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FINAL EXPANDED SITE INSPECTION REPORT FOR POTENTIAL SOURCE OF CONTAMINATION (PSC) 57 NAS JACKSONVILLE FL

6/1/2016

RESOLUTION CONSULTANTS

FINAL EXPANDED SITE INSPECTION REPORT

POTENTIAL SOURCE OF CONTAMINATION 57
FORMER S-3 HIGH POWER TURN-UP PAD
NAVAL AIR STATION JACKSONVILLE
JACKSONVILLE, FLORIDA 32212

Revision: 0

Prepared for:

Department of the Navy
Naval Facilities Engineering Command Southeast
Building 135 North, P.O. Box 30
Jacksonville, Florida 32212-0030

June 2016

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List of Acronyms

°F	degrees Fahrenheit
µg/L	micrograms per liter
BaP	benzo(a)pyrene
BASH	Bird Airstrike Hazard
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CTLs	Cleanup Target Levels
DCE	dichloroethene
DO	dissolved oxygen
DoD	Department of Defense
DPT	direct-push technology
EB	equipment rinsate blanks
EPA Eco SSL	United States Environmental Protection Agency Ecological Soil Screening Level
ESI	Expanded Site Inspection
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
GCAL	Gulf Coast Analytical Laboratory, Inc.
GCTL	Groundwater Cleanup Target Levels
HHRA	human health risk assessment
HMW	High Molecular Weight
HPTP	High Power Turn-up Pad
IDW	Investigation-Derived Waste
LMW	Low Molecular Weight
mg/kg	milligrams per kilogram
MGBR	machine gun boresight range
mm	millimeter
MS	matrix spike
MSD	matrix spike duplicate
MTBE	methyl tertiary-butyl ether
NAS	Naval Air Station
Navy	United States Department of the Navy
PAH	polynuclear aromatic hydrocarbon
PA	Preliminary Assessment
ppm	part(s) per million
PSC	potential source of contamination

QC	Quality Control
R4 Eco SSL	United States Environmental Protection Agency Region 4 Ecological Soil Screening Level
SAP	Sampling and Analysis Plan
SCTL	Soil Cleanup Target Level
SIR	Site Investigation Report
SOP	Standard Operating Procedure
SSL	soil screening level
TB	trip blanks
TCE	trichloroethylene
TRPH	Total Recoverable Petroleum Hydrocarbons
UCL	upper confidence limit
UFP	Uniform Federal Policy
U.S. EPA	United States Environmental Protection Agency
VOC	volatile organic compound

EXECUTIVE SUMMARY

Potential Source of Contamination (PSC) 57, the Former S-3 High Power Turn-up Pad (HPTP), is a currently unused concrete pad within an isolated, secured portion of the Naval Air Station (NAS) Jacksonville flight area. The site was used as a machine gun boresight range (1953 to 1997), an A-7 aircraft engine maintenance and testing pad (1970s to 1997), and as a pad for high-power engine tests of A-7 aircraft (1997 to 2009). The original engine-testing pad was excavated in 1997, and replaced by the differently configured HPTP. Presently, PSC 57 consists of an approximately 60-foot by 125-foot rectangular concrete pad sitting atop a grassy area that slopes radially toward a drainage swale and to a ditch. The ditch directs storm water north approximately 1,000 feet to the St. Johns River. PSC 57 is near the airfield where it is unlikely to be used as a long-term habitat by avian species as a result of the NAS Jacksonville Bird Airstrike Hazard Reduction Program.

During excavation of the first pad in 1997, polynuclear aromatic hydrocarbons contaminants, primarily benzo(a)pyrene equivalents, were identified in soil. However, benzo(a)pyrene equivalent soil results from a 2001 contamination assessment and a 2002 site investigation were less than the Florida Department of Environmental Protection Industrial and Leachability Soil Clean-up Target Levels. It was concluded that polynuclear aromatic hydrocarbons most likely originated from former asphalt paving and represented minimal risk to human health due to the site's association with a restricted airfield.

Groundwater sampled during the 2001 contamination assessment yielded only a single constituent (vinyl chloride) exceeding the Florida Department of Environmental Protection Groundwater Cleanup Target Level (GCTL). The following observations were made in this Expanded Site Inspection:

- Since 2001, vinyl chloride concentrations have declined to approximately 2 micrograms per liter (µg/L), marginally above its GCTL of 1 µg/L.

- Vinyl chloride exceedances are limited to two adjacent wells (HPTP-MW03 and HPTP-MW04). Non-detections in an immediately downgradient sentinel well show that the plume geometry is limited and stable, and that a groundwater to surface water discharge pathway does not exist.

- Natural attenuation appears to have been an effective mechanism at this site. The parent product trichloroethene and intermediate dechlorinated species such as trans-1,2-dichloroethene (DCE), and cis-1,2-DCE are largely depleted. Concentrations of these constituents have not been measured at concentrations greater than respective GCTLs, and like vinyl chloride, concentrations continue to decrease.

- Dissolved oxygen concentrations in HPTP-MW04 ranged from 0.41 to 0.61 mg/L during the Expanded Site Inspection. At these concentrations, aerobic biological activity capable of further degrading vinyl chloride is suspected to be impaired. This may explain the current plateau of vinyl chloride concentrations at the 2 µg/L level.

Based on these findings, the NAS Jacksonville Tier I Partnering Team made a consensus decision to perform an enhanced bioremediation pilot study to evaluate whether oxygen release compound socks can increase dissolved oxygen levels sufficiently to stimulate further degradation of cis-1,2-DCE and vinyl chloride. The goal of the pilot study, if successful, is to collect the data necessary to support the future development of a focused feasibility study. The pilot study design will be detailed in a separate work plan. No further action is recommended for soil at PSC 57.

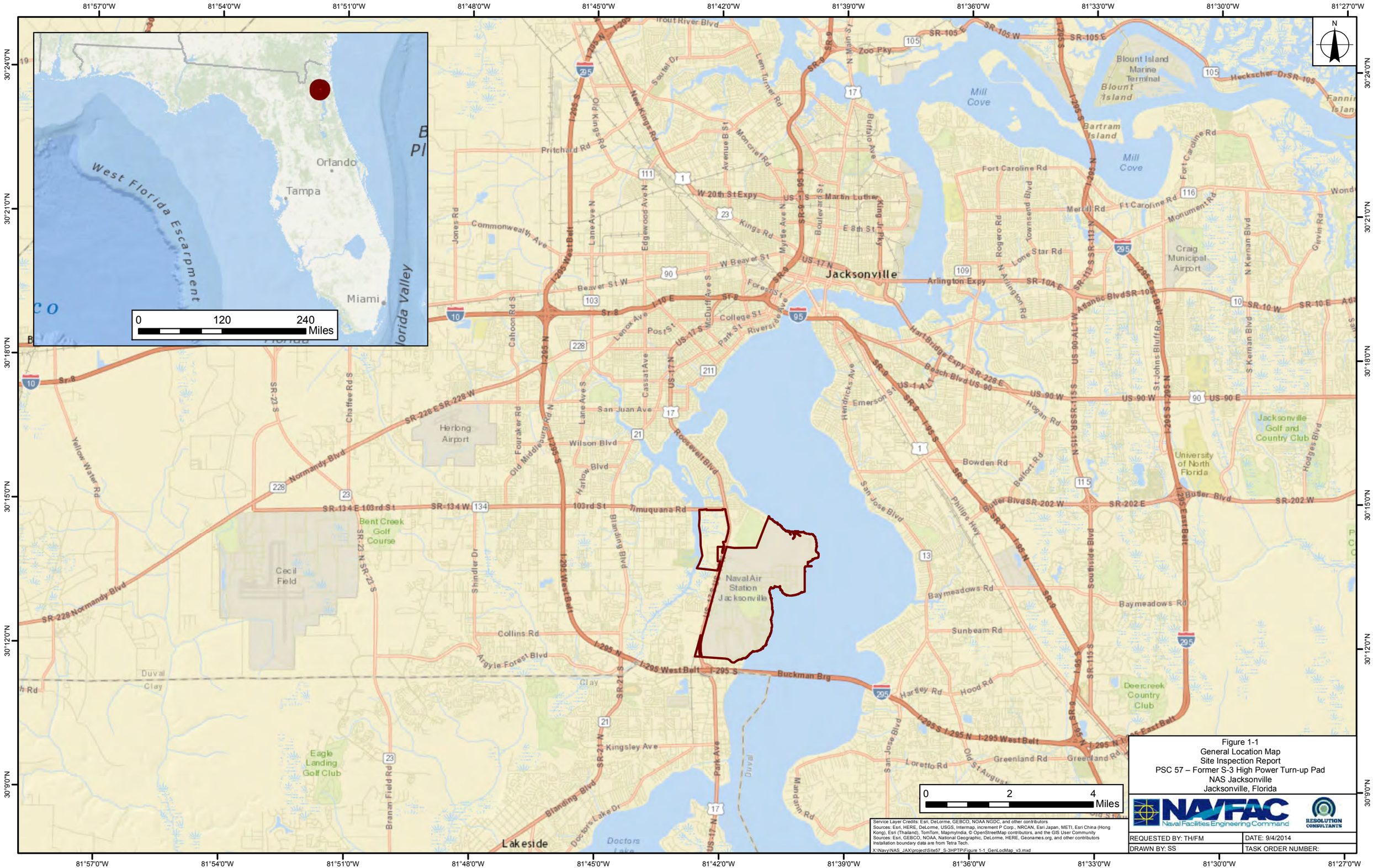
1.0 INTRODUCTION

Resolution Consultants performed an Expanded Site Inspection (ESI) of Potential Source of Contamination (PSC) 57 — Former S-3 High Power Turn-up Pad (HPTP) at Naval Air Station (NAS) Jacksonville in Jacksonville, Florida. The ESI was generated for, and complies with, applicable United States Department of the Navy (Navy), United States Environmental Protection Agency (U.S. EPA) Region 4, and Florida Department of Environmental Protection (FDEP) requirements, regulations, guidance, and technical standards. The regulatory framework for managing PSC 57 Former S-3 HPTP is guided by federal, state, and local laws, as well as Department of Defense (DoD) and Navy policy and guidance, which provides the necessary information for stakeholders decision makers.

NAS Jacksonville is in southwest Duval County, Florida, approximately 22 miles west of the Atlantic Ocean. NAS Jacksonville covers approximately 3,800 acres on the west bank of the St. Johns River and is 24 miles upstream of the mouth of the St. Johns River and the Atlantic Ocean. Figure 1-1 is a General Location Map and Figure 1-2 shows the site location within the NAS Jacksonville installation boundary.

PSC 57 was identified in June 1997 during the excavation of a concrete pad (Figure 1-3) that was used at the time as an HPTP for A-7 aircraft. Petroleum-related impacts (odors) were observed at the time and petroleum-impacted soil was later removed for offsite disposal in August 1997. The site was subsequently investigated in 2001, as documented in a *Site Investigation Report, Petroleum Contaminated Area 57 — High Power Turn-up Pad* (Tetra Tech 2002), herein referred to as the 2002 Site Investigation Report (SIR). The 2001 site investigation identified petroleum constituents and chlorinated volatile organic compounds (VOCs) below FDEP cleanup target levels (CTLs) in soil and groundwater with the exception of vinyl chloride that was detected in groundwater at concentrations great than the FDEP groundwater cleanup target level (GCTL) in two wells. Historical operational information had not indicated a potential source for chlorinated VOCs. The 2002 SIR (Tetra Tech 2002) recommended no additional investigation under the petroleum contamination program but suggested the Navy consider investigating chlorinated solvents in groundwater under the Installation Restoration Program.

In April 2012, the Navy issued a Statement of Work soliciting development of a Uniform Federal Policy (UFP)-Sampling and Analysis Plan (SAP) for an ESI of the PSC 57 — Former S-3 HPTP. Resolution Consultants prepared and submitted the UFP-SAP (December 2013), which was approved on 13 January 2014.



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Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, GEBCO, NOAA, National Geographic, DeLorme, HERE, Geonames.org, and other contributors
Installation boundary data are from Tetra Tech.
X:\Navy\NAS_JAX\project\Site57_S-3HPTP\Figure 1-1_GenLocMap_v3.mxd

Figure 1-1
General Location Map
Site Inspection Report
PSC 57 – Former S-3 High Power Turn-up Pad
NAS Jacksonville
Jacksonville, Florida

NAVFAC Naval Facilities Engineering Command
RESOLUTION CONSULTANTS

REQUESTED BY: TH/FM	DATE: 9/4/2014
DRAWN BY: SS	TASK ORDER NUMBER:

Figure 1-2
Site Location Map
Site Inspection Report
PSC 57 – Former S-3 High Power Turn-up Pad
NAS Jacksonville
Jacksonville, Florida

Legend

Former S-3 High Power Turn-up Pad

Installation Boundary

0 0.6 1.2 Miles

NAVFAC Naval Facilities Engineering Command

RESOLUTION CONSULTANTS

REQUESTED BY: A. Jacobs	DATE: 9/4/2014
DRAWN BY: blipscomb	TASK ORDER NUMBER: JM19

X:\Navy\NAS_JAX\projects\Site57_S-3HPTP\Figure 1-2_PSC57_SiteMap.mxd

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; Some data are from Tetra Tech.

Figure 1-3
Circa 1994 Aerial Photograph
Site Inspection Report
PSC 57 – Former S-3 High Power Turn-up Pad
NAS Jacksonville
Jacksonville, Florida

Legend

Former A-7 High Power Turn-up Pad

0 100 200 Feet

NAVFAC Naval Facilities Engineering Command

RESOLUTION CONSULTANTS

REQUESTED BY: A. Jacobs	DATE: 3/17/2016
DRAWN BY: kbronson	TASK ORDER NUMBER: JM19

X:\Navy\NAS_JAX\projects\Site57_S-3HPTP\Figure 1-4_PSC57_FormerA7.mxd

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community. Digital Orthophoto Quadrangle: DI00000000016404-ORANGE PARK-NE,FL provided by USGS Earth Resources Observation & Science (EROS) Center and downloaded through USGS Earth Explorer. Some data are from Tetra Tech.

1.1 Purpose

The purpose of this ESI is to determine whether contaminants previously detected in soil and groundwater remain at the Former S-3 HPTP and to evaluate potential threats to human health and the environment through a screening level assessment. Findings will provide information to support development, evaluation, and selection of appropriate response alternatives as deemed necessary.

1.2 Site Description and Surrounding Land Use

The PSC 57 — Former S-3 HPTP is approximately 600 feet northeast of NAS Jacksonville Runway 14/32, within the northeast portion of the installation. The Former S-3 HPTP, comprised of an approximately 60-foot-wide by 125-foot-long unused concrete pad, is located within an isolated portion of the NAS Jacksonville flight line area that is surrounded by a fence and access control gates. Access to the concrete pad is from a gravel driveway off Catapult Road. An aerial photo showing the conditions of the site in 2002 is presented on Figure 1-4. Former taxiway pavement, that provided access to the pad from the runway and an apron that surrounded the pad, were removed in 2011. Future land use is anticipated, remain unchanged, and to be compatible with that of a restricted flight line.

The concrete pad is approximately 3 feet higher in elevation than adjoining areas to the north, east, and west, and slightly higher in elevation than the taxiway pavement footprint and gravel access driveway. The ground surface surrounding the concrete pad is grassy and slopes away from the concrete pad in all directions. At the base of the slope is a drainage swale that nearly encircles the site and empties into a ditch east of the concrete pad. The ditch directs storm water north where it empties into St. Johns River, approximately 1,000 feet from the Former S-3 HPTP. Figure 1-5 shows the current ground surface conditions and storm water run-off patterns.

1.3 Physical Setting

Topography

NAS Jacksonville is in the Coastal Plain physiographic province, which is predominantly flat with marshy areas of various sizes scattered among areas of slightly elevated high ground. Elevations at NAS Jacksonville range from sea level to approximately 25 feet above mean sea level. The point of highest elevation is in the southern portion of the installation, and the lowest points lie along the St. Johns River shoreline.

Figure 1-4
2002 Site Conditions
Site Inspection Report
PSC 57 – Former S-3 High Power Turn-up Pad
NAS Jacksonville
Jacksonville, Florida

Legend

Former A-7 High Power Turn-up Pad

Former S- 3 High Power Turn-up Pad

0 40 80 Feet

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RESOLUTION CONSULTANTS

REQUESTED BY: A. Jacobs	DATE: 9/4/2014
DRAWN BY: msenne	TASK ORDER NUMBER: JM19

X:\Navy\NAS_JAX\projects\Site57_S-3HPTP\Figure 1-5_PSC57_2002Conditions.mxd

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; Photo Circa 2002; Some data are from Tetra Tech.

Figure 1-5
Current Surface Conditions
Site Inspection Report
PSC 57 – Former S-3 High Power Turn-up Pad
NAS Jacksonville
Jacksonville, Florida

Legend

Surface Runoff Direction

Drainage Swale

0 60 120 Feet

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Aerial image acquired from US Navy GeoReadiness (2012).

X:\Navy\NAS_JAX\projects\Site57_S-3HPTP\Figure 1-3_PSC57_CurrentConditions.mxd

The Former S-3 HPTP and NAS Jacksonville are situated on the central and eastern portions of a peninsula ridgeline between the St. Johns River and its tributary, the Ortega River, both of which are the predominant surface drainage features in the vicinity. The St. Johns River, its tributaries, and lakes within the basin are designated as Class III waterways, and are used for recreational purposes and the propagation of fish and wildlife. Most of NAS Jacksonville lies within the watershed of the St. Johns River.

Climate

Duval County is characterized by humid and semitropical climate conditions, with an average annual temperature of 70 degrees Fahrenheit (°F); average daily temperatures range from 50°F in the winter to 80°F in the summer. Prevailing winds are northeasterly in fall and winter, and southwesterly in spring and summer. Average annual rainfall in Duval County is 54 inches, most of which occurs between June and September. During summer, thunderstorms may occur at a frequency of every other day, and may yield several inches of rainfall. The Jacksonville area is subject to tropical storms and hurricanes, sometimes with tornadic activity, which are likely to occur from June through November. Winters are typically mild and dry.

Geology and Hydrogeology

Soil commonly observed at the installation is poorly drained fine sands and loamy soil; the United States Department of Agriculture classified soil in the area as Arents, a soil type that is typically poorly drained and with variable permeability. In the vicinity of the Former S-3 HPTP, soil has been reworked by earthmoving operations, and consists of a mixture of soil materials.

Beneath the soil are hundreds of feet of marine sediments, which were deposited in terraces during prehistoric fluctuation of sea level. Surficial deposits ranging from 25 to 100 feet thick consist of highly variable sediments of Late Miocene to recent age that include sand, shelly sand, coquina, silt, clay, and shell beds. Beneath the sediments lie several limestone formations, including (from shallowest to deepest) the Hawthorn, Ocala Limestone, Avon Park, and Oldsmar Formations.

The Hawthorn overlies the principal drinking water formations in the Jacksonville area, acts as a confining bed, and restricts downward percolation of water from the surficial aquifer. The top of the drinking water aquifer in the vicinity of NAS Jacksonville occurs at a depth of approximately 400 feet below ground surface (bgs). Recharge to the aquifer results from downward percolation of precipitation in the sandy uplands west and southwest of Jacksonville.

Groundwater can occur from 1 to 5 feet bgs and the hydraulic gradient tends to reflect surface topography of the area. Throughout much of NAS Jacksonville, groundwater flow in the surficial aquifer is generally toward surface water features, including the St. Johns River to the east, the Ortega River to the west, and smaller tributaries of these two principal drainage features. Site-specific groundwater flow direction is discussed in Section 4.3.

Wetlands

Natural vegetation consists chiefly of pine, palmetto, live oak, turkey oak, magnolia, and locally adapted shrubs. The United States Fish and Wildlife Service National Wetlands Inventory identified the vegetated and wooded area, immediately north and northeast of the Former S-3 HPTP, as an approximately 25-acre freshwater seasonally-flooded forested/shrub wetland.

1.4 Operational and Regulatory History

Background information regarding the history of the Former S-3 HPTP at NAS Jacksonville discussed below is from the following documents: *Final Preliminary Assessment Naval Air Station Jacksonville, Florida* (Malcolm Pirnie, Inc., 2007), herein referred to as the Preliminary Assessment (PA) Report; *Contamination Assessment Plan for High Power Turn-up Pad* (Tetra Tech 2001), herein referred to as the 2001 Contamination Assessment Plan; and the 2002 SIR (Tetra Tech 2002). Those documents also provided installation-wide historical and physical setting information referenced throughout this ESI Report.

1.4.1 Installation History

Prior to its establishment, portions of what is now NAS Jacksonville were used as the Black Point Militia Target Range, a state militia training facility. A 1917 United States Geological Survey topographic map labels the installation shorelines as Piney Point and Black Point. During World War I, the United States Army assumed control of the Black Point Militia Target Range and commissioned Camp Joseph E. Johnson as an infantry training station in 1917. The facility was decommissioned in 1917, after World War I, and returned to the state (Florida National Guard), which operated Camp Clifford R. Foster from 1928 until 1939. The Black Point Militia Target Range and Camp Joseph E. Johnson were in the east-central portion of NAS Jacksonville in the area currently referred to as Black Point. NAS Jacksonville was officially commissioned on 15 October 1940. NAS Jacksonville became the first component of the Jacksonville Navy Complex, which would eventually include NAS Cecil Field and Naval Station Mayport.

1.4.2 Potential Sources of Contamination 57 History

Machine Gun Boresight Range (c. 1953 to 1977)

This earliest use of the general area of PSC 57 identified in the PA Report (Malcolm Pirnie, Inc., 2007) was as a machine gun boresight range (MGBR) shown on Figure 1-6. The MGBR, constructed on approximately 3 acres in 1953, was used for maintenance, periodic alignment, and sighting of wing-mounted .30- and .50-caliber and 20-millimeter (mm) machine guns on aircraft. Historical maps in the PA Report indicate the MGBR was comprised of a concrete aircraft staging area and firing line, target area, and backstop berm. Visual surveys conducted on 29 March 2005 and 19 July 2006 as part of the PA, identified the former locations of the firing positions, target area, and backstop berm; the locations of the latter were overgrown and densely vegetated. The concrete firing pad remained along with what were identified as aircraft tie-downs. The PA determined that expended rounds were not expected to have penetrated the ground surface or accumulated beyond the backstop berm location because the range was designed such that ammunition was fired toward targets behind which a berm receives and contains the projectiles. Because PSC 57 is approximately 600 feet south of the former backstop berm and 600 feet north of the firing line, which are the locations most likely to have been impacted based on munitions studies (*Army Technical Manuals* AR 750-10 and the *Navy Programming Guide* 1958) referenced in the PA Report, the area of PSC 57 is not expected to have been affected by the former MGBR.

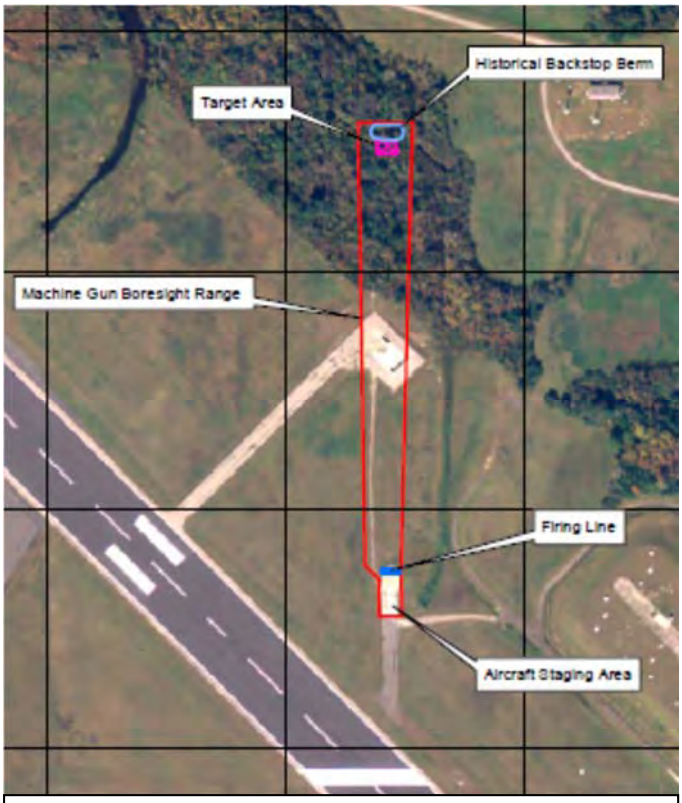


Figure 1-6
Former Machine Gun Boresight Range
Source: Map 5.4-3 PA Report
(Malcolm Pirnie, Inc., 2007)

Use of the site as a range was discontinued by the mid-1970s and the hardstand and earthen berm had been demolished and removed from the site circa 1977. A 1977 General Base Description Map referenced in the PA Report shows the former backstop berm area had been redeveloped and

a portion of the site used for aircraft engine maintenance and testing with the remainder maintained as a runway buffer area covered with grasses, shrubs, and trees.

High Power Turn-up Pad

A circa 1994 aerial photograph (Figure 1-3) shows the original east-to-west oriented rectangular pad used for high power turn-ups of A-7 aircraft. The former A-7 HPTP was demolished in June 1997 and subsequently replaced with the northwest-to-southeast rectangular S-3 HPTP in August 1997 to support S-3 squadrons that were transferred to NAS Jacksonville from nearby NAS Cecil Field that was closed under Base Realignment and Closure activities. The S-3 HPTP was taken out of service after the S-3 squadrons were decommissioned in January 2009 and the pavement associated with the taxiway and apron surrounding the concrete pad were removed in 2011.

1.4.3 Previous Environmental Investigations

Florida Department of Environmental Protection Petroleum Contamination Report Form (1997)

During excavation of the Former A-7 HPTP in June 1997, petroleum odors were observed in soil beneath the concrete pad. Headspace analysis of soil beneath the concrete pad determined soil was "excessively contaminated" in accordance with Florida Administrative Code (F.A.C.) Chapter 62-770 criteria. Bechtel Environmental, Inc., removed and transported contaminated soil to a thermal treatment unit for disposal. The *Petroleum or Petroleum Product Contamination Report Form* submitted to FDEP on 4 June 1997 did not include a figure that documented the exact location of the soil excavation area. There were no underground storage tanks or aboveground storage tanks at the Former A-7 HPTP area, so Tetra Tech associated the petroleum contamination (suspected to be Jet Propellant-5) with former airplane fluid leaks and operation and maintenance activities. Figure 1-4 is a circa 2002 aerial photograph with the estimated Former A-7 HPTP concrete pad's location superimposed on the Former S-3 HPTP location.

Contamination Assessment Plan (2001) and Site Investigation Report (2002)

In 2001, the Contamination Assessment Plan was prepared and implemented in accordance with F.A.C. Chapter 62-770 to determine if the site had been impacted by releases from site activities. Contamination assessment activities included a soil-vapor survey, soil analysis by mobile and fixed-based laboratories, monitoring well installation, and groundwater sampling and analysis. At that time, the Navy reportedly restricted any boring installations within the S-3 HPTP concrete pad due to concerns associated with structural integrity of the pad, which was still in use. The findings summarized below are documented in the 2002 SIR (Tetra Tech 2002).

Soil samples collected from direct-push technology (DPT) boring cores at 1 and 3 feet bgs were screened with an organic vapor analyzer with flame ionization detector. Eight soil boring locations contained hydrocarbon vapors above 50 parts per million (ppm) which, for diesel fuel sites, is considered "excessively contaminated" as defined by F.A.C. Chapter 62-770.200. The 50 ppm diesel fuel action level was used because the most likely source of hydrocarbon contamination was believed to be jet fuel (Tetra Tech 2002).

One soil sample was collected from the DPT interval with the highest vapor detection for screening analysis in an onsite mobile laboratory. The mobile laboratory analyzed soil samples for methyl tertiary-butyl ether (MTBE), naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Those constituents were not detected.

Three soil samples were collected from 3 feet bgs for fixed-based laboratory analysis of VOCs by U.S. EPA Method 8021B, polynuclear aromatic hydrocarbons (PAHs) by U.S. EPA Method 8310, and Total Recoverable Petroleum Hydrocarbons (TRPH) using Florida Petroleum Residual Organic method. VOCs were not detected. TRPH was detected in two samples and benzo(a)pyrene (BaP) was detected in one soil sample; all detected concentrations were below FDEP Soil Cleanup Target Levels (SCTLs) for Residential and Industrial Direct Exposure and Leachability Based on Groundwater.

Groundwater samples collected at 6 to 10 feet bgs from DPT borings were screened for BTEX, MTBE, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene by the mobile laboratory. Mobile laboratory analysis of DPT groundwater samples detected TRPH in one sample and PAHs in seven samples below FDEP GCTLs; one sample contained PAHs (naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene) at concentrations above GCTLs applicable at that time[1].

Based on the groundwater mobile laboratory screening results, permanent monitoring wells were installed to approximately 13 feet bgs at five locations across the Former S-3 HPTP. Monitoring wells were developed using a submersible pump, water levels were measured, and the well elevations were surveyed. Groundwater samples collected from the permanent monitoring wells were submitted for fixed-based laboratory analysis of VOCs, PAHs, TRPH, and ethylene dibromide using U.S. EPA Method 504.1, and lead using U.S. EPA Method 6010B.

[1] The GCTLs for naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene in 2002 were 20 µg/L.

