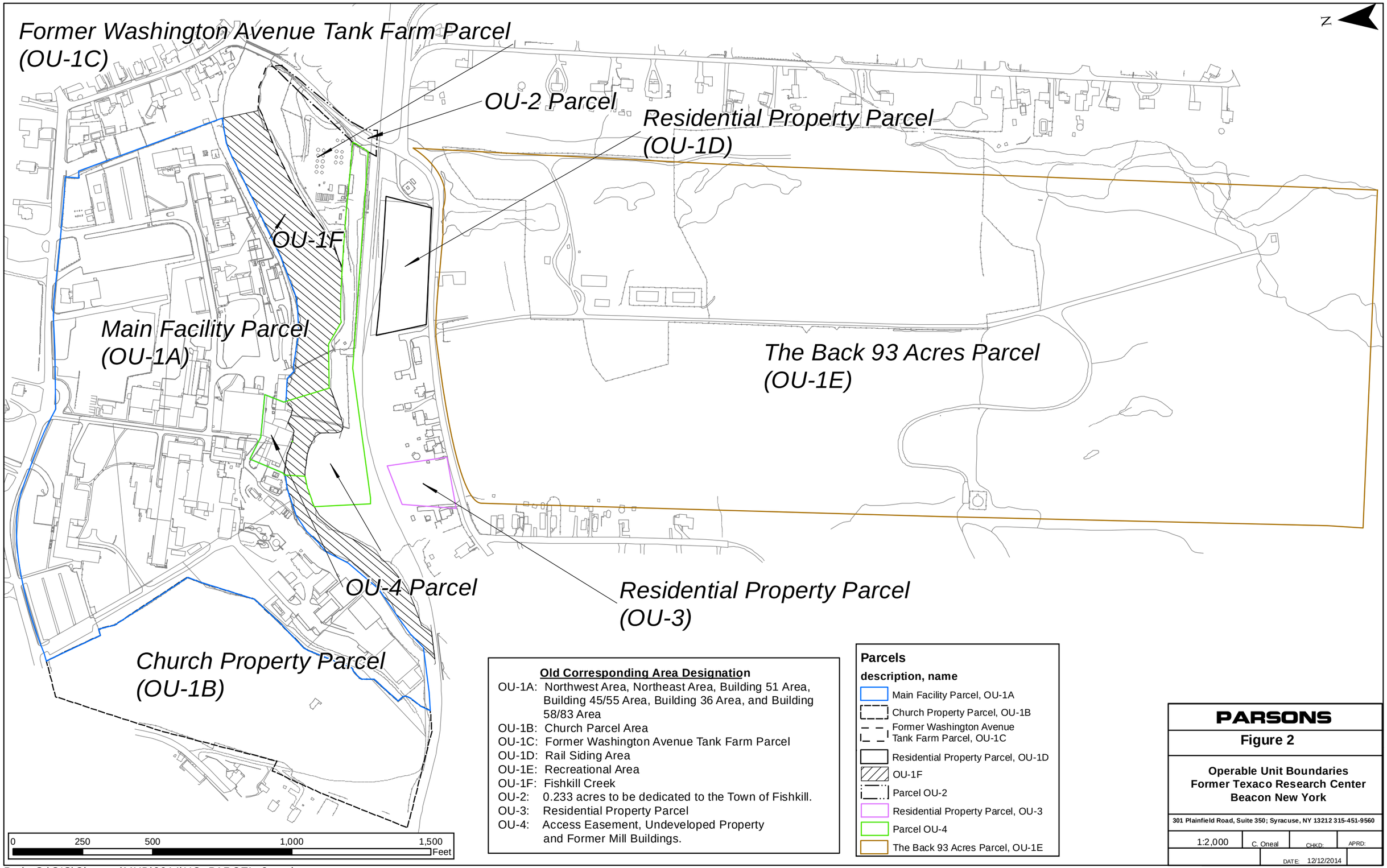
Chevron

Chevron Environmental Management Company (EMC)
Former Texaco Research Facility
Beacon, New York

SITE LOCATION MAP

PARSONS
301 PLAINFIELD ROAD * SUITE 350 * SYRACUSE, NY 13212 PHONE: (315) 451-9560

P:\Chevron Beacon\446068 - 2010 Site Demo Const Mgmt & ACM Ovrsght\15.0 CAMP Graphs and Data\Graphics\SITEMAP.PPTX



Old Corresponding Area Designation

OU-1A: Northwest Area, Northeast Area, Building 51 Area, Building 45/55 Area, Building 36 Area, and Building 58/83 Area
OU-1B: Church Parcel Area
OU-1C: Former Washington Avenue Tank Farm Parcel
OU-1D: Rail Siding Area
OU-1E: Recreational Area
OU-1F: Fishkill Creek
OU-2: 0.233 acres to be dedicated to the Town of Fishkill.
OU-3: Residential Property Parcel
OU-4: Access Easement, Undeveloped Property and Former Mill Buildings.

Parcels

description, name

- Main Facility Parcel, OU-1A
- Church Property Parcel, OU-1B
- Former Washington Avenue Tank Farm Parcel, OU-1C
- Residential Property Parcel, OU-1D
- OU-1F
- Parcel OU-2
- Residential Property Parcel, OU-3
- Parcel OU-4
- The Back 93 Acres Parcel, OU-1E

PARSONS

Figure 2

Operable Unit Boundaries
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
		DATE: 12/12/2014	

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PARSONS

Figure 2.1

Fishkill Creek Surface Water & Sediment Sampling Locations Transects 1 through 3 Former Texaco Research Center Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
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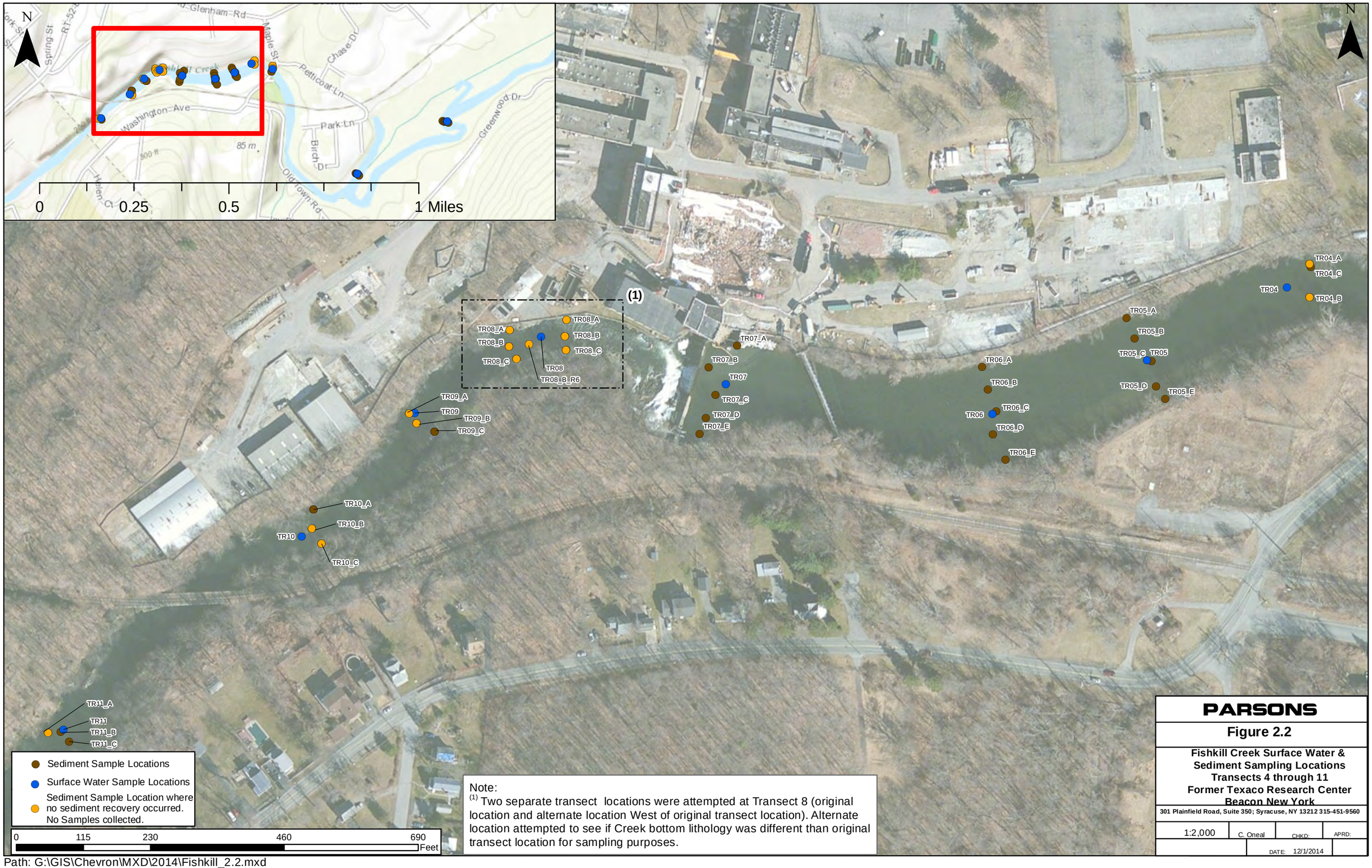

Note:
(1) Two separate transect locations were attempted at Transect 8 (original location and alternate location West of original transect location). Alternate location attempted to see if Creek bottom lithology was different than original transect location for sampling purposes.

PARSONS

Figure 2.2

Fishkill Creek Surface Water & Sediment Sampling Locations
Transects 4 through 11
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
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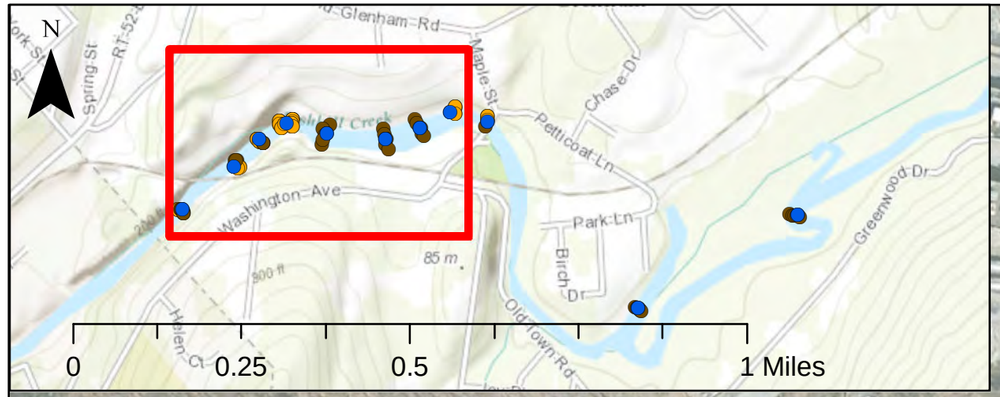

Note:
(1) Two separate transect locations were attempted at Transect 8 (original location and alternate location West of original transect location). Alternate location attempted to see if Creek bottom lithology was different than original transect location for sampling purposes.
(2) R1 through R3- Multiple drilling attempts at soil boring location.

PARSONS

Figure 2.3

Fishkill Creek Surface Water & Sediment Sampling Locations Transects 4 through 11 Former Texaco Research Center Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
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Path: G:\GIS\Chevron\MXD\2014\Fishkill_2.3.mxd

[1] Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

- Sediment sample location where all analytical parameters were analyzed for, but not detected.
- Sediment sample location where one or more analytical parameters were detected at a concentration less than NYSDEC Class A sediment guidance values.

PARSONS

Figure 3.1

Fishkill Creek Sediment Sampling (VOCs)
Transect 1
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/10/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_3_1.mxd

(1) Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

- Sediment sample location where all analytical parameters were analyzed for, but not detected.
- Sediment sample location where one or more analytical parameters were detected at a concentration less than NYSDEC Class A sediment guidance values.

PARSONS

Figure 3.2

Fishkill Creek Sediment Sampling (VOCs)
Transect 2
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

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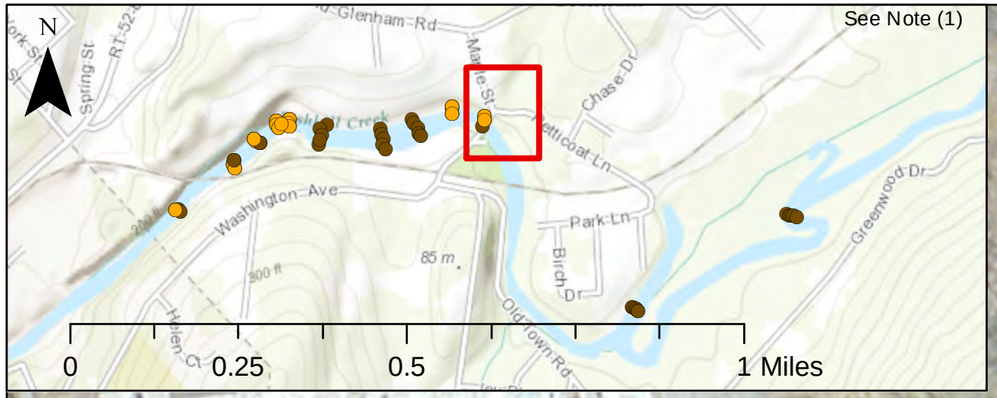

N

TR04_A

TR04_C

TR04_B

TR03_A

TR03_B

TR03_C

TR05_A

TR05_B

TR05_C

TR05_D

TR05_E

[1]Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

Sediment sample location where all analytical parameters were analyzed for, but not detected.

Sediment sample location where no sediment recovery occurred. No Samples collected.

PARSONS

Figure 3.3

Fishkill Creek Sediment Sampling (VOCs)
Transect 3
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
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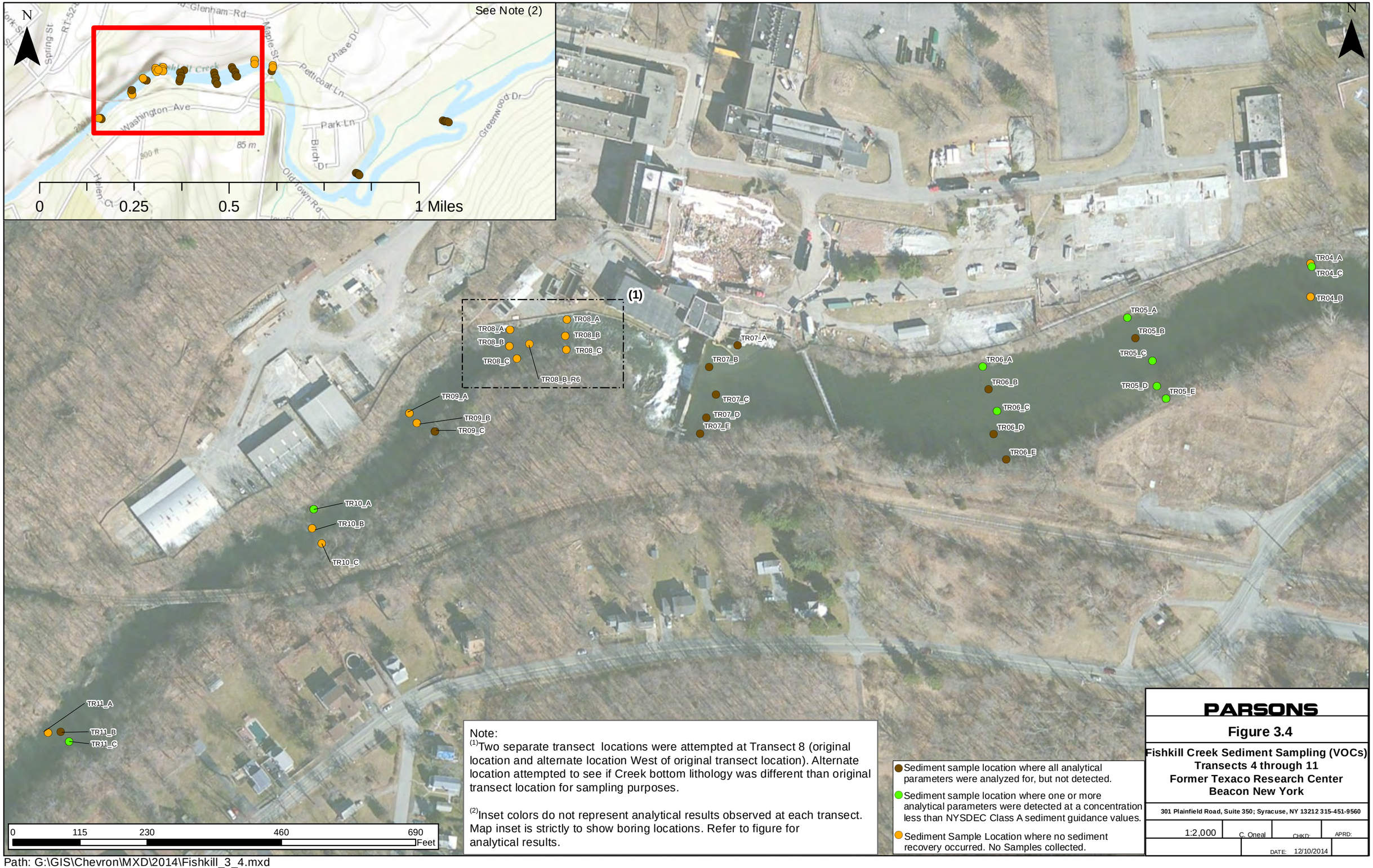


Note:
(1)Two separate transect locations were attempted at Transect 8 (original location and alternate location West of original transect location). Alternate location attempted to see if Creek bottom lithology was different than original transect location for sampling purposes.

(2)Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

- Sediment sample location where all analytical parameters were analyzed for, but not detected.
- Sediment sample location where one or more analytical parameters were detected at a concentration less than NYSDEC Class A sediment guidance values.
- Sediment Sample Location where no sediment recovery occurred. No Samples collected.

PARSONS

Figure 3.4

Fishkill Creek Sediment Sampling (VOCs)
Transects 4 through 11
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/10/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_3_4.mxd

(1) Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

Sediment sample location where all analytical parameters were analyzed for, but not detected.

PARSONS

Figure 4.1

Fishkill Creek Sediment Sampling (Total PAHs) Transect 1 Former Texaco Research Center Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/29/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_4_1.mxd

[1] Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

Sediment sample location where all analytical parameters were analyzed for, but not detected.

PARSONS

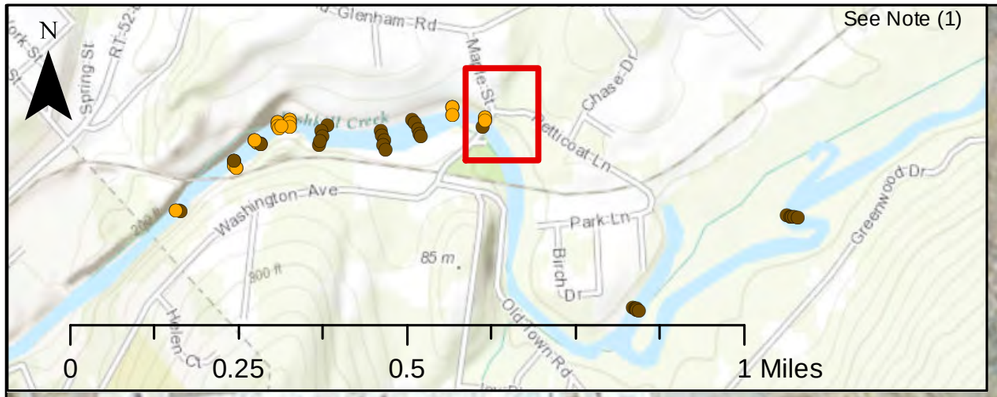
Figure 4.2

Fishkill Creek Sediment Sampling (Total PAHs) Transect 2
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/29/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_4_2.mxd



TR04_A

TR04_C

TR04_B

TR05_A

TR05_B

TR05_C

TR05_D

TR05_E

TR03_A

TR03_B

TR03_C

N

[(1)]Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

Sediment Sample Location where no sediment recovery occurred. No Samples collected.

Sediment sample locations where all analytical parameters were analyzed for, but not detected.

PARSONS

Figure 4.3

Fishkill Creek Sediment Sampling (Total PAHs)Transect 3 Former Texaco Research Center Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/29/2014		

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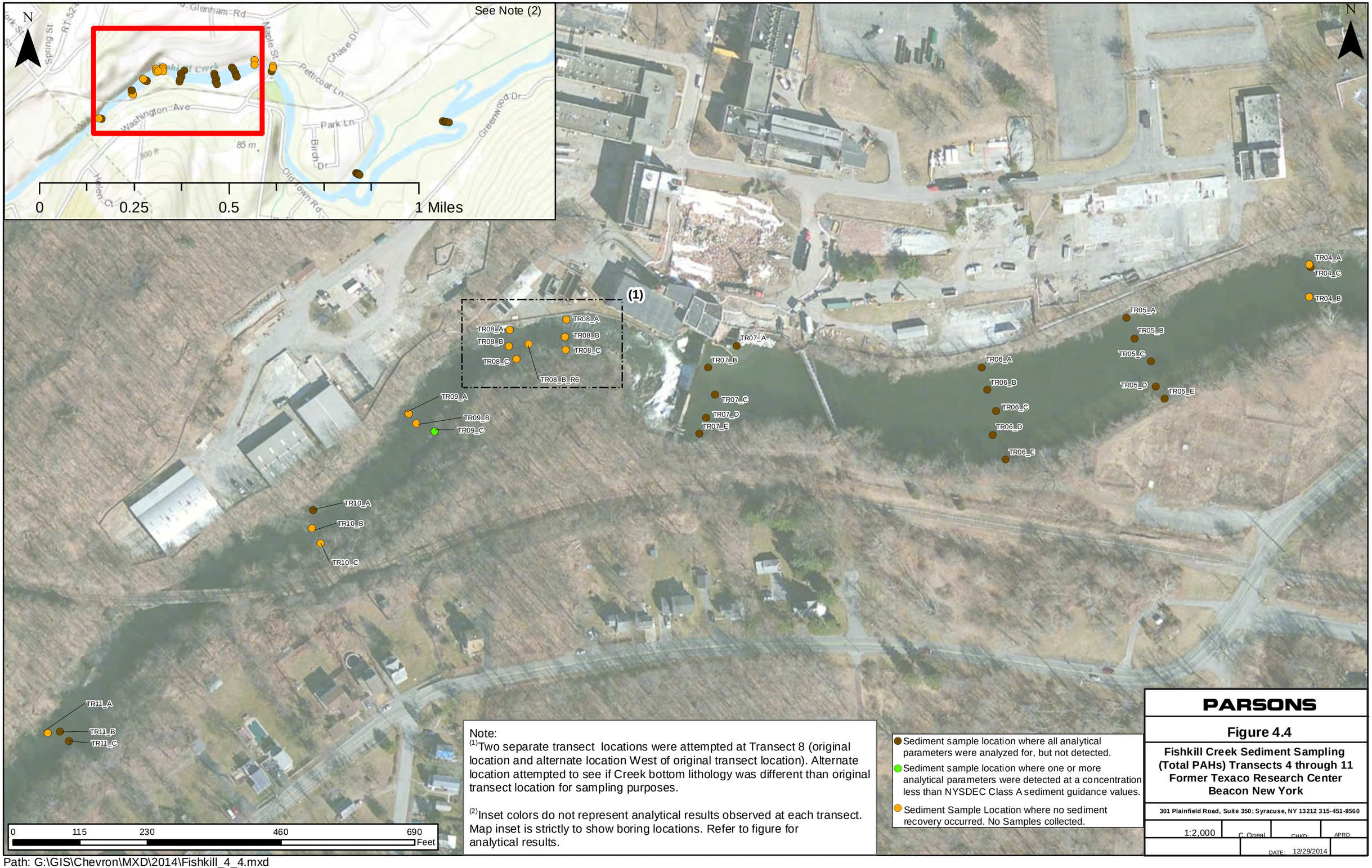


Note:
(1)Two separate transect locations were attempted at Transect 8 (original location and alternate location West of original transect location). Alternate location attempted to see if Creek bottom lithology was different than original transect location for sampling purposes.

(2)Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

- Sediment sample location where all analytical parameters were analyzed for, but not detected.
- Sediment sample location where one or more analytical parameters were detected at a concentration less than NYSDEC Class A sediment guidance values.
- Sediment Sample Location where no sediment recovery occurred. No Samples collected.

PARSONS

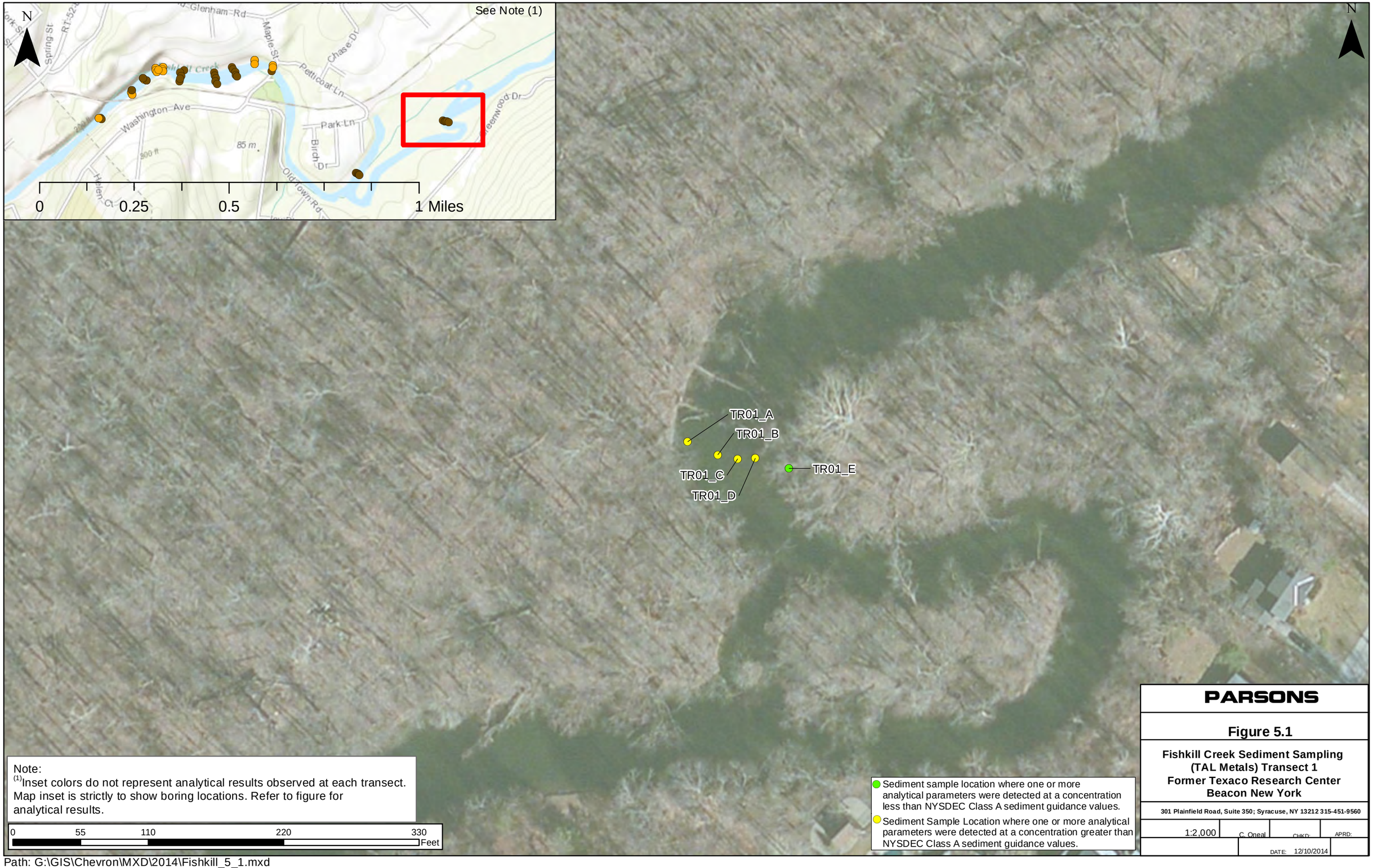
Figure 4.4

Fishkill Creek Sediment Sampling (Total PAHs) Transects 4 through 11
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000 | C. Oneal | CHKD: | APRD: | DATE: 12/29/2014

Path: G:\GIS\Chevron\MXD\2014\Fishkill_4_4.mxd



Note:
(1)Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

- Sediment sample location where one or more analytical parameters were detected at a concentration less than NYSDEC Class A sediment guidance values.
- Sediment Sample Location where one or more analytical parameters were detected at a concentration greater than NYSDEC Class A sediment guidance values.

PARSONS

Figure 5.1

Fishkill Creek Sediment Sampling (TAL Metals) Transect 1
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/10/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_5_1.mxd

Note:
(1)Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

- Sediment sample location where one or more analytical parameters were detected at a concentration less than NYSDEC Class A sediment guidance values.
- Sediment Sample Location where one or more analytical parameters were detected at a concentration greater than NYSDEC Class A sediment guidance values.

PARSONS

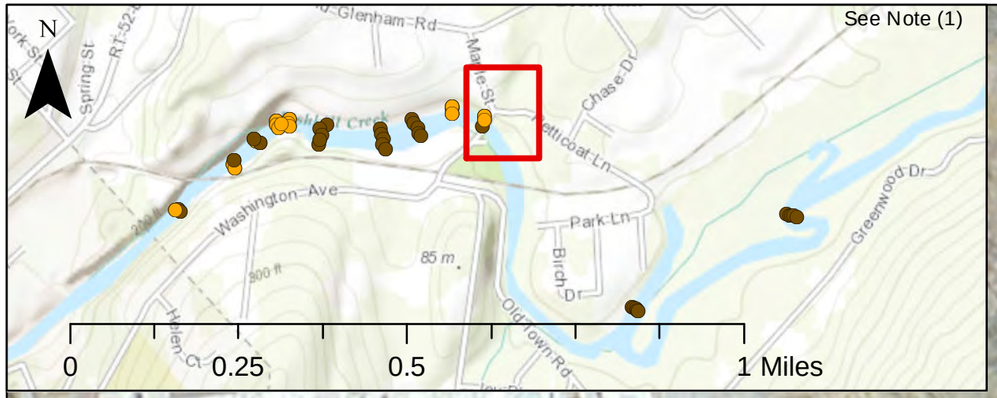
Figure 5.2

Fishkill Creek Sediment Sampling (TAL Metals)Transect 2
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/10/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_5_2.mxd



N

TR04_A

TR04_C

TR04_B

TR03_A

TR03_B

TR03_C

TR05_A

TR05_B

TR05_C

TR05_D

TR05_E

(1)Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

Sediment Sample Location where no sediment recovery occurred. No Samples collected.

Sediment Sample Location where one or more analytical parameters were detected at a concentration greater than NYSDEC Class A sediment guidance values.

PARSONS

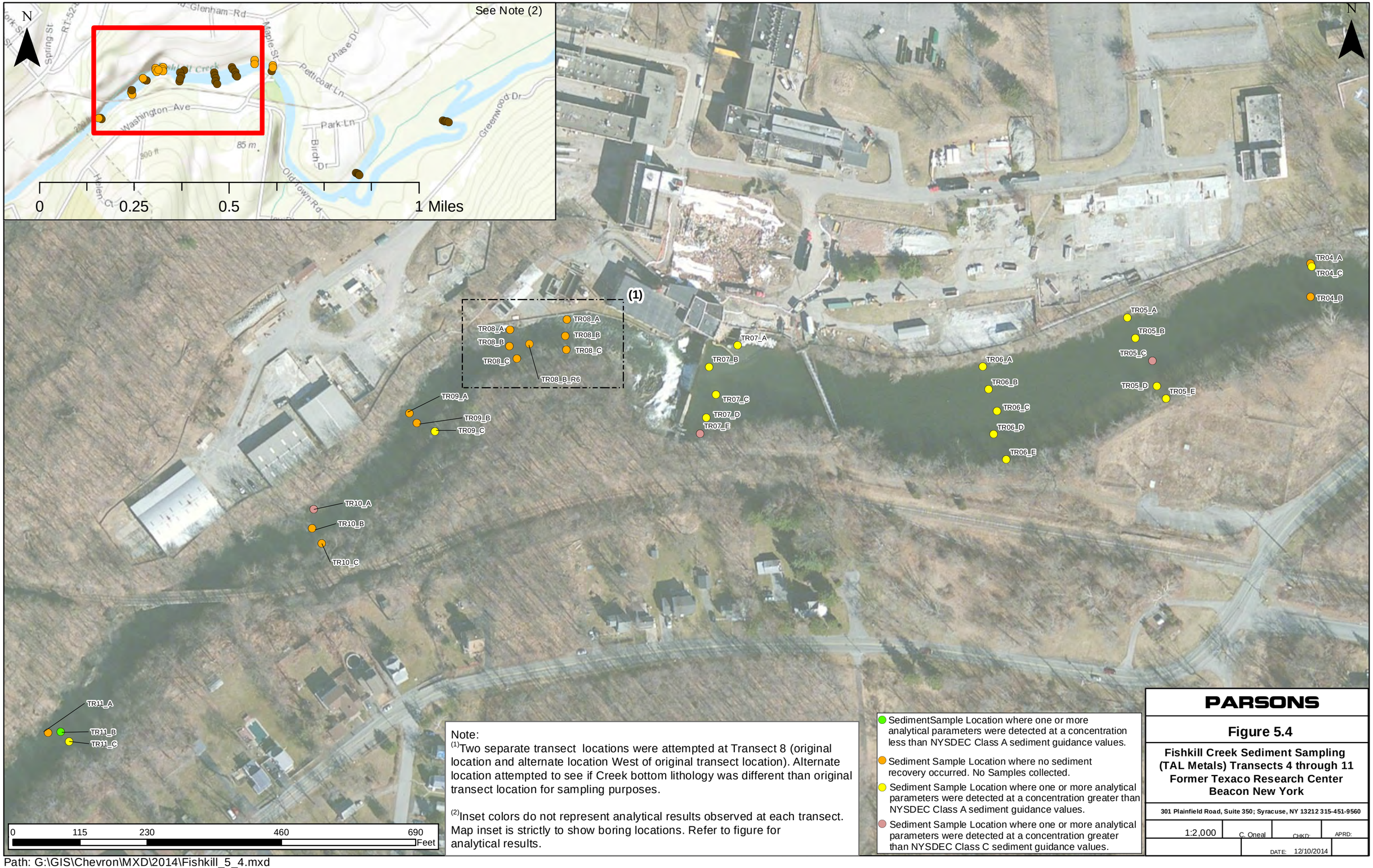
Figure 5.3

Fishkill Creek Sediment Sampling (TAL Metals) Transect 3 Former Texaco Research Center Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/10/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_5_3.mxd



Note:
(1)Two separate transect locations were attempted at Transect 8 (original location and alternate location West of original transect location). Alternate location attempted to see if Creek bottom lithology was different than original transect location for sampling purposes.

(2)Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

- SedimentSample Location where one or more analytical parameters were detected at a concentration less than NYSDEC Class A sediment guidance values.
- Sediment Sample Location where no sediment recovery occurred. No Samples collected.
- Sediment Sample Location where one or more analytical parameters were detected at a concentration greater than NYSDEC Class A sediment guidance values.
- Sediment Sample Location where one or more analytical parameters were detected at a concentration greater than NYSDEC Class C sediment guidance values.

PARSONS

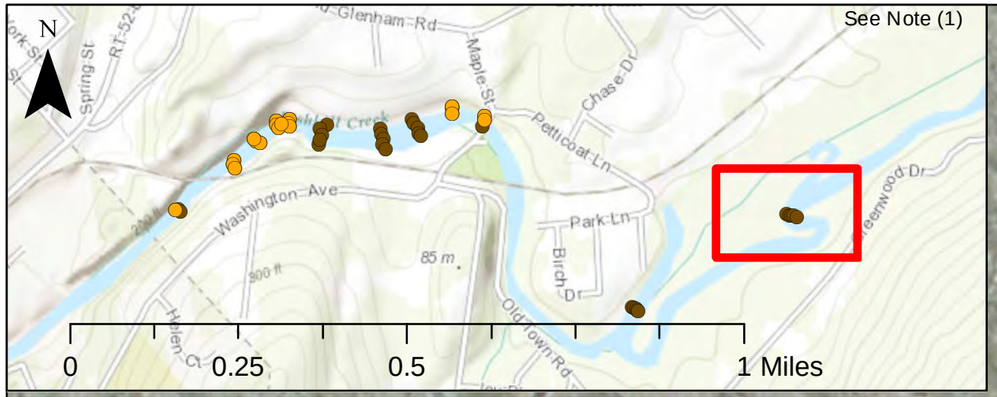
Figure 5.4

Fishkill Creek Sediment Sampling (TAL Metals) Transects 4 through 11 Former Texaco Research Center Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/10/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_5_4.mxd



(1) Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

Sediment sample location where all analytical parameters were analyzed for, but not detected.

PARSONS

Figure 6.1

Fishkill Creek Sediment Sampling (PCBs)
Transect 1
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/10/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_6_1.mxd

(1) Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

Sediment sample location where all analytical parameters were analyzed for, but not detected.

PARSONS

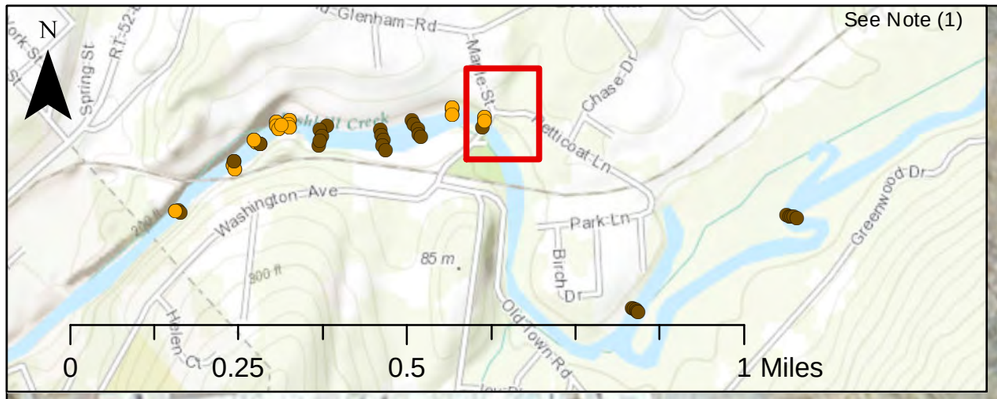
Figure 6.2

Fishkill Creek Sediment Sampling (PCBs)
Transect 2
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/10/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_6_2.mxd



TR04_A

TR04_C

TR04_B

TR05_A

TR05_B

TR05_C

TR05_D

TR05_E

TR03_A

TR03_B

TR03_C

N

(1)Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

0 55 110 220 330 Feet

Sediment Sample Location where no sediment recovery occurred. No Samples collected.

Sediment Sample Location where all analytical parameters were analyzed for, but not detected.

PARSONS

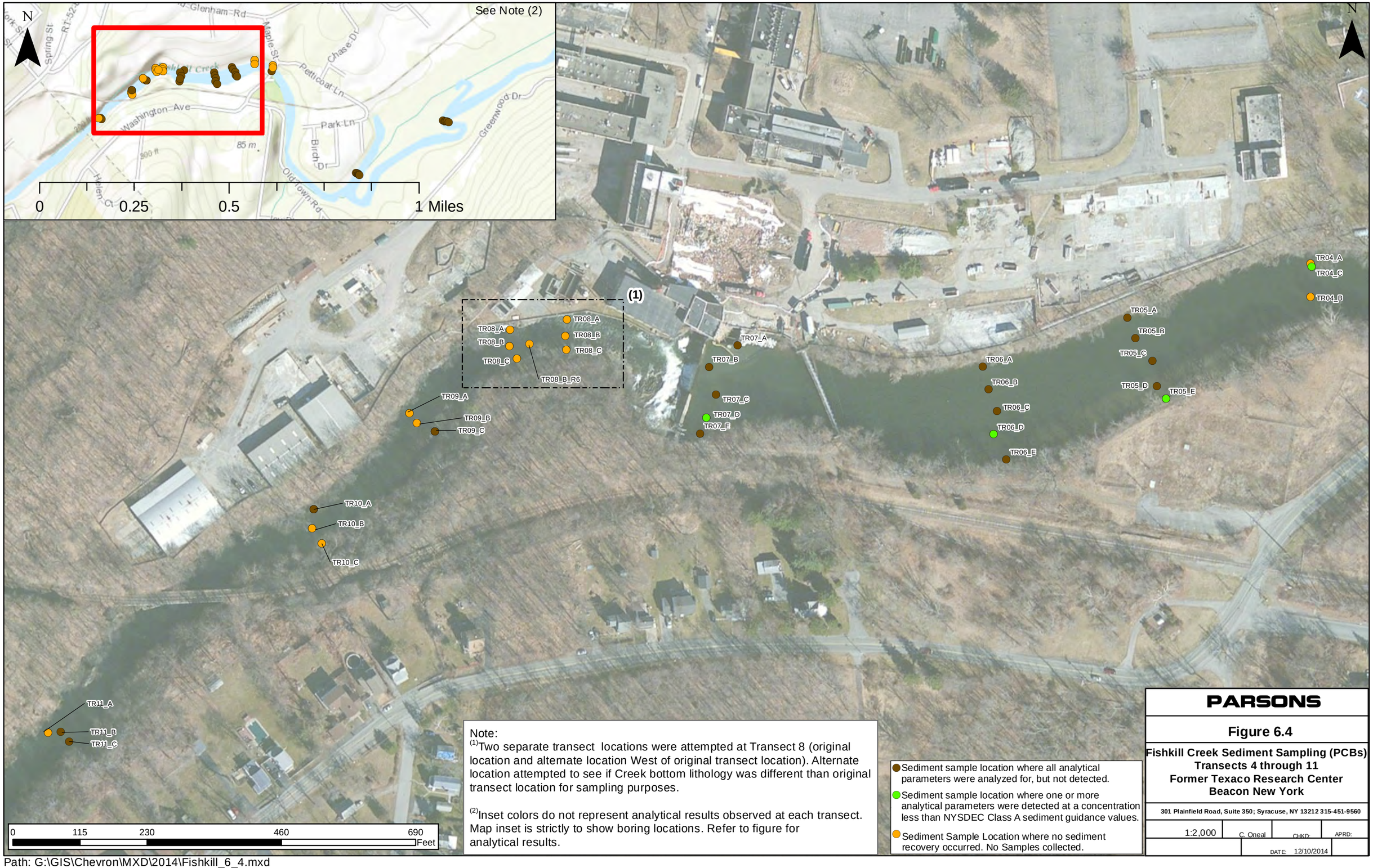
Figure 6.3

Fishkill Creek Sediment Sampling (PCBs)
Transect 3
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/10/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_6_3.mxd



Note:
(1)Two separate transect locations were attempted at Transect 8 (original location and alternate location West of original transect location). Alternate location attempted to see if Creek bottom lithology was different than original transect location for sampling purposes.

(2)Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

- Sediment sample location where all analytical parameters were analyzed for, but not detected.
- Sediment sample location where one or more analytical parameters were detected at a concentration less than NYSDEC Class A sediment guidance values.
- Sediment Sample Location where no sediment recovery occurred. No Samples collected.

PARSONS

Figure 6.4

Fishkill Creek Sediment Sampling (PCBs)
Transects 4 through 11
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/10/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_6_4.mxd

(1) Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.
(2) Only metal analytical results are shown because no VOCs or PAHs were detected exceeding NYSDEC Part 703 Water Quality Standard Class C surface water screening criteria

Surface water sample location where one analytical parameter (iron) exceeded NYSDEC Part 703 Water Quality Standard Class C surface water screening criteria.

PARSONS

Figure 7.1

Fishkill Creek Surface Water Sampling (TAL Metals) Transect 1 Former Texaco Research Center Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/29/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_7_1.mxd

(1) Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.
(2) Only metal analytical results are shown because no VOCs or PAHs were detected exceeding NYSDEC Part 703 Water Quality Standard Class C surface water screening criteria

Surface water sample location where one analytical parameter (mercury) exceeded NYSDEC Part 703 Water Quality Standard Class C surface water screening criteria.

PARSONS

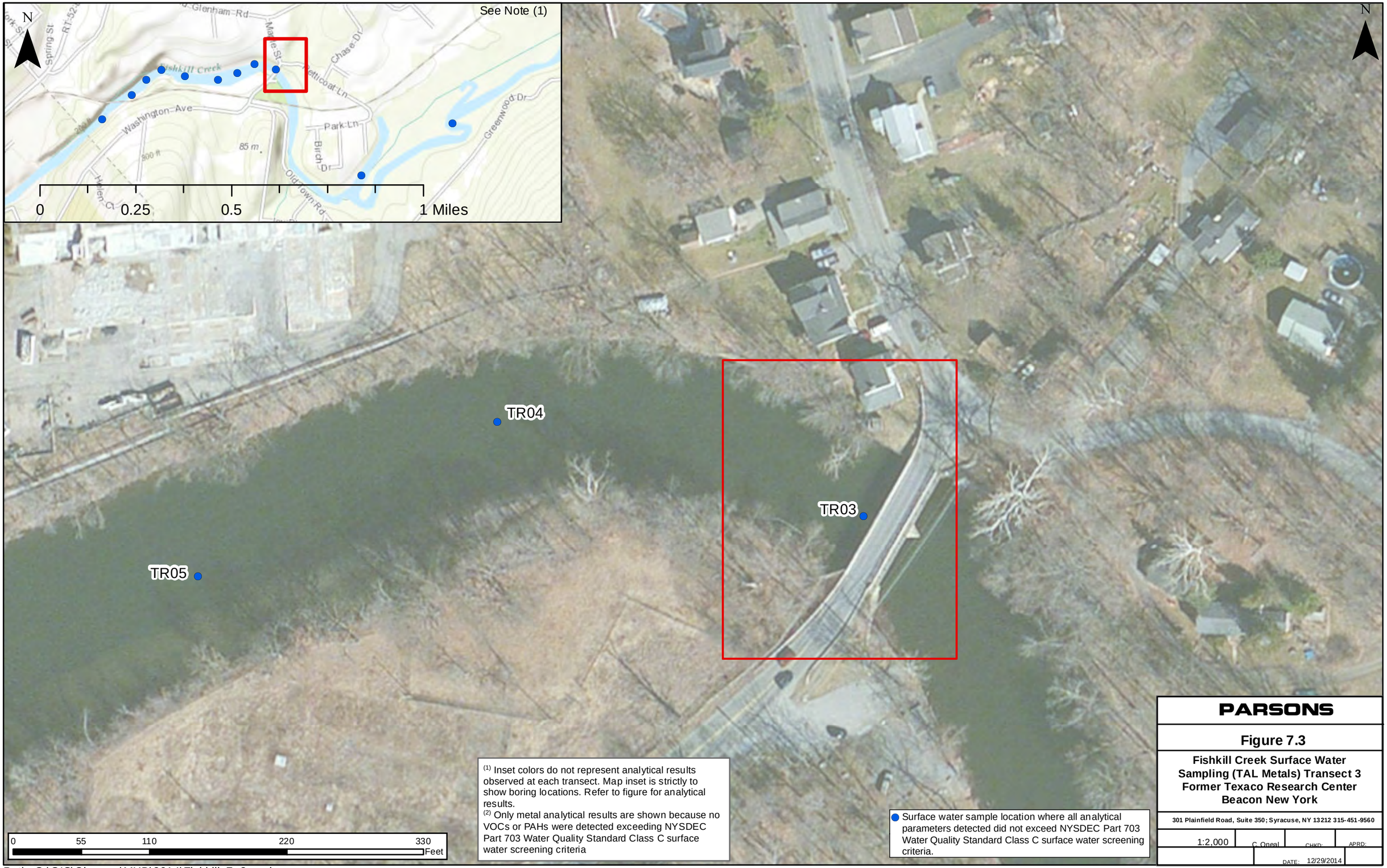
Figure 7.2

Fishkill Creek Surface Water Sampling (TAL Metals) Transect 2 Former Texaco Research Center Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/29/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_7_2.mxd



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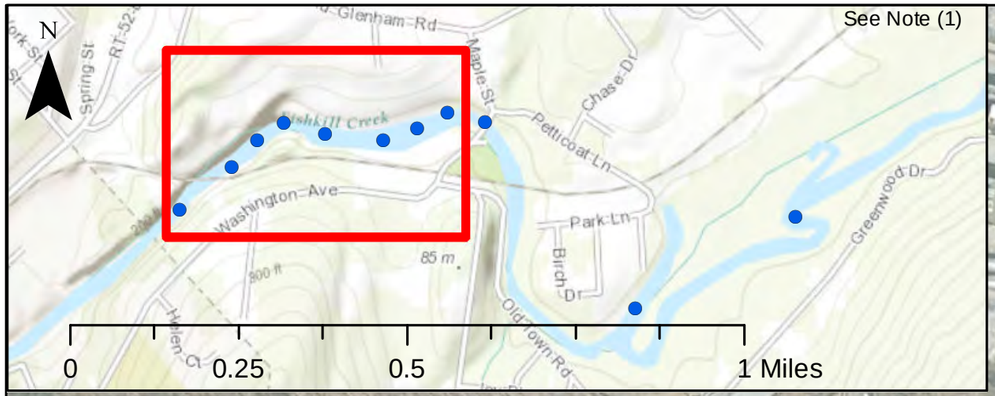

N

TR04

TR05

TR06

TR07

TR08

TR09

TR10

TR11

0 115 230 460 690 Feet

(1) Inset colors do not represent analytical results observed at each transect. Map inset is strictly to show boring locations. Refer to figure for analytical results.

(2) Only metal analytical results are shown because no VOCs or PAHs were detected exceeding NYSDEC Part 703 Water Quality Standard Class C surface water screening criteria

- Surface water sample location where all analytical parameters detected did not exceed NYSDEC Part 703 Water Quality Standard Class C surface water screening criteria.
- Surface water sample location where one analytical parameter (mercury) exceeded NYSDEC Part 703 Water Quality Standard Class C surface water screening criteria.

PARSONS

Figure 7.4

Fishkill Creek Surface Water Sampling (TAL Metals) Transects 4 through 11
Former Texaco Research Center
Beacon New York

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

1:2,000	C. Oneal	CHKD:	APRD:
	DATE: 12/29/2014		

Path: G:\GIS\Chevron\MXD\2014\Fishkill_7_4.mxd

APPENDIX A

DATA USABILITY SUMMARY REPORT (DUSR)

DATA USABILITY SUMMARY REPORT
2014 FISHKILL CREEK SAMPLING

Former Chevron Texaco Research Center
Beacon, New York

Prepared For:

Mr. Mark Hendrickson

Chevron Environmental Management Company
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4800 Fourance Place, Room E5346
Bellaire, TX 77401

Prepared By:

PARSONS

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DECEMBER 2014

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LIST OF ATTACHMENTS

SECTION 1

DATA USABILITY SUMMARY

Surface water, sediment, and mixed composite soil samples were collected as part of the 2014 sampling event at Fishkill Creek from August 14, 2014 through September 11, 2014. Analytical results from these samples were validated and reviewed by Parsons for usability with respect to the following requirements:

- Work Plan
- QAPP,
- July 2005 NYSDEC Analytical Services Protocol (ASP), and
- USEPA Region II Standard Operating Procedures (SOPs) for organic and inorganic data review.

The analytical laboratory for this project was Eurofins Laboratories (Eurofins) in Lancaster, Pennsylvania. This laboratory is certified to conduct project analyses through the New York State Department of Health (NYSDOH) and the National Environmental Laboratory Accreditation Program (NELAP).

1.1 LABORATORY DATA PACKAGES

The laboratory data package turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by Parsons, was 24-62 days for the samples.

The laboratory data packages received from Eurofins were paginated, complete, and overall were of good quality. Comments on specific quality control (QC) and other requirements are discussed in detail in the attached data validation report which is summarized in Section 2.

1.2 SAMPLING AND CHAIN-OF-CUSTODY

The samples were collected, properly preserved, shipped under a COC record, and received at Eurofins within one day of sampling. All samples were received intact and in good condition at Eurofins.

1.3 LABORATORY ANALYTICAL METHODS

The surface water samples were collected from the site and analyzed for volatiles, polynuclear aromatic hydrocarbons (PAHs), total and dissolved metals, total hardness, total suspended solids (TSS), and pH. The sediment samples were collected from the site and analyzed for volatiles, PAHs, polychlorinated biphenyls (PCBs), metals, simultaneously extracted metals (SEM), acid volatile sulfide (AVS), and total organic carbon (TOC). One mixed composite solid sample was collected from the site and analyzed for volatiles, semivolatiles, and PCBs. Summaries of issues concerning these laboratory analyses are

presented in Subsections 1.3.1 through 1.3.5. The data qualifications resulting from the data validation review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, and comparability (PARCC) are discussed for each analytical method in Section 2 of this Data Usability Summary Report (DUSR). A USEPA Stage 4 data validation (i.e., full data validation) was conducted by Parsons on 10% of the project samples with the remaining 90% of the project samples undergoing a USEPA Stage 2B data validation which provides data defensibility. The laboratory data were reviewed and may be qualified with the following validation flags:

"U" - not detected at the value given,

"UJ" - estimated and not detected at the value given,

"J" - estimated at the value given,

"J+" - estimated biased high at the value given,

"J-" - estimated biased low at the value given,

"N" - presumptive evidence at the value given, and

"R" - unusable value.

The validated laboratory data were tabulated and are presented in Attachment A.

1.3.1 Volatile Organic Analysis

The samples collected from the site were analyzed for volatiles using the USEPA SW-846 8260C analytical method. Certain reported results for these samples were qualified as estimated based upon laboratory control sample (LCS) recoveries, instrument calibrations, internal standard responses, and percent moisture content. Certain reported results for these samples were considered unusable and qualified "R" based upon poor internal standard responses. The reported volatile analytical results were 99.0% to 100% complete (i.e., usable) for the data presented by Eurofins. PARCC requirements were met overall.

1.3.2 Semivolatile Organic Analysis

The samples collected from the site were analyzed for PAHs or semivolatiles using the USEPA SW-846 SIM 8270D and 8270D analytical methods. Certain reported results for these samples were qualified as estimated based upon surrogate recoveries, LCS recoveries, field duplicate precision, and percent moisture content. The reported semivolatile analytical results were 100% complete (i.e., usable) for the data presented by Eurofins. PARCC requirements were met.