Fixed-based laboratory analysis of groundwater samples did not detect PAHs; TRPH was detected below its GCTL in two samples from permanent monitoring wells HPTP-MW03 and HPTP-MW04. Vinyl chloride was detected at 2.3 micrograms per liter (µg/L) and 6.7 µg/L in monitoring wells HPTP-MW03 and HPTP-MW04, respectively, above its GCTL of 1 µg/L; also detected below GCTLs were VOCs cis-1,2-dichloroethene (DCE) in samples from four wells, trans-1,2-DCE in one well, trichloroethylene (TCE) in three wells, and vinyl chloride in one well.

2.0 PROJECT OBJECTIVES

The overall objective of this ESI is to collect representative environmental samples to support a decision regarding the need for further action at NAS Jacksonville PSC 57. Soil and groundwater sampling is required to determine if constituents detected in 2001 remain or have attenuated or increased. If contaminant concentrations in soil or groundwater are below applicable screening levels, then no further action will be required, otherwise recommendations for future action such as additional ESI activities, risk assessment, or removal are to be made.

2.1 Previous Investigation Data Gaps and Limitations

Results generated during previous investigations indicate that soil and groundwater may have been impacted by historical operations. The uncertainty associated with the age of the data and inconsistencies between the soil and groundwater sample analyses that were performed precluded being able to use that data to determine whether future action was required.

Prior studies proposed that the release(s) of contaminants occurred prior to 1978, when high power turn-ups of A-7 aircraft on the original pad ceased. Use of the Former S-3 HPTP between 2001 (when sampling was conducted) and 2009 (when S-3 squadrons were decommissioned and the pad was taken out of use) may have also impacted soil and groundwater. During the 2001 sampling event, chlorinated solvents were detected in groundwater; however, VOCs were not analyzed in soil, so a potential source area was not identified.

2.2 Scope of Work

The soil and groundwater sampling design was developed to further characterize contaminant concentrations historically detected in soil and groundwater at the site, to address gaps associated with existing data, and evaluate soil and groundwater for VOCs, metals, and PAHs. The ESI is not intended to delineate the extent of any remaining constituents. The scope of work conducted in accordance with the approved UFP-SAP (Resolution Consultants 2013) included the following tasks associated with surface and subsurface soil and groundwater sampling and analysis.

- Collect samples from biased locations chosen to represent a worst-case scenario based on historical information and observations made during a July 2012 Resolution Consultants site visit. The sampling portion of the UFP-SAP, designed to provide for a representative range of heterogeneity at the Former S-3 HPTP, was implemented with best possible professional judgment. As discussed in Section 3.2, soil samples were collected in accordance with FDEP Standard Operating Procedure (SOP) FS3000, using standard field sampling methodologies outlined in the UFP-SAP.

- Supplement site-specific geology information obtained during previous site assessment activities by observing and describing soil characteristics during soil boring activities using the Unified Soil Classification System.

- Measure current groundwater depths and determine flow direction using monitoring wells that remain from the 2001 investigation wells installed during the ESI.

- Screen soil for organic vapors and collect field parameter data — including pH, temperature, specific conductivity, oxidation reduction potential, dissolved oxygen, and turbidity — to confirm groundwater samples are representative of the formation being investigated and supplement understanding of the nature of contamination.

- Analyze soil and groundwater samples for target analytes (VOCs, PAHs, and metals) selected based on historical detections and operations at the Former S-3 HPTP. Table 3-5 in Section 3.6 details analytical groups and methods for soil and groundwater samples in accordance with the approved UFP-SAP.

- Compare concentrations of detected target analytes in soil and groundwater to applicable screening levels as part of a human health screening level risk evaluation to determine if the site poses unacceptable risk and the necessity for follow-up action. Surface and subsurface soil human health risk assessment (HHRA) screening levels are FDEP GCTLs per Chapter 62-777, F.A.C., Table II (Soils) — Residential and Industrial Direct Exposure and Leachability to Groundwater. Groundwater HHRA screening levels are FDEP GCTLs per Chapter 62-777, F.A.C., Table 1 (Groundwater). Groundwater ecological screening levels are Freshwater Surface Water Cleanup Target Levels also found in the aforementioned Table 1.

- Compare concentrations of detected target analytes to ecological screening levels and evaluate effective ecological pathways. The hierarchy used to select the ESI Ecological Soil Screening Levels (SSLs) is (in order of preference) U.S. EPA Ecological Soil Screening Levels (U.S. EPA Eco SSL) available at http://www.epa.gov/ecotox/ecossl/ and U.S. EPA Region 4 Ecological Soil Screening Levels (R4 Eco SSL).

- Prepare a brief narrative ESI report to summarize the project objectives and scope, provide an overview of site background information, describe field activities, present a screening level evaluation of the data based on appropriate potential receptors and exposure pathways, and conclude whether additional action(s) are warranted or if a No Further Action determination can be made.

Based on the findings of the original work outlined in the UFP-SAP, the NAS Jacksonville Tier I Partnering Team reached consensus agreements at the July 2014 and September 2014 meetings to expand the ESI to include the following activities, the results of which are also included in this report.

- Resample monitoring well HPTP-MW04 and analyze the sample for vinyl chloride to monitor whether the January 2014 concentration had attenuated.

- Install a new well, HPTP-MW06, downgradient of HPTP-MW04 to monitor the downgradient site boundary and to evaluate the possibility for a groundwater to surface water discharge pathway into a nearby storm water drainage ditch. Perform a third groundwater sampling event during which all wells were sampled and analyzed for the full suite of VOCs. In addition to FDEP GCTLs, the results from HPTP-MW06 were to be compared to FDEP Surface Water Cleanup Target Levels. HPTP-MW06 was installed on 12 March 2015.

3.0 INVESTIGATION SUMMARY

3.1 Initial Field Activities

Resolution Consultants submitted an Excavation/Digging Permit application to NAS Jacksonville Public Works Department on 10 December 2013. Sample locations were marked in the field on 18 December 2013 using wooden stakes and orange flagging. The coordinates of each soil boring and the temporary well boring location were recorded by Resolution Consultants personnel using a Trimble GeoXH global positioning system device.

Utility clearance was coordinated with Sunshine State One Call and NAS Jacksonville Public Works Department; the former indicated no utilities were located within the investigation area in a 7 January 2014 email, and the latter approved the Excavation/Digging Permit application on 16 January 2014. Resolution Consultants personnel notified the Navy Remedial Project Manager of the site mobilization and proposed schedule for environmental field work in a 15 January 2014 email. A second Excavation/Digging Permit was issued 5 March 2015 for the installation of monitoring well HPTP-MW06. Sample locations are presented on Figure 3-1. Pre-field work documentation is included in Appendix A.

3.2 Soil Sampling

Nine hand auger soil borings were advanced around the perimeter of the remaining pad within the footprint of the Former S-3 HPTP asphalt apron, located consistent with 2001 soil borings where the highest organic vapor readings were recorded, or, where fixed-based laboratory analytical detections were reported. One soil boring (HPTP-SB16) was advanced through a point central to both Former A-7 HPTP and Former S-3 HPTP, where samples were not collected in 2001 because of integrity concerns that were associated with continued use of the concrete pad. A DPT rig was used to core through the concrete and the soil boring was advanced using a hand auger.

The reported lithology beneath and adjoining the perimeter of the concrete pad described in boring logs from the 2002 SIR (Tetra Tech 2002) is consistent with that encountered by Resolution Consultants: the raised portion of the site where the concrete pad is located is underlain by a layer of sand and gravel fill to a depth of approximately 3 feet bgs. None of the other outlying monitoring wells installed by Tetra Tech encountered the sand and gravel fill layer.

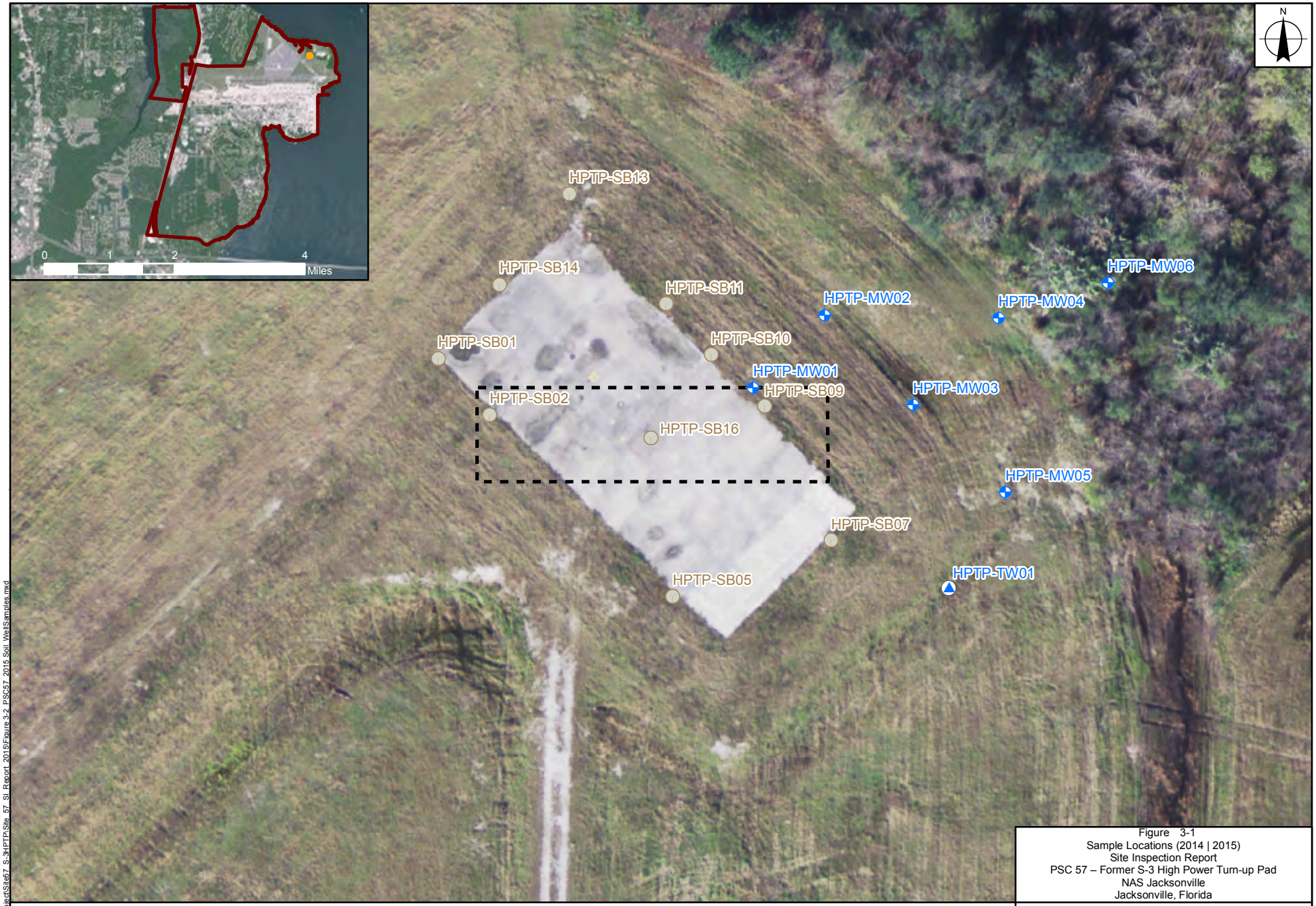


Figure 3-1
Sample Locations (2014 | 2015)
Site Inspection Report
PSC 57 – Former S-3 High Power Turn-up Pad
NAS Jacksonville
Jacksonville, Florida

Legend

- Existing Monitoring Well
- Former A-7 High Power Turn-up Pad
- Soil Boring
- Temporary Well

0 40 80 Feet

NAVFAC Naval Facilities Engineering Command

RESOLUTION CONSULTANTS

REQUESTED BY: A. Jacobs	DATE: 5/7/2015
DRAWN BY: blipscomb	TASK ORDER NUMBER: JM19

X:\Navy\NAS_JAX\projects\Site57_S-3HPTP\Site_57_SI_Report_2015\Figure 3-2_PSC57_2015 Soil_WellSamples.mxd

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community & US Navy GeoReadiness (2012); Some data are from Tetra Tech.

The boring HPTP-TW01 was installed approximately 40 feet east-southeast of the raised portion of the site and the concrete pad, within the surrounding drainage swale; Resolution Consultants did not observe the sand and gravel fill material encountered adjoining the concrete pad in 2001. Beneath approximately 6 inches of sandy silty topsoil, dark tan and grey silty, clayey, fine-grained sand was encountered from 0.5 to 7 feet bgs, with increasing sand content and moisture with depth (until groundwater was discovered at approximately 5.5 feet bgs). Gray sandy clay was encountered from 7 to 9 feet bgs, then gray and brown silty fine-grained sands were noted from 9 to 15 feet bgs, the terminal depth of the boring.

Resolution Consultants attempted to collect samples in each boring at depth intervals of 0 to 0.5 feet bgs, 0.5 to 2 feet bgs, and 2 to 4 feet bgs. The 2 to 4 foot bgs interval was not sampled in any hand auger soil boring, because hard-packed gravel encountered between 2 and 2.5 feet bgs refused the hand auger. Similar refusal was encountered between 0.5 and 1 foot bgs in three hand auger borings (HPTP-SB09, HPTP-SB10, and HPTP-SB16). Soil samples were successfully collected from each interval in the temporary monitoring well boring (HPTP-TW01). During the March 2015 field sampling event, soil samples were obtained from the 0.5 to 2 feet bgs and 2 to 4 feet bgs intervals at HPTP-SB09 and HPTP-SB10 using a DPT rig.

Soil sample identification numbers, assigned in general accordance with the procedures outlined in Resolution Consultants SOP-3-03A, replicate the historical location identifier boring numbers used by Tetra Tech in 2001. Table 3-1 summarizes soil samples collected and lists sample identification numbers, dates, depths, location coordinates, and reasons for deviation from the sample intervals proposed in the UFP-SAP.

Table 3-1
Summary of Soil Samples Collected
Expanded Site Inspection — Potential Source of Contamination 57 — Former S-3 High-Power Turn-up Pad
Naval Air Station Jacksonville
Jacksonville, Florida

Sample Location	Sample Identification	Sample Date	Sample Time	Depth (feet - below ground surface)	Location Coordinates[1]		Sample Analyses[3]
					X	Y	
HPTP-SB01	HPTP-SB01-0	01/23/2014	1005	0 — 0.5	445062.651	2146603.403	V, P, M
HPTP-SB01	HPTP-SB01-2	01/23/2014	1005	0.5 — 2	445062.651	2146603.403	V, P, M
HPTP-SB01	NC[2]	—	—	2 — 4	445062.651	2146603.403	—
HPTP-SB02	HPTP-SB02-0	01/23/2014	1055	0 — 0.5	445078.452	2146586.134	V, P, M
HPTP-SB02	HPTP-SB02-2	01/23/2014	1055	0.5 — 2	445078.452	2146586.134	V, P, M
HPTP-SB02	NC[2]	—	—	2 — 4	445078.452	2146586.134	—

Table 3-1
Summary of Soil Samples Collected
Expanded Site Inspection — Potential Source of Contamination 57 — Former S-3 High-Power Turn-up Pad
Naval Air Station Jacksonville
Jacksonville, Florida

Sample Location	Sample Identification	Sample Date	Sample Time	Depth (feet - below ground surface)	Location Coordinates[1]		Sample Analyses[3]
					X	Y	
HPTP-SB05	HPTP-SB05-0	01/23/2014	1142	0 — 0.5	445134.724	2146530.245	V, P, M
HPTP-SB05	HPTP-SB05-2	01/23/2014	1142	0.5 — 2	445134.724	2146530.245	V, P, M
HPTP-SB05	NC[2]	—	—	2 — 4	445134.724	2146530.245	—
HPTP-SB07	HPTP-SB07-0	01/23/2014	1410	0 — 0.5	445183.444	2146547.605	V, P, M
HPTP-SB07	HPTP-SB07-2	01/23/2014	1410	0.5 — 2	445183.444	2146547.605	V, P, M
HPTP-SB07	NC[2]	—	—	2 — 4	445183.444	2146547.605	—
HPTP-SB09	HPTP-SB09-0	01/23/2014	1442	0 — 0.5	445163.043	2146588.678	V, P, M
HPTP-SB09	HPTP-SB09-2	03/12/2015	1212	0.5 — 2	445163.043	2146588.678	V, P, M
HPTP-SB09	HPTP-SB09-4	03/12/2015	1227	2 — 4	445163.043	2146588.678	V, P, M
HPTP-SB10	HPTP-SB10-0	01/23/2014	1512	0 — 0.5	445146.581	2146604.683	V, P, M
HPTP-SB10	HPTP-SB10-2	03/12/2015	1138	0.5 — 2	445146.581	2146604.683	V, P, M
HPTP-SB10	HPTP-SB10-4	03/12/2015	1149	2 — 4	445146.581	2146604.683	V, P, M
HPTP-SB11	HPTP-SB11-0	01/23/2014	1536	0 — 0.5	445132.726	2146620.222	V, P, M
HPTP-SB11	HPTP-SB11-2	01/23/2014	1536	0.5 — 2	445132.726	2146620.222	V, P, M
HPTP-SB11	NC[2]	—	—	2 — 4	445132.726	2146620.222	—
HPTP-SB13	HPTP-SB13-0	01/24/2014	0945	0 — 0.5	445102.962	2146654.111	V, P, M
HPTP-SB13	HPTP-SB13-2	01/24/2014	0945	0.5 — 2	445102.962	2146654.111	V, P, M
HPTP-SB13	NC[2]	—	—	2 — 4	445102.962	2146654.111	—
HPTP-SB14	HPTP-SB14-0	01/24/2014	1120	0 — 0.5	445081.545	2146626.240	V, P, M
HPTP-SB14	HPTP-SB14-2	01/24/2014	1120	0.5 — 2	445081.545	2146626.240	V, P, M
HPTP-SB14	NC[2]	—	—	2 — 4	445081.545	2146626.240	—
HPTP-SB16	HPTP-SB16-0	01/24/2014	1230	0 — 0.5	445128.080	2146579.031	V, P, M
HPTP-SB16	NC[2]	—	—	0.5 — 2	445128.080	2146579.031	—
HPTP-SB16	NC[2]	—	—	2 — 4	445128.080	2146579.031	—
HPTP-TW01	HPTP-TW01-0	01/21/2014	1545	0 — 0.5	445219.485	2146532.650	V, P, M
HPTP-TW01	HPTP-TW01-2	01/21/2014	1545	0.5 — 2	445219.485	2146532.650	V, P, M
HPTP-TW01	HPTP-TW01-4	01/21/2014	1545	2 — 4	445219.485	2146532.650	V, P, M

Notes:
[1] Location Coordinates for soil samples associated with HPTP-TW01 are based on a survey performed by State of Florida Registered Professional Surveyor, John Maffett, of Arc Surveying. All other soil borings were located by Resolution Consultants field personnel using Trimble GeoXH GPS unit capable of sub-foot accuracy.
[2] NC = Not collected. Refusal due to hard-packed gravel below ground surface
[3] Refer to Table 3-4 for analytical methods. V = volatile organic compounds, P = polynuclear aromatic hydrocarbons, M = metals

To prevent cross-contamination between sampling points, FDEP SOP FC1000 decontamination procedures provided in the UFP-SAP were followed for all non-disposable equipment that contacted sample media. After soil sampling, each borehole was backfilled to within 6 inches of grade using soil cuttings removed from the borehole and bentonite grout.

Per the UFP-SAP, all soil sampling information was transcribed into a field logbook or onto field data sheets (e.g., soil boring logs, driller's logs, instrument calibration logs).

3.3 Monitoring Well Installation and Development

On 21 January 2014, temporary monitoring well (HPTP-TW01) was installed approximately 40 feet southeast and downgradient of the Former S-3 HPTP pad, as shown on Figure 3-1. The well boring was advanced to 15 feet bgs using DPT. The well was constructed of single-cased, 1-inch Schedule 40 polyvinyl chloride with a 10-foot, 0.010-inch slot pre-packed screen between 3 and 13 feet bgs; the uppermost portion of the screen straddled the water table. The temporary well was developed following installation using a portable centrifugal water pump. The well was surged with down-hole tubing and developed until there was minimal turbidity; approximately 50 gallons of development water was generated from HPTP-TW01. The temporary well was properly abandoned on 31 January 2014 following the sampling activities described below.

Monitoring well HPTP-MW06 was installed on 12 March 2015 approximately 35 feet northeast and downgradient of HPTP-MW04 where vinyl chloride has historically been detected at concentrations exceeding the GCTL. The purpose of HPTP-MW06 was to provide a data point to bind the downgradient extent of vinyl chloride, and to evaluate the potential for a groundwater to surface water discharge pathway into an adjacent storm water drainage ditch. The 2-inch single-cased polyvinyl chloride well was installed using a DPT rig and a constructed with a 10-foot, 0.010-inch slot screen between 2 and 12 feet bgs. Development methods were similar to those described above for HPTP-TW01.

To obtain the accuracy necessary to construct piezometric surface maps, the location and top of casing elevations of temporary and existing monitoring wells were surveyed by State of Florida Registered Professional Surveyor, John Maffett, of Arc Surveying. Basic well construction information and groundwater level elevations are listed in Table 3-2.

Table 3-2
Groundwater Level Measurements (all values presented in feet)
Expanded Site Inspection — Potential Source of Contamination 57 – Former S-3 High Power Turn-up Pad
Naval Air Station Jacksonville — Jacksonville, Florida

Well Number	Screened Interval (feet bgs)	Well Depth (feet bgs)	Top of Casing Elevation[1] (feet)
HPTP-TW01	5 – 15	15	5.55
HPTP-MW01	2.5 - 12.5	13	5.88
HPTP-MW02	2 – 12	12	2.16
HPTP-MW03	2 – 12	12	1.88
HPTP-MW04	2 – 12	12	2.48
HPTP-MW05	2 – 12	12	2.09
HPTP-MW06	2 – 12	12	1.43

Note:
[1] North American Vertical Datum of 1988
bgs – below ground surface

3.4 Groundwater Sampling

Figure 3-1 shows the location of seven monitoring wells sampled during the ESI: five wells (HPTP-MW01 through HPTP-MW05) installed during the 2001 site investigation activities, a temporary well (HPTP-TW01) installed in January 2014 during the initial phase of the ESI, and a permanent well (HPTP-MW06) installed in March 2015 during the expanded ESI phase. Static groundwater level measurements were recorded at each well prior to purging with a peristaltic pump using low-flow, minimal drawdown techniques.

Groundwater samples were collected from the wells for laboratory analysis using U.S. EPA and FDEP low-flow sampling protocol. Samples were collected using a peristaltic pump connected to dedicated Teflon discharge tubing; tubing intake was placed in the center of the screened interval. To confirm that groundwater samples were representative of the formation being investigated, field measurements of monitoring parameters were recorded until they stabilized.

Table 3-3 summarizes groundwater samples collected during the ESI and lists sample identification numbers, dates and times collected, and surveyed coordinates. Per the UFP-SAP, all groundwater sampling information was transcribed onto field data sheets (e.g., Groundwater Sampling Logs) included in Appendix B.

Table 3-3
Summary of Groundwater Samples Collected
Expanded Site Inspection — Potential Source of Contamination 57 — Former S-3 High-Power Turn-up Pad
Naval Air Station Jacksonville
Jacksonville, Florida

Sample Location	Sample Identification	Sample Date	Sample Time	Location Coordinates[1]		Sample Analyses[2]
				X	Y	
HPTP-MW01	HPTP-MW01-0114	01/24/2014	1516	445159.432	2146594.444	V, P, M
HPTP-MW01	HPTP-MW01-0315	03/16/2015	1215	445159.432	2146594.444	V
HPTP-MW02	HPTP-MW02-0114	01/24/2014	1224	445181.410	2146616.774	V, P, M
HPTP-MW02	HPTP-MW02-0315	03/16/2015	1425	445181.410	2146616.774	V
HPTP-MW03	HPTP-MW03-0114	01/24/2014	1411	445208.618	2146589.178	V, P, M
HPTP-MW03	HPTP-MW03-0315	03/16/2015	1530	445208.618	2146589.178	V
HPTP-MW04	HPTP-MW04-0114	01/24/2014	1021	445234.869	2146615.756	V, P, M
HPTP-MW04	HPTP-MW04-0814	08/06/2014	1235	445234.869	2146615.756	V
HPTP-MW04	HPTP-MW04-0315	03/16/2015	1628	445234.869	2146615.756	V
HPTP-MW05	HPTP-MW05-0114	01/23/2014	1554	445237.020	2146562.195	V, P, M
HPTP-MW05	HPTP-MW05-0315	03/16/2015	1712	445237.020	2146562.195	V
HPTP-MW06	HPTP-MW06-0315	03/16/2015	1530	445267.421	2146628.726	V
HPTP-TW01	HPTP-TW01-0114	01/23/2014	1212	445219.485	2146532.650	V, P, M

Notes:
[1] Location Coordinates for groundwater samples associated with HPTP-MW01, HPTP-MW02, HPTP-MW03, HPTP-MW04, HPTP-MW05, and HPTP-TW01 are based on a survey performed by State of Florida Registered Professional Surveyor, John Maffett, of Arc Surveying.
[2] Refer to Table 3-4 for analytical methods. V = volatile organic compounds, P = polynuclear aromatic hydrocarbons, M = metals

To prevent cross-contamination between sampling points, FDEP SOP FC1000 decontamination procedures were followed for all non-disposable equipment (e.g., water level indicator) that contacted sample media.

3.5 Field Sample Custody Procedures

Chain-of-custody protocols were used throughout sample handling to establish the evidentiary integrity of sample containers and ensure that the samples were prepared, handled, stored, transferred, and shipped in a manner that would eliminate possible tampering. Following collection, all samples were handled in accordance with the UFP-SAP which included being packaged in protective wrap and immediately placed on ice in a cooler. Coolers were secured with tape and a signed custody seal.

For all samples collected, chain-of-custody forms were used to document the date and time of sample collection, the sampler's name, and the names of all others who subsequently held custody of the samples. Specifications for chemical analyses were also included on each chain-of-custody form.

Sample coolers were delivered by priority overnight delivery to Gulf Coast Analytical Laboratories, Inc. (GCAL), in Baton Rouge, Louisiana. Once received by GCAL, receipt was documented on the

chain-of-custody form and laboratory SOPs subsequently dictated internal sample custody procedures. GCAL noted the following on its Sample Receiving Checklist for both sample shipments:

- All samples were received using proper thermal preservation
- Custody seals were intact
- All samples were received in proper containers, in good condition
- All VOC vials were received with no headspace
- All sample labels matched the chain-of-custody, which listed sample technicians
- Proper chain-of-custody was maintained (i.e., all signatures, dates, and time of receipt were included)

The laboratory project manager did not report any discrepancies or problems to Resolution Consultants, and none was documented on the laboratory Sample Receiving Checklists.

3.6 Laboratory Analysis

Soil and groundwater samples were analyzed by GCAL, which is accredited by the Florida Department of Health National Environmental Laboratory Accreditation Program and DoD Environmental Laboratory Accreditation Program. GCAL analyzed all soil and groundwater samples for analytical methods listed in Table 3-4, as required by the SAP, which also identified the bottle types, preservation, target analytes, analytical methods, and holding times for this ESI.

Table 3-4
Soil and Groundwater Analytical Methods
Expanded Site Inspection — Potential Source of Contamination 57 – Former S-3 High Power Turn-up Pad
Naval Air Station Jacksonville — Jacksonville, Florida

Matrix	Analytical Group	Analytical Method/SOP
Groundwater	VOCs PAH-SIM Metals Mercury	U.S. EPA SW-846 5030/8260B GCMSV-003 U.S. EPA SW-846 3510C/8270D EXT-003/GCMSSV-004 U.S. EPA SW-846 3010A/6020A MET-005/ MET-021 U.S. EPA SW-846 7470A MET-006/ MET-008
Soil	VOCs PAH-SIM Metals Mercury	U.S. EPA SW-846 5035/8260B GCMSV-003 U.S. EPA SW-846 3550C/8270D EXT-001/GCMSSV-004 U.S. EPA SW-846 3050B/6020A MET-004/ MET-021 U.S. EPA SW-846 7471B MET-006/ MET-008

Notes:
SOP = Standard Operating Procedure
VOCs = volatile organic compounds
PAH-SIM = polynuclear aromatic hydrocarbons — selective ion method
U.S. EPA = United State Environmental Protection Agency

Field Quality Control (QC) samples collected included field duplicates, trip blanks, and equipment rinsate blanks. Field blank samples were submitted to the laboratory as blind duplicate samples. The field QC blank code used was "EB" (for equipment rinsate blanks) and "TB" (for trip blanks) followed sequentially by the month, day, and year sampled (e.g., TBMMDDYY and EBMMDDYY). Samples designated for matrix spike (MS)/matrix spike duplicate (MSD) were labeled MS/MSD on the container label, and noted on the chain-of-custody; however, "MS/MSD" was not part of the unique sample identifier in order to maintain consistency with the project database. Field duplicate samples used the unique sample identifier as the corresponding primary sample followed by the letters "FD". Resolution Consultants provided data validation services by verifying and evaluating the usability of the data, as described in Section 4.1.

GCAL provided electronic data deliverable files, portable document format files of the data deliverables for all project data, and a hard copy of data deliverables for all results. Portable document format copies of all analytical data packages are stored on CD-ROM, archived in the Naval Facilities Engineering Command Atlantic Administrative Record, and uploaded into Naval Installation Restoration Information Solution.

3.7 Demobilization

Demobilization included removing field equipment, supplies, and sample location markers from the site; returning rented equipment; managing investigation-derived waste (IDW); performing

general site cleanup; organizing and finalizing field paperwork; and entering field records/data into the database.

3.8 Investigation-Derived Waste

Solid and semi-solid IDW in the form of soil generated during field activities (e.g., soil sampling using hand augers and temporary well boring cuttings using DPT) that was not included in samples submitted for laboratory analysis or could not be replaced into the original source (boring) was containerized in a 55-gallon drum. Liquid IDW (e.g., development water, well purging and sampling water, and decontamination fluids) was containerized in two 55-gallon drums. The NAS Jacksonville Public Works Department provided, collected, and staged the drums at a designated waste accumulation area while awaiting characterization. Resolution Consultants characterized the waste using field pH measurements and laboratory analytical data. The NAS Jacksonville Public Works Department arranged for proper disposal of all IDW. Used personal protective equipment was bagged and disposed as regular trash in an appropriate installation waste container. IDW letters are provided in Appendix C.

4.0 ANALYTICAL RESULTS

GCAL provided data packages for sample delivery groups comprised of soil and groundwater samples collected during the ESI. Analytic Results Tables and GCAL Laboratory analytical report packages can be found in Appendix D and E, respectively.

4.1 Data Validation Summary

A full deliverable data package, including QC summaries and raw data, was independently reviewed by a Resolution Consultants chemist to assess data quality. The quality assurance criteria used to assess all data were established by the analytical methods, consistent with the measurement performance criteria provided in the project UFP-SAP.

As documented in the Data Validation Summary Report (Appendix F), no results were rejected; therefore, analytical completeness was calculated to be 100%. The remaining results qualified as estimated may be high or low, but the data are usable for their intended purpose, according to U.S. EPA and DoD guidelines. The most noteworthy qualifications occurred due to a high relative percent difference between the cis-1,2-DCE and vinyl chloride results reported for the primary and duplicate groundwater samples collected from HPTP-MW03 in March 2015. As a result, the data for these samples were "J" flagged as estimated. Although the primary sample results for the March 2015 sample were elevated with respect to results observed in January 2014, the 2015 duplicate sample results were remarkably similar to the 2014 data.

The Data Validation Summary Report includes final data review qualifiers (e.g., "U" and "J") used to describe results, and how they should be interpreted by the end data user, final results tables after data review, and documentation to support data qualification. Overall, the data quality review and data validation results indicate the data is representative of site conditions and collectively supports the attainment of project objectives.

4.2 Soil Results

Section 4.2 tables show the summary statistics for the target analytes with the maximum detected concentrations compared to Ecological SSLs and FDEP SCTLs for Residential and Industrial Direct Exposure and Leachability to Groundwater. Where at least one carcinogenic PAH — BaP, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, dibenz(a,h)anthracene, or indeno(1,2,3-cd)pyrene — was detected equal to or higher than its respective laboratory Method Detection Limit, the Total BaP Equivalents concentration was calculated for that sample using FDEP's BaP Conversion Table for Direct Exposure SCTLs. Screening for ecological risks associated

with the presence of PAHs was based on a comparison of Ecological SSLs to the sum concentration of Low Molecular Weight (LMW) PAH and the sum concentration of High Molecular Weight (HMW) PAH concentrations at each sample location.

4.2.1 Surface Soil (0 to 0.5 foot below ground surface)

Summary statistics for the results of the 11 samples collected from the 0 to 0.5 foot bgs interval compared to SCTLs and Ecological SSLs are in Table 4-1.

- Lead was detected in each soil sample collected from this interval. One of 11 detected lead concentrations (106 milligrams per kilogram [mg/kg] at HPTP-SB07, as shown on Figure 4-1) is greater than the 11 mg/kg Ecological SSL. The remaining detections ranged from 1.28 mg/kg to 7.73 mg/kg, and averaged 4.55 mg/kg, all of which are below the Ecological SSL. Not only is the lead exceedance isolated to a single location, but the ecological endpoint is for avian species. PSC 57 is near the airfield where it is unlikely to be used as a long-term habitat by avian species as a result of the NAS Jacksonville Bird Airstrike Hazard (BASH) Reduction Program. The BASH Program Instruction Document (U.S. Navy 2012) references the general area of the site as one in which the program seeks to control birds and to provide increased levels of safety during the critical phases of flight. The program "encompasses actions that may reduce or eliminate bird or other animal hazards to aviation, specifically bird avoidance and bird control (including harassment, grounds maintenance, habitat modification, and depredation)." This makes the area less likely to be used by avian species on a long-term basis.

  The lead concentration at HPTP-SB07 is also greater than the Ecological SSL of 56 mg/kg for mammals. The isolated extent of lead and BASH program actions are expected to lessen the likelihood of long-term exposure to mammals potentially present at the site as well.

- Ecological SSLs for the summed LMW PAH concentrations and the summed HMW PAH concentrations were used to screen ecological risk. The maximum LMW PAH concentration (0.19 mg/kg) was less than the corresponding Ecological SSL (29 mg/kg), so no additional refinement was necessary for LMW PAHs in this evaluation. The maximum HMW PAH concentration (2.59 mg/kg) at location HPTP-SB09 was greater than the corresponding Ecological SSL (1.1 mg/kg). No other HMW PAH concentration was greater than the HMW PAH Ecological SSL. Consequently, the upper confidence limit (UCL) of means were calculated to attain a representative, upper bound concentration for screening using

U.S. EPA ProUCL software by including detected concentrations and assuming that detection limits were concentrations when PAHs were not detected. As shown in Table 4-1, the 95% UCL (0.833 mg/kg) is less than the corresponding Ecological SSL for HMW PAHs.

- No metals or VOCs were detected at concentrations exceeding their respective SCTLs. A leachability SCTL does not exist for arsenic or lead, and samples were not analyzed by the Synthetic Precipitation Leaching Procedure; however, as documented in Section 4.3 of this report, neither was detected in groundwater above its respective GCTL, so the threat of leaching does not appear to be an issue.

- Varying concentrations of PAHs were detected in surface soil samples at borings HPTP-SB05, HPTP-SB07, HPTP-SB09, HPTP-SB10, HPTP-SB11, and HPTP-SB14. As shown on Figure 4-1, the Total BaP Equivalent concentrations in HPTP-SB09 (0.488 mg/kg) and HPTP-SB10 (0.1539 mg/kg) exceeded the Residential SCTL (0.1 mg/kg) but were less than the Industrial and Leachability SCTLs. The anticipated long-term use of the site and surrounding area as an airfield, combined with the isolated exposure potential to select sample locations, makes long-term human exposure under a residential scenario highly unlikely.

With respect to the PAH detections discussion above, it is noteworthy to mention that all sample locations with the exception of one were collected from areas formerly covered by an asphalt apron that surrounded the concrete HPTP as shown on Figure 4-1. The likelihood exists that the uppermost portion of the surface soil samples was once in direct contact with asphalt paving which may have contributed either entirely, or in part, to the presence of the PAHs, none of which were detected above their respective screening levels in the deeper soil intervals as discussed below.

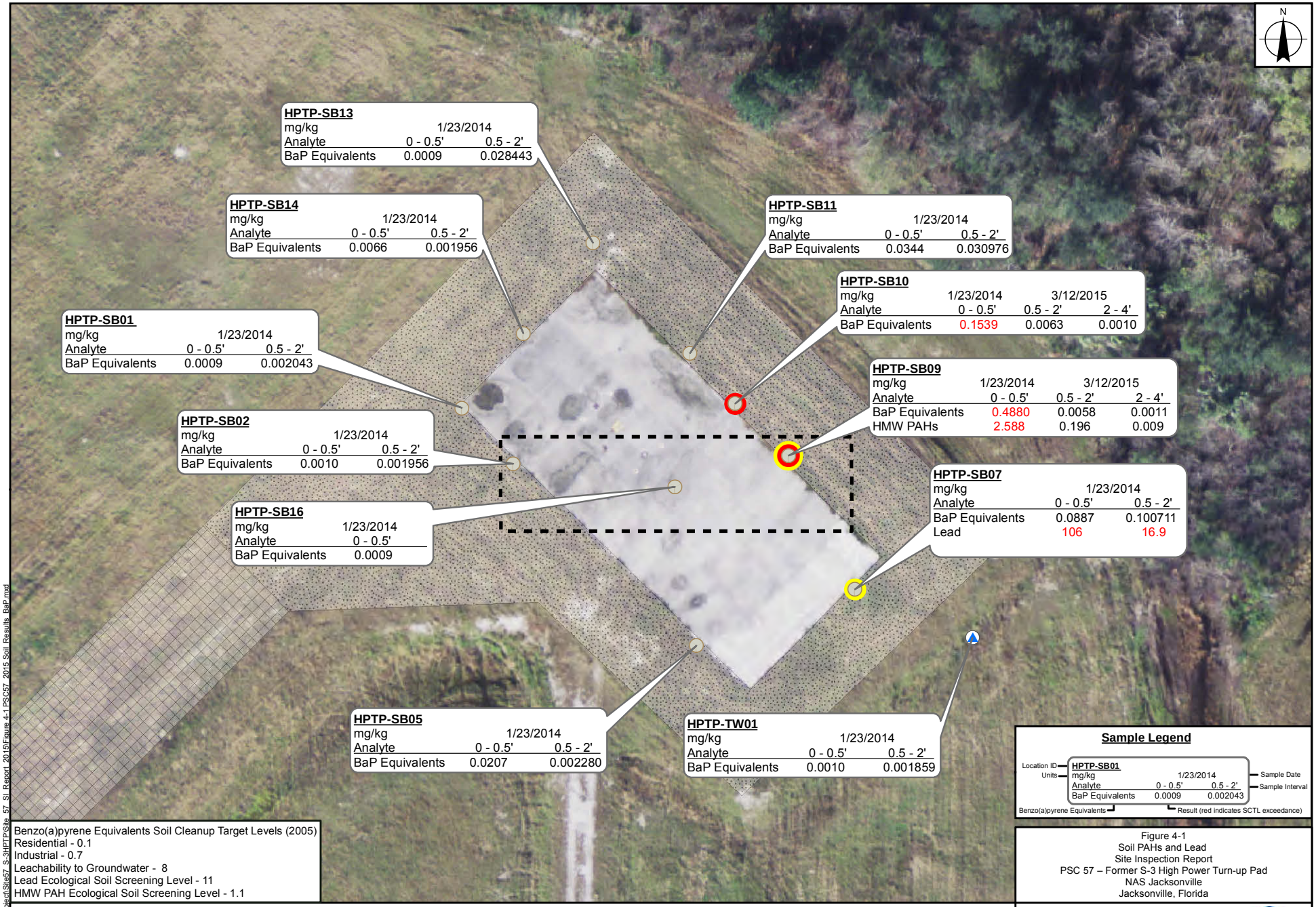


Figure 4-1
Soil PAHs and Lead
Site Inspection Report
PSC 57 – Former S-3 High Power Turn-up Pad
NAS Jacksonville
Jacksonville, Florida

Service Layer Credits: US Navy GeoReadiness (2012)

Table 4-1
Soil Aggregate Analytical Results (0 to 0.5 foot below ground surface) — Detections Only
Expanded Site Inspection — Potential Source of Contamination 57 – Former S-3 High Power Turn-up Pad
Naval Air Station Jacksonville — Jacksonville, Florida
(all results presented in milligrams per kilogram)

Analyte	Number Detects	Number Results	Concentration Range		Results Average[1]	FDEP Soil Cleanup Target Levels			Ecological SSL[2]	Background[3]	Maximum Detection Location
			Minimum	Maximum		Residential	Industrial	Leachability			
Metals											
Arsenic	10	11	<0.111	0.998	0.4376364	2.1	12	n/a	18	0.8	HPTP-SB16
Barium	11	11	3.35	23.9	13.76091	120	130,000	1,600	330	11.2	HPTP-SB14
Cadmium	5	11	<0.111	0.675	0.2590909	82	1,700	7.5	0.36	n/a	HPTP-SB14
Chromium, Total	11	11	1.6	7.21	5.168182	210	470	38	26	6.6	HPTP-SB09
Lead	11	11	1.28	**106**	13.77818	400	1,400	n/a	**11**	14.4	HPTP-SB07
Mercury	5	11	<0.0046	0.0654	0.01201818	3	17	2.1	0.1	n/a	HPTP-SB02
Polynuclear Aromatic Hydrocarbons											
Acenaphthylene	2	11	<0.00143	0.0511	0.009135455	1,800	20,000	27	n/a	n/a	HPTP-SB10
Anthracene	4	11	<0.000294	0.0831	0.01463545	21,000	300,000	2,500	n/a	n/a	HPTP-SB09
Benzo(a)anthracene	6	11	<0.00168	0.308	0.03992454	n/a	n/a	0.8	n/a	n/a	HPTP-SB09
Benzo(a)pyrene	6	11	<0.000338	**0.299**	0.04166364	**0.1**	0.7	8	n/a	n/a	HPTP-SB09
Benzo(b)fluoranthene	5	11	<0.00108	0.63	0.1153836	n/a	n/a	2.4	n/a	n/a	HPTP-SB09
Benzo(g,h,i)perylene	5	11	<0.000649	0.277	0.04454818	2,500	52,000	32,000	n/a	n/a	HPTP-SB09
Benzo(k)fluoranthene	5	11	<0.000424	0.134	0.01845727	n/a	n/a	24	n/a	n/a	HPTP-SB09
Chrysene	6	11	<0.00121	0.262	0.03571091	n/a	n/a	77	n/a	n/a	HPTP-SB09
Dibenz(a,h)anthracene	3	11	<0.00108	0.0356	0.005257273	n/a	n/a	0.7	n/a	n/a	HPTP-SB09
Fluoranthene	6	11	<0.0004	0.539	0.0616	3,200	59,000	1,200	n/a	n/a	HPTP-SB09
Fluorene	1	11	<0.000445	0.00616	0.000991818	2,600	33,000	160	n/a	n/a	HPTP-SB10
Indeno(1,2,3-cd)pyrene	5	11	<0.00046	0.58	0.1057536	n/a	n/a	6.6	n/a	n/a	HPTP-SB09
Phenanthrene	4	11	<0.000517	0.0705	0.009602727	2,200	36,000	250	n/a	n/a	HPTP-SB09
Pyrene	6	11	<0.000603	0.339	0.04286909	2,400	45,000	880	n/a	n/a	HPTP-SB09
BaP Equivalents	5	11	<0.000874	**0.488002**	0.31	**0.1**	0.7	8	n/a	n/a	HPTP-SB09
Total Low Molecular Weight PAHs	5	10	<0.00504	0.19211	Not Calculated	NA	NA	NA	29	n/a	HPTP-SB09
Total High Molecular Weight PAHs	6	10	<0.00792	**2.5876**	0.833	NA	NA	NA	1.1	n/a	HPTP-SB09
Volatile Organic Compounds											
2-Butanone	1	11	<0.000316	0.00387	0.00068	16,000	110,000	17	1	n/a	HPTP-TW01
Ethylbenzene	10	11	<0.000179	0.00107	0.000466364	1,500	9,200	0.6	0.27	n/a	HPTP-TW01
Tetrachloroethene	1	11	<0.00029	0.0004	0.000341818	8.8	18	0.03	0.06	n/a	HPTP-SB10
Toluene	11	11	0.00136	0.00477	0.002153636	7,500	60,000	0.5	0.15	n/a	HPTP-TW01
Xylenes, Total	10	11	<0.000242	0.00538	0.002086364	130	700	0.2	0.1	n/a	HPTP-TW01

Notes:
[1] Results average was calculated using the laboratory Practical Quantitation Limit for non-detect results with the exception of the values for benzon(a)pyrene (BaP) Equivalents and high molecular weight polynuclear aromatic hydrocarbon (PAHs) for which 95% upper confidence limits (UCLs) were calculated using the United States Environmental Protection Agency ProUCL software.
[2] Ecological Soil Screening Levels (SSLs) selected (in order of preference) from U.S. EPA Ecological Soil Screening Levels available at http://www.epa.gov/ecotox/ecossl/ and U.S. EPA Region 4 Soil Screening Levels.
[3] Background values for surface soil obtained from Table 4-1 of the Remedial Investigation and Feasibility Study, Operable Unit 1, Naval Air Station Jacksonville (ABB, March 1996)
Analytes in bold exceed the Ecological Soil Screening Level and in bold exceed the Soil Cleanup Target Level concentrations in as indicated by the column heading.
FDEP = Florida Department of Environmental Protection
< = less than
n/a = Not available or not established
NA = Not applicable
PAH = Polynuclear aromatic hydrocarbon

4.2.2 Subsurface Soil (0.5 to 2 feet below ground surface)

Summary statistics for the results of the eight samples collected from the 0.5 to 2 feet bgs soil interval compared to SCTLs and Ecological SSLs are in Table 4-2.

- Lead was detected in each soil sample from this interval. The detection at HPTP-SB07 (16.9 mg/kg) exceeds the 11 mg/kg Ecological SSL for avian species but is less than the mammalian Ecological SSL (56 mg/kg). Ecological SSLs are typically applicable to surface soil, so comparing to subsurface soil is a conservative screening measure.

- PAHs were frequently detected in the sample from this interval in borings HPTP-SB07, HPTP-SB05, HPTP-SB11, and HPTP-SB13. The maximum LMW PAH and HMW PAH concentration sums were less than the corresponding Ecological SSLs, so no additional refinement was necessary for LMW or HMW PAHs in this evaluation.

- No metals, PAHs, or VOCs were detected at concentrations exceeding their respective SCTLs.

4.2.3 Subsurface Soil (2 to 4 feet below ground surface)

Summary statistics for the results of the three soil samples collected from the 2 to 4 feet bgs interval are shown in Table 4-3. No metals, PAHs, or VOCs were detected at concentrations exceeding their respective Ecological SSLs or SCTLs.

4.3 Groundwater Results

As noted in Section 2.2, the original scope of the ESI included one groundwater sampling event. Based on the results of that initial event in January 2014, the NAS Jacksonville Tier I Partnering Team subsequently reached consensus decisions to conduct two additional sampling events. The latter two sampling events were performed in August 2014 and March 2015. The results of the three ESI sampling events as well as the 2001-02 Site Investigation results are collectively discussed in this section to provide a perspective of both current conditions and data trends.

Table 4-2
Soil Aggregate Analytical Results (0.5 to 2 feet below ground surface) — Detections Only
Expanded Site Inspection — Potential Source of Contamination 57 – Former S-3 High Power Turn-up Pad
Naval Air Station Jacksonville — Jacksonville, Florida
(all results presented in milligrams per kilogram)

Analyte	Number Detects	Number Results	Range		Results	FDEP Soil Cleanup Target Levels			Ecological SSL[2]	Background[3]	Maximum Detection Location
			Minimum	Maximum	Average[1]	Residential	Industrial	Leachability			
Metals											
Arsenic	10	10	0.137	0.7	0.3452	2.1	12	n/a	18	1.48	HPTP-TW01
Barium	10	10	4.8	43.6	14.867	120	130,000	1,600	330	20.8	HPTP-TW01
Cadmium	2	10	<0.108	0.267	0.1368	82	1,700	7.5	0.36	n/a	HPTP-SB10
Chromium, Total	10	10	<0.108	8.11	5.005	210	470	38	26	14.1	HPTP-TW01
Lead	10	10	1.58	**16.9**	4.977	400	1,400	n/a	**11**	6.46	HPTP-SB07
Mercury	3	10	<0.0046	0.0592	0.01085	3	17	2.1	0.1	n/a	HPTP-SB01
Polynuclear Aromatic Hydrocarbons											
2-methylnaphthalene	1	10	<0.000748	0.00359	0.001107	210	2,100	8.5	n/a	n/a	HPTP-SB07
Acenaphthene	1	10	<0.00117	0.00626	0.001795	2,400	20,000	2.1	n/a	n/a	HPTP-SB07
Acenaphthylene	1	10	<0.0014	0.00507	0.00191	1,800	20,000	27	n/a	n/a	HPTP-SB07
Anthracene	2	10	<0.000288	0.00866	0.001317	21,000	300,000	2,500	n/a	n/a	HPTP-SB07
Benzo(a)anthracene	6	10	<0.00165	0.0609	0.010708	n/a	n/a	0.8	n/a	n/a	HPTP-SB07
Benzo(a)pyrene	5	10	<0.000332	0.0602	0.009490999	0.1	0.7	8	n/a	n/a	HPTP-SB07
Benzo(b)fluoranthene	5	10	<0.00106	0.134	0.030814	n/a	n/a	2.4	n/a	n/a	HPTP-SB07
Benzo(g,h,i)perylene	5	10	<0.000638	0.0625	0.010059	2,500	52,000	32,000	n/a	n/a	HPTP-SB07
Benzo(k)fluoranthene	5	10	<0.000416	0.0321	0.005381	n/a	n/a	24	n/a	n/a	HPTP-SB07
Chrysene	6	10	<0.00119	0.0599	0.010397	n/a	n/a	77	n/a	n/a	HPTP-SB07
Dibenz(a,h)anthracene	2	10	<0.00119	0.00814	0.001961	n/a	n/a	0.7	n/a	n/a	HPTP-SB07
Fluoranthene	6	10	<0.000392	0.084	0.013083	3,200	59,000	1,200	n/a	n/a	HPTP-SB07
Fluorene	1	10	<0.000437	0.00371	0.00081	2,600	33,000	160	n/a	n/a	HPTP-SB07
Indeno(1,2,3-cd)pyrene	5	10	<0.000451	0.125	0.026724	n/a	n/a	6.6	n/a	n/a	HPTP-SB07
Naphthalene	1	10	<0.000399	0.00411	0.000809	55	300	1.2	n/a	n/a	HPTP-SB07
Phenanthrene	3	10	<0.000508	0.0271	0.003896	2,200	36,000	250	n/a	n/a	HPTP-SB07
Pyrene	6	10	<0.000592	0.0705	0.011472	2,400	45,000	880	n/a	n/a	HPTP-SB07
B(a)P Equivalents	6	10	<0.000929	0.100711	0.0622	0.1	0.7	8	n/a	n/a	HPTP-SB07
Total Low Molecular Weight PAHs	4	10	<0.00496	0.0585	Not Calculated	NA	NA	NA	29	n/a	HPTP-SB07
Total High Molecular Weight PAHs	6	10	<0.00856	0.1955	Not Calculated	NA	NA	NA	1.1	n/a	HPTP-SB07
Volatile Organic Compounds											
Ethylbenzene	6	10	<0.000163	0.00066	0.000359	1,500	9,200	0.6	0.27	n/a	HPTP-TW01
Tetrachloroethene	1	10	<0.000264	0.00125	0.000396	8.8	18	0.03	0.06	n/a	HPTP-TW01
Toluene	8	10	<0.000095	0.00277	0.001536	7,500	60,000	0.5	0.15	n/a	HPTP-TW01
Xylenes, Total	6	10	<0.00022	0.00311	0.001262	130	700	0.2	0.1	n/a	HPTP-TW01

Notes:
[1] Results average was calculated using the laboratory Practical Quantitation Limit for non-detect results with the exception of the value for benzo(a)pyrene (BaP) Equivalents were calculated using the United States Environmental Protection Agency roUCL software.
[2] Ecological Soil Screening Levels (SSLs) selected (in order of preference) from U.S. EPA Ecological Soil Screening Levels available at http://www.epa.gov/ecotox/ecossl/ and U.S. EPA Region 4 Soil Screening Levels.
[3] Background values for subsurface soil obtained from Table 4-2 of the Remedial Investigation and Feasibility Study, Operable Unit 1, Naval Air Station Jacksonville (ABB, March 1996).
Analytes in bold exceed the Ecological Soil Screening Level as indicated by the column heading.
FDEP = Florida Department of Environmental Protection
n/a = Not available or not established
NA = Not applicable
< = less than

n/a	=	Not available or not established
NA	=	Not applicable
PAH	=	polynuclear aromatic hydrocarbon

Table 4-3
Soil Aggregate Analytical Results (2 to 4 feet below ground surface) — Detections Only
Expanded Site Inspection — Potential Source of Contamination 57 – Former S-3 High Power Turn-up Pad
Naval Air Station Jacksonville — Jacksonville, Florida
(all results presented in milligrams per kilogram)

Analyte	Number Detects	Number Results	Range		Results Average[1]	FDEP Soil Cleanup Target Levels			Ecological SSL[2]	Background[3]	Maximum Location
			Minimum	Maximum		Residential	Industrial	Leachability			
Metals											
Arsenic	2	3	<0.108	0.615	0.3186667	2.1	12	n/a	18	1.48	HPTP-TW01
Barium	3	3	9.42	23.4	15.07333	120	130000	1600	330	20.8	HPTP-TW01
Cadmium	1	3	<0.108	0.166	0.1373333	82	1700	7.5	0.36	n/a	HPTP-SB09
Chromium, Total	3	3	4.06	6.81	5.496666	210	470	38	26	38	HPTP-TW01
Lead	3	3	2.02	3.72	3.003333	400	1400	n/a	11	6.46	HPTP-TW01
Mercury	2	3	<0.0051	0.0087	0.0071	3	17	2.1	0.1	n/a	HPTP-SB09
Polynuclear Aromatic Hydrocarbons											
2-methylnaphthalene	1	3	<0.000785	0.00256	0.001423333	210	2100	8.5	n/a	n/a	HPTP-SB09
Benzo(b)fluoranthene	1	3	<0.00111	0.00218	0.001533333	n/a	n/a	2.4	n/a	n/a	HPTP-SB09
B(a)P Equivalents	1	3	<0.000946	0.001061	Not Calculated	0.1	0.7	8	n/a	n/a	HPTP-SB09
Total Low Molecular Weight PAHs	1	3	<0.00544	0.00697	Not Calculated	NA	NA	NA	29	n/a	HPTP-SB09
Total High Molecular Weight PAHs	1	3	<0.00856	0.00923	Not Calculated	NA	NA	NA	1.1	n/a	HPTP-SB09
Volatile Organic Compounds											
Ethylbenzene	1	3	<0.000153	0.00066	0.000333333	1500	9200	0.6	0.27	n/a	HPTP-TW01
Toluene	1	3	<0.000089	0.00282	0.001006667	7500	60000	0.5	0.15	n/a	HPTP-TW01
Xylenes, Total	1	3	<0.000206	0.0031	0.00119	130	700	0.2	0.1	n/a	HPTP-TW01

Notes:
[1] Results average was calculated using the laboratory Practical Quantitation Limit for non-detect results.
[2] Ecological Soil Screening Levels (SSLs) selected (in order of preference) from U.S. EPA Ecological Soil Screening Levels available at http://www.epa.gov/ecotox/ecossl/ and United States Environmental Protection Agency Region 4 Soil Screening Levels.
[3] Background values for subsurface soil obtained from Table 4-2 of the Remedial Investigation and Feasibility Study, Operable Unit 1, Naval Air Station Jacksonville (ABB, March 1996).
FDEP = Florida Department of Environmental Protection
n/a = Not available or not established
NA = Not applicable
< = less than
B(a)P = benzo(a)pyrene
PAH = Polynuclear aromatic hydrocarbon

4.3.1 Pieozometric Surface

Groundwater surface elevations were measured in conjunction with each of the sampling events to evaluate changes in groundwater flow patterns. The water level elevations presented in Table 4-4 were used to draw the piezometric surface contours for 2014 and 2015, shown in Figures 4-2 through 4-4. Groundwater is mounded beneath the elevated turn-up pad and flows in a northeasterly direction between the pad and the monitoring well network.

Table 4-4
Groundwater Level Measurements (all values presented in feet)
Expanded Site Inspection — Potential Source of Contamination 57 – Former S-3 High Power Turn-up Pad
Naval Air Station Jacksonville — Jacksonville, Florida

Well Number	Screened Interval (feet below ground surface)	Well Depth (feet below ground surface)	January 2014 W.L. Elevation	August 2014 W.L. Elevation	March 2015 W.L. Elevation
HPTP-TW01	5 – 15	15	1.71	n/a[1]	n/a[1]
HPTP-MW01	2.5 - 12.5	13	2.20	0.89	2.42
HPTP-MW02	2 – 12	12	1.89	0.66	>2.09[2]
HPTP-MW03	2 – 12	12	1.73	0.69	>1.79[2]
HPTP-MW04	2 – 12	12	1.35	0.38	1.57
HPTP-MW05	2 – 12	12	1.09	0.51	1.70
HPTP-MW06	2 – 12	12	n/a[3]	n/a[3]	0.76

Notes:
[1] Temporary well HPTP-TW01 was abandoned following the January 2014 sampling event.
[2] Water level was at the top of the well casing; top of casing elevation is shown.
[3] Well HPTP-MW06 was not installed until March 2015.
W.L. = water level
> = greater than

4.3.2 Analytical Results

Table 4-5 summarizes the statistics for constituents detected in groundwater for the entire data set currently available (all wells, all events from 2001 to current ESI sampling). Metals, PAHs, or TPH were not measure at concentrations exceeding GCTLs during any sampling event. Vinyl chloride is the only VOC detected at concentrations exceeding its GCTL, both historically and currently. VOC results from 2014 and 2015 are presented on Figure 4-5.