1.3.3 PCB Organic Analysis

The sediment and mixed composite samples collected from the site were analyzed for PCBs using the USEPA SW-846 8082A analytical method. Certain reported results for these samples were qualified as estimated based upon holding times and percent moisture content. Certain reported results for these samples were considered unusable and qualified "R" based upon grossly exceeded holding times. The reported PCB analytical results were 97.3% to 100%

complete (i.e., usable) for the data presented by Eurofins. PARCC requirements were met overall.

1.3.4 Metals Analysis

The surface water and sediment samples collected from the site were analyzed for metals or SEM using the USEPA SW-846 6010C/6020A/7471B and USEPA 1631E analytical methods. Certain reported results for these samples were qualified as estimated based upon matrix spike/matrix spike duplicate (MS/MSD) recoveries, LCS recoveries, instrument calibrations, serial dilutions, laboratory duplicate precision, field duplicate precision, and percent moisture content. Certain reported results for these samples were considered unusable and qualified "R" based upon poor MS/MSD recoveries and instrument calibrations. The metals results were considered 99.9% to 100% complete (i.e., usable) for the data presented by Eurofins. PARCC requirements were met overall.

1.3.5 Wet Chemistry Analysis

Surface water samples collected from the site were analyzed for total hardness using the SM2340C analytical method; TSS using the SM2540D analytical method; and pH using the SM4500 analytical method. Sediment samples collected from the site were analyzed for AVS using the USEPA 821-R-91-100 analytical method and TOC using the USEPA approved Lloyd Kahn method. Certain reported results for these samples were qualified as estimated based upon MS/MSD recoveries, laboratory duplicate precision, field duplicate precision, and percent moisture content. The wet chemistry results were considered 100% complete (i.e., usable) for the data presented by Eurofins. PARCC requirements were met.

SECTION 2

DATA VALIDATION REPORT

2.1 SURFACE WATER SAMPLES

Data review has been completed for data packages generated by Eurofins containing surface water samples collected from the site. These samples were contained within sample delivery groups (SDGs) CBC51, CBC52, CBC54, CBC62, and CBC65. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The validated laboratory data were tabulated and are presented in Attachment A-1.

Data validation was performed for all samples in accordance with the project work plan, QAPP, NYSDEC ASP, and the USEPA Region II SOPs for organic and inorganic data review. This data validation and usability report is presented by analysis type.

2.1.1 Volatiles

The following items were reviewed for compliancy in the volatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank and trip/equipment blank contamination
- GC/MS instrument performance
- Sample result verification and identification
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of continuing calibrations as discussed below.

Continuing Calibrations

All continuing calibration compounds were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum percent difference (%D) within ±20% with the exception of vinyl chloride (22%D) in the continuing calibration associated with samples in SDG CBC54; and 2-hexanone (63%D), 2-butanone (41%D), and 4-methyl-2-pentanone (57%D) associated with samples in SDG CBC65. Therefore, results for these compounds were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

Usability

All volatile results for the surface water samples were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The volatile data presented by Eurofins were 100% complete (i.e., usable). The validated laboratory data are tabulated and presented in Attachment A-1.

2.1.2 PAHs

The following items were reviewed for compliancy in the PAHs analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank and equipment blank contamination
- GC/MS instrument performance
- Sample result verification and identification
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of MS/MSD precision and accuracy and LCS recoveries as discussed below.

MS/MSD Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC limits for designated spiked project samples with the exception of all MSD accuracy and precision results during the spiked analyses of sample CVX-0012-01. Validation qualification was not required.

LCS Recoveries

All LCS recoveries were considered acceptable and within QC limits with the exception of the low LCS recoveries for naphthalene (59%R; QC limit 78-117%R), acenaphthylene (63%R; QC limit 72-124%R), acenaphthene (62%R; QC limit 82-126%R), fluorene (66%R; QC limit 74-115%R), anthracene (63%R; QC limit 70-117%R), fluoranthene (72%R; QC limit 76-121%R), pyrene (69%R; QC limit 70-124%R), and chrysene (72%R; QC limit 77-122%R) associated with samples in SDG CBC62; and the low LCS recovery for naphthalene (77%R; QC limit 78-117%R) associated with samples in SDG CBC65. Therefore, results for these compounds were considered estimated, possibly biased low, with positive results qualified "J-" and nondetected results qualified "UJ" for the affected samples.

Usability

All PAH results for the surface water samples were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The PAH data presented by Eurofins were 100% complete (i.e., usable). The validated PAH laboratory data are tabulated and presented in Attachment A-1.

2.1.3 Total and Dissolved Metals

The following items were reviewed for compliancy in the metals analysis:

- Custody documentation
- Holding times
- Initial and continuing calibration verifications
- Initial and continuing calibration blank, laboratory preparation blank, and equipment blank contamination
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries
- Laboratory duplicate precision

- Laboratory control sample (LCS) recoveries
- Serial dilutions
- Interference check sample recoveries
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of blank contamination and serial dilutions as discussed below.

Blank Contamination

The equipment blank CVX-0012-04 associated with samples in SDG CBC62 contained total zinc, dissolved magnesium, dissolved sodium, and dissolved mercury at concentrations of 2.5 µg/L, 8.5 µg/L, 60.8 µg/L, and 1.24 ng/L, respectively; the laboratory preparation blank associated with samples in SDG CBC62 contained dissolved calcium and dissolved lead at concentrations of 110.1 and 0.099 µg/L, respectively. Validation qualification of the associated project samples was not required.

Serial Dilutions

All serial dilution results were considered acceptable and less than 10%D for all analytes with the exception of the serial dilution result for total sodium (15%D) associated with sample CVX-0015-02. Therefore, the total sodium result for this sample was considered estimated and qualified "J".

Usability

All metals results for the surface water samples were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The metals data for the surface water samples presented by Eurofins were 100% complete (i.e., usable). The validated laboratory data are tabulated and presented in Attachment A-1.

2.1.4 Wet Chemistry

The following items were reviewed for compliancy in the wet chemistry analysis:

- Custody documentation
- Holding times
- Initial and continuing calibration verifications

- Initial and continuing calibration blank, laboratory preparation blank, and equipment blank contamination
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries
- Laboratory duplicate precision
- Laboratory control sample (LCS) recoveries
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of blank contamination as discussed below.

Blank Contamination

The field equipment blank CVX-0012-04 associated with samples in SDG CBC62 contained total hardness at a concentration of 5900 µg/L. Validation qualification of the project samples was not required since sample concentrations were not affected by the contamination present in this blank.

Usability

All wet chemistry results for the surface water samples were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The wet chemistry data for the surface water samples presented by Eurofins were 100% complete (i.e., usable). The validated laboratory data are tabulated and presented in Attachment A-1.

2.2 SEDIMENT SAMPLES

Data review has been completed for data packages generated by Eurofins containing sediment samples collected from the site. These samples were contained within sample delivery groups (SDGs) CBC50, CBC53, CBC55, CBC56, CBC57, CBC58, CBC60, CBC61, CBC63, and CBC64. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The validated laboratory data were tabulated and are presented in Attachment A-2.

Data validation was performed for all samples in accordance with the project work plan, QAPP, NYSDEC ASP, and the USEPA Region II SOPs for organic and inorganic data review. This data validation and usability report is presented by analysis type.

2.2.1 Volatiles

The following items were reviewed for compliancy in the volatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank contamination
- GC/MS instrument performance
- Sample result verification and identification
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of MS/MSD precision and accuracy, LCS recoveries, continuing calibrations, and internal standard responses as discussed below.

MS/MSD Precision and Accuracy

All precision (RPD) and accuracy (%R) measurements were considered acceptable and within QC limits for the spiked analyses of designated project samples with the exception of the high MS accuracy result for methylene chloride during the spiked analyses of sample CVX-0004-11; the precision results for chloromethane, carbon disulfide, 2-butanone, 2-hexanone, and 1,1,2,2-tetrachloroethane during the spiked analyses of sample CVX-0009-09; the low MS/MSD accuracy results for styrene during the spiked analyses of sample CVX-0010-17; and the precision result for chloroethane during the spiked analyses of sample CVX-0014-04. Validation qualification of the parent sample was not required.

LCS Recoveries

All LCS recoveries were considered acceptable and within QC limits with the exception of the low LCS recovery for 2-butanone (60%R; QC limit 62-123%R) associated with samples CVX-0005-06, -10, and CVX-0007-05. Therefore, results for 2-butanone were considered estimated, possibly biased low, with positive results qualified "J-" and nondetected results qualified "UJ" for the affected samples.

Continuing Calibrations

All continuing calibration compounds were compliant with a minimum relative response factor (RRF) of 0.05 and a maximum percent difference (%D) within ±20% with the exception of bromoform (27%D) in the continuing calibration associated with samples CVX-0009-12, -13, -14, and -18; and 1,2-dichloroethane (-23%D) associated with samples in SDGs CBC63 and CBC64. Therefore, results for these compounds were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

Internal Standard Responses

All internal standard (IS) responses and retention times were within specified QC ranges based on associated calibration standards (i.e., sample's area count within -50% to +100% and retention times within ±0.5 minutes of the standard) with the exception of the low IS response for chlorobenzene-d5 in samples CVX-0001-02 and CVX-0007-01; the low IS response for 1,4-dichlorobenzene-d4 in samples CVX-0001-02, CVX-0005-01, -04, -07, -08, -09, CVX-0007-01, -02, -03, -04, -05, CVX-0009-02, -03, -11, 16, CVX-0010-08, -09, -10, -16, CVX-0011-10, and -12, ; and the low IS response for t-butyl alcohol-d10 in samples CVX-0005-07, CVX-0007-01, and -04. These samples were reanalyzed yielding similar internal standard responses and confirming the presence of matrix effects in these samples. Therefore, positive results associated with these ISs were considered estimated, possibly biased high, and qualified "J+" while nondetected results were considered unusable and qualified "R" for the affected samples.

Usability

All volatile results for the sediment samples were considered usable following data validation with the exception of certain nondetected results based upon poor internal standard responses.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The volatile data presented by Eurofins were 99.9% complete (i.e., usable). The validated laboratory data are tabulated and presented in Attachment A-2.

It was noted that sample CVX-0011-10 contained less than 30% solids. Therefore, results for this sample were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

2.2.2 PAHs

The following items were reviewed for compliancy in the PAHs analysis:

- Custody documentation
- Holding times

- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank contamination
- GC/MS instrument performance
- Sample result verification and identification
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Field duplicate precision
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of surrogate recoveries, MS/MSD precision and accuracy, LCS recoveries, and field duplicate precision as discussed below.

Surrogate Recoveries

All sample surrogate recoveries were considered acceptable and within QC limits with the exception of the low recoveries for the surrogates fluoranthene-d10 (QC limit 70-130%R) and benzo(a)pyrene-d12 (QC limit 70-130%R) in samples CVX-0001-01 (65%R, 57%R), CVX-0004-02 (66%R, 58%R), CVX-0005-07 (66%R, 69%R), -08 (56%R, 59%R), CVX-0008-02 (46%R, 42%R), CVX-0010-08 (54%R, 52%R), -10 (48%R, 42%R), CVX-0011-01 (42%R, 37%R), and -10 (47%R, 46%R); the low recovery for surrogate benzo(a)pyrene-d12 (QC limit 70-130%R) in samples CVX-0010-11 (51%R), -16 (53%R), CVX-0013-02 (52%R), -04 (52%R), and -05 (50%R); and the low recovery for the surrogate 1-methylnaphthalene-d10 (QC limit 65-103%R) in samples CVX-0008-02 (62%R), CVX-0010-10 (61%R), CVX-0011-01 (52%R), -10 (59%R), and -11 (61%R). Therefore, associated sample results were considered estimated, possibly biased low, with positive results qualified "J-" and nondetected results qualified "UJ" for the affected samples.

MS/MSD Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC limits for designated spiked project samples with the exception of the low MS/MSD accuracy results for fluoranthene, pyrene, and chrysene during the spiked analyses of sample CVX-0004-11; the high MSD accuracy results for fluoranthene, chrysene, pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, and benzo(e)pyrene and precision results for fluoranthene, pyrene, and benzo(k)fluoranthene during the spiked analyses of sample CVX-0005-01; the MSD accuracy results for phenanthrene, anthracene, fluoranthene, and pyrene

during the spiked analyses of sample CVX-0007-01; the many MS/MSD accuracy and precision outliers during the spiked analyses of sample CVX-0008-04; the high MS/MSD accuracy results for perylene and anthracene during the spiked analyses of sample CVX-0009-09; the many low MS/MSD accuracy results during the spiked analyses of sample CVX-0010-17; the many MS accuracy results during the spiked analyses of sample CVX-0011-07; and the many MS/MSD precision and accuracy results during the spiked analyses of samples CVX-0013-02 and CVX-0014-04. Validation qualification was not required.

LCS Recoveries

All LCS recoveries were considered acceptable and within QC limits with the exception of the low LCS recovery for fluoranthene (77%R; QC limit 78-120%R) associated with samples in SDG CBC55; and the high LCS recovery for dibenz(a,h)anthracene (100%R; QC limit 75-97%R) associated with samples in SDG CBC56. Therefore, results for those compounds where LCS recoveries fell below the QC limit were considered estimated, possibly biased low, with positive results qualified "J-" and nondetected results qualified "UJ" for the affected samples. Positive results for those compounds where LCS recoveries exceeded the QC limit were considered estimated, possibly biased high, and qualified "J+" for the affected samples.

Field Duplicate Precision

All field duplicate precision results were considered acceptable with the exception of the precision results for phenanthrene (71%RPD) and C2-phenanthrenes/anthracenes (71%RPD) associated with the field duplicate pair CVX-0007-04 and -05; the precision for C1-naphthalenes (67%RPD) and C1-phenanthrenes/anthracenes (0.079 mg/kg, nondetect) associated with the field duplicate pair CVX-0009-03 and -04; the precision for acenaphthylene (111%RPD), anthracene (75%RPD), benzo(a)anthracene (56%RPD), benzo(k)fluoranthene (52%RPD), C1-benzanthrene/chrysenes (64%RPD), C1-fluoranthenes/pyrenes (55%RPD), C1-phenanthrenes/anthracenes (82%RPD), C2-benzanthrene/chrysenes (67%RPD), C2-fluorenes (nondetect, 0.005 mg/kg) associated with the field duplicate pair CVX-0011-12 and -13; and the precision for acenaphthene (124%RPD), anthracene (111%RPD), benzo(a)anthracene (75%RPD), benzo(a)pyrene (70%RPD), benzo(b)fluoranthene (101%RPD), benzo(e)pyrene (74%RPD), benzo(g,h,i)perylene (77%RPD), benzo(k)fluoranthene (66%RPD), C1-benzanthrene/chrysenes (59%RPD), C1-fluoranthrenes/pyrenes (63%RPD), C1-phenanthrenes/anthracenes (60%RPD), chrysene (77%RPD), dibenz(a,h)anthracene (72%RPD), fluorene (106%RPD), indeno(1,2,3-cd)pyrene (75%RPD), naphthalene (83%RPD), perylene (78%RPD), phenanthrene (81%RPD), and pyrene (74%RPD) associated with the field duplicate pair CVX-0013-04 and -05. Therefore, results for these compounds were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected parent sample and field duplicate.

Usability

All PAH results for the sediment samples were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The PAH data presented by Eurofins were 100% complete (i.e., usable). The validated PAH laboratory data are tabulated and presented in Attachment A-2.

It was noted that sample CVX-0011-10 contained less than 30% solids. Therefore, results for this sample were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

2.2.3 PCBs

The following items were reviewed for compliancy in the PCB analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- MS/MSD precision and accuracy
- LCS recoveries
- Laboratory method blank contamination
- Initial calibrations
- Verification calibrations
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of holding times and surrogate recoveries as discussed below.

Holding Times

All samples contained in SDGs CBC53 and CBC55 exceeded the 14-day holding time requirement by 37 to 38 days. Results for these samples were considered estimated with positive results qualified "J" and nondetected results qualified "UJ". The field equipment blank sample CVX-0005-02 grossly exceeded the 7-day extraction holding time requirement by 46 days. The nondetected results for this sample were considered unusable and qualified "R".

Surrogate Recoveries

All sample surrogate recoveries were considered acceptable and within QC acceptance limits with the exception of the high decachlorobiphenyl recovery (QC limit 48-151%R) in PCB sample CVX-0013-01 (254%R). Validation qualification of this sample was not required.

Usability

All PCB results for the sediment samples were considered usable following data validation with the exception of certain nondetected results based upon grossly exceeded holding times.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The PCB sediment data presented by Eurofins were 97.3% complete (i.e., usable). The validated data are tabulated and presented in Attachment A-2.

It was noted that sample CVX-0011-10 contained less than 30% solids. Therefore, results for this sample were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

2.2.4 Metals and SEM

The following items were reviewed for compliancy in the metals analysis:

- Custody documentation
- Holding times
- Initial and continuing calibration verifications
- Initial and continuing calibration blank, and laboratory preparation blank contamination
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries
- Laboratory duplicate precision
- Laboratory control sample (LCS) recoveries
- Serial dilutions
- Interference check sample recoveries
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of calibrations, blank contamination, MS/MSD recoveries, laboratory duplicate precision, LCS recoveries, serial dilutions, and field duplicate precision as discussed below.

Calibrations

All initial and continuing calibration verifications were considered acceptable with recoveries within QC limits and analyzed at the appropriate frequency. All calibration reference standard recoveries were acceptable and within the 70-130%R QC limit with the exception of calcium (68.9%R) associated with sample CVX-0001-02; SEM zinc (153%R) associated with SEM samples CVX-0009-16, -17, -18, and -19; SEM zinc (-1%R, -0.9%R) associated with SEM samples CVX-0009-11 and -12; and sodium (140.9%R) associated with samples CVX-0009-01 and -02. Therefore, positive results for those analytes where standard recoveries exceeded the QC limit were considered estimated, possibly biased high, and qualified "J+" for the affected samples. Results for those analytes where standard recoveries fell below the QC limit were estimated, possibly biased low, with positive results qualified "J-" and nondetected results qualified "UJ" for the affected samples. Nondetected results for those analytes where standard recoveries fell below 10% were considered unusable and qualified "R" for the affected samples.

Blank Contamination

The laboratory preparation blank associated with samples in SDG CBC50 contained aluminum, lead, SEM nickel, and SEM zinc at concentrations of 8.788, 0.014, 0.041, and 1.142 mg/kg, respectively; the laboratory preparation blank associated with samples in SDG CBC53 contained aluminum, lead, potassium, sodium, zinc, and mercury at concentrations of 6.92, 0.041, 16.338, 22.94, 0.66, 0.012 mg/kg, respectively; the laboratory preparation blank associated with SEM samples CVX-0004-01 through -12 and -17 contained SEM zinc and SEM nickel at concentrations of 1.142 and 0.041 mg/kg, respectively; the laboratory preparation blank associated with SEM samples CVX-0004-13. -14, -15, -16, and -18 contained SEM copper and SEM zinc at concentrations of 0.234 and 0.839 mg/kg, respectively; the laboratory preparation blank associated with samples in SDGs CBC55 and CBC56 contained aluminum, calcium, lead, SEM copper, and SEM zinc at concentrations of 10.174, 27.64, 0.013, 0.234, and 0.839 mg/kg, respectively; the equipment blank CVX-0005-02 associated with samples in SDG CBC55 contained aluminum, barium, calcium, magnesium, and sodium at concentrations of 13.5, 0.8, 79.7, 22, and 227 µg/L, respectively; the laboratory preparation blank associated with samples in SDG CBC57 contained SEM zinc, SEM copper, and aluminum at concentrations of 0.839, 0.234, and 4.714 mg/kg, respectively; the laboratory preparation blank associated with samples in SDG CBC58 contained SEM zinc, aluminum, calcium, potassium, zinc, and mercury at concentrations of 0.272, 7.534, 18.794, 11.06, 2.2, and 0.012 mg/kg, respectively; the laboratory preparation blank associated with samples in SDG CBC60 contained SEM cadmium, SEM zinc, aluminum, and sodium at concentrations of 0.012, 0.274, 6.38, and 21.44 mg/kg, respectively; the laboratory preparation blank associated with samples in SDG CBC61 contained SEM zinc, aluminum, calcium, and lead at concentrations of 0.126, 9.888, 19.926, and 0.015 mg/kg, respectively; the laboratory preparation blank associated with samples in SDG CBC63 contained SEM zinc, aluminum, calcium, lead, and zinc at concentrations of 0.335, 7.36, 17.758, 0.016, and 1.289 mg/kg, respectively; and the laboratory preparation blank associated with samples in SDG CBC64 contained SEM zinc, aluminum, and calcium at concentrations of 0.335, 4.747, and 27.675 mg/kg, respectively. Therefore, results for these analytes less than validation action concentrations were considered not detected and qualified "U" for the affected samples.

MS/MSD Recoveries

All MS/MSD recoveries were considered acceptable and within the 75-125%R QC limit with the exception of the many high MSD recoveries associated with sample CVX-0001-01; SEM lead (63%R, 72%R) associated with SEM sample CVX-0004-17; SEM copper (31%R, 29%R), SEM silver (8%R, 8%R), and SEM zinc (135%R) associated with SEM sample CVX-0004-11; many high MSD recoveries associated with sample CVX-0004-11; antimony (51%R, 67%R), arsenic (131%R), chromium (36%R), iron (61%R), nickel (71%R, -11%R), vanadium (39%R), SEM copper (52%R, -18%R), SEM lead (72%R, 149%R), SEM silver (7%R, 0%R), and SEM zinc (134%R) associated with sample CVX-0008-04; antimony (40%R, 31%R), arsenic (17%R), beryllium (71%R), copper (69%R, 35%R), lead (68%R), nickel (54%R), vanadium (49%R), SEM copper (7%R, 11%R), SEM lead (61%R, 62%R), and SEM silver (28%R, 30%R) associated with sample CVX-0009-09; arsenic (136%R), calcium (53%R, 46%R), copper (128%R, 129%R), nickel (137%R), SEM copper (5%R, -18%R), SEM lead (55%R, 50%R), and SEM silver (14%R, 10%R) associated with sample CVX-0010-17; antimony (34%R, 39%R), calcium (68%R), chromium (66%R), lead (50%R), nickel (74%R), vanadium (130%R), and SEM lead (71%R) associated with sample CVX-0011-07; antimony (73%R), arsenic (51%R), chromium (60%R), and copper (51%R) and the many high MSD recoveries associated with sample CVX-0013-01; and antimony (62%R, 64%R), cobalt (187%R), lead (341%R), mercury (207%R), SEM copper (68%R, 53%R), and SEM lead (162%R) associated with sample CVX-0014-04. Therefore, results for those analytes where matrix spike recoveries fell below the QC limit were considered estimated, possibly biased low, with positive results qualified "J-" and nondetected results qualified "UJ" for the affected samples. Nondetected results for those analytes where matrix spike recoveries fell below 10% were considered unusable and qualified "R" for the affected samples. Positive results for those analytes where matrix spike recoveries exceeded the QC limit were considered estimated, possibly biased high, and qualified "J+" for the affected samples.

Laboratory Duplicate Precision

All laboratory duplicate precision results were considered acceptable and less than 20%RPD for all analytes with the exception of calcium (97%RPD), potassium (30%RPD), and magnesium (58%RPD) associated with sample CVX-0001-01; lead (39%RPD) associated with sample CVX-0004-11; zinc (27%RPD) associated with sample CVX-0008-04; arsenic (35%RPD), barium (26%RPD), copper (21%RPD), magnesium (27%RPD), potassium (47%RPD), and vanadium (27%RPD) associated with sample CVX-0009-09; calcium (30%RPD) and SEM copper (22%RPD) associated with sample CVX-0010-17; barium (63%RPD), cobalt (26%RPD), magnesium (28%RPD), and manganese (42%RPD) associated with sample CVX-0011-07; calcium (61%RPD), chromium (97%RPD), copper (31%RPD), lead (60%RPD), magnesium (45%RPD), nickel (61%RPD), and zinc (22%RPD) associated with sample CVX-0013-01; and barium (22%RPD), calcium (107%RPD), chromium (30%RPD), cobalt (26%RPD), magnesium (34%RPD), potassium (22%RPD), sodium (105%RPD), vanadium (21%RPD), SEM copper (45%RPD), and SEM zinc (83%RPD) associated with sample CVX-0014-04. Therefore, results for these analytes were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

LCS Recoveries

All LCS recoveries were considered acceptable and within the 85-115%R QC limit with the exception of SEM lead (126%R) and SEM zinc (124%R) associated with SEM samples in SDGs CBC50 and CBC53. Therefore, positive results for these analytes were considered estimated, possibly biased high, and qualified "J+" for the affected samples.

Serial Dilutions

All serial dilution results were considered acceptable and less than 10%D for all analytes with the exception of the serial dilution result for magnesium (13%D), potassium (17%D), chromium (32%D), and arsenic (15%D) associated with sample CVX-0001-01; SEM lead (24%D) and SEM zinc (70%D) associated with SEM sample CVX-0004-11; aluminum (13%D) and zinc (17%D) associated with sample CVX-0008-04; SEM lead (15%D) and vanadium (12%D) associated with sample CVX-0010-17; chromium (13%D), potassium (15%D), and vanadium (12%D) associated with sample CVX-0011-07; calcium (12%D), copper (12%D), iron (12%D), magnesium (15%D), and nickel (13%D) associated with sample CVX-0013-01; and barium (13%D), cobalt (14%D), nickel (13%D), and zinc (13%D) associated with sample CVX-0014-04. Therefore, positive results for these analytes were considered estimated and qualified "J" for the affected samples.

Field Duplicate Precision

All field duplicate precision results were considered acceptable with the exception of potassium (73%RPD) associated with the field duplicate pair CVX-0004-06 and -07; sodium (89%RPD) associated with the field duplicate pair CVX-0007-04 and -05; copper (57.4%RPD) associated with the field duplicate pair CVX-0009-03 and -04; SEM lead (58%RPD) associated with the field duplicate pair CVX-0011-12 and -13; and SEM nickel associated with the field duplicate pair CVX-0013-04 and -05. Therefore, results for these analytes were considered estimated and qualified "J" for the affected parent sample and its field duplicate.

Usability

All metals results for the surface water samples were considered usable following data validation with the exception of certain nondetected results based upon poor calibration recoveries and MS/MSD recoveries.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The metals data for the sediment samples presented by Eurofins were 99.9% complete (i.e., usable). The validated laboratory data are tabulated and presented in Attachment A-2.

It was noted that sample CVX-0011-10 contained less than 30% solids. Therefore, results for this sample were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

2.2.5 Wet Chemistry

The following items were reviewed for compliancy in the wet chemistry analysis:

- Custody documentation
- Holding times
- Initial and continuing calibration verifications
- Initial and continuing calibration blank, and laboratory preparation blank contamination
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries
- Laboratory duplicate precision
- Laboratory control sample (LCS) recoveries
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of MS/MSD recoveries, laboratory duplicate precision, and field duplicate precision as discussed below.

MS/MSD Recoveries

All MS/MSD recoveries were considered acceptable and within QC limits with the exception of the recoveries for TOC (128%R; QC limit 59-125%R) associated with CVX-0004-14; and AVS (32%R; QC limit 37-119%R) associated with sample CVX-0004-17. Therefore, results for those analytes where matrix spike recoveries fell below the QC limit were considered estimated, possibly biased low, with positive results qualified "J-" and nondetected results qualified "UJ" for the affected parent sample. The positive results for those analytes where matrix spike recoveries exceeded the QC limit were considered estimated, possibly biased high, and qualified "J+" for the affected parent sample.

Laboratory Duplicate Precision

All laboratory duplicate precision results were considered acceptable and within QC limits with the exception of the precision for AVS (45%RPD, 50%RPD, 22%RPD; QC limit 0-20%RPD) associated with samples CVX-0004-11, CVX-0010-17, and CVX-001404; and TOC (23%RPD; QC limit 0-20%RPD) associated with sample CVX-0007-01. Therefore, results for these analytes were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

Field Duplicate Precision

All field duplicate precision results were considered acceptable with the exception of the precision for TOC (79%RPD) associated with the field duplicate pair CVX-0007-04 and -05; and TOC (96%RPD) associated with the field duplicate pair CVX-0011-12 and -13. Therefore, the TOC results were considered estimated and qualified "J" for the affected parent sample and field duplicate.

Usability

All wet chemistry results for the sediment samples were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The wet chemistry data for the sediment samples presented by Eurofins were 100% complete (i.e., usable). The validated laboratory data are tabulated and presented in Attachment A-2.

It was noted that sample CVX-0011-10 contained less than 30% solids. Therefore, results for this sample were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

2.3 MIXED COMPOSITE SAMPLE

Data review has been completed for data packages generated by Eurofins containing one mixed composite solid sample collected from the site. This sample was contained within sample delivery group (SDG) CBC59. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The validated laboratory data were tabulated and are presented in Attachment A-3.

Data validation was performed for all samples in accordance with the project work plan, QAPP, NYSDEC ASP, and the USEPA Region II SOPs for organic and inorganic data review. This data validation and usability report is presented by analysis type.

2.3.1 Volatiles

The following items were reviewed for compliancy in the volatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries

- Laboratory method blank contamination
- GC/MS instrument performance
- Sample result verification and identification
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols.

Usability

All volatile results for the mixed composite sample were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The volatile data presented by Eurofins were 100% complete (i.e., usable). The validated laboratory data are tabulated and presented in Attachment A-3.

2.3.2 Semivolatiles

The following items were reviewed for compliancy in the semivolatiles analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank contamination
- GC/MS instrument performance
- Sample result verification and identification
- Initial and continuing calibrations
- Internal standard area counts and retention times
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols.

Usability

All semivolatile results for the mixed composite sample was considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The semivolatile data presented by Eurofins were 100% complete (i.e., usable). The validated semivolatile laboratory data are tabulated and presented in Attachment A-3.

2.3.3 PCBs

The following items were reviewed for compliancy in the PCB analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- MS/MSD precision and accuracy
- LCS recoveries
- Laboratory method blank contamination
- Initial calibrations
- Verification calibrations
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols.

Usability

All PCB results for the mixed composite solid sample were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The PCB data presented by Eurofins were 100% complete with all data considered usable and valid. The validated data are tabulated and presented in Attachment A-3.

ATTACHMENT A

VALIDATED LABORATORY DATA

ATTACHMENT A-1

VALIDATED LABORATORY SURFACE WATER DATA

			Location	TR01		TR02		TR03		TR04		TR05	
			Field Sample ID	CVX-0003-01		CVX-0002-01		CVX-0006-01		CVX-0006-02		CVX-0006-04	
			Sample Date	8/15/2014		8/14/2014		8/20/2014		8/20/2014		8/20/2014	
			Sample Delivery Group	1496618		1496388		1497595		1497595		1497595	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
Analytical Method	Parameter Name	Units	Filtered										
SM 2340 C-1997	Total Hardness as CaCO3	mgCaCO3/L	N	124		154		199		191		185	
SM 2540 D-1997	Total Suspended Solids	mg/l	N	7		7.8		2.7	J	2.3	J	1.9	J
SM 4500-H+ B-2000	pH - Hydrogen Ion	SU	N	8		7.7		7.8		7.9		8	
SW-846 6020A	Aluminum	mg/l	N	0.192	J	0.131	J	0.0797	J	0.0566	J	0.0666	J
SW-846 6020A	Aluminum	mg/l	Y	0.0088	J	0.0082	U	0.0098	J	0.011	J	0.0103	J
SW-846 6020A	Antimony	mg/l	N	0.00033	U	0.00033	U	0.00033	U	0.00033	U	0.00033	U
SW-846 6020A	Antimony	mg/l	Y	0.00033	U	0.00033	U	0.00033	U	0.00033	U	0.00033	U
SW-846 6020A	Arsenic	mg/l	N	0.00082	U	0.00082	U	0.00082	U	0.00082	U	0.00082	U
SW-846 6020A	Arsenic	mg/l	Y	0.00082	U	0.00082	U	0.00082	U	0.00082	U	0.00082	U
SW-846 6020A	Barium	mg/l	N	0.0133		0.0165		0.0158		0.0147		0.0165	
SW-846 6020A	Barium	mg/l	Y	0.0126		0.0139		0.0146		0.0154		0.0147	
SW-846 6020A	Beryllium	mg/l	N	4.50E-05	U	4.50E-05	U	4.50E-05	U	4.50E-05	U	4.50E-05	U
SW-846 6020A	Beryllium	mg/l	Y	0.000045	U	0.000045	U	0.000045	U	0.000045	U	0.000045	U
SW-846 6020A	Cadmium	mg/l	N	0.00017	U	0.00017	U	0.00017	U	0.00017	U	0.00017	U
SW-846 6020A	Cadmium	mg/l	Y	0.00017	U	0.00017	U	0.00017	U	0.00017	U	0.00017	U
SW-846 6020A	Calcium	mg/l	N	34.1		39.1		45.8		47.3		43.8	
SW-846 6020A	Calcium	mg/l	Y	33.4		38		46.9		45.6		44.4	
SW-846 6020A	Chromium	mg/l	N	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
SW-846 6020A	Chromium	mg/l	Y	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
SW-846 6020A	Cobalt	mg/l	N	0.0002	J	0.00012	J	0.0001	U	0.00013	J	0.0001	U
SW-846 6020A	Cobalt	mg/l	Y	0.0001	U	0.0001	U	0.0001	U	0.0001	U	0.0001	U
SW-846 6020A	Copper	mg/l	N	0.0018	J	0.0014	J	0.0018	J	0.0015	J	0.0018	J
SW-846 6020A	Copper	mg/l	Y	0.0014	J	0.0013	J	0.0017	J	0.0022	J	0.0022	J
SW-846 6020A	IRON	mg/l	N	0.35		0.251		0.159	J	0.145	J	0.134	J
SW-846 6020A	IRON	mg/l	Y	0.035	J	0.0181	J	0.0275	J	0.0318	J	0.0304	J
SW-846 6020A	Lead	mg/l	N	4.10E-04	J	3.30E-04	J	2.60E-04	J	1.80E-04	J	1.90E-04	J
SW-846 6020A	Lead	mg/l	Y	0.000082	U	0.000082	U	0.000082	U	0.00014	J	0.000082	U
SW-846 6020A	Magnesium	mg/l	N	10		11.4		13.6		13.1		13.5	
SW-846 6020A	Magnesium	mg/l	Y	9.91		10.9		13.6		14.5		13.6	
SW-846 6020A	Manganese	mg/l	N	0.0595		0.108		0.0621		0.061		0.0647	
SW-846 6020A	Manganese	mg/l	Y	0.0268		0.0749		0.051		0.0561		0.0567	
SW-846 6010C	Manganese	mg/l	N										
SW-846 6010C	Manganese	mg/l	Y										
SW-846 7470A	Mercury	mg/l	N										
EPA 1631 Revision E	Mercury	mg/l	N	0.0000028	U	0.0000028	U	0.0000028	U	0.0000028	U	0.0000028	U
EPA 1631 Revision E	Mercury	mg/l	Y	0.0000028	U	0.000004	J	0.0000028	U	0.0000028	U	0.0000028	U
SW-846 6020A	Nickel	mg/l	N	0.001	J	0.0012	J	0.0012	J	0.0012	J	0.0012	J
SW-846 6020A	Nickel	mg/l	Y	0.00079	U	0.0013	J	0.0011	J	0.0013	J	0.0015	J
SW-846 6020A	Potassium	mg/l	N	1.75		1.56		1.56		1.48		1.55	
SW-846 6020A	Potassium	mg/l	Y	1.66		1.48		1.6		1.73		1.59	
SW-846 6020A	Selenium	mg/l	N	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
SW-846 6020A	Selenium	mg/l	Y	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
SW-846 6020A	Silver	mg/l	N	0.00013	U	0.00013	U	0.00013	U	0.00013	U	0.00013	U
SW-846 6020A	Silver	mg/l	Y	0.00013	U	0.00013	U	0.00013	U	0.00013	U	0.00013	U
SW-846 6020A	Sodium	mg/l	N	43.4		67.4		81.7		77.2		79.2	

			Location	TR01		TR02		TR03		TR04		TR05	
			Field Sample ID	CVX-0003-01		CVX-0002-01		CVX-0006-01		CVX-0006-02		CVX-0006-04	
			Sample Date	8/15/2014		8/14/2014		8/20/2014		8/20/2014		8/20/2014	
			Sample Delivery Group	1496618		1496388		1497595		1497595		1497595	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
Analytical Method	Parameter Name	Units	Filtered										
SW-846 6020A	Sodium	mg/l	Y	50.8		66.3		83.2		83.6		81.8	
SW-846 6020A	Thallium	mg/l	N	0.00015	U	0.00015	U	0.00015	U	0.00015	U	0.00015	U
SW-846 6020A	Thallium	mg/l	Y	0.00015	U	0.00015	U	0.00015	U	0.00015	U	0.00015	U
SW-846 6020A	Vanadium	mg/l	N	0.00062	J	0.0006	J	0.00036	J	0.00035	J	0.00052	J
SW-846 6020A	Vanadium	mg/l	Y	0.00043	J	0.00053	J	0.00034	J	0.00027	J	0.00028	J
SW-846 6020A	Zinc	mg/l	N	0.0027	J	0.0024	U	0.0033	J	0.0024	U	0.0024	U
SW-846 6020A	Zinc	mg/l	Y	0.0024	U	0.0024	U	0.0024	U	0.0024	U	0.0025	J
SW-846 8082A	Aroclor 1016	ug/l	N										
SW-846 8082A	Aroclor 1221	ug/l	N										
SW-846 8082A	Aroclor 1232	ug/l	N										
SW-846 8082A	Aroclor 1242	ug/l	N										
SW-846 8082A	Aroclor 1248	ug/l	N										
SW-846 8082A	Aroclor 1254	ug/l	N										
SW-846 8082A	Aroclor 1260	ug/l	N										
SW-846 8082A	Aroclor-1262	ug/l	N										
SW-846 8082A	Aroclor-1268	ug/l	N										
SW-846 8260C	1,1,1-Trichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1,2-Trichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1-Dichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,2-Dichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,2-Dichloropropane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/l	N	3	U	3	U	3	U	3	U	3	U
SW-846 8260C	2-Hexanone	ug/l	N	3	U	3	U	3	U	3	U	3	U
SW-846 8260C	4-Methyl-2-pentanone	ug/l	N	3	U	3	U	3	U	3	U	3	U
SW-846 8260C	Acetone	ug/l	N	6	U	6	U	6	U	6	U	6	U
SW-846 8260C	Benzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromodichloromethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromoform	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Carbon Disulfide	ug/l	N	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Carbon Tetrachloride	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chlorobenzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloroform	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Dibromochloromethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Ethylbenzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/l	N	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/l	N	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Tetrachloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Toluene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

			Location	TR01		TR02		TR03		TR04		TR05	
			Field Sample ID	CVX-0003-01		CVX-0002-01		CVX-0006-01		CVX-0006-02		CVX-0006-04	
			Sample Date	8/15/2014		8/14/2014		8/20/2014		8/20/2014		8/20/2014	
			Sample Delivery Group	1496618		1496388		1497595		1497595		1497595	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
Analytical Method	Parameter Name	Units	Filtered										
SW-846 8260C	trans-1,2-Dichloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/l	N	0.5	U	0.5	U	0.5	UJ	0.5	UJ	0.5	UJ
SW-846 8260C	Xylenes, Total	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8270D SIM modified	Acenaphthene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Acenaphthylene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Anthracene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C1-Fluorenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C2-Naphthalenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Chrysene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Fluoranthene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Fluorene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Naphthalene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Perylene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Phenanthrene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Pyrene	ug/l	N	0.09	U	0.08	U	0.08	U	0.08	U	0.08	U

			Location	TR06		TR07		TR07		TR08		TR09	
			Field Sample ID	CVX-0006-05		CVX-0012-01		CVX-0012-02		CVX-0015-04		CVX-0015-03	
			Sample Date	8/20/2014		8/27/2014		8/27/2014		9/11/2014		9/11/2014	
			Sample Delivery Group	1497595		1499493		1499493		1502970		1502970	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample	
			Sample Type	SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
Analytical Method	Parameter Name	Units	Filtered										
SM 2340 C-1997	Total Hardness as CaCO3	mgCaCO3/L	N	174		179		183		198		208	
SM 2540 D-1997	Total Suspended Solids	mg/l	N	1.6	J	3.3		3.3		2.3	J	2.6	J
SM 4500-H+ B-2000	pH - Hydrogen Ion	SU	N	7.9		8.1		8.1		8.2		8.2	
SW-846 6020A	Aluminum	mg/l	N	0.057	J	0.0978	J	0.0945	J	0.0655	J	0.0734	J
SW-846 6020A	Aluminum	mg/l	Y	0.0188	J	0.0082	U	0.0082	U	0.0106	J	0.0176	J
SW-846 6020A	Antimony	mg/l	N	0.00033	U	0.00033	U	0.00033	U	0.00033	U	0.00033	U
SW-846 6020A	Antimony	mg/l	Y	0.00033	U	0.00033	U	0.00033	U	0.00033	U	0.00033	U
SW-846 6020A	Arsenic	mg/l	N	0.00082	U	0.00082	U	0.0009	J	0.00082	U	0.00082	U
SW-846 6020A	Arsenic	mg/l	Y	0.00082	U	0.00082	U	0.00082	U	0.00082	U	0.00082	U
SW-846 6020A	Barium	mg/l	N	0.0152		0.0186		0.019		0.0194		0.019	
SW-846 6020A	Barium	mg/l	Y	0.0151		0.0184		0.0175		0.0173		0.0165	
SW-846 6020A	Beryllium	mg/l	N	4.50E-05	U	4.50E-05	U	4.50E-05	U	4.50E-05	U	4.50E-05	U
SW-846 6020A	Beryllium	mg/l	Y	0.000045	U	0.000045	U	0.000045	U	0.000045	U	0.000045	U
SW-846 6020A	Cadmium	mg/l	N	0.00017	U	0.00017	U	0.00017	U	0.00017	U	0.00017	U
SW-846 6020A	Cadmium	mg/l	Y	0.00017	U	0.00017	U	0.00017	U	0.00017	U	0.00017	U
SW-846 6020A	Calcium	mg/l	N	42.7		48.2		47.8		53.2		52.4	
SW-846 6020A	Calcium	mg/l	Y	40.4		54.9		52.7		54		52.6	
SW-846 6020A	Chromium	mg/l	N	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
SW-846 6020A	Chromium	mg/l	Y	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
SW-846 6020A	Cobalt	mg/l	N	0.0001	U	0.0001	J	0.0001	U	0.00012	J	0.0001	U
SW-846 6020A	Cobalt	mg/l	Y	0.0001	U	0.00013	J	0.0001	U	0.0001	U	0.0001	U
SW-846 6020A	Copper	mg/l	N	0.002	J	0.0025	J	0.0028	J	0.0026	J	0.0027	J
SW-846 6020A	Copper	mg/l	Y	0.0039	J	0.0022	J	0.0021	J	0.0025	J	0.0032	J
SW-846 6020A	IRON	mg/l	N	0.147	J	0.206		0.182	J	0.168	J	0.184	J
SW-846 6020A	IRON	mg/l	Y	0.0215	J	0.0324	J	0.029	J	0.0332	J	0.0509	J
SW-846 6020A	Lead	mg/l	N	1.80E-04	J	2.50E-04	J	2.40E-04	J	3.10E-04	J	2.30E-04	J
SW-846 6020A	Lead	mg/l	Y	0.000082	U	0.000082	U	0.000082	U	0.000082	U	0.000094	J
SW-846 6020A	Magnesium	mg/l	N	13.4		15.2		15.4		14.6		14.8	
SW-846 6020A	Magnesium	mg/l	Y	12.6		16		15.2		14.9		14.6	
SW-846 6020A	Manganese	mg/l	N	0.064									
SW-846 6020A	Manganese	mg/l	Y	0.0494									
SW-846 6010C	Manganese	mg/l	N			0.0746		0.0726		0.0795		0.0836	
SW-846 6010C	Manganese	mg/l	Y			0.0553		0.0545		0.0616		0.0678	
SW-846 7470A	Mercury	mg/l	N										
EPA 1631 Revision E	Mercury	mg/l	N	0.0000028	U	0.00000398	J	0.00000318	J	0.0000028	U	0.0000028	U
EPA 1631 Revision E	Mercury	mg/l	Y	0.0000028	U	0.00000344	J	0.0000028	U	0.0000028	U	0.0000028	U
SW-846 6020A	Nickel	mg/l	N	0.0012	J	0.0015	J	0.0018	J	0.002	J	0.002	J
SW-846 6020A	Nickel	mg/l	Y	0.0012	J	0.0017	J	0.0016	J	0.002	J	0.002	J
SW-846 6020A	Potassium	mg/l	N	1.56		1.73		1.69		1.75		1.77	
SW-846 6020A	Potassium	mg/l	Y	1.48		1.89		1.73		1.79		1.76	
SW-846 6020A	Selenium	mg/l	N	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
SW-846 6020A	Selenium	mg/l	Y	0.0005	U	0.0005	U	0.0005	U	0.0005	U	0.0005	U
SW-846 6020A	Silver	mg/l	N	0.00013	U	0.00013	U	0.00013	U	0.00013	U	0.00013	U
SW-846 6020A	Silver	mg/l	Y	0.00013	U	0.00013	U	0.00013	U	0.00013	U	0.00013	U
SW-846 6020A	Sodium	mg/l	N	74.1		85.4		86.1		93.5		92.4	

			Location	TR06		TR07		TR07		TR08		TR09	
			Field Sample ID	CVX-0006-05		CVX-0012-01		CVX-0012-02		CVX-0015-04		CVX-0015-03	
			Sample Date	8/20/2014		8/27/2014		8/27/2014		9/11/2014		9/11/2014	
			Sample Delivery Group	1497595		1499493		1499493		1502970		1502970	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample	
			Sample Type	SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
Analytical Method	Parameter Name	Units	Filtered										
SW-846 6020A	Sodium	mg/l	Y	66.6		96.1		92.6		95		92.8	
SW-846 6020A	Thallium	mg/l	N	0.00015	U	0.00015	U	0.00015	U	0.00015	U	0.00015	U
SW-846 6020A	Thallium	mg/l	Y	0.00015	U	0.00015	U	0.00015	U	0.00015	U	0.00015	U
SW-846 6020A	Vanadium	mg/l	N	0.0004	J	0.00041	J	0.00034	J	0.00046	J	0.00046	J
SW-846 6020A	Vanadium	mg/l	Y	0.00032	J	0.00046	J	0.00027	J	0.00042	J	0.00048	J
SW-846 6020A	Zinc	mg/l	N	0.0024	U	0.0024	U	0.0024	U	0.0024	U	0.0024	U
SW-846 6020A	Zinc	mg/l	Y	0.0052	J	0.0024	U	0.0024	U	0.0024	U	0.0024	U
SW-846 8082A	Aroclor 1016	ug/l	N										
SW-846 8082A	Aroclor 1221	ug/l	N										
SW-846 8082A	Aroclor 1232	ug/l	N										
SW-846 8082A	Aroclor 1242	ug/l	N										
SW-846 8082A	Aroclor 1248	ug/l	N										
SW-846 8082A	Aroclor 1254	ug/l	N										
SW-846 8082A	Aroclor 1260	ug/l	N										
SW-846 8082A	Aroclor-1262	ug/l	N										
SW-846 8082A	Aroclor-1268	ug/l	N										
SW-846 8260C	1,1,1-Trichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1,2-Trichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1-Dichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,2-Dichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,2-Dichloropropane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/l	N	3	U	3	U	3	U	3	UJ	3	UJ
SW-846 8260C	2-Hexanone	ug/l	N	3	U	3	U	3	U	3	UJ	3	UJ
SW-846 8260C	4-Methyl-2-pentanone	ug/l	N	3	U	3	U	3	U	3	UJ	3	UJ
SW-846 8260C	Acetone	ug/l	N	6	U	6	U	6	U	6	U	6	U
SW-846 8260C	Benzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromodichloromethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromoform	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Carbon Disulfide	ug/l	N	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Carbon Tetrachloride	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chlorobenzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloroform	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Dibromochloromethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Ethylbenzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/l	N	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/l	N	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Tetrachloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Toluene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

			Location	TR06		TR07		TR07		TR08		TR09	
			Field Sample ID	CVX-0006-05		CVX-0012-01		CVX-0012-02		CVX-0015-04		CVX-0015-03	
			Sample Date	8/20/2014		8/27/2014		8/27/2014		9/11/2014		9/11/2014	
			Sample Delivery Group	1497595		1499493		1499493		1502970		1502970	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample	
			Sample Type	SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER		SURFACE WATER	
Analytical Method	Parameter Name	Units	Filtered										
SW-846 8260C	trans-1,2-Dichloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/l	N	0.5	UJ	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Xylenes, Total	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8270D SIM modified	Acenaphthene	ug/l	N	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U
SW-846 8270D SIM modified	Acenaphthylene	ug/l	N	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U
SW-846 8270D SIM modified	Anthracene	ug/l	N	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C1-Fluorenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C2-Naphthalenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Chrysene	ug/l	N	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Fluoranthene	ug/l	N	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U
SW-846 8270D SIM modified	Fluorene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Naphthalene	ug/l	N	0.08	U	0.08	UJ	0.08	UJ	0.08	UJ	0.08	UJ
SW-846 8270D SIM modified	Perylene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Phenanthrene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U	0.08	U
SW-846 8270D SIM modified	Pyrene	ug/l	N	0.08	U	0.08	UJ	0.08	UJ	0.08	U	0.08	U

			Location	TR10		TR11		EB		EB		TB	
			Field Sample ID	CVX-0015-02		CVX-0015-01		CVX-0005-02		CVX-0012-04		CVX-0002-02	
			Sample Date	9/11/2014		9/11/2014		8/20/2014		8/27/2014		8/14/2014	
			Sample Delivery Group	1502970		1502970		1497631		1499493		1496388	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Regular sample		Regular sample		Equipment Blank		Equipment Blank		Trip Blank	
			Sample Type	SURFACE WATER		SURFACE WATER		Blank Water		Blank Water		Blank Water	
Analytical Method	Parameter Name	Units	Filtered										
SM 2340 C-1997	Total Hardness as CaCO3	mgCaCO3/L	N	218		217				5.9	J		
SM 2540 D-1997	Total Suspended Solids	mg/l	N	1.7	J	1.5	J			1	U		
SM 4500-H+ B-2000	pH - Hydrogen Ion	SU	N	8.1		8.1				5.3			
SW-846 6020A	Aluminum	mg/l	N	0.0562	J	0.0365	J	0.0135	J	0.0082	U		
SW-846 6020A	Aluminum	mg/l	Y	0.0124	J	0.0139	J			0.0082	U		
SW-846 6020A	Antimony	mg/l	N	0.00033	U	0.00033	U	0.00033	U	0.00033	U		
SW-846 6020A	Antimony	mg/l	Y	0.00033	U	0.00033	U			0.00033	U		
SW-846 6020A	Arsenic	mg/l	N	0.00082	U	0.00082	U	0.00082	U	0.00082	U		
SW-846 6020A	Arsenic	mg/l	Y	0.00082	J	0.001	J			0.00082	U		
SW-846 6020A	Barium	mg/l	N	0.0177		0.0183		0.0008	J	0.00058	U		
SW-846 6020A	Barium	mg/l	Y	0.0187		0.0184				0.00058	U		
SW-846 6020A	Beryllium	mg/l	N	4.50E-05	U	4.50E-05	U	4.50E-05	U	4.50E-05	U		
SW-846 6020A	Beryllium	mg/l	Y	0.000045	U	0.000045	U			0.000045	U		
SW-846 6020A	Cadmium	mg/l	N	0.00017	U	0.00017	U	0.00017	U	0.00017	U		
SW-846 6020A	Cadmium	mg/l	Y	0.00017	U	0.00017	U			0.00017	U		
SW-846 6020A	Calcium	mg/l	N	52.6		53.1		0.0797	J	0.0697	U		
SW-846 6020A	Calcium	mg/l	Y	52.3		51.8				0.0697	U		
SW-846 6020A	Chromium	mg/l	N	0.0005	U	0.0005	U	0.0005	U	0.0005	U		
SW-846 6020A	Chromium	mg/l	Y	0.0005	U	0.0005	U			0.0005	U		
SW-846 6020A	Cobalt	mg/l	N	0.0001	U	0.0001	U	0.0001	U	0.0001	U		
SW-846 6020A	Cobalt	mg/l	Y	0.0001	U	0.0001	U			0.0001	U		
SW-846 6020A	Copper	mg/l	N	0.0024	J	0.0024	J	0.0005	U	0.0005	U		
SW-846 6020A	Copper	mg/l	Y	0.0028	J	0.0026	J			0.0005	U		
SW-846 6020A	IRON	mg/l	N	0.141	J	0.122	J	0.0131	U	0.0131	U		
SW-846 6020A	IRON	mg/l	Y	0.0395	J	0.0453	J			0.0131	U		
SW-846 6020A	Lead	mg/l	N	2.10E-04	J	1.70E-04	J	8.20E-05	U	8.20E-05	U		
SW-846 6020A	Lead	mg/l	Y	0.000084	J	0.000082	U			0.000082	U		
SW-846 6020A	Magnesium	mg/l	N	14.2		14.5		0.022	J	0.007	U		
SW-846 6020A	Magnesium	mg/l	Y	14.8		14.7				0.0085	J		
SW-846 6020A	Manganese	mg/l	N					0.00055	U				
SW-846 6020A	Manganese	mg/l	Y										
SW-846 6010C	Manganese	mg/l	N	0.0764		0.0672				0.00083	U		
SW-846 6010C	Manganese	mg/l	Y	0.0589		0.0516				0.00083	U		
SW-846 7470A	Mercury	mg/l	N					6.00E-05	U				
EPA 1631 Revision E	Mercury	mg/l	N	0.00000305	J	0.0000028	U			0.00000028	U		
EPA 1631 Revision E	Mercury	mg/l	Y	0.0000028	U	0.0000028	U			0.00000124			
SW-846 6020A	Nickel	mg/l	N	0.0016	J	0.0017	J	0.00079	U	0.00079	U		
SW-846 6020A	Nickel	mg/l	Y	0.0021	J	0.0016	J			0.00079	U		
SW-846 6020A	Potassium	mg/l	N	1.7		1.74		0.0412	U	0.0412	U		
SW-846 6020A	Potassium	mg/l	Y	1.8		1.8				0.0412	U		
SW-846 6020A	Selenium	mg/l	N	0.0005	U	0.0005	U	0.0005	U	0.0005	U		
SW-846 6020A	Selenium	mg/l	Y	0.0005	U	0.0005	U			0.0005	U		
SW-846 6020A	Silver	mg/l	N	0.00013	U	0.00013	U	0.00013	U	0.00013	U		
SW-846 6020A	Silver	mg/l	Y	0.00013	U	0.00013	U			0.00013	U		
SW-846 6020A	Sodium	mg/l	N	89.8	J	92.6		0.227	J	0.05	U		