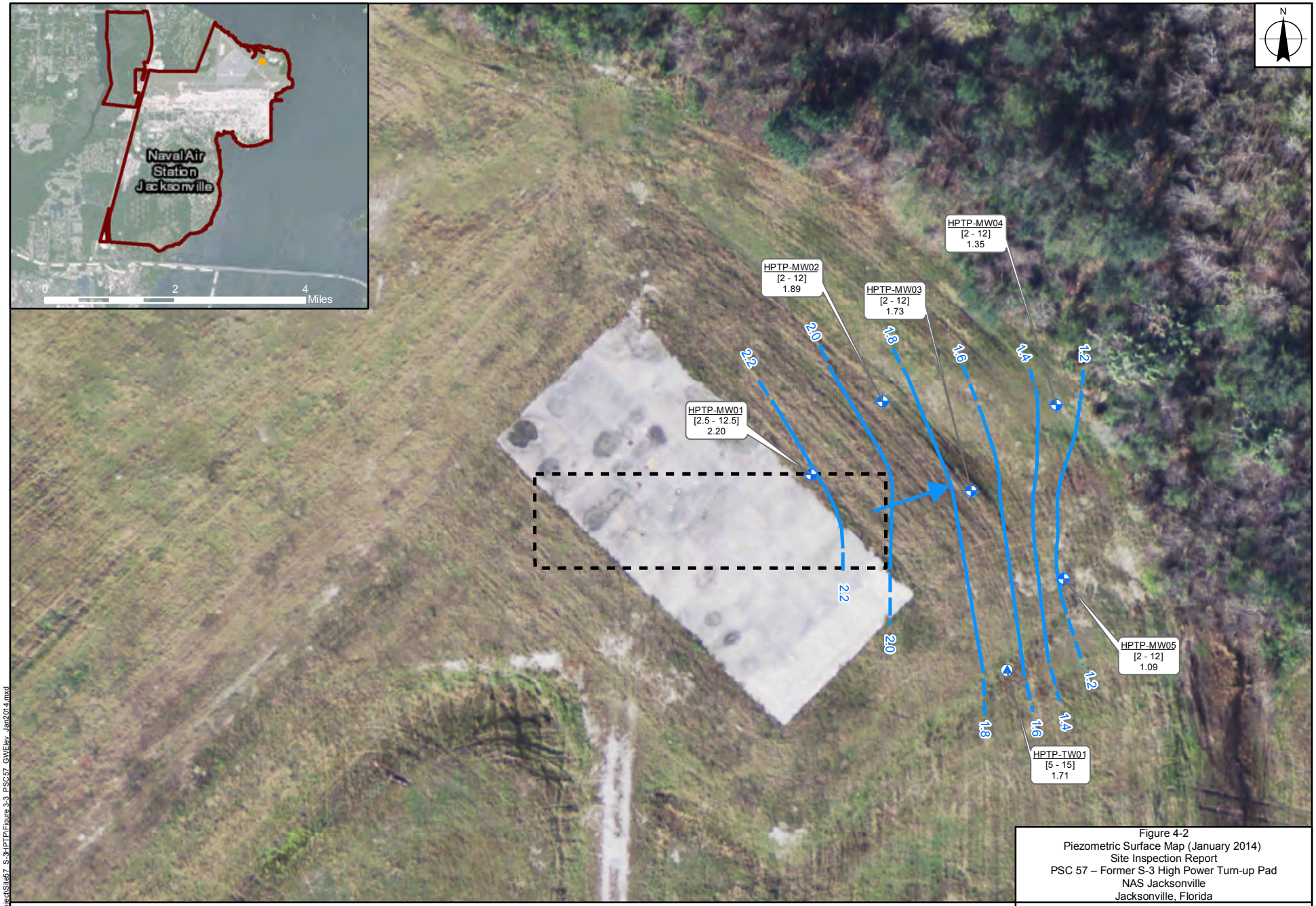


Figure 4-2
Piezometric Surface Map (January 2014)
Site Inspection Report
PSC 57 – Former S-3 High Power Turn-up Pad
NAS Jacksonville
Jacksonville, Florida

Legend

- Monitoring Well
- Temporary Well
- Former A-7 High Power Turn-up Pad
- Groundwater Flow Direction
- Groundwater Contour
- Inferred Groundwater Contour

HPTP-MW01 — Monitoring Well ID
[2.5 - 12.5] — Screen Interval
2.20 — Depth to Water

0 40 80 Feet

NAVFAC Naval Facilities Engineering Command
RESOLUTION CONSULTANTS

REQUESTED BY: A. Jacobs	DATE: 9/4/2014
DRAWN BY: msenne	TASK ORDER NUMBER: JM19

X:\Navy\NAS_JAX\projects\Site57_S-3HPTP\Figure 3-3_PSC57_GWElev_Jan2014.mxd

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community & US Navy GeoReadiness (2012); Some data are from Tetra Tech.

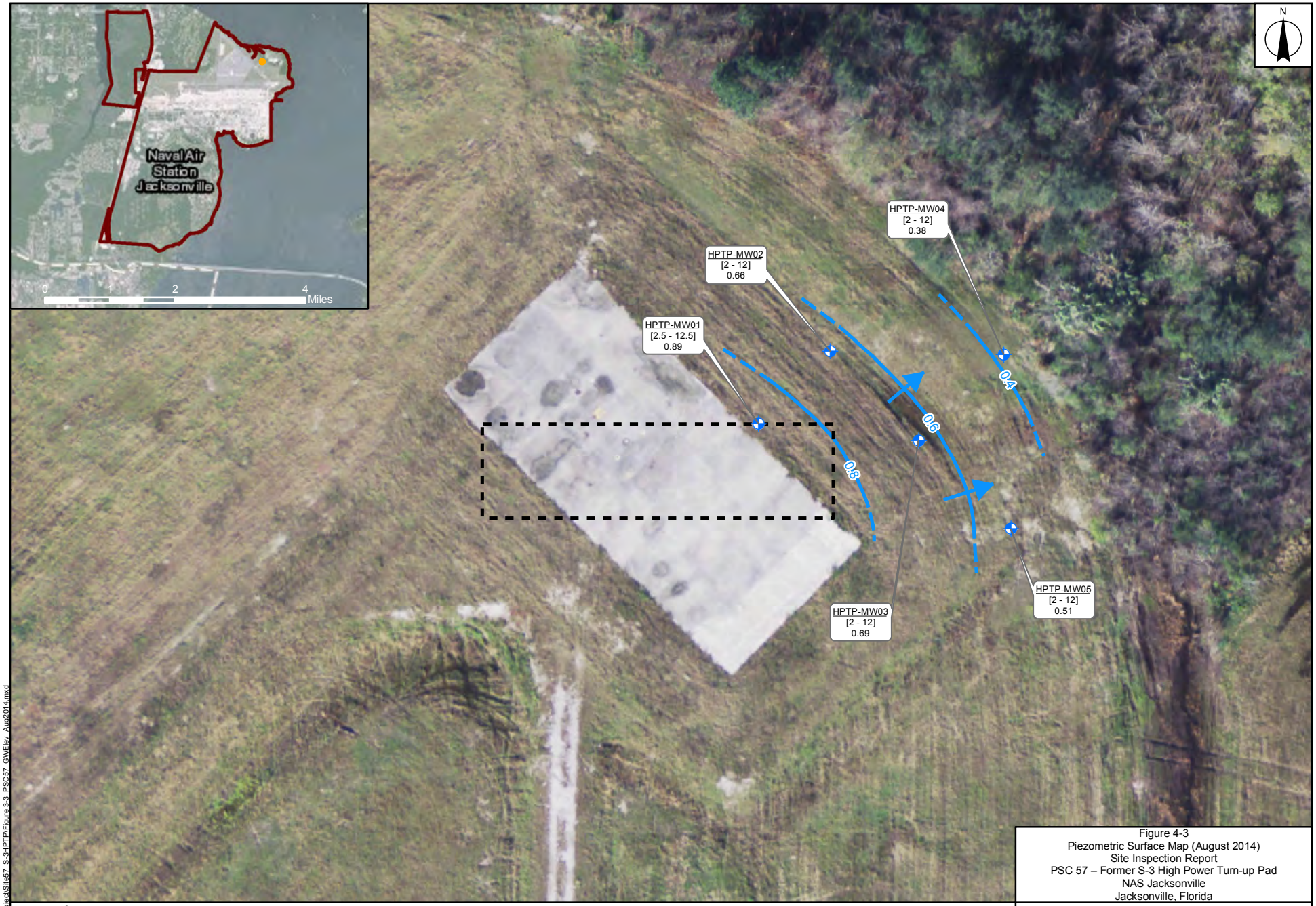


Figure 4-3
Piezometric Surface Map (August 2014)
Site Inspection Report
PSC 57 – Former S-3 High Power Turn-up Pad
NAS Jacksonville
Jacksonville, Florida

Legend

- Monitoring Well
- Former A-7 High Power Turn-up Pad
- Groundwater Flow Direction
- Groundwater Contour
- Inferred Groundwater Contour

HPTP-MW01 — Monitoring Well ID
[2.5 - 12.5] — Screen Interval
2.20 — Water Level Elevation

0 40 80 Feet

NAVFAC Naval Facilities Engineering Command
RESOLUTION CONSULTANTS

REQUESTED BY: T. Haverkost	DATE: 9/4/2014
DRAWN BY: B. Lipscomb	TASK ORDER NUMBER: JM19

X:\Navy\NAS_JAX\projects\Site57_S-3HPTP\Figure 3-3_PSC57_GWElev_Aug2014.mxd

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community; Main aerial image was acquired from US Navy GeoReadiness (2012) at NAS Jacksonville; Installation boundary was provided by Tetra Tech.

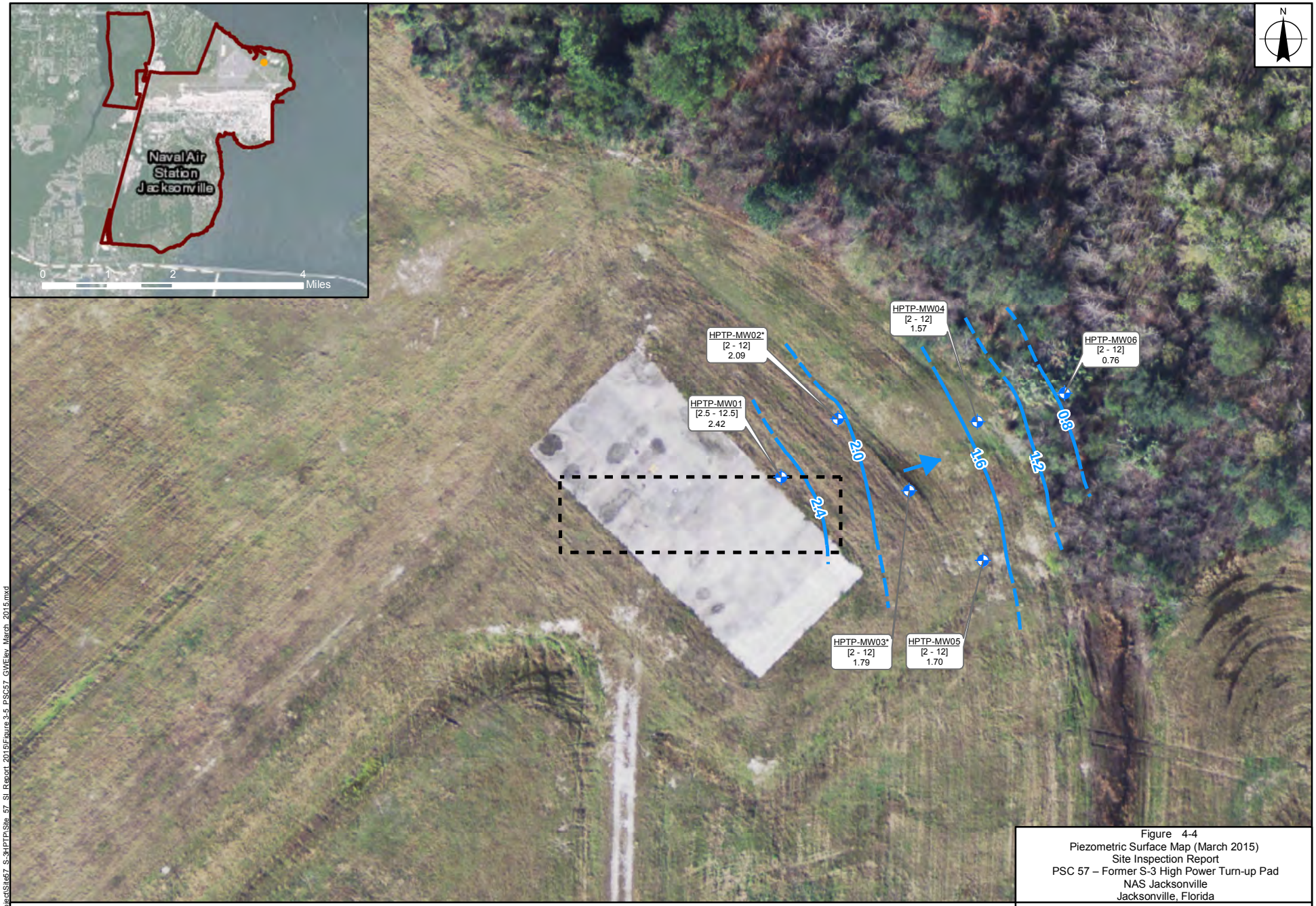


Figure 4-4
Piezometric Surface Map (March 2015)
Site Inspection Report
PSC 57 – Former S-3 High Power Turn-up Pad
NAS Jacksonville
Jacksonville, Florida

Legend

- Monitoring Well
- Former A-7 High Power Turn-up Pad
- Groundwater Contour
- Inferred Groundwater Contour
- Groundwater Flow Direction

HPTP-MW01 — Monitoring Well ID
[2.5 - 12.5] — Screen Interval
2.46 — Groundwater Elevation

* Denotes groundwater elevations at top of casing during March 2015 measurements.

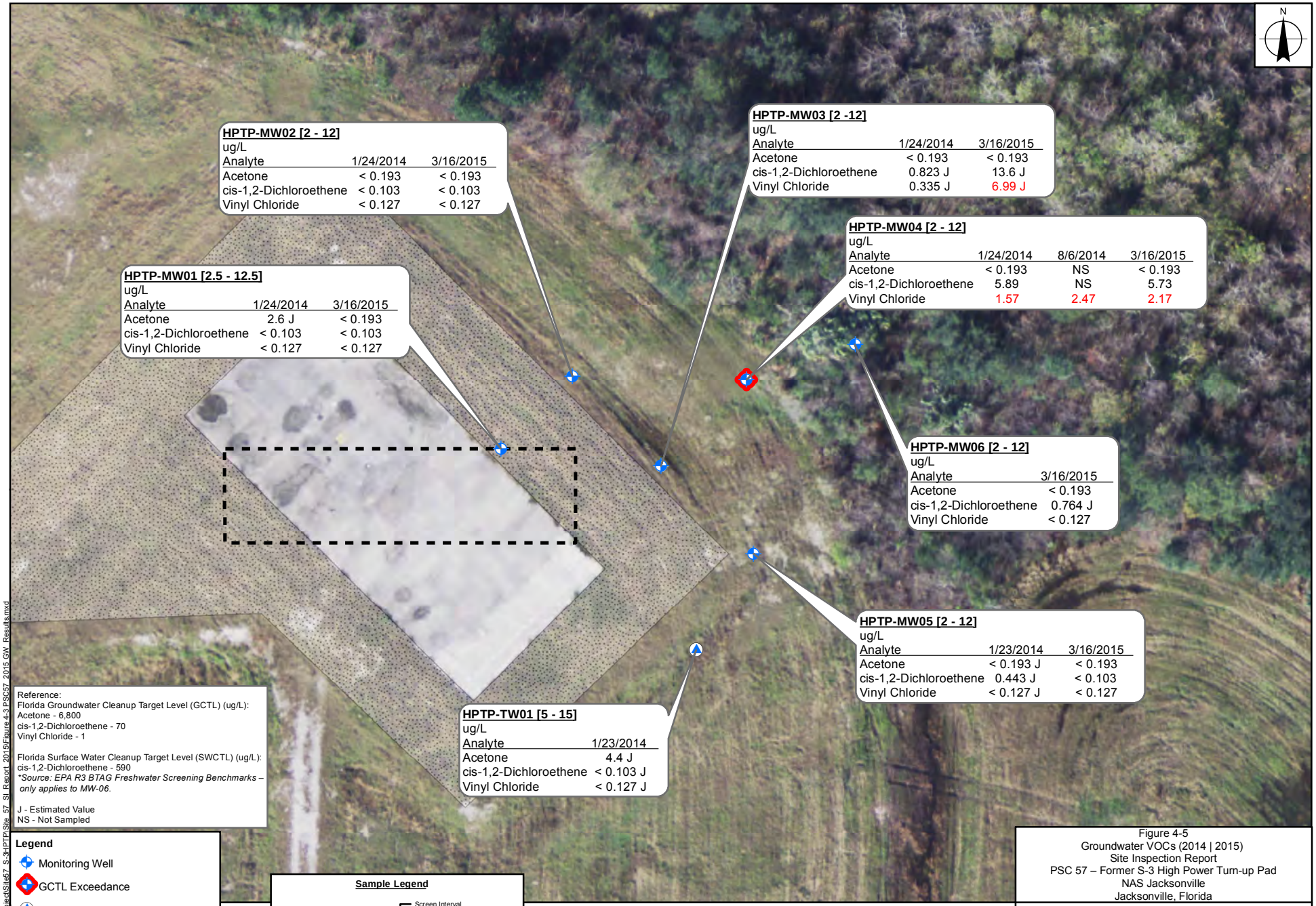
0 50 100 Feet

NAVFAC Naval Facilities Engineering Command
RESOLUTION CONSULTANTS

REQUESTED BY: D. Myers	DATE: 4/21/2015
DRAWN BY: B. Lipscomb	TASK ORDER NUMBER: JM19

X:\Navy\NAS_JAX\projects\Site57_S-3HPTP\Site_57_SI_Report_2015\Figure 3-5_PSC57_GWElev_March_2015.mxd

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community; US Navy GeoReadiness (2012); Some data are from Tetra Tech.



Service Layer Credits: US Navy GeoReadiness (2012)

Table 4-5
Summary of Detected Groundwater Constituents, all Historical Data (2001-2015)
Expanded Site Inspection — Potential Source of Contamination 57 – Former S-3 High Power Turn-up Pad
Naval Air Station Jacksonville — Jacksonville, Florida
(all results presented in micrograms per liter)

Analyte	Number Detects	Number Results[1]	Range		Results Average[2]	FDEP GCTL	FDEP FW SWCTL[3]	FDEP MARINE SWCTL[3]	Maximum Location
			Minimum	Maximum					
Metals									
ARSENIC	12	12	0.28	10	3.38	10	50	50	HPTP-MW02
BARIUM	12	12	11.1	50.7	29.13333	2,000	n/a	n/a	HPTP-TW01
CHROMIUM, TOTAL	4	12	<0.25	1.47	0.3941667	100	11	50	HPTP-MW06
LEAD	4	17	<0.25	1.28	0.7088236	15	n/a	8.5	HPTP-MW05
SELENIUM	2	12	<0.25	1.04	0.3225	50	5	71	HPTP-MW01
Polynuclear Aromatic Hydrocarbons									
2-METHYLNAPHTHALENE	2	17	<0.03	0.407	0.6568823	28	30	30	HPTP-MW03
ACENAPHTHENE	1	17	<0.0082	0.143	1.213727	20	3	3	HPTP-MW03
ANTHRACENE	1	17	<0.041	0.17	0.6365294	2100	0.3	0.3	HPTP-MW03
FLUORANTHENE	1	17	<0.012	0.136	0.6157647	280	0.3	0.3	HPTP-MW03
FLUORENE	1	17	<0.04	0.167	0.6357059	280	30	30	HPTP-MW03
NAPHTHALENE	1	17	<0.0097	0.138	0.6144059	14	26	26	HPTP-MW03
PHENANTHRENE	1	17	<0.0072	0.269	0.6204906	210	0.031	0.031	HPTP-MW03
PYRENE	1	17	<0.015	0.117	0.6165882	210	0.3	0.3	HPTP-MW03
Total Petroleum Hydrocarbons									
TPH	2	5	<250	726	349.2	5,000	5,000	5,000	HPTP-MW03
Volatile Organic Compounds									
ACETONE	2	12	<0.193	4.4	0.7441667	6,300	1,700	1,700	HPTP-TW01
CIS-1,2-DCE	12	19	<0.103	24.4	4.583579	70	n/a	n/a	HPTP-MW04
TRANS-1,2-DCE	2	19	<0.077	0.543	0.4152631	100	11,000	11,000	HPTP-MW03
TRICHLOROETHENE	5	19	<0.161	0.81	0.3922105	3	80.7	80.7	HPTP-MW04
VINYL CHLORIDE	10	20	<0.1	8	1.86955	1	2.4	2.4	HPTP-MW04

Notes:
[1] The results summary includes groundwater data from the 2001-02 site assessment as well as the Expanded Site Assessment to account for temporal trends.
[2] Results average was calculated using laboratory Practical Quantitation Limits.
[3] The FDEP Surface Water Cleanup Target Levels (SWCTLs) are only being compared to the results from downgradient monitoring well HPTP-MW06 that was installed adjacent to a storm water drainage to evaluate the potential for a groundwater to surface water migration pathway.

FDEP = Florida Department of Environmental Protection
FW = freshwater
GCTL = Groundwater Cleanup Target Level
DCE = dichloroethene

The concentration in **bold** exceeds the FDEP GCTL
n/a = Not available or not established
< = less than

Table 4-6 shows the complete historical data for vinyl chloride and several of its higher-chlorinated progenitors. These data show:

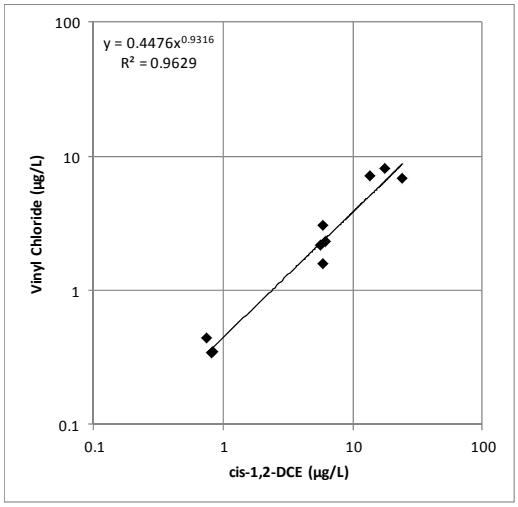


Figure 4-6
Correlation of vinyl chloride to cis-1,2-DCE concentrations in MW03 & MW04, 2001-2015 (excluding non-detections)

- The parent product TCE has been depleted (non-detect).
- Trans-1,2-DCE, and cis-1,2-DCE — neither of which exceed their GCTLs for any event — also have had declining concentrations since 2001.
- Since 2001, vinyl chloride concentrations have declined to approximately 2 µg/L in HPTP-MW04. The current concentrations are only marginally above the GCTL of 1 µg/L.
- Although the vinyl chloride concentrations for the primary sample collected from HPTP-MW03 in March 2015 exceeded the GCTL, the result for a corresponding duplicate sample did not exceed the GCTL nor did the results from a sample collected in January 2014.
- Concentrations of cis-1,2-DCE and vinyl chloride are strongly correlated, as shown on Figure 4-6. The correlation (power in log space) is expected where natural attenuation processes are effective occurring.
- Dissolved oxygen (DO) concentrations in HPTP-MW04 ranged from 0.41 to 0.61 mg/L during the ESI. At these concentrations aerobic biological activity capable of further degrading vinyl chloride is suspected to be impaired as demonstrated by the lack of reduction in vinyl chloride concentrations between January 2014 and March 2015.

Table 4-6
Historical Concentrations of Key Volatile Organic Compounds
Expanded Site Inspection — Potential Source of Contamination 57 – Former S-3 High Power Turn-up Pad
Naval Air Station Jacksonville — Jacksonville, Florida
(all results presented in micrograms per liter)

	Well ID	10/2001	1/2002	10/2002	1/2014	8/2014	3/2015
TCE GCTL=3 µg/L	MW01	<1 U			<0.161 U		<0.161 U
	MW02	<1 U			<0.161 U		<0.161 U
	MW03	0.62 J		0.8 J	<0.161 U [<0.161 U]		<0.161 U [<0.161 U]
	MW04		0.81 J	0.8 J	<0.161 U		<0.161 U
	MW05		0.49 J		<0.161 UJ		<0.161 U
	MW06						<0.161 U
	TW01				<0.161 UJ		
cis-1,2-DCE GCTL=70 µg/L	MW01	<1 U			<0.103 U		<0.103 U
	MW02	0.82 J			<0.103 U		<0.103 U
	MW03	6.2		6	0.823 J [0.846 J]		13.6 J [0.756 J]
	MW04		24.4	18	5.89		5.73
	MW05		2.8		0.443 J		<0.103 U
	MW06						0.764 J
	TW01				<0.103 UJ		
trans-1,2-DCE GCTL=100 µg/L	MW01	<1 U			<0.077 U		<0.077 U
	MW02	<1 U			<0.077 U		<0.077 U
	MW03	<1 U		<1 U	<0.077 U [<0.077 U]		0.543 J [<0.077 U]
	MW04		0.5 J	<1 U	<0.77 U		<0.077 U
	MW05		<1 U		<0.77 UJ		<0.077 U
	MW06						<0.077 U
	TW01				<0.77 UJ		
Vinyl Chloride GCTL=1 µg/L	MW01	<1 U			<0.127 U		<0.127 U
	MW02	<1 U			<0.127 U		<0.127 U
	MW03	**2.3**		**3**	0.335 J [0.348 J]		**6.99 J** [0.439 J]
	MW04		**6.7**	**8**	**1.57**	**2.47** [2.09]	**2.17**
	MW05		0.84 J		<0.127 UJ		<0.127 U
	MW06						<0.127 U
	TW01				<0.77 UJ		

Notes:
Blank cells represent either the constituent was not detected or not analyzed
< = less than
GCTL = Groundwater Cleanup Target Level
µg/L = micrograms per liter
DCE = dichloroethene
U = Not detected above laboratory method detection limit
J = Concentration estimated by the laboratory
TCE = trichloroethylene
Concentrations in **bold** exceed the GCTL
[] = Field duplicate value

5.0 SUMMARY AND CONCLUSIONS

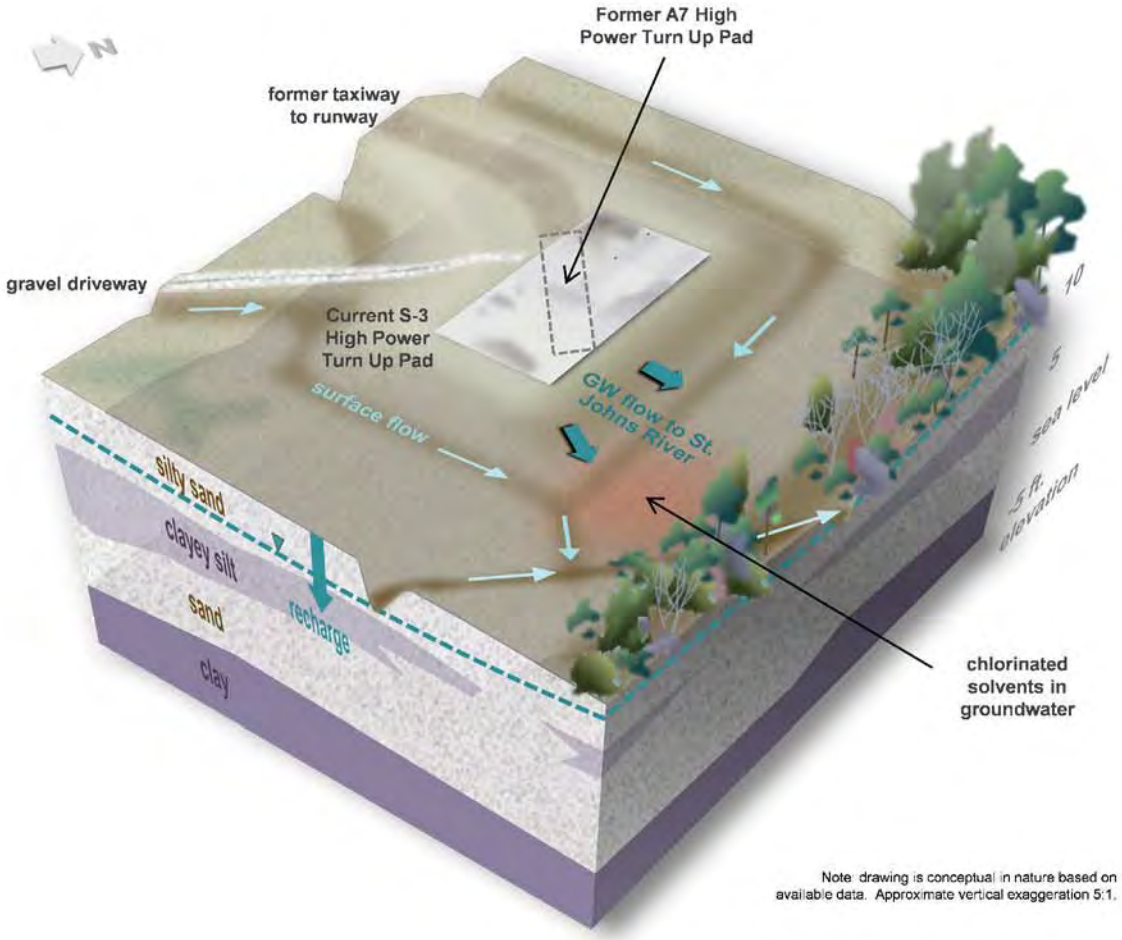
5.1 Summary of Site Conditions

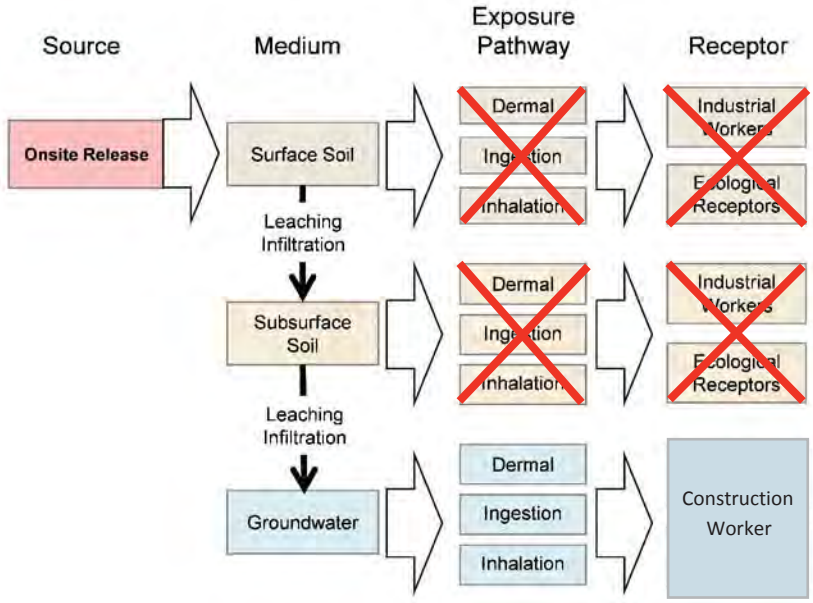
Potential impacts to soil appear to be very limited in nature. Lead concentrations of 106 mg/kg in the 0 to 0.5 foot bgs interval and 16.9 mg/kg in the 0.5 to 2 feet bgs interval at soil boring HPTP-SB07 exceed the Ecological SSL of 11 mg/kg that is based on an endpoint for avian species. The surface interval also exceeds the Ecological SSL of 56 mg/kg for mammals. The isolation of lead exceedances to a single boring location combined with BASH program actions that are designed to "reduce or eliminate bird or other animal hazards to aviation" substantially minimize the potential for ecological receptor exposure on a long-term basis.

Total BaP Equivalent concentrations in the 0 to 0.5 foot bgs interval at borings HPTP-SB09 (0.488 mg/kg) and HPTP-SB10 (0.1539 mg/kg) exceeded the Residential SCTL (0.1 mg/kg) but were less than the Industrial and Leachability SCTLs. The anticipated long-term use of the site and surrounding area as an airfield combined with the isolated exposure potential to select sample locations makes long-term human exposure under a residential scenario highly unlikely. It is also noteworthy to mention that both samples were collected from areas formerly covered by an asphalt apron that surrounded the concrete HPTP. The potential exists that the presence of PAHs in the surface may be due entirely, or in part, to the asphalt paving since none of these constituents were detected above their respective screening levels in the deeper, subsurface soil samples.

Between 2001 and 2015, vinyl chloride was the only constituent to ever exceed its GCTL (1 µg/L). The areal extent of the exceedances are confined to adjacent wells HPTP-MW03 and HPTP-MW04. Concentrations have declined since 2001 and now hover at approximately 2 µg/L in HPTP-MW04, the downgradient well of the pair. Data collected to date suggest natural attenuation processes have played an important role at the site in the breakdown of TCE resulting in the formation of degradation byproducts DCE and vinyl chloride. TCE has been depleted and cis-1,2-DCE and vinyl chloride concentrations have declined since 2001. DO concentrations in HPTP-MW04 ranged from 0.41 to 0.61 mg/L during the ESI. At these concentrations aerobic biological activity capable of further degrading vinyl chloride is suspected to be impaired as demonstrated by the lack of further reduction in vinyl chloride concentrations between January 2014 and March 2015.

Figure 5-1 shows the conceptual site model. The model's sole exposure pathway is to industrial/commercial (construction) workers from groundwater.





X - Denotes an incomplete exposure pathway.

Figure 5-1
Conceptual Site Model
Site 57, S-3 High Power Turn Up Pad
NAS Jacksonville
Jacksonville, Florida

NAVFAC Naval Facilities Engineering Command
RESOLUTION CONSULTANTS

REQUESTED BY: TH	DATE: 6/11/2013
DRAWN BY: SS	TASK ORDER NUMBER: JM30

X:\Navy\NAS_JAX\project\Fig10-4_CSM.mxd

5.2 Recommendations

The NAS Jacksonville Tier I Partnering Team made a consensus decision to perform an enhanced bioremediation pilot study to evaluate whether oxygen release compound socks can effectively increase DO levels enough to stimulate further degradation of cis-1,2-DCE and vinyl chloride. The goal of the pilot study, if successful, is to collect the data necessary to support the future development of a focused feasibility study. The pilot study design will be detailed in a separate work plan. No further action is recommended with respect to soil.

6.0 REFERENCES

ABB Environmental Services, Inc. *Remedial Investigation and Feasibility Study Operable Unit 1, Naval Air Station Jackson, Jacksonville, Florida.* March 1996.

Intergovernmental Data Quality Task Force. *Uniform Federal Policy for Quality Assurance Project Plans. Evaluating, Assessing, and Documenting Environmental Data Collection and Use Programs, Parts 1, 2A, 2B, and 2C*. EPA-505-B-04-900A, Final, Version 1. March 2005.

Florida Department of Environmental Protection. *Process for Assessing Data Usability*, DEP-EA 001/01. March 2008.

Malcom Pirnie, Inc. *Final Preliminary Assessment, Naval Air Station Jacksonville, Florida.* December 2007.

Resolution Consultants. *Sampling and Analysis Plan, Site Inspection for PSC 57 S-3 High Power Turn up Pad at NAS Jacksonville, Florida.* Prepared for Department of the Navy, Naval Facilities Engineering Command Southeast. December 2013.

Tetra Tech. *Contamination Assessment Plan for High Power Turn-Up Pad Naval Air Station Jacksonville, Jacksonville, Florida.* Prepared for Department of the Navy, Southern Division, Naval Facilities Engineering Command. August 2001.

— Tetra Tech. *Site Investigation Report, Petroleum Contaminated Area 57 — High Power Turn-up Pad, Naval Air Station Jacksonville, Jacksonville, Florida.* Prepared for Department of the Navy, Southern Division, Naval Facilities Engineering Command. June 2002.

United States Army. *Range Regulations for Firing Ammunition in Time of Peace,* Maintenance of Supplies and Equipment, Army Regulations, AR 750-10. May 1939.

U.S. Department of Defense. *Department of Defense Quality Systems Manual for Environmental Laboratories*, Version 4.2. October 2010.

United States Navy. *Navy Programming Guide,* NAVAER 00-100-504, United States Naval Aeronautical Shore Facility. March 1958.

Appendix A
Pre-Fieldwork Documents

EXCAVATION / DIGGING PERMIT
NAS Jacksonville

NAS Code 162____
Date Received/Initials
_____/_____

1a. Date of Request (min. 7 days prior to required date): December 10, 2013	1b. Date Required: January 3, 2014	1c. Permit # (for expired permits/phases):
1d. Requestor name/initials: David A. Myers (person performing/supervising excavations should be present for locates)		1e. Company/Organization: Resolution Consultants (EnSafe Inc.)
1f. Requestor Phone: (904) 367-4324	1g. Cell Phone/Pager: (865) 286-3419	1h. Fax: (904) 367-4328
2a. Project Name: S-3 High Power Turn-Up Pad		
2b. Government Contract Office: NAVFAC		2c. Government Contract Number: N62470-11-D-8013 (CTO JM19)
2d. Government Contract POC: Adrienne Wilson	2e. Government Contract POC Phone: (904) 542-6160	2f. Cell Phone/Pager:

3. Scope of Work/Excavations (Specify Purpose, Methods, Extent of Excavations - Drawings of Site Must Be Attached):

Proposed sub-surface work located at S-3 High Power Turn-Up Pad which is approximately 860 feet from edge of NAS JAX Runway 14-32 in northeast direction. Sub-surface work includes installation by mechanical drill-rig of a temporary monitoring well approximately 15 feet in depth. Additionally, soil samples at depths between 1 and 4 feet below ground surface will be collected at 10 locations by hand-auger. The proposed locations of the temporary monitoring well and the soil samples will be marked by wooden stake or white paint prior to request for utility locating. See attached location map.

4a. Request Approval/Disapproval (FED 162; 542-6427, ext 126)(Prior to Locates): Vern Smith (Name); Vern Smith 12-2013 (Signature/Date); FED: 13-386 (Tracking #)		4b. Reason for Disapproval (if required): DOD 30L; Vern Smith PWD 542-0144 fax

Utility/Org	Responsible Organization	Phone #	Ticket #	Locate Completed Yes	Locate Completed No	Name of Locator	Initial	Date	Attached Notes (y/n)
5a. Electrical ✓	FFS	Fax: 542-5333							
	CCPWR								
5b. Steam/ Comp. Air	FFS								
5c. Sewage	BRADY								
5d. Water	BRADY								
5e. Nat. Gas	Sunshine State One Call	1-800-432-4770							
Jax Housing	FFS	FAX: 542-5333	NA						
Yiwwater Housing	FFS	FAX: 542-5333	NA						
5f. Non-Gov Tel/Com	Sunshine State One Call	1-800-432-4770							
5g. CATV	Sunshine State One Call	1-800-432-4770							
5h. Gov Tel/Com ✓	NCTS Bldg 27	Fax: 542-6134							
5i. NAS Environmnt ✓	FED Code 184	Fax: 542-4368							
5j. Irrigation	KIRA	Fax: 771-3599	NA						
5k. Other	Access Logic	Fax: 771-3599							

6. Permit Request Approval (After Locates) (Permit must be maintained at the Job Site):

VERN SMITH	Vern Smith 1-16-14	FED-13-386 / 2-16-14 VS
Name (Fed Code 162)	Signature/Date	Permit #/Expiration date (30 days from App)

16-Jan-2014 11:07 HP 102
1/11

EXCAVATION / DIGGING PERMIT
NAS Jacksonville

NAS Code 182____
Date Received/Initials
_____/_____

1a. Date of Request (min. 7 days prior to required date): December 10, 2013
1b. Date Required: January 3, 2014
1c. Permit # (for expired permits/phone):

1d. Requestor Name/Initials: David A. Myers (person performing/supervising excavations should be present for locates)
1e. Company/Organization: Resolution Consultants (EnSafe Inc.)

1f. Requestor Phone: (904) 367-4324
1g. Cell Phone/Pager: (865) 285-3419
1h. Fax: (904) 367-4328

2a. Project Name: S-3 High Power Turn-Up Pad

2b. Government Contract Office: NAVFAC
2c. Government Contract Number: N62470-11-D-8013 (OTO JM19)

2d. Government Contract POC: Adrienne Wilson
2e. Government Contract POC Phone: (904) 542-6160
2f. Cell Phone/Pager:

3. Scope of Work/Excavations (Specify Purpose, Methods, Extent of Excavations - Drawings of Site Must Be Attached):
Proposed sub-surface work located at S-3 High Power Turn-Up Pad which is approximately 660 feet from edge of NAS JAX Runway 14-32 in northeast direction. Sub-surface work includes installation by mechanical drilling of a temporary monitoring well approximately 18 feet in depth. Additionally, soil samples at depths between 1 and 4 feet below ground surface will be collected at 10 locations by hand-auger. The proposed locations of the temporary monitoring well and the soil samples will be marked by wooden stake or white paint prior to request for utility locating. See attached location map.

4a. Request Approval/Disapproval (FEC 182; 542-5427, ext 126)(Prior to Locates): 13-386
Vern Smith — Name
12/13 — Signature/Date
BED: 13-386 — Tracking #
4b. Reason for Disapproval (if required): DOD 301
Vern Smith FWD 542-0144 fax

Utility/Org	Responsible Organization	Phone #	Ticket #	Locate Completed Yes	Locate Completed No	Name of Locator	Initial	Date	Attached Notes (y/n)
5a. Electrical ✓	FPG	Fax: 542-4318							
	COPWR								
5b. Steam/Comp. Air	FPG								
5c. Sewage	DRABY								
5d. Water	DRABY								
5e. Nat. Gas	Sunshine State One Call	1800-432-4770							
5f. Fuel Hauling	FPG	FAX: 542-4313	NA						
Firewater Hauling	FPG	FAX: 542-4313	NA						
5f. Non-Gov Telecom	Sunshine State One Call	1800-432-4770							
5g. CATV	Sunshine State One Call	1800-432-4770							
5h. Gov Telecom ✓	NCTS Bldg 87	FAX: 542-6134							
5i. NAS Environmental ✓	FEC Code 184	FAX: 542-4380	ER Site Contaminated. OSHA Training & PPE are required				EACER	1810, 1120	
5j. Irrigation	KIRA	Fax: 771-3500	NA			T. Curtin			
5k. Other	Access Logic	Fax: 771-3500				542-4228			

6. Permit Request Approval (After Locates) (Permit must be maintained at the Job Site):

Name (Fac Code 182) _____ Signature/Date _____ Permit #/Expiration Date (30 days from App) _____

NAS JAX FORM FEC001 7MAR08 (Page 1 of 2) PROCEEDING ON REVERSE

NAS Code 152____
Date Received/Initials
_____/_____

EXCAVATION / DIGGING PERMIT
NAS Jacksonville

1a. Date of Request (min. 7 days prior to required date): December 10, 2013	1b. Date Required: January 3, 2014	1c. Permit # (for expired permits/phases):
1d. Requestor name/initials: David A. Myers (person performing/supervising excavations-should be present for locates)		1e. Company/Organization: Resolution Consultants (EnSafe Inc.)
1f. Requestor Phone: (904) 367-4324	1g. Cell Phone/Pager: (865) 288-3419	1h. Fax: (904) 367-4328
2a. Project Name: S-3 High Power Turn-Up Pad		
2b. Government Contract Office: NAVFAC		2c. Government Contract Number: N62470-11-D-8013 (CTO JM19)
2d. Government Contract POC: Adrianne Wilson	2e. Government Contract POC Phone: (904) 542-6160	2f. Cell Phone/Pager:

3. Scope of Work/Excavations (Specify Purpose, Methods, Extent of Excavations - Drawings of Site Must Be Attached):
Proposed sub-surface work located at S-3 High Power Turn-Up Pad which is approximately 560 feet from edge of NAS JAX Runway 14-32 in northeast direction. Sub-surface work includes installation by mechanical drilling of a temporary monitoring well approximately 18 feet in depth. Additionally, soil samples at depths between 1 and 4 feet below ground surface will be collected at 10 locations by hand-auger. The proposed locations of the temporary monitoring well and the soil samples will be marked by wooden stake or white paint prior to request for utility locating. See attached location map.

4a. Request Approval/Disapproval (FSD 152; 542-5427, ext 125)(Prior to Locates):		4b. Reason for Disapproval (if required):
Vern Smith Name	12-30-13 Signature/Date	13-386 EED: 13-386 Tracking #
		B00302 Vern Smith PWD 542-0144 fax

Utility/Org	Responsible Organization	Phone #	Ticket #	Locate Completed Yes	Locate Completed No	Name of Locator	Initial	Date	Attached Notes (y/n)
5a. Electrical ✓	FPU COPWR	(Fax) 542-4333							
5b. Steam/ Comp. Air	NNG								
5c. Sewage	BRADY								
5d. Water	BRADY								
5e. Nat. Gas	Sunshine State One Call	(800-432-4770)							
Jax Housing	FPU	FAX: 542-5333	NA						
Yiewater Housing	FPU	FAX: 542-5333	NA						
5f. Non-Gov Tel/Com	Sunshine State One Call	(800-432-4770)							
5g. CATV	Sunshine State One Call	(800-432-4770)							
5h. Gov Tel/Com ✓	NCTS Bldg 27	Fax: 542-3134		✓		B. Bullinger	B.B.	Dec	26, 2013
5i. NAS Environment ✓	FSD Code 152	Fax: 542-4366							
5j. Irrigation	KIRA	Fax: 771-3599	NA						
5k. Other	Access Logic	Fax: 771-3599							

6. Permit Request Approval (After Locates) (Permit must be maintained at the job site):

Name (Fac Code 152)	Signature/Date	Permit W/Expiration date (30 days from App)

NASJAX FORM FSD001 7MAR08 (Page 1 of 2) PROCEDURES ON REVERSE

13122608 2655

EXCAVATION / DIGGING PERMIT
NAS Jacksonville

NAS Code 182___
Date Received/Initials
_____/_____

1a. Date of Request (min. 7 days prior to required date): December 10, 2013	1b. Date Required: January 3, 2014	1c. Permit # (for expired permits/phases):
1d. Requestor name/initials: David A. Myers (person performing/supervising excavations should be present for locates)		1e. Company/Organization: Resolution Consultants (EnSafe Inc.)
1f. Requestor Phone: (904) 367-4324	1g. Cell Phone/Pager: (855) 266-3419	1h. Fax: (904) 367-4328
2a. Project Name: S-3 High Power Turn-Up Pad		
2b. Government Contract Office: NAVFAC		2c. Government Contract Number: N62470-11-D-8013 (CTO JM19)
2d. Government Contract POC: Adrienne Wilson	2e. Government Contract POC Phone: (904) 542-6160	2f. Cell Phone/Pager:

3. Scope of Work/Excavations (Specify Purpose, Methods, Extent of Excavations - Drawings of Site Must Be Attached):

Proposed sub-surface work located at S-3 High Power Turn-Up Pad which is approximately 660 feet from edge of NAS JAX Runway 14-32 in northeast direction. Sub-surface work includes installation by mechanical drill-rig of a temporary monitoring well approximately 16 feet in depth. Additionally, soil samples at depths between 1 and 4 feet below ground surface will be collected at 10 locations by hand-auger. The proposed locations of the temporary monitoring well and the soil samples will be marked by wooden stake or white paint prior to request for utility locating. See attached location map.

4a. Request Approval/Disapproval (FED 182; 542-5427, ext 126)(Prior to Locates): Vern Smith (Name)	Signature/Date: 12/2013	FED: 13-386 Tracking #
4b. Reason for Disapproval (if required): BOD 30L	Vern Smith PWO 542-0144 fax	

Utility/Org	Responsible Organization	Phone #	Ticket #	Locate Completed Yes	Locate Completed No	Name of Locator	Initial	Date	Attached Notes (y/n)
5a. Electrical	FPB OCPWR	Fax: 542-5338	230813	✓					
5b. Steam/ Comp. Air	FPB		230815	✓					
5c. Sewage	BRADY		230817	✓					
5d. Water	BRADY		230816	✓					
5e. Nat. Gas	Sunshine State One Call	1-800-432-4770							
Jax Housing	FPB	FAX: 542-5333	NA						
Viewpoint Housing	FPB	FAX: 542-5333	NA						
5f. Non-Gov Tel/Com	Sunshine State One Call	1-800-432-4770							
5g. CATV	Sunshine State One Call	1-800-432-4770							
5h. Gov Tel/Com	NCTC Bldg 27	Fax: 542-8134							
5i. NAS Environment	PRD Code 184	Fax: 542-4528							
5j. Irrigation	KIRA	Fax: 771-3598	NA						
5k. Other	Access Logic	Fax: 771-3598							

6. Permit Request Approval (After Locates) (Permit must be maintained at the Job Site):

Name (Fed Code 182)	Signature/Date	Permit #/Expiration date (30 days from App)

NASJAX FORM FED001 7MAR08 (Page 1 of 2) (PROCEDURES ON REVERSE)

EXCAVATION / DIGGING PERMIT
NAS Jacksonville

NAS Code 182___
Date Received/Initials
_____/_____

1a. Date of Request (min. 7 days prior to required date): December 10, 2013	1b. Date Required: January 3, 2014	1c. Permit # (for expired permits/phases):
1d. Requestor name/initials: David A. Myers (person performing/supervising excavations should be present for location)		1e. Company/Organization: Resolution Consultants (EnSafe Inc.)
1f. Requestor Phone: (904) 367-4324	1g. Cell Phone/Pager: (865) 266-3419	1h. Fax: (904) 367-4328
2a. Project Name: S-3 High Power Turn-Up Pad		
2b. Government Contract Office: NAVFAC		2c. Government Contract Number: N62470-11-D-8013 (CTO JM13)
2d. Government Contract POC: Adrienne Wilson	2e. Government Contract POC Phone: (904) 542-6180	2f. Cell Phone/Pager:

3. Scope of Work/Excavations (Specify Purpose, Methods, Extent of Excavations - Drawings of Site Must Be Attached):

Proposed sub-surface work located at S-3 High Power Turn-Up Pad which is approximately 860 feet from edge of NAS JAX Runway 14-32 in northeast direction. Sub-surface work includes installation by mechanical drilling of a temporary monitoring well approximately 15 feet in depth. Additionally, soil samples at depths between 1 and 4 feet below ground surface will be collected at 10 locations by hand-auger. The proposed locations of the temporary monitoring well and the soil samples will be marked by wooden stake or white paint prior to request for utility locating. See attached location map.

4a. Request Approval/Disapproval (FED 182) 542-5427, ext 126)(Prior to Location): Vern Smith (Name) — Signature/Date: 12-2013 — FED: 13-386 (Tracking #)		4b. Reason for Disapproval (if required): DOD 30C — Vern Smith FWD 542-0144 fax

Utility/Org	Responsible Organization	Phone #	Ticket #	Locate Completed Yes	Locate Completed No	Name of Locator	Initial	Date	Attached Notes (y/n)
5a. Electrical ✓	FPR CCPWR	FAX: 542-5333	230813						
5b. Steam/ Comp. Air	FPS		230815						
5c. Sewage	BRADY		230817						
5d. Water	BRADY		230816	✓		S. Worster	[illegible]	12-31	N
5e. Nat. Gas	Sunshine State One Call	1-800-432-4770							
Jax Housing	FPS	FAX: 542-5333	NA						
Yrwater Housing	FPS	FAX: 542-5333	NA						
5f. NonGov Tel/Com	Sunshine State One Call	1-800-432-4770							
5g. CATV	Sunshine State One Call	1-800-432-4770							
5h. Gov Tel/Com ✓	NCTS Bldg 27	FAX: 542-6134							
5i. NAS Environment ✓	FED Code 184	FAX: 542-4260							
5j. Irrigation	KIRA	FAX: 771-3599	NA						
5k. Other	Access Logic	FAX: 771-3599							

6. Permit Request Approval (After Location) (Permit must be maintained at the Job Site):

Name (Fed Code 182) _____ Signature/Date _____ Permit #/Expiration date (30 days from App) _____

EXCAVATION / DIGGING PERMIT
NAS Jacksonville

NAS Code 182____
Date Received/Initials
_____/_____

1a. Date of Request (min. 7 days prior to required date): December 10, 2013	1b. Date Required: January 3, 2014	1c. Permit # (for expired permits/phases):
1d. Requester name/initials: David A. Myers (person performing/supervising excavations should be present for locates)		1e. Company/Organization: Resolution Consultants (EnSafe Inc.)
1f. Requester Phone: (904) 367-4324	1g. Cell Phone/Pager: (855) 266-3419	1h. Fax: (904) 367-4328
2p. Project Name: S-3 High Power Turn-Up Pad		
2b. Government Contract Office: NAVFAC		2c. Government Contract Number: N62470-11-D-8013 (CTO JM19)
2d. Government Contract POC: Adrienne Wilson	2e. Government Contract POC Phone: (904) 542-6180	2f. Cell Phone/Pager:

3. Scope of Work/Excavations (Specify Purpose, Methods, Extent of Excavations - Drawings of Site Must Be Attached):

Proposed sub-surface work located at S-3 High Power Turn-Up Pad which is approximately 660 feet from edge of NAS JAX Runway 14-32 in northeast direction. Sub-surface work includes installation by mechanical drill-rig of a temporary monitoring well approximately 15 feet in depth. Additionally, soil samples at depths between 1 and 4 feet below ground surface will be collected at 10 locations by hand-auger. The proposed locations of the temporary monitoring well and the soil samples will be marked by wooden stake or white paint prior to request for utility locating. See attached location map.

4a. Request Approval/Disapproval (FED 182) 542-5427, ext 1R6) (Prior to Locates):		4b. Reason for Disapproval (if required): BOD 30L
Vern Smith Name	Signature/Date 12-30-13	FED: 13-386 Tracking #
		Vern Smith PWD 542-6144 fax

Utility/Org	Responsible Organization	Phone #	Ticket #	Locate Completed Yes	Locate Completed No	Name of Locator	Initial	Date	Attached Notes (y/n)
5a. Electrical ✓	FFS COPWR	Fax: 542-6133	230813						
5b. Steam/Comp. Air	FFS		230815	NA		C. Johns	CJ	12-27-13	
5c. Sewage	BRADY		230817						
5d. Water	BRADY		230816						
5e. Nat. Gas	Sunshine State One Call	1-800-432-4770							
Jax Housing	FFS	FAX: 542-6303	NA						
Yiewater Housing	FFS	FAX: 542-6303	NA						
5f. Non-Gov Telecom	Sunshine State One Call	1-800-432-4770							
5g. CATV	Sunshine State One Call	1-800-432-4770							
5h. Gov Telecom ✓	NCTS Bldg 27	Fax: 542-6134							
5i. NAS Environmnt ✓	FED Code 184	Fax: 542-4306							
5j. Irrigation	KIRA	Fax: 771-3599	NA						
5k. Other	Antenna Logic	Fax: 771-3599							

6. Permit Request Approval (After Locates) (Permit must be maintained at the Job Site):

Name (Fed Code 182)	Signature/Date	Permit #/Expiration date (30 days from App)

NASJAX FORM FED001 TNARDS (Page 1 of 2) (PROCEDURES ON REVERSE)

EXCAVATION / DIGGING PERMIT
NAS Jacksonville

NAS Code 182____
Date Received/Initials
_____/_____

1a. Date of Request (min. 7 days prior to required date): December 10, 2013	1b. Date Required: January 3, 2014	1c. Permit # (for expired permits/phases):
1d. Requester name/initials: David A. Myers (person performing/supervising excavations should be present for locates)		1e. Company/Organization: Resolution Consultants (EnSafe Inc.)
1f. Requester Phone: (904) 387-4324	1g. Cell Phone/Pager: (855) 266-3419	1h. Fax: (904) 387-4328
2a. Project Name: S-3 High Power Turn-Up Pad		
2b. Government Contract Office: NAVFAC		2c. Government Contract Number: N62470-11-D-8013 (CTO JM19)
2d. Government Contract POC: Adrienne Wilson	2e. Government Contract POC Phone: (904) 542-6160	2f. Cell Phone/Pager:

2. Scope of Work/Excavation (Specify Purpose, Methods, Extent of Excavations - Drawings of Site Must Be Attached):

Proposed sub-surface work located at S-3 High Power Turn-Up Pad which is approximately 360 feet from edge of NAS JAX Runway 14-32 in northeast direction. Sub-surface work includes installation by mechanical drill-rig of a temporary monitoring well approximately 15 feet in depth. Additionally, soil samples at depths between 1 and 4 feet below ground surface will be collected at 10 locations by hand-auger. The proposed locations of the temporary monitoring well and the soil samples will be marked by wooden stake or white paint prior to request for utility locating. See attached location map.

4a. Request Approval/Disapproval (FED 182; 542-5427, ext 126)(Prior to Location): Vern Smith (Name); Vern Smith 12-10-13 (Signature/Date); FED: 13-386 (Tracking #)	13-386	4b. Reason for Disapproval (if required): DOD 30C; Vern Smith PWD 542-6144 fax

Utility/Org	Responsible Organization	Phone #.	Ticket #	Locate Completed Yes	Locate Completed No	Name of Locator	Initial	Date	Attached Notes (y/n)
5a. Electrical ✓	FFS GOPWR	Fax: 542-5333	230813	✓		[illegible]	[illegible]	12-31-13	
5b. Steam/ Comp. Air	FFS		230815						
5c. Sewage	BRADY		230817						
5d. Water	BRADY		230816						
5e. Nat. Gas	Sunshine State One Call	1800-432-4770							
Jax Housing	FFS	FAX: 542-5333	NA						
Yiuwater Housing	FFS	FAX: 542-5333	NA						
5f. Non-Gov Tel/Com	Sunshine State One Call	1800-432-4770							
5g. CATV	Sunshine State One Call	1800-432-4770							
5h. Gov Tel/Com ✓	NCTS Bldg 27	Fax: 542-5134							
5i. NAS Environment ✓	FED Code 184	Fax: 542-4358							
5j. Irrigation	KIRA	Fax: 771-3599	NA						
5k. Other	Access Logic	Fax: 771-3599							

6. Permit Request Approval (After Locates) (Permit must be maintained at the Job Site):

Name (Fed Code 182) _____ Signature/Date _____ Permit #/Expiration date (30 days from App) _____

EXCAVATION / DIGGING PERMIT
NAS Jacksonville

NAS Code 182____
Date Received/Initials
_____/_____

1a. Date of Request (min. 7 Days prior to required date): December 10, 2013	1b. Date Required: January 3, 2014	1c. Permit # (for expired permits/phones):
1d. Requester name/initials: David A. Myers (person performing/supervising excavations should be present for location)		1e. Company/Organization: Resolution Consultants (EnSafe Inc.)
1f. Requester Phone: (904) 367-4324	1g. Cell Phone/Pager: (865) 268-3419	1h. Fax: (904) 367-4328
2a. Project Name: S-3 High Power Turn-Up Pad		
2b. Government Contract Office: NAVFAC		2c. Government Contract Number: N62470-11-D-8013 (CTO JM19)
2d. Government Contract POC: Adrienne Wilson	2e. Government Contract POC Phone: (904) 542-6160	2f. Cell Phone/Pager:

3. Scope of Work/Excavations (Specify Purpose, Methods, Extent of Excavations - Drawings of Site Must Be Attached):

Proposed sub-surface work located at S-3 High Power Turn-Up Pad which is approximately 560 feet from edge of NAS JAX Runway 14-32 in northeast direction. Sub-surface work includes installation by mechanical drill-rig of a temporary monitoring well approximately 15 feet in depth. Additionally, soil samples at depths between 1 and 4 feet below ground surface will be collected at 10 locations by hand-auger. The proposed locations of the temporary monitoring well and the soil samples will be marked by wooden stake or white paint prior to request for utility locating. See attached location map.