			Location	TR10		TR11		EB		EB		TB	
			Field Sample ID	CVX-0015-02		CVX-0015-01		CVX-0005-02		CVX-0012-04		CVX-0002-02	
			Sample Date	9/11/2014		9/11/2014		8/20/2014		8/27/2014		8/14/2014	
			Sample Delivery Group	1502970		1502970		1497631		1499493		1496388	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Regular sample		Regular sample		Equipment Blank		Equipment Blank		Trip Blank	
			Sample Type	SURFACE WATER		SURFACE WATER		Blank Water		Blank Water		Blank Water	
Analytical Method	Parameter Name	Units	Filtered										
SW-846 6020A	Sodium	mg/l	Y	90.6		89.2				0.0608	J		
SW-846 6020A	Thallium	mg/l	N	0.00015	U	0.00015	U	0.00015	U	0.00015	U		
SW-846 6020A	Thallium	mg/l	Y	0.00015	U	0.00015	U			0.00015	U		
SW-846 6020A	Vanadium	mg/l	N	0.00054	J	0.00045	J	0.00022	U	0.00022	U		
SW-846 6020A	Vanadium	mg/l	Y	0.00041	J	0.00039	J			0.00022	U		
SW-846 6020A	Zinc	mg/l	N	0.0024	U	0.0024	U	0.0024	U	0.0025	J		
SW-846 6020A	Zinc	mg/l	Y	0.0024	U	0.0024	U			0.0024	U		
SW-846 8082A	Aroclor 1016	ug/l	N						R				
SW-846 8082A	Aroclor 1221	ug/l	N						R				
SW-846 8082A	Aroclor 1232	ug/l	N						R				
SW-846 8082A	Aroclor 1242	ug/l	N						R				
SW-846 8082A	Aroclor 1248	ug/l	N						R				
SW-846 8082A	Aroclor 1254	ug/l	N						R				
SW-846 8082A	Aroclor 1260	ug/l	N						R				
SW-846 8082A	Aroclor-1262	ug/l	N						R				
SW-846 8082A	Aroclor-1268	ug/l	N						R				
SW-846 8260C	1,1,1-Trichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1,2-Trichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1-Dichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,2-Dichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,2-Dichloropropane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/l	N	3	UJ	3	UJ	3	U	3	U	3	U
SW-846 8260C	2-Hexanone	ug/l	N	3	UJ	3	UJ	3	U	3	U	3	U
SW-846 8260C	4-Methyl-2-pentanone	ug/l	N	3	UJ	3	UJ	3	U	3	U	3	U
SW-846 8260C	Acetone	ug/l	N	6	U	6	U	6	U	6	U	6	U
SW-846 8260C	Benzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromodichloromethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromoform	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Carbon Disulfide	ug/l	N	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Carbon Tetrachloride	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chlorobenzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloroform	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Dibromochloromethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Ethylbenzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/l	N	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/l	N	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Tetrachloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Toluene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

			Location	TR10		TR11		EB		EB		TB	
			Field Sample ID	CVX-0015-02		CVX-0015-01		CVX-0005-02		CVX-0012-04		CVX-0002-02	
			Sample Date	9/11/2014		9/11/2014		8/20/2014		8/27/2014		8/14/2014	
			Sample Delivery Group	1502970		1502970		1497631		1499493		1496388	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Regular sample		Regular sample		Equipment Blank		Equipment Blank		Trip Blank	
			Sample Type	SURFACE WATER		SURFACE WATER		Blank Water		Blank Water		Blank Water	
Analytical Method	Parameter Name	Units	Filtered										
SW-846 8260C	trans-1,2-Dichloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Xylenes, Total	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8270D SIM modified	Acenaphthene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	UJ		
SW-846 8270D SIM modified	Acenaphthylene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	UJ		
SW-846 8270D SIM modified	Anthracene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	UJ		
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C1-Fluorenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C1-Naphthalenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C2-Fluorenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C2-Naphthalenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C3-Fluorenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C3-Naphthalenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C4-Naphthalenes	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Chrysene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	UJ		
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Fluoranthene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	UJ		
SW-846 8270D SIM modified	Fluorene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Naphthalene	ug/l	N	0.08	UJ	0.08	UJ	0.08	U	0.08	UJ		
SW-846 8270D SIM modified	Perylene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Phenanthrene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	U		
SW-846 8270D SIM modified	Pyrene	ug/l	N	0.08	U	0.08	U	0.08	U	0.08	UJ		

			Location	TB		TB		TB		TB		TB	
			Field Sample ID	CVX-0003-02		CVX-0005-03		CVX-0006-03		CVX-0012-03		CVX-0015-05	
			Sample Date	8/15/2014		8/20/2014		8/20/2014		8/27/2014		9/11/2014	
			Sample Delivery Group	1496618		1497631		1497595		1499493		1502970	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Trip Blank		Trip Blank		Trip Blank		Trip Blank		Trip Blank	
			Sample Type	Blank Water		Blank Water		Blank Water		Blank Water		Blank Water	
Analytical Method	Parameter Name	Units	Filtered										
SM 2340 C-1997	Total Hardness as CaCO3	mgCaCO3/L	N										
SM 2540 D-1997	Total Suspended Solids	mg/l	N										
SM 4500-H+ B-2000	pH - Hydrogen Ion	SU	N										
SW-846 6020A	Aluminum	mg/l	N										
SW-846 6020A	Aluminum	mg/l	Y										
SW-846 6020A	Antimony	mg/l	N										
SW-846 6020A	Antimony	mg/l	Y										
SW-846 6020A	Arsenic	mg/l	N										
SW-846 6020A	Arsenic	mg/l	Y										
SW-846 6020A	Barium	mg/l	N										
SW-846 6020A	Barium	mg/l	Y										
SW-846 6020A	Beryllium	mg/l	N										
SW-846 6020A	Beryllium	mg/l	Y										
SW-846 6020A	Cadmium	mg/l	N										
SW-846 6020A	Cadmium	mg/l	Y										
SW-846 6020A	Calcium	mg/l	N										
SW-846 6020A	Calcium	mg/l	Y										
SW-846 6020A	Chromium	mg/l	N										
SW-846 6020A	Chromium	mg/l	Y										
SW-846 6020A	Cobalt	mg/l	N										
SW-846 6020A	Cobalt	mg/l	Y										
SW-846 6020A	Copper	mg/l	N										
SW-846 6020A	Copper	mg/l	Y										
SW-846 6020A	IRON	mg/l	N										
SW-846 6020A	IRON	mg/l	Y										
SW-846 6020A	Lead	mg/l	N										
SW-846 6020A	Lead	mg/l	Y										
SW-846 6020A	Magnesium	mg/l	N										
SW-846 6020A	Magnesium	mg/l	Y										
SW-846 6020A	Manganese	mg/l	N										
SW-846 6020A	Manganese	mg/l	Y										
SW-846 6010C	Manganese	mg/l	N										
SW-846 6010C	Manganese	mg/l	Y										
SW-846 7470A	Mercury	mg/l	N										
EPA 1631 Revision E	Mercury	mg/l	N										
EPA 1631 Revision E	Mercury	mg/l	Y										
SW-846 6020A	Nickel	mg/l	N										
SW-846 6020A	Nickel	mg/l	Y										
SW-846 6020A	Potassium	mg/l	N										
SW-846 6020A	Potassium	mg/l	Y										
SW-846 6020A	Selenium	mg/l	N										
SW-846 6020A	Selenium	mg/l	Y										
SW-846 6020A	Silver	mg/l	N										
SW-846 6020A	Silver	mg/l	Y										
SW-846 6020A	Sodium	mg/l	N										

			Location	TB		TB		TB		TB		TB	
			Field Sample ID	CVX-0003-02		CVX-0005-03		CVX-0006-03		CVX-0012-03		CVX-0015-05	
			Sample Date	8/15/2014		8/20/2014		8/20/2014		8/27/2014		9/11/2014	
			Sample Delivery Group	1496618		1497631		1497595		1499493		1502970	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Trip Blank		Trip Blank		Trip Blank		Trip Blank		Trip Blank	
			Sample Type	Blank Water		Blank Water		Blank Water		Blank Water		Blank Water	
Analytical Method	Parameter Name	Units	Filtered										
SW-846 6020A	Sodium	mg/l	Y										
SW-846 6020A	Thallium	mg/l	N										
SW-846 6020A	Thallium	mg/l	Y										
SW-846 6020A	Vanadium	mg/l	N										
SW-846 6020A	Vanadium	mg/l	Y										
SW-846 6020A	Zinc	mg/l	N										
SW-846 6020A	Zinc	mg/l	Y										
SW-846 8082A	Aroclor 1016	ug/l	N										
SW-846 8082A	Aroclor 1221	ug/l	N										
SW-846 8082A	Aroclor 1232	ug/l	N										
SW-846 8082A	Aroclor 1242	ug/l	N										
SW-846 8082A	Aroclor 1248	ug/l	N										
SW-846 8082A	Aroclor 1254	ug/l	N										
SW-846 8082A	Aroclor 1260	ug/l	N										
SW-846 8082A	Aroclor-1262	ug/l	N										
SW-846 8082A	Aroclor-1268	ug/l	N										
SW-846 8260C	1,1,1-Trichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1,2-Trichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1-Dichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,2-Dichloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	1,2-Dichloropropane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/l	N	3	U	3	U	3	U	3	U	3	UJ
SW-846 8260C	2-Hexanone	ug/l	N	3	U	3	U	3	U	3	U	3	UJ
SW-846 8260C	4-Methyl-2-pentanone	ug/l	N	3	U	3	U	3	U	3	U	3	UJ
SW-846 8260C	Acetone	ug/l	N	6	U	6	U	6	U	6	U	6	U
SW-846 8260C	Benzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromodichloromethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromoform	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Carbon Disulfide	ug/l	N	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Carbon Tetrachloride	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chlorobenzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloroethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloroform	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Dibromochloromethane	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Ethylbenzene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/l	N	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/l	N	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Tetrachloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Toluene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U

			Location	TB		TB		TB		TB		TB	
			Field Sample ID	CVX-0003-02		CVX-0005-03		CVX-0006-03		CVX-0012-03		CVX-0015-05	
			Sample Date	8/15/2014		8/20/2014		8/20/2014		8/27/2014		9/11/2014	
			Sample Delivery Group	1496618		1497631		1497595		1499493		1502970	
			Matrix	WATER		WATER		WATER		WATER		WATER	
			Sample Purpose	Trip Blank		Trip Blank		Trip Blank		Trip Blank		Trip Blank	
			Sample Type	Blank Water		Blank Water		Blank Water		Blank Water		Blank Water	
Analytical Method	Parameter Name	Units	Filtered										
SW-846 8260C	trans-1,2-Dichloroethene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/l	N	0.5	U	0.5	U	0.5	UJ	0.5	U	0.5	U
SW-846 8260C	Xylenes, Total	ug/l	N	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
SW-846 8270D SIM modified	Acenaphthene	ug/l	N										
SW-846 8270D SIM modified	Acenaphthylene	ug/l	N										
SW-846 8270D SIM modified	Anthracene	ug/l	N										
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/l	N										
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/l	N										
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/l	N										
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/l	N										
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/l	N										
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/l	N										
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/l	N										
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/l	N										
SW-846 8270D SIM modified	C1-Fluorenes	ug/l	N										
SW-846 8270D SIM modified	C1-Naphthalenes	ug/l	N										
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/l	N										
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/l	N										
SW-846 8270D SIM modified	C2-Fluorenes	ug/l	N										
SW-846 8270D SIM modified	C2-Naphthalenes	ug/l	N										
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/l	N										
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/l	N										
SW-846 8270D SIM modified	C3-Fluorenes	ug/l	N										
SW-846 8270D SIM modified	C3-Naphthalenes	ug/l	N										
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/l	N										
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/l	N										
SW-846 8270D SIM modified	C4-Naphthalenes	ug/l	N										
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/l	N										
SW-846 8270D SIM modified	Chrysene	ug/l	N										
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/l	N										
SW-846 8270D SIM modified	Fluoranthene	ug/l	N										
SW-846 8270D SIM modified	Fluorene	ug/l	N										
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/l	N										
SW-846 8270D SIM modified	Naphthalene	ug/l	N										
SW-846 8270D SIM modified	Perylene	ug/l	N										
SW-846 8270D SIM modified	Phenanthrene	ug/l	N										
SW-846 8270D SIM modified	Pyrene	ug/l	N										

ATTACHMENT A-2

VALIDATED LABORATORY SEDIMENT DATA

		Location	TR01_A		TR01_A		TR01_A		TR01_A		TR01_B		TR01_B	
		Field Sample ID	CVX-0004-01		CVX-0004-02		CVX-0004-03		CVX-0004-08		CVX-0004-04		CVX-0004-05	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
		Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.7 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	12400		24400		9340		9270		6870		21700	
SM 2540 G	Moisture	%	34.8		39.7		18.7		26.2		22.1		40.7	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	0.75	J	4.2		0.63	U	0.63	U	0.63	U	2.7	
SW-846 6010C	Cadmium	UMOLES/G	0.000604	J	0.000406	J	0.000254	J	0.000297	J	0.000375	J	0.000378	J
SW-846 6010C	Copper	UMOLES/G	0.0634		0.0508		0.0461		0.0522		0.0444		0.0456	
SW-846 6010C	Lead	UMOLES/G	0.0414	J+	0.0344	J+	0.0278	J+	0.0275	J+	0.0241	J+	0.0248	J+
SW-846 6010C	Nickel	UMOLES/G	0.026		0.032		0.0255		0.0271		0.0316		0.0307	
SW-846 6010C	Silver	UMOLES/G	0.000439	U	0.000432	U	0.00043	U	0.000432	U	0.000439	U	0.000435	U
SW-846 6010C	Zinc	UMOLES/G	0.173	UJ	0.181	UJ	0.141	UJ	0.126	UJ	0.162	UJ	0.196	UJ
SW-846 6020A	Aluminum	mg/kg	11000		16400		13900		16300		13800		9250	
SW-846 6020A	Antimony	mg/Kg	0.128	U	0.135	U	0.103	U	0.112	U	0.105	U	0.136	U
SW-846 6020A	Arsenic	mg/kg	2.87		2.98		3.74		4.46		3.38		1.76	
SW-846 6020A	Barium	mg/kg	50.6		70.4		36.9		46		39.9		36	
SW-846 6020A	Beryllium	mg/Kg	0.404		0.71		0.547		0.616		0.59		0.312	J
SW-846 6020A	Cadmium	mg/kg	0.148	J	0.113	J	0.0246	U	0.0352	J	0.0738	J	0.1	J
SW-846 6020A	Calcium	mg/kg	1650		1630		1170		1350		46900		1350	
SW-846 6020A	Chromium	mg/Kg	12.1		20.2		14.4		17.6		15		9.73	
SW-846 6020A	Cobalt	mg/kg	6.76		10.8		9.15		11.9		11.4		6.7	
SW-846 6020A	Copper	mg/kg	13.9		15.8		9.67		12.4		17.3		11.8	
SW-846 6020A	IRON	mg/kg	16000		28100		28400		36300		35800		14900	
SW-846 6020A	Lead	mg/Kg	12.7		15.8		9.84		10.8		11.1		9.14	
SW-846 6020A	Magnesium	mg/kg	3910		7950		7440		8460		33800		4340	
SW-846 6010C	Manganese	mg/kg	270		270		286		292		372		357	
SW-846 7471B	Mercury	mg/Kg	0.289	U	0.307	U	0.241	U	0.26	U	0.243	U	0.317	U
SW-846 6020A	Nickel	mg/Kg	15.3		25.8		23.2		28.9		26.1		14.6	
SW-846 6020A	Potassium	mg/kg	1120		1880		1450		1700		1000		849	
SW-846 6020A	Selenium	mg/Kg	0.369	J	0.213	J	0.122	U	0.133	U	0.125	U	0.194	J
SW-846 6020A	Silver	mg/Kg	0.139	J	0.0912	J	0.0244	U	0.0266	U	0.0461	J	0.0548	J
SW-846 6020A	Sodium	mg/kg	126		128	U	97.4	U	106	U	134		128	U
SW-846 6020A	Thallium	mg/Kg	0.0793	J	0.116	J	0.0533	J	0.071	J	0.0666	J	0.0499	J
SW-846 6020A	Vanadium	mg/kg	13.1		22.1		17.3		18.2		17.2		9.75	
SW-846 6020A	Zinc	mg/Kg	65.6		91.7		65.1		80.7		89.1		55.3	
SW-846 8082A	Aroclor 1016	ug/kg												
SW-846 8082A	Aroclor 1221	ug/kg												
SW-846 8082A	Aroclor 1232	ug/kg												
SW-846 8082A	Aroclor 1242	ug/kg												
SW-846 8082A	Aroclor 1248	ug/kg												
SW-846 8082A	Aroclor 1254	ug/kg												
SW-846 8082A	Aroclor 1260	ug/kg												
SW-846 8082A	Aroclor-1262	ug/kg												
SW-846 8082A	Aroclor-1268	ug/kg												
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U

		Location	TR01_A		TR01_A		TR01_A		TR01_A		TR01_B		TR01_B	
		Field Sample ID	CVX-0004-01		CVX-0004-02		CVX-0004-03		CVX-0004-08		CVX-0004-04		CVX-0004-05	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
		Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.7 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	5	U	5	U	4	U	4	U	4	U	5	U
SW-846 8260C	2-Hexanone	ug/Kg	3	U	4	U	3	U	3	U	3	U	4	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	3	U	4	U	3	U	3	U	3	U	4	U
SW-846 8260C	Acetone	ug/kg	15	J	10	J	24		7	U	13	J	18	J
SW-846 8260C	Benzene	ug/kg	0.6	U	0.6	U	0.5	U	0.5	U	0.5	U	0.6	U
SW-846 8260C	Bromodichloromethane	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Bromoform	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Carbon Disulfide	ug/kg	3	J	7		2	J	1	U	2	J	16	
SW-846 8260C	Carbon Tetrachloride	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Chlorobenzene	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Chloroethane	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Chloroform	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Dibromochloromethane	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Ethylbenzene	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Tetrachloroethene	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Toluene	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Xylenes, Total	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	1	U	1	U	0.8	U	0.9	U	3		2	J
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	1	J	1	U	0.8	U	0.9	U	1	J	1	J
SW-846 8270D SIM modified	Anthracene	ug/kg	2	J	2	J	0.8	U	0.9	U	6		8	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	17		12	J-	0.8	U	0.9	U	28		45	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	28		18	J-	0.8	U	0.9	U	31		58	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	27		18	J-	0.8	U	0.9	U	38		64	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	19		14	J-	0.8	U	0.9	U	22		47	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	21		18	J-	0.8	U	0.9	U	30		53	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	18		14	J-	0.8	U	0.9	U	25		44	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	11		12	J-	0.8	U	0.9	U	18		33	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	15		11	J-	0.8	U	0.9	U	24		38	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	1	J	1	U	0.8	U	0.9	U	2	J	2	J
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	1	U	1	U	0.9	J	0.9	U	1	J	3	J
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	1	U	1	UJ	0.8	U	0.9	U	0.8	U	1	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	1	U	3	J-	0.8	U	0.9	U	7		13	
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	1	U	1	U	0.8	U	0.9	U	0.8	U	1	U

		Location	TR01_A		TR01_A		TR01_A		TR01_A		TR01_B		TR01_B	
		Field Sample ID	CVX-0004-01		CVX-0004-02		CVX-0004-03		CVX-0004-08		CVX-0004-04		CVX-0004-05	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
		Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.7 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	1	U	1	U	2		0.9	U	2	J	3	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	7		5	J-	1	J	0.9	U	7		10	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	1	U	2	J	0.8	U	0.9	U	5		8	
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	1	U	1	U	0.8	U	0.9	U	0.8	U	1	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	6		2	J	2		0.9	U	2	J	4	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	4		3	J-	0.8	U	0.9	U	4		6	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	1	U	1	UJ	0.8	U	0.9	U	0.8	U	1	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	1	J	1	U	0.8	U	0.9	U	0.8	U	1	U
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	1	U	1	UJ	0.8	U	0.9	U	0.8	U	1	U
SW-846 8270D SIM modified	Chrysene	ug/kg	24		18	J-	0.8	U	0.9	U	39		66	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	4		3	J-	0.8	U	0.9	U	6		10	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	50		37	J-	0.8	U	2	J	87		130	
SW-846 8270D SIM modified	Fluorene	ug/kg	2	J	1	J	0.8	U	0.9	U	4		3	
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	21		16	J-	0.8	U	0.9	U	25		50	
SW-846 8270D SIM modified	Naphthalene	ug/kg	2	J	1	J	0.8	U	0.9	U	0.9	J	2	J
SW-846 8270D SIM modified	Perylene	ug/kg	41		19	J-	11		26		15		28	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	13		11	J-	0.8	U	0.9	U	40		43	
SW-846 8270D SIM modified	Pyrene	ug/kg	35		26	J-	0.8	U	1	J	56		87	

		Location	TR01_B		TR01_B		TR01_C		TR01_C		TR01_C		TR01_C	
		Field Sample ID	CVX-0004-06		CVX-0004-07		CVX-0004-09		CVX-0004-10		CVX-0004-11		CVX-0004-12	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
		Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485	
		Sample Depth	1-2 FT		1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-2.9 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	1590		1680		9860		1050		1550		1220	
SM 2540 G	Moisture	%	22.4		15.2		32.9		20.1		26.2		21.1	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	1.8	J	1.3	J	6.1		1.6	J	1.6	J	0.63	U
SW-846 6010C	Cadmium	UMOLES/G	0.000494	J	0.000769	J	0.000706	J	0.000393	J	0.0008	J	0.000344	J
SW-846 6010C	Copper	UMOLES/G	0.0371		0.0562		0.0474		0.035		0.0549	J-	0.0558	
SW-846 6010C	Lead	UMOLES/G	0.0329	J+	0.0393	J+	0.0316	J+	0.0297	J+	0.0322	J+	0.029	J+
SW-846 6010C	Nickel	UMOLES/G	0.0316		0.0425		0.0419		0.0288		0.0312		0.0311	
SW-846 6010C	Silver	UMOLES/G	0.000423	U	0.000426	U	0.00043	U	0.000425	U		R	0.000437	U
SW-846 6010C	Zinc	UMOLES/G	0.218	UJ	0.266	UJ	0.302	UJ	0.257	UJ	0.313	UJ	0.176	UJ
SW-846 6020A	Aluminum	mg/kg	15300		13200		14500		8690		15100		17700	
SW-846 6020A	Antimony	mg/Kg	0.105	U	0.0995	U	0.121	U	0.103	U	0.109	U	0.105	U
SW-846 6020A	Arsenic	mg/kg	2.04		2.5		3.01		1.79		1.51	J+	2.12	
SW-846 6020A	Barium	mg/kg	52.2		36.4		73		44.6		39.2	J-	44.1	
SW-846 6020A	Beryllium	mg/Kg	0.708		0.464		0.712		0.442		0.412	J+	0.532	
SW-846 6020A	Cadmium	mg/kg	0.0766	J	0.0903	J	0.229	J	0.12	J	0.0708	J	0.0912	J
SW-846 6020A	Calcium	mg/kg	1510		824		2440		1790		1150	J+	1070	
SW-846 6020A	Chromium	mg/Kg	21.4		14.2		17.3		12.6		13.7	J+	18.8	
SW-846 6020A	Cobalt	mg/kg	11.2		12.4		11.2		7.91		9.52	J+	13.3	
SW-846 6020A	Copper	mg/kg	18.2		19.6		26.5		14.8		10.3	J+	12.7	
SW-846 6020A	IRON	mg/kg	27100		32200		26000		16500		28700		32400	
SW-846 6020A	Lead	mg/Kg	21.6		14.3		21.3		13.2		9.71	J-	13.3	
SW-846 6020A	Magnesium	mg/kg	7650		5930		6500		5300		6910		10900	
SW-846 6010C	Manganese	mg/kg	316		441		522		300		306		324	
SW-846 7471B	Mercury	mg/Kg	0.243	U	0.233	U	0.296	U	0.236	U	0.267	U	0.238	U
SW-846 6020A	Nickel	mg/Kg	25.9		26.7		26.3		19.2		22.3	J-	28.1	
SW-846 6020A	Potassium	mg/kg	1780	J	823	J	1430		977		1150	J	1080	
SW-846 6020A	Selenium	mg/Kg	0.174	J	0.118	U	0.369	J	0.192	J	0.129	U	0.124	U
SW-846 6020A	Silver	mg/Kg	0.0272	J	0.0273	J	0.142	J	0.0692	J	0.0356	J	0.0249	U
SW-846 6020A	Sodium	mg/kg	99.1	U	94.3	U	151		97.2	U	103	U	99.4	U
SW-846 6020A	Thallium	mg/Kg	0.0828	J	0.041	J	0.111	J	0.0576	J	0.0486	J	0.0641	J
SW-846 6020A	Vanadium	mg/kg	19.8		12.6		17.5		12.5		13.7	J+	18.4	
SW-846 6020A	Zinc	mg/Kg	79.5		91.3		108		72.2		79.5		86.4	
SW-846 8082A	Aroclor 1016	ug/kg					5.4	UJ	4.5	UJ	4.9	UJ	4.6	UJ
SW-846 8082A	Aroclor 1221	ug/kg					6.9	UJ	5.8	UJ	6.2	UJ	5.8	UJ
SW-846 8082A	Aroclor 1232	ug/kg					12	UJ	10	UJ	11	UJ	10	UJ
SW-846 8082A	Aroclor 1242	ug/kg					4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ
SW-846 8082A	Aroclor 1248	ug/kg					4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ
SW-846 8082A	Aroclor 1254	ug/kg					4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ
SW-846 8082A	Aroclor 1260	ug/kg					7.3	UJ	6.1	UJ	6.6	UJ	6.2	UJ
SW-846 8082A	Aroclor-1262	ug/kg					4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ
SW-846 8082A	Aroclor-1268	ug/kg					4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ
SW-846 8082A	Polychlorinated biphenyls	ug/kg					4.9	UJ	4.1	UJ	4.5	UJ	4.2	UJ
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U

		Location	TR01_B		TR01_B		TR01_C		TR01_C		TR01_C		TR01_C	
		Field Sample ID	CVX-0004-06		CVX-0004-07		CVX-0004-09		CVX-0004-10		CVX-0004-11		CVX-0004-12	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
		Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485	
		Sample Depth	1-2 FT		1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-2.9 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	4	U	3	U	5	U	4	U	4	U	3	U
SW-846 8260C	2-Hexanone	ug/Kg	3	U	2	U	4	U	3	U	3	U	3	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	3	U	2	U	4	U	3	U	3	U	3	U
SW-846 8260C	Acetone	ug/kg	10	J	10	J	28		24		11	J	16	J
SW-846 8260C	Benzene	ug/kg	0.5	U	0.4	U	0.6	U	0.5	U	0.5	U	0.4	U
SW-846 8260C	Bromodichloromethane	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Bromoform	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Carbon Disulfide	ug/kg	1	J	2	J	8		6		1	J	5	
SW-846 8260C	Carbon Tetrachloride	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Chlorobenzene	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Chloroethane	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Chloroform	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Dibromochloromethane	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Ethylbenzene	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Tetrachloroethene	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Toluene	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8260C	Xylenes, Total	ug/kg	0.9	U	0.8	U	1	U	1	U	1	U	0.9	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	0.9	U	0.8	U	2	J	1	J	0.9	U	0.8	U
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	0.9	U	0.8	U	2	J	0.8	U	0.9	U	0.8	U
SW-846 8270D SIM modified	Anthracene	ug/kg	1	J	0.8	U	8		5		2	J	0.8	U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	7		4		42		38		8		5	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	10		6		55		42		14		6	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	10		6		70		42		14		6	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	8		5		48		34		13		5	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	11		6		54		38		11		6	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	8		5		45		31		10		5	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	5		3		26		52		14		3	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	6		4		36		30		9		4	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	0.9	U	0.8	U	3		2	J	1	J	0.8	U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	1	J	0.8	U	1	J	0.8	U	3		0.8	U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	0.9	U	0.8	U	1	U	0.8	U	0.9	U	0.8	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	2	J	2		11		0.8	U	0.9	U	0.8	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	0.9	U	0.8	U	1	U	0.8	U	0.9	U	0.8	U

		Location	TR01_B		TR01_B		TR01_C		TR01_C		TR01_C		TR01_C	
		Field Sample ID	CVX-0004-06		CVX-0004-07		CVX-0004-09		CVX-0004-10		CVX-0004-11		CVX-0004-12	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
		Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485	
		Sample Depth	1-2 FT		1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-2.9 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	2	J	1	J	2	J	0.9	J	12		0.8	U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	3		2		12		11		5		2	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	0.9	U	2	J	5		6		7		0.8	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	0.9	U	0.8	U	1	U	0.8	U	0.9	U	0.8	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	1	J	0.8	U	3		2	J	4		0.8	U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	0.9	U	2		7		6		4		2	J
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	0.9	U	0.8	U	1	U	0.8	U	7		0.8	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	0.9	U	0.8	U	2	J	1	J	3		0.8	U
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	0.9	U	0.8	U	1	U	0.8	U	0.9	U	0.8	U
SW-846 8270D SIM modified	Chrysene	ug/kg	10		6		61		44		13		6	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	2	J	1	J	10		7		2	J	1	J
SW-846 8270D SIM modified	Fluoranthene	ug/kg	18		11		130		110		26		12	
SW-846 8270D SIM modified	Fluorene	ug/kg	0.9	U	0.8	U	3		2	J	2	J	0.8	U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	9		6		53		36		10		5	
SW-846 8270D SIM modified	Naphthalene	ug/kg	0.9	U	0.8	U	1	J	0.8	U	1	J	0.8	U
SW-846 8270D SIM modified	Perylene	ug/kg	16		25		27		24		15		18	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	4		3		38		14		11		4	
SW-846 8270D SIM modified	Pyrene	ug/kg	12		8		87		73		21		9	

		Location	TR01_D		TR01_D		TR01_D		TR01_D		TR01_E		TR01_E	
		Field Sample ID	CVX-0004-13		CVX-0004-14		CVX-0004-15		CVX-0004-16		CVX-0004-17		CVX-0004-18	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
		Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	11700		27500	J+	2440		4080		116	U	110	U
SM 2540 G	Moisture	%	32.2		45.1		24.9		20.5		14		9.3	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	3		2.5		0.63	U	1.3	J	0.63	UJ	0.63	U
SW-846 6010C	Cadmium	UMOLES/G	0.000634	J	0.000819	J	0.0003	J	0.000363	J	0.000517	J	0.000272	J
SW-846 6010C	Copper	UMOLES/G	0.0329		0.0696		0.0414		0.0516		0.0397		0.0327	
SW-846 6010C	Lead	UMOLES/G	0.022	J+	0.0267	J+	0.0241	J+	0.0272	J+	0.0221	J+	0.0195	J+
SW-846 6010C	Nickel	UMOLES/G	0.0305		0.0328		0.0334		0.0354		0.0212		0.0166	
SW-846 6010C	Silver	UMOLES/G	0.000439	U	0.000431	U	0.000431	U	0.000427	U	0.000421	U	0.000431	U
SW-846 6010C	Zinc	UMOLES/G	0.276	J+	0.312	J+	0.261	J+	0.254	J+	0.123	UJ	0.104	J+
SW-846 6020A	Aluminum	mg/kg	12900		16100		11500		12300		11300		11500	
SW-846 6020A	Antimony	mg/Kg	0.121	U	0.152	U	0.108	U	0.103	U	0.0953	U	0.0895	U
SW-846 6020A	Arsenic	mg/kg	1.61		4.29		1.26		1.74		1.7		2.51	
SW-846 6020A	Barium	mg/kg	51.1		85.6		35.8		37.1		25.9		25.4	
SW-846 6020A	Beryllium	mg/Kg	0.369		0.649		0.403		0.449		0.35		0.348	
SW-846 6020A	Cadmium	mg/kg	0.103	J	0.32	J	0.0637	J	0.0921	J	0.0452	J	0.0541	J
SW-846 6020A	Calcium	mg/kg	2180		3860		1100		1580		868	J	840	J
SW-846 6020A	Chromium	mg/Kg	12.8		19.8		13		13.5		13.9		10.8	
SW-846 6020A	Cobalt	mg/kg	8.89		13.1		9.77		9.27		9.25		8.34	
SW-846 6020A	Copper	mg/kg	12.5		25.5		9.1		9.81		9.33		8.21	
SW-846 6020A	IRON	mg/kg	21000		30100		22400		24400		22200		24900	
SW-846 6020A	Lead	mg/Kg	9.19		20.2		9.21		10.5		6.98		6.94	
SW-846 6020A	Magnesium	mg/kg	5970		7880		6600		6850		6840		6480	
SW-846 6010C	Manganese	mg/kg	438		413		261		329		302		308	
SW-846 7471B	Mercury	mg/Kg	0.289	U	0.359	U	0.261	U	0.247	U	0.225	U	0.21	U
SW-846 6020A	Nickel	mg/Kg	20.5		28.5		21.4		21.5		19.4		19.4	
SW-846 6020A	Potassium	mg/kg	1160		1830		1080		1110		916		879	
SW-846 6020A	Selenium	mg/Kg	0.175	J	0.503	J	0.128	U	0.122	U	0.113	U	0.106	U
SW-846 6020A	Silver	mg/Kg	0.0408	J	0.135	J	0.0256	U	0.0287	J	0.0226	U	0.0212	U
SW-846 6020A	Sodium	mg/kg	115	U	178		102	U	97.7	U	903	U	848	U
SW-846 6020A	Thallium	mg/Kg	0.0672	J	0.126	J	0.0545	J	0.0496	J	0.045	J	0.0387	J
SW-846 6020A	Vanadium	mg/kg	12.6		21.5		13.9		13.3		13.2		12.5	
SW-846 6020A	Zinc	mg/Kg	78.2		126		77.5		70.2		55.1		49.3	
SW-846 8082A	Aroclor 1016	ug/kg												
SW-846 8082A	Aroclor 1221	ug/kg												
SW-846 8082A	Aroclor 1232	ug/kg												
SW-846 8082A	Aroclor 1242	ug/kg												
SW-846 8082A	Aroclor 1248	ug/kg												
SW-846 8082A	Aroclor 1254	ug/kg												
SW-846 8082A	Aroclor 1260	ug/kg												
SW-846 8082A	Aroclor-1262	ug/kg												
SW-846 8082A	Aroclor-1268	ug/kg												
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U

		Location	TR01_D		TR01_D		TR01_D		TR01_D		TR01_E		TR01_E	
		Field Sample ID	CVX-0004-13		CVX-0004-14		CVX-0004-15		CVX-0004-16		CVX-0004-17		CVX-0004-18	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
		Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	5	U	6	U	4	U	5	U	4	U	3	U
SW-846 8260C	2-Hexanone	ug/Kg	4	U	5	U	3	U	4	U	3	U	2	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	4	U	5	U	3	U	4	U	3	U	2	U
SW-846 8260C	Acetone	ug/kg	53		67		11	J	22	J	6	U	6	U
SW-846 8260C	Benzene	ug/kg	0.6	U	0.8	U	0.5	U	0.6	U	0.5	U	0.4	U
SW-846 8260C	Bromodichloromethane	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Bromoform	ug/kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	3	U	3	U	2	U	2	U	2	U	2	U
SW-846 8260C	Carbon Disulfide	ug/kg	9		8		4	J	3	J	1	J	0.8	U
SW-846 8260C	Carbon Tetrachloride	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Chlorobenzene	ug/kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Chloroethane	ug/Kg	3	U	3	U	2	U	2	U	2	U	2	U
SW-846 8260C	Chloroform	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	3	U	3	U	2	U	2	U	2	U	2	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Dibromochloromethane	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Ethylbenzene	ug/kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	3	U	3	U	2	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Tetrachloroethene	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Toluene	ug/kg	1	U	3	J	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8260C	Xylenes, Total	ug/kg	1	U	2	U	1	U	1	U	0.9	U	0.8	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	7		4		0.9	U	0.8	U	0.8	U	0.7	U
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	1	J	6		0.9	U	0.8	U	0.8	U	0.7	U
SW-846 8270D SIM modified	Anthracene	ug/kg	29		18		2	J	1	J	0.8	U	0.7	U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	95		56		10		6		3		0.7	U
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	110		67		12		8		4		0.7	U
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	100		60		12		9		4		0.7	U
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	83		41		9		7		3		0.7	U
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	100		59		12		7		4		0.7	U
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	79		44		9		7		3		0.7	U
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	56		120		0.9	U	5		2	J	0.7	U
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	95		52		9		6		3		0.7	U
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	5		7		0.9	U	0.8	U	0.8	U	0.7	U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	2	J	5		0.9	J	0.9	J	0.8	U	0.7	U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	1	U	1	U	0.9	U	0.8	U	0.8	U	0.7	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	1	U	1	U	0.9	U	0.8	U	0.8	U	0.7	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	1	U	1	U	0.9	U	0.8	U	0.8	U	0.7	U

		Location	TR01_D		TR01_D		TR01_D		TR01_D		TR01_E		TR01_E	
		Field Sample ID	CVX-0004-13		CVX-0004-14		CVX-0004-15		CVX-0004-16		CVX-0004-17		CVX-0004-18	
		Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
		Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	3		8		0.9	U	1	J	1	J	0.7	U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	17		23		3		4		2	J	0.7	U
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	6		1	U	0.9	U	0.8	U	0.8	U	0.7	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	1	U	1	U	0.9	U	0.8	U	0.8	U	0.7	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	3		9		2	J	2	J	1	J	0.7	U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	9		12		2		2		1	J	0.7	U
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	1	U	1	U	0.9	U	0.8	U	0.8	U	0.7	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	2	J	6		0.9	U	1	J	0.8	J	0.7	U
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	1	U	1	U	0.9	U	0.8	U	0.8	U	0.7	U
SW-846 8270D SIM modified	Chrysene	ug/kg	120		69		13		9		4		0.7	U
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	19		11		2		2	J	0.8	U	0.7	U
SW-846 8270D SIM modified	Fluoranthene	ug/kg	300		170		23		19		7		0.7	U
SW-846 8270D SIM modified	Fluorene	ug/kg	10		13		1	J	0.8	J	0.8	U	0.7	U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	92		48		10		7		3		0.7	U
SW-846 8270D SIM modified	Naphthalene	ug/kg	2	J	3	J	2	J	0.8	U	0.8	U	0.7	U
SW-846 8270D SIM modified	Perylene	ug/kg	49		43		9		25		9		0.7	J
SW-846 8270D SIM modified	Phenanthrene	ug/kg	150		110		7		5		3		0.7	U
SW-846 8270D SIM modified	Pyrene	ug/kg	190		100		15		13		5		0.7	U

		Location	TR02_A		TR02_A		TR02_B		TR02_C		TR02_D		TR02_D	
		Field Sample ID	CVX-0001-01		CVX-0001-02		CVX-0005-01		CVX-0005-04		CVX-0005-05		CVX-0005-06	
		Sample Date	8/14/2014		8/14/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014	
		Sample Delivery Group	1496370		1496370		1497631		1497631		1497631		1497631	
		Sample Depth	0-0.5 FT		0.5-1 FT		0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	21600		4860		2330		8090		10400		3560	
SM 2540 G	Moisture	%	42.4		31.7		24.8		29		42.8		24.9	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	0.63	U	0.63	U	0.71	J	0.63	U	0.63	U	0.63	U
SW-846 6010C	Cadmium	UMOLES/G	0.000558	J	0.000543	J	0.000334	J	0.000463	J	0.000586	J	0.000436	J
SW-846 6010C	Copper	UMOLES/G	0.0373		0.0447		0.0374		0.0321		0.0324		0.035	
SW-846 6010C	Lead	UMOLES/G	0.0156	J+	0.0205	J+	0.018		0.0202		0.022		0.0209	
SW-846 6010C	Nickel	UMOLES/G	0.0167		0.0233		0.0223		0.0294		0.0269		0.0263	
SW-846 6010C	Silver	UMOLES/G	0.00043	U	0.000425	U	0.000421	U	0.00043	U	0.000439	U	0.000427	U
SW-846 6010C	Zinc	UMOLES/G	0.158	UJ	0.146	UJ	0.14		0.165		0.176		0.166	
SW-846 6020A	Aluminum	mg/kg	6290		9120		13400		12700		17300		13300	
SW-846 6020A	Antimony	mg/Kg	0.0836	U	0.0836	U	0.109	U	0.115	U	0.146	U	0.112	U
SW-846 6020A	Arsenic	mg/Kg	1.43	J	2.34		1.79		2.51		2.97		2.72	
SW-846 6020A	Barium	mg/kg	29.3	J+	44.2		48.1		67.1		66.1		51.2	
SW-846 6020A	Beryllium	mg/Kg	0.241	J+	0.385		0.402		0.558		0.563		0.438	
SW-846 6020A	Cadmium	mg/kg	0.079	J	0.105	J	0.0814	J	0.142	J	0.142	J	0.099	J
SW-846 6020A	Calcium	mg/kg	1560	J	2250	J-	3470		3860		2370		1520	
SW-846 6020A	Chromium	mg/Kg	6.7	J	11.8		13		15		16.8		13.4	
SW-846 6020A	Cobalt	mg/kg	5.18	J+	9.94		9.37		10.9		11.2		9.15	
SW-846 6020A	Copper	mg/kg	7.13	J+	11		10.5		13.3		14.6		10.6	
SW-846 6020A	IRON	mg/kg	10600		15300		22800		19800		26000		21700	
SW-846 6020A	Lead	mg/Kg	5.26	J+	7.95		9		10.5		11.5		8.85	
SW-846 6020A	Magnesium	mg/kg	2620	J	5270		6190		6550		6740		5690	
SW-846 6010C	Manganese	mg/kg	145		188		327		332		379		274	
SW-846 7471B	Mercury	mg/Kg	0.0099	U	0.0098	U	0.0126	U	0.0137	U	0.0167	U	0.0132	U
SW-846 6020A	Nickel	mg/Kg	10	J+	19.1		20.9		23.6		23.7		19.9	
SW-846 6020A	Potassium	mg/kg	398	J	670		1090		1160		1210		999	
SW-846 6020A	Selenium	mg/Kg	0.313	J	0.405	J	0.193	J	0.275	J	0.385	J	0.25	J
SW-846 6020A	Silver	mg/Kg	0.0263	J	0.0198	U	0.0315	J	0.0406	J	0.0382	J	0.0266	U
SW-846 6020A	Sodium	mg/kg	70	J	69.2	J	103	U	109	U	138	U	107	U
SW-846 6020A	Thallium	mg/Kg	0.0491	J	0.0493	J	0.0617	J	0.0913	J	0.0971	J	0.0895	J
SW-846 6020A	Vanadium	mg/kg	6.75	J+	11.1		14		16.2		17.5		14	
SW-846 6020A	Zinc	mg/Kg	34.5		45.1		63.5		73.7		77		61.2	
SW-846 8082A	Aroclor 1016	ug/kg												
SW-846 8082A	Aroclor 1221	ug/kg												
SW-846 8082A	Aroclor 1232	ug/kg												
SW-846 8082A	Aroclor 1242	ug/kg												
SW-846 8082A	Aroclor 1248	ug/kg												
SW-846 8082A	Aroclor 1254	ug/kg												
SW-846 8082A	Aroclor 1260	ug/kg												
SW-846 8082A	Aroclor-1262	ug/kg												
SW-846 8082A	Aroclor-1268	ug/kg												
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	0.9	U		R		R		R	1	U	1	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	0.9	U		R	0.9	U	1	U	1	U	1	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U

		Location	TR02_A		TR02_A		TR02_B		TR02_C		TR02_D		TR02_D	
		Field Sample ID	CVX-0001-01		CVX-0001-02		CVX-0005-01		CVX-0005-04		CVX-0005-05		CVX-0005-06	
		Sample Date	8/14/2014		8/14/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014	
		Sample Delivery Group	1496370		1496370		1497631		1497631		1497631		1497631	
		Sample Depth	0-0.5 FT		0.5-1 FT		0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	4	U	3	U	4	U	5	U	6	U	4	UJ
SW-846 8260C	2-Hexanone	ug/Kg	3	U		R	3	U	4	U	4	U	3	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	3	U	2	U	3	U	4	U	4	U	3	U
SW-846 8260C	Acetone	ug/kg	45		20		9	J	24		32		26	
SW-846 8260C	Benzene	ug/kg	0.5	U	0.4	U	0.5	U	0.6	U	0.7	U	0.5	U
SW-846 8260C	Bromodichloromethane	ug/kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	Bromoform	ug/kg	0.9	U		R	0.9	U	1	U	1	U	1	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	2	U	2	U	2	U	2	U	3	U	2	U
SW-846 8260C	Carbon Disulfide	ug/kg	2	J	0.8	U	0.9	U	1	U	1	U	1	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	Chlorobenzene	ug/kg	0.9	U		R	0.9	U	1	U	1	U	1	U
SW-846 8260C	Chloroethane	ug/Kg	2	U	2	U	2	U	2	U	3	U	2	U
SW-846 8260C	Chloroform	ug/Kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	2	U	2	U	2	U	2	U	3	U	2	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	Dibromochloromethane	ug/Kg	0.9	U		R	0.9	U	1	U	1	U	1	U
SW-846 8260C	Ethylbenzene	ug/kg	0.9	U		R	0.9	U	1	U	1	U	1	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	2	U	2	U	2	U	2	U	3	U	2	U
SW-846 8260C	Styrene	ug/Kg	0.9	U		R	0.9	U	1	U	1	U	1	U
SW-846 8260C	Tetrachloroethene	ug/Kg	0.9	U		R	0.9	U	1	U	1	U	1	U
SW-846 8260C	Toluene	ug/kg	0.9	U		R	1	J	1	U	1	U	1	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	0.9	U		R	0.9	U	1	U	1	U	1	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	0.9	U	0.8	U	0.9	U	1	U	1	U	1	U
SW-846 8260C	Xylenes, Total	ug/kg	0.9	U		R	0.9	U	1	U	1	U	1	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	0.7	U	0.7	U	0.9	U	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	0.7	U	0.7	U	0.9	U	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	Anthracene	ug/kg	0.7	U	0.7	U	1	J	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	0.7	UJ	0.7	U	7		3		1	U	0.9	U
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	0.7	UJ	0.7	U	10		4		1	U	0.9	U
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	0.8	J	0.7	U	12		5		1	J	0.9	U
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	0.7	UJ	0.7	U	9		3		1	U	0.9	U
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	0.7	J	0.7	U	10		4		1	U	0.9	U
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	0.7	UJ	0.7	U	9		3		1	U	0.9	U
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	0.7	UJ	0.7	U	4		2	J	1	U	0.9	U
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	0.9	J	0.7	U	7		2	J	1	U	0.9	U
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	0.7	U	0.7	U	0.9	U	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	0.7	U	0.7	U	1	J	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	0.7	U	0.7	U	0.9	U	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	0.7	UJ	0.7	U	2	J	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	0.7	U	0.7	U	0.9	U	0.9	U	1	U	0.9	U

		Location	TR02_A		TR02_A		TR02_B		TR02_C		TR02_D		TR02_D	
		Field Sample ID	CVX-0001-01		CVX-0001-02		CVX-0005-01		CVX-0005-04		CVX-0005-05		CVX-0005-06	
		Sample Date	8/14/2014		8/14/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014	
		Sample Delivery Group	1496370		1496370		1497631		1497631		1497631		1497631	
		Sample Depth	0-0.5 FT		0.5-1 FT		0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	0.7	U	0.7	U	1	J	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	0.8	J	0.7	U	3		2	J	1	U	0.9	U
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	0.7	UJ	0.7	U	0.9	U	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	0.7	U	0.7	U	0.9	U	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	0.7	U	0.7	U	1	J	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	0.7	U	0.7	U	2		0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	0.7	UJ	0.7	U	0.9	U	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	0.7	U	0.7	U	0.9	U	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	0.7	U	0.7	U	0.9	U	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	Chrysene	ug/kg	0.9	J	0.7	U	12		5		1	U	0.9	U
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	0.7	UJ	0.7	U	1	J	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	Fluoranthene	ug/kg	2	J-	0.7	U	21	J-	7	J-	2	J	0.9	UJ
SW-846 8270D SIM modified	Fluorene	ug/kg	0.7	U	0.7	U	0.9	U	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	0.7	UJ	0.7	U	9		4		1	U	0.9	U
SW-846 8270D SIM modified	Naphthalene	ug/kg	0.7	U	0.7	U	1	J	0.9	U	1	U	0.9	U
SW-846 8270D SIM modified	Perylene	ug/kg	55	J-	99		23		55		610		21	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	0.8	J	0.7	U	8		3		1	U	0.9	U
SW-846 8270D SIM modified	Pyrene	ug/kg	1	J	0.7	U	17		6		2	J	0.9	U

		Location	TR02_E		TR02_E		TR02_E		TR02_E		TR03_C		TR03_C	
		Field Sample ID	CVX-0005-07		CVX-0005-08		CVX-0005-09		CVX-0005-10		CVX-0011-12		CVX-0011-13	
		Sample Date	8/20/2014		8/20/2014		8/20/2014		8/20/2014		8/27/2014		8/27/2014	
		Sample Delivery Group	1497631		1497631		1497631		1497631		1499492		1499492	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.75 FT		0-0.5 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	38300		64400		16800		5720		2650	J	929	J
SM 2540 G	Moisture	%	67.6		72.3		36.9		27.4		18.3		16.9	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	5.8		5.6		0.8	J	0.63	U	1.6	J	0.63	U
SW-846 6010C	Cadmium	UMOLES/G	0.00186	J	0.000722	J	0.000703	J	0.000451	J	0.000511	J	0.000419	J
SW-846 6010C	Copper	UMOLES/G	0.0223		0.0201		0.0227		0.0272		0.0743		0.0582	
SW-846 6010C	Lead	UMOLES/G	0.0663		0.0286		0.0216		0.0206		0.0629	J	0.0348	J
SW-846 6010C	Nickel	UMOLES/G	0.0347		0.0249		0.02		0.0256		0.068		0.0746	
SW-846 6010C	Silver	UMOLES/G	0.000426	U	0.000423	U	0.000438	U	0.000421	U	0.000427	U	0.000425	U
SW-846 6010C	Zinc	UMOLES/G	0.457		0.229		0.18		0.168		0.198		0.16	
SW-846 6020A	Aluminum	mg/kg	22300		26500		14600		13500		11700		10200	
SW-846 6020A	Antimony	mg/Kg	0.258	U	0.325	J	0.13	U	0.115	U	0.102	U	0.0967	U
SW-846 6020A	Arsenic	mg/kg	6.1		6.48		2.31		1.72		3.04		3.3	
SW-846 6020A	Barium	mg/kg	142		169		66.7		55.3		28.8		35.3	
SW-846 6020A	Beryllium	mg/Kg	1.1		1.19		0.527		0.395		0.432		0.474	
SW-846 6020A	Cadmium	mg/kg	0.693		0.629	J	0.171	J	0.0648	J	0.0727	J	0.0857	J
SW-846 6020A	Calcium	mg/kg	5670		6750		2260		1070		3120		2920	
SW-846 6020A	Chromium	mg/Kg	26		32.3		16		13.5		25		26.2	
SW-846 6020A	Cobalt	mg/kg	16.8		18.5		10.9		9.7		10.6		8.87	
SW-846 6020A	Copper	mg/kg	44.4		57.4		13.6		8.86		13.8		14.7	
SW-846 6020A	IRON	mg/kg	27100		34300		22700		22500		26900		24200	
SW-846 6020A	Lead	mg/Kg	52.2		50.4		10.5		7.49		12.7		16.7	
SW-846 6020A	Magnesium	mg/kg	7160		8400		6330		6620		8040		7250	
SW-846 6010C	Manganese	mg/kg	732		1040		316		283		341		297	
SW-846 7471B	Mercury	mg/Kg	0.0849	J	0.107	J	0.0148	U	0.0128	U	0.0121	U	0.0117	U
SW-846 6020A	Nickel	mg/Kg	36.3		42.2		22.5		21.9		29.2		28.4	
SW-846 6020A	Potassium	mg/kg	1990		2300		1170		1080		757		820	
SW-846 6020A	Selenium	mg/Kg	1.02	J	1.03	J	0.373	J	0.136	U	0.121	U	0.115	U
SW-846 6020A	Silver	mg/Kg	0.318	J	0.368	J	0.0308	U	0.0273	U	0.0242	U	0.0229	U
SW-846 6020A	Sodium	mg/kg	244	U	283	U	123	U	109	U	74.2	J	63.9	J
SW-846 6020A	Thallium	mg/Kg	0.213	J	0.299	J	0.0987	J	0.0651	J	0.0475	J	0.0432	J
SW-846 6020A	Vanadium	mg/kg	30.1		34.5		15.4		13.4		14.7		13.5	
SW-846 6020A	Zinc	mg/Kg	174		204		71.7		63.3		72.8		60.3	
SW-846 8082A	Aroclor 1016	ug/kg	11	UJ	13	UJ	5.7	UJ	5	UJ	4.3	U	4.3	U
SW-846 8082A	Aroclor 1221	ug/kg	14	UJ	17	UJ	7.3	UJ	6.3	UJ	5.5	U	5.4	U
SW-846 8082A	Aroclor 1232	ug/kg	25	UJ	29	UJ	13	UJ	11	UJ	9.6	U	9.5	U
SW-846 8082A	Aroclor 1242	ug/kg	10	UJ	12	UJ	5.2	UJ	4.5	UJ	4	U	3.9	U
SW-846 8082A	Aroclor 1248	ug/kg	10	UJ	12	UJ	5.2	UJ	4.5	UJ	4	U	3.9	U
SW-846 8082A	Aroclor 1254	ug/kg	10	UJ	12	UJ	5.2	UJ	4.5	UJ	4	U	3.9	U
SW-846 8082A	Aroclor 1260	ug/kg	15	UJ	18	UJ	7.8	UJ	6.7	UJ	5.9	U	5.8	U
SW-846 8082A	Aroclor-1262	ug/kg	10	UJ	12	UJ	5.2	UJ	4.5	UJ	4	U	3.9	U
SW-846 8082A	Aroclor-1268	ug/kg	10	UJ	12	UJ	5.2	UJ	4.5	UJ	4	U	3.9	U
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg		R		R		R	1	U		R	1	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	3	U	4	U	2	U	1	U	1	U	1	U