4a. Request Approval/Disapproval (FED 182) 542-5427, ext 126) (Prior to Locates): Vern Smith / Name	Vs [signature] 12-13-13 / Signature/Date — FED: ~~13-386~~ 13-386 / Tracking #	4b. Reason for Disapproval (if required): BOA 30L — Vern Smith PWD 542-5144 fax

Utility/Org	Responsible Organization	Phone #	Ticket #	Locate Completed Yes	Locate Completed No	Name of Locator	Initial	Date	Attached Notes (y/n)
5a. Electrical	FPS	Fax: 542-5121	230813						
	COMPWR								
5b. Steam/Comp. Air	FPS		230815						
5c. Sewage	BRADY		230817	✓		S. Woofter	SW	12-31	N
5d. Water	BRADY		230816						
5e. Nat. Gas	Sunshine State One Call	1-800-432-4770							
Jax Housing	FPS	FAX: 542-5003	NA						
Riverwater Housing	FPS	FAX: 542-3333	NA						
5f. Non-Gov Tel/Com	Sunshine State One Call	1-800-432-4770							
5g. CATV	Sunshine State One Call	1-800-432-4770							
5h. Gov Tel/Com	NCTS Bldg 27	Fax: 542-6134							
5i. NAS Environment	FED Code 184	FAX: 542-4366							
5j. Irrigation	KIRA	Fax: 771-3600	NA						
5k. Other	Access Login	Fax: 771-3099							

6. Permit Request Approval (After Location) (Permit must be maintained at the Job Site):

Name (Fed Code 182) _____ Signature/Date _____ Permit #/Expiration date (30 days from App) _____

NASJAX FORM FED001 7MAR08 (Page 1 of 2) *PROCEDURES ON REVERSE*

EXCAVATION / DIGGING PERMIT
NAS Jacksonville

NAS Code 182____
Date Received/Initials
_____/_____

1a. Date of Request (min. 7 days prior to required date): December 10, 2013	1b. Date Required: January 3, 2014	1c. Permit # (for expired permits/phases):
1d. Requestor name/initials: David A. Myers (person performing/supervising excavations should be present for locates)		1e. Company/Organization: Resolution Consultants (EnSafe Inc.)
1f. Requestor Phone: (904) 367-4324	1g. Cell Phone/Pager: (865) 266-3419	1h. Fax: (904) 367-4328
2a. Project Name: S-3 High Power Turn-Up Pad		
2b. Government Contract Office: NAVFAC		2c. Government Contract Number: N62470-11-D-8013 (CTO JM13)
2d. Government Contract POC: Adrienne Wilson	2e. Government Contract POC Phone: (904) 542-6180	2f. Cell Phone/Pager:

3. Scope of Work/Excavations (Specify Purpose, Methods, Extent of Excavations - Drawings of Site Must Be Attached):

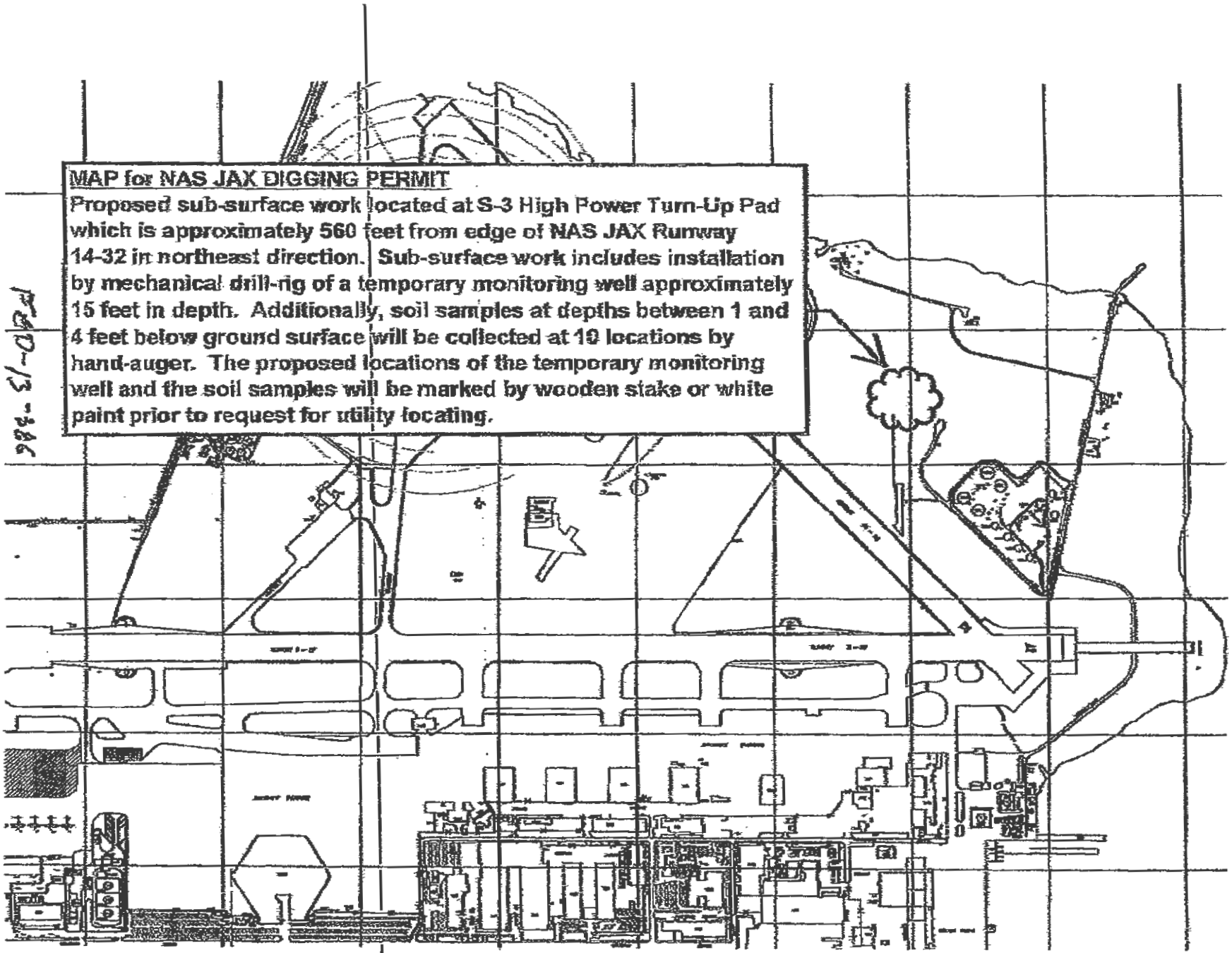
Proposed sub-surface work located at S-3 High Power Turn-Up Pad which is approximately 560 feet from edge of NAS JAX Runway 14-32 in northeast direction. Sub-surface work includes installation by mechanical drilling of a temporary monitoring well approximately 18 feet in depth. Additionally, soil samples at depths between 1 and 4 feet below ground surface will be collected at 10 locations by hand-auger. The proposed locations of the temporary monitoring well and the soil samples will be marked by wooden stake or white paint prior to request for utility locating. See attached location map.

4a. Request Approval/Disapproval (FED 182) 542-5421, ext 126)(Prior to Locates): Vern Smith (Name)	Vern Smith 12-16-13 (Signature/Date)	FED: 13-386 (Tracking #)
4b. Reason for Disapproval (if required): DOA 30L	Vern Smith PWD 542-0144 fax	

Utility/Org	Responsible Organization	Phone #	Ticket #	Locate Completed Yes	Locate Completed No	Name of Locator	Initial	Date	Attached Notes (y/n)
5a. Electrical	PPR CCPWR	PPR: 542-5333	230813						
5b. Steam/ Comp. Air	FFS		230815						
5c. Sewage	BRADY		230817						
5d. Water	BRADY		230816	✓		S. Worster	SW	12-31	N
5e. Nat. Gas	Sunshine State One Call	1-800-432-4770							
Jax Housing	FFS	FAX: 542-5333	NA						
Yhowster Housing	FFS	FAX: 542-5333	NA						
5f. Non-Gov Tel/Com	Sunshine State One Call	1-800-432-4770							
5g. CATV	Sunshine State One Call	1-800-432-4770							
5h. Gov Tel/Com	NCTS Bldg 27	Fax: 542-6134							
5i. NAS Environment	FED Code 184	Fax: 542-4360							
5j. Irrigation	KIRA	Fax: 771-3599	NA						
5k. Other	Access Login	Fax: 771-3598							

6. Permit Request Approval (After Locates) (Permit must be maintained at the Job Site):

Name (Fed Code 182)	Signature/Date	Permit #/Expiration date (30 days from App)


MAP for NAS JAX DIGGING PERMIT
Proposed sub-surface work located at S-3 High Power Turn-Up Pad which is approximately 560 feet from edge of NAS JAX Runway 14-32 in northeast direction. Sub-surface work includes installation by mechanical drill-rig of a temporary monitoring well approximately 15 feet in depth. Additionally, soil samples at depths between 1 and 4 feet below ground surface will be collected at 10 locations by hand-auger. The proposed locations of the temporary monitoring well and the soil samples will be marked by wooden stake or white paint prior to request for utility locating.

PED-13-386

David Myers

From:	irth_host@callsunshine.com
Sent:	Tuesday, January 07, 2014 1:05 PM
To:	David Myers
Subject:	Response to Sunshine State One Call ticket 004400005

The following facility operators have responded for this locate request:

Ticket 004400005
FL : DUVAL County, JACKSONVILLE City
CATAPULT RD

SOUTHERN NATURAL GAS COMPANY
- No Conflict - utility is outside of the requested work site

JACKSONVILLE ELECTRIC AUTHORITY:JEA-WSBU WATER
- Unmarked - Not service provider for this location

JACKSONVILLE ELECTRIC AUTHORITY: JEA-WSBU - SEWER
- Unmarked - Not service provider for this location

JACKSONVILLE ELECTRIC AUTHORITY
- Unmarked - Not service provider for this location

SAWYER GAS (602)
- ***Response has not been entered***

A T & T/ DISTRIBUTION
- Clear No Facilities

COMCAST CABLE COMMUNICATIONS INC
- Clear No Facilities

TECO PEOPLES GAS JACKSONVILLE
- No Conflict - utility is outside of the requested work site

---

The most up-to-date response status can always be gathered at http://www.online811.com/IRTHOneCall/ or by calling 1 - (800) 852 - 8057.

16-Jan-2014 11:07 HP 102 11/11

Appendix B
Groundwater Sampling Forms

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NAS JAX	SITE LOCATION: HPTP / Site 57	
WELL NO: HPTP-TW01	SAMPLE ID: HPTP-TW01-0114	DATE: 1/23/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16 ID	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 3.84	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 20 feet) + 0.10 gallons = 0.128 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 12.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 12.5	PURGING INITIATED AT: 1119	PURGING ENDED AT: 1211	TOTAL VOLUME PURGED (gallons): 1.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP	COLOR/ODOR (describe)
1156	0.25	0.25	0.08	4.23	6.33	20.57	0.430	0.91	8.14	-82.1	clear
1159	0.25	0.5	0.08	4.24	6.35	20.60	0.427	1.02	6.19	-83.4	clear
1202	0.25	0.75	0.08	4.24	6.39	20.67	0.426	0.81	5.82	-100.5	clear
1205	0.25	1.0	0.08	4.24	6.35	20.78	0.425	0.65	4.43	-100.9	clear
1208	0.25	1.25	0.08	4.24	6.36	20.87	0.423	0.54	3.91	-104.2	clear
1211	0.25	1.5	0.08	4.24	6.35	21.12	0.422	0.49	3.41	-104.7	clear

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Parker Adams / BC	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1212	SAMPLING ENDED AT: 1225
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2		1L	—			PAH		
	1		250mL	HNO_3			Metals		
	3		40mL	—			VOCs		

REMARKS: Temperature rising as day does along; Stick up, 1.9' from bls

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)
"J" = indicates that the calibration result for the parameter of concern was outside of the acceptable criteria for standard range.

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NAS JAX		SITE LOCATION: HPTP	
WELL NO: MW-01	SAMPLE ID: HPTP-MW01-0114		DATE: 1/24/14

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16 ID	WELL SCREEN INTERVAL DEPTH: 2.5 feet to 12.5 feet	STATIC DEPTH TO WATER (feet): 3.64	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 30 feet) + 0.10 gallons = 0.14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1441	PURGING ENDED AT: 1515	TOTAL VOLUME PURGED (gallons): 1.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP	COLOR/ODOR (describe)
1505	0.75	0.75	0.05	3.98	7.30	15.51	0.372	2.31	9.07	3.1	clear
1508	0.25	1.0	0.05	3.97	7.31	15.33	0.372	2.29	9.11	4.2	clear
1511	0.15	1.15	0.05	3.98	7.32	15.30	0.371	2.38	7.87	2.2	clear
1514	0.15	1.3	0.05	3.98	7.31	15.29	0.371	2.37	8.01	2.4	clear

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Parker Adams	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1516	SAMPLING ENDED AT: 1525
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: (PUMP) Y N	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	3		40 mL	—			VOCs		
	2		1L	—			PAH		
	1		250 mL	HNO_3			Metals		

REMARKS: Tried lowering flow rates, raising tubing, lower flow rate again, DO would not get below 2 or 20% saturation

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

"J" = indicates that the calibration result for the parameter of concern was outside of the acceptable criteria for standard range.

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NAS JAX		SITE LOCATION: HPTP	
WELL NO: MW-02	SAMPLE ID: HPTP-MW02-0114		DATE: 1/24/14

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16 ID	WELL SCREEN INTERVAL DEPTH: 2 feet to 12 feet	STATIC DEPTH TO WATER (feet): 0.20	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.10 0.4 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1129	PURGING ENDED AT: ~~1129~~ 1222	TOTAL VOLUME PURGED (gallons): 1.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP	COLOR/ODOR (describe)
1213	0.5	0.5	0.1	0.51	7.05	17.14	0.523	0.73	22.9	-94.0	clear
1216	0.3	0.8	0.1	0.51	7.01	17.24	0.523	0.58	20.9	-96.5	clear
1219	0.25	1.05	0.1	0.50	7.02	17.32	0.523	0.55	20.8	-97.7	clear
1222	0.25	1.3	0.1	0.50	7.01	17.36	0.522	0.56	19.6	-98.1	clear

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Parker Adams / RC	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1224	SAMPLING ENDED AT: 1250
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: (PUMP) Y N	TUBING Y (N) (replaced)	DUPLICATE: Y (N) B-1 MS/MSD	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	9		40mL	—			VOCs		
	6		1L	—			PAH		
	3		250mL	HNO_3			Metals		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (S

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (s optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (which **"J" = indicates that the calibration result for the parameter of concern was outside of the acceptable criteria for st**

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NAS JAX		SITE LOCATION: HPTP/Site 57	
WELL NO: MW-03	SAMPLE ID: HPTP-MW03-0114		DATE: 1/24/14

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16 ID	WELL SCREEN INTERVAL DEPTH: 2 feet to 12 feet	STATIC DEPTH TO WATER (feet): 0.06	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.10 gallons = 1.6 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1326	PURGING ENDED AT: 1410	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP	COLOR/ODOR (describe)
1400	0.5	0.5	0.07	0.66	6.32	15.77	0.351	0.70	6.18	-26.6	clear
1403	0.2	0.7	0.07	0.66	6.32	15.72	0.350	0.57	5.68	-24.0	clear
1406	0.2	0.9	0.07	0.66	6.31	15.77	0.349	0.55	6.45	-23.2	clear
1409	0.2	1.1	0.07	0.66	6.33	15.80	0.349	0.51	5.38	-23.1	clear

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Parker Adams / RC	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1411	SAMPLING ENDED AT: 1420
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: Teflon	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: (PUMP) Y N	TUBING Y (N replaced)	DUPLICATE: (Y) N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
HPTP-MW03-0114									
	3		40mL	—			VOCs		
	2		1L	—			PAH		
	1		250mL	HNO_3			Metals		
HPTP-MW03-0114-FD									
		3	40mL	—					
		2	1L	—					
		1	250mL	HNO_3					

REMARKS: * - Standing water in well, bailed water from well + casing, DTW came up in casing, then stabilized

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)
"J" = indicates that the calibration result for the parameter of concern was outside of the acceptable criteria for standard range.

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NAS JAX	SITE LOCATION: NAS JAX / HPTP	
WELL NO: MW-04	SAMPLE ID: HPTP-MW04-0114	DATE: 1/24/14

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16 IP	WELL SCREEN INTERVAL DEPTH: 2 feet to 12 feet	STATIC DEPTH TO WATER (feet): 1.06	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 30 feet) + 0.10 gallons = 0.142 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 0907	PURGING ENDED AT: 1020	TOTAL VOLUME PURGED (gallons): 3.55

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP	COLOR/ODOR (describe)
1010	~~0.50~~ 0.15	~~0.50~~ 3.02	0.1	1.69	6.59	16.08	0.500	0.57	0.96	64.0	clear
1013	0.25	3.25	0.125	1.69	6.59	16.32	0.498	0.49	0.97	61.3	clear
1016	0.15	3.4	0.1	1.69	6.59	16.33	0.500	0.45	0.81	50.5	clear
1019	0.15	3.55	0.1	1.69	6.59	16.46	0.499	0.44	1.07	46.8	clear

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Parker Adams / RC	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1021	SAMPLING ENDED AT: 1030
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: (PUMP) Y N	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3		40 mL	—			VOCs		
	2		1 L	—			PAH		
	1		250 mL	HNO_3			Metals		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)
"J" = indicates that the calibration result for the parameter of concern was outside of the acceptable criteria for standard range.

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NAS JAX	SITE LOCATION: NAS JAX / HPTP / Site 57
WELL NO: MW-05	SAMPLE ID: HPTP-MW05-0114 / DATE: 1/23/14

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16 ID	WELL SCREEN INTERVAL DEPTH: 2 feet to 12 feet	STATIC DEPTH TO WATER (feet): 0.96	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 20 feet) + 0.10 gallons = 0.128 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1410	PURGING ENDED AT: 1553	TOTAL VOLUME PURGED (gallons): 5.2

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP	COLOR/ODOR (describe)
1452	0.25	0.25	0.08	2.79	6.43	18.23	0.425	0.73	15.9	56.0	clear
1455	0.25	0.5	0.08	2.96	6.39	18.13	0.425	0.69	13.3	46.5	clear
1458	0.2	0.7	0.07	3.04	6.38	17.95	0.427	0.56	12.7	38.8	clear
1501	0.1	0.8	0.03	3.09	6.37	17.96	0.430	0.53	12.0	38.3	clear
1504	0.1	0.9	0.03	3.18	6.35	17.96	0.432	0.47	13.75	38.7	clear
1515		1.5		3.63	6.34	17.27	0.454	0.33	10.04	43.8	clear
1546 ~~1318~~		5.0	0.03	6.82	6.30	17.68	0.435	0.15	4.00	14.1	clear
1549 ~~1321~~	0.1	5.1	0.03	6.92	6.29	17.82	0.433	0.16	2.99	14.0	Clear
1552	0.1	5.2	0.03	7.04	6.28	17.89	0.430	0.17	3.67	11.4	clear

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Parker Adams / RC	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1554	SAMPLING ENDED AT: 1610
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: (PUMP) Y N	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3		40 mL	—			VOCs		
	2		1L	—			PAH		
	1		250 mL	HNO_3			Metals		
Would not low flow; stay on well says 12' TD + screened 2 to 12 — appears no free phase of well									

REMARKS: – Stop @ 1425 and switch pump to high speed side b/c not enough suction to get into transfer bottle
– Slowed purge rate considerably @ 1455 to ~200 mL/min ; 1504, raised purge rate to try & reach Groundwater Equilibrium

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)
"J" = indicates that the calibration result for the parameter of concern was outside of the acceptable criteria for standard range.

Resolution Consultants / Form FD 9000-24 (modified)

GROUNDWATER SAMPLING LOG

SITE NAME: NAS Jacksonville – Site 57	SITE LOCATION: Site 57	
WELL NO: HPTP-MW04	SAMPLE ID: HPTP-MW04-0814 HPTP-MW04-0814-FD	SAMPLE DATE/TIME: 08/06/2014 @ 1235

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16 (ID)	WELL SCREEN INTERVAL DEPTH: 2 feet to 12 feet	STATIC DEPTH TO WATER (feet): 2.03	PURGE PUMP TYPE OR BAILER: PERISTALTIC

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable = (___ feet – ___ feet) X ___ gallons/foot = ___ gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable) = 0 gallons + (0.0014 gallons/foot X 15 feet) + 0.1 gallons = 0.121 gallons x 3 = 0.363

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7	PURGING INITIATED AT: 1210	PURGING ENDED AT: 1245	TOTAL VOLUME PURGED (gallons): 3.25

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mg/L)	COLOR/ ODOR (describe)
1220	1.0			2.79	6.62	25.02	0.505	0.53	3.75	2.8	tannish colorless
1223	0.25	1.25	0.083	2.84	6.59	24.81	0.501	0.53	3.22	8.5	"
1226	0.25	1.5	0.083	2.89	6.61	24.57	0.499	0.54	2.21	-1.4	"
1229	0.25	1.75	0.083	2.92	6.59	24.43	0.496	0.42	1.72	-10.2	"
1232	0.25	2.0	0.083	2.94	6.57	24.25	0.495	0.41	1.80	0.4	"

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: D. MYERS / C. Nowalk / RC	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1235	SAMPLING ENDED AT: 1245
PUMP OR TUBING DEPTH IN WELL (feet): 7	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ___ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	DUPLICATE: Y and MS/MSD N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	12	CG	40 mL	HCL	120		Select VOCs*	RFPP	

REMARKS:
*Select VOCs: VC only

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Resolution Consultants / Form FD 9000-24 (modified)

GROUNDWATER SAMPLING LOG

Site Name:	NAS Jacksonville	Site Location:	Site 57	Date:
Well ID:	HPTP-MW01	Sample ID:	HPTP-MW01-0315	3/16/2015

PURGING DATA

Well Diameter (inches):	2	Tubing Diameter (inches):	3/16"	Well Screen Depth feet to	feet	Static Depth to Water (ft):	Pump/Bailer Type
				2.5	12.5	3.43	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only if applicable) = (12.5 ft - 3.43 ft) X 0.16 gal/ft = **1.45 gal**

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOL.

(only if applicable) = 0 gal + (0.0014 gal/ft x ft)+ 0.1 gal = **0.10 gal**

Initial Pump or Tubing Depth in Well (ft)	7	Final Pump or Tubing Depth in Well (ft)	7	Purging Initiated At:	Purging Ended At:	Total Vol Purged (gal):
				11:37	12:11	2.3

Time	Volume Purged (gal)	Cumul. Volume Purged (gal)	Purge Rate (gpm)	Depth to Water (ft)	pH (standard units)	Temp (°C)	Conductivity (mSC/cm)	Dissolved Oxygen (% sat.)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	ORP (mV)
12:00	1.50	1.50	0.07	4.00	7.08	19.97	0.299	7.60%	0.69	3.31	-30.70
12:04	0.50	2.00	0.13	*3.80*	7.09	20.00	0.300	6.80%	0.62	4.00	-44.20
12:07	0.15	2.15	0.05	3.90	7.10	20.08	0.299	7.00%	0.63	3.12	-25.70
12:10	0.15	2.30	0.05	3.90	**7.11**	**20.10**	**0.299**	7.30%	0.65	4.45	-25.00

Purge Color/Odor:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

Sampled by (Print) / Affiliation:	Sampler(s) Signature(s):	Sampling Initiated At:	Sampling Ended At:
D. Myers/C.Nowalk		12:15	12:20

Pump or Tubing Depth in Well (feet):	7	Tubing Material Code:	T	Field Filtered? (Y/N)	N	Filter Size (µm):	N/A

Field Decontamination:	Pump (Y/N)	N	Tubing Replaced? (Y/N)	Y	Duplicate (Y/N):	N

Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# of Cont.	Material Code	Volume	Pres. Used	Total Vol (mL)	Final pH			
-	3	CG	40 mL	HCl	None	N/A	VOCs	APP	-
-	2	AG	1 L	None	N/A	N/A	PAHs	APP	-
-	1	PE	250 mL	HNO3	None	NM	Metals	APP	-

Remarks: Project Code: 0888813870.FI.FS

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** +/- 0.2 units **Temperature:** +/- 0.2 °C **Specific Conductance:** +/- 5% **Dissolved Oxygen:** all readings < 20% saturation (see Table FS 2200-2); optionally, +/- 0.2 mg/L or +/- 10% (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally +/- 5 NTU or + 10% (whichever is greater)

Resolution Consultants / Form FD 9000-24 (modified)

GROUNDWATER SAMPLING LOG

Site Name:	NAS Jacksonville	Site Location:	Site 57	Date:
Well ID:	HPTP-MW02	Sample ID:	HPTP-MW02-0315	3/16/2015

PURGING DATA

Well Diameter (inches):	2	Tubing Diameter (inches):	3/16"	Well Screen Depth feet to	feet	Static Depth to Water (ft):	Pump/Bailer Type
				2	12		PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only if applicable) = (12 ft - ft) X 0.02 gal/ft = **0.24 gal**

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOL.

(only if applicable) = 0 gal + (0.0014 gal/ft x 20 ft)+ 0.1 gal = **0.13 gal**

Initial Pump or Tubing Depth in Well (ft)	7	Final Pump or Tubing Depth in Well (ft)	7	Purging Initiated At:	Purging Ended At:	Total Vol Purged (gal):
				13:57	14:23	2.1

Time	Volume Purged (gal)	Cumul. Volume Purged (gal)	Purge Rate (gpm)	Depth to Water (ft)	pH (standard units)	Temp (°C)	Conductivity (mSC/cm)	Dissolved Oxygen (% sat.)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	ORP (mV)
14:07	0.50	0.50	0.05	0.47	7.09	20.53	0.462	21.30%	1.92	9.91	-100.70
14:10	0.50	1.00	0.17	0.45	6.84	20.33	0.458	16.30%	1.46	7.60	-97.80
14:13	0.35	1.35	0.12	0.35	6.79	20.43	0.457	10.10%	0.91	6.53	-96.80
14:16	0.25	1.60	0.08	0.34	**6.81**	20.77	**0.457**	8.90%	0.79	5.84	-99.30
14:19	0.25	1.85	0.08	0.34	**6.86**	20.82	**0.458**	7.70%	0.69	5.51	-104.30
14:22	0.25	2.10	0.08	0.34	**6.89**	**20.81**	**0.458**	6.80%	0.61	10.60	-108.20

Purge Color/Odor: Clear tan with particulates

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

Sampled by (Print) / Affiliation:	Sampler(s) Signature(s):	Sampling Initiated At:	Sampling Ended At:
D. Myers/C.Nowalk		14:25	14:45

Pump or Tubing Depth in Well (feet):	7	Tubing Material Code:	T	Field Filtered? (Y/N)	N	Filter Size (µm):	N/A

Field Decontamination:	Pump (Y/N)	N	Tubing Replaced? (Y/N)	Y	Duplicate (Y/N):	N but MS/MSD

Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# of Cont.	Material Code	Volume	Pres. Used	Total Vol (mL)	Final pH			
-	9	CG	40 mL	HCl	None	N/A	VOCs	APP	-
-	6	AG	1 L	None	N/A	N/A	PAHs	APP	-
-	3	PE	250 mL	HNO3	None	NM	Metals	APP	-

Remarks: Project Code: 0888813870.FI.FS

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** +/- 0.2 units **Temperature:** +/- 0.2 °C **Specific Conductance:** +/- 5% **Dissolved Oxygen:** all readings < 20% saturation (see Table FS 2200-2); optionally, +/- 0.2 mg/L or +/- 10% (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally +/- 5 NTU or + 10% (whichever is greater)

Resolution Consultants / Form FD 9000-24 (modified)

GROUNDWATER SAMPLING LOG

Site Name:	NAS Jacksonville	Site Location:	Site 57	Date:
Well ID:	HPTP-MW03	Sample ID:	HPTP-MW03-0315(-FD)	3/16/2015

PURGING DATA

Well Diameter (inches):	2	Tubing Diameter (inches):	3/16"	Well Screen Depth feet to	feet	Static Depth to Water (ft):	Pump/Bailer Type
				2	12	-0.08	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only if applicable) = (12 ft - -0.08 ft) X 0 gal/ft = **0.00 gal**

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOL.

(only if applicable) = 0 gal + (0.0014 gal/ft x 20 ft)+ 0.1 gal = **0.13 gal**

Initial Pump or Tubing Depth in Well (ft)	7	Final Pump or Tubing Depth in Well (ft)	7	Purging Initiated At:	Purging Ended At:	Total Vol Purged (gal):
				15:02	15:28	1.5

Time	Volume Purged (gal)	Cumul. Volume Purged (gal)	Purge Rate (gpm)	Depth to Water (ft)	pH (standard units)	Temp (°C)	Conductivity (mSC/cm)	Dissolved Oxygen (% sat.)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	ORP (mV)
15:15	0.50	0.50	0.04	1.11	6.09	20.77	0.327	13.50%	1.22	2.52	-38.40
15:18	0.25	0.75	0.08	1.05	6.04	20.83	0.321	11.60%	1.04	1.65	-33.90
15:21	0.25	1.00	0.08	1.04	5.94	20.98	0.317	11.20%	0.98	2.17	-45.00
15:24	0.25	1.25	0.08	1.04	**5.87**	21.08	**0.315**	6.70%	0.60	3.33	-49.00
15:27	0.25	1.50	0.08	1.03	**5.88**	**21.16**	**0.314**	4.60%	0.41	1.16	-52.10

Purge Color/Odor:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

Sampled by (Print) / Affiliation:	Sampler(s) Signature(s):	Sampling Initiated At:	Sampling Ended At:
D. Myers/C.Nowalk		15:30	15:45

Pump or Tubing Depth in Well (feet):	7	Tubing Material Code:	T	Field Filtered? (Y/N)	N	Filter Size (µm):	N/A

Field Decontamination:	Pump (Y/N)	N	Tubing Replaced? (Y/N)	Y	Duplicate (Y/N):	Y

Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# of Cont.	Material Code	Volume	Pres. Used	Total Vol (mL)	Final pH			
-	6	CG	40 mL	HCl	None	N/A	VOCs	APP	-
-	4	AG	1 L	None	N/A	N/A	PAHs	APP	-
-	2	PE	250 mL	HNO3	None	NM	Metals	APP	-

Remarks: Project Code: 0888813870.FI.FS

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** +/- 0.2 units **Temperature:** +/- 0.2 °C **Specific Conductance:** +/- 5% **Dissolved Oxygen:** all readings < 20% saturation (see Table FS 2200-2); optionally, +/- 0.2 mg/L or +/- 10% (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally +/- 5 NTU or + 10% (whichever is greater)

Resolution Consultants / Form FD 9000-24 (modified)

GROUNDWATER SAMPLING LOG

Site Name:	NAS Jacksonville	Site Location:	Site 57	Date:
Well ID:	HPTP-MW04	Sample ID:	HPTP-MW04-0315	3/16/2015

PURGING DATA

Well Diameter (inches):	2	Tubing Diameter (inches):	3/16"	Well Screen Depth feet to	feet	Static Depth to Water (ft):	Pump/Bailer Type
				2	12	1.00	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only if applicable) = (12 ft - 1.00 ft) X 0 gal/ft = **0.00 gal**

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOL.

(only if applicable) = 0 gal + (0.0014 gal/ft x 20 ft)+ 0.1 gal = **0.13 gal**

Initial Pump or Tubing Depth in Well (ft)	7	Final Pump or Tubing Depth in Well (ft)	7	Purging Initiated At:	Purging Ended At:	Total Vol Purged (gal):
				16:09	16:25	1.3

Time	Volume Purged (gal)	Cumul. Volume Purged (gal)	Purge Rate (gpm)	Depth to Water (ft)	pH (standard units)	Temp (°C)	Conductivity (mSC/cm)	Dissolved Oxygen (% sat.)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	ORP (mV)
16:15	0.50	0.50	0.08	2.10	6.34	20.06	0.481	13.70%	1.23	9.75	-23.50
16:18	0.25	0.75	0.08	2.10	6.31	19.97	0.481	8.40%	0.76	7.27	-20.70
16:21	0.25	1.00	0.08	2.08	6.31	20.01	0.480	8.30%	0.76	4.68	-16.90
16:24	0.25	1.25	0.08	2.09	**6.32**	**19.98**	**0.479**	6.80%	0.61	4.51	-20.30

Purge Color/Odor:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

Sampled by (Print) / Affiliation:	Sampler(s) Signature(s):	Sampling Initiated At:	Sampling Ended At:
D. Myers/C.Nowalk		16:28	16:33

Pump or Tubing Depth in Well (feet):	7	Tubing Material Code:	T	Field Filtered? (Y/N)	N	Filter Size (µm):	N/A

Field Decontamination:	Pump (Y/N)	N	Tubing Replaced? (Y/N)	Y	Duplicate (Y/N):	N

Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# of Cont.	Material Code	Volume	Pres. Used	Total Vol (mL)	Final pH			
-	3	CG	40 mL	HCl	None	N/A	VOCs	APP	-
-	2	AG	1 L	None	N/A	N/A	PAHs	APP	-
-	1	PE	250 mL	HNO3	None	NM	Metals	APP	-

Remarks: Project Code: 0888813870.FI.FS

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** +/- 0.2 units **Temperature:** +/- 0.2 °C **Specific Conductance:** +/- 5% **Dissolved Oxygen:** all readings < 20% saturation (see Table FS 2200-2); optionally, +/- 0.2 mg/L or +/- 10% (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally +/- 5 NTU or + 10% (whichever is greater)

Resolution Consultants / Form FD 9000-24 (modified)

GROUNDWATER SAMPLING LOG

Site Name:	NAS Jacksonville	Site Location:	Site 57	Date:
Well ID:	HPTP-MW05	Sample ID:	HPTP-MW05-0315	3/16/2015

PURGING DATA

Well Diameter (inches):	2	Tubing Diameter (inches):	3/16"	Well Screen Depth feet to	feet	Static Depth to Water (ft):	Pump/Bailer Type
				2	12	0.60	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only if applicable) = (12 ft - 0.60 ft) X 0 gal/ft = **0.00 gal**

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOL.

(only if applicable) = 0 gal + (0.0014 gal/ft x 20 ft)+ 0.1 gal = **0.13 gal**

Initial Pump or Tubing Depth in Well (ft)	7	Final Pump or Tubing Depth in Well (ft)	7	Purging Initiated At:	Purging Ended At:	Total Vol Purged (gal):
				16:50	17:10	1.4

Time	Volume Purged (gal)	Cumul. Volume Purged (gal)	Purge Rate (gpm)	Depth to Water (ft)	pH (standard units)	Temp (°C)	Conductivity (mSC/cm)	Dissolved Oxygen (% sat.)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	ORP (mV)
16:56	0.25	0.25	0.04	3.03	6.53	19.93	0.389	17.80%	1.62	13.80	20.80
16:59	0.50	0.75	0.17	3.50	6.41	19.79	0.401	14.50%	1.35	9.59	33.70
17:02	0.20	0.95	0.07	3.65	6.39	20.02	0.404	14.00%	1.27	7.40	36.30
17:05	0.20	1.15	0.07	3.81	**6.39**	20.09	**0.405**	12.10%	1.09	6.80	35.90
17:08	0.20	1.35	0.07	3.99	**6.37**	**20.07**	**0.407**	10.80%	0.98	5.39	36.10

Purge Color/Odor:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

Sampled by (Print) / Affiliation:	Sampler(s) Signature(s):	Sampling Initiated At:	Sampling Ended At:
D. Myers/C.Nowalk		17:12	17:17

Pump or Tubing Depth in Well (feet):	7	Tubing Material Code:	T	Field Filtered? (Y/N)	N	Filter Size (µm):	N/A

Field Decontamination:	Pump (Y/N)	N	Tubing Replaced? (Y/N)	Y	Duplicate (Y/N):	N

Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# of Cont.	Material Code	Volume	Pres. Used	Total Vol (mL)	Final pH			
-	3	CG	40 mL	HCl	None	N/A	VOCs	APP	-
-	2	AG	1 L	None	N/A	N/A	PAHs	APP	-
-	1	PE	250 mL	HNO3	None	NM	Metals	APP	-

Remarks: Project Code: 0888813870.FI.FS

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** +/- 0.2 units **Temperature:** +/- 0.2 °C **Specific Conductance:** +/- 5% **Dissolved Oxygen:** all readings < 20% saturation (see Table FS 2200-2); optionally, +/- 0.2 mg/L or +/- 10% (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally +/- 5 NTU or + 10% (whichever is greater)

Resolution Consultants / Form FD 9000-24 (modified)

GROUNDWATER SAMPLING LOG

Site Name:	NAS Jacksonville	Site Location:	Site 57	Date:
Well ID:	HPTP-MW06	Sample ID:	HPTP-MW06-0315	3/16/2015

PURGING DATA

Well Diameter (inches):	2	Tubing Diameter (inches):	3/16"	Well Screen Depth feet to	feet	Static Depth to Water (ft):	Pump/Bailer Type
				2	12	0.83	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only if applicable) = (12 ft - 0.83 ft) X 0 gal/ft = **0.00 gal**

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOL.

(only if applicable) = 0 gal + (0.0014 gal/ft x 20 ft)+ 0.1 gal = **0.13 gal**

Initial Pump or Tubing Depth in Well (ft)	10	Final Pump or Tubing Depth in Well (ft)	10	Purging Initiated At:	Purging Ended At:	Total Vol Purged (gal):
				17:32	18:33	5.0

Time	Volume Purged (gal)	Cumul. Volume Purged (gal)	Purge Rate (gpm)	Depth to Water (ft)	pH (standard units)	Temp (°C)	Conductivity (mSC/cm)	Dissolved Oxygen (% sat.)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	ORP (mV)
High turbidity and well not low-flowing. Purging ended after 5 gallons and running. Returned to sample on 3/17/2015.											

Purge Color/Odor:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

Sampled by (Print) / Affiliation:	Sampler(s) Signature(s):	Sampling Initiated At:	Sampling Ended At:
D. Myers/C.Nowalk		N/A	N/A

Pump or Tubing Depth in Well (feet):	10	Tubing Material Code:	T	Field Filtered? (Y/N)	N	Filter Size (µm):	N/A

Field Decontamination:	Pump (Y/N)	N	Tubing Replaced? (Y/N)	Y	Duplicate (Y/N):	N

Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# of Cont.	Material Code	Volume	Pres. Used	Total Vol (mL)	Final pH			

Remarks: Project Code: 0888813870.FI.FS

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** +/- 0.2 units **Temperature:** +/- 0.2 °C **Specific Conductance:** +/- 5% **Dissolved Oxygen:** all readings < 20% saturation (see Table FS 2200-2); optionally, +/- 0.2 mg/L or +/- 10% (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally +/- 5 NTU or + 10% (whichever is greater)

Resolution Consultants / Form FD 9000-24 (modified)

GROUNDWATER SAMPLING LOG

Site Name:	NAS Jacksonville	Site Location:	Site 57	Date:
Well ID:	HPTP-MW06	Sample ID:	HPTP-MW06-0315	3/17/2015

PURGING DATA

Well Diameter (inches):	2	Tubing Diameter (inches):	3/16"	Well Screen Depth feet to	feet	Static Depth to Water (ft):	Pump/Bailer Type
				2	12	0.93	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only if applicable) = (12 ft - 0.93 ft) X 0 gal/ft = **0.00 gal**

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOL.

(only if applicable) = 0 gal + (0.0014 gal/ft x ft)+ 0.1 gal = **0.10 gal**

Initial Pump or Tubing Depth in Well (ft)	7	Final Pump or Tubing Depth in Well (ft)	7	Purging Initiated At:	Purging Ended At:	Total Vol Purged (gal):
				14:49	15:27	1.1

Time	Volume Purged (gal)	Cumul. Volume Purged (gal)	Purge Rate (gpm)	Depth to Water (ft)	pH (standard units)	Temp (°C)	Conductivity (mSC/cm)	Dissolved Oxygen (% sat.)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	ORP (mV)
15:15	0.50	0.50	0.02	4.45	6.66	21.73	0.560	28.50%	2.48	13.00	43.60
15:18	0.15	0.65	0.05	4.80	6.52	21.73	0.559	24.40%	2.14	11.80	54.30
15:21	0.15	0.80	0.05	5.29	6.55	21.84	0.556	22.90%	2.00	14.50	56.40
15:24	0.15	0.95	0.05	5.47	**6.57**	**21.78**	**0.557**	22.00%	1.93	19.50	55.20
15:27	0.15	1.10	0.05	5.78	**6.60**	**21.87**	**0.558**	22.30%	1.95	20.40	54.90

Purge Color/Odor:

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

Sampled by (Print) / Affiliation:	Sampler(s) Signature(s):	Sampling Initiated At:	Sampling Ended At:
D. Myers/C.Nowalk		15:30	15:45

Pump or Tubing Depth in Well (feet):	7	Tubing Material Code:	T	Field Filtered? (Y/N)	N	Filter Size (µm):	N/A

Field Decontamination:	Pump (Y/N)	N	Tubing Replaced? (Y/N)	Y	Duplicate (Y/N):	N

Sample Container Specification				Sample Preservation			Intended Analysis and/or Method	Sampling Equipment Code	Sample Pump Flow Rate (mL per minute)
Sample ID Code	# of Cont.	Material Code	Volume	Pres. Used	Total Vol (mL)	Final pH			
-	3	CG	40 mL	HCl	None	N/A	VOCs	APP	-
-	2	AG	1 L	None	N/A	N/A	PAHs	APP	-
-	1	PE	250 mL	HNO3	None	3 To 4	Metals	APP	-

Remarks: Project Code: 0888813870.FI.FS

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** +/- 0.2 units **Temperature:** +/- 0.2 °C **Specific Conductance:** +/- 5% **Dissolved Oxygen:** all readings < 20% saturation (see Table FS 2200-2); optionally, +/- 0.2 mg/L or +/- 10% (whichever is greater) **Turbidity:** all readings < 20 NTU; optionally +/- 5 NTU or + 10% (whichever is greater)

Appendix C
Investigation-Derived Waste Disposal Documents

Resolution Consultants
A Joint Venture of AECOM & EnSafe
1500 Wells Fargo Building
440 Monticello Avenue

March 21, 2014

Mr. Kenneth Hendl
Department of Navy
Navy Public Works Center
Building 147, Code 30
NAS Jacksonville
Jacksonville, Florida 32212-0030

Re: Investigative Derived Waste Characterization for Site 57
Naval Air Station Jacksonville, Florida
Navy CLEAN Contract: N62470-11-D-8013
Contact Task Order: JM19

Dear Mr. Hendl,

There are three drums of investigative derived waste (IDW) generated from recent soil and groundwater sampling activity at Site 57 (S-3 High-Power Turn-Up Pad) located within Naval Air Station Jacksonville, Florida. The drums contain soil sample cuttings, development water, purge water, soil cuttings generated from a temporary monitoring well installation at Site 57, and sampling from existing monitoring wells between the dates of January 21, 2014 and January 24, 2014. 55-gallon drums of IDW related to Site 57 include the following:

- Site 57 Soil Drum pH 8.80 dated 1-21-2014 (hazardous)
- Site 57 Groundwater Drum pH 7.08 dated 1-21-2014 (non-hazardous)
- Site 57 Groundwater Drum pH 7.26 dated 1-21-2014 (non-hazardous)

The IDW has been characterized using field pH measurements and analytical laboratory data. The pH of development water and soil cuttings in these 3 drums is greater than 2 and less than 12.5 standard units. Laboratory analysis was conducted on the groundwater (two drums) and the soil (one drum) for contaminant parameters known to exist at Site 57. U.S. Environmental Protection Agency (U.S. EPA) toxicity characteristic leaching procedure (TCLP) was not performed since previous investigations at Site 57 have precluded contaminants at the site other than those that are currently monitored including select metals, select volatile organic compounds, and select polycyclic aromatic hydrocarbons.

RESOLUTION
CONSULTANTS

Resolution Consultants
A Joint Venture of AECOM & EnSafe
1500 Wells Fargo Building
440 Monticello Avenue
Norfolk, Virginia 23510

The attached laboratory analysis indicates that one soil sample which is included in the Site 57 Soil Drum exceeds the U.S. EPA toxicity characteristic using the "rule of twenty" and therefore, the Site 57 Soil Drum is considered hazardous. Specifically, soil sample HTPT-SB07-0 as shown in the attached GCAL 214012420 lab report indicates a total lead result of 106,000 micrograms per kilogram (ug/kg). Converting this value to a TCLP equivalent using the "rule of twenty" yields a value of 5.3 milligrams per liter (mg/L) which exceeds the U.S. EPA toxicity characteristic regulatory limit for lead of 5.0 mg/L (Code of Federal Regulations Title 40 Section 261.24). Therefore, the Site 57 IDW Soil Drum generated from Site 57 soil sampling and temporary monitoring well installation is considered hazardous unless further laboratory testing including TCLP analysis for metals is performed on the Site 57 soil IDW and the results are less than U.S. EPA toxicity characteristic regulatory limits.

Based on pH testing and the attached laboratory results, the two drums of groundwater IDW related to Site 57 are not considered hazardous and can be disposed of as non-hazardous waste. A summary spreadsheet showing drum pH measurements and laboratory analytical results are included as attachments.

Sincerely,
Resolution Consultants

By: David A. Myers, PE
Engineer

Enclosures

Attachment A	IDW Summary for Site 57
Attachment B	Site 57 Laboratory Analytical Results (GCAL report 214012207)
Attachment C	Site 57 Laboratory Analytical Results (GCAL report 214012420)
Attachment D	Site 57 Laboratory Analytical Results (GCAL report 214012506)

CC: Adrienne Wilson, NAVFAC SE
Tim Curtin, NAVFAC SE
Todd Haverkost, Resolution Consultants

RESOLUTION CONSULTANTS

Attachment A
IDW Summary for Site 57

Investigative Derived Waste Characterization for Site 57
Naval Air Station Jacksonville, Florida
Navy CLEAN Contract: N62470-11-D-8013
Contact Task Order: JM19

SITE 57 IDW DRUMS

Site 57 Soil Drum pH 8.80 dated 1-21-2014 (hazardous)

Sample ID	Sample Date	Drum	Matrix	Lab Report (GCAL)	Contaminant	Concentration (ug/Kg)	Concentration/ 20 (mg/L)	U.S. EPA TCLP Regulatory Level (mg/L)
HPTP-SB07-0	1/23/2014	Site 57 Soil Drum	soil	F1261	Lead	106,000	5.3	5.0

Site 57 Groundwater Drum pH 7.08 dated 1-21-2014 (non-hazardous)

Sample ID	Sample Date	Drum	Matrix	Lab Report (GCAL)	Contaminant	Concentration (ug/Kg)	Concentration/2 0 (mg/L)	U.S. EPA TCLP Regulatory Level (mg/L)
NA	NA	NA	NA	NA	NA	NA	NA	NA

Site 57 Groundwater Drum pH 7.26 dated 1-21-2014 (non-hazardous)

Sample ID	Sample Date	Drum	Matrix	Lab Report (GCAL)	Contaminant	Concentration (ug/Kg)	Concentration/2 0 (mg/L)	U.S. EPA TCLP Regulatory Level (mg/L)
NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
GCAL - Gulf Coast Analytical Laboratories, Inc.
U.S. EPA - United States Environmental Protection Agency
TCLP - toxicity characteristic leaching procedure
ug/kg - micrograms per kilograms
mg/L - milligrams per liter
NA - not applicable

Attachment B
Site 57 Laboratory Analytical Results
(GCAL Report 214012207)

NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER L13-190

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 Innovation Park Dr.

Baton Rouge, LA 70820

Report Date 02/04/2014

GCAL Report 214012207

Deliver To	EnSafe Inc 5724 Summer Trees Dr Memphis, TN 38134 901-937-4315
Attn	Tina Cantwell

Project NAS Jacksonville Site 57 /JM19

CASE NARRATIVE

Client: Resolution Consultants **Report:** 214012207

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

METALS

In the EPA 6020A analysis, a chemical or physical interference necessitated a dilution for samples 21401220701 (HPTP-TW01-0), 21401220702 (HPTP-TW01-2) and 21401220703 (HPTP-TW01-4). This is reflected in the elevated reporting limits.

In the EPA 6020A analysis for prep batch 524130, the MS/MSD recoveries are not applicable for Barium because the sample concentration is greater than four times the spike concentration. The heterogeneous nature of the QC sample is believed to be responsible for this. The MS/MSD recoveries are not applicable because the spike was diluted out of the samples. All LCS recoveries are acceptable. The MS/MSD RPD for Selenium is above the control limit.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Authorized Signature
GCAL REPORT 214012207

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401220701	HPTP-TW01-0	Solid	01/21/2014 15:45	01/22/2014 10:30
21401220702	HPTP-TW01-2	Solid	01/21/2014 15:45	01/22/2014 10:30
21401220703	HPTP-TW01-4	Solid	01/21/2014 15:45	01/22/2014 10:30
21401220704	TB012114	Water	01/21/2014 00:00	01/22/2014 10:30

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401220701	**HPTP-TW01-0**	Solid	01/21/2014 15:45	01/22/2014 10:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
78-93-3	2-Butanone	3.87J	5.65	0.365	ug/Kg
67-64-1	Acetone	21.3J	28.2	0.334	ug/Kg
100-41-4	Ethylbenzene	1.07J	5.65	0.207	ug/Kg
75-09-2	Methylene chloride	0.869J	11.3	0.578	ug/Kg
108-88-3	Toluene	4.77J	5.65	0.121	ug/Kg
1330-20-7	Xylene (total)	5.38J	16.9	0.279	ug/Kg

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	8.0J	13.8	5.5	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	751	516	129	ug/Kg
7440-43-9	Cadmium	205J	516	129	ug/Kg
7440-47-3	Chromium	6120	516	129	ug/Kg
7439-92-1	Lead	7640	516	129	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	14600	516	129	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401220702	**HPTP-TW01-2**	Solid	01/21/2014 15:45	01/22/2014 10:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	8.45J	26.9	0.319	ug/Kg
100-41-4	Ethylbenzene	0.656J	5.38	0.197	ug/Kg
75-09-2	Methylene chloride	1.11J	10.8	0.551	ug/Kg
127-18-4	Tetrachloroethene	1.25J	5.38	0.319	ug/Kg
108-88-3	Toluene	2.77J	5.38	0.115	ug/Kg
1330-20-7	Xylene (total)	3.11J	16.1	0.266	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	700	461	115	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401220702	HPTP-TW01-2	Solid	01/21/2014 15:45	01/22/2014 10:30

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-47-3	Chromium	8110	461	115	ug/Kg
7439-92-1	Lead	5790	461	115	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	43600	461	115	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401220703	HPTP-TW01-4	Solid	01/21/2014 15:45	01/22/2014 10:30

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	615	471	118	ug/Kg
7440-47-3	Chromium	6810	471	118	ug/Kg
7439-92-1	Lead	3720	471	118	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	23400	471	118	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	14.7J	27.7	0.328	ug/Kg
100-41-4	Ethylbenzene	0.656J	5.55	0.203	ug/Kg
75-09-2	Methylene chloride	2.83J	11.1	0.568	ug/Kg
108-88-3	Toluene	2.82J	5.55	0.119	ug/Kg
1330-20-7	Xylene (total)	3.10J	16.6	0.274	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401220704	TB012114	Water	01/21/2014 00:00	01/22/2014 10:30

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-09-2	Methylene chloride	1.52J	5.00	0.149	ug/L

Attachment C
Site 57 Laboratory Analytical Results
(GCAL Report 214012420)

NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER L13-190

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 Innovation Park Dr.

Baton Rouge, LA 70820

Report Date 02/07/2014

GCAL Report 214012420

Deliver To	EnSafe Inc 5724 Summer Trees Dr Memphis, TN 38134 901-937-4315
Attn	Tina Cantwell

Project NAS Jacksonville Site 57 / JM1

CASE NARRATIVE

Client: Resolution Consultants **Report:** 214012420

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

Additional Flags:

Q – non-compliant QC result (see Q Flag Application Form)

VOLATILES MASS SPECTROMETRY

In the EPA 8260B analysis for analytical batch 524442, the LCS/LCSD RPD is above the control limit for Acetone.

In the EPA 8260B analysis, 2-Hexanone is above the upper control limit in the ICV (MSV11, 01/28/14). There are no hits detected for this compound in the associated samples.

SEMI-VOLATILES MASS SPECTROMETRY

In the EPA 8270D SIM analysis, sample 21401242009 (HPTP-SB09-0) is reported at multiple dilutions due to the recovery of the internal standards being affected by the sample matrix. The sample required the dilution to bring the internal standards within limits.

In the EPA 8270D SIM analysis, sample 21401242010 (HPTP-SB10-0) is reported at multiple dilutions due to the recovery of the internal standards being affected by the sample matrix. The sample required the dilution to bring the internal standards within limits.

METALS

In the EPA 6020A analysis for prep batch 524235, the MS/MSD recoveries are not applicable because the spike was diluted out of the samples. All LCS recoveries are acceptable. The MS/MSD RPD for Barium, Chromium, and Selenium is above the control limit. The heterogeneous nature of the QC sample is believed to be responsible for this. Barium was detected greater than half the PQL in the method blank. The concentration was insignificant as compared to the concentration detected in the associated sample(s).

In the EPA 6020A analysis for prep batch 524237, the MS/MSD recoveries/RPDs are not applicable because the spike was diluted out of the samples. All LCS recoveries are acceptable.

In the EPA 6020A analysis, sample 21401242007 (HPTP-SB07-0) had to be diluted in order to bracket the concentration within the calibration range of the instrument.

In the EPA 6020A analysis, a chemical or physical interference necessitated a dilution for samples 21401242001 (HPTP-SB01-0), 21401242002 (HPTP-SB01-2), 21401242003 (HPTP-SB02-0), 21401242004 (HPTP-SB02-2), 21401242005 (HPTP-SB05-0), 21401242006 (HPTP-SB05-2), 21401242007 (HPTP-SB07-0), 21401242008 (HPTP-SB07-2), 21401242009 (HPTP-SB09-0), 21401242010 (HPTP-SB10-0), 21401242011 (HPTP-SB11-0) and 21401242012 (HPTP-SB11-2). This is reflected in the elevated reporting limits.