		Location	TR02_E		TR02_E		TR02_E		TR02_E		TR03_C		TR03_C	
		Field Sample ID	CVX-0005-07		CVX-0005-08		CVX-0005-09		CVX-0005-10		CVX-0011-12		CVX-0011-13	
		Sample Date	8/20/2014		8/20/2014		8/20/2014		8/20/2014		8/27/2014		8/27/2014	
		Sample Delivery Group	1497631		1497631		1497631		1497631		1499492		1499492	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.75 FT		0-0.5 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	43		49		7	U	4	UJ	4	U	4	U
SW-846 8260C	2-Hexanone	ug/Kg	9	U	13	U	5	U	3	U	3	U	3	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	9	U	13	U	5	U	3	U	3	U	3	U
SW-846 8260C	Acetone	ug/kg	490	J+	490		49		12	J	11	J	10	J
SW-846 8260C	Benzene	ug/kg	2	U	2	U	0.8	U	0.5	U	0.5	U	0.5	U
SW-846 8260C	Bromodichloromethane	ug/kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Bromoform	ug/kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	6	U	9	U	3	U	2	U	2	U	2	U
SW-846 8260C	Carbon Disulfide	ug/kg	19		30		4	J	2	J	18		15	
SW-846 8260C	Carbon Tetrachloride	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Chlorobenzene	ug/kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Chloroethane	ug/Kg	6	U	9	U	3	U	2	U	2	U	2	U
SW-846 8260C	Chloroform	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	6	U	9	U	3	U	2	U	2	U	2	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Dibromochloromethane	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Ethylbenzene	ug/kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	6	U	9	U	3	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Tetrachloroethene	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Toluene	ug/kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8260C	Xylenes, Total	ug/kg	3	U	4	U	2	U	1	U	1	U	1	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	2	U	2	U	1	U	0.9	U	2	J	1	J
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	2	J	2	U	1	U	0.9	U	2	J	7	J
SW-846 8270D SIM modified	Anthracene	ug/kg	5	J	3	J	1	U	0.9	U	5	J	11	J
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	32	J-	26	J-	1	U	0.9	U	22	J	39	J
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	52	J-	54	J-	2	J	0.9	U	21		35	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	51	J-	42	J-	1	U	0.9	U	21		39	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	35	J-	28	J-	1	U	0.9	U	15		23	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	41	J-	34	J-	1	U	0.9	U	17	J	29	J
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	35	J-	29	J-	1	U	0.9	U	16		27	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	45	J-	44	J-	1	U	0.9	U	16	J	31	J
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	27	J-	22	J-	1	U	0.9	U	28	J	49	J
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	5	J	2	U	1	U	0.9	U	4		7	
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	2	J	2	U	1	U	0.9	U	2	J	3	
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	2	UJ	2	UJ	1	U	0.9	U	18	J	43	J
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	2	UJ	2	UJ	1	U	0.9	U	9	J	18	J
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	2	U	2	U	1	U	0.9	U	0.8	UJ	5	J

		Location	TR02_E		TR02_E		TR02_E		TR02_E		TR03_C		TR03_C	
		Field Sample ID	CVX-0005-07		CVX-0005-08		CVX-0005-09		CVX-0005-10		CVX-0011-12		CVX-0011-13	
		Sample Date	8/20/2014		8/20/2014		8/20/2014		8/20/2014		8/27/2014		8/27/2014	
		Sample Delivery Group	1497631		1497631		1497631		1497631		1499492		1499492	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.75 FT		0-0.5 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	3	J	2	J	1	U	0.9	U	3		6	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	12	J-	9	J-	1	U	0.9	U	20		32	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	2	UJ	2	UJ	1	U	0.9	U	5		9	
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	2	U	2	U	1	U	0.9	U	20		14	
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	3	J	2	U	1	U	0.9	U	5		8	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	7	J-	6	J-	1	U	0.9	U	28		25	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	2	UJ	2	UJ	1	U	0.9	U	0.8	U	0.8	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	2	U	2	U	1	U	0.9	U	18		12	
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	2	UJ	2	UJ	1	U	0.9	U	0.8	U	0.8	U
SW-846 8270D SIM modified	Chrysene	ug/kg	50	J-	42	J-	1	U	0.9	U	26		44	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	7	J-	6	J	1	U	0.9	U	4		6	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	90	J-	78	J-	1	UJ	0.9	UJ	49		82	
SW-846 8270D SIM modified	Fluorene	ug/kg	3	J	3	J	1	U	0.9	U	3		4	
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	38	J-	31	J-	1	U	0.9	U	15		25	
SW-846 8270D SIM modified	Naphthalene	ug/kg	3	J	2	U	1	U	0.9	U	1	J	3	
SW-846 8270D SIM modified	Perylene	ug/kg	86	J-	55	J-	230		19		8		12	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	37	J-	31	J-	1	U	0.9	U	24		41	
SW-846 8270D SIM modified	Pyrene	ug/kg	76	J-	60	J-	1	U	0.9	U	48		76	

		Location	TR04_C		TR04_C		TR04_C		TR04_C		TR04_C		TR05_A	
		Field Sample ID	CVX-0007-01		CVX-0007-02		CVX-0007-03		CVX-0007-04		CVX-0007-05		CVX-0011-05	
		Sample Date	8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/27/2014	
		Sample Delivery Group	1498092		1498092		1498092		1498092		1498092		1499492	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		2-3 Ft		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	46800	J	42300		41800		44900	J	19400	J	8190	
SM 2540 G	Moisture	%	67		59.6		60.4		53.7		59.1		26.1	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	6.6		1.2	J	7.2		1.2	J	1.4	J	0.63	U
SW-846 6010C	Cadmium	UMOLES/G	0.000751	J	0.00104	J	0.00133	J	0.00111	J	0.00113	J	0.000252	J
SW-846 6010C	Copper	UMOLES/G	0.063		0.063		0.0263		0.0552		0.0525		0.0241	
SW-846 6010C	Lead	UMOLES/G	0.0268		0.0386		0.0512		0.0433		0.0405		0.0156	
SW-846 6010C	Nickel	UMOLES/G	0.0332		0.027		0.0318		0.0199		0.0208		0.00565	J
SW-846 6010C	Silver	UMOLES/G	0.000436	U	0.000423	U	0.000427	U	0.00042	U	0.000426	U	0.000427	U
SW-846 6010C	Zinc	UMOLES/G	0.237		0.325		0.443		0.274		0.29		0.0226	
SW-846 6020A	Aluminum	mg/kg	22800		17800		16500		13800		20200		15700	
SW-846 6020A	Antimony	mg/Kg	0.248	U	0.285	J	0.216	J	0.179	U	0.202	U	0.11	U
SW-846 6020A	Arsenic	mg/kg	4.08		3.75		5.01		3.67		3.71		2.58	
SW-846 6020A	Barium	mg/kg	111		97.6		104		68.2		76.4		66	
SW-846 6020A	Beryllium	mg/Kg	0.986		1.02		0.921		0.635		0.788		0.692	
SW-846 6020A	Cadmium	mg/kg	0.444	J	0.478	J	0.526		0.451		0.323	J	0.0843	J
SW-846 6020A	Calcium	mg/kg	5130		3960		6290		3740		3340		2230	
SW-846 6020A	Chromium	mg/Kg	25.9		21.6		20.4		15.5		20.3		16.6	
SW-846 6020A	Cobalt	mg/kg	16.9		13.8		12.2		12.5		15.1		8.71	
SW-846 6020A	Copper	mg/kg	39.1		32.9		34.1		21.6		20.9		10.1	
SW-846 6020A	IRON	mg/kg	36200		26600		26300		25000		34500		19900	
SW-846 6020A	Lead	mg/Kg	31.2		33.5		34.7		28.8		30.9		12.4	
SW-846 6020A	Magnesium	mg/kg	9970		6930		6350		6610		9970		5500	
SW-846 6010C	Manganese	mg/kg	828		569		600		448		472		248	
SW-846 7471B	Mercury	mg/Kg	0.0643	J	0.0507	J	0.0784	J	0.0805	J	0.0404	J	0.0132	J
SW-846 6020A	Nickel	mg/Kg	38.8		29.1		26.2		24.5		33.8		19.1	
SW-846 6020A	Potassium	mg/kg	2010		1670		1520		1060		1570		953	
SW-846 6020A	Selenium	mg/Kg	0.464	J	0.559	J	0.705	J	0.534	J	0.333	J	0.378	J
SW-846 6020A	Silver	mg/Kg	0.213	J	0.221	J	0.354	J	0.206	J	0.0917	J	0.0606	J
SW-846 6020A	Sodium	mg/kg	154	J	111	J	136	J	227	J	87.5	J	115	
SW-846 6020A	Thallium	mg/Kg	0.174	J	0.14	J	0.155	J	0.102	J	0.112	J	0.133	J
SW-846 6020A	Vanadium	mg/kg	27.3		23.1		23.1		17.9		22.8		21	
SW-846 6020A	Zinc	mg/Kg	161		143		153		113		133		61.6	
SW-846 8082A	Aroclor 1016	ug/kg	11	U	8.8	U	9.1	U	7.6	U	8.7	U		
SW-846 8082A	Aroclor 1221	ug/kg	14	U	11	U	12	U	9.8	U	11	U		
SW-846 8082A	Aroclor 1232	ug/kg	24	U	20	U	20	U	17	U	19	U		
SW-846 8082A	Aroclor 1242	ug/kg	10	U	8.1	U	8.3	U	7	U	8	U		
SW-846 8082A	Aroclor 1248	ug/kg	10	U	8.1	U	8.3	U	7	U	8	U		
SW-846 8082A	Aroclor 1254	ug/kg	11	J	9.3	J	9.5	J	16	J	14	J		
SW-846 8082A	Aroclor 1260	ug/kg	15	U	12	U	12	U	10	U	12	U		
SW-846 8082A	Aroclor-1262	ug/kg	10	U	8.1	U	8.3	U	7	U	8	U		
SW-846 8082A	Aroclor-1268	ug/kg	10	U	8.1	U	8.3	U	7	U	8	U		
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg		R		R		R		R		R	1	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg		R	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	4	U	3	U	4	U	2	U	3	U	1	U

		Location	TR04_C		TR04_C		TR04_C		TR04_C		TR04_C		TR05_A	
		Field Sample ID	CVX-0007-01		CVX-0007-02		CVX-0007-03		CVX-0007-04		CVX-0007-05		CVX-0011-05	
		Sample Date	8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/27/2014	
		Sample Delivery Group	1498092		1498092		1498092		1498092		1498092		1499492	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		2-3 Ft		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	23	J	11	U	17	U	10	U	11	UJ	5	U
SW-846 8260C	2-Hexanone	ug/Kg		R	8	U	13	U	7	U	8	U	4	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	12	U	8	U	13	U	7	U	8	U	4	U
SW-846 8260C	Acetone	ug/kg	300	J+	100		230		95	J+	140		18	J
SW-846 8260C	Benzene	ug/kg	2	U	1	U	2	U	1	U	1	U	0.6	U
SW-846 8260C	Bromodichloromethane	ug/kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Bromoform	ug/kg		R	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	8	U	6	U	8	U	5	U	5	U	3	U
SW-846 8260C	Carbon Disulfide	ug/kg	26		7	J	20	J	9	J	10	J	1	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Chlorobenzene	ug/kg		R	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Chloroethane	ug/Kg	8	U	6	U	8	U	5	U	5	U	3	U
SW-846 8260C	Chloroform	ug/Kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	8	U	6	U	8	U	5	U	5	U	3	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Dibromochloromethane	ug/Kg		R	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Ethylbenzene	ug/kg		R	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	8	U	6	U	8	U	5	U	5	U	3	U
SW-846 8260C	Styrene	ug/Kg		R	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Tetrachloroethene	ug/Kg		R	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Toluene	ug/kg	8	J	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg		R	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	4	U	3	U	4	U	2	U	3	U	5	J
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	4	U	3	U	4	U	2	U	3	U	1	U
SW-846 8260C	Xylenes, Total	ug/kg		R	3	U	4	U	2	U	3	U	1	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	2	U	3	J	3	J	3	J	2	J	0.9	U
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	5	J	5		5		9		6		0.9	U
SW-846 8270D SIM modified	Anthracene	ug/kg	7		12		7		12		7		0.9	U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	38		71		23		38		22		2	J
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	58		86		36		43		28		2	J
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	59		86		25		35		20		3	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	42		60		20		26		17		2	J
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	44		70		25		31		23		2	J
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	41		59		20		27		18		2	J
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	27		50		2	U	39		23		0.9	J
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	41		58		35		51		29		0.9	U
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	2	U	2	U	2	U	1	U	2	U	0.9	U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	2	J	2	J	2	J	8		2	J	0.9	U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	2	U	32		46		54		33		0.9	J
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	2	U	17		2	U	1	U	2	U	0.9	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	2	U	2	U	2	U	1	U	2	U	0.9	U

		Location	TR04_C		TR04_C		TR04_C		TR04_C		TR04_C		TR05_A	
		Field Sample ID	CVX-0007-01		CVX-0007-02		CVX-0007-03		CVX-0007-04		CVX-0007-05		CVX-0011-05	
		Sample Date	8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/27/2014	
		Sample Delivery Group	1498092		1498092		1498092		1498092		1498092		1499492	
		Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		2-3 Ft		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	2	U	7		17		22		13		0.9	U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	17		24		27		42	J	20	J	0.9	U
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	6		6		2	U	1	U	2	U	0.9	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	2	U	2	U	2	U	1	U	2	U	0.9	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	12		2	U	11		1	U	2	U	0.9	U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	11		11		15		22		13		0.9	U
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	2	U	2	U	2	U	1	U	2	U	0.9	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	9		6		7		10		11		0.9	U
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	2	U	2	U	2	U	1	U	2	U	0.9	U
SW-846 8270D SIM modified	Chrysene	ug/kg	59		92		34		45		29		3	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	7	J+	14	J+	4	J+	6	J+	3	J	0.9	U
SW-846 8270D SIM modified	Fluoranthene	ug/kg	130		180		66		88		59		6	
SW-846 8270D SIM modified	Fluorene	ug/kg	3	J	6		4	J	4		3	J	0.9	U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	46		67		21		28		18		2	J
SW-846 8270D SIM modified	Naphthalene	ug/kg	2	J	2	J	2	J	5		2	J	0.9	U
SW-846 8270D SIM modified	Perylene	ug/kg	24		36		35		42		47		5	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	57		80		33		61	J	29	J	2	J
SW-846 8270D SIM modified	Pyrene	ug/kg	73		120		48		70		44		4	

		Location	TR05_A		TR05_A		TR05_A		TR05_B		TR05_B		TR05_C	
		Field Sample ID	CVX-0011-06		CVX-0011-07		CVX-0011-08		CVX-0010-19		CVX-0010-20		CVX-0011-10	
		Sample Date	8/27/2014		8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/27/2014	
		Sample Delivery Group	1499492		1499492		1499492		1499124		1499124		1499492	
		Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	499		1150		1230		515		108	U	101000	J
SM 2540 G	Moisture	%	20.9		22.3		17.3		9.7		7.4		79.3	J
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	0.63	U	0.63	U	0.63	U	0.66	J	0.63	U	5.2	J
SW-846 6010C	Cadmium	UMOLES/G	0.000212	J	0.000246	J	0.00101	J	0.00217	U	0.00213	U	0.00104	J
SW-846 6010C	Copper	UMOLES/G	0.0115		0.0076	J	0.026		0.16		0.142		0.0254	J
SW-846 6010C	Lead	UMOLES/G	0.0165		0.0126	J-	0.0103		0.0236		0.0236		0.0335	J
SW-846 6010C	Nickel	UMOLES/G	0.00389	J	0.00859		0.0767		0.138		0.0849		0.0311	J
SW-846 6010C	Silver	UMOLES/G	0.00042	U	0.000431	U	0.000419	U	0.00043	U	0.000421	U	0.000427	UJ
SW-846 6010C	Zinc	UMOLES/G	0.0155		0.033		0.072		0.312		0.33		0.216	J
SW-846 6020A	Aluminum	mg/kg	16700		17800		11400		10000		9800		28300	J
SW-846 6020A	Antimony	mg/Kg	0.106	U	0.108	UJ	0.0981	U	0.102	J	0.103	J	0.388	UJ
SW-846 6020A	Arsenic	mg/Kg	4.66		7.33		6.39		3.47		3.14		9.86	J
SW-846 6020A	Barium	mg/kg	58.5		173	J	82.5		61.2		35.3		178	J
SW-846 6020A	Beryllium	mg/Kg	0.684		0.641		0.54		0.57		0.592		1.32	J
SW-846 6020A	Cadmium	mg/kg	0.0739	J	0.502		0.35		0.0841	J	0.106	J	0.784	J
SW-846 6020A	Calcium	mg/kg	1200		1580	J-	1560		13300		18100		7620	J
SW-846 6020A	Chromium	mg/Kg	24.7		31.7	J-	26.9		37.6		24.8		44.1	J
SW-846 6020A	Cobalt	mg/kg	10.6		12.1	J	9.06		10.1		10.1		20.4	J
SW-846 6020A	Copper	mg/kg	10.3		15.3		13.7		18.9		21.4		55.3	J
SW-846 6020A	IRON	mg/kg	28600		32000		24200		23500		21300		47600	J
SW-846 6020A	Lead	mg/Kg	14.2		12.7	J-	8.94		10.4		9.68		49	J
SW-846 6020A	Magnesium	mg/kg	6500		6880	J	4400		8900		9100		9820	J
SW-846 6010C	Manganese	mg/kg	334		2270	J	1480		929		583		1500	J
SW-846 7471B	Mercury	mg/Kg	0.0228	J	0.0327	J	0.0317	J	0.0109	U	0.0119	J	0.137	J
SW-846 6020A	Nickel	mg/Kg	26.3		35.7	J-	29.4		32.7		24.4		49.4	J
SW-846 6020A	Potassium	mg/kg	881		1200	J	747		1200		1240		2500	J
SW-846 6020A	Selenium	mg/Kg	0.146	J	0.127	U	0.116	U	0.135	J	0.151	J	1.63	J
SW-846 6020A	Silver	mg/Kg	0.0337	J	0.0661	J	0.0607	J	0.0217	U	0.0326	J	0.307	J
SW-846 6020A	Sodium	mg/kg	95.3	J	90	J	79.3	J	86.9	U	83.1	U	411	J
SW-846 6020A	Thallium	mg/Kg	0.0999	J	0.148	J	0.0884	J	0.0663	J	0.0605	J	0.296	J
SW-846 6020A	Vanadium	mg/kg	23.2		21.8	J+	16.6		14.1		15		35.7	J
SW-846 6020A	Zinc	mg/Kg	66.5		67.4		55.4		63.6		64.1		217	J
SW-846 8082A	Aroclor 1016	ug/kg												
SW-846 8082A	Aroclor 1221	ug/kg												
SW-846 8082A	Aroclor 1232	ug/kg												
SW-846 8082A	Aroclor 1242	ug/kg												
SW-846 8082A	Aroclor 1248	ug/kg												
SW-846 8082A	Aroclor 1254	ug/kg												
SW-846 8082A	Aroclor 1260	ug/kg												
SW-846 8082A	Aroclor-1262	ug/kg												
SW-846 8082A	Aroclor-1268	ug/kg												
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	1	U	1	U	1	U	0.9	U	0.8	U		R
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	1,1-Dichloroethane	ug/kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ

		Location	TR05_A		TR05_A		TR05_A		TR05_B		TR05_B		TR05_C	
		Field Sample ID	CVX-0011-06		CVX-0011-07		CVX-0011-08		CVX-0010-19		CVX-0010-20		CVX-0011-10	
		Sample Date	8/27/2014		8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/27/2014	
		Sample Delivery Group	1499492		1499492		1499492		1499124		1499124		1499492	
		Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	1,2-Dichloroethane	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	1,2-Dichloropropane	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	5	U	4	U	6	J	4	U	3	U	19	J
SW-846 8260C	2-Hexanone	ug/Kg	4	U	3	U	3	U	3	U	2	U	14	UJ
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	4	U	3	U	3	U	3	U	2	U	14	UJ
SW-846 8260C	Acetone	ug/kg	17	J	13	J	63		6	U	5	U	220	J
SW-846 8260C	Benzene	ug/kg	0.6	U	0.5	U	0.5	U	0.5	U	0.4	U	2	UJ
SW-846 8260C	Bromodichloromethane	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Bromoform	ug/kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	2	U	2	U	2	U	2	U	2	U	9	UJ
SW-846 8260C	Carbon Disulfide	ug/kg	1	U	1	U	1	J	15		1	J	18	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Chlorobenzene	ug/kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Chloroethane	ug/Kg	2	U	2	U	2	U	2	U	2	U	9	UJ
SW-846 8260C	Chloroform	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	2	U	2	U	2	U	2	U	2	U	9	UJ
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Dibromochloromethane	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Ethylbenzene	ug/kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	2	U	2	U	2	U	2	U	2	U	9	UJ
SW-846 8260C	Styrene	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Tetrachloroethene	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Toluene	ug/kg	1	U	1	U	1	U	0.9	U	0.8	U	6	J
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	2	J	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8260C	Xylenes, Total	ug/kg	1	U	1	U	1	U	0.9	U	0.8	U	5	UJ
SW-846 8270D SIM modified	Acenaphthene	ug/kg	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	4	J
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	0.8	U	0.8	U	0.8	U	1	J	0.7	U	3	UJ
SW-846 8270D SIM modified	Anthracene	ug/kg	1	J	0.8	U	0.8	U	3		0.7	U	6	J
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	4		0.8	U	0.8	U	11		0.7	U	30	J
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	4		0.8	U	0.8	U	9		0.7	U	31	J
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	4		0.8	U	0.8	U	8		0.7	U	42	J
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	3		0.8	U	0.8	U	6		0.7	U	27	J
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	3		0.8	U	0.8	U	8		0.7	U	28	J
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	3		0.8	U	0.8	U	6		0.7	U	30	J
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	1	J	0.8	U	0.8	U	8		0.7	U	26	J
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	3		0.8	U	0.8	U	13		0.7	U	29	J
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	0.8	U	0.8	U	0.8	U	2		0.7	U	4	J
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	0.8	U	0.8	U	0.8	U	0.8	J	0.7	U	3	UJ
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	1	J	0.8	U	0.8	U	17		0.7	U	25	J
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ

		Location	TR05_A		TR05_A		TR05_A		TR05_B		TR05_B		TR05_C	
		Field Sample ID	CVX-0011-06		CVX-0011-07		CVX-0011-08		CVX-0010-19		CVX-0010-20		CVX-0011-10	
		Sample Date	8/27/2014		8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/27/2014	
		Sample Delivery Group	1499492		1499492		1499492		1499124		1499124		1499492	
		Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	0.8	U	0.8	U	0.8	U	2	J	0.7	U	5	J
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	0.8	U	0.8	U	0.8	U	10		0.7	U	16	J
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	0.8	U	0.8	U	0.8	U	1	J	0.7	U	3	UJ
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	0.8	U	0.8	U	0.8	U	2		0.7	U	5	J
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	0.8	U	0.8	U	0.8	U	5		0.7	U	14	J
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	0.8	U	0.8	U	0.8	U	2		0.7	U	6	J
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ
SW-846 8270D SIM modified	Chrysene	ug/kg	5		0.8	U	0.8	U	11		0.7	U	47	J
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	0.8	U	0.8	U	0.8	U	2	J	0.7	U	6	J
SW-846 8270D SIM modified	Fluoranthene	ug/kg	10		1	J	0.8	U	28		1	J	92	J
SW-846 8270D SIM modified	Fluorene	ug/kg	0.8	U	0.8	U	0.8	U	1	J	0.7	U	6	J
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	3		0.8	U	0.8	U	7		0.7	U	27	J
SW-846 8270D SIM modified	Naphthalene	ug/kg	0.8	U	0.8	U	0.8	U	0.7	U	0.7	U	3	UJ
SW-846 8270D SIM modified	Perylene	ug/kg	1	J	0.8	U	0.8	U	5		1	J	60	J
SW-846 8270D SIM modified	Phenanthrene	ug/kg	3		0.8	U	0.8	U	21		0.7	U	42	J
SW-846 8270D SIM modified	Pyrene	ug/kg	8		0.9	J	0.8	U	21		0.8	J	69	J

		Location	TR05_C		TR05_D		TR05_D		TR05_D		TR05_D		TR05_E	
		Field Sample ID	CVX-0011-11		CVX-0010-08		CVX-0010-09		CVX-0010-10		CVX-0010-11		CVX-0010-01	
		Sample Date	8/27/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014	
		Sample Delivery Group	1499492		1499124		1499124		1499124		1499124		1499124	
		Sample Depth	0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	42400		40500		35500		41500		14900		42900	
SM 2540 G	Moisture	%	62.2		64.6		62.5		63.5		45.2		63.8	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	4.2		12		9.6		6.8		4.8		13.1	
SW-846 6010C	Cadmium	UMOLES/G	0.000907	J	0.00215	U	0.0022	U	0.00217	U	0.00246		0.00215	U
SW-846 6010C	Copper	UMOLES/G	0.0316		0.0389		0.0428		0.105		0.105		0.043	
SW-846 6010C	Lead	UMOLES/G	0.0319		0.0318		0.0462		0.0549		0.071		0.0526	
SW-846 6010C	Nickel	UMOLES/G	0.0583		0.0495		0.063		0.0682		0.0691		0.071	
SW-846 6010C	Silver	UMOLES/G	0.00043	U	0.000426	U	0.000658	J	0.00043	U	0.000433	U	0.000426	U
SW-846 6010C	Zinc	UMOLES/G	0.219		0.401		0.565		0.559		0.481		0.563	
SW-846 6020A	Aluminum	mg/kg	13100		19900		21800		22800		17400		23500	
SW-846 6020A	Antimony	mg/Kg	0.223	U	0.236	U	0.259	J	0.329	J	0.151	U	0.235	J
SW-846 6020A	Arsenic	mg/Kg	6.03		6.27		6.19		6.96		5.03		10.9	
SW-846 6020A	Barium	mg/kg	83.5		117		132		155		92.1		151	
SW-846 6020A	Beryllium	mg/Kg	0.606		0.9		0.951		1.1		0.669		1.02	
SW-846 6020A	Cadmium	mg/kg	0.423	J	0.601		0.73		0.806		0.425		0.603	
SW-846 6020A	Calcium	mg/kg	4200		6920		6780		6530		3460		6370	
SW-846 6020A	Chromium	mg/Kg	28.3		26.2		27.7		31.1		24.3		29.5	
SW-846 6020A	Cobalt	mg/kg	9.71		18.5		16.5		18		14.5		15.8	
SW-846 6020A	Copper	mg/kg	27.7		41.4		53.5		51.5		27.7		49.6	
SW-846 6020A	IRON	mg/kg	23500		29800		28400		34000		29900		34400	
SW-846 6020A	Lead	mg/Kg	20.5		37.4		40.2		48.7		36.7		47.4	
SW-846 6020A	Magnesium	mg/kg	5110		7900		8010		9560		8520		8110	
SW-846 6010C	Manganese	mg/kg	707		699		718		807		611		587	
SW-846 7471B	Mercury	mg/Kg	0.0605	J	0.0888	J	0.0928	J	0.122	J	0.0551	J	0.117	J
SW-846 6020A	Nickel	mg/Kg	27.8		34.2		34.9		39.4		31.9		35.6	
SW-846 6020A	Potassium	mg/kg	1080		1890		1830		2210		1600		2050	
SW-846 6020A	Selenium	mg/Kg	0.808	J	0.752	J	0.851	J	0.945	J	0.316	J	1.12	J
SW-846 6020A	Silver	mg/Kg	0.118	J	0.417	J	1.26		0.752		0.156	J	0.61	
SW-846 6020A	Sodium	mg/kg	211	J	224	U	213	U	217	U	143	U	492	
SW-846 6020A	Thallium	mg/Kg	0.112	J	0.181	J	0.222	J	0.249	J	0.162	J	0.2	J
SW-846 6020A	Vanadium	mg/kg	17		22.3		25.8		30.3		20.6		29.8	
SW-846 6020A	Zinc	mg/Kg	92.6		178		199		221		135		193	
SW-846 8082A	Aroclor 1016	ug/kg											9.9	U
SW-846 8082A	Aroclor 1221	ug/kg											13	U
SW-846 8082A	Aroclor 1232	ug/kg											22	U
SW-846 8082A	Aroclor 1242	ug/kg											9.1	U
SW-846 8082A	Aroclor 1248	ug/kg											9.1	U
SW-846 8082A	Aroclor 1254	ug/kg											9.1	U
SW-846 8082A	Aroclor 1260	ug/kg											14	U
SW-846 8082A	Aroclor-1262	ug/kg											9.1	U
SW-846 8082A	Aroclor-1268	ug/kg											9.1	U
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	3	U		R		R		R	2	U	3	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	3	U	3	U	3	U	4	U	2	U	3	U

		Location	TR05_C		TR05_D		TR05_D		TR05_D		TR05_D		TR05_E	
		Field Sample ID	CVX-0011-11		CVX-0010-08		CVX-0010-09		CVX-0010-10		CVX-0010-11		CVX-0010-01	
		Sample Date	8/27/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014	
		Sample Delivery Group	1499492		1499124		1499124		1499124		1499124		1499124	
		Sample Depth	0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	14	J	13	U	14	U	17	U	8	U	22	J
SW-846 8260C	2-Hexanone	ug/Kg	9	U	10	U	10	U	13	U	6	U	10	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	9	U	10	U	10	U	13	U	6	U	10	U
SW-846 8260C	Acetone	ug/kg	180		120		120		110		37	J	180	
SW-846 8260C	Benzene	ug/kg	1	U	2	U	2	U	2	U	1	U	3	J
SW-846 8260C	Bromodichloromethane	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Bromoform	ug/kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	6	U	6	U	7	U	8	U	4	U	7	U
SW-846 8260C	Carbon Disulfide	ug/kg	17		26		13	J	18	J	5	J	20	
SW-846 8260C	Carbon Tetrachloride	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Chlorobenzene	ug/kg	3	U	3	U	3	U	4	U	2	U	16	J
SW-846 8260C	Chloroethane	ug/Kg	6	U	6	U	7	U	8	U	4	U	7	U
SW-846 8260C	Chloroform	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	6	U	6	U	7	U	8	U	4	U	7	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Dibromochloromethane	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Ethylbenzene	ug/kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	6	U	6	U	7	U	8	U	4	U	7	U
SW-846 8260C	Styrene	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Tetrachloroethene	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Toluene	ug/kg	6	J	5	J	5	J	5	J	2	U	7	J
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	3	U	3	U	3	U	4	U	2	U	3	U
SW-846 8260C	Xylenes, Total	ug/kg	3	U	3	U	3	U	4	U	2	U	5	J
SW-846 8270D SIM modified	Acenaphthene	ug/kg	2	J	3	J	3	J	2	UJ	2	J	7	
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	2	UJ	2	U	2	U	2	UJ	3		2	U
SW-846 8270D SIM modified	Anthracene	ug/kg	5		6	J-	6		4	J	6	J-	3	J
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	16		37	J-	29		19	J-	27	J-	13	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	17		43	J-	32		20	J-	27	J-	13	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	24		46	J-	42		19	J-	25	J-	13	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	13		35	J-	29		17	J-	20	J-	10	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	16		44	J-	29		21	J-	26	J-	14	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	19		36	J-	36		20	J-	21	J-	10	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	9		2	UJ	49		2	UJ	21	J-	10	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	14		36	J-	28		20	J-	36		12	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	2	J	4	J	3	J	2	J	4		14	
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	2	UJ	2	J	2	U	2	UJ	3	J	10	
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	2	U	41	J-	19		14	J-	29	J-	9	
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	2	U	2	UJ	2	U	2	UJ	12	J-	2	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	2	UJ	2	U	2	U	2	UJ	1	U	2	U

		Location	TR05_C		TR05_D		TR05_D		TR05_D		TR05_D		TR05_E	
		Field Sample ID	CVX-0011-11		CVX-0010-08		CVX-0010-09		CVX-0010-10		CVX-0010-11		CVX-0010-01	
		Sample Date	8/27/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014	
		Sample Delivery Group	1499492		1499124		1499124		1499124		1499124		1499124	
		Sample Depth	0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	3	J	3	J	3	J	3	J	5		23	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	7		15	J-	12		12	J-	24	J-	6	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	2	U	2	UJ	2	U	2	UJ	3	J-	2	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	2	UJ	2	U	2	U	2	UJ	1	U	2	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	2	J	5		4	J	4	J	7		13	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	6		10	J-	11		8	J-	12	J-	5	J
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	2	U	2	UJ	2	U	2	UJ	1	UJ	2	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	3	J	4	J	4	J	3	J	5		13	
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	2	U	2	UJ	2	U	2	UJ	1	UJ	2	U
SW-846 8270D SIM modified	Chrysene	ug/kg	24		53	J-	42		25	J-	33	J-	18	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	3	J	6	J-	7		4	J	5	J-	3	J
SW-846 8270D SIM modified	Fluoranthene	ug/kg	48		110	J-	92		52	J-	62		37	
SW-846 8270D SIM modified	Fluorene	ug/kg	3	J	5		5		3	J	3	J	5	
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	15		38	J-	29		18	J-	22	J-	11	
SW-846 8270D SIM modified	Naphthalene	ug/kg	3	J	2	J	2	U	2	UJ	3	J	2	U
SW-846 8270D SIM modified	Perylene	ug/kg	34		27	J-	23		20	J-	35	J-	12	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	25		51	J-	38		22	J-	26	J-	14	
SW-846 8270D SIM modified	Pyrene	ug/kg	35		75	J-	59		35	J-	47	J-	26	

		Location	TR05_E		TR05_E		TR05_E		TR05_E		TR06_A		TR06_A	
		Field Sample ID	CVX-0010-02		CVX-0010-03		CVX-0010-04		CVX-0010-05		CVX-0011-01		CVX-0011-02	
		Sample Date	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/27/2014		8/27/2014	
		Sample Delivery Group	1499124		1499124		1499124		1499124		1499492		1499492	
		Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		2-3 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	37600		214	J	401		373		24400		54300	
SM 2540 G	Moisture	%	68.4		16		12.8		11.5		63.6		62.7	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	0.88	J	0.63	U	0.63	U	0.63	U	9.3		0.84	J
SW-846 6010C	Cadmium	UMOLES/G	0.00217	U	0.00217	U	0.00217	U	0.00219	U	0.00116	J	0.000498	J
SW-846 6010C	Copper	UMOLES/G	0.104		0.137		0.134		0.125		0.0315		0.0215	
SW-846 6010C	Lead	UMOLES/G	0.0409		0.0376		0.0374		0.0364		0.0611		0.0302	
SW-846 6010C	Nickel	UMOLES/G	0.0646		0.0611		0.0606		0.0576		0.0492		0.0189	
SW-846 6010C	Silver	UMOLES/G	0.000429	U	0.00043	U	0.00043	U	0.000433	U	0.000437	U	0.000423	U
SW-846 6010C	Zinc	UMOLES/G	0.211		0.158		0.157		0.15		0.394		0.108	
SW-846 6020A	Aluminum	mg/kg	24200		20400		17100		19900		15700		17700	
SW-846 6020A	Antimony	mg/Kg	0.286	J	0.116	J	0.106	J	0.135	J	0.227	U	0.226	U
SW-846 6020A	Arsenic	mg/kg	8.59		4.59		5.59		5.73		6.03		5.91	
SW-846 6020A	Barium	mg/kg	166		53.3		53.8		63		90.4		101	
SW-846 6020A	Beryllium	mg/Kg	1.12		0.523		0.461		0.559		0.679		0.786	
SW-846 6020A	Cadmium	mg/kg	0.719		0.052	J	0.0935	J	0.122	J	0.571		0.61	
SW-846 6020A	Calcium	mg/kg	11800		582		575		647		5410		6820	
SW-846 6020A	Chromium	mg/Kg	31.5		16.6		16		18.7		20		21.7	
SW-846 6020A	Cobalt	mg/kg	16.2		12.1		11.1		12.4		11.3		12.8	
SW-846 6020A	Copper	mg/kg	46.4		21.9		22.3		24.5		62.4		59	
SW-846 6020A	IRON	mg/kg	33100		33700		30700		34100		26300		28000	
SW-846 6020A	Lead	mg/Kg	46.7		12.1		13.8		15.2		37.5		41.8	
SW-846 6020A	Magnesium	mg/kg	8430		7030		7000		7560		6010		7060	
SW-846 6010C	Manganese	mg/kg	643		511		562		574		597		601	
SW-846 7471B	Mercury	mg/Kg	0.114	J	0.0123	J	0.0194	J	0.0164	J	0.719		0.728	
SW-846 6020A	Nickel	mg/Kg	34.6		27.9		25.5		29		27.8		30.2	
SW-846 6020A	Potassium	mg/kg	2240		1110		1090		1180		1210		1370	
SW-846 6020A	Selenium	mg/Kg	0.944	J	0.132	J	0.111	U	0.113	U	0.806	J	0.893	J
SW-846 6020A	Silver	mg/Kg	0.593	J	0.0229	U	0.0223	U	0.0226	U	0.501	J	0.747	
SW-846 6020A	Sodium	mg/kg	574		134		130		137		290		336	
SW-846 6020A	Thallium	mg/Kg	0.258	J	0.0981	J	0.0954	J	0.103	J	0.135	J	0.166	J
SW-846 6020A	Vanadium	mg/kg	28.2		17.2		15.3		16.5		21.3		23.2	
SW-846 6020A	Zinc	mg/Kg	206		68.4		65.9		70.5		153		173	
SW-846 8082A	Aroclor 1016	ug/kg	11	U	4.3	U	4.1	U	4.1	U				
SW-846 8082A	Aroclor 1221	ug/kg	15	U	5.5	U	5.3	U	5.2	U				
SW-846 8082A	Aroclor 1232	ug/kg	25	U	9.5	U	9.2	U	9	U				
SW-846 8082A	Aroclor 1242	ug/kg	10	U	3.9	U	3.8	U	3.7	U				
SW-846 8082A	Aroclor 1248	ug/kg	10	U	3.9	U	3.8	U	3.7	U				
SW-846 8082A	Aroclor 1254	ug/kg	14	J	3.9	U	3.8	U	3.7	U				
SW-846 8082A	Aroclor 1260	ug/kg	16	U	5.8	U	5.6	U	5.5	U				
SW-846 8082A	Aroclor-1262	ug/kg	10	U	3.9	U	3.8	U	3.7	U				
SW-846 8082A	Aroclor-1268	ug/kg	10	U	3.9	U	3.8	U	3.7	U				
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	3	U	0.9	U	0.9	U	0.8	U	38		41	
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	3	U	0.9	U	0.9	U	0.8	U	130		140	

		Location	TR05_E		TR05_E		TR05_E		TR05_E		TR06_A		TR06_A	
		Field Sample ID	CVX-0010-02		CVX-0010-03		CVX-0010-04		CVX-0010-05		CVX-0011-01		CVX-0011-02	
		Sample Date	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/27/2014		8/27/2014	
		Sample Delivery Group	1499124		1499124		1499124		1499124		1499492		1499492	
		Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		2-3 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	34		51	
SW-846 8260C	1,2-Dichloroethane	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	11	U	4	U	3	U	3	U	24	J	12	U
SW-846 8260C	2-Hexanone	ug/Kg	8	U	3	U	3	U	2	U	10	U	9	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	8	U	3	U	3	U	2	U	10	U	9	U
SW-846 8260C	Acetone	ug/kg	50	J	7	U	6	J	6	U	220		70	
SW-846 8260C	Benzene	ug/kg	8	J	1	J	0.8	J	0.8	J	33		18	
SW-846 8260C	Bromodichloromethane	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	Bromoform	ug/kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	6	U	2	U	2	U	2	U	7	U	6	U
SW-846 8260C	Carbon Disulfide	ug/kg	11	J	3	J	1	J	0.9	J	20		7	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	Chlorobenzene	ug/kg	7	J	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	Chloroethane	ug/Kg	6	U	2	U	2	U	2	U	26		6	J
SW-846 8260C	Chloroform	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	6	U	2	U	2	U	2	U	7	U	6	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	34		39	
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	Dibromochloromethane	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	Ethylbenzene	ug/kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	6	U	2	U	2	U	2	U	7	U	6	U
SW-846 8260C	Styrene	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	Tetrachloroethene	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	10	J	10	J
SW-846 8260C	Toluene	ug/kg	5	J	0.9	U	0.9	U	0.8	U	3	J	3	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	4	J	3	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	51		53	
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	3	U	0.9	U	0.9	U	0.8	U	37		43	
SW-846 8260C	Xylenes, Total	ug/kg	4	J	0.9	U	0.9	U	0.8	U	3	U	3	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	17		3		0.8	U	1	J	120	J-	5	
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	3	J	0.8	U	0.8	U	0.8	U	5	J-	4	J
SW-846 8270D SIM modified	Anthracene	ug/kg	5	J	0.8	U	0.8	U	0.8	U	140	J-	15	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	18		0.8	U	0.8	U	0.8	U	390	J-	100	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	20		0.8	U	0.8	U	0.8	U	380	J-	130	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	20		0.8	U	0.8	U	0.8	U	350	J-	140	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	15		0.8	U	0.8	U	0.8	U	220	J-	86	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	18		0.8	U	0.8	U	0.8	U	310	J-	100	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	17		0.8	U	0.8	U	0.8	U	260	J-	96	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	18		0.8	U	0.8	U	0.8	U	150	J-	47	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	27		0.8	U	0.8	U	0.8	U	280	J-	67	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	36		7		8		11		24	J-	3	J
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	14		0.9	J	0.8	U	0.8	U	22	J-	2	U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	36		0.8	U	0.8	U	0.8	U	190	J-	31	
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	2	U	0.8	U	0.8	U	0.8	U	50	J-	16	
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	2	U	4		4		5		9	J-	2	U

		Location	TR05_E		TR05_E		TR05_E		TR05_E		TR06_A		TR06_A	
		Field Sample ID	CVX-0010-02		CVX-0010-03		CVX-0010-04		CVX-0010-05		CVX-0011-01		CVX-0011-02	
		Sample Date	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/27/2014		8/27/2014	
		Sample Delivery Group	1499124		1499124		1499124		1499124		1499492		1499492	
		Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		2-3 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	39		0.8	U	0.8	U	0.8	U	17	J-	2	J
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	23		0.8	U	0.8	U	0.8	U	87	J-	19	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	3	J	0.8	U	0.8	U	0.8	U	2	UJ	2	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	2	U	0.8	U	0.8	U	0.8	U	2	UJ	2	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	35		7		6		8		15	J-	2	J
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	11		0.8	U	0.8	U	0.8	U	30	J-	10	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	2	U	0.8	U	0.8	U	0.8	U	2	UJ	2	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	26		8		7		8		10	J-	2	J
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	2	U	0.8	U	0.8	U	0.8	U	2	UJ	2	U
SW-846 8270D SIM modified	Chrysene	ug/kg	25		0.8	J	0.8	U	0.8	U	430	J-	140	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	4	J	0.8	U	0.8	U	0.8	U	53	J-	20	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	46		2	J	0.8	U	0.8	U	1300	J-	240	
SW-846 8270D SIM modified	Fluorene	ug/kg	12		1	J	0.8	U	0.8	U	89	J-	6	
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	17		0.8	U	0.8	U	0.8	U	260	J-	100	
SW-846 8270D SIM modified	Naphthalene	ug/kg	3	J	0.8	U	0.8	U	0.8	U	58	J-	2	U
SW-846 8270D SIM modified	Perylene	ug/kg	23		7		2	J	2		89	J-	35	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	26		0.8	U	0.8	U	0.8	U	770	J-	100	
SW-846 8270D SIM modified	Pyrene	ug/kg	41		2	J	0.8	U	0.8	J	800	J-	180	

		Location	TR06_A		TR06_A		TR06_B		TR06_B		TR06_B		TR06_C	
		Field Sample ID	CVX-0011-03		CVX-0011-04		CVX-0010-12		CVX-0010-13		CVX-0010-14		CVX-0010-06	
		Sample Date	8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014	
		Sample Delivery Group	1499492		1499492		1499124		1499124		1499124		1499124	
		Sample Depth	1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	1250		2110		2470		1550		1890		13300	
SM 2540 G	Moisture	%	24.2		21.5		22.4		17		17		51.8	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	2.9	
SW-846 6010C	Cadmium	UMOLES/G	0.00061	J	0.00226		0.00221	U	0.00218	U	0.0022	U	0.00214	U
SW-846 6010C	Copper	UMOLES/G	0.024		0.0856		0.0745		0.0888		0.097		0.0892	
SW-846 6010C	Lead	UMOLES/G	0.024		0.0215		0.0214		0.0318		0.0269		0.0433	
SW-846 6010C	Nickel	UMOLES/G	0.0193		0.0709		0.132		0.152		0.192		0.062	
SW-846 6010C	Silver	UMOLES/G	0.000422	U	0.000421	U	0.000437	U	0.000431	U	0.000435	U	0.000423	U
SW-846 6010C	Zinc	UMOLES/G	0.0657		0.102		0.244		0.239		0.293		0.366	
SW-846 6020A	Aluminum	mg/kg	16400		18600		12200		12300		13900		20300	
SW-846 6020A	Antimony	mg/Kg	0.108	U	0.108	J	0.107	U	0.101	U	0.158	J	0.26	J
SW-846 6020A	Arsenic	mg/Kg	4.76		17.5		3.14		4.77		4.38		9.47	
SW-846 6020A	Barium	mg/kg	119		244		46.8		54.3		55.2		143	
SW-846 6020A	Beryllium	mg/Kg	0.709		0.857		0.388		0.515		0.591		0.924	
SW-846 6020A	Cadmium	mg/kg	0.145	J	0.276		0.0585	J	0.0681	J	0.0896	J	0.552	
SW-846 6020A	Calcium	mg/kg	1190		2040		2170		2900		4520		4300	
SW-846 6020A	Chromium	mg/Kg	19.3		30.6		35.3		40.5		55.7		30.1	
SW-846 6020A	Cobalt	mg/kg	12.7		12.9		9.21		12.1		12.2		18.1	
SW-846 6020A	Copper	mg/kg	12.5		24		12		16.8		20.2		37.3	
SW-846 6020A	IRON	mg/kg	28800		40400		21700		22500		25400		35600	
SW-846 6020A	Lead	mg/Kg	13.1		15.7		8.39		11.8		13		41.5	
SW-846 6020A	Magnesium	mg/kg	5840		5910		6640		8120		8780		9550	
SW-846 6010C	Manganese	mg/kg	528		2530		271		274		423		955	
SW-846 7471B	Mercury	mg/Kg	0.0218	J	0.0266	J	0.0144	J	0.0237	J	0.0378	J	0.0763	J
SW-846 6020A	Nickel	mg/Kg	24.7		30.6		31.1		39.4		47.4		37.2	
SW-846 6020A	Potassium	mg/kg	1380		1720		1020		1360		1380		2110	
SW-846 6020A	Selenium	mg/Kg	0.231	J	0.332	J	0.296	J	0.308	J	0.287	J	0.711	J
SW-846 6020A	Silver	mg/Kg	0.061	J	0.12	J	0.0253	U	0.0287	J	0.0366	J	0.146	J
SW-846 6020A	Sodium	mg/kg	104		107		101	U	95.4	U	95.4	U	163	U
SW-846 6020A	Thallium	mg/Kg	0.139	J	0.248		0.0691	J	0.0801	J	0.0756	J	0.228	J
SW-846 6020A	Vanadium	mg/kg	21.8		30.3		13		12.6		15.5		24.6	
SW-846 6020A	Zinc	mg/Kg	64.6		76.9		57.5		77.1		75.5		151	
SW-846 8082A	Aroclor 1016	ug/kg												
SW-846 8082A	Aroclor 1221	ug/kg												
SW-846 8082A	Aroclor 1232	ug/kg												
SW-846 8082A	Aroclor 1242	ug/kg												
SW-846 8082A	Aroclor 1248	ug/kg												
SW-846 8082A	Aroclor 1254	ug/kg												
SW-846 8082A	Aroclor 1260	ug/kg												
SW-846 8082A	Aroclor-1262	ug/kg												
SW-846 8082A	Aroclor-1268	ug/kg												
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	4	J	6		1	U	0.8	U	1	U	2	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	26		18		1	U	0.8	U	1	U	2	U

		Location	TR06_A		TR06_A		TR06_B		TR06_B		TR06_B		TR06_C	
		Field Sample ID	CVX-0011-03		CVX-0011-04		CVX-0010-12		CVX-0010-13		CVX-0010-14		CVX-0010-06	
		Sample Date	8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014	
		Sample Delivery Group	1499492		1499492		1499124		1499124		1499124		1499124	
		Sample Depth	1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	14		12		1	U	0.8	U	1	U	2	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	4	U	5	U	4	U	3	U	5	U	26	
SW-846 8260C	2-Hexanone	ug/Kg	3	U	4	U	3	U	3	U	3	U	5	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	3	U	4	U	3	U	3	U	3	U	5	U
SW-846 8260C	Acetone	ug/kg	8	U	11	J	15	J	10	J	11	J	260	
SW-846 8260C	Benzene	ug/kg	1	J	1	J	0.5	U	0.4	U	0.6	U	0.9	U
SW-846 8260C	Bromodichloromethane	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Bromoform	ug/kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	2	U	3	U	2	U	2	U	2	U	3	U
SW-846 8260C	Carbon Disulfide	ug/kg	4	J	2	J	8		8		6		12	
SW-846 8260C	Carbon Tetrachloride	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Chlorobenzene	ug/kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Chloroethane	ug/Kg	2	U	3	U	2	U	2	U	2	U	3	U
SW-846 8260C	Chloroform	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	2	U	3	U	2	U	2	U	2	U	3	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	6		6	J	1	U	0.8	U	1	U	2	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Dibromochloromethane	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Ethylbenzene	ug/kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	2	U	3	U	2	U	2	U	2	U	3	U
SW-846 8260C	Styrene	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Tetrachloroethene	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Toluene	ug/kg	1	U	1	U	1	U	0.8	U	1	U	4	J
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	6		8		1	U	0.8	U	1	U	2	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	3	J	1	U	1	U	0.8	U	1	U	2	U
SW-846 8260C	Xylenes, Total	ug/kg	1	U	1	U	1	U	0.8	U	1	U	2	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	2	J
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	3	J
SW-846 8270D SIM modified	Anthracene	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	5	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	3		2	J	3		2	J	2	J	31	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	3		1	J	3		2	J	2	J	31	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	3		1	J	3		2	J	1	J	32	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	2		1	J	2	J	2	J	1	J	21	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	3		1	J	2		2	J	2	J	26	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	3		1	J	2	J	1	J	1	J	24	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	1	J	0.9	J	2	J	2		2	J	22	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	2		1	J	3		4		3		33	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	3	J
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	3	J
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	1	J	0.9	J	2	J	3		3		27	
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	11	
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	1	U

		Location	TR06_A		TR06_A		TR06_B		TR06_B		TR06_B		TR06_C	
		Field Sample ID	CVX-0011-03		CVX-0011-04		CVX-0010-12		CVX-0010-13		CVX-0010-14		CVX-0010-06	
		Sample Date	8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014	
		Sample Delivery Group	1499492		1499492		1499124		1499124		1499124		1499124	
		Sample Depth	1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	5	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	1	J	0.8	U	2	J	3		3		18	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	4	
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	1	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	0.9	U	0.8	U	0.9	U	0.8	J	0.8	U	6	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	0.9	U	0.8	U	2	J	2		0.8	U	10	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	1	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	5	
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	1	U
SW-846 8270D SIM modified	Chrysene	ug/kg	4		2	J	3		2		2	J	37	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	0.9	U	0.8	U	0.9	U	0.9	J	0.8	U	5	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	7		3		6		4		4		69	
SW-846 8270D SIM modified	Fluorene	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	3	J
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	3		1	J	2		2	J	1	J	24	
SW-846 8270D SIM modified	Naphthalene	ug/kg	0.9	U	0.8	U	0.9	U	0.8	U	0.8	U	4	
SW-846 8270D SIM modified	Perylene	ug/kg	1	J	1	J	9		5		7		62	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	2		1	J	2		2		2	J	31	
SW-846 8270D SIM modified	Pyrene	ug/kg	6		3		4		4		3		54	

		Location	TR06_C		TR06_D		TR06_D		TR06_D		TR06_D		TR06_E	
		Field Sample ID	CVX-0010-07		CVX-0010-15		CVX-0010-16		CVX-0010-17		CVX-0010-18		CVX-0009-16	
		Sample Date	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/25/2014	
		Sample Delivery Group	1499124		1499124		1499124		1499124		1499124		1498701	
		Sample Depth	0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	2790		7620		23200		9290		12800		20400	
SM 2540 G	Moisture	%	18.6		36.1		47.9		48.2		39.5		62.9	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	6.5		2.4		4.6		2	J	3.3		5.9	
SW-846 6010C	Cadmium	UMOLES/G	0.00218	U	0.00224		0.00217	U	0.00219	U	0.00219	U	0.00152	J
SW-846 6010C	Copper	UMOLES/G	0.0613		0.101		0.0923		0.105	J-	0.0853		0.0753	
SW-846 6010C	Lead	UMOLES/G	0.0428		0.0712		0.0476		0.0502	J-	0.0519		0.0452	
SW-846 6010C	Nickel	UMOLES/G	0.0753		0.0702		0.0686		0.0696		0.0652		0.0662	
SW-846 6010C	Silver	UMOLES/G	0.000431	U	0.000426	U	0.000429	U	0.000434	UJ	0.000433	U	0.00043	U
SW-846 6010C	Zinc	UMOLES/G	0.42		0.466		0.429		0.426		0.412		0.421	J
SW-846 6020A	Aluminum	mg/kg	13600		17100		19600		16600		17500		21600	
SW-846 6020A	Antimony	mg/Kg	0.102	U	0.172	J	0.186	J	0.163	U	0.143	J	0.225	U
SW-846 6020A	Arsenic	mg/Kg	2.82		5.81		6		5.32	J+	3.95		6.18	
SW-846 6020A	Barium	mg/kg	44.1		95.9		121		94		99.8		113	
SW-846 6020A	Beryllium	mg/Kg	0.487		0.732		0.791		0.68		0.578		0.968	
SW-846 6020A	Cadmium	mg/kg	0.0689	J	0.537		0.428		0.274	J	0.289	J	0.665	
SW-846 6020A	Calcium	mg/kg	1370		3370		2800		3270	J	2160		5250	
SW-846 6020A	Chromium	mg/Kg	16		21.4		23.1		20.8		18.4		27.3	
SW-846 6020A	Cobalt	mg/kg	12		13.4		14.5		13.8		12.2		13.6	
SW-846 6020A	Copper	mg/kg	15.2		28.3		27.5		21.1	J+	20.4		43.4	
SW-846 6020A	IRON	mg/kg	28300		28100		30500		31700		26800		28300	
SW-846 6020A	Lead	mg/Kg	13.1		36.4		32.6		24.8		25.5		40.8	
SW-846 6020A	Magnesium	mg/kg	7850		7210		7490		7730		6400		7480	
SW-846 6010C	Manganese	mg/kg	378		597		641		659		590		564	
SW-846 7471B	Mercury	mg/Kg	0.0116	U	0.0687	J	0.0675	J	0.0575	J	0.0638	J	0.504	U
SW-846 6020A	Nickel	mg/Kg	27.6		27.6		29.4		28.3	J+	24.9		33.4	
SW-846 6020A	Potassium	mg/kg	1110		1320		1580		1480		1400		1780	
SW-846 6020A	Selenium	mg/Kg	0.124	J	0.442	J	0.679	J	0.511	J	0.432	J	0.937	J
SW-846 6020A	Silver	mg/Kg	0.0241	U	0.134	J	0.137	J	0.0765	J	0.0805	J	0.445	J
SW-846 6020A	Sodium	mg/kg	96.4	U	124	U	151	U	154	U	128	U	256	
SW-846 6020A	Thallium	mg/Kg	0.0642	J	0.169	J	0.187	J	0.147	J	0.173	J	0.213	J
SW-846 6020A	Vanadium	mg/kg	14.5		19.9		22.6		19.9	J	20.8		28	
SW-846 6020A	Zinc	mg/Kg	107		121		127		110		105		266	
SW-846 8082A	Aroclor 1016	ug/kg			5.6	U	6.9	U	6.9	U	6	U		
SW-846 8082A	Aroclor 1221	ug/kg			7.2	U	8.8	U	8.9	U	7.6	U		
SW-846 8082A	Aroclor 1232	ug/kg			13	U	15	U	15	U	13	U		
SW-846 8082A	Aroclor 1242	ug/kg			5.2	U	6.3	U	6.4	U	5.5	U		
SW-846 8082A	Aroclor 1248	ug/kg			5.2	U	6.3	U	6.4	U	5.5	U		
SW-846 8082A	Aroclor 1254	ug/kg			8.7	J	6.3	U	6.4	U	9.6	J		
SW-846 8082A	Aroclor 1260	ug/kg			7.7	U	9.4	U	9.5	U	8.1	U		
SW-846 8082A	Aroclor-1262	ug/kg			5.2	U	6.3	U	6.4	U	5.5	U		
SW-846 8082A	Aroclor-1268	ug/kg			5.2	U	6.3	U	6.4	U	5.5	U		
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	2	U	2	U		R	2	U	2	U		R
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	2	U	2	U	2	U	2	U	2	U	2	U

		Location	TR06_C		TR06_D		TR06_D		TR06_D		TR06_D		TR06_E	
		Field Sample ID	CVX-0010-07		CVX-0010-15		CVX-0010-16		CVX-0010-17		CVX-0010-18		CVX-0009-16	
		Sample Date	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/25/2014	
		Sample Delivery Group	1499124		1499124		1499124		1499124		1499124		1498701	
		Sample Depth	0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	7	U	6	U	8	U	7	U	7	U	11	J
SW-846 8260C	2-Hexanone	ug/Kg	5	U	5	U	6	U	6	U	5	U	7	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	5	U	5	U	6	U	6	U	5	U	7	U
SW-846 8260C	Acetone	ug/kg	25	J	26	J	44		30	J	38		130	
SW-846 8260C	Benzene	ug/kg	0.9	U	0.8	U	1	U	0.9	U	0.8	U	1	U
SW-846 8260C	Bromodichloromethane	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Bromoform	ug/kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	4	U	3	U	4	U	4	U	3	U	5	U
SW-846 8260C	Carbon Disulfide	ug/kg	5	J	3	J	5	J	5	J	5	J	13	
SW-846 8260C	Carbon Tetrachloride	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Chlorobenzene	ug/kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Chloroethane	ug/Kg	4	U	3	U	4	U	4	U	3	U	5	U
SW-846 8260C	Chloroform	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	4	U	3	U	4	U	4	U	3	U	5	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Dibromochloromethane	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Ethylbenzene	ug/kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	4	U	3	U	4	U	4	U	3	U	5	U
SW-846 8260C	Styrene	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Tetrachloroethene	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Toluene	ug/kg	2	J	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8260C	Xylenes, Total	ug/kg	2	U	2	U	2	U	2	U	2	U	2	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	1	J	1	J	1	U	3	J	1	J	5	U
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	3		3		6		1	U	1	J	11	J
SW-846 8270D SIM modified	Anthracene	ug/kg	3		4		6	J-	3	J	2	J	20	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	24		23		19	J-	12		5		160	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	41		24		18	J-	12		6		180	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	40		23		14	J-	12		6		190	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	33		18		14	J-	11		5		120	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	30		23		14	J-	12		6		180	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	28		19		15	J-	10		5		150	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	18		19		32	J-	10		4		90	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	18		29		55		13		8		130	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	2	J	3		8		2	J	2	J	7	J
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	1	J	2	J	2	J	1	J	1	J	6	J
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	6		21		56	J-	23		6		5	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	10		10		23	J-	5		1	U	5	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	0.8	U	1	U	1	U	1	U	1	U	5	U

		Location	TR06_C		TR06_D		TR06_D		TR06_D		TR06_D		TR06_E	
		Field Sample ID	CVX-0010-07		CVX-0010-15		CVX-0010-16		CVX-0010-17		CVX-0010-18		CVX-0009-16	
		Sample Date	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/25/2014	
		Sample Delivery Group	1499124		1499124		1499124		1499124		1499124		1498701	
		Sample Depth	0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	2		3	J	4		2	J	2	J	8	J
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	6		18		56	J-	7		5		52	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	6		4		8	J-	2	J	1	U	5	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	0.8	U	1	U	1	U	1	U	1	U	5	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	3		4		6		3	J	3		9	J
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	5		10		34	J-	5		4		32	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	0.8	U	1	U	1	UJ	1	U	1	U	5	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	2		4		6		2	J	2	J	8	J
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	0.8	U	1	U	1	UJ	1	U	1	U	5	U
SW-846 8270D SIM modified	Chrysene	ug/kg	28		28		25	J-	14		7		220	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	8		4		2	J	2	J	1	U	30	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	24		52		41		32		15		340	
SW-846 8270D SIM modified	Fluorene	ug/kg	2	J	2	J	1	U	3	J	2	J	8	J
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	38		19		13	J-	12		5		140	
SW-846 8270D SIM modified	Naphthalene	ug/kg	2	J	2	J	2	J	3	J	2	J	7	J
SW-846 8270D SIM modified	Perylene	ug/kg	48		39		52	J-	65		49		200	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	9		23		30	J-	19		12		78	
SW-846 8270D SIM modified	Pyrene	ug/kg	20		40		42	J-	24		11		270	

		Location	TR06_E		TR06_E		TR06_E		TR07_A		TR07_A		TR07_A	
		Field Sample ID	CVX-0009-17		CVX-0009-18		CVX-0009-19		CVX-0009-01		CVX-0009-02		CVX-0009-03	
		Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
		Sample Delivery Group	1498701		1498701		1498701		1498701		1498701		1498701	
		Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	39600		14500		8450		24700		33900		40500	
SM 2540 G	Moisture	%	65.4		39.4		32.6		28		40.1		55.5	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	14.3		3.4		1.2	J	1.6	J	5.7		4.9	
SW-846 6010C	Cadmium	UMOLES/G	0.00219		0.00108	J	0.00103	J	0.00142	J	0.00149	J	0.00156	J
SW-846 6010C	Copper	UMOLES/G	0.0413		0.0982		0.0948		0.0751		0.0607		0.0207	
SW-846 6010C	Lead	UMOLES/G	0.0608		0.0452		0.0353		0.0559		0.059		0.056	
SW-846 6010C	Nickel	UMOLES/G	0.0754		0.0715		0.0745		0.029		0.0238		0.0332	
SW-846 6010C	Silver	UMOLES/G	0.000425	U	0.00043	U	0.000426	U	0.000434	U	0.000428	U	0.000435	U
SW-846 6010C	Zinc	UMOLES/G	0.644	J	0.285	J	0.289	J	0.281		0.312		0.34	
SW-846 6020A	Aluminum	mg/kg	24000		17100		16800		11400		13600		22300	
SW-846 6020A	Antimony	mg/Kg	0.232	U	0.135	U	0.119	U	0.114	U	0.14	U	0.186	U
SW-846 6020A	Arsenic	mg/Kg	7.24		3.2		3.2		4.6		4.54		7.65	
SW-846 6020A	Barium	mg/kg	151		87.6		74.2		74.8		72.7		145	
SW-846 6020A	Beryllium	mg/Kg	1.19		0.741		0.558		0.46		0.566		0.991	
SW-846 6020A	Cadmium	mg/kg	0.852		0.209	J	0.145	J	0.382		0.372		0.742	
SW-846 6020A	Calcium	mg/kg	6450		1770		1410		8570		2910		3980	
SW-846 6020A	Chromium	mg/Kg	32.9		21.9		16		47.7		14.3		29.6	
SW-846 6020A	Cobalt	mg/kg	17.3		11.7		10.7		8.37		8.6		17.4	
SW-846 6020A	Copper	mg/kg	57.3		24.6		16.8		21.2		19.6		44.2	J
SW-846 6020A	IRON	mg/kg	32600		23700		24400		18900		20700		32700	
SW-846 6020A	Lead	mg/Kg	56.7		27.7		15		32.3		24.8		53.4	
SW-846 6020A	Magnesium	mg/kg	9480		6370		5260		8090		4840		8540	
SW-846 6010C	Manganese	mg/kg	634		316		286		493		580		706	
SW-846 7471B	Mercury	mg/Kg	0.569	U	0.325	U	0.292	U	0.276	U	0.313	U	0.417	U
SW-846 6020A	Nickel	mg/Kg	40.8		27.5		22.9		36.2		18.9		35.9	
SW-846 6020A	Potassium	mg/kg	2280		1170		923		956		1040		1610	
SW-846 6020A	Selenium	mg/Kg	1.12	J	0.63	J	0.398	J	0.47	J	0.676	J	1.19	J
SW-846 6020A	Silver	mg/Kg	0.777		0.0835	J	0.0462	J	0.101	J	0.0883	J	0.249	J
SW-846 6020A	Sodium	mg/kg	265		112	J	80.8	J	105	J	90	J	164	J
SW-846 6020A	Thallium	mg/Kg	0.242	J	0.146	J	0.11	J	0.107	J	0.142	J	0.242	J
SW-846 6020A	Vanadium	mg/kg	35.8		22		17.6		16.2		16.6		29.1	
SW-846 6020A	Zinc	mg/Kg	244		98.4		70.1		75.2		109		167	
SW-846 8082A	Aroclor 1016	ug/kg												
SW-846 8082A	Aroclor 1221	ug/kg												
SW-846 8082A	Aroclor 1232	ug/kg												
SW-846 8082A	Aroclor 1242	ug/kg												
SW-846 8082A	Aroclor 1248	ug/kg												
SW-846 8082A	Aroclor 1254	ug/kg												
SW-846 8082A	Aroclor 1260	ug/kg												
SW-846 8082A	Aroclor-1262	ug/kg												
SW-846 8082A	Aroclor-1268	ug/kg												
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	2	U	2	U	1	U	1	U		R		R
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	2	U	2	U	1	U	1	U	2	U	3	U

		Location	TR06_E		TR06_E		TR06_E		TR07_A		TR07_A		TR07_A	
		Field Sample ID	CVX-0009-17		CVX-0009-18		CVX-0009-19		CVX-0009-01		CVX-0009-02		CVX-0009-03	
		Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
		Sample Delivery Group	1498701		1498701		1498701		1498701		1498701		1498701	
		Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	9	U	7	U	6	U	7	J	43		15	J
SW-846 8260C	2-Hexanone	ug/Kg	7	U	5	U	4	U	4	U	6	U	8	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	7	U	5	U	4	U	4	U	6	U	8	U
SW-846 8260C	Acetone	ug/kg	27	J	25	J	17	J	63		360		130	
SW-846 8260C	Benzene	ug/kg	1	U	0.9	U	0.7	U	0.7	U	1	U	1	U
SW-846 8260C	Bromodichloromethane	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Bromoform	ug/kg	2	U	2	UJ	1	U	1	U	2	U	3	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	4	U	4	U	3	U	3	U	4	U	5	U
SW-846 8260C	Carbon Disulfide	ug/kg	7	J	2	J	2	J	6	J	20		9	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Chlorobenzene	ug/kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Chloroethane	ug/Kg	4	U	4	U	3	U	3	U	4	U	5	U
SW-846 8260C	Chloroform	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	4	U	4	U	3	U	3	U	4	U	5	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Dibromochloromethane	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Ethylbenzene	ug/kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	4	U	4	U	3	U	3	U	4	U	5	U
SW-846 8260C	Styrene	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Tetrachloroethene	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Toluene	ug/kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8260C	Xylenes, Total	ug/kg	2	U	2	U	1	U	1	U	2	U	3	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	11	J	3	U	2	U	14		12		9	
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	20		4	J	2	U	13		24		7	
SW-846 8270D SIM modified	Anthracene	ug/kg	38		9		2	U	34		31		21	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	220		35		2	U	100		110		79	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	260		35		2	U	96		110		89	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	290		37		2	U	73		92		88	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	190		26		2	U	58		69		52	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	230		34		2	U	85		80		63	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	220		30		2	U	65		77		59	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	140		27		2	U	86		130		46	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	220		37		2	U	150		220		79	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	25		5	J	2	U	28		38		9	
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	17		5	J	2	U	10		10		5	J
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	6	U	3	U	2	U	160		280		79	J
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	59		13		2	U	0.9	U	1	U	1	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	6	U	3	U	2	U	0.9	U	1	U	1	U

		Location	TR06_E		TR06_E		TR06_E		TR07_A		TR07_A		TR07_A	
		Field Sample ID	CVX-0009-17		CVX-0009-18		CVX-0009-19		CVX-0009-01		CVX-0009-02		CVX-0009-03	
		Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
		Sample Delivery Group	1498701		1498701		1498701		1498701		1498701		1498701	
		Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	25		8	J	2	J	25		30		9	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	130		28		2	U	110		220		41	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	22		6	J	2	U	15		1	U	1	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	6	U	3	U	2	U	0.9	U	1	U	1	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	28		8		2	J	31		38		10	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	62		18		2	U	49		110		21	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	6	U	3	U	2	U	0.9	U	1	U	1	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	19		7	J	2	J	17		27		7	
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	6	U	3	U	2	U	0.9	U	1	U	1	U
SW-846 8270D SIM modified	Chrysene	ug/kg	300		45		2	U	130		140		100	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	40		6	J	2	U	13		15		13	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	590		77		2	J	230		260		220	
SW-846 8270D SIM modified	Fluorene	ug/kg	20		5	J	2	U	23		28		15	
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	210		28		2	U	62		69		59	
SW-846 8270D SIM modified	Naphthalene	ug/kg	16		6	J	2	U	10		11		8	
SW-846 8270D SIM modified	Perylene	ug/kg	490		230		170		80		140		210	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	190		38		2	J	190		220		140	
SW-846 8270D SIM modified	Pyrene	ug/kg	500		67		2	J	220		260		160	

		Location	TR07_A		TR07_B		TR07_B		TR07_B		TR07_B		TR07_B	
		Field Sample ID	CVX-0009-04		CVX-0008-01		CVX-0008-02		CVX-0008-03		CVX-0008-04		CVX-0008-05	
		Sample Date	8/25/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014	
		Sample Delivery Group	1498701		1498276		1498276		1498276		1498276		1498276	
		Sample Depth	1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		3-4 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	47300		118	U	23700		20400		5770		20900	
SM 2540 G	Moisture	%	55		15.6		43.6		50.8		25.3		40.5	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	8		0.63	U	4.7		8.2		0.63	U	0.63	U
SW-846 6010C	Cadmium	UMOLES/G	0.00146	J	0.000301	J	0.00175	J	0.00178	J	0.000395	J	0.00152	J
SW-846 6010C	Copper	UMOLES/G	0.0172		0.0353		0.0246		0.0199		0.0372	J-	0.0225	
SW-846 6010C	Lead	UMOLES/G	0.0552		0.0256		0.057		0.0593		0.0347	J-	0.0579	
SW-846 6010C	Nickel	UMOLES/G	0.0333		0.0239		0.0413		0.0419		0.0331		0.0439	
SW-846 6010C	Silver	UMOLES/G	0.00043	U	0.00042	U	0.000436	U	0.000421	U		R	0.00043	U
SW-846 6010C	Zinc	UMOLES/G	0.325		0.213		0.341		0.35		0.224	J+	0.344	
SW-846 6020A	Aluminum	mg/kg	17300		6210		17400		18300		17900	J	19700	
SW-846 6020A	Antimony	mg/Kg	0.18	U	0.0971	U	0.148	U	0.165	U	0.108	UJ	0.138	U
SW-846 6020A	Arsenic	mg/Kg	5.79		2.55		7.14		4.55		2.8	J+	4.97	
SW-846 6020A	Barium	mg/kg	94.6		19		94.2		104		58.1		105	
SW-846 6020A	Beryllium	mg/Kg	0.691		0.358		0.678		0.74		0.528		0.726	
SW-846 6020A	Cadmium	mg/kg	0.542		0.047	J	0.409		0.383	J	0.162	J	0.384	
SW-846 6020A	Calcium	mg/kg	2700		2750		3120		2430		1790		2850	
SW-846 6020A	Chromium	mg/Kg	18		7.53		19.2		19.2		16.1	J	19.9	
SW-846 6020A	Cobalt	mg/kg	11.5		3.76		11.3		11.5		9.75		12.4	
SW-846 6020A	Copper	mg/kg	24.5	J	7.48		22.5		22.7		16.4		26.1	
SW-846 6020A	IRON	mg/kg	28600		12900		25800		25200		28700	J-	27800	
SW-846 6020A	Lead	mg/Kg	29.1		7.55		29.6		29.6		21.9		29.5	
SW-846 6020A	Magnesium	mg/kg	5880		5370		6720		6200		7050		6510	
SW-846 6010C	Manganese	mg/kg	652		277		419		476		311		420	
SW-846 7471B	Mercury	mg/Kg	0.418	U	0.0292	J	0.0837	J	0.0725	J	0.0665	J	0.0814	J
SW-846 6020A	Nickel	mg/Kg	25		9.94		25.4		25.6		23.8	J-	26.6	
SW-846 6020A	Potassium	mg/kg	1050		669		1490		1290		1300		1430	
SW-846 6020A	Selenium	mg/Kg	1.01	J	0.115	U	0.69	J	0.627	J	0.319	J	0.742	J
SW-846 6020A	Silver	mg/Kg	0.117	J	0.023	U	0.0854	J	0.122	J	0.0434	J	0.0869	J
SW-846 6020A	Sodium	mg/kg	98	J	32.9	J	142		198		82.6	J	177	
SW-846 6020A	Thallium	mg/Kg	0.177	J	0.0345	U	0.186	J	0.171	J	0.106	J	0.212	J
SW-846 6020A	Vanadium	mg/kg	19.4		7.03		21.1		20.8		17.3	J-	21.8	
SW-846 6020A	Zinc	mg/Kg	176		78.7		128		163		76.9	J	143	
SW-846 8082A	Aroclor 1016	ug/kg												
SW-846 8082A	Aroclor 1221	ug/kg												
SW-846 8082A	Aroclor 1232	ug/kg												
SW-846 8082A	Aroclor 1242	ug/kg												
SW-846 8082A	Aroclor 1248	ug/kg												
SW-846 8082A	Aroclor 1254	ug/kg												
SW-846 8082A	Aroclor 1260	ug/kg												
SW-846 8082A	Aroclor-1262	ug/kg												
SW-846 8082A	Aroclor-1268	ug/kg												
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	2	U	1	U	2	U	2	U	1	U	2	U

		Location	TR07_A		TR07_B		TR07_B		TR07_B		TR07_B		TR07_B	
		Field Sample ID	CVX-0009-04		CVX-0008-01		CVX-0008-02		CVX-0008-03		CVX-0008-04		CVX-0008-05	
		Sample Date	8/25/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014	
		Sample Delivery Group	1498701		1498276		1498276		1498276		1498276		1498276	
		Sample Depth	1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		3-4 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	17	J	5	U	9	U	9	U	6	U	8	U
SW-846 8260C	2-Hexanone	ug/Kg	7	U	3	U	7	U	7	U	4	U	6	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	7	U	3	U	7	U	7	U	4	U	6	U
SW-846 8260C	Acetone	ug/kg	200		9	J	58		45		10	U	42	
SW-846 8260C	Benzene	ug/kg	1	U	0.6	U	1	U	1	U	0.7	U	1	U
SW-846 8260C	Bromodichloromethane	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Bromoform	ug/kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	4	U	2	U	5	U	4	U	3	U	4	U
SW-846 8260C	Carbon Disulfide	ug/kg	8	J	3	J	4	J	4	J	2	J	6	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Chlorobenzene	ug/kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Chloroethane	ug/Kg	4	U	2	U	5	U	4	U	3	U	4	U
SW-846 8260C	Chloroform	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	4	U	2	U	5	U	4	U	3	U	4	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Dibromochloromethane	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Ethylbenzene	ug/kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	4	U	2	U	5	U	4	U	3	U	4	U
SW-846 8260C	Styrene	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Tetrachloroethene	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Toluene	ug/kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Xylenes, Total	ug/kg	2	U	1	U	2	U	2	U	1	U	2	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	10		0.9	J	1	UJ	3	J	9		1	U
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	9		1	J	1	UJ	3	J	4		2	J
SW-846 8270D SIM modified	Anthracene	ug/kg	19		10		2	J	10		23		3	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	84		30		8	J-	40		90		15	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	86		28		9	J-	42		81		17	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	87		25		8	J-	38		76		17	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	62		20		7	J-	26		56		13	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	88		27		9	J-	39		71		16	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	67		20		7	J-	27		59		14	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	59		13		6	J-	19		59		10	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	95		22		11	J-	36		84		16	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	12		2	J	2	J	3	J	7		2	J
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	10	J	0.8	U	2	J	1	U	5		1	J
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	3	UJ	16		12	J-	25		56		20	
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	3	U	7		3	J-	7		25		4	
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	3	U	1	J	1	UJ	1	U	0.9	U	1	U

		Location	TR07_A		TR07_B		TR07_B		TR07_B		TR07_B		TR07_B	
		Field Sample ID	CVX-0009-04		CVX-0008-01		CVX-0008-02		CVX-0008-03		CVX-0008-04		CVX-0008-05	
		Sample Date	8/25/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014	
		Sample Delivery Group	1498701		1498276		1498276		1498276		1498276		1498276	
		Sample Depth	1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		3-4 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	16		1	J	4	J-	2	J	7		3	J
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	54		9		6	J-	12		39		8	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	3	U	6		1	UJ	2	J	9		2	J
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	3	U	0.8	U	1	UJ	1	U	0.9	U	1	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	18		2	J	3	J-	2	J	8		2	J
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	34		4		4	J-	6		18		5	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	3	U	0.8	U	1	UJ	1	U	0.9	U	1	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	13		1	J	3	J	2	J	5		1	J
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	3	U	0.8	U	1	UJ	1	U	0.9	U	1	U
SW-846 8270D SIM modified	Chrysene	ug/kg	120		33		10	J-	46		97		19	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	14		5		2	J	7		15		3	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	230		73		24	J-	110		190		36	
SW-846 8270D SIM modified	Fluorene	ug/kg	17		2		1	J	4		11		2	J
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	69		22		8	J-	32		63		15	
SW-846 8270D SIM modified	Naphthalene	ug/kg	11		1	J	3	J-	1	U	8		2	J
SW-846 8270D SIM modified	Perylene	ug/kg	290		13		41	J-	36		99		66	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	140		33		10	J-	56		96		14	
SW-846 8270D SIM modified	Pyrene	ug/kg	180		51		19	J-	73		160		27	

		Location	TR07_B		TR07_B		TR07_C		TR07_C		TR07_D		TR07_D	
		Field Sample ID	CVX-0008-06		CVX-0008-07		CVX-0009-05		CVX-0009-06		CVX-0009-07		CVX-0009-08	
		Sample Date	8/22/2014		8/22/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
		Sample Delivery Group	1498276		1498276		1498701		1498701		1498701		1498701	
		Sample Depth	4-5 FT		5-6 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	13000		12600		417		216	J	11200		24500	
SM 2540 G	Moisture	%	33.4		28.3		14.8		18.9		29.5		27.2	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	4.5		0.63	U	0.63	U	0.63	U	3.7		2.2	
SW-846 6010C	Cadmium	UMOLES/G	0.000827	J	0.000996	J	0.000413	J	0.000328	J	0.00103	J	0.000808	J
SW-846 6010C	Copper	UMOLES/G	0.0593		0.0732		0.0551		0.0377		0.0285		0.0472	
SW-846 6010C	Lead	UMOLES/G	0.0248		0.0236		0.0334		0.0315		0.0464		0.0423	
SW-846 6010C	Nickel	UMOLES/G	0.0281		0.0223		0.0325		0.0382		0.0297		0.0331	
SW-846 6010C	Silver	UMOLES/G	0.000435	U	0.000433	U	0.000439	U	0.000427	U	0.000428	U	0.000436	U
SW-846 6010C	Zinc	UMOLES/G	0.132		0.109		0.187		0.165		0.262		0.21	
SW-846 6020A	Aluminum	mg/kg	13200		13100		11900		13300		13700		17100	
SW-846 6020A	Antimony	mg/Kg	0.124	U	0.114	U	0.0962	U	0.103	U	0.12	U	0.116	U
SW-846 6020A	Arsenic	mg/kg	3.43		2.17		4.19		4.1		3.92		2.39	
SW-846 6020A	Barium	mg/kg	56		59.4		25.8		34.3		66.4		67.2	
SW-846 6020A	Beryllium	mg/Kg	0.561		0.533		0.336		0.383		0.516		0.589	
SW-846 6020A	Cadmium	mg/kg	0.127	J	0.178	J	0.0571	J	0.0416	J	0.258	J	0.113	J
SW-846 6020A	Calcium	mg/kg	1880		1810		1360		2150		2220		1010	
SW-846 6020A	Chromium	mg/Kg	13.3		14.1		13.9		14.9		14.9		17.4	
SW-846 6020A	Cobalt	mg/kg	9.44		7.98		7.79		8.76		8.85		10.4	
SW-846 6020A	Copper	mg/kg	11.8		13.7		13.4		9.45		15.4		18	
SW-846 6020A	IRON	mg/kg	20400		19100		28300		29900		21500		26600	
SW-846 6020A	Lead	mg/Kg	9.72		10.5		9.4		9.97		22.3		12.2	
SW-846 6020A	Magnesium	mg/kg	5280		5050		6990		8430		5650		6840	
SW-846 6010C	Manganese	mg/kg	376		260		348		279		468		429	
SW-846 7471B	Mercury	mg/Kg	0.0198	J	0.0132	U	0.233	U	0.236	U	0.268	U	0.262	U
SW-846 6020A	Nickel	mg/Kg	19.2		18.8		21.6		24		20.6		27	
SW-846 6020A	Potassium	mg/kg	1080		924		727		914		972		1190	
SW-846 6020A	Selenium	mg/Kg	0.336	J	0.623	J	0.114	U	0.122	U	0.498	J	0.174	J
SW-846 6020A	Silver	mg/Kg	0.0294	U	0.0314	J	0.0228	U	0.0244	U	0.0507	J	0.0403	J
SW-846 6020A	Sodium	mg/kg	146		116		65.4	J	44.2	J	111	J	102	J
SW-846 6020A	Thallium	mg/Kg	0.0927	J	0.0972	J	0.0342	U	0.038	J	0.114	J	0.11	J
SW-846 6020A	Vanadium	mg/kg	14.5		15.1		12.1		12.8		15.6		19.4	
SW-846 6020A	Zinc	mg/Kg	110		89.2		43.2		64.4		101		81.4	
SW-846 8082A	Aroclor 1016	ug/kg									5	U	4.9	U
SW-846 8082A	Aroclor 1221	ug/kg									6.4	U	6.3	U
SW-846 8082A	Aroclor 1232	ug/kg									11	U	11	U
SW-846 8082A	Aroclor 1242	ug/kg									4.6	U	4.5	U
SW-846 8082A	Aroclor 1248	ug/kg									4.6	U	4.5	U
SW-846 8082A	Aroclor 1254	ug/kg									7.8	J	4.5	U
SW-846 8082A	Aroclor 1260	ug/kg									6.8	U	6.7	U
SW-846 8082A	Aroclor-1262	ug/kg									4.6	U	4.5	U
SW-846 8082A	Aroclor-1268	ug/kg									4.6	U	4.5	U
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U

		Location	TR07_B		TR07_B		TR07_C		TR07_C		TR07_D		TR07_D	
		Field Sample ID	CVX-0008-06		CVX-0008-07		CVX-0009-05		CVX-0009-06		CVX-0009-07		CVX-0009-08	
		Sample Date	8/22/2014		8/22/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
		Sample Delivery Group	1498276		1498276		1498701		1498701		1498701		1498701	
		Sample Depth	4-5 FT		5-6 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	6	U	5	U	5	U	4	U	5	U	5	U
SW-846 8260C	2-Hexanone	ug/Kg	4	U	4	U	3	U	3	U	4	U	4	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	4	U	4	U	3	U	3	U	4	U	4	U
SW-846 8260C	Acetone	ug/kg	10	U	46		8	U	7	U	24	J	20	J
SW-846 8260C	Benzene	ug/kg	0.7	U	0.7	U	0.6	U	0.5	U	0.7	U	0.7	U
SW-846 8260C	Bromodichloromethane	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Bromoform	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	3	U	3	U	2	U	2	U	3	U	3	U
SW-846 8260C	Carbon Disulfide	ug/kg	1	U	3	J	5	J	5	J	4	J	2	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Chlorobenzene	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Chloroethane	ug/Kg	3	U	3	U	2	U	2	U	3	U	3	U
SW-846 8260C	Chloroform	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	3	U	3	U	2	U	2	U	3	U	3	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Dibromochloromethane	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Ethylbenzene	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	3	U	3	U	2	U	2	U	3	U	3	U
SW-846 8260C	Styrene	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Tetrachloroethene	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Toluene	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8260C	Xylenes, Total	ug/kg	1	U	1	U	1	U	1	U	1	U	1	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	1	U	0.9	U	1	J	0.9	J	9		3	J
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	1	U	0.9	U	7		0.8	U	14		2	U
SW-846 8270D SIM modified	Anthracene	ug/kg	1	U	0.9	U	6		4		27		2	U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	1	U	0.9	U	17		18		120		3	J
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	1	U	0.9	U	19		16		130		3	J
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	1	U	0.9	U	15		15		140		5	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	1	U	0.9	U	15		10		96		3	J
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	1	U	0.9	U	13		15		110		3	J
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	1	U	0.9	U	16		11		100		4	J
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	1	U	0.9	U	28		9		72		3	J
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	1	U	0.9	U	43		15		120		4	J
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	1	U	0.9	U	7		1	J	10		2	U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	1	J	0.9	U	5		0.8	U	8		2	U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	1	U	0.9	U	59		13		2	U	2	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	1	U	0.9	U	18		5		28		2	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	1	U	0.9	U	0.8	U	0.8	U	2	U	2	U

		Location	TR07_B		TR07_B		TR07_C		TR07_C		TR07_D		TR07_D	
		Field Sample ID	CVX-0008-06		CVX-0008-07		CVX-0009-05		CVX-0009-06		CVX-0009-07		CVX-0009-08	
		Sample Date	8/22/2014		8/22/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
		Sample Delivery Group	1498276		1498276		1498701		1498701		1498701		1498701	
		Sample Depth	4-5 FT		5-6 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	2	J	0.9	U	8		0.8	U	9		2	U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	1	U	0.9	U	37		7		51		2	U
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	1	U	0.9	U	9		2		13		2	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	1	U	0.9	U	0.8	U	0.8	U	2	U	2	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	2	J	0.9	U	7		0.9	J	10		2	U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	1	U	0.9	U	19		4		24		2	U
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	1	U	0.9	U	0.8	U	0.8	U	2	U	2	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	1	J	0.9	U	4		0.9	J	8		2	U
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	1	U	0.9	U	0.8	U	0.8	U	2	U	2	U
SW-846 8270D SIM modified	Chrysene	ug/kg	1	U	0.9	U	25		22		150		4	J
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	1	U	0.9	U	3		3		22		2	U
SW-846 8270D SIM modified	Fluoranthene	ug/kg	2	J	0.9	U	37		44		270		8	
SW-846 8270D SIM modified	Fluorene	ug/kg	1	U	0.9	U	4		2	J	16		2	U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	1	U	0.9	U	13		11		110		3	J
SW-846 8270D SIM modified	Naphthalene	ug/kg	1	U	0.9	U	3		0.8	U	22		2	J
SW-846 8270D SIM modified	Perylene	ug/kg	87		130		12		6		430		150	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	1	J	0.9	U	33		23		82		3	J
SW-846 8270D SIM modified	Pyrene	ug/kg	2	J	0.9	U	46		35		240		7	

		Location	TR07_D		TR07_D		TR07_E		TR07_E		TR07_E		TR07_E	
		Field Sample ID	CVX-0009-09		CVX-0009-10		CVX-0009-11		CVX-0009-12		CVX-0009-13		CVX-0009-14	
		Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
		Sample Delivery Group	1498701		1498701		1498701		1498701		1498701		1498701	
		Sample Depth	1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	870		1920		19600		28800		8430		48700	
SM 2540 G	Moisture	%	21.1		21.8		46.7		42.1		39.3		56.3	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	2.1		0.63	U	2.9		3.8		2.9		1.7	J
SW-846 6010C	Cadmium	UMOLES/G	0.000979	J	0.000484	J	0.00177	J	0.0019	J	0.00162	J	0.00203	J
SW-846 6010C	Copper	UMOLES/G	0.104	J-	0.0485		0.111		0.148		0.106		0.121	
SW-846 6010C	Lead	UMOLES/G	0.0309	J-	0.0272		0.0537		0.0586		0.0565		0.0448	
SW-846 6010C	Nickel	UMOLES/G	0.0788		0.0194		0.0738		0.0868		0.0658		0.0766	
SW-846 6010C	Silver	UMOLES/G	0.000432	UJ	0.000435	U	0.000434	U	0.000433	U	0.00043	U	0.00043	U
SW-846 6010C	Zinc	UMOLES/G	0.224		0.0807		0.457	J	0.519	J	0.404		0.305	
SW-846 6020A	Aluminum	mg/kg	21800		26600		19700		21100		17500		38300	
SW-846 6020A	Antimony	mg/Kg	0.107	UJ	0.106	U	0.158	U	0.139	U	0.139	U	0.188	U
SW-846 6020A	Arsenic	mg/Kg	4.43	J-	7.33		4.69		3.75		4.29		13.2	
SW-846 6020A	Barium	mg/kg	91.6	J	98.5		107		108		91		170	
SW-846 6020A	Beryllium	mg/Kg	0.909	J-	1.4		0.753		0.77		0.671		2.52	
SW-846 6020A	Cadmium	mg/kg	0.2	J	0.249	J	0.422		0.405		0.363		0.567	
SW-846 6020A	Calcium	mg/kg	1050		1380		2800		2080		2880		2420	
SW-846 6020A	Chromium	mg/Kg	20.2		25.2		21.4		21.6		19.9		42.2	
SW-846 6020A	Cobalt	mg/kg	11.5		10.6		12.7		13.1		11.6		23.6	
SW-846 6020A	Copper	mg/kg	27.9	J-	32.3		25.5		26.7		26.9		60	
SW-846 6020A	IRON	mg/kg	33200		31700		27100		29800		26700		54700	
SW-846 6020A	Lead	mg/Kg	15.2	J-	11		30.9		30.1		26.9		33.2	
SW-846 6020A	Magnesium	mg/kg	6860	J	13100		6840		6840		6530		16000	
SW-846 6010C	Manganese	mg/kg	461		366		502		494		373		680	
SW-846 7471B	Mercury	mg/Kg	0.238	U	0.254	U	0.364	U	0.34	U	0.322	U	0.435	U
SW-846 6020A	Nickel	mg/Kg	31.1	J-	37.9		27.1		29.1		26.3		60.4	
SW-846 6020A	Potassium	mg/kg	1430	J	4390		1520		1430		1210		3030	
SW-846 6020A	Selenium	mg/Kg	0.269	J	0.344	J	0.778	J	0.779	J	0.643	J	0.4	J
SW-846 6020A	Silver	mg/Kg	0.0419	J	0.0838	J	0.0923	J	0.0827	J	0.0983	J	0.0572	J
SW-846 6020A	Sodium	mg/kg	98.8	J	117		136	J	127	J	174		185	
SW-846 6020A	Thallium	mg/Kg	0.128	J	0.209	J	0.192	J	0.218	J	0.167	J	0.408	J
SW-846 6020A	Vanadium	mg/kg	26.6	J-	34.4		23.7		23		20.1		52.8	
SW-846 6020A	Zinc	mg/Kg	80.3		104		121		154		118		132	
SW-846 8082A	Aroclor 1016	ug/kg	4.5	U	4.6	U								
SW-846 8082A	Aroclor 1221	ug/kg	5.8	U	5.8	U								
SW-846 8082A	Aroclor 1232	ug/kg	10	U	10	U								
SW-846 8082A	Aroclor 1242	ug/kg	4.1	U	4.2	U								
SW-846 8082A	Aroclor 1248	ug/kg	4.1	U	4.2	U								
SW-846 8082A	Aroclor 1254	ug/kg	4.1	U	4.2	U								
SW-846 8082A	Aroclor 1260	ug/kg	6.1	U	6.2	U								
SW-846 8082A	Aroclor-1262	ug/kg	4.1	U	4.2	U								
SW-846 8082A	Aroclor-1268	ug/kg	4.1	U	4.2	U								
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	1	U	1	U		R	2	U	1	U	2	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	1	U	1	U	2	U	2	U	1	U	2	U

		Location	TR07_D		TR07_D		TR07_E		TR07_E		TR07_E		TR07_E	
		Field Sample ID	CVX-0009-09		CVX-0009-10		CVX-0009-11		CVX-0009-12		CVX-0009-13		CVX-0009-14	
		Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
		Sample Delivery Group	1498701		1498701		1498701		1498701		1498701		1498701	
		Sample Depth	1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	4	U	4	U	7	U	8	U	6	U	8	U
SW-846 8260C	2-Hexanone	ug/Kg	3	U	3	U	6	U	6	U	4	U	6	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	3	U	3	U	6	U	6	U	4	U	6	U
SW-846 8260C	Acetone	ug/kg	7	J	15	J	61		38		17	J	37	J
SW-846 8260C	Benzene	ug/kg	0.5	U	0.6	U	0.9	U	0.9	U	0.7	U	1	U
SW-846 8260C	Bromodichloromethane	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Bromoform	ug/kg	1	U	1	U	2	U	2	UJ	1	UJ	2	UJ
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	2	U	2	U	4	U	4	U	3	U	4	U
SW-846 8260C	Carbon Disulfide	ug/kg	3	J	2	J	4	J	2	U	2	J	6	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Chlorobenzene	ug/kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Chloroethane	ug/Kg	2	U	2	U	4	U	4	U	3	U	4	U
SW-846 8260C	Chloroform	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	2	U	2	U	4	U	4	U	3	U	4	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Dibromochloromethane	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Ethylbenzene	ug/kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	2	U	2	U	4	U	4	U	3	U	4	U
SW-846 8260C	Styrene	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Tetrachloroethene	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Toluene	ug/kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8260C	Xylenes, Total	ug/kg	1	U	1	U	2	U	2	U	1	U	2	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	0.9	J	2	U	8		2	U	4		2	U
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	0.8	U	2	U	9		4	J	4		2	J
SW-846 8270D SIM modified	Anthracene	ug/kg	0.8	U	2	U	24		4	J	24		4	J
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	0.8	U	2	U	85		20		93		15	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	0.8	U	2	U	87		24		88		17	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	0.8	U	2	U	91		25		89		19	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	0.8	U	2	U	61		18		56		14	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	0.8	U	2	U	76		24		65		16	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	0.8	U	2	U	67		21		60		16	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	0.8	U	2	U	55		15		43		11	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	0.8	U	2	U	91		23		77		18	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	0.8	U	2	U	10		3	J	6		3	J
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	0.8	U	2	U	7		4	J	4		4	J
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	0.8	U	2	U	2	U	2	U	85		2	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	0.8	U	2	U	32		10		18		2	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	0.8	U	2	U	2	U	2	U	1	U	2	U

		Location	TR07_D		TR07_D		TR07_E		TR07_E		TR07_E		TR07_E	
		Field Sample ID	CVX-0009-09		CVX-0009-10		CVX-0009-11		CVX-0009-12		CVX-0009-13		CVX-0009-14	
		Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
		Sample Delivery Group	1498701		1498701		1498701		1498701		1498701		1498701	
		Sample Depth	1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	0.8	U	2	U	10		4	J	6		4	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	0.8	U	2	U	48		14		34		11	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	0.8	U	2	U	2	U	2	U	1	U	2	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	0.8	U	2	U	2	U	2	U	1	U	2	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	0.8	U	2	U	12		5	J	8		4	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	0.8	U	2	U	22		10		15		7	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	0.8	U	2	U	2	U	2	U	1	U	2	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	0.8	U	2	U	8		4	J	7		3	J
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	0.8	U	2	U	2	U	2	U	1	U	2	U
SW-846 8270D SIM modified	Chrysene	ug/kg	0.8	U	2	U	100		28		97		22	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	0.8	U	2	U	14		4	J	13		3	J
SW-846 8270D SIM modified	Fluoranthene	ug/kg	0.8	U	2	U	220		51		210		38	
SW-846 8270D SIM modified	Fluorene	ug/kg	0.8	U	2	U	14		3	J	6		3	J
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	0.8	U	2	U	69		21		64		15	
SW-846 8270D SIM modified	Naphthalene	ug/kg	0.8	U	2	U	9		4	J	6		4	
SW-846 8270D SIM modified	Perylene	ug/kg	53		8		660		190		140		72	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	0.8	U	2	U	120		22		95		20	
SW-846 8270D SIM modified	Pyrene	ug/kg	0.8	U	2	U	180		44		170		32	

		Location	TR07_E		TR09_C		TR10_A		TR10_A		TR10_A		TR10_A	
		Field Sample ID	CVX-0009-15		CVX-0013-01		CVX-0013-02		CVX-0013-03		CVX-0013-04		CVX-0013-05	
		Sample Date	8/25/2014		9/10/2014		9/10/2014		9/10/2014		9/10/2014		9/10/2014	
		Sample Delivery Group	1498701		1502680		1502680		1502680		1502680		1502680	
		Sample Depth	3-4 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
Lloyd Kahn modified	Total Organic Carbon	mg/kg	2160		2170		3200		2280		2470		2930	
SM 2540 G	Moisture	%	31.6		13.4		24.5		20.8		20.9		23.4	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U	0.63	U
SW-846 6010C	Cadmium	UMOLES/G	0.00142	J	0.000837	J	0.000394	J	0.000396	J	0.000347	J	0.000326	J
SW-846 6010C	Copper	UMOLES/G	0.122		0.944		0.0577		0.098		0.0498		0.074	
SW-846 6010C	Lead	UMOLES/G	0.0252		0.128		0.0645		0.0654		0.0632		0.0619	
SW-846 6010C	Nickel	UMOLES/G	0.0684		0.0533		0.0795		0.0756		0.0678	J	0.17	J
SW-846 6010C	Silver	UMOLES/G	0.000435	U	0.000426	U	0.000428	U	0.000433	U	0.000427	U	0.000427	U
SW-846 6010C	Zinc	UMOLES/G	0.178		0.485		0.208		0.186		0.15		0.258	
SW-846 6020A	Aluminum	mg/kg	12000		13400		15000		14700		14600		14600	
SW-846 6020A	Antimony	mg/Kg	0.121	U	0.0965	UJ	0.106	U	0.103	U	0.104	U	0.107	U
SW-846 6020A	Arsenic	mg/kg	7.78		4.74	J-	4.53		3.22		3.14		3.42	
SW-846 6020A	Barium	mg/kg	64.2		47.7		74.7		45.5		40		47.7	
SW-846 6020A	Beryllium	mg/Kg	1.13		0.409	J+	0.877		0.82		0.824		0.719	
SW-846 6020A	Cadmium	mg/kg	0.263	J	0.133	J	0.109	J	0.0621	J	0.0759	J	0.0649	J
SW-846 6020A	Calcium	mg/kg	1660		13400	J	2660		2440		2150		2570	
SW-846 6020A	Chromium	mg/Kg	16.7		17.3	J	32.1		38.4		39.8		32.5	
SW-846 6020A	Cobalt	mg/kg	6.48		7.8	J+	12		8.57		8.73		8.73	
SW-846 6020A	Copper	mg/kg	22.4		17.8	J	16.3		17.7		10.3		12.4	
SW-846 6020A	IRON	mg/kg	18800		30400	J	25200		26300		27700		26400	
SW-846 6020A	Lead	mg/Kg	10.1		29.6	J	37.2		31.8		20.2		31	
SW-846 6020A	Magnesium	mg/kg	5930		14000	J	8450		6350		6900		6650	
SW-846 6010C	Manganese	mg/kg	436		515		436		306		352		318	
SW-846 7471B	Mercury	mg/Kg	0.277	U	0.319	J+	1.3		0.116	J	0.0666	J	0.116	J
SW-846 6020A	Nickel	mg/Kg	22.1		22.1	J	35.8		32.5		34.6		31.2	
SW-846 6020A	Potassium	mg/kg	2200		1110	J+	1820		1060		854		1150	
SW-846 6020A	Selenium	mg/Kg	0.15	J	0.114	U	0.222	J	0.2	J	0.141	J	0.174	J
SW-846 6020A	Silver	mg/Kg	0.0906	J	0.027	J	0.118	J	0.0584	J	0.0525	J	0.0621	J
SW-846 6020A	Sodium	mg/kg	94.8	J	84.2	J	122		57.3	J	59.4	J	75.5	J
SW-846 6020A	Thallium	mg/Kg	0.14	J	0.0506	J	0.115	J	0.0706	J	0.0619	J	0.0767	J
SW-846 6020A	Vanadium	mg/kg	29.6		15.9	J+	22.4		15.3		21.1		16.9	
SW-846 6020A	Zinc	mg/Kg	120		108	J	80.6		73.2		80.9		71.6	
SW-846 8082A	Aroclor 1016	ug/kg			4.1	U	4.7	U	4.5	U	4.5	U	4.7	U
SW-846 8082A	Aroclor 1221	ug/kg			5.3	U	6	U	5.8	U	5.7	U	5.9	U
SW-846 8082A	Aroclor 1232	ug/kg			9.2	U	10	U	10	U	10	U	10	U
SW-846 8082A	Aroclor 1242	ug/kg			3.8	U	4.3	U	4.2	U	4.1	U	4.3	U
SW-846 8082A	Aroclor 1248	ug/kg			3.8	U	4.3	U	4.2	U	4.1	U	4.3	U
SW-846 8082A	Aroclor 1254	ug/kg			3.8	U	4.3	U	4.2	U	4.1	U	4.3	U
SW-846 8082A	Aroclor 1260	ug/kg			5.6	U	6.4	U	6.2	U	6.1	U	6.3	U
SW-846 8082A	Aroclor-1262	ug/kg			3.8	U	4.3	U	4.2	U	4.1	U	4.3	U
SW-846 8082A	Aroclor-1268	ug/kg			3.8	U	4.3	U	4.2	U	4.1	U	4.3	U
SW-846 8082A	Polychlorinated biphenyls	ug/kg												
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U

		Location	TR07_E		TR09_C		TR10_A		TR10_A		TR10_A		TR10_A	
		Field Sample ID	CVX-0009-15		CVX-0013-01		CVX-0013-02		CVX-0013-03		CVX-0013-04		CVX-0013-05	
		Sample Date	8/25/2014		9/10/2014		9/10/2014		9/10/2014		9/10/2014		9/10/2014	
		Sample Delivery Group	1498701		1502680		1502680		1502680		1502680		1502680	
		Sample Depth	3-4 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	1	U	1	UJ	2	UJ	1	UJ	0.7	UJ	0.7	UJ
SW-846 8260C	1,2-Dichloropropane	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	5	U	4	U	6	U	4	U	3	U	3	U
SW-846 8260C	2-Hexanone	ug/Kg	4	U	3	U	5	U	3	U	2	U	2	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	4	U	3	U	5	U	3	U	2	U	2	U
SW-846 8260C	Acetone	ug/kg	13	J	12	J	17	J	11	J	11	J	11	J
SW-846 8260C	Benzene	ug/kg	0.6	U	0.5	U	0.8	U	0.5	J	0.4	U	0.3	U
SW-846 8260C	Bromodichloromethane	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Bromoform	ug/kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	2	U	2	U	3	U	2	U	1	U	1	U
SW-846 8260C	Carbon Disulfide	ug/kg	2	J	1	U	4	J	3	J	2	J	2	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Chlorobenzene	ug/kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Chloroethane	ug/Kg	2	U	2	U	3	U	2	U	1	U	1	U
SW-846 8260C	Chloroform	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	2	U	2	U	3	U	2	U	1	U	1	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Dibromochloromethane	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Ethylbenzene	ug/kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	2	U	2	U	3	U	2	U	1	U	1	U
SW-846 8260C	Styrene	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Tetrachloroethene	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Toluene	ug/kg	1	U	1	U	2	U	1	J	0.9	J	0.9	J
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8260C	Xylenes, Total	ug/kg	1	U	1	U	2	U	1	U	0.7	U	0.7	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	2	U	8800		8		8		4	J	17	J
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	2	U	2200		19		25		6		10	
SW-846 8270D SIM modified	Anthracene	ug/kg	2	U	20000		51		60		22	J	77	J
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	2	U	24000	J+	160		210		54	J	120	J
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	2	U	22000	J+	150	J-	180		48	J	100	J
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	2	U	21000	J+	120	J-	150		33	J	100	J
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	2	U	12000	J+	74	J-	90		24	J	54	J
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	2	U	17000	J+	130	J-	150		48	J	95	J
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	2	U	13000	J+	92	J-	110		29	J	63	J
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	2	U	9500	J+	100		130		31	J	57	J
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	2	U	21000	J+	130		150		43	J	83	J
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	2	U	3800		14		16		6		10	
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	2	U	5100		9		12		4		7	
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	2	U	22000		150		180		51	J	95	J
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	2	U	3300	J+	41		54		13		22	
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	2	U	1300		12		15		4		7	

		Location	TR07_E		TR09_C		TR10_A		TR10_A		TR10_A		TR10_A	
		Field Sample ID	CVX-0009-15		CVX-0013-01		CVX-0013-02		CVX-0013-03		CVX-0013-04		CVX-0013-05	
		Sample Date	8/25/2014		9/10/2014		9/10/2014		9/10/2014		9/10/2014		9/10/2014	
		Sample Delivery Group	1498701		1502680		1502680		1502680		1502680		1502680	
		Sample Depth	3-4 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate	
		Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units												
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	2	U	4300		13		14		7		9	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	2	U	9000		87		100		28		48	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	2	U	8	U	13		20		4		8	
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	2	U	8	U	0.9	U	0.8	U	0.8	U	0.9	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	2	U	3200		18		21		7		11	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	2	U	2800		34		42		11		19	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	2	U	8	U	0.9	U	0.8	U	0.8	U	0.9	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	2	U	1100		12		16		5		7	
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	2	U	8	U	0.9	U	0.8	U	0.8	U	0.9	U
SW-846 8270D SIM modified	Chrysene	ug/kg	2	U	24000	J+	180		220		58	J	130	J
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	2	U	3700	J+	26	J-	31		7	J	15	J
SW-846 8270D SIM modified	Fluoranthene	ug/kg	2	U	58000	J+	360		460		130		300	
SW-846 8270D SIM modified	Fluorene	ug/kg	2	U	12000		18		20		8	J	26	J
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	2	U	14000	J+	88	J-	110		29	J	64	J
SW-846 8270D SIM modified	Naphthalene	ug/kg	2	U	7000		24		29		7	J	17	J
SW-846 8270D SIM modified	Perylene	ug/kg	11		5400	J+	34		41		11	J	25	J
SW-846 8270D SIM modified	Phenanthrene	ug/kg	2	U	70000	J+	260		300		110	J	260	J
SW-846 8270D SIM modified	Pyrene	ug/kg	2	U	49000	J+	310		380		110	J	240	J

		Location	TR11_B		TR11_C		TR11_C		TR11_C	
		Field Sample ID	CVX-0014-01		CVX-0014-02		CVX-0014-03		CVX-0014-04	
		Sample Date	9/11/2014		9/11/2014		9/11/2014		9/11/2014	
		Sample Delivery Group	1502969		1502969		1502969		1502969	
		Sample Depth	0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units								
Lloyd Kahn modified	Total Organic Carbon	mg/kg	107	U	349		667		668	
SM 2540 G	Moisture	%	6.8		10.7		10		15.5	
EPA 821/R-91-100	ACID VOLATILE SULFIDE	UMOLES/G	0.63	U	0.63	U	0.63	U	0.63	UJ
SW-846 6010C	Cadmium	UMOLES/G	0.000548	J	0.000312	J	0.000574	J	0.000468	J
SW-846 6010C	Copper	UMOLES/G	0.0489		0.066		0.0515		0.0952	J-
SW-846 6010C	Lead	UMOLES/G	0.0362		0.0346		0.0363		0.0341	J+
SW-846 6010C	Nickel	UMOLES/G	0.0282		0.042		0.0481		0.0499	
SW-846 6010C	Silver	UMOLES/G	0.000427	U	0.000426	U	0.000437	U	0.000428	U
SW-846 6010C	Zinc	UMOLES/G	0.263		0.309		0.254		0.266	J
SW-846 6020A	Aluminum	mg/kg	12100		13200		14100		16700	
SW-846 6020A	Antimony	mg/Kg	0.0888	U	0.0927	U	0.0928	U	0.0989	UJ
SW-846 6020A	Arsenic	mg/Kg	4.11		3.35		2.41		3.47	
SW-846 6020A	Barium	mg/kg	34.6		40.3		28.6		41.9	J
SW-846 6020A	Beryllium	mg/Kg	0.385		0.451		0.391		0.516	
SW-846 6020A	Cadmium	mg/kg	0.0465	J	0.0573	J	0.0563	J	0.0719	J
SW-846 6020A	Calcium	mg/kg	4450		12700		1510		6490	J
SW-846 6020A	Chromium	mg/Kg	15		26.1		18.2		24	J
SW-846 6020A	Cobalt	mg/kg	10.1		8.81		9.84		9.71	J+
SW-846 6020A	Copper	mg/kg	14		11.8		10.7		12	
SW-846 6020A	IRON	mg/kg	26100		24700		27400		29900	
SW-846 6020A	Lead	mg/Kg	15.1		8.85		7.89		12.5	J+
SW-846 6020A	Magnesium	mg/kg	7660		12000		7550		10600	J
SW-846 6010C	Manganese	mg/kg	375		367		358		382	
SW-846 7471B	Mercury	mg/Kg	0.0508	J	0.0569	J	0.0351	J	0.0411	J
SW-846 6020A	Nickel	mg/Kg	20.9		27.7		23.1		28.5	J
SW-846 6020A	Potassium	mg/kg	1170		1640		941		1490	J
SW-846 6020A	Selenium	mg/Kg	0.201	J	0.162	J	0.13	J	0.203	J
SW-846 6020A	Silver	mg/Kg	0.021	U	0.022	U	0.022	U	0.0234	U
SW-846 6020A	Sodium	mg/kg	57.4	J	74.5	J	43.6	J	162	J
SW-846 6020A	Thallium	mg/Kg	0.0341	J	0.0547	J	0.0403	J	0.0455	J
SW-846 6020A	Vanadium	mg/kg	13.4		14.6		13.7		18.5	J
SW-846 6020A	Zinc	mg/Kg	62.2		70.9		71.7		87.2	J
SW-846 8082A	Aroclor 1016	ug/kg			4	U	3.9	U	4.3	U
SW-846 8082A	Aroclor 1221	ug/kg			5.1	U	5	U	5.4	U
SW-846 8082A	Aroclor 1232	ug/kg			8.9	U	8.7	U	9.5	U
SW-846 8082A	Aroclor 1242	ug/kg			3.7	U	3.6	U	3.9	U
SW-846 8082A	Aroclor 1248	ug/kg			3.7	U	3.6	U	3.9	U
SW-846 8082A	Aroclor 1254	ug/kg			3.7	U	3.6	U	3.9	U
SW-846 8082A	Aroclor 1260	ug/kg			5.4	U	5.4	U	5.8	U
SW-846 8082A	Aroclor-1262	ug/kg			3.7	U	3.6	U	3.9	U
SW-846 8082A	Aroclor-1268	ug/kg			3.7	U	3.6	U	3.9	U
SW-846 8082A	Polychlorinated biphenyls	ug/kg								
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	1	U	0.8	U	1	U	0.8	U

		Location	TR11_B		TR11_C		TR11_C		TR11_C	
		Field Sample ID	CVX-0014-01		CVX-0014-02		CVX-0014-03		CVX-0014-04	
		Sample Date	9/11/2014		9/11/2014		9/11/2014		9/11/2014	
		Sample Delivery Group	1502969		1502969		1502969		1502969	
		Sample Depth	0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units								
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	1	UJ	0.8	UJ	1	UJ	0.8	UJ
SW-846 8260C	1,2-Dichloropropane	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	5	U	3	U	4	U	3	U
SW-846 8260C	2-Hexanone	ug/Kg	4	U	3	U	3	U	2	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	4	U	3	U	3	U	2	U
SW-846 8260C	Acetone	ug/kg	10	J	32		19	J	10	J
SW-846 8260C	Benzene	ug/kg	0.6	U	0.4	U	0.5	U	0.4	U
SW-846 8260C	Bromodichloromethane	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Bromoform	ug/kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	2	U	2	U	2	U	2	U
SW-846 8260C	Carbon Disulfide	ug/kg	2	J	2	J	3	J	4	J
SW-846 8260C	Carbon Tetrachloride	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Chlorobenzene	ug/kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Chloroethane	ug/Kg	2	U	2	U	2	U	2	U
SW-846 8260C	Chloroform	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	2	U	2	U	2	U	2	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Dibromochloromethane	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Ethylbenzene	ug/kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	2	U	2	U	2	U	2	U
SW-846 8260C	Styrene	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Tetrachloroethene	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Toluene	ug/kg	1	U	1	J	1	U	0.8	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	1	U	0.8	U	1	U	0.8	U
SW-846 8260C	Xylenes, Total	ug/kg	1	U	0.8	U	1	U	0.8	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	8		1	J	2	J	8	
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	2		0.7	J	3		2	
SW-846 8270D SIM modified	Anthracene	ug/kg	25		5		7		36	
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	31		16		26		110	
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	29		17		23		91	
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	29		21		26		100	
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	18		12		16		57	
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	25		16		19		80	
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	19		14		20		64	
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	13		9		18		70	
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	26		13		26		100	
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	5		1	J	3		11	
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	9		1	J	2		5	
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	24		9		23		110	
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	6		4		10		28	
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	2		0.7	U	0.7	U	10	

		Location	TR11_B		TR11_C		TR11_C		TR11_C	
		Field Sample ID	CVX-0014-01		CVX-0014-02		CVX-0014-03		CVX-0014-04	
		Sample Date	9/11/2014		9/11/2014		9/11/2014		9/11/2014	
		Sample Delivery Group	1502969		1502969		1502969		1502969	
		Sample Depth	0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
		Matrix	SOIL		SOIL		SOIL		SOIL	
		Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample	
		Sample Type	Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units								
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	14		1	J	3		11	
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	12		6		15		72	
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	2		2		6		11	
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	0.7	U	0.7	U	0.7	U	0.8	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	9		1	J	3		12	
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	5		3		8		31	
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	0.7	U	0.7	U	0.7	U	0.8	U
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	4		0.8	J	3		10	
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	0.7	U	0.7	U	0.7	U	0.8	U
SW-846 8270D SIM modified	Chrysene	ug/kg	33		22		33		130	
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	4		3		5		15	
SW-846 8270D SIM modified	Fluoranthene	ug/kg	88		41		63		240	
SW-846 8270D SIM modified	Fluorene	ug/kg	12		2	J	3		10	
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	20		13		18		64	
SW-846 8270D SIM modified	Naphthalene	ug/kg	7		0.8	J	1	J	4	
SW-846 8270D SIM modified	Perylene	ug/kg	8		5		9		25	
SW-846 8270D SIM modified	Phenanthrene	ug/kg	90		22		32		170	
SW-846 8270D SIM modified	Pyrene	ug/kg	70		33		53		210	

ATTACHMENT A-3

VALIDATED LABORATORY MIXED COMPOSITE DATA

		Location	Mixed Comp	
		Field Sample ID	Mixed Composite	
		Sample Date	8/25/2014	
		Sample Delivery Group	1498789	
		Matrix	SOIL	
		Sample Purpose	Regular sample	
		Sample Type	Soil Boring	
Analytical Method	Parameter Name	Units		
SM 2540 G	Moisture	%	0.5	U
SW-846 8082A	Aroclor 1016	ug/kg	3.6	U
SW-846 8082A	Aroclor 1221	ug/kg	4.6	U
SW-846 8082A	Aroclor 1232	ug/kg	8	U
SW-846 8082A	Aroclor 1242	ug/kg	3.3	U
SW-846 8082A	Aroclor 1248	ug/kg	3.3	U
SW-846 8082A	Aroclor 1254	ug/kg	3.3	U
SW-846 8082A	Aroclor 1260	ug/kg	4.9	U
SW-846 8082A	Aroclor-1262	ug/kg	3.3	U
SW-846 8082A	Aroclor-1268	ug/kg	3.3	U
SW-846 8260C	1,1,1-Trichloroethane	ug/kg	1	U
SW-846 8260C	1,1,2,2-Tetrachloroethane	ug/kg	1	U
SW-846 8260C	1,1,2-Trichloroethane	ug/Kg	1	U
SW-846 8260C	1,1-Dichloroethane	ug/kg	1	U
SW-846 8260C	1,1-Dichloroethene (Dichloroethylene)	ug/Kg	1	U
SW-846 8260C	1,2-Dichloroethane	ug/Kg	1	U
SW-846 8260C	1,2-Dichloropropane	ug/Kg	1	U
SW-846 8260C	2-Butanone (Methyl ethyl ketone)	ug/Kg	4	U
SW-846 8260C	2-Hexanone	ug/Kg	3	U
SW-846 8260C	4-Methyl-2-pentanone	ug/Kg	3	U
SW-846 8260C	Acetone	ug/kg	7	U
SW-846 8260C	Benzene	ug/kg	0.5	U
SW-846 8260C	Bromodichloromethane	ug/Kg	1	U
SW-846 8260C	Bromoform	ug/kg	1	U
SW-846 8260C	Bromomethane (Methyl bromide)	ug/Kg	2	U
SW-846 8260C	Carbon Disulfide	ug/kg	1	U
SW-846 8260C	Carbon Tetrachloride	ug/Kg	1	U
SW-846 8260C	Chlorobenzene	ug/kg	1	U
SW-846 8260C	Chloroethane	ug/Kg	2	U
SW-846 8260C	Chloroform	ug/Kg	1	U
SW-846 8260C	Chloromethane (Methyl chloride)	ug/Kg	2	U
SW-846 8260C	cis-1,2-Dichloroethene	ug/Kg	1	U
SW-846 8260C	cis-1,3-Dichloropropene	ug/kg	1	U
SW-846 8260C	Dibromochloromethane	ug/Kg	1	U
SW-846 8260C	Ethylbenzene	ug/kg	1	U
SW-846 8260C	Methylene chloride (Dichloromethane)	ug/Kg	2	U
SW-846 8260C	Styrene	ug/Kg	1	U
SW-846 8260C	Tetrachloroethene	ug/Kg	1	U
SW-846 8260C	Toluene	ug/kg	1	U
SW-846 8260C	trans-1,2-Dichloroethene	ug/Kg	1	U
SW-846 8260C	trans-1,3-Dichloropropene	ug/Kg	1	U
SW-846 8260C	Trichloroethene (Trichloroethylene)	ug/Kg	1	U
SW-846 8260C	Vinyl chloride (Chloroethene)	ug/Kg	1	U
SW-846 8260C	Xylenes, Total	ug/kg	1	U
SW-846 8270D SIM modified	Acenaphthene	ug/kg	0.7	U
SW-846 8270D SIM modified	Acenaphthylene	ug/kg	0.7	U
SW-846 8270D SIM modified	Anthracene	ug/kg	0.7	U
SW-846 8270D SIM modified	Benzo(a)anthracene	ug/kg	0.7	U
SW-846 8270D SIM modified	Benzo(a)Pyrene	ug/kg	0.7	U
SW-846 8270D SIM modified	Benzo(b)Fluoranthene	ug/kg	0.7	U
SW-846 8270D SIM modified	Benzo(g,h,i)perylene	ug/kg	0.7	U
SW-846 8270D SIM modified	Benzo(k)Fluoranthene	ug/kg	0.7	U
SW-846 8270D SIM modified	Benzo[e]pyrene	ug/kg	0.7	U
SW-846 8270D SIM modified	C1-Benzanthrene/chrysenes	ug/kg	0.7	U
SW-846 8270D SIM modified	C1-FLUORANTHRENES/PYRENES	ug/kg	0.7	U
SW-846 8270D SIM modified	C1-Fluorenes	ug/kg	0.7	U
SW-846 8270D SIM modified	C1-Naphthalenes	ug/kg	0.7	U
SW-846 8270D SIM modified	C1-PHENANTHRENES/ANTHRACENES	ug/kg	0.7	U
SW-846 8270D SIM modified	C2-Benzanthrene/chrysenes	ug/kg	0.7	U
SW-846 8270D SIM modified	C2-Fluorenes	ug/kg	0.7	U
SW-846 8270D SIM modified	C2-Naphthalenes	ug/kg	0.7	U
SW-846 8270D SIM modified	C2-PHENANTHRENES/ANTHRACENES	ug/kg	0.7	U
SW-846 8270D SIM modified	C3-Benzanthrene/chrysenes	ug/kg	0.7	U
SW-846 8270D SIM modified	C3-Fluorenes	ug/kg	0.7	U
SW-846 8270D SIM modified	C3-Naphthalenes	ug/kg	0.7	U
SW-846 8270D SIM modified	C3-PHENANTHRENES/ANTHRACENES	ug/kg	0.7	U
SW-846 8270D SIM modified	C4-Benzanthrene/chrysenes	ug/kg	0.7	U

		Location	Mixed Comp	
		Field Sample ID	Mixed Composite	
		Sample Date	8/25/2014	
		Sample Delivery Group	1498789	
		Matrix	SOIL	
		Sample Purpose	Regular sample	
		Sample Type	Soil Boring	
Analytical Method	Parameter Name	Units		
SW-846 8270D SIM modified	C4-Naphthalenes	ug/kg	0.7	U
SW-846 8270D SIM modified	C4-PHENANTHRENES/ANTHRACENES	ug/kg	0.7	U
SW-846 8270D SIM modified	Chrysene	ug/kg	0.7	U
SW-846 8270D SIM modified	Dibenz(a,h)anthracene	ug/kg	0.7	U
SW-846 8270D SIM modified	Fluoranthene	ug/kg	0.7	U
SW-846 8270D SIM modified	Fluorene	ug/kg	0.7	U
SW-846 8270D SIM modified	Indeno(1,2,3-cd)pyrene	ug/kg	0.7	U
SW-846 8270D SIM modified	Naphthalene	ug/kg	0.7	U
SW-846 8270D SIM modified	Perylene	ug/kg	0.7	U
SW-846 8270D SIM modified	Phenanthrene	ug/kg	0.7	U
SW-846 8270D SIM modified	Pyrene	ug/kg	0.7	U

APPENDIX B

LABORATORY ANALYTICAL REPORT WITH CHAIN-OF-CUSTODY FORMS

(Data Provided On Disks)

APPENDIX C

SEDIMENT CORE LOGS

Site: Beacon, NY	Drilling Company: ATL	Northing: 977447.61
Boring/Well ID: TR01_A	Driller: Mark Childs	Easting: 649766.70
Permit No: NA	Consulting Firm: Parsons	Elevation: 212.08
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/18/2014	Drill Rig Type: MC	Total Depth: 3.38 Ft
Complete Date: 08/19/2014	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny, 60s	Sample Method: MC	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0004-01		0		SM		Wet, brown, fine to coarse SAND, trace silt, trace organic roots, no odors, no sheen.
	CVX-0004-02		0		SM		Wet, brown, fine to medium SAND, some silt, trace organics, no odors, no sheen.
1	CVX-0004-03		0		SW		12 to 15 inches is wet, brown, fine to medium SAND, trace silt, trace organics, no staining, no odor, no sheen. 15 to 24 inches is wet, brown, fine to medium SAND, some fine to medium gravel, trace silt, no odors, no staining, no sheen.
2	CVX-0004-08		0		SM/SC		Wet, light brown to brow, fine to medium SAND, trace silt and clay, no odors, no sheen, no straining.
3							
3.38							

Site: Beacon, NY	Drilling Company: ATL	Northing: 977436.91
Boring/Well ID: TR01_B	Driller: Mark Childs	Easting: 649790.93
Permit No: NA	Consulting Firm: Parsons	Elevation: 192.985
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/18/2014	Drill Rig Type: MC	Total Depth: 3.38 Ft
Complete Date: 08/19/2014	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny, 60s	Sample Method: MC	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0004-04		0		SW/SP		Wet, brown to grey, fine to coarse GRAVEL, some fine to medium sand, trace silt, little organics, no odors, no sheens, no staining.
	CVX-0004-05		0		SW/SP		Wet, brown to grey, fine to coarse GRAVEL, some fine to medium sand, trace silt, some organics (wood), no odors, no sheens, no staining.
1	CVX-0004-06 CVX-0004-07		0		SW/SP		Wet, brown, fine to medium SAND, some fine to medium gravel, trace silt, trace organics, no odor, no sheens, no staining.
2							
3							
3.38							

Site: Beacon, NY	Drilling Company: ATL	Northing: 977433.67
Boring/Well ID: TR01_C	Driller: Mark Childs	Easting: 649807.31
Permit No: NA	Consulting Firm: Parsons	Elevation: 194.227
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/18/2014	Drill Rig Type: MC	Total Depth: 3.38 Ft
Complete Date: 08/19/2014	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny, 60s	Sample Method: MC	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0004-09		0		SM		Wet, dark brown to dark grey, fine to medium SAND, some silt, trace fine gravel, trace organic roots, no odor, no sheen, no staining.
	CVX-0004-10		0		SM		Wet, dark brown to dark grey, fine to medium SAND, some silt, trace fine gravel, trace organics, no odors, no sheens, no staining.
1	CVX-0004-11		0		SM		Wet, brown, 12 to 13 inches has organic roots, trace fine sand and silt. 13 to 24 inches is wet, brown, fine to medium SAND, trace silt, some organics, no sheen, no odors, no staining.
2	CVX-0004-12		0		SM/SP		Wet, brown, fine to medium SAND, some fine gravel, trace silt, no odors, no staining, no sheen.
3							
3.38							

Site: Beacon, NY	Drilling Company: ATL	Northing: 977434.02
Boring/Well ID: TR01_D	Driller: Mark Childs	Easting: 649821.67
Permit No: NA	Consulting Firm: Parsons	Elevation: 194.355
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/18/2014	Drill Rig Type: MC	Total Depth: 3.38 Ft
Complete Date: 08/19/2014	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny, 60s	Sample Method: MC	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0004-13		0		SM		Wet, dark brown, fine to medium SAND, some silt, trace organics, no odors, no staining, no sheen.
	CVX-0004-14		0		SM		Wet, dark brown, fine to medium SAND, some silt, trace organics, no odors, no staining, no sheen.
1	CVX-0004-15		0		SM		Wet, brown, fine to medium SAND, trace silt, trace organics, no sheen, no odors, no staining.
2	CVX-0004-16		0		SM/SP		Wet, brown to grey, fine to medium SAND, some fine gravel, trace organics, no sheen, no odor, no staining.
3							
3.38							

Site: Beacon, NY	Drilling Company: ATL	Northing: 977426.04
Boring/Well ID: TR01_E	Driller: Mark Childs	Easting: 649848.75
Permit No: NA	Consulting Firm: Parsons	Elevation: 202.303
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/18/2014	Drill Rig Type: MC	Total Depth: 3.38 Ft
Complete Date: 08/19/2014	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny, 60s	Sample Method: MC	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0004-17		0		SP		Wet, brown, fine to medium SAND, some fine to coarse gravel, trace silt, no odors, no sheen, no staining.
	CVX-0004-18		0		SP		Wet, brown, fine to medium SAND, some fine to coarse gravel, trace silt, no odors, no sheen, no staining.
1							
2							
3							
3.38							

Site: Beacon, NY	Drilling Company: ATL	Northing: 976726.49
Boring/Well ID: TR02_A	Driller: Mark Childs	Easting: 648556.90
Permit No: NA	Consulting Firm: Parsons	Elevation: 194.147
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/14/2014	Drill Rig Type: MC	Total Depth: 3.33 Ft
Complete Date: 08/14/2014	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny, 60s	Sample Method: MC	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0001-01		0		SM		Wet, grey, fine to medium SAND, trace silt, some organic roots in the top 1-inch. No odors, no sheen or staining. PID 0.0
	CVX-0001-02		0		SC		Wet, grey, CLAY, some silt, trace to some fine to medium sand, trace to some medium to coarse gravel, no odors, no sheen. PID 0.0
1							
2							
3							
3.33							

Site: Beacon, NY	Drilling Company: ATL	Northing: 976715.19
Boring/Well ID: TR02_B	Driller: Mark Childs	Easting: 648576.13
Permit No: NA	Consulting Firm: Parsons	Elevation: 192.573
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/19/2014	Drill Rig Type: MC	Total Depth: 1.17 Ft
Complete Date: 08/20/2014	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny, 60s	Sample Method: MC	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0005-01		0		ML		Wet, grey, SILT, some clay, some fine to coarse gravel, trace fine to medium sand, no odors, no sheen, no staining.
1							
1.17							

Site: Beacon, NY	Drilling Company: ATL	Northing: 976709.96
Boring/Well ID: TR02_C	Driller: Mark Childs	Easting: 648587.25
Permit No: NA	Consulting Firm: Parsons	Elevation: 192.843
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/19/2014	Drill Rig Type: MC	Total Depth: 1.58 Ft
Complete Date: 08/20/2014	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny, 60s	Sample Method: MC	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0005-04		0		SM/SC		Wet, brown, SILT, some fine to medium sand, some clay, trace fine to medium gravel, no odor, no sheen, no staining.
1							
1.58							

Site: Beacon, NY	Drilling Company: ATL	Northing: 976702.03
Boring/Well ID: TR02_D	Driller: Mark Childs	Easting: 648592.52
Permit No: NA	Consulting Firm: Parsons	Elevation: 193.537
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/19/2014	Drill Rig Type: MC	Total Depth: 3.83 Ft
Complete Date: 08/20/2014	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny, 60s	Sample Method: MC	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0005-05		0		SM/SC		Wet, brown, SILT, some fine sand, trace clay, trace fine to medium gravel, no odors, no sheen, no staining.
	CVX-0005-06		0		SM/SC		Wet, brown, SILT, some fine sand, trace clay, trace fine to medium gravel, no odors, no sheen, no staining.
1							
2							
3							
3.83							

Site: Beacon, NY	Drilling Company: ATL	Northing: 976694.07
Boring/Well ID: TR02_E	Driller: Mark Childs	Easting: 648607.26
Permit No: NA	Consulting Firm: Parsons	Elevation: 196.24
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/19/2014	Drill Rig Type: MC	Total Depth: 3.5 Ft
Complete Date: 08/20/2014	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny, 60s	Sample Method: MC	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0005-07		0		SM		Wet, dark brown, SILT, some fine to medium sand, some organics, trace clam shells, no odors, no sheen, no staining.
	CVX-0005-08		0		SM		Wet, dark brown, SILT, some fine to medium sand, some organics, trace clam shells, no odors, no sheen, no staining.
1	CVX-0005-09		0		SM		Top 3 inches is wet, dark brown, SILT, some fine to medium sand, some organics, trace clam shells, no odors, no sheen, no staining. Rest of core is wet, brown, fine to medium SAND, some silt, trace clay, trace fine gravel, no odors, no sheen, no staining.
2	CVX-0005-10		0		SM		Wet, brown to grey, fine to medium SAND, some silt, trace clay, trace organics, between 30 and 31 inches there is less fine to medium sand and more silt, no odors, no sheen, no staining.
3							
3.5							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978137.58
Boring/Well ID: TR03_C	Driller: Mark Childs	Easting: 647383.15
Permit No: NA	Consulting Firm: Parsons	Elevation: 193.579
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/26/2014	Drill Rig Type: Vibracore	Total Depth: 2.0 Ft
Complete Date: 08/27/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Sunny, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0011-12 CVX-0011-13		0		SP		Wet, brown, fine to coarse SAND, some fine to medium gravel, trace silt, no odors, no staining, no sheens.
1							
2.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978285.14
Boring/Well ID: TR04_C	Driller: Mark Childs	Easting: 647149.38
Permit No: NA	Consulting Firm: Parsons	Elevation: 189.548
Location: Fishkill Creek	Logged By: SARA WEISHAUPT	Datum: Ground Surface
Start Date/Time: 08/27/2014	Drill Rig Type: Vibracore	Total Depth: 5.0 Ft
Complete Date: 08/27/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Sunny, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0007-01		0		ML		Wet, dark brown, SILT, some organics, trace to some fine sand, no odor, sheen, or staining.
	CVX-0007-02		0		ML/SM		Wet, dark brown, SILT, some fine sand/organics, no odor, sheen, or staining.
1	CVX-0007-03		0		ML		Wet, brown, SILT, some fine sand, trace clay, some organics, no odor, sheen, or staining.
2	CVX-0007-04 CVX-0007-05		0		ML/SM		24 to 31 inches -wet, brown, SILT, some fine sand, some organics, trace clay. 31 to 36 inches -wet, brown, FINE TO MEDIUM SAND, little silt, trace clay, trace organics, no odor, sheen, or staining.
3							
4							
5.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978197.51
Boring/Well ID: TR05_A	Driller: Mark Childs	Easting: 646833.31
Permit No: NA	Consulting Firm: Parsons	Elevation: 192.835
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/26/2014	Drill Rig Type: Vibracore	Total Depth: 4.0 Ft
Complete Date: 08/27/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Sunny, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0011-05		0		ML		Wet, brown, SILT, some clay, little fine sand, trace medium to coarse gravel, no staining, no odors, no sheens.
	CVX-0011-06		0		ML		Wet, light brown, SILT, some clay, little fine sand, some fine gravel, no staining, no odors, no sheens.
1	CVX-0011-07		0		ML		Wet, brown, SILT, some clay, some fine sand, trace fine to medium gravel, no staining, no odors, no sheen.
2	CVX-0011-08		0		GM		Wet, brown, fine to medium GRAVEL, some silt, some fine sand, trace clay, bottom 1 inch is hard till, no staining, no odors, no sheens.
3							
4.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978162.19
Boring/Well ID: TR05_B	Driller: Mark Childs	Easting: 646847.24
Permit No: NA	Consulting Firm: Parsons	Elevation: 188.374
Location: Fishkill Creek	Logged By: SARA WEISHAUPT	Datum: Ground Surface
Start Date/Time: 08/26/2014	Drill Rig Type: Vibracore	Total Depth: 5.0 Ft
Complete Date: 08/26/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Sunny, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0010-19		0		SW/GC		Wet, brown, FINE TO MEDIUM SAND, some medium to coarse gravel, trace silt, piece of metal, no odor, sheen, or staining.
	CVX-0010-20		0		GC		Wet, brown, FINE TO COARSE SAND, some fine to coarse gravel, trace silt and cobbles, no odor, sheen, or staining.
1							
2							
3							
4							
5.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978123.41
Boring/Well ID: TR05_C	Driller: Mark Childs	Easting: 646876.09
Permit No: NA	Consulting Firm: Parsons	Elevation: 188.86
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/26/2014	Drill Rig Type: Vibracore	Total Depth: 4.0 Ft
Complete Date: 08/27/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Sunny, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0011-10		0		MH		Wet, dark brown, SILT. Some fine sand, some organics, no staining, no odors, no sheens.
	CVX-0011-11		0		MH		Wet, dark brown, SILT, some fine sand, some organics, no staining, no odors, no sheens.
1							
2							
3							
4.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978080.22
Boring/Well ID: TR05_D	Driller: Mark Childs	Easting: 646884.29
Permit No: NA	Consulting Firm: Parsons	Elevation: 195.905
Location: Fishkill Creek	Logged By: SARA WEISHAUPT	Datum: Ground Surface
Start Date/Time: 08/25/2014	Drill Rig Type: Vibracore	Total Depth: 5.0 Ft
Complete Date: 08/26/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Cloudy, 60s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0010-08		0		ML		Wet, brown, SILT, some organics, little fine sand, no odor, sheen, or staining.
	CVX-0010-09		0		ML		Wet, brown, SILT, some organics, little fine sand, no odor, sheen, or staining.
1	CVX-0010-10		0		ML		Wet, brown, SILT, little clay, trace fine sand, some organics, no odor, sheen, or staining.
2	CVX-0010-11		0		ML		Wet, brown, SILT, some clay, trace fine sand, trace organics, medium sand seam from 27 to 28 inches, no odor, sheen, or staining.
3							
4							
5.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978058.58
Boring/Well ID: TR05_E	Driller: Mark Childs	Easting: 646899.49
Permit No: NA	Consulting Firm: Parsons	Elevation: 195.031
Location: Fishkill Creek	Logged By: SARA WEISHAUPT	Datum: Ground Surface
Start Date/Time: 08/25/2014	Drill Rig Type: Vibracore	Total Depth: 5.0 Ft
Complete Date: 08/26/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Cloudy, 60s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0010-01		0		ML		Wet, brown, SILT, trace fine sand, trace medium gravel, little organics, no odor, sheen, or staining.
	CVX-0010-02		0		ML		Wet, brown, SILT, little fine sand, trace organics ,no odor, sheen, or staining.
1	CVX-0010-03		0		SM		Wet, brown, FINE TO MEDIUM SAND, some silt, trace fine gravel, no odor, sheen, or staining.
2	CVX-0010-04 CVX-0010-05		0		SM		Wet, brown, FINE TO MEDIUM SAND, some silt, trace fine gravel, no odor, sheen, or staining.
3							
4							
5.0							

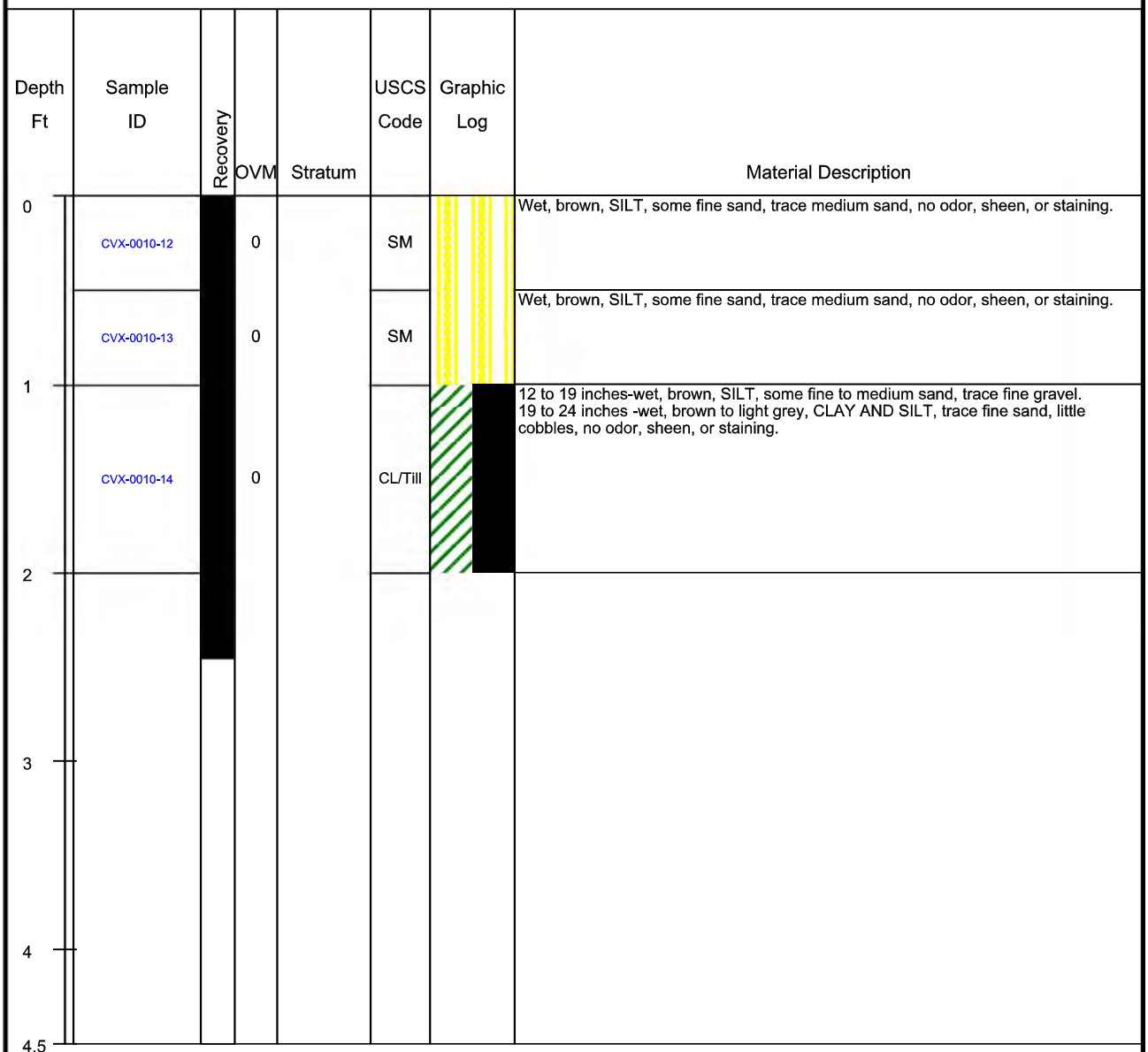
Site: Beacon, NY	Drilling Company: ATL	Northing: 978113.10
Boring/Well ID: TR06_A	Driller: Mark Childs	Easting: 646585.70
Permit No: NA	Consulting Firm: Parsons	Elevation: 192.939
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/26/2014	Drill Rig Type: Vibracore	Total Depth: 4.0 Ft
Complete Date: 08/27/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Sunny, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0011-01		0		MH/ML		Wet, brown, SILT, some organics, trace fine sand, no staining, no sheens, no odors.
	CVX-0011-02		0		SM		Wet, brown, SILT, some fine to medium sand, trace organics, no staining, no sheens, no odors.
1	CVX-0011-03		0		ML/CL		Wet, brown to olive green, SILT and Clay, some fine sand, trace organics, no staining, no sheens, no odors.
2	CVX-0011-04		0		CL/ML		Wet, brown to olive green, CLAY and Silt, some fine to coarse gravel, little fine sand, no staining, no odors, no sheens.
3							
4.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978074.14
Boring/Well ID: TR06_B	Driller: Mark Childs	Easting: 646594.99
Permit No: NA	Consulting Firm: Parsons	Elevation: 189.239
Location: Fishkill Creek	Logged By: SARA WEISHAUPT	Datum: Ground Surface
Start Date/Time: 08/25/2014	Drill Rig Type: Vibracore	Total Depth: 4.5 Ft
Complete Date: 08/26/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Cloudy, 60s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:



Site: Beacon, NY	Drilling Company: ATL	Northing: 978037.44
Boring/Well ID: TR06_C	Driller: Mark Childs	Easting: 646610.27
Permit No: NA	Consulting Firm: Parsons	Elevation: 188.105
Location: Fishkill Creek	Logged By: SARA WEISHAUPT	Datum: Ground Surface
Start Date/Time: 08/25/2014	Drill Rig Type: Vibracore	Total Depth: 5.0 Ft
Complete Date: 08/26/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Cloudy, 60s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0010-06		0		ML		Wet, brown, SILT, little fine sand , trace clay, trace organics, no odor, sheen, or staining.
	CVX-0010-07		0		SW		Wet, brown, FINE TO COARSE SAND, little fine to medium gravel, trace cobbles, little silt, no odor, sheen , or staining.
1							
2							
3							
4							
5.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 977997.21
Boring/Well ID: TR06_D	Driller: Mark Childs	Easting: 646604.35
Permit No: NA	Consulting Firm: Parsons	Elevation: 189.923
Location: Fishkill Creek	Logged By: SARA WEISHAUPT	Datum: Ground Surface
Start Date/Time: 08/25/2014	Drill Rig Type: Vibracore	Total Depth: 5.0 Ft
Complete Date: 08/26/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Cloudy, 60s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0010-15		0		ML		Wet, brown, SILT, some fine sand, trace organics, no odor, sheen, or staining.
	CVX-0010-16		0		ML		Wet, brown, SILT, little fine sand, trace clay, trace fine gravel, no odor, sheen, or staining.
1	CVX-0010-17		0		ML		Wet, brown, SILT, little fine sand, trace clay, fine to medium gravel seam from 22 to 24 inches, no odor, sheen, or staining.
2	CVX-0010-18		0		ML		Wet, brown, SILT, some clay, little fine sand, trace fine gravel and organics, no odor, sheen, or staining.
3							
4							
5.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 977954.34
Boring/Well ID: TR06_E	Driller: Mark Childs	Easting: 646625.85
Permit No: NA	Consulting Firm: Parsons	Elevation: 193.747
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/25/2014	Drill Rig Type: Vibracore	Total Depth: 5.0 Ft
Complete Date: 08/25/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Cloudy, 60s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0009-16		0		ML		Wet, brown, SILT, some fine sand, trace organics, no odors, no staining, no sheens.
	CVX-0009-17		0		ML/CL		Wet, brown, CLAY and Silt, some fine gravel, trace organics, no odors, no staining, no sheens.
1	CVX-0009-18		0		ML		Wet, brown, SILT, some clay, trace organics, no odors, no sheens, no staining.
2	CVX-0009-19		0		ML/CL		24 to 34 inches is wet, brown, SILT, some clay, some fine sand, trace organics, no odor, no sheen, no staining. 34 to 36 inches is wet, grey to brown, CLAY, some silt, little fine gravel, little fine sand, no odor, no sheen, no staining.
3							
4							
5.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978150.16
Boring/Well ID: TR07_A	Driller: Mark Childs	Easting: 646164.80
Permit No: NA	Consulting Firm: Parsons	Elevation: 190.413
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/22/2014	Drill Rig Type: Vibracore	Total Depth: 5.0 Ft
Complete Date: 08/25/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Cloudy, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0009-01		0		SM/SP		Wet, brown, SILT, some fine to medium gravel, trace clay, trace organics, no sheen, no odors, no staining.
	CVX-0009-02		0		ML		Wet, brown, SILT and Clay, trace fine gravel, trace organics, no odors, no sheens, no staining.
1	CVX-0009-03 CVX-0009-04		0		ML		Wet, brown, SILT and Clay, trace fine gravel, trace organics, no odors, no sheens, no staining.
2							
3							
4							
5.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978112.80
Boring/Well ID: TR07_B	Driller: Mark Childs	Easting: 646115.74
Permit No: NA	Consulting Firm: Parsons	Elevation: 190.139
Location: Fishkill Creek	Logged By: SARA WEISHAUPT	Datum: Ground Surface
Start Date/Time: 08/21/2014	Drill Rig Type: Vibracore	Total Depth: 8.67 Ft
Complete Date: 08/22/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Rain, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0008-01		0		SW		Wet, grey, MEDIUM TO COARSE SAND, little fine gravel, trace silt, no odor, sheen, or staining.
	CVX-0008-02		0		ML		Wet, brown, SILT AND CLAY, trace fine sand, trace organics, no odor, sheen, or staining.
1	CVX-0008-03		0		ML		Wet, brown, CLAY AND SILT, trace fine sand, trace organics, no odor, sheen, or staining. 14 to 16 inches-fine to medium sand seam.
2	CVX-0008-04		0		SW/ML		24 to 30 inches -wet, brown, MEDIUM TO COARSE SAND, trace fine gravel, trace silt. 30 to 36 inches -wet, brown, CLAY, some silt, trace fine sand, no odor, sheen, or staining.
3	CVX-0008-05		0		ML		Wet, brown, CLAY AND SILT, trace fine sand and organics, no odor, sheen, or staining
4	CVX-0008-06		0		GC/ML		48 to 53 inches -wet, grey, MEDIUM TO COARSE SAND, little fine to medium gravel, trace cobble and silt. 53 to 56 inches -wet, brown, CLAY, some silt, trace fine sand, trace organics. 56 to 60 inches -wet, brown, FINE SAND, little silt, little organics, no odor, sheen, or staining.
5	CVX-0008-07		0		SM/ML		60 to 64 inches -wet, brown, FINE SAND, little silt, trace organics. 64 to 72 inches -wet, brown, CLAY, some silt, trace fine sand and organics, no odor, sheen, or staining.
6							
7							
8							
8.67							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978065.31
Boring/Well ID: TR07_C	Driller: Mark Childs	Easting: 646127.91
Permit No: NA	Consulting Firm: Parsons	Elevation: 189.25
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/22/2014	Drill Rig Type: Vibracore	Total Depth: 5.0 Ft
Complete Date: 08/25/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Cloudy, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0009-05		0		GC/SW		Wet, brown, fine to medium GRAVEL, some fine to medium sand, trace silt, no odor, no sheens, no staining.
	CVX-0009-06		0		GC/SW		Wet, brown, fine to medium GRAVEL, some fine to medium sand, trace silt, no odor, no sheens, no staining.
1							
2							
3							
4							
5.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978025.68
Boring/Well ID: TR07_D	Driller: Mark Childs	Easting: 64611.72
Permit No: NA	Consulting Firm: Parsons	Elevation: 192.384
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/22/2014	Drill Rig Type: Vibracore	Total Depth: 7.0 Ft
Complete Date: 08/25/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Cloudy, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0009-07		0		ML		Wet, brown, SILT, some clay, some fine gravel, trace organics, no staining, no sheens, no odors.
	CVX-0009-08		0		CL/ML		6 to 9 inches is wet, brown, SILT, some clay, some fine gravel, trace organics, no staining, no sheens, no odors. 9 to 12 inches is wet, brown, CLAY and Silt, trace fine gravel, trace organics, no odors, no sheens, no staining.
1	CVX-0009-09		0		SM		Wet, brown, SILT, some fine sand, trace clay, trace fine gravel, no odors, no sheen, no staining.
2	CVX-0009-10		0		SM/ML		24 to 28 inches is wet, brown to light brown, SILT, some fine sand, trace clay, no odors, no sheen, no staining. 28 to 36 inches is wet, light brown to brown, CLAY and Silt, trace fine sand, trace fine gravel, no odors, no staining, no sheen.
3							
4							
5							
6							
7.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 977998.60
Boring/Well ID: TR07_E	Driller: Mark Childs	Easting: 646100.83
Permit No: NA	Consulting Firm: Parsons	Elevation: 193.947
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 08/22/2014	Drill Rig Type: Vibracore	Total Depth: 5.0 Ft
Complete Date: 08/25/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Cloudy, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0009-11		0		ML/SC		Wet, brown, SILT, some clay, trace fine to coarse gravel, trace organics, no odors, no staining, no sheens.
	CVX-0009-12		0		ML/SC		Wet, brown, SILT, some clay, trace fine to coarse gravel, trace organics, no odors, no staining, no sheens.
1	CVX-0009-13		0		ML		Wet, brown, SILT, some fine sand, trace organics trace clay, no odors, no staining, no sheens.
2	CVX-0009-14		0		ML/CL		24 to 29 inches is wet, brown, SILT, some clay, trace fine sand, some organics, no odors, no sheen, no staining. 29 to 36 inches, wet, light brown to olive green, soft, CLAY, some silt, trace organics, trace fine sand, trace organics, no odors, no sheens, no staining.
3	CVX-0009-15		0		ML		Wet, brown, SILT, some fine sand, trace organics trace clay, no odors, no staining, no sheens.
4							
5.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 978002.189
Boring/Well ID: TR09_C	Driller: Mark Childs	Easting: 645646.091
Permit No: NA	Consulting Firm: Parsons	Elevation: 174.436
Location: Fishkill Creek	Logged By: ED ASHTON	Datum: Ground Surface
Start Date/Time: 09/09/2014	Drill Rig Type: Vibracore	Total Depth: 1.5 Ft
Complete Date: 09/10/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Sunny, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0013-01		0		SM		Wet, brown, FINE TO COARSE SAND, some fine to medium gravel, trace silt, no odor, sheen, or staining.
1							
1.5							

Site: Beacon, NY	Drilling Company: ATL	Northing: 977868.297
Boring/Well ID: TR10_A	Driller: Mark Childs	Easting: 645437.912
Permit No: NA	Consulting Firm: Parsons	Elevation: 173.613
Location: Fishkill Creek	Logged By: BILL SIMONS	Datum: Ground Surface
Start Date/Time: 09/10/2014	Drill Rig Type: Vibracore	Total Depth: 4.0 Ft
Complete Date: 09/10/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Sunny, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0013-02		1.5		ML		Wet (extremely liquidy), brown, SILT, some fine sand, trace clay, no odor, sheens, or stains.
	CVX-0013-03		1		ML		Wet (extremely liquidy), brown, SILT, some fine sand, trace clay, no odor, sheens, or stains.
1	CVX-0013-04 CVX-0013-05		0.8		ML		Wet (extremely liquidy), brown, SILT, some fine sand, trace clay, no odor, sheens, or stains.
2							
3							
4.0							

Site: Beacon, NY	Drilling Company: ATL	Northing: 977487.121
Boring/Well ID: TR11_B	Driller: Mark Childs	Easting: 645003.526
Permit No: NA	Consulting Firm: Parsons	Elevation: 158.51
Location: Fishkill Creek	Logged By: BILL SIMONS	Datum: Ground Surface
Start Date/Time: 09/10/2014	Drill Rig Type: Vibracore	Total Depth: 6.41 Ft
Complete Date: 09/11/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Sunny, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0014-01		0		SP		Wet, brown, FINE TO COURSE SAND, some fine to medium gravel, trace silt, no odor, sheen, or staining (little glass).
1							
2							
3							
4							
5							
6							
6.41							

Site: Beacon, NY	Drilling Company: ATL	Northing: 977470.517
Boring/Well ID: TR11_C	Driller: Mark Childs	Easting: 645018.938
Permit No: NA	Consulting Firm: Parsons	Elevation: 158.354
Location: Fishkill Creek	Logged By: BILL SIMONS	Datum: Ground Surface
Start Date/Time: 09/10/2014	Drill Rig Type: Vibracore	Total Depth: 4.0 Ft
Complete Date: 09/11/2014	Drilling Method: Vibracore	Boring Diameter: NA
Weather: Sunny, 70s	Sample Method: Vibracore	Water Depth in Soil: 0.0 Ft
Field Book No: NA	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	CVX-0014-02		0		SP		Wet, brown, FINE TO COURSE SAND, some fine to medium gravel, trace silt, no odor, sheen, or staining (trace glass and wood).
	CVX-0014-03		0.5		SP		Wet, brown, FINE TO COURSE SAND, some fine to medium gravel, trace silt, no odor, sheen, or staining (less gravel percentage then above).
1	CVX-0014-04		0		SP		Wet, brown, FINE TO COURSE SAND, some fine to medium gravel, trace silt, no odor, sheen, or staining (trace paint chips and less gravel percentage then above).
2							
3							
4.0							

APPENDIX D

PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG
PARSONS

PROJECT: Fishkill Creek Sediment and Surface Water Sampling LOCATION: Former Texaco Research Center, Beacon, NY
PROJECT #: 448948.01000 CLIENT: Chevron Environmental Management Company

Photo by: E. Ashton

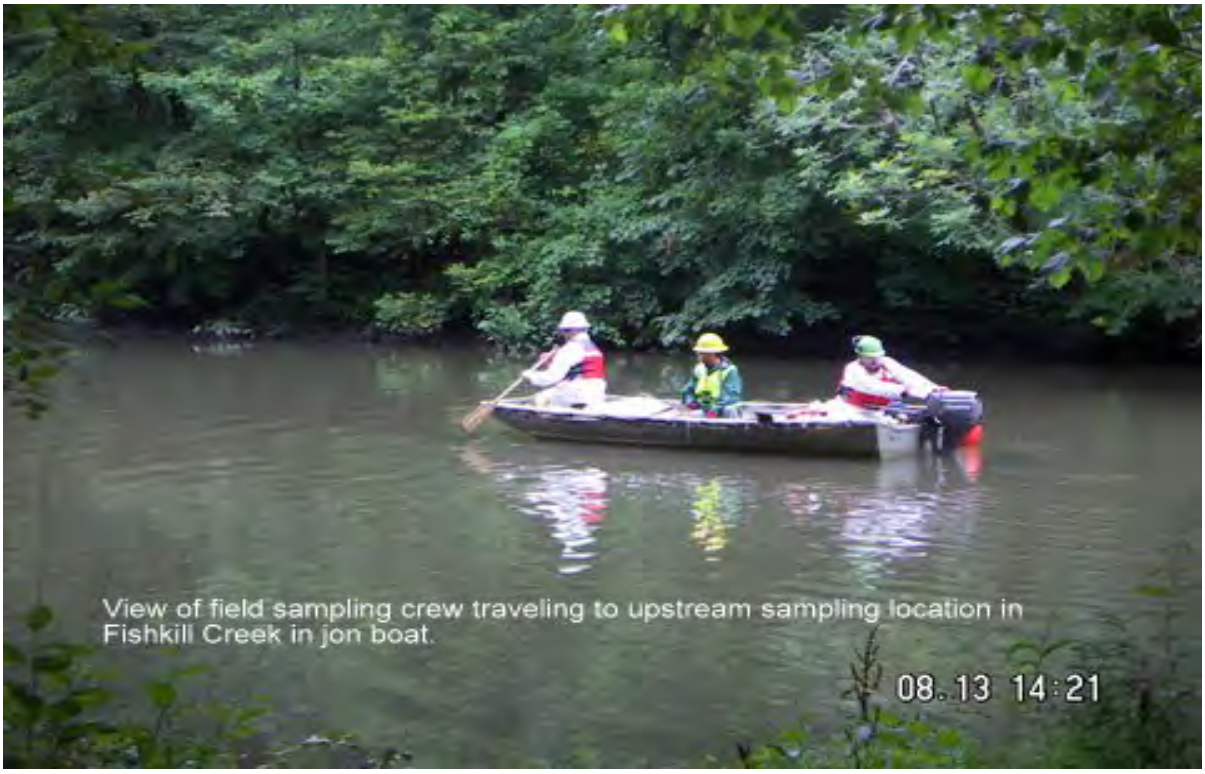


Photo by: E. Ashton

PHOTOGRAPHIC LOG
PARSONS

PROJECT: Fishkill Creek Sediment and Surface Water Sampling LOCATION: Former Texaco Research Center, Beacon, NY
PROJECT #: 448948.01000 CLIENT: Chevron Environmental Management Company

Status as of: 8-20-14
Photo by: C. Watson

PHOTOGRAPHIC LOG
PARSONS

PROJECT: Fishkill Creek Sediment and Surface Water Sampling LOCATION: Former Texaco Research Center, Beacon, NY
PROJECT #: 448948.01000 CLIENT: Chevron Environmental Management Company

Photo by: E. Ashton

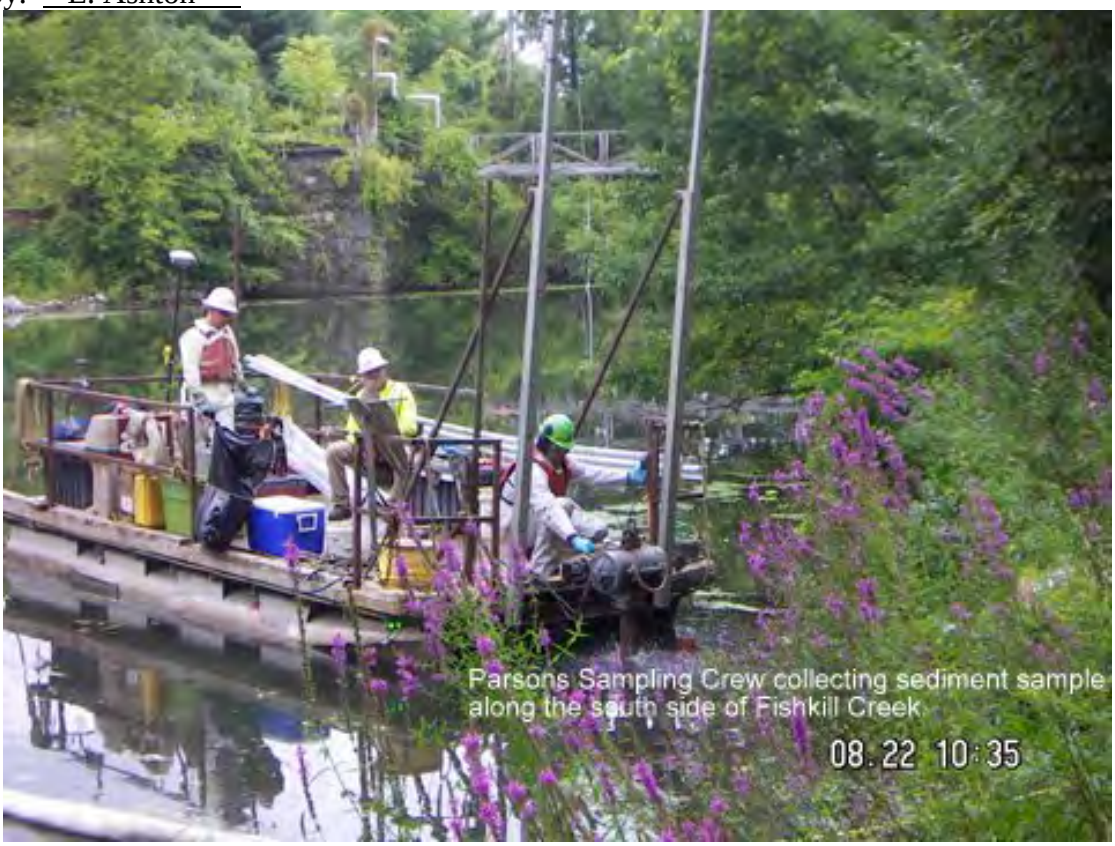


Photo by: E. Ashton

PHOTOGRAPHIC LOG
PARSONS

PROJECT: Fishkill Creek Sediment and Surface Water Sampling LOCATION: Former Texaco Research Center, Beacon, NY
PROJECT #: 448948.01000 CLIENT: Chevron Environmental Management Company

Photo by: C. Butler

Photo by: C. Butler

PHOTOGRAPHIC LOG
PARSONS

PROJECT: Fishkill Creek Sediment and Surface Water Sampling LOCATION: Former Texaco Research Center, Beacon, NY
PROJECT #: 448948.01000 CLIENT: Chevron Environmental Management Company

Photo by: C. Butler

ATTACHMENT 6

SUPPLEMENTAL TABLES FOR SURFACE SOIL AND SEDIMENT CHARACTERIZATION

TABLE 1
SUMMARY STATISTICS FOR SURFACE SOIL (0-2 FT) COLLECTED FROM THE CHURCH PROPERTY PARCEL (OU-1B)
FORMER TEXAS RESEARCH CENTER, BEACON, NEW YORK

Variable	Number Samples with Detected Concentrations	Total Number Samples [1]	Percent Samples Detected	Units	Minimum Detected Concentration	Maximum Detected Concentration	Mean of Detected Concentration	Standard Deviation of the Mean of Detected Concentration	Shapiro-Wilk Test Statistic [2]	Shaprio-Wilk Critical Value	Distribution [3]	UCL test	UCL on the Mean [4] (mg/kg)	UCL or Max
4,4'-DDD	7	33	21%	µg/kg	0.64	6.1	2.42	2.121	0.815	0.803	Normal	95% KM (t) UCL	**1.2**	UCL
4,4'-DDE	29	33	88%	µg/kg	0.49	59	15.17	18.13	0.764	0.926	Gamma	95% Gamma Adjusted KM-UCL (use when n<50)	**21**	UCL
4,4'-DDT	28	33	85%	µg/kg	0.6	73	15.06	19.58	0.737	0.924	Gamma	95% Gamma Adjusted KM-UCL (use when n<50)	**21**	UCL
Arsenic	33	33	100%	mg/kg	3.8	34	10.12	5.486	0.777	0.931	Normal	95% Student's-t UCL	**12**	UCL
Chromium	33	33	100%	mg/kg	11.3	61.7	21.9	10.92	0.59	0.931	Nonparametric	95% Chebyshev(Mean, Sd) UCL	**30**	UCL
Copper	33	33	100%	mg/kg	11.3	112	32.81	23.58	0.778	0.931	Nonparametric	95% Chebyshev(Mean, Sd) UCL	**51**	UCL
Lead	33	33	100%	mg/kg	13.1	564	137.2	143.9	0.798	0.931	Gamma	95% Adjusted Gamma UCL (use when n<50)	**191**	UCL
Manganese	33	33	100%	mg/kg	153	1960	664.5	388.5	0.902	0.931	Normal	95% Student's-t UCL	**779**	UCL
Mercury	33	33	100%	mg/kg	0.0366	0.66	0.214	0.171	0.87	0.931	Gamma	95% Adjusted Gamma UCL (use when n<50)	**0.28**	UCL
Nickel	33	33	100%	mg/kg	13.7	89.9	22.05	12.85	0.46	0.931	Nonparametric	95% Chebyshev(Mean, Sd) UCL	**32**	UCL
Selenium	6	33	18%	mg/kg	1.29	5.04	2.09	1.455	0.604	0.788	Nonparametric	95% KM (% Bootstrap) UCL	**1.5**	UCL
Silver	24	33	73%	mg/kg	0.207	2.93	0.442	0.543	0.383	0.916	Nonparametric	95% KM (BCA) UCL	**0.54**	UCL
Zinc	33	33	100%	mg/kg	32.9	804	131.7	138.9	0.576	0.931	Nonparametric	95% Chebyshev(Mean, Sd) UCL	**237**	UCL

[1] Total number of samples includes field duplicates.

[2] The null hypothesis is that the data are normally distributed. The test statistic is compared the Shapiro-WilK Critical value, which is based on the number of samples. Shapiro-Wilk Test of Normality is used when there are less than 50 samples in the dataset. If Shapiro-Wilk test statistic is greater than the critical value, do not reject the null hypothesis.

[3] The distribution of the data is estimated using the Shapiro-Wilk Test.

[4] The Upper Confidence Limit (UCL) is the 95% UCL on the mean using the distribution of the data. All data distributions and UCLs calculated in ProUCL (v. 5.0) (EPA 2013). The UCL is the upper boundary (or limit) of a confidence interval of the population mean. If the 95% UCL is greater than the maximum detected concentration, the maximum detected concentration will be used. The selected concentration is shown in **bold**.

TABLE 2
SUMMARY STATISTICS FOR SURFACE SOIL (0-2 FT) COLLECTED FROM THE BACK 93 ACRES PARCEL (OU-1E)
FORMER TEXAS RESEARCH CENTER, BEACON, NEW YORK

Variable	Number Samples with Detected Concentrations	Total Number Samples [1]	Percent Samples Detected	Units	Minimum Detected Concentration	Maximum Detected Concentration	Mean of Detected Concentration	Standard Deviation of the Mean of Detected Concentration	Shapiro-Wilk Test Statistic [2]	Shaprio-Wilk Critical Value	Distribution [3]	UCL test	UCL on the Mean [4] (mg/kg)	UCL or Max
Benzo(a)Pyrene	11	21	52%	µg/kg	72	3000	656.5	891	0.709	0.85	Gamma	95% Gamma Adjusted KM-UCL (use when n<50)	**876**	UCL

[1] Total number of samples includes field duplicates.

[2] The null hypothesis is that the data are normally distributed. The test statistic is compared the Shapiro-WilK Critical value, which is based on the number of samples. Shapiro-Wilk Test of Normality is used when there are less than 50 samples in the dataset. If Shapiro-Wilk test statistic is greater than the critical value, do not reject the null hypothesis.

[3] The distribution of the data is estimated using the Shapiro-Wilk Test.

[4] The Upper Confidence Limit (UCL) is the 95% UCL on the mean using the distribution of the data. All data distributions and UCLs calculated in ProUCL (v. 5.0) (EPA 2013). The UCL is the upper boundary (or limit) of a confidence interval of the population mean. If the 95% UCL is greater than the maximum detected concentration, the maximum detected concentration will be used. The selected concentration is shown in **bold**.

TABLE 3
SUMMARY STATISTICS FOR SURFACE SOIL (0-2 FT) COLLECTED FROM THE DAM AND ASSOCIATED HYDROPOWER FACILITIES PARCEL (OU-4)
FORMER TEXAS RESEARCH CENTER, BEACON, NEW YORK

Variable	Number Samples with Detected Concentrations	Total Number Samples [1]	Percent Samples Detected	Units	Minimum Detected Concentration	Maximum Detected Concentration	Mean of Detected Concentration	Standard Deviation of the Mean of Detected Concentration	Lilliefors Test Statistic [2]	Lilliefors Critical Value	Distribution [3]	UCL test	UCL on the Mean [4] (mg/kg)	UCL or Max
Arsenic	59	59	100%	mg/kg	1.5	21	7.144	3.188	0.119	0.115	Gamma	95% Approximate Gamma UCL (use when n>=50)	**8**	UCL
Chromium	59	59	100%	mg/kg	10.3	5410	123.3	702.5	0.496	0.115	Nonparametric	95% Chebyshev(Mean, Sd) UCL	**522**	UCL
Copper	59	59	100%	mg/kg	11.8	1340	56.47	173.1	0.46	0.115	Nonparametric	95% Chebyshev(Mean, Sd) UCL	**155**	UCL
Lead	59	59	100%	mg/kg	11.9	514	48.95	82.97	0.37	0.115	Nonparametric	95% Chebyshev(Mean, Sd) UCL	**96**	UCL
Manganese	59	59	100%	mg/kg	266	1760	673.8	278.2	0.114	0.115	Normal	95% Student's-t UCL	**734**	UCL
Mercury	58	59	98%	mg/kg	0.0367	1.75	0.349	0.388	0.239	0.116	Lognormal	95% KM (Chebyshev) UCL [5]	**0.56**	UCL
Nickel	59	59	100%	mg/kg	11.1	50.4	27.31	7.362	0.0933	0.115	Normal	95% Student's-t UCL	**29**	UCL
Selenium	21	59	36%	mg/kg	0.826	4.19	1.529	0.684	0.24	0.193	Gamma	95% Gamma Approximate KM-UCL (use when n>=50)	**1.2**	UCL
Zinc	59	59	100%	mg/kg	58.9	331	93.63	39.02	0.236	0.115	Nonparametric	95% Chebyshev(Mean, Sd) UCL	**116**	UCL

[1] Total number of samples includes field duplicates.

[2] The null hypothesis is that the data are normally distributed. The test statistic is compared the Lilliefors Critical value, which is based on the number of samples. Lilliefors Test of Normality is used when there are more than 50 samples in the dataset. If Lilliefors test statistic is greater than the critical value, do not reject the null hypothesis.

[3] The distribution of the data is estimated using the Lilliefors Test.

[4] The Upper Confidence Limit (UCL) is the 95% UCL on the mean using the distribution of the data. All data distributions and UCLs calculated in ProUCL (v. 5.0) (EPA 2013). The UCL is the upper boundary (or limit) of a confidence interval of the population mean. If the 95% UCL is greater than the maximum detected concentration, the maximum detected concentration will be used. The selected concentration is shown in bold.

[5] For lognormal distributions, ProUCL computes and outputs H-statistic based UCLs for historical reasons only. The H-statistic often results in unstable (both high and low) values of 95% UCLs. Threfore, use of nonparametric methods are preferred to compute 95% UCLs for skewed data sets which do not follow a gamma distribution.

TABLE 4
SUMMARY STATISTICS FOR BACKGROUND SEDIMENT SAMPLES COLLECTED BETWEEN 0 AND 2 FT (3 UPSTREAM TRANSECTS)
FISHKILL CREEK SAMPLING PROGRAM, AUGUST-SEPTEMBER 2014
FORMER TEXAS RESEARCH CENTER, BEACON, NEW YORK

Variable	Number Samples with Detected Concentrations	Total Number Samples [1]	Percent Samples Detected	Minimum Detected Concentration (mg/kg)	Maximum Detected Concentration (mg/kg)	Mean of Detected Concentration (mg/kg)	Standard Deviation of the Mean of Detected Concentration	Shapiro Wilk Test Statistic [2]	Shapiro Wilk Critical Value	Distribution [3]	UPL Test [4]	UPL (mg/kg)	USL Test [5]	USL (mg/kg)	Selected Background Concentration [6] (mg/kg)	USL or Max
Inorganics																
Aluminum	26	26	100%	6290	26500	13533	4152	0.903	0.92	Normal	95% UPL (t)	20760	95% USL	**24664**	24664	USL
Antimony	1	26	4%	0.325	**0.325**	0.325	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.325	Max
Arsenic	26	26	100%	1.26	6.48	2.767	1.284	0.841	0.92	Gamma	95% Wilson Hilferty (WH) Approx. Gamma UPL	5.1	**95% WH USL**	**6.9**	**6.9**	USL
Barium	26	26	100%	25.4	169	55.8	33.54	0.736	0.92	Lognormal	95% UPL (t)	112.0	**95% USL**	**174**	**174**	USL
Beryllium	26	26	100%	0.241	1.19	0.528	0.221	0.825	0.92	Normal	95% UPL (t)	0.9	**95% USL**	**1.1**	**1.1**	USL
Cadmium	25	26	96%	0.0452	0.693	0.156	0.163	0.589	0.918	Lognormal	95% UPL (t)	0.4	**95% USL**	**0.79**	**0.79**	USL
Chromium	26	26	100%	6.7	32.3	16.27	5.872	0.901	0.92	Gamma	95% Wilson Hilferty (WH) Approx. Gamma UPL	27	**95% WH USL**	**35**	**35**	USL
Cobalt	26	26	100%	5.18	18.5	10.3	2.81	0.901	0.92	Gamma	95% Wilson Hilferty (WH) Approx. Gamma UPL	15	**95% WH USL**	**19**	**19**	USL
Copper	26	26	100%	7.13	57.4	16.67	11.27	0.673	0.92	Nonparametric	95% UPL	53	**95% USL**	**57**	**57**	USL
IRON	26	26	100%	10600	35800	24065	6144	0.98	0.92	Normal	95% UPL (t)	34759	**95% USL**	**40536**	**40536**	USL
Lead	26	26	100%	5.26	52.2	14.88	11.55	0.632	0.92	Lognormal	95% UPL (t)	32	**95% USL**	**53**	**53**	USL
Manganese	26	26	100%	145	1040	366.7	176.5	0.713	0.92	Lognormal	95% UPL (t)	658	**95% USL**	**941**	**941**	USL
Mercury	2	26	8%	0.0849	**0.107**	0.096	0.0156	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.107**	Max
Nickel	26	26	100%	10	42.2	23.48	6.532	0.942	0.92	Normal	95% UPL (t)	34.85	**95% USL**	**40.99**	**40.99**	USL
Selenium	17	26	65%	0.174	1.03	0.378	0.262	0.708	0.892	Gamma	95% Approx. Gamma WH UPL	0.94	**95% Gamma USL**	**1.826**	**1.826**	USL
Silver	17	26	65%	0.0263	0.368	0.0959	0.102	0.696	0.892	Lognormal	95% KM UPL (Lognormal)	0.20	**95% KM USL (Lognormal)**	**0.45**	**0.45**	USL
Thallium	26	26	100%	0.0387	0.299	0.0837	0.0579	0.692	0.92	Gamma	95% Wilson Hilferty (WH) Approx. Gamma UPL	0.18	**95% WH USL**	**0.26**	**0.26**	USL
Vanadium	26	26	100%	6.75	34.5	16.04	5.896	0.838	0.92	Gamma	95% Wilson Hilferty (WH) Approx. Gamma UPL	26.49	**95% WH USL**	**34.20**	**34.20**	USL
Zinc	26	26	100%	34.5	204	81.58	37.17	0.781	0.92	Lognormal	95% UPL (t)	147	**95% USL**	**210**	**210**	USL

[1] Total number of samples includes field duplicates.
[2] The null hypothesis is that the data are normally distributed. The test statistic is compared the Shapiro-Wilk Critical value, which is based on the number of samples. If Shaprio-Willk test statistic is greater than the critical value, do not reject the null

[3] The distribution of the data is estimated using the Shapiro-Wilk Test.

[4] The Upper Prediction Limit (UPL) is the 95% UPL using the distribution of the data. All distribution as and UPLs calculated in ProUCL (v. 5.1) (EPA 2014). The UPL is the upper boundary of a prediction interval for an independently obtained observation (or an independent future observation).
[5] The Upper Simultaneous Limit (USL) is the upper boundary of the largest value. The use of the USL as an estimate of background values is recommended when a large number of onsite observations need to be compared to the background threshold value.

[6] The selected sediment background concentration 95% USL if available, or the maximum detected concentration. The selected background concentration is shown in **bold**.
N/A - Not available, because not enough detected samples in dataset.

TABLE 5
SEDIMENT SAMPLE SCREENING BY GUIDANCE VALUES AND BACKGROUND CONCENTRATION
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

					Location	TR01_A	TR01_A	TR01_A	TR01_A	TR01_B	TR01_B	TR01_B	TR01_B	TR01_C	TR01_C	TR01_C	TR01_C
					Field Sample ID	CVX-0004-01	CVX-0004-02	CVX-0004-03	CVX-0004-08	CVX-0004-04	CVX-0004-05	CVX-0004-06	CVX-0004-07	CVX-0004-09	CVX-0004-10	CVX-0004-11	CVX-0004-12
					Sample Date	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014	8/19/2014
					Sample Delivery Group	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485	1497485
					Sample Depth	0-0.5 FT	0.5-1 FT	1-2 FT	2-2.7 FT	0-0.5 FT	0.5-1 FT	1-2 FT	1-2 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-2.9 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	Parameter Name	Units	FW Class A SGV(1) mg/kg	FW Class C SGV(1) mg/kg	Background (95% USL)(2)												
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	2.87	2.98	3.74	4.46	3.38	1.76	2.04	2.5	3.01	1.79	1.51 J+	2.12
SW-846 6020A	Cadmium	mg/Kg	1	5	0.789	0.148 J	0.113 J	0.0246 U	0.0352 J	0.0738 J	0.1 J	0.0766 J	0.0903 J	0.229 J	0.12 J	0.0708 J	0.0912 J
SW-846 6020A	Chromium	mg/Kg	43	110	35	12.1	20.2	14.4	17.6	15	9.73	21.4	14.2	17.3	12.6	13.7 J+	18.8
SW-846 6020A	Copper	mg/Kg	32	150	57	13.9	15.8	9.67	12.4	17.3	11.8	18.2	19.6	26.5	14.8	10.3 J+	12.7
SW-846 6020A	Lead	mg/Kg	36	130	53	12.7	15.8	9.84	10.8	11.1	9.14	21.6	14.3	21.3	13.2	9.71 J-	13.3
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.289 U	0.307 U	0.241 U	0.26 U	0.243 U	0.317 U	0.243 U	0.233 U	0.296 U	0.236 U	0.267 U	0.238 U
SW-846 6020A	Nickel	mg/Kg	23	49	41	15.3	25.8	23.2	28.9	26.1	14.6	25.9	26.7	26.3	19.2	22.3 J-	28.1
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	0.139 J	0.0912 J	0.0244 U	0.0266 U	0.0461 J	0.0548 J	0.0272 J	0.0273 J	0.142 J	0.0692 J	0.0356 J	0.0249 U
SW-846 6020A	Zinc	mg/Kg	120	460	210	65.6	91.7	65.1	80.7	89.1	55.3	79.5	91.3	108	72.2	79.5	86.4
	Site Classification					Class A	Class A	Class A	Class A	Class A	Class A	Class A	Class A	Class A	Class A	Class A	Class A

detected concentration less than Class A SGV

detected concentration between Class A and Class C SGV

detected concentration greater than Class C SGV

Boldface, centered detected value > background (95% USL of upstream samples)

detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
June 2014, New York State Department of Environmental Conservation

(2) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)

SGV - Sediment Guidance Value

mg/Kg - milligrams per kilogram

J: Analyte positively identified, but quantitation is an estimation

J-: Estimated biased low at the valure given

J+: Estimated biased high at the valure given

U: Undetected, value is at or below the method detection limit

TABLE 5
SEDIMENT SAMPLE SCREENING BY GUIDANCE VALUES AND BACKGROUND CONCENTRATION
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

					Location	TR01_D		TR01_D		TR01_D		TR01_D		TR01_E		TR01_E		TR02_A		TR02_A		TR02_B		TR02_C		TR02_D		TR02_D	
					Field Sample ID	CVX-0004-13		CVX-0004-14		CVX-0004-15		CVX-0004-16		CVX-0004-17		CVX-0004-18		CVX-0001-01		CVX-0001-02		CVX-0005-01		CVX-0005-04		CVX-0005-05		CVX-0005-06	
					Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/14/2014		8/14/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014	
					Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485		1496370		1496370		1497631		1497631		1497631		1497631	
					Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	FW Class A SGV(1) mg/kg	FW Class C SGV(1) mg/kg	Background (95% USL)(2)																								
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	1.61		4.29		1.26		1.74		1.7		2.51		1.43	J	2.34		1.79		2.51		2.97		2.72	
SW-846 6020A	Cadmium	mg/kg	1	5	0.789	0.103	J	0.32	J	0.0637	J	0.0921	J	0.0452	J	0.0541	J	0.079	J	0.105	J	0.0814	J	0.142	J	0.142	J	0.099	J
SW-846 6020A	Chromium	mg/kg	43	110	35	12.8		19.8		13		13.5		13.9		10.8		6.7	J	11.8		13		15		16.8		13.4	
SW-846 6020A	Copper	mg/kg	32	150	57	12.5		25.5		9.1		9.81		9.33		8.21		7.13	J+	11		10.5		13.3		14.6		10.6	
SW-846 6020A	Lead	mg/kg	36	130	53	9.19		20.2		9.21		10.5		6.98		6.94		5.26	J+	7.95		9		10.5		11.5		8.85	
SW-846 7471B	Mercury	mg/kg	0.2	1	0.107	0.289	U	0.359	U	0.261	U	0.247	U	0.225	U	0.21	U	0.0099	U	0.0098	U	0.0126	U	0.0137	U	0.0167	U	0.0132	U
SW-846 6020A	Nickel	mg/kg	23	49	41	20.5		28.5		21.4		21.5		19.4		19.4		10	J+	19.1		20.9		23.6		23.7		19.9	
SW-846 6020A	Silver	mg/kg	1	2.2	0.45	0.0408	J	0.135	J	0.0256	U	0.0287	J	0.0226	U	0.0212	U	0.0263	J	0.0198	U	0.0315	J	0.0406	J	0.0382	J	0.0266	U
SW-846 6020A	Zinc	mg/kg	120	460	210	78.2		126		77.5		70.2		55.1		49.3		34.5		45.1		63.5		73.7		77		61.2	
	Site Classification					Class A		Class A		Class A		Class A		Class A		Class A		Class A		Class A		Class A		Class A		Class A		Class A	

	detected concentration less than Class A SGV
	detected concentration between Class A and Class C SGV
	detected concentration greater than Class C SGV
Boldface, centered	detected value > background (95% USL of upstream samples)
	detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
June 2014, New York State Department of Environmental Conservation
(2) Background concentration is the Upper Simultaneous Limit (USL) of samples
collected from 3 upstream sampling transects (Table 4)
SGV - Sediment Guidance Value
mg/Kg - milligrams per kilogram
J: Analyte positively identified, but quantitation is an estimation
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TABLE 5
SEDIMENT SAMPLE SCREENING BY GUIDANCE VALUES AND BACKGROUND CONCENTRATION
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

					Location	TR02_E	TR02_E	TR02_E	TR02_E	TR03_C	TR03_C	TR04_C	TR04_C	TR04_C	TR04_C
					Field Sample ID	CVX-0005-07	CVX-0005-08	CVX-0005-09	CVX-0005-10	CVX-0011-12	CVX-0011-13	CVX-0007-01	CVX-0007-02	CVX-0007-03	CVX-0007-04
					Sample Date	8/20/2014	8/20/2014	8/20/2014	8/20/2014	8/27/2014	8/27/2014	8/21/2014	8/21/2014	8/21/2014	8/21/2014
					Sample Delivery Group	1497631	1497631	1497631	1497631	1499492	1499492	1498092	1498092	1498092	1498092
					Sample Depth	0-0.5 FT	0.5-1 FT	1-2 FT	2-2.75 FT	0-0.5 FT	0-0.5 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample	Regular sample	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	Parameter Name	Units	FW Class A SGV(1) mg/kg	FW Class C SGV(1) mg/kg	Background (95% USL)(2)										
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	6.1	6.48	2.31	1.72	3.04	3.3	4.08	3.75	5.01	3.67
SW-846 6020A	Cadmium	mg/Kg	1	5	0.789	0.693	0.629 J	0.171 J	0.0648 J	0.0727 J	0.0857 J	0.444 J	0.478 J	0.526	0.451
SW-846 6020A	Chromium	mg/Kg	43	110	35	26	32.3	16	13.5	25	26.2	25.9	21.6	20.4	15.5
SW-846 6020A	Copper	mg/Kg	32	150	57	44.4	**57.4**	13.6	8.86	13.8	14.7	39.1	32.9	34.1	21.6
SW-846 6020A	Lead	mg/Kg	36	130	53	52.2	50.4	10.5	7.49	12.7	16.7	31.2	33.5	34.7	28.8
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.0849 J	0.107 J	0.0148 U	0.0128 U	0.0121 U	0.0117 U	0.0643 J	0.0507 J	0.0784 J	0.0805 J
SW-846 6020A	Nickel	mg/Kg	23	49	41	36.3	**42.2**	22.5	21.9	29.2	28.4	38.8	29.1	26.2	24.5
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	0.318 J	0.368 J	0.0308 U	0.0273 U	0.0242 U	0.0229 U	0.213 J	0.221 J	0.354 J	0.206 J
SW-846 6020A	Zinc	mg/Kg	120	460	210	174	204	71.7	63.3	72.8	60.3	161	143	153	113
	Site Classification					Class A	Class B	Class A	Class A	Class A	Class A	Class A	Class A	Class A	Class A

	detected concentration less than Class A SGV
	detected concentration between Class A and Class C SGV
	detected concentration greater than Class C SGV
Boldface, centered	detected value > background (95% USL of upstream samples)
	detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
June 2014, New York State Department of Environmental Conservation
(2) Background concentration is the Upper Simultaneous Limit (USL) of samples
collected from 3 upstream sampling transects (Table 4)
SGV - Sediment Guidance Value
mg/Kg - milligrams per kilogram
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J-: Estimated biased low at the valure given
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TABLE 5
SEDIMENT SAMPLE SCREENING BY GUIDANCE VALUES AND BACKGROUND CONCENTRATION
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

					Location	TR04_C		TR05_A		TR05_A		TR05_A		TR05_A		TR05_B		TR05_B		TR05_C		TR05_C		TR05_D	
					Field Sample ID	CVX-0007-05		CVX-0011-05		CVX-0011-06		CVX-0011-07		CVX-0011-08		CVX-0010-19		CVX-0010-20		CVX-0011-10		CVX-0011-11		CVX-0010-08	
					Sample Date	8/21/2014		8/27/2014		8/27/2014		8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/27/2014		8/27/2014		8/26/2014	
					Sample Delivery Group	1498092		1499492		1499492		1499492		1499492		1499124		1499124		1499492		1499492		1499124	
					Sample Depth	2-3 Ft		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	FW Class A SGV(1) mg/kg	FW Class C SGV(1) mg/kg	Background (95% USL)(2)																				
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	3.71		2.58		4.66		**7.33**		6.39		3.47		3.14		**9.86**	J	6.03		6.27	
SW-846 6020A	Cadmium	mg/Kg	1	5	0.789	0.323	J	0.0843	J	0.0739	J	0.502		0.35		0.0841	J	0.106	J	0.784	J	0.423	J	0.601	
SW-846 6020A	Chromium	mg/Kg	43	110	35	20.3		16.6		24.7		31.7	J-	26.9		**37.6**		24.8		**44.1**	J	28.3		26.2	
SW-846 6020A	Copper	mg/Kg	32	150	57	20.9		10.1		10.3		15.3		13.7		18.9		21.4		55.3	J	27.7		41.4	
SW-846 6020A	Lead	mg/Kg	36	130	53	30.9		12.4		14.2		12.7	J-	8.94		10.4		9.68		49	J	20.5		37.4	
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.0404	J	0.0132	J	0.0228	J	0.0327	J	0.0317	J	0.0109	U	0.0119	J	**0.137**	J	0.0605	J	0.0888	J
SW-846 6020A	Nickel	mg/Kg	23	49	41	33.8		19.1		26.3		35.7	J-	29.4		32.7		24.4		**49.4**	J	27.8		34.2	
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	0.0917	J	0.0606	J	0.0337	J	0.0661	J	0.0607	J	0.0217	U	0.0326	J	0.307	J	0.118	J	0.417	J
SW-846 6020A	Zinc	mg/Kg	120	460	210	133		61.6		66.5		67.4		55.4		63.6		64.1		**217**	J	92.6		178	
	Site Classification					Class A		Class A		Class A		Class A		Class A		Class A		Class A		Class C		Class A		Class A	

	detected concentration less than Class A SGV
	detected concentration between Class A and Class C SGV
	detected concentration greater than Class C SGV
Boldface, centered	detected value > background (95% USL of upstream samples)
	detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
June 2014, New York State Department of Environmental Conservation
(2) Background concentration is the Upper Simultaneous Limit (USL) of samples
collected from 3 upstream sampling transects (Table 4)
SGV - Sediment Guidance Value
mg/Kg - milligrams per kilogram
J: Analyte positively identified, but quantitation is an estimation
J-: Estimated biased low at the valure given
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TABLE 5
SEDIMENT SAMPLE SCREENING BY GUIDANCE VALUES AND BACKGROUND CONCENTRATION
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

					Location	TR05_D	TR05_D	TR05_D	TR05_E	TR05_E	TR05_E	TR05_E	TR05_E	TR06_A	TR06_A
					Field Sample ID	CVX-0010-09	CVX-0010-10	CVX-0010-11	CVX-0010-01	CVX-0010-02	CVX-0010-03	CVX-0010-04	CVX-0010-05	CVX-0011-01	CVX-0011-02
					Sample Date	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/27/2014	8/27/2014
					Sample Delivery Group	1499124	1499124	1499124	1499124	1499124	1499124	1499124	1499124	1499492	1499492
					Sample Depth	0.5-1 FT	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	2-3 FT	2-3 FT	0-0.5 FT	0.5-1 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Field Duplicate	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	Parameter Name	Units	FW Class A SGV(1) mg/kg	FW Class C SGV(1) mg/kg	Background (95% USL)(2)										
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	6.19	**6.96**	5.03	**10.9**	**8.59**	4.59	5.59	5.73	6.03	5.91
SW-846 6020A	Cadmium	mg/Kg	1	5	0.789	0.73	**0.806**	0.425	0.603	0.719	0.052 J	0.0935 J	0.122 J	0.571	0.61
SW-846 6020A	Chromium	mg/Kg	43	110	35	27.7	31.1	24.3	29.5	31.5	16.6	16	18.7	20	21.7
SW-846 6020A	Copper	mg/Kg	32	150	57	53.5	51.5	27.7	49.6	46.4	21.9	22.3	24.5	**62.4**	**59**
SW-846 6020A	Lead	mg/Kg	36	130	53	40.2	48.7	36.7	47.4	46.7	12.1	13.8	15.2	37.5	41.8
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.0928 J	**0.122** J	0.0551 J	**0.117** J	**0.114** J	0.0123 J	0.0194 J	0.0164 J	**0.719**	**0.728**
SW-846 6020A	Nickel	mg/Kg	23	49	41	34.9	39.4	31.9	35.6	34.6	27.9	25.5	29	27.8	30.2
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	**1.26**	**0.752**	0.156 J	**0.61**	**0.593** J	0.0229 U	0.0223 U	0.0226 U	**0.501** J	**0.747**
SW-846 6020A	Zinc	mg/Kg	120	460	210	199	**221**	135	193	206	68.4	65.9	70.5	153	173
	Site Classification					Class B	Class B	Class A	Class B	Class A	Class A	Class A	Class A	Class B	Class B

	detected concentration less than Class A SGV
	detected concentration between Class A and Class C SGV
	detected concentration greater than Class C SGV
Boldface, centered	detected value > background (95% USL of upstream samples)
	detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
June 2014, New York State Department of Environmental Conservation
(2) Background concentration is the Upper Simultaneous Limit (USL) of samples
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SEDIMENT SAMPLE SCREENING BY GUIDANCE VALUES AND BACKGROUND CONCENTRATION
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

					Location	TR06_A	TR06_A	TR06_B	TR06_B	TR06_B	TR06_C	TR06_C	TR06_D	TR06_D	TR06_D
					Field Sample ID	CVX-0011-03	CVX-0011-04	CVX-0010-12	CVX-0010-13	CVX-0010-14	CVX-0010-06	CVX-0010-07	CVX-0010-15	CVX-0010-16	CVX-0010-17
					Sample Date	8/27/2014	8/27/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014	8/26/2014
					Sample Delivery Group	1499492	1499492	1499124	1499124	1499124	1499124	1499124	1499124	1499124	1499124
					Sample Depth	1-2 FT	2-3 FT	0-0.5 FT	0.5-1 FT	1-2 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT	1-2 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	Parameter Name	Units	FW Class A SGV(1) mg/kg	FW Class C SGV(1) mg/kg	Background (95% USL)(2)										
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	4.76	**17.5**	3.14	4.77	4.38	**9.47**	2.82	5.81	6	5.32 J+
SW-846 6020A	Cadmium	mg/Kg	1	5	0.789	0.145 J	0.276	0.0585 J	0.0681 J	0.0896 J	0.552	0.0689 J	0.537	0.428	0.274 J
SW-846 6020A	Chromium	mg/Kg	43	110	35	19.3	30.6	**35.3**	**40.5**	**55.7**	30.1	16	21.4	23.1	20.8
SW-846 6020A	Copper	mg/Kg	32	150	57	12.5	24	12	16.8	20.2	37.3	15.2	28.3	27.5	21.1 J+
SW-846 6020A	Lead	mg/Kg	36	130	53	13.1	15.7	8.39	11.8	13	41.5	13.1	36.4	32.6	24.8
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.0218 J	0.0266 J	0.0144 J	0.0237 J	0.0378 J	0.0763 J	0.0116 U	0.0687 J	0.0675 J	0.0575 J
SW-846 6020A	Nickel	mg/Kg	23	49	41	24.7	30.6	31.1	39.4	**47.4**	37.2	27.6	27.6	29.4	28.3 J+
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	0.061 J	0.12 J	0.0253 U	0.0287 J	0.0366 J	0.146 J	0.0241 U	0.134 J	0.137 J	0.0765 J
SW-846 6020A	Zinc	mg/Kg	120	460	210	64.6	76.9	57.5	77.1	75.5	151	107	121	127	110
	Site Classification					Class A	Class B	Class A	Class A	Class B	Class A	Class A	Class A	Class A	Class A

	detected concentration less than Class A SGV
	detected concentration between Class A and Class C SGV
	detected concentration greater than Class C SGV
Boldface, centered	detected value > background (95% USL of upstream samples)
	detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
June 2014, New York State Department of Environmental Conservation
(2) Background concentration is the Upper Simultaneous Limit (USL) of samples
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TABLE 5
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FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

					Location	TR06_D		TR06_E		TR06_E		TR06_E		TR06_E		TR07_A		TR07_A		TR07_A		TR07_A		TR07_B	
					Field Sample ID	CVX-0010-18		CVX-0009-16		CVX-0009-17		CVX-0009-18		CVX-0009-19		CVX-0009-01		CVX-0009-02		CVX-0009-03		CVX-0009-04		CVX-0008-01	
					Sample Date	8/26/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/22/2014	
					Sample Delivery Group	1499124		1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498276	
					Sample Depth	2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT		0-0.5 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	FW Class A SGV(1) mg/kg	FW Class C SGV(1) mg/kg	Background (95% USL)(2)																				
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	3.95		6.18		**7.24**		3.2		3.2		4.6		4.54		**7.65**		5.79		2.55	
SW-846 6020A	Cadmium	mg/Kg	1	5	0.789	0.289	J	0.665		**0.852**		0.209	J	0.145	J	0.382		0.372		0.742		0.542		0.047	J
SW-846 6020A	Chromium	mg/Kg	43	110	35	18.4		27.3		32.9		21.9		16		**47.7**		14.3		29.6		18		7.53	
SW-846 6020A	Copper	mg/Kg	32	150	57	20.4		43.4		**57.3**		24.6		16.8		21.2		19.6		44.2	J	24.5	J	7.48	
SW-846 6020A	Lead	mg/Kg	36	130	53	25.5		40.8		**56.7**		27.7		15		32.3		24.8		**53.4**		29.1		7.55	
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.0638	J	0.504	U	0.569	U	0.325	U	0.292	U	0.276	U	0.313	U	0.417	U	0.418	U	0.0292	J
SW-846 6020A	Nickel	mg/Kg	23	49	41	24.9		33.4		40.8		27.5		22.9		36.2		18.9		35.9		25		9.94	
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	0.0805	J	0.445	J	**0.777**		0.0835	J	0.0462	J	0.101	J	0.0883	J	0.249	J	0.117	J	0.023	U
SW-846 6020A	Zinc	mg/Kg	120	460	210	105		**266**		**244**		98.4		70.1		75.2		109		167		176		78.7	
	Site Classification					Class A		Class B		Class B		Class A		Class A		Class B		Class A		Class B		Class A		Class A	

	detected concentration less than Class A SGV
	detected concentration between Class A and Class C SGV
	detected concentration greater than Class C SGV
Boldface, centered	detected value > background (95% USL of upstream samples)
	detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
June 2014, New York State Department of Environmental Conservation
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SEDIMENT SAMPLE SCREENING BY GUIDANCE VALUES AND BACKGROUND CONCENTRATION
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

					Location	TR07_B	TR07_B	TR07_B	TR07_B	TR07_B	TR07_B	TR07_C	TR07_C	TR07_D	TR07_D
					Field Sample ID	CVX-0008-02	CVX-0008-03	CVX-0008-04	CVX-0008-05	CVX-0008-06	CVX-0008-07	CVX-0009-05	CVX-0009-06	CVX-0009-07	CVX-0009-08
					Sample Date	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/22/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014
					Sample Delivery Group	1498276	1498276	1498276	1498276	1498276	1498276	1498701	1498701	1498701	1498701
					Sample Depth	0.5-1 FT	1-2 FT	2-3 FT	3-4 FT	4-5 FT	5-6 FT	0-0.5 FT	0.5-1 FT	0-0.5 FT	0.5-1 FT
					Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Purpose	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample	Regular sample
					Sample Type	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Analytical Method	Parameter Name	Units	FW Class A SGV(1) mg/kg	FW Class C SGV(1) mg/kg	Background (95% USL)(2)										
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	**7.14**	4.55	2.8 **J+**	4.97	3.43	2.17	4.19	4.1	3.92	2.39
SW-846 6020A	Cadmium	mg/Kg	1	5	0.789	0.409	0.383 **J**	0.162 **J**	0.384	0.127 **J**	0.178 **J**	0.0571 **J**	0.0416 **J**	0.258 **J**	0.113 **J**
SW-846 6020A	Chromium	mg/Kg	43	110	35	19.2	19.2	16.1 **J**	19.9	13.3	14.1	13.9	14.9	14.9	17.4
SW-846 6020A	Copper	mg/Kg	32	150	57	22.5	22.7	16.4	26.1	11.8	13.7	13.4	9.45	15.4	18
SW-846 6020A	Lead	mg/Kg	36	130	53	29.6	29.6	21.9	29.5	9.72	10.5	9.4	9.97	22.3	12.2
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.0837 J	0.0725 J	0.0665 J	0.0814 J	0.0198 J	0.0132 U	0.233 U	0.236 U	0.268 U	0.262 U
SW-846 6020A	Nickel	mg/Kg	23	49	41	25.4	25.6	23.8 **J-**	26.6	19.2	18.8	21.6	24	20.6	27
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	0.0854 **J**	0.122 **J**	0.0434 **J**	0.0869 **J**	0.0294 **U**	0.0314 **J**	0.0228 **U**	0.0244 **U**	0.0507 **J**	0.0403 **J**
SW-846 6020A	Zinc	mg/Kg	120	460	210	128	163	76.9 **J**	143	110	89.2	43.2	64.4	101	81.4
	Site Classification					Class A	Class A	Class A	Class A	Class A	Class A	Class A	Class A	Class A	Class A

detected concentration less than Class A SGV
detected concentration between Class A and Class C SGV
detected concentration greater than Class C SGV
Boldface, centered detected value > background (95% USL of upstream samples)
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(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
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FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

					Location	TR07_D		TR07_D		TR07_E		TR07_E		TR07_E		TR07_E		TR09_C		TR10_A		TR10_A	
					Field Sample ID	CVX-0009-09		CVX-0009-10		CVX-0009-11		CVX-0009-12		CVX-0009-13		CVX-0009-14		CVX-0009-15		CVX-0013-01		CVX-0013-02		CVX-0013-03	
					Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		9/10/2014		9/10/2014		9/10/2014	
					Sample Delivery Group	1498701		1498701		1498701		1498701		1498701		1498701		1498701		1502680		1502680		1502680	
					Sample Depth	1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		3-4 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	FW Class A SGV(1) mg/kg	FW Class C SGV(1) mg/kg	Background (95% USL)(2)																			
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	4.43	J-	**7.33**		4.69		3.75		4.29		**13.2**		**7.78**		4.74	J-	4.53		3.22	
SW-846 6020A	Cadmium	mg/Kg	1	5	0.789	0.2	J	0.249	J	0.422		0.405		0.363		0.567		0.263	J	0.133	J	0.109	J	0.0621	J
SW-846 6020A	Chromium	mg/Kg	43	110	35	20.2		25.2		21.4		21.6		19.9		**42.2**		16.7		17.3	J	32.1		**38.4**	
SW-846 6020A	Copper	mg/Kg	32	150	57	27.9	J-	32.3		25.5		26.7		26.9		**60**		22.4		17.8	J	16.3		17.7	
SW-846 6020A	Lead	mg/Kg	36	130	53	15.2	J-	11		30.9		30.1		26.9		33.2		10.1		29.6	J	37.2		31.8	
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.238	U	0.254	U	0.364	U	0.34	U	0.322	U	0.435	U	0.277	U	**0.319**	J+	**1.3**		**0.116**	J
SW-846 6020A	Nickel	mg/Kg	23	49	41	31.1	J-	37.9		27.1		29.1		26.3		**60.4**		22.1		22.1	J	35.8		32.5	
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	0.0419	J	0.0838	J	0.0923	J	0.0827	J	0.0983	J	0.0572	J	0.0906	J	0.027	J	0.118	J	0.0584	J
SW-846 6020A	Zinc	mg/Kg	120	460	210	80.3		104		121		154		118		132		120		108	J	80.6		73.2	
	Site Classification					Class A		Class A		Class A		Class A		Class A		Class C		Class A		Class B		Class C		Class A	

	detected concentration less than Class A SGV
	detected concentration between Class A and Class C SGV
	detected concentration greater than Class C SGV
Boldface, centered	detected value > background (95% USL of upstream samples)
	detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
June 2014, New York State Department of Environmental Conservation
(2) Background concentration is the Upper Simultaneous Limit (USL) of samples
collected from 3 upstream sampling transects (Table 4)
SGV - Sediment Guidance Value
mg/Kg - milligrams per kilogram
J: Analyte positively identified, but quantitation is an estimation
J-: Estimated biased low at the valure given
J+: Estimated biased high at the valure given
U: Undetected, value is at or below the method detection limit

TABLE 5
SEDIMENT SAMPLE SCREENING BY GUIDANCE VALUES AND BACKGROUND CONCENTRATION
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

					Location	TR10_A		TR10_A		TR11_B		TR11_C		TR11_C		TR11_C	
					Field Sample ID	CVX-0013-04		CVX-0013-05		CVX-0014-01		CVX-0014-02		CVX-0014-03		CVX-0014-04	
					Sample Date	9/10/2014		9/10/2014		9/11/2014		9/11/2014		9/11/2014		9/11/2014	
					Sample Delivery Group	1502680		1502680		1502969		1502969		1502969		1502969	
					Sample Depth	1-2 FT		1-2 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
					Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
					Sample Purpose	Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample	
					Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	FW Class A SGV(1) mg/kg	FW Class C SGV(1) mg/kg	Background (95% USL)(2)												
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	3.14		3.42		4.11		3.35		2.41		3.47	
SW-846 6020A	Cadmium	mg/Kg	1	5	0.789	0.0759	J	0.0649	J	0.0465	J	0.0573	J	0.0563	J	0.0719	J
SW-846 6020A	Chromium	mg/Kg	43	110	35	**39.8**		32.5		15		26.1		18.2		24	J
SW-846 6020A	Copper	mg/Kg	32	150	57	10.3		12.4		14		11.8		10.7		12	
SW-846 6020A	Lead	mg/Kg	36	130	53	20.2		31		15.1		8.85		7.89		12.5	J+
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.0666	J	**0.116**	J	0.0508	J	0.0569	J	0.0351	J	0.0411	J
SW-846 6020A	Nickel	mg/Kg	23	49	41	34.6		31.2		20.9		27.7		23.1		28.5	J
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	0.0525	J	0.0621	J	0.021	U	0.022	U	0.022	U	0.0234	U
SW-846 6020A	Zinc	mg/Kg	120	460	210	80.9		71.6		62.2		70.9		71.7		87.2	J
	Site Classification					Class A		Class A		Class A		Class A		Class A		Class A	

	detected concentration less than Class A SGV
	detected concentration between Class A and Class C SGV
	detected concentration greater than Class C SGV
Boldface, centered	detected value > background (95% USL of upstream samples)
	detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
June 2014, New York State Department of Environmental Conservation
(2) Background concentration is the Upper Simultaneous Limit (USL) of samples
collected from 3 upstream sampling transects (Table 4)
SGV - Sediment Guidance Value
mg/Kg - milligrams per kilogram
J: Analyte positively identified, but quantitation is an estimation
J-: Estimated biased low at the valure given
J+: Estimated biased high at the valure given
U: Undetected, value is at or below the method detection limit

TABLE 6
SUMMARY SEDIMENT SAMPLING SCREENING BY GUIDANCE VALUES AND BACKGROUND CONCENTRATION
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

						TR02_E		TR05_C		TR05_D		TR05_D		TR05_E		TR06_A		TR06_A		TR06_A		TR06_B	
						CVX-0005-08		CVX-0011-10		CVX-0010-09		CVX-0010-10		CVX-0010-01		CVX-0011-01		CVX-0011-02		CVX-0011-04		CVX-0010-14	
						8/20/2014		8/27/2014		8/26/2014		8/26/2014		8/26/2014		8/27/2014		8/27/2014		8/27/2014		8/26/2014	
						1497631		1499492		1499124		1499124		1499124		1499492		1499492		1499492		1499124	
						0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		2-3 FT		1-2 FT	
						SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
						Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
						Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	FW Class A SGV mg/kg	FW Class C SGV mg/kg	Bkgd (95% USL)																		
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	6.48		**9.86**	J	6.19		**6.96**		**10.9**		6.03		5.91		**17.5**		4.38	
SW-846 6020A	Cadmium	mg/kg	1	5	0.789	0.629	J	0.784	J	0.73		**0.806**		0.603		0.571		0.61		0.276		0.0896	J
SW-846 6020A	Chromium	mg/Kg	43	110	35	32.3		**44.1**	J	27.7		31.1		29.5		20		21.7		30.6		**55.7**	
SW-846 6020A	Copper	mg/kg	32	150	57	**57.4**		55.3	J	53.5		51.5		49.6		**62.4**		**59**		24		20.2	
SW-846 6020A	Lead	mg/Kg	36	130	53	50.4		49	J	40.2		48.7		47.4		37.5		41.8		15.7		13	
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.107	J	**0.137**	J	0.0928	J	**0.122**	J	**0.117**	J	**0.719**		**0.728**		0.0266	J	0.0378	J
SW-846 6020A	Nickel	mg/Kg	23	49	41	**42.2**		**49.4**	J	34.9		39.4		35.6		27.8		30.2		30.6		**47.4**	
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	0.368	J	0.307	J	**1.26**		**0.752**		**0.61**		**0.501**	J	**0.747**		0.12	J	0.0366	J
SW-846 6020A	Zinc	mg/Kg	120	460	210	204		**217**	J	199		**221**		193		153		173		76.9		75.5	
	Site Classification					Class B		Class C		Class B		Class B		Class B		Class B		Class B		Class B		Class B	

detected concentration less than Class A SGV
detected concentration between Class A and Class C SGV
detected concentration greater than Class C SGV
Boldface, centered detected value>background (95% USL of upstream samples)
detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment" June 2014, New York State Department of Environmental Conservation
(2) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)
SGV - Sediment Guidance Value
mg/Kg - milligrams per kilogram
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J-: Estimated biased low at the valure given
J+: Estimated biased high at the valure given
U: Undetected, value is at or below the method detection limit

TABLE 6
SUMMARY SEDIMENT SAMPLING SCREENING BY GUIDANCE VALUES AND BACKGROUND CONCENTRATION
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

						TR06_E		TR06_E		TR07_A		TR07_A		TR07_E		TR09_C		TR10_A	
						CVX-0009-16		CVX-0009-17		CVX-0009-01		CVX-0009-03		CVX-0009-14		CVX-0013-01		CVX-0013-02	
						8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		9/10/2014		9/10/2014	
						1498701		1498701		1498701		1498701		1498701		1502680		1502680	
						0-0.5 FT		0.5-1 FT		0-0.5 FT		1-2 FT		2-3 FT		0-0.5 FT		0-0.5 FT	
						SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
						Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
						Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	FW Class A SGV mg/kg	FW Class C SGV mg/kg	Bkgd (95% USL)														
SW-846 6020A	Arsenic	mg/Kg	10	33	6.9	6.18		**7.24**		4.6		**7.65**		**13.2**		4.74	J-	4.53	
SW-846 6020A	Cadmium	mg/kg	1	5	0.789	0.0665		**0.852**		0.382		0.742		0.567		0.133	J	0.109	J
SW-846 6020A	Chromium	mg/Kg	43	110	35	27.3		32.9		**47.7**		29.6		**42.2**		17.3	J	32.1	
SW-846 6020A	Copper	mg/kg	32	150	57	43.4		**57.3**		21.2		44.2	J	**60**		17.8	J	16.3	
SW-846 6020A	Lead	mg/Kg	36	130	53	40.8		**56.7**		32.3		**53.4**		33.2		29.6	J	37.2	
SW-846 7471B	Mercury	mg/Kg	0.2	1	0.107	0.504	U	0.569	U	0.276	U	0.417	U	0.435	U	**0.319**	J+	**1.3**	
SW-846 6020A	Nickel	mg/Kg	23	49	41	33.4		40.8		36.2		35.9		**60.4**		22.1	J	35.8	
SW-846 6020A	Silver	mg/Kg	1	2.2	0.45	0.445	J	**0.777**		0.101	J	0.249	J	0.0572	J	0.027	J	0.118	J
SW-846 6020A	Zinc	mg/Kg	120	460	210	**266**		**244**		75.2		167		132		108	J	80.6	
	Site Classification					Class B		Class B		Class B		Class B		Class C		Class B		Class C	

	detected concentration less than Class A SGV
	detected concentration between Class A and Class C SGV
	detected concentration greater than Class C SGV
Boldface, centered	detected value>background (95% USL of upstream samples)
	detected value exceeds both criterion and background

(1) Criteria from NYSDEC "Screening and Assessment of Contaminated Sediment"
June 2014, New York State Department of Environmental Conservation
(2) Background concentration is the Upper Simultaneous Limit (USL) of samples
collected from 3 upstream sampling transects (Table 4)
SGV - Sediment Guidance Value
mg/Kg - milligrams per kilogram
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J-: Estimated biased low at the valure given
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U: Undetected, value is at or below the method detection limit

TABLE 7
SEDIMENT SAMPLE SCREENING BY BACKGROUND CONCENTRATION (METALS WITHOUT NYSDEC GUIDANCE VALUE)
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

			Location	TR01_A		TR01_A		TR01_A		TR01_A		TR01_B		TR01_B		TR01_B		TR01_B		TR01_C		TR01_C		TR01_C		TR01_C		TR01_D	
			Field Sample ID	CVX-0004-01		CVX-0004-02		CVX-0004-03		CVX-0004-08		CVX-0004-04		CVX-0004-05		CVX-0004-06		CVX-0004-07		CVX-0004-09		CVX-0004-10		CVX-0004-11		CVX-0004-12		CVX-0004-13	
			Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014	
			Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485		1497485	
			Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		2-2.7 FT		0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-2.9 FT		0-0.5 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	Background (95% USL) (1)																										
SW-846 6020A	Aluminum	mg/kg	24664	11000		16400		13900		16300		13800		9250		15300		13200		14500		8690		15100		17700		12900	
SW-846 6020A	Antimony	mg/kg	0.325	0.128	U	0.135	U	0.103	U	0.112	U	0.105	U	0.136	U	0.105	U	0.0995	U	0.121	U	0.103	U	0.109	U	0.105	U	0.121	U
SW-846 6020A	Barium	mg/kg	174.2	50.6		70.4		36.9		46		39.9		36		52.2		36.4		73		44.6		39.2	**J-**	44.1		51.1	
SW-846 6020A	Beryllium	mg/Kg	1.119	0.404		0.71		0.547		0.616		0.59		0.312	J	0.708		0.464		0.712		0.442		0.412	J+	0.532		0.369	
SW-846 6020A	Cobalt	mg/kg	19.04	6.76		10.8		9.15		11.9		11.4		6.7		11.2		12.4		11.2		7.91		9.52	J+	13.3		8.89	
SW-846 6020A	IRON	mg/kg	40536	16000		28100		28400		36300		35800		14900		27100		32200		26000		16500		28700		32400		21000	
SW-846 6010C	Manganese	mg/kg	940.8	270		270		286		292		372		357		316		441		522		300		306		324		438	
SW-846 6020A	Selenium	mg/Kg	1.826	0.369	J	0.213	J	0.122	U	0.133	U	0.125	U	0.194	J	0.174	J	0.118	U	0.369	J	0.192	J	0.129	U	0.124	U	0.175	J
SW-846 6020A	Thallium	mg/Kg	0.255	0.0793	J	0.116	J	0.0533	J	0.071	J	0.0666	J	0.0499	J	0.0828	J	0.041	J	0.111	J	0.0576	J	0.0486	J	0.0641	J	0.0672	J
SW-846 6020A	Vanadium	mg/kg	34.2	13.1		22.1		17.3		18.2		17.2		9.75		19.8		12.6		17.5		12.5		13.7	J+	18.4		12.6	

Boldface value > background (95% USL of upstream samples)

(1) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)
mg/Kg - milligrams per kilogram
J: Analyte positively identified, but quantitation is an estimation
J-: Estimated biased low at the valure given
J+: Estimated biased high at the valure given
U: Undetected, value is at or below the method detection limit
UJ: The analyte was detected; however the result is an estimate

TABLE 7
SEDIMENT SAMPLE SCREENING BY BACKGROUND CONCENTRATION (METALS WITHOUT NYSDEC GUIDANCE VALUE)
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

			Location	TR01_D		TR01_D		TR01_D		TR01_E		TR01_E		TR02_A		TR02_A		TR02_B		TR02_C		TR02_D		TR02_D		TR02_E		TR02_E	
			Field Sample ID	CVX-0004-14		CVX-0004-15		CVX-0004-16		CVX-0004-17		CVX-0004-18		CVX-0001-01		CVX-0001-02		CVX-0005-01		CVX-0005-04		CVX-0005-05		CVX-0005-06		CVX-0005-07		CVX-0005-08	
			Sample Date	8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/19/2014		8/14/2014		8/14/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014		8/20/2014	
			Sample Delivery Group	1497485		1497485		1497485		1497485		1497485		1496370		1496370		1497631		1497631		1497631		1497631		1497631		1497631	
			Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	Background (95% USL) (1)																										
SW-846 6020A	Aluminum	mg/kg	24664	16100		11500		12300		11300		11500		6290		9120		13400		12700		17300		13300		22300		**26500**	
SW-846 6020A	Antimony	mg/kg	0.325	0.152	U	0.108	U	0.103	U	0.0953	U	0.0895	U	0.0836	U	0.0836	U	0.109	U	0.115	U	0.146	U	0.112	U	0.258	U	0.325	J
SW-846 6020A	Barium	mg/kg	174.2	85.6		35.8		37.1		25.9		25.4		29.3	J+	44.2		48.1		67.1		66.1		51.2		142		169	
SW-846 6020A	Beryllium	mg/Kg	1.119	0.649		0.403		0.449		0.35		0.348		0.241	J+	0.385		0.402		0.558		0.563		0.438		1.1		**1.19**	
SW-846 6020A	Cobalt	mg/kg	19.04	13.1		9.77		9.27		9.25		8.34		5.18	J+	9.94		9.37		10.9		11.2		9.15		16.8		18.5	
SW-846 6020A	IRON	mg/kg	40536	30100		22400		24400		22200		24900		10600		15300		22800		19800		26000		21700		27100		34300	
SW-846 6010C	Manganese	mg/kg	940.8	413		261		329		302		308		145		188		327		332		379		274		732		**1040**	
SW-846 6020A	Selenium	mg/Kg	1.826	0.503	J	0.128	U	0.122	U	0.113	U	0.106	U	0.313	J	0.405	J	0.193	J	0.275	J	0.385	J	0.25	J	1.02	J	1.03	J
SW-846 6020A	Thallium	mg/Kg	0.255	0.126	J	0.0545	J	0.0496	J	0.045	J	0.0387	J	0.0491	J	0.0493	J	0.0617	J	0.0913	J	0.0971	J	0.0895	J	0.213	J	**0.299**	J
SW-846 6020A	Vanadium	mg/kg	34.2	21.5		13.9		13.3		13.2		12.5		6.75	J+	11.1		14		16.2		17.5		14		30.1		**34.5**	

Boldface value > background (95% USL of upstream samples

(1) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)

mg/Kg - milligrams per kilogram

J: Analyte positively identified, but quantitation is an estimation

J-: Estimated biased low at the valure given

J+: Estimated biased high at the valure given

U: Undetected, value is at or below the method detection limit

UJ: The analyte was detected; however the result is an estimate

TABLE 7
SEDIMENT SAMPLE SCREENING BY BACKGROUND CONCENTRATION (METALS WITHOUT NYSDEC GUIDANCE VALUE)
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

			Location	TR02_E		TR02_E		TR03_C		TR03_C		TR04_C		TR04_C		TR04_C		TR04_C		TR05_A		TR05_A	
			Field Sample ID	CVX-0005-09		CVX-0005-10		CVX-0011-12		CVX-0011-13		CVX-0007-01		CVX-0007-02		CVX-0007-03		CVX-0007-04		CVX-0007-05		CVX-0011-05		CVX-0011-06	
			Sample Date	8/20/2014		8/20/2014		8/27/2014		8/27/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/21/2014		8/27/2014		8/27/2014	
			Sample Delivery Group	1497631		1497631		1499492		1499492		1498092		1498092		1498092		1498092		1498092		1499492		1499492	
			Sample Depth	1-2 FT		2-2.75 FT		0-0.5 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		2-3 Ft		0-0.5 FT		0.5-1 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	Background (95% USL) (1)																						
SW-846 6020A	Aluminum	mg/kg	24664	14600		13500		11700		10200		22800		17800		16500		13800		20200		15700		16700	
SW-846 6020A	Antimony	mg/kg	0.325	0.13	U	0.115	U	0.102	U	0.0967	U	0.248	U	0.285	J	0.216	J	0.179	U	0.202	U	0.11	U	0.106	U
SW-846 6020A	Barium	mg/kg	174.2	66.7		55.3		28.8		35.3		111		97.6		104		68.2		76.4		66		58.5	
SW-846 6020A	Beryllium	mg/Kg	1.119	0.527		0.395		0.432		0.474		0.986		1.02		0.921		0.635		0.788		0.692		0.684	
SW-846 6020A	Cobalt	mg/kg	19.04	10.9		9.7		10.6		8.87		16.9		13.8		12.2		12.5		15.1		8.71		10.6	
SW-846 6020A	IRON	mg/kg	40536	22700		22500		26900		24200		36200		26600		26300		25000		34500		19900		28600	
SW-846 6010C	Manganese	mg/kg	940.8	316		283		341		297		828		569		600		448		472		248		334	
SW-846 6020A	Selenium	mg/Kg	1.826	0.373	J	0.136	U	0.121	U	0.115	U	0.464	J	0.559	J	0.705	J	0.534	J	0.333	J	0.378	J	0.146	J
SW-846 6020A	Thallium	mg/Kg	0.255	0.0987	J	0.0651	J	0.0475	J	0.0432	J	0.174	J	0.14	J	0.155	J	0.102	J	0.112	J	0.133	J	0.0999	J
SW-846 6020A	Vanadium	mg/kg	34.2	15.4		13.4		14.7		13.5		27.3		23.1		23.1		17.9		22.8		21		23.2	

Boldface value > background (95% USL of upstream samples

(1) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)

mg/Kg - milligrams per kilogram

J: Analyte positively identified, but quantitation is an estimation

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J+: Estimated biased high at the valure given

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UJ: The analyte was detected; however the result is an estimate

TABLE 7
SEDIMENT SAMPLE SCREENING BY BACKGROUND CONCENTRATION (METALS WITHOUT NYSDEC GUIDANCE VALUE)
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

			Location	TR05_A		TR05_A		TR05_B		TR05_B		TR05_C		TR05_C		TR05_D		TR05_D		TR05_D		TR05_D		TR05_E	
			Field Sample ID	CVX-0011-07		CVX-0011-08		CVX-0010-19		CVX-0010-20		CVX-0011-10		CVX-0011-11		CVX-0010-08		CVX-0010-09		CVX-0010-10		CVX-0010-11		CVX-0010-01	
			Sample Date	8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014	
			Sample Delivery Group	1499492		1499492		1499124		1499124		1499492		1499492		1499124		1499124		1499124		1499124		1499124	
			Sample Depth	1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	Background (95% USL) (1)																						
SW-846 6020A	Aluminum	mg/kg	24664	17800		11400		10000		9800		**28300**	J	13100		19900		21800		22800		17400		23500	
SW-846 6020A	Antimony	mg/kg	0.325	0.108	UJ	0.0981	U	0.102	J	0.103	J	**0.388**	UJ	0.223	U	0.236	U	0.259	J	**0.329**	J	0.151	U	0.235	J
SW-846 6020A	Barium	mg/kg	174.2	173	J	82.5		61.2		35.3		**178**	J	83.5		117		132		155		92.1		151	
SW-846 6020A	Beryllium	mg/Kg	1.119	0.641		0.54		0.57		0.592		**1.32**	J	0.606		0.9		0.951		1.1		0.669		1.02	
SW-846 6020A	Cobalt	mg/kg	19.04	12.1	J	9.06		10.1		10.1		**20.4**	J	9.71		18.5		16.5		18		14.5		15.8	
SW-846 6020A	IRON	mg/kg	40536	32000		24200		23500		21300		**47600**	J	23500		29800		28400		34000		29900		34400	
SW-846 6010C	Manganese	mg/kg	940.8	**2270**	J	**1480**		929		583		**1500**	J	707		699		718		807		611		587	
SW-846 6020A	Selenium	mg/Kg	1.826	0.127	U	0.116	U	0.135	J	0.151	J	1.63	J	0.808	J	0.752	J	0.851	J	0.945	J	0.316	J	1.12	J
SW-846 6020A	Thallium	mg/Kg	0.255	0.148	J	0.0884	J	0.0663	J	0.0605	J	**0.296**	J	0.112	J	0.181	J	0.222	J	0.249	J	0.162	J	0.2	J
SW-846 6020A	Vanadium	mg/kg	34.2	21.8	J+	16.6		14.1		15		**35.7**	J	17		22.3		25.8		30.3		20.6		29.8	

Boldface value > background (95% USL of upstream samples

(1) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)
mg/Kg - milligrams per kilogram
J: Analyte positively identified, but quantitation is an estimation
J-: Estimated biased low at the valure given
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SEDIMENT SAMPLE SCREENING BY BACKGROUND CONCENTRATION (METALS WITHOUT NYSDEC GUIDANCE VALUE)
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

			Location	TR05_E		TR05_E		TR05_E		TR05_E		TR06_A		TR06_A		TR06_A		TR06_A		TR06_B		TR06_B		TR06_B	
			Field Sample ID	CVX-0010-02		CVX-0010-03		CVX-0010-04		CVX-0010-05		CVX-0011-01		CVX-0011-02		CVX-0011-03		CVX-0011-04		CVX-0010-12		CVX-0010-13		CVX-0010-14	
			Sample Date	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/27/2014		8/27/2014		8/27/2014		8/27/2014		8/26/2014		8/26/2014		8/26/2014	
			Sample Delivery Group	1499124		1499124		1499124		1499124		1499492		1499492		1499492		1499492		1499124		1499124		1499124	
			Sample Depth	0.5-1 FT		1-2 FT		2-3 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	Background (95% USL) (1)																						
SW-846 6020A	Aluminum	mg/kg	24664	24200		20400		17100		19900		15700		17700		16400		18600		12200		12300		13900	
SW-846 6020A	Antimony	mg/kg	0.325	0.286	J	0.116	J	0.106	J	0.135	J	0.227	U	0.226	U	0.108	U	0.108	J	0.107	U	0.101	U	0.158	J
SW-846 6020A	Barium	mg/kg	174.2	166		53.3		53.8		63		90.4		101		119		**244**		46.8		54.3		55.2	
SW-846 6020A	Beryllium	mg/Kg	1.119	**1.12**		0.523		0.461		0.559		0.679		0.786		0.709		0.857		0.388		0.515		0.591	
SW-846 6020A	Cobalt	mg/kg	19.04	16.2		12.1		11.1		12.4		11.3		12.8		12.7		12.9		9.21		12.1		12.2	
SW-846 6020A	IRON	mg/kg	40536	33100		33700		30700		34100		26300		28000		28800		40400		21700		22500		25400	
SW-846 6010C	Manganese	mg/kg	940.8	643		511		562		574		597		601		528		**2530**		271		274		423	
SW-846 6020A	Selenium	mg/Kg	1.826	0.944	J	0.132	J	0.111	U	0.113	U	0.806	J	0.893	J	0.231	J	0.332	J	0.296	J	0.308	J	0.287	J
SW-846 6020A	Thallium	mg/Kg	0.255	**0.258**	J	0.0981	J	0.0954	J	0.103	J	0.135	J	0.166	J	0.139	J	0.248		0.0691	J	0.0801	J	0.0756	J
SW-846 6020A	Vanadium	mg/kg	34.2	28.2		17.2		15.3		16.5		21.3		23.2		21.8		30.3		13		12.6		15.5	

Boldface value > background (95% USL of upstream samples

(1) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)

mg/Kg - milligrams per kilogram

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FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

			Location	TR06_C		TR06_C		TR06_D		TR06_D		TR06_D		TR06_D		TR06_E		TR06_E		TR06_E		TR06_E		TR07_A	
			Field Sample ID	CVX-0010-06		CVX-0010-07		CVX-0010-15		CVX-0010-16		CVX-0010-17		CVX-0010-18		CVX-0009-16		CVX-0009-17		CVX-0009-18		CVX-0009-19		CVX-0009-01	
			Sample Date	8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/26/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014	
			Sample Delivery Group	1499124		1499124		1499124		1499124		1499124		1499124		1498701		1498701		1498701		1498701		1498701	
			Sample Depth	0-0.5 FT		0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	Background (95% USL) (1)																						
SW-846 6020A	Aluminum	mg/kg	24664	20300		13600		17100		19600		16600		17500		21600		24000		17100		16800		11400	
SW-846 6020A	Antimony	mg/kg	0.325	0.26	J	0.102	U	0.172	J	0.186	J	0.163	U	0.143	J	0.225	U	0.232	U	0.135	U	0.119	U	0.114	U
SW-846 6020A	Barium	mg/kg	174.2	143		44.1		95.9		121		94		99.8		113		151		87.6		74.2		74.8	
SW-846 6020A	Beryllium	mg/Kg	1.119	0.924		0.487		0.732		0.791		0.68		0.578		0.968		**1.19**		0.741		0.558		0.46	
SW-846 6020A	Cobalt	mg/kg	19.04	18.1		12		13.4		14.5		13.8		12.2		13.6		17.3		11.7		10.7		8.37	
SW-846 6020A	IRON	mg/kg	40536	35600		28300		28100		30500		31700		26800		28300		32600		23700		24400		18900	
SW-846 6010C	Manganese	mg/kg	940.8	**955**		378		597		641		659		590		564		634		316		286		493	
SW-846 6020A	Selenium	mg/Kg	1.826	0.711	J	0.124	J	0.442	J	0.679	J	0.511	J	0.432	J	0.937	J	1.12	J	0.63	J	0.398	J	0.47	J
SW-846 6020A	Thallium	mg/Kg	0.255	0.228	J	0.0642	J	0.169	J	0.187	J	0.147	J	0.173	J	0.213	J	0.242	J	0.146	J	0.11	J	0.107	J
SW-846 6020A	Vanadium	mg/kg	34.2	24.6		14.5		19.9		22.6		19.9	J	20.8		28		**35.8**		22		17.6		16.2	

Boldface value > background (95% USL of upstream samples

(1) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)

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FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

			Location	TR07_A		TR07_A		TR07_A		TR07_B		TR07_B		TR07_B		TR07_B		TR07_B		TR07_B		TR07_B		TR07_C	
			Field Sample ID	CVX-0009-02		CVX-0009-03		CVX-0009-04		CVX-0008-01		CVX-0008-02		CVX-0008-03		CVX-0008-04		CVX-0008-05		CVX-0008-06		CVX-0008-07		CVX-0009-05	
			Sample Date	8/25/2014		8/25/2014		8/25/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/22/2014		8/25/2014	
			Sample Delivery Group	1498701		1498701		1498701		1498276		1498276		1498276		1498276		1498276		1498276		1498276		1498701	
			Sample Depth	0.5-1 FT		1-2 FT		1-2 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		3-4 FT		4-5 FT		5-6 FT		0-0.5 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	Background (95% USL) (1)																						
SW-846 6020A	Aluminum	mg/kg	24664	13600		22300		17300		6210		17400		18300		17900	J	19700		13200		13100		11900	
SW-846 6020A	Antimony	mg/kg	0.325	0.14	U	0.186	U	0.18	U	0.0971	U	0.148	U	0.165	U	0.108	UJ	0.138	U	0.124	U	0.114	U	0.0962	U
SW-846 6020A	Barium	mg/kg	174.2	72.7		145		94.6		19		94.2		104		58.1		105		56		59.4		25.8	
SW-846 6020A	Beryllium	mg/Kg	1.119	0.566		0.991		0.691		0.358		0.678		0.74		0.528		0.726		0.561		0.533		0.336	
SW-846 6020A	Cobalt	mg/kg	19.04	8.6		17.4		11.5		3.76		11.3		11.5		9.75		12.4		9.44		7.98		7.79	
SW-846 6020A	IRON	mg/kg	40536	20700		32700		28600		12900		25800		25200		28700	**J-**	27800		20400		19100		28300	
SW-846 6010C	Manganese	mg/kg	940.8	580		706		652		277		419		476		311		420		376		260		348	
SW-846 6020A	Selenium	mg/Kg	1.826	0.676	J	1.19	J	1.01	J	0.115	U	0.69	J	0.627	J	0.319	J	0.742	J	0.336	J	0.623	J	0.114	U
SW-846 6020A	Thallium	mg/Kg	0.255	0.142	J	0.242	J	0.177	J	0.0345	U	0.186	J	0.171	J	0.106	J	0.212	J	0.0927	J	0.0972	J	0.0342	U
SW-846 6020A	Vanadium	mg/kg	34.2	16.6		29.1		19.4		7.03		21.1		20.8		17.3	**J-**	21.8		14.5		15.1		12.1	

Boldface value > background (95% USL of upstream samples

(1) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)
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FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

			Location	TR07_C		TR07_D		TR07_D		TR07_D		TR07_D		TR07_E		TR07_E		TR07_E		TR07_E		TR09_C	
			Field Sample ID	CVX-0009-06		CVX-0009-07		CVX-0009-08		CVX-0009-09		CVX-0009-10		CVX-0009-11		CVX-0009-12		CVX-0009-13		CVX-0009-14		CVX-0009-15		CVX-0013-01	
			Sample Date	8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		8/25/2014		9/10/2014	
			Sample Delivery Group	1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498701		1498701		1502680	
			Sample Depth	0.5-1 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		0-0.5 FT		0.5-1 FT		1-2 FT		2-3 FT		3-4 FT		0-0.5 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	Background (95% USL) (1)																						
SW-846 6020A	Aluminum	mg/kg	24664	13300		13700		17100		21800		**26600**		19700		21100		17500		**38300**		12000		13400	
SW-846 6020A	Antimony	mg/kg	0.325	0.103	U	0.12	U	0.116	U	0.107	UJ	0.106	U	0.158	U	0.139	U	0.139	U	0.188	U	0.121	U	0.0965	UJ
SW-846 6020A	Barium	mg/kg	174.2	34.3		66.4		67.2		91.6	J	98.5		107		108		91		170		64.2		47.7	
SW-846 6020A	Beryllium	mg/Kg	1.119	0.383		0.516		0.589		0.909	**J-**	**1.4**		0.753		0.77		0.671		**2.52**		**1.13**		0.409	J+
SW-846 6020A	Cobalt	mg/kg	19.04	8.76		8.85		10.4		11.5		10.6		12.7		13.1		11.6		**23.6**		6.48		7.8	J+
SW-846 6020A	IRON	mg/kg	40536	29900		21500		26600		33200		31700		27100		29800		26700		**54700**		18800		30400	J
SW-846 6010C	Manganese	mg/kg	940.8	279		468		429		461		366		502		494		373		680		436		515	
SW-846 6020A	Selenium	mg/Kg	1.826	0.122	U	0.498	J	0.174	J	0.269	J	0.344	J	0.778	J	0.779	J	0.643	J	0.4	J	0.15	J	0.114	U
SW-846 6020A	Thallium	mg/Kg	0.255	0.038	J	0.114	J	0.11	J	0.128	J	0.209	J	0.192	J	0.218	J	0.167	J	**0.408**	J	0.14	J	0.0506	J
SW-846 6020A	Vanadium	mg/kg	34.2	12.8		15.6		19.4		26.6	**J-**	**34.4**		23.7		23		20.1		**52.8**		29.6		15.9	J+

Boldface value > background (95% USL of upstream samples

(1) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)
mg/Kg - milligrams per kilogram
J: Analyte positively identified, but quantitation is an estimation
J-: Estimated biased low at the valure given
J+: Estimated biased high at the valure given
U: Undetected, value is at or below the method detection limit
UJ: The analyte was detected; however the result is an estimate

TABLE 7
SEDIMENT SAMPLE SCREENING BY BACKGROUND CONCENTRATION (METALS WITHOUT NYSDEC GUIDANCE VALUE)
FISHKILL CREEK SAMPLING PROGRAM (AUG-SEP 2014)
FORMER TEXACO RESEARCH CENTER, BEACON, NEW YORK

			Location	TR10_A		TR10_A		TR10_A		TR10_A		TR11_B		TR11_C		TR11_C		TR11_C	
			Field Sample ID	CVX-0013-02		CVX-0013-03		CVX-0013-04		CVX-0013-05		CVX-0014-01		CVX-0014-02		CVX-0014-03		CVX-0014-04	
			Sample Date	9/10/2014		9/10/2014		9/10/2014		9/10/2014		9/11/2014		9/11/2014		9/11/2014		9/11/2014	
			Sample Delivery Group	1502680		1502680		1502680		1502680		1502969		1502969		1502969		1502969	
			Sample Depth	0-0.5 FT		0.5-1 FT		1-2 FT		1-2 FT		0-0.5 FT		0-0.5 FT		0.5-1 FT		1-2 FT	
			Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
			Sample Purpose	Regular sample		Regular sample		Regular sample		Field Duplicate		Regular sample		Regular sample		Regular sample		Regular sample	
			Sample Type	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Analytical Method	Parameter Name	Units	Background (95% USL) (1)																
SW-846 6020A	Aluminum	mg/kg	24664	15000		14700		14600		14600		12100		13200		14100		16700	
SW-846 6020A	Antimony	mg/kg	0.325	0.106	U	0.103	U	0.104	U	0.107	U	0.0888	U	0.0927	U	0.0928	U	0.0989	UJ
SW-846 6020A	Barium	mg/kg	174.2	74.7		45.5		40		47.7		34.6		40.3		28.6		41.9	J
SW-846 6020A	Beryllium	mg/Kg	1.119	0.877		0.82		0.824		0.719		0.385		0.451		0.391		0.516	
SW-846 6020A	Cobalt	mg/kg	19.04	12		8.57		8.73		8.73		10.1		8.81		9.84		9.71	J+
SW-846 6020A	IRON	mg/kg	40536	25200		26300		27700		26400		26100		24700		27400		29900	
SW-846 6010C	Manganese	mg/kg	940.8	436		306		352		318		375		367		358		382	
SW-846 6020A	Selenium	mg/Kg	1.826	0.222	J	0.2	J	0.141	J	0.174	J	0.201	J	0.162	J	0.13	J	0.203	J
SW-846 6020A	Thallium	mg/Kg	0.255	0.115	J	0.0706	J	0.0619	J	0.0767	J	0.0341	J	0.0547	J	0.0403	J	0.0455	J
SW-846 6020A	Vanadium	mg/kg	34.2	22.4		15.3		21.1		16.9		13.4		14.6		13.7		18.5	J

Boldface value > background (95% USL of upstream samples

(1) Background concentration is the Upper Simultaneous Limit (USL) of samples collected from 3 upstream sampling transects (Table 4)

mg/Kg - milligrams per kilogram

J: Analyte positively identified, but quantitation is an estimation

J-: Estimated biased low at the valure given

J+: Estimated biased high at the valure given

U: Undetected, value is at or below the method detection limit

UJ: The analyte was detected; however the result is an estimate

ATTACHMENT 7

CHEVRON ENERGY TECHNOLOGY COMPANY INTERGRATED LABORATORY TECHNOLOGIES PROJECT SUMMARY (2015.0004)

CHEVRON ENERGY TECHNOLOGY COMPANY
INTEGRATED LABORATORY TECHNOLOGIES
PROJECT SUMMARY

Project No	2015.0004	**Requested by**	Amanda Bess
Date Initiated	02/11/15	**Location**	ETC/HES
Date Completed	02/24/15		1200 Smith St.
CRTC Charge Code	YWEX00570002		Houston, TX 77002
		Phone	(713)-654-5624

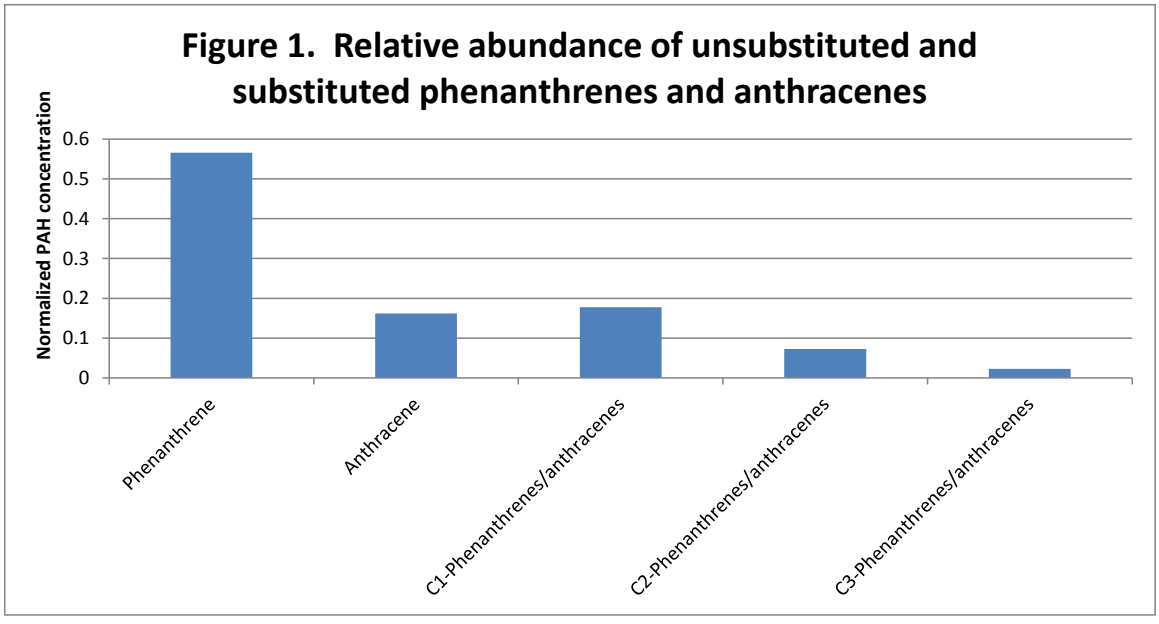
Project Description:

Review PAH data from sediment samples taken from Fishkill Creek near the former Texaco research facility in Beacon, NY. Identify the source of the polycyclic aromatic hydrocarbons in the sediment samples.

Results:

8270SIM data for 34 polycyclic aromatic hydrocarbons (PAH) produced by Lancaster Laboratories were examined for sediment sample CVX-0013-01. The corresponding Lancaster Laboratories sample number is 7595900.

The relative abundance of substituted and unsubstituted PAHs is a useful tool to identify the source of PAHs in a given sample. PAHs derived from crude oil, petrogenic PAHs, typically display less of the parent, unsubstituted PAH than the substituted species while pyrogenic PAHs, those derived from coal tar, wood tar, or combustion, invariably are dominated by unsubstituted PAHs. For example, Figure 1 shows the relative abundances of substituted and unsubstituted anthracenes and phenanthrenes for the sediment sample in question. The prefix C1 refers to substitution by one methyl group, C2 by two methyl groups or one ethyl group, and so forth. The dominance of the unsubstituted PAH is clear.



Figures 2 and 3 show the relative abundance of unsubstituted fluorenes and naphthalenes. In the case of naphthalene, the dominance of the unsubstituted PAH is still clear but is somewhat attenuated. This is likely due to biodegradation and chemical degradation which would tend to remove the parent PAH more quickly from these more soluble and degradable PAHs.

Figure 2. Relative abundance of unsubstituted and substituted fluorenes

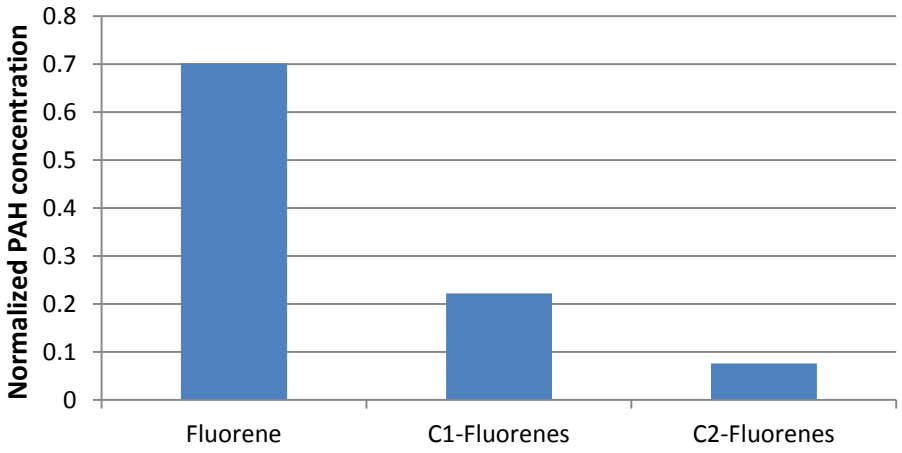
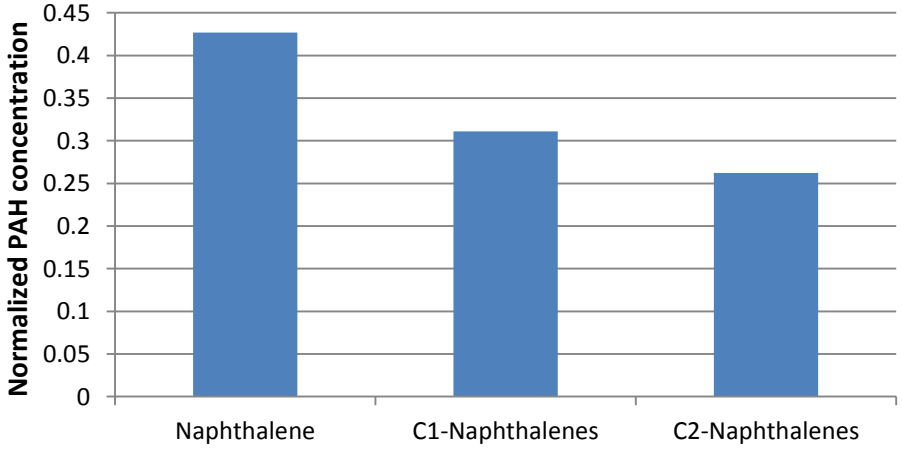
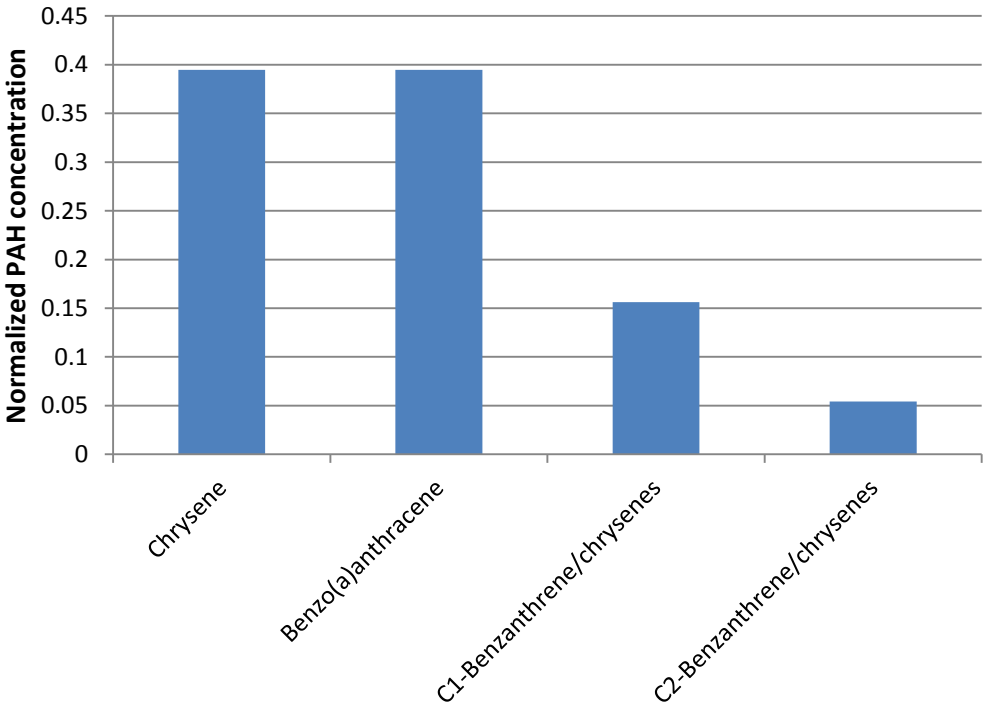


Figure 3. Relative abundance of unsubstituted and substituted naphthalenes



Finally, Figure 4 once again shows the signature of coal tar or creosote for the four ring PAHs. Potential sources include railroad ties or trestles, or roadway pavement.

Figure 4. Relative abundance of unsubstituted and substituted chrysenes and benzanthrene



For comparison purposes, the following figure 9.26 is extracted from the cited reference below and shows the distribution of PAHs that is expected for coal tar in its native and weathered states. It is clear that the PAHs in CVX-0013-1 are of this type. In this figure, N0 is naphthalene, A0 is anthracene, FL0 is fluorene, C0 is chrysene, and BA0 is benzoanthracene. N1 is C1-naphthalene and so forth.

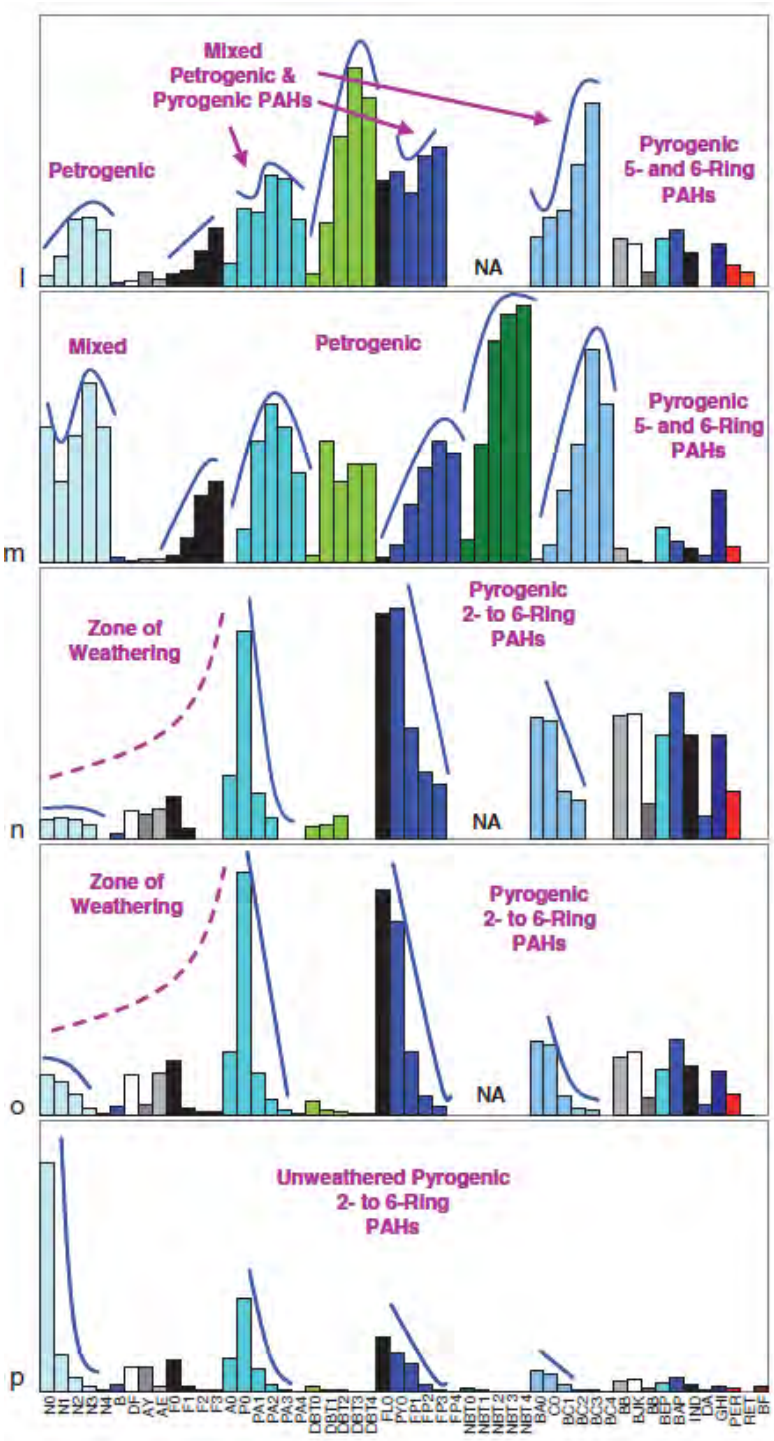


Figure 9.26—cont'd

l. Hot patch
This paving material is composed of heavy PAHs in the residual petroleum range. It is a complex mixture of petrogenic 2- to 4-ring PAHs mixed with pyrogenic 3- to 6-ring PAHs.

m. Roadway pavement (c. 2005)
Like Hot patch, this modern pavement contains mixtures of pyrogenic and petrogenic PAHs. In particular, it has higher levels of 2-ring PAHs caused by the kerosene solvent.

n. Roadway pavement (c. 1940s)
Mid-century pavement was frequently blended with petroleum and tar. In this sample the tar derived pyrogenic 3- to 6-ring PAHs are dominant.

o. Roadway pavement (c. 1940s)
Pavement from the early to mid 1900s was predominantly made with tar binders. Accordingly, the pyrogenic 2- to 6-ring PAHs from tar were well preserved in the roadway bedding.

p. Coal tar oil
The downward sloping profile of each homolog group is a feature shared by all pyrogenic tars. Subtle changes in several isomer ratios (e.g., FL0: PY0) are characteristic of the different processes by which they are generated. (Emsbo-Mattingly et al., *2001b)*

Additional evidence that the hydrocarbons in CVX-0013-1 are from creosote or coal tar comes from the Total Ion Chromatogram (TIC) of the sample. The unsubstituted PAHs, annotated below on the chromatogram from Lancaster Laboratories (with relevant pages of the report) show that they are the dominant feature of the TIC. If the hydrocarbons were from a fuel oil or other petroleum-derived source, the TIC would be dominated by an unresolved complex mixture as shown in Figure 9.20 from the reference below.

13-01 Lancaster Laboratories, Inc. 7595900
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/14sep22.b/ci0624.d Injection date and time: **22-SEP-2014 14:06**
Data file Sample Info. Line: 13-01;7595900;2;D;SAMPLE; Instrument ID: **HP10623.i** Batch: **142598LG**
Date, time and analyst ID of latest file update: 23-Sep-2014 04:30 jmg00346

Blank Data file reference: **/chem/HP10623.i/14sep19.b/ci0553.d**

Method used: /chem/HP10623.i/14sep22.b/alkyl_pah.m Sublist used: **14497**
Calibration date and time (Last Method Edit): 22-SEP-2014 11:14
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/14sep22.b/ci0601.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf * Vt/Ms

Dilution Factor (DF): 10 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 2 ul Sample Weight (Ms): 30.1 g

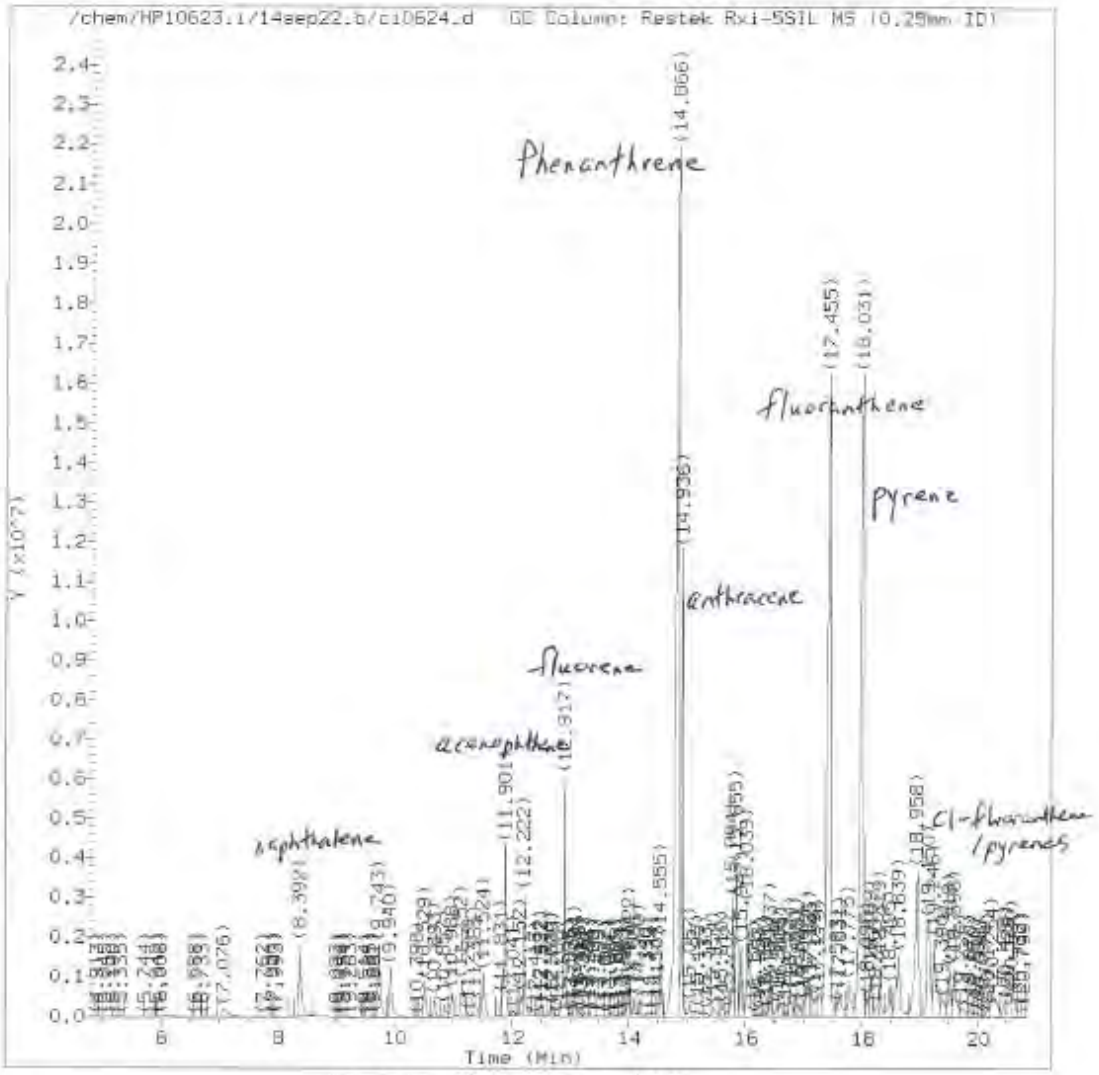
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
135) C3-Benzanthrene/chrysenes	(5)			Not Detected					0.02
141) Perylene	(6)	27.164(-0.000)	252	3447401A	12.884	4280.45		E	0.02
152) C4-Benzanthrene/chrysenes	(5)			Not Detected					0.02
172) Indeno(1,2,3-cd)pyrene	(6)	30.792(-0.000)	276	8442949	31.866	10586.79		E	0.02
173) Dibenz(a,h)anthracene	(6)	30.836(0.000)	278	2428344	9.410	3192.83			0.02
175) Benzo(g,h,i)perylene	(6)	31.623(-0.001)	276	8187643A	28.572	9492.40		E	0.02

E = Compound concentration above calibration range. A = User selected an alternate peak.

Total number of targets = 34

Digitally signed by Joseph M. Gambler on 09/23/2014 at 04:43. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 09/23/2014 at 13:26. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/14sep22.b/ci0624.d Instrument ID: HP10623.i
Injection date and time: 22-SEP-2014 14:06 Analyst ID: jmg00396

Method used: /chem/HP10623.i/14sep22.b/alkyl_pah.m Sublist used: 19497
Calibration date and time: 22-SEP-2014 11:14
Date, time and analyst ID of latest file update: 23-Sep-2014 04:30 jmg00348

Sample Name: 13-01 Lab Sample ID: 7095900

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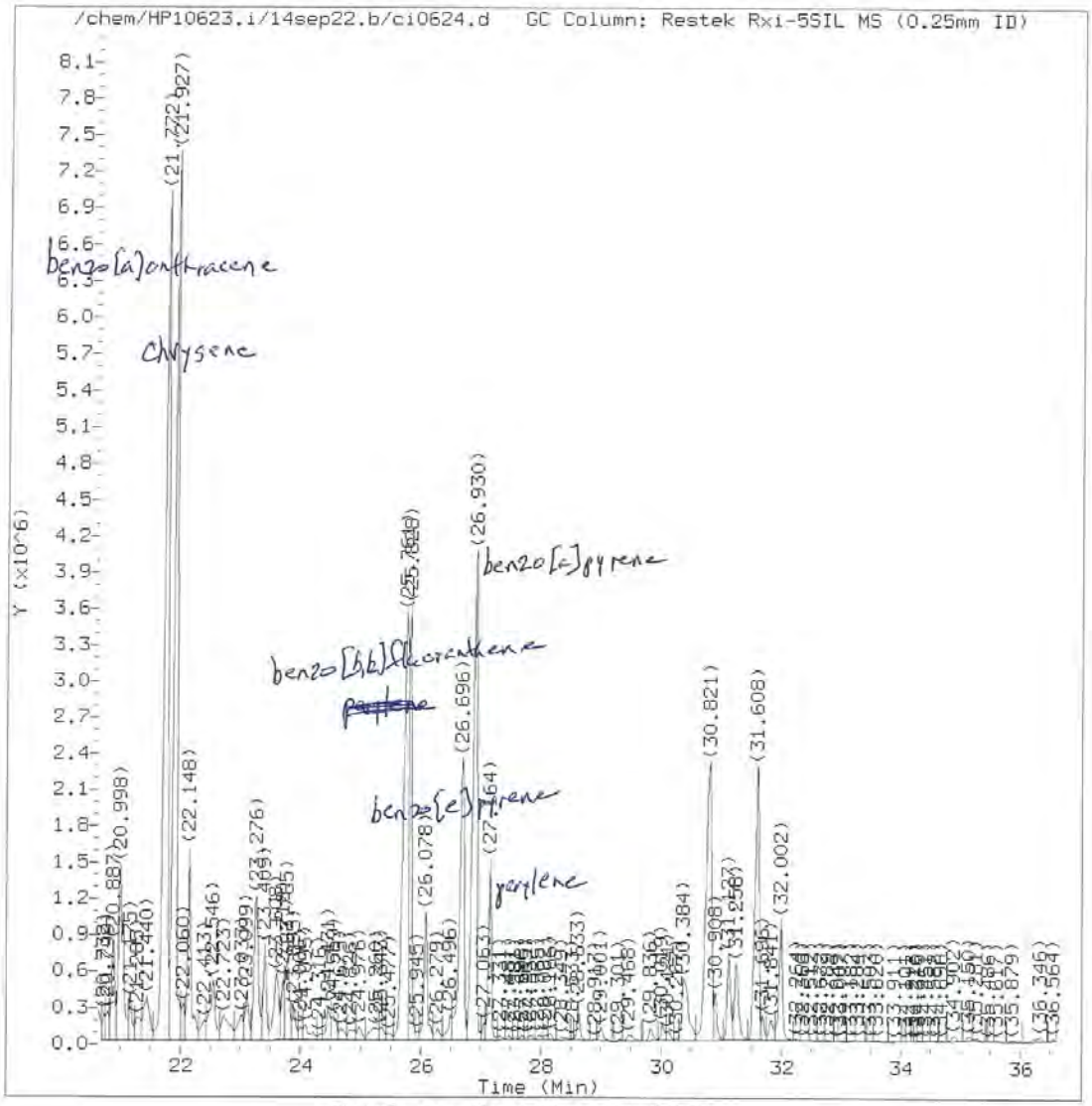
on 09/23/2014 at 04:43.
Target 3.5 esignature [illegible]



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/14sep22.b/ci0624.d Instrument ID: HP10623.i
Injection date and time: 22-SEP-2014 14:06 Analyst ID: jmg00346

Method used: /chem/HP10623.i/14sep22.b/alkyl_pah.m Sublist used: 14497
Calibration date and time: 22-SEP-2014 11:14
Date, time and analyst ID of latest file update: 23-Sep-2014 04:30 jmg00346

Sample Name: 13-01 Lab Sample ID: 7595900

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on 09/23/2014 at 04:43.
Target 3.5 esignature page ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/14sep22.b/ci0624.d Instrument ID: HP10623.i
Injection date and time: 22-SEP-2014 14:06 Analyst ID: jmg00346

Method used: /chem/HP10623.i/14sep22.b/alkyl_pah.m Sublist used: 14497
Calibration date and time: 22-SEP-2014 11:14
Date, time and analyst ID of latest file update: 23-Sep-2014 04:30 jmg00346

Sample Name: 13-01 Lab Sample ID: 7595900

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2)*1,4-Dichlorobenzene-d4	(1)	6.008	152	56082M	1.000
8)*Naphthalene-d8	(2)	8.356	136	209012	1.000
9) Naphthalene	(2)	8.392	128	4703734	17.562
18) C1-Naphthalenes	(2)	9.743	142	3555244M	13.274
493)$1-Methylnaphthalene-d10	(2)	9.874	152	10699	0.083
27) C2-Naphthalenes	(2)	11.168	156	3001031M	11.205
29) Acenaphthylene	(3)	11.524	152	1686210	5.746
31)*Acenaphthene-d10	(3)	11.831	164	131627	1.000
32) Acenaphthene	(3)	11.901	154	3651757	21.163
37) C3-Naphthalenes	(2)	12.532	170	2236188M	8.349
41) Fluorene	(3)	12.917	166	6154034	29.846
46) C1-Fluorenes	(3)	14.022	180	2015688M	9.776
42) C4-Naphthalenes	(2)	14.330	184	797702M	2.978
52)*Phenanthrene-d10	(4)	14.780	188	214610	1.000
54) Phenanthrene	(4)	14.866	178	43027763	148.402
55) Anthracene	(4)	14.936	178	15612272	51.467
58) C2-Fluorenes	(3)	15.195	194	706766M	3.428
61) C1-Phenanthrenes/anthracenes	(4)	15.855	192	16476626M	56.828
67) C2-Phenanthrenes/anthracenes	(4)	17.071	206	6822313M	23.530
494)$Fluoranthene-d10	(4)	17.343	212	40093	0.189
70) Fluoranthene	(4)	17.455	202	42400153	142.016
76) Pyrene	(5)	18.031	202	42303707	124.502
79) C3-Phenanthrenes/anthracenes	(4)	18.255	220	2149342M	7.413
84) C1-Fluoranthrenes/pyrenes	(4)	18.958	216	16002333M	53.598
95) Benzo(a)anthracene	(5)	21.772	228	19415845	65.723
96)*Chrysene-d12	(5)	21.794	240	184413	1.000
99) Chrysene	(5)	21.927	228	18168360	62.997
108) C1-Benzanthrene/chrysenes	(5)	23.276	242	7342036M	24.853
114) C2-Benzanthrene/chrysenes	(5)	24.976	256	2565073M	8.683
123) Benzo(b)fluoranthene	(6)	25.761	252	17586678M	61.271
124) Benzo(k)fluoranthene	(6)	25.828	252	8044733A	26.134
133) Benzo(e)pyrene	(6)	26.696	252	8930725M	32.461
495)$Benzo(a)pyrene-d12	(6)	26.780	264	11363	0.069
134) Benzo(a)pyrene	(6)	26.930	252	15299513A	54.277
140)*Perylene-d12	(6)	27.063	264	185835MA	1.000
141) Perylene	(6)	27.164	252	3647401A	12.884
172) Indeno(1,2,3-cd)pyrene	(6)	30.792	276	8442949	31.866
173) Dibenz(a,h)anthracene	(6)	30.836	278	2628366	9.610
175) Benzo(g,h,i)perylene	(6)	31.623	276	8187643A	28.572

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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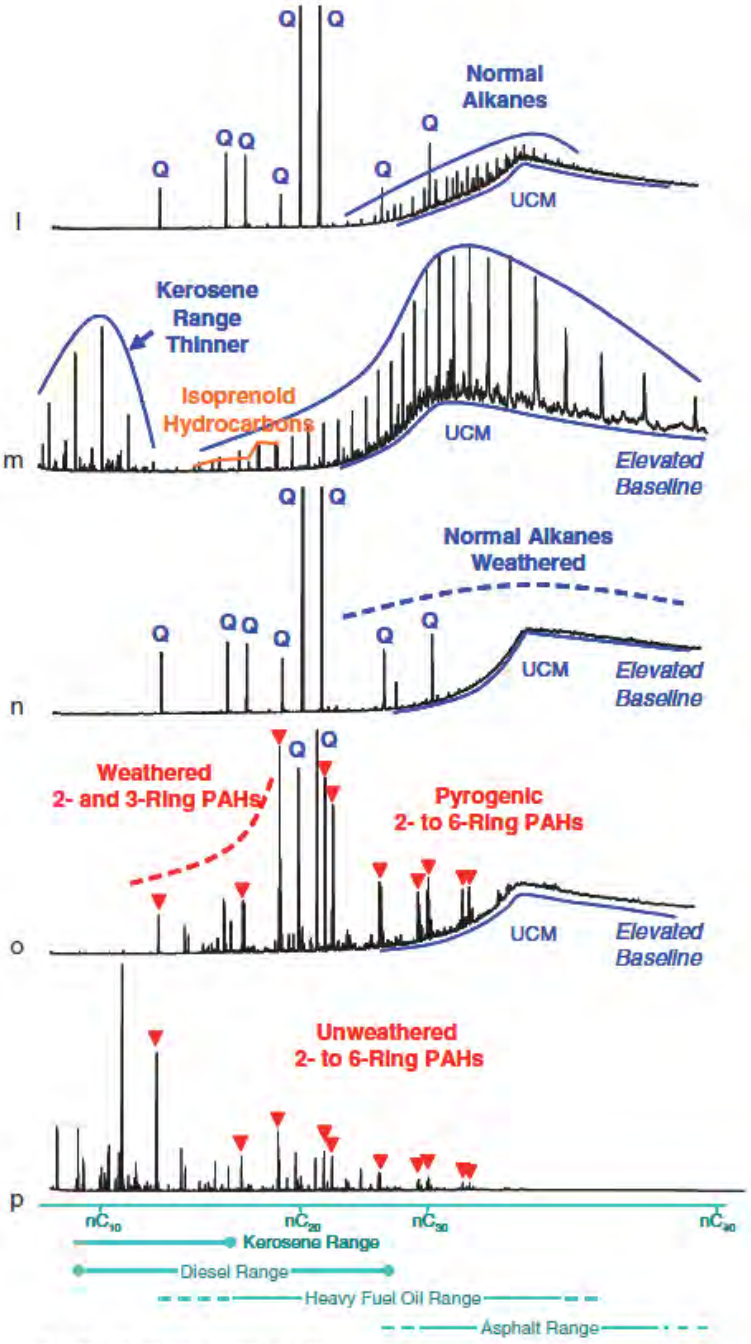
on 09/23/2014 at 04:43.
Target 3.5 esignature [illegible] ID: jmg00346

Figure 9.20—cont'd

l. Hot patch
This paving material commonly is used to patch roadways. Instead of kerosene, this residual range petroleum is heated to make it more malleable during its application.
m. Roadway pavement (c. 2005)
The dominant fraction of this material is residual range oil that is solid during the summer temperatures. Kerosene is sometimes added to improve fluidity during its application.
n. Roadway pavement (c. 1940s)
This pavement clearly contains residual range petroleum as evidenced by the late eluting UCM and elevated baseline. The normal alkanes typically degrade in old pavement.
o. Roadway pavement (c. 1940s)
The active bonding agent of roadway pavement and road oils was often tar, especially before the 1950s. Some of the pavement produced in this period also contained varying levels of residual petroleum.
p. Coal tar oil
Unweathered pyrogenic PAHs dominate the tar fingerprint.



Q = Quality Control compounds.
▼ = EPA priority pollutant PAHs.

Reported by: M. E. Moir MEM
Reviewed by: Deyuan Kong DYK

Reference: Gregory S. Douglas, Stephen D. Emsbo-Mattingly, Scott A. Stout, Allen D. Uhler, and Kevin J. McCarthy, “Chemical Fingerprinting Techniques,” in Introduction to Environmental Forensics, Brian L. Murphy, Robert D. Morrison, Eds., Elsevier Academic Press, 2007.

ETC file
Technical files