In the EPA 6020A analysis for analytical batch 525046,Selenium is greater than 120% in the initial LLCCV analyzed on ICPMS1(02/06/14,17:51).All associated samples are less than the MDL.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Authorized Signature
GCAL REPORT 214012420

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242001	HPTP-SB01-0	Solid	01/23/2014 10:05	01/24/2014 11:50
21401242002	HPTP-SB01-2	Solid	01/23/2014 10:05	01/24/2014 11:50
21401242003	HPTP-SB02-0	Solid	01/23/2014 10:55	01/24/2014 11:50
21401242004	HPTP-SB02-2	Solid	01/23/2014 10:55	01/24/2014 11:50
21401242005	HPTP-SB05-0	Solid	01/23/2014 11:42	01/24/2014 11:50
21401242006	HPTP-SB05-2	Solid	01/23/2014 11:42	01/24/2014 11:50
21401242007	HPTP-SB07-0	Solid	01/23/2014 14:10	01/24/2014 11:50
21401242008	HPTP-SB07-2	Solid	01/23/2014 14:10	01/24/2014 11:50
21401242009	HPTP-SB09-0	Solid	01/23/2014 14:42	01/24/2014 11:50
21401242010	HPTP-SB10-0	Solid	01/23/2014 15:12	01/24/2014 11:50
21401242011	HPTP-SB11-0	Solid	01/23/2014 15:36	01/24/2014 11:50
21401242012	HPTP-SB11-2	Solid	01/23/2014 15:36	01/24/2014 11:50
21401242013	HPTP-TW01-0114	Water	01/23/2014 12:12	01/24/2014 11:50
21401242014	HPTP-MW05-0114	Water	01/23/2014 15:54	01/24/2014 11:50
21401242015	TB012314-SO	Water	01/23/2014 17:30	01/24/2014 11:50
21401242016	TB012314-GW	Water	01/23/2014 17:35	01/24/2014 11:50

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242001	**HPTP-SB01-0**	Solid	01/23/2014 10:05	01/24/2014 11:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.479J	5.18	0.189	ug/Kg
75-09-2	Methylene chloride	8.99J	10.4	0.530	ug/Kg
108-88-3	Toluene	2.26J	5.18	0.111	ug/Kg
1330-20-7	Xylene (total)	2.26J	15.5	0.256	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	299J	463	116	ug/Kg
7440-39-3	Barium	15800	463	116	ug/Kg
7440-47-3	Chromium	5540	463	116	ug/Kg
7439-92-1	Lead	4040	463	116	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242002	**HPTP-SB01-2**	Solid	01/23/2014 10:05	01/24/2014 11:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.466J	4.93	0.180	ug/Kg
75-09-2	Methylene chloride	13.2	9.85	0.504	ug/Kg
108-88-3	Toluene	1.91J	4.93	0.105	ug/Kg
1330-20-7	Xylene (total)	1.56J	14.8	0.243	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	666	520	130	ug/Kg
7440-39-3	Barium	32600	520	130	ug/Kg
7440-47-3	Chromium	7250	520	130	ug/Kg
7439-92-1	Lead	7170	520	130	ug/Kg

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	59.2	14.7	5.9	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242003	**HPTP-SB02-0**	Solid	01/23/2014 10:55	01/24/2014 11:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.398J	5.22	0.191	ug/Kg
75-09-2	Methylene chloride	2.52J	10.4	0.534	ug/Kg
108-88-3	Toluene	1.97J	5.22	0.112	ug/Kg
1330-20-7	Xylene (total)	2.00J	15.7	0.258	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	262J	468	117	ug/Kg
7440-39-3	Barium	15700	468	117	ug/Kg
7440-47-3	Chromium	5390	468	117	ug/Kg
7439-92-1	Lead	3190	468	117	ug/Kg

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	65.4	14.1	5.6	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242004	**HPTP-SB02-2**	Solid	01/23/2014 10:55	01/24/2014 11:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.358J	4.97	0.182	ug/Kg
75-09-2	Methylene chloride	2.76J	9.93	0.508	ug/Kg
108-88-3	Toluene	2.02J	4.97	0.106	ug/Kg
1330-20-7	Xylene (total)	0.981J	14.9	0.245	ug/Kg

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	6.4J	13.8	5.5	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	299J	489	122	ug/Kg
7440-39-3	Barium	17200	489	122	ug/Kg
7440-47-3	Chromium	6840	489	122	ug/Kg
7439-92-1	Lead	3650	489	122	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242005	**HPTP-SB05-0**	Solid	01/23/2014 11:42	01/24/2014 11:50

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	189J	454	114	ug/Kg
7440-39-3	Barium	10900	454	114	ug/Kg
7440-47-3	Chromium	3600	454	114	ug/Kg
7439-92-1	Lead	3140	454	114	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-09-2	Methylene chloride	1.61J	11.4	0.583	ug/Kg
108-88-3	Toluene	1.36J	5.70	0.122	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
56-55-3	Benzo(a)anthracene	8.95	3.78	1.76	ug/Kg
50-32-8	Benzo(a)pyrene	7.05	3.78	0.355	ug/Kg
205-99-2	Benzo(b)fluoranthene	67.1	3.78	1.13	ug/Kg
191-24-2	Benzo(g,h,i)perylene	7.31	3.78	0.681	ug/Kg
207-08-9	Benzo(k)fluoranthene	4.28	3.78	0.444	ug/Kg
218-01-9	Chrysene	8.29	3.78	1.27	ug/Kg
206-44-0	Fluoranthene	8.11	3.78	0.419	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	54.6	3.78	0.482	ug/Kg
129-00-0	Pyrene	7.16	3.78	0.632	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242006	**HPTP-SB05-2**	Solid	01/23/2014 11:42	01/24/2014 11:50

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	180J	467	117	ug/Kg
7440-39-3	Barium	10800	467	117	ug/Kg
7440-47-3	Chromium	3660	467	117	ug/Kg
7439-92-1	Lead	3460	467	117	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
56-55-3	Benzo(a)anthracene	5.87	3.85	1.80	ug/Kg
218-01-9	Chrysene	4.48	3.85	1.30	ug/Kg
206-44-0	Fluoranthene	4.54	3.85	0.427	ug/Kg
129-00-0	Pyrene	5.34	3.85	0.645	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242006	HPTP-SB05-2	Solid	01/23/2014 11:42	01/24/2014 11:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-09-2	Methylene chloride	1.60J	9.63	0.493	ug/Kg
108-88-3	Toluene	1.40J	4.82	0.103	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242007	HPTP-SB07-0	Solid	01/23/2014 14:10	01/24/2014 11:50

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	6.7J	13.2	5.3	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	364J	459	115	ug/Kg
7440-39-3	Barium	7620	459	115	ug/Kg
7440-43-9	Cadmium	221J	459	115	ug/Kg
7440-47-3	Chromium	3510	459	115	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	106000	2300	574	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.418J	5.43	0.199	ug/Kg
75-09-2	Methylene chloride	1.49J	10.9	0.556	ug/Kg
108-88-3	Toluene	1.96J	5.43	0.116	ug/Kg
1330-20-7	Xylene (total)	1.65J	16.3	0.268	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
120-12-7	Anthracene	5.75	3.79	0.309	ug/Kg
56-55-3	Benzo(a)anthracene	52.3	3.79	1.77	ug/Kg
50-32-8	Benzo(a)pyrene	53.0	3.79	0.356	ug/Kg
205-99-2	Benzo(b)fluoranthene	130	3.79	1.13	ug/Kg
191-24-2	Benzo(g,h,i)perylene	50.4	3.79	0.683	ug/Kg
207-08-9	Benzo(k)fluoranthene	25.9	3.79	0.445	ug/Kg
218-01-9	Chrysene	53.0	3.79	1.27	ug/Kg
53-70-3	Dibenz(a,h)anthracene	6.45	3.79	1.14	ug/Kg
206-44-0	Fluoranthene	70.2	3.79	0.420	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	107	3.79	0.483	ug/Kg
85-01-8	Phenanthrene	20.5	3.79	0.544	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242007	HPTP-SB07-0	Solid	01/23/2014 14:10	01/24/2014 11:50

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
129-00-0	Pyrene	63.7	3.79	0.634	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242008	HPTP-SB07-2	Solid	01/23/2014 14:10	01/24/2014 11:50

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
91-57-6	2-Methylnaphthalene	3.59J	3.96	0.837	ug/Kg
83-32-9	Acenaphthene	6.26	3.96	1.31	ug/Kg
208-96-8	Acenaphthylene	5.07	3.96	1.57	ug/Kg
120-12-7	Anthracene	8.66	3.96	0.323	ug/Kg
56-55-3	Benzo(a)anthracene	60.9	3.96	1.85	ug/Kg
50-32-8	Benzo(a)pyrene	60.2	3.96	0.372	ug/Kg
205-99-2	Benzo(b)fluoranthene	134	3.96	1.19	ug/Kg
191-24-2	Benzo(g,h,i)perylene	62.5	3.96	0.714	ug/Kg
207-08-9	Benzo(k)fluoranthene	32.1	3.96	0.465	ug/Kg
218-01-9	Chrysene	59.9	3.96	1.33	ug/Kg
53-70-3	Dibenz(a,h)anthracene	8.14	3.96	1.19	ug/Kg
206-44-0	Fluoranthene	84.0	3.96	0.439	ug/Kg
86-73-7	Fluorene	3.71J	3.96	0.489	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	125	3.96	0.505	ug/Kg
91-20-3	Naphthalene	4.11	3.96	0.446	ug/Kg
85-01-8	Phenanthrene	27.1	3.96	0.569	ug/Kg
129-00-0	Pyrene	70.5	3.96	0.662	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.559J	5.37	0.197	ug/Kg
75-09-2	Methylene chloride	2.94J	10.7	0.550	ug/Kg
108-88-3	Toluene	2.71J	5.37	0.115	ug/Kg
1330-20-7	Xylene (total)	2.43J	16.1	0.265	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	202J	480	120	ug/Kg
7440-39-3	Barium	6300	480	120	ug/Kg
7440-47-3	Chromium	3240	480	120	ug/Kg
7439-92-1	Lead	16900	480	120	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242009	HPTP-SB09-0	Solid	01/23/2014 14:42	01/24/2014 11:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.370J	5.17	0.189	ug/Kg
75-09-2	Methylene chloride	1.63J	10.3	0.529	ug/Kg
108-88-3	Toluene	1.82J	5.17	0.111	ug/Kg
1330-20-7	Xylene (total)	1.69J	15.5	0.255	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	499	454	114	ug/Kg
7440-39-3	Barium	13500	454	114	ug/Kg
7440-43-9	Cadmium	326J	454	114	ug/Kg
7440-47-3	Chromium	7210	454	114	ug/Kg
7439-92-1	Lead	6390	454	114	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
208-96-8	Acenaphthylene	35.6	3.75	1.49	ug/Kg
120-12-7	Anthracene	83.1	3.75	0.305	ug/Kg
56-55-3	Benzo(a)anthracene	308	3.75	1.75	ug/Kg
218-01-9	Chrysene	262	3.75	1.26	ug/Kg
206-44-0	Fluoranthene	539	3.75	0.416	ug/Kg
85-01-8	Phenanthrene	70.5	3.75	0.538	ug/Kg
129-00-0	Pyrene	339	3.75	0.627	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
50-32-8	Benzo(a)pyrene	299	18.7	1.76	ug/Kg
205-99-2	Benzo(b)fluoranthene	630	18.7	5.61	ug/Kg
191-24-2	Benzo(g,h,i)perylene	277	18.7	3.38	ug/Kg
207-08-9	Benzo(k)fluoranthene	134	18.7	2.20	ug/Kg
53-70-3	Dibenz(a,h)anthracene	35.6	18.7	5.62	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	580	18.7	2.39	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242010	HPTP-SB10-0	Solid	01/23/2014 15:12	01/24/2014 11:50

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	573	446	111	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242010	**HPTP-SB10-0**	Solid	01/23/2014 15:12	01/24/2014 11:50

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	10700	446	111	ug/Kg
7440-43-9	Cadmium	299J	446	111	ug/Kg
7440-47-3	Chromium	6410	446	111	ug/Kg
7439-92-1	Lead	7730	446	111	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.383J	4.90	0.179	ug/Kg
75-09-2	Methylene chloride	1.20J	9.79	0.501	ug/Kg
127-18-4	Tetrachloroethene	0.396J	4.90	0.290	ug/Kg
108-88-3	Toluene	1.56J	4.90	0.105	ug/Kg
1330-20-7	Xylene (total)	1.64J	14.7	0.242	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
208-96-8	Acenaphthylene	51.1	3.68	1.46	ug/Kg
120-12-7	Anthracene	68.5	3.68	0.300	ug/Kg
56-55-3	Benzo(a)anthracene	36.7	3.68	1.72	ug/Kg
218-01-9	Chrysene	40.4	3.68	1.24	ug/Kg
206-44-0	Fluoranthene	31.2	3.68	0.408	ug/Kg
86-73-7	Fluorene	6.16	3.68	0.455	ug/Kg
85-01-8	Phenanthrene	5.91	3.68	0.528	ug/Kg
129-00-0	Pyrene	34.8	3.68	0.615	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
50-32-8	Benzo(a)pyrene	76.2	18.4	1.73	ug/Kg
205-99-2	Benzo(b)fluoranthene	357	18.4	5.50	ug/Kg
191-24-2	Benzo(g,h,i)perylene	135	18.4	3.31	ug/Kg
207-08-9	Benzo(k)fluoranthene	25.6	18.4	2.16	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	353	18.4	2.35	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242011	**HPTP-SB11-0**	Solid	01/23/2014 15:36	01/24/2014 11:50

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-39-3	Barium	3350	460	115	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242011	**HPTP-SB11-0**	Solid	01/23/2014 15:36	01/24/2014 11:50

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-47-3	Chromium	1600	460	115	ug/Kg
7439-92-1	Lead	1610	460	115	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.350J	5.67	0.207	ug/Kg
75-09-2	Methylene chloride	2.17J	11.3	0.580	ug/Kg
108-88-3	Toluene	1.60J	5.67	0.121	ug/Kg
1330-20-7	Xylene (total)	1.62J	17.0	0.280	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
120-12-7	Anthracene	1.42J	3.79	0.309	ug/Kg
56-55-3	Benzo(a)anthracene	16.7	3.79	1.77	ug/Kg
50-32-8	Benzo(a)pyrene	16.1	3.79	0.356	ug/Kg
205-99-2	Benzo(b)fluoranthene	78.1	3.79	1.14	ug/Kg
191-24-2	Benzo(g,h,i)perylene	16.1	3.79	0.684	ug/Kg
207-08-9	Benzo(k)fluoranthene	10.5	3.79	0.446	ug/Kg
218-01-9	Chrysene	16.2	3.79	1.28	ug/Kg
53-70-3	Dibenz(a,h)anthracene	2.11J	3.79	1.14	ug/Kg
206-44-0	Fluoranthene	19.4	3.79	0.421	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	65.7	3.79	0.484	ug/Kg
85-01-8	Phenanthrene	4.81	3.79	0.545	ug/Kg
129-00-0	Pyrene	17.2	3.79	0.634	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242012	**HPTP-SB11-2**	Solid	01/23/2014 15:36	01/24/2014 11:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.348J	5.47	0.200	ug/Kg
75-09-2	Methylene chloride	2.55J	10.9	0.560	ug/Kg
108-88-3	Toluene	1.67J	5.47	0.117	ug/Kg
1330-20-7	Xylene (total)	1.49J	16.4	0.270	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
120-12-7	Anthracene	1.96J	4.09	0.334	ug/Kg
56-55-3	Benzo(a)anthracene	14.4	4.09	1.91	ug/Kg
50-32-8	Benzo(a)pyrene	12.5	4.09	0.384	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242012	HPTP-SB11-2	Solid	01/23/2014 15:36	01/24/2014 11:50

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
205-99-2	Benzo(b)fluoranthene	80.5	4.09	1.23	ug/Kg
191-24-2	Benzo(g,h,i)perylene	14.4	4.09	0.738	ug/Kg
207-08-9	Benzo(k)fluoranthene	8.10	4.09	0.481	ug/Kg
218-01-9	Chrysene	14.9	4.09	1.38	ug/Kg
53-70-3	Dibenz(a,h)anthracene	2.08J	4.09	1.23	ug/Kg
206-44-0	Fluoranthene	17.5	4.09	0.454	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	68.1	4.09	0.522	ug/Kg
85-01-8	Phenanthrene	6.20	4.09	0.588	ug/Kg
129-00-0	Pyrene	15.4	4.09	0.684	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	162J	492	123	ug/Kg
7440-39-3	Barium	5540	492	123	ug/Kg
7440-47-3	Chromium	2530	492	123	ug/Kg
7439-92-1	Lead	2030	492	123	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242013	HPTP-TW01-0114	Water	01/23/2014 12:12	01/24/2014 11:50

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	2.82	1.00	0.25	ug/L
7440-39-3	Barium	50.7	1.00	0.25	ug/L
7439-92-1	Lead	0.33J	1.00	0.25	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	4.40J	5.00	0.193	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242014	HPTP-MW05-0114	Water	01/23/2014 15:54	01/24/2014 11:50

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	0.50J	1.00	0.25	ug/L
7440-39-3	Barium	38.1	1.00	0.25	ug/L
7439-92-1	Lead	1.28	1.00	0.25	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242014	**HPTP-MW05-0114**	Water	01/23/2014 15:54	01/24/2014 11:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
156-59-2	**cis-1,2-Dichloroethene**	**0.443J**	**1.00**	**0.103**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242015	**TB012314-SO**	Water	01/23/2014 17:30	01/24/2014 11:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-09-2	**Methylene chloride**	**1.60J**	**5.00**	**0.149**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401242016	**TB012314-GW**	Water	01/23/2014 17:35	01/24/2014 11:50

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-09-2	**Methylene chloride**	**1.54J**	**5.00**	**0.149**	**ug/L**

Attachment D
Site 57 Laboratory Analytical Results
(GCAL Report 214012506)

NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER L13-190

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 Innovation Park Dr.

Baton Rouge, LA 70820

Report Date 02/12/2014

GCAL Report 214012506

Deliver To	EnSafe Inc 5724 Summer Trees Dr Memphis, TN 38134 901-937-4315
Attn	Tina Cantwell

Project NAS Jacksonville Site 57 /JM19

CASE NARRATIVE

Client: Resolution Consultants **Report:** 214012506

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILES MASS SPECTROMETRY

In the EPA 8260B analysis for analytical batch 524719, the % recovery is above the upper control limit for Chloromethane and Chloroethane in the ICV (MSV11, 02/03/14). These analytes were not detected in the associated samples.

SEMI-VOLATILES MASS SPECTROMETRY

In the EPA 8270D SIM analysis, samples 21401250612 (HPTP-MW04-0114), 21401250614 (HPTP-MW02-0114 MS), 21401250615 (HPTP-MW02-0114 MSD), and 21401250616 (HPTP-MW03-0114) had one surrogate recovery outside control limits in the base-neutral fraction.

METALS

In the EPA 6020A analysis, a chemical or physical interference necessitated a dilution for sample 21401250601 (HPTP-SB13-0), 21401250602 (HPTP-SB13-0 MS), 21401250603 (HPTP-SB13-0 MSD), 21401250604 (HPTP-SB13-2), 21401250605 (HPTP-SB13-2 MS), 21401250606 (HPTP-SB13-2 MSD), 21401250607 (HPTP-SB16-0), 21401250608 (HPTP-SB14-0), 21401250609 (HPTP-SB14-2), 21401250610 (HPTP-SB14-0 FD), and 21401250611 (HPTP-SB14-2 FD) . This is reflected in elevated detection limits.

In the EPA 6020A analysis for prep batch 524302, the MS/MSD recoveries/RPDs are not applicable because the spike was diluted out of the samples. All LCS recoveries are acceptable.

In the EPA 6020A analysis for 524348, Barium is flagged as estimated on the serial dilution form due to the fact that the percent difference between original sample result and the serial dilution result for the batch QC sample is greater than 10. A chemical or physical interference is suspected.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

_____

Authorized Signature
GCAL REPORT 214012506

THIS REPORT CONTAINS _____ PAGES.

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250601	HPTP-SB13-0	Solid	01/24/2014 09:45	01/25/2014 10:15
21401250602	HPTP-SB13-0 MS	Solid	01/24/2014 09:45	01/25/2014 10:15
21401250603	HPTP-SB13-0 MSD	Solid	01/24/2014 09:45	01/25/2014 10:15
21401250604	HPTP-SB13-2	Solid	01/24/2014 09:45	01/25/2014 10:15
21401250605	HPTP-SB13-2 MS	Solid	01/24/2014 09:45	01/25/2014 10:15
21401250606	HPTP-SB13-2 MSD	Solid	01/24/2014 09:45	01/25/2014 10:15
21401250607	HPTP-SB16-0	Solid	01/24/2014 12:30	01/25/2014 10:15
21401250608	HPTP-SB14-0	Solid	01/24/2014 11:20	01/25/2014 10:15
21401250609	HPTP-SB14-2	Solid	01/24/2014 11:20	01/25/2014 10:15
21401250610	HPTP-SB14-0 FD	Solid	01/24/2014 11:20	01/25/2014 10:15
21401250611	HPTP-SB14-2 FD	Solid	01/24/2014 11:20	01/25/2014 10:15
21401250612	HPTP-MW04-0114	Water	01/24/2014 10:21	01/25/2014 10:15
21401250613	HPTP-MW02-0114	Water	01/24/2014 12:24	01/25/2014 10:15
21401250614	HPTP-MW02-0114 MS	Water	01/24/2014 12:24	01/25/2014 10:15
21401250615	HPTP-MW02-0114 MSD	Water	01/24/2014 12:24	01/25/2014 10:15
21401250616	HPTP-MW03-0114	Water	01/24/2014 14:11	01/25/2014 10:15
21401250617	HPTP-MW03-0114-FD	Water	01/24/2014 14:11	01/25/2014 10:15
21401250618	HPTP-MW01-0114	Water	01/24/2014 15:16	01/25/2014 10:15
21401250619	EB012414-SO	Water	01/24/2014 15:45	01/25/2014 10:15
21401250620	EB012414-GW	Water	01/24/2014 15:50	01/25/2014 10:15
21401250621	TB012414-GW	Water	01/24/2014 17:35	01/25/2014 10:15
21401250622	TB012414-SO	Water	01/24/2014 17:40	01/25/2014 10:15

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250601	**HPTP-SB13-0**	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	9.2J	11.6	4.6	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	326J	465	116	ug/Kg
7440-39-3	Barium	16900	465	116	ug/Kg
7440-47-3	Chromium	4910	465	116	ug/Kg
7439-92-1	Lead	3870	465	116	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.475J	5.38	0.197	ug/Kg
75-09-2	Methylene chloride	3.07J	10.8	0.551	ug/Kg
108-88-3	Toluene	2.03J	5.38	0.115	ug/Kg
1330-20-7	Xylene (total)	2.28J	16.1	0.266	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250602	**HPTP-SB13-0 MS**	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
91-57-6	2-Methylnaphthalene	3160	3.83	0.811	ug/Kg
83-32-9	Acenaphthene	3780	3.83	1.27	ug/Kg
208-96-8	Acenaphthylene	3280	3.83	1.52	ug/Kg
120-12-7	Anthracene	2760	3.83	0.313	ug/Kg
56-55-3	Benzo(a)anthracene	2990	3.83	1.79	ug/Kg
50-32-8	Benzo(a)pyrene	3060	3.83	0.360	ug/Kg
205-99-2	Benzo(b)fluoranthene	2710	3.83	1.15	ug/Kg
191-24-2	Benzo(g,h,i)perylene	4390	3.83	0.691	ug/Kg
207-08-9	Benzo(k)fluoranthene	2730	3.83	0.451	ug/Kg
218-01-9	Chrysene	2790	3.83	1.29	ug/Kg
53-70-3	Dibenz(a,h)anthracene	4620	3.83	1.15	ug/Kg
206-44-0	Fluoranthene	3150	3.83	0.425	ug/Kg
86-73-7	Fluorene	3230	3.83	0.474	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	4330	3.83	0.489	ug/Kg
91-20-3	Naphthalene	2920	3.83	0.432	ug/Kg
85-01-8	Phenanthrene	2950	3.83	0.551	ug/Kg
129-00-0	Pyrene	2920	3.83	0.641	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250602	**HPTP-SB13-0 MS**	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	2280	465	116	ug/Kg
7440-39-3	Barium	24300	465	116	ug/Kg
7440-43-9	Cadmium	2380	465	116	ug/Kg
7440-47-3	Chromium	7570	465	116	ug/Kg
7439-92-1	Lead	7080	465	116	ug/Kg
7782-49-2	Selenium	230J	465	116	ug/Kg
7440-22-4	Silver	2430	465	116	ug/Kg

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	286	11.6	4.6	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-55-6	1,1,1-Trichloroethane	55.6	5.56	0.180	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	48.8	5.56	0.194	ug/Kg
79-00-5	1,1,2-Trichloroethane	49.1	5.56	0.071	ug/Kg
75-34-3	1,1-Dichloroethane	56.1	5.56	0.107	ug/Kg
75-35-4	1,1-Dichloroethene	54.5	5.56	0.252	ug/Kg
107-06-2	1,2-Dichloroethane	50.8	5.56	0.220	ug/Kg
78-87-5	1,2-Dichloropropane	53.2	5.56	0.085	ug/Kg
78-93-3	2-Butanone	45.1	5.56	0.359	ug/Kg
591-78-6	2-Hexanone	44.8	5.56	0.329	ug/Kg
108-10-1	4-Methyl-2-pentanone	40.7	5.56	0.172	ug/Kg
67-64-1	Acetone	43.2	27.8	0.329	ug/Kg
71-43-2	Benzene	57.9	5.56	0.056	ug/Kg
75-27-4	Bromodichloromethane	51.8	5.56	0.115	ug/Kg
75-25-2	Bromoform	45.7	5.56	0.486	ug/Kg
74-83-9	Bromomethane	50.8	5.56	0.541	ug/Kg
75-15-0	Carbon disulfide	57.0	5.56	0.208	ug/Kg
56-23-5	Carbon tetrachloride	56.7	5.56	0.210	ug/Kg
108-90-7	Chlorobenzene	52.4	5.56	0.144	ug/Kg
75-00-3	Chloroethane	60.4	5.56	0.224	ug/Kg
67-66-3	Chloroform	52.4	5.56	0.192	ug/Kg
74-87-3	Chloromethane	57.6	5.56	0.214	ug/Kg
124-48-1	Dibromochloromethane	49.0	5.56	0.278	ug/Kg
100-41-4	Ethylbenzene	54.4	5.56	0.204	ug/Kg
75-09-2	Methylene chloride	49.7	11.1	0.570	ug/Kg
100-42-5	Styrene	54.0	5.56	0.093	ug/Kg
127-18-4	Tetrachloroethene	54.3	5.56	0.329	ug/Kg
108-88-3	Toluene	56.9	5.56	0.119	ug/Kg
79-01-6	Trichloroethene	55.3	5.56	0.141	ug/Kg
75-01-4	Vinyl chloride	57.2	5.56	0.216	ug/Kg
1330-20-7	Xylene (total)	173	16.7	0.275	ug/Kg
156-59-2	cis-1,2-Dichloroethene	56.0	5.56	0.127	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	48.9	5.56	0.144	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250602	**HPTP-SB13-0 MS**	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
156-60-5	trans-1,2-Dichloroethene	55.8	5.56	0.133	ug/Kg
10061-02-6	trans-1,3-Dichloropropene	46.5	5.56	0.091	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250603	**HPTP-SB13-0 MSD**	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
91-57-6	2-Methylnaphthalene	3310	3.83	0.811	ug/Kg
83-32-9	Acenaphthene	3820	3.83	1.27	ug/Kg
208-96-8	Acenaphthylene	3390	3.83	1.52	ug/Kg
120-12-7	Anthracene	2990	3.83	0.313	ug/Kg
56-55-3	Benzo(a)anthracene	3140	3.83	1.79	ug/Kg
50-32-8	Benzo(a)pyrene	3280	3.83	0.360	ug/Kg
205-99-2	Benzo(b)fluoranthene	2920	3.83	1.15	ug/Kg
191-24-2	Benzo(g,h,i)perylene	4500	3.83	0.691	ug/Kg
207-08-9	Benzo(k)fluoranthene	2900	3.83	0.451	ug/Kg
218-01-9	Chrysene	2920	3.83	1.29	ug/Kg
53-70-3	Dibenz(a,h)anthracene	4640	3.83	1.15	ug/Kg
206-44-0	Fluoranthene	3280	3.83	0.425	ug/Kg
86-73-7	Fluorene	3290	3.83	0.474	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	4430	3.83	0.489	ug/Kg
91-20-3	Naphthalene	3020	3.83	0.432	ug/Kg
85-01-8	Phenanthrene	3090	3.83	0.551	ug/Kg
129-00-0	Pyrene	3140	3.83	0.641	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-55-6	1,1,1-Trichloroethane	50.2	5.42	0.176	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	45.9	5.42	0.189	ug/Kg
79-00-5	1,1,2-Trichloroethane	47.5	5.42	0.069	ug/Kg
75-34-3	1,1-Dichloroethane	52.0	5.42	0.104	ug/Kg
75-35-4	1,1-Dichloroethene	48.8	5.42	0.246	ug/Kg
107-06-2	1,2-Dichloroethane	47.9	5.42	0.215	ug/Kg
78-87-5	1,2-Dichloropropane	51.1	5.42	0.083	ug/Kg
78-93-3	2-Butanone	40.3	5.42	0.350	ug/Kg
591-78-6	2-Hexanone	40.8	5.42	0.320	ug/Kg
108-10-1	4-Methyl-2-pentanone	36.9	5.42	0.167	ug/Kg
67-64-1	Acetone	37.6	27.1	0.321	ug/Kg
71-43-2	Benzene	53.2	5.42	0.055	ug/Kg
75-27-4	Bromodichloromethane	49.7	5.42	0.112	ug/Kg
75-25-2	Bromoform	43.2	5.42	0.473	ug/Kg
74-83-9	Bromomethane	51.3	5.42	0.526	ug/Kg
75-15-0	Carbon disulfide	50.4	5.42	0.203	ug/Kg
56-23-5	Carbon tetrachloride	51.0	5.42	0.204	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250603	**HPTP-SB13-0 MSD**	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
108-90-7	Chlorobenzene	50.1	5.42	0.140	ug/Kg
75-00-3	Chloroethane	52.6	5.42	0.218	ug/Kg
67-66-3	Chloroform	49.3	5.42	0.187	ug/Kg
74-87-3	Chloromethane	54.7	5.42	0.209	ug/Kg
124-48-1	Dibromochloromethane	48.6	5.42	0.271	ug/Kg
100-41-4	Ethylbenzene	52.3	5.42	0.198	ug/Kg
75-09-2	Methylene chloride	45.1	10.8	0.555	ug/Kg
100-42-5	Styrene	53.7	5.42	0.090	ug/Kg
127-18-4	Tetrachloroethene	50.8	5.42	0.321	ug/Kg
108-88-3	Toluene	53.8	5.42	0.116	ug/Kg
79-01-6	Trichloroethene	50.2	5.42	0.138	ug/Kg
75-01-4	Vinyl chloride	51.2	5.42	0.210	ug/Kg
1330-20-7	Xylene (total)	166	16.3	0.268	ug/Kg
156-59-2	cis-1,2-Dichloroethene	53.1	5.42	0.124	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	46.8	5.42	0.140	ug/Kg
156-60-5	trans-1,2-Dichloroethene	50.9	5.42	0.129	ug/Kg
10061-02-6	trans-1,3-Dichloropropene	45.1	5.42	0.089	ug/Kg

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	269	11.6	4.6	ug/Kg

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	2210	465	116	ug/Kg
7440-39-3	Barium	29700	465	116	ug/Kg
7440-43-9	Cadmium	2380	465	116	ug/Kg
7440-47-3	Chromium	8890	465	116	ug/Kg
7439-92-1	Lead	7820	465	116	ug/Kg
7440-22-4	Silver	2330	465	116	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250604	**HPTP-SB13-2**	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	5.2J	11.9	4.8	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250604	HPTP-SB13-2	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	137J	477	119	ug/Kg
7440-39-3	Barium	4800	477	119	ug/Kg
7440-47-3	Chromium	1730	477	119	ug/Kg
7439-92-1	Lead	1580	477	119	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
56-55-3	Benzo(a)anthracene	13.1	3.94	1.84	ug/Kg
50-32-8	Benzo(a)pyrene	12.0	3.94	0.370	ug/Kg
205-99-2	Benzo(b)fluoranthene	75.6	3.94	1.18	ug/Kg
191-24-2	Benzo(g,h,i)perylene	12.3	3.94	0.710	ug/Kg
207-08-9	Benzo(k)fluoranthene	7.02	3.94	0.463	ug/Kg
218-01-9	Chrysene	12.8	3.94	1.32	ug/Kg
206-44-0	Fluoranthene	15.3	3.94	0.437	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	63.1	3.94	0.502	ug/Kg
129-00-0	Pyrene	14.0	3.94	0.659	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	0.451J	5.26	0.193	ug/Kg
75-09-2	Methylene chloride	2.00J	10.5	0.538	ug/Kg
108-88-3	Toluene	1.97J	5.26	0.113	ug/Kg
1330-20-7	Xylene (total)	2.05J	15.8	0.260	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250605	HPTP-SB13-2 MS	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
91-57-6	2-Methylnaphthalene	3100	3.94	0.833	ug/Kg
83-32-9	Acenaphthene	3280	3.94	1.30	ug/Kg
208-96-8	Acenaphthylene	3250	3.94	1.56	ug/Kg
120-12-7	Anthracene	2780	3.94	0.321	ug/Kg
56-55-3	Benzo(a)anthracene	2920	3.94	1.84	ug/Kg
50-32-8	Benzo(a)pyrene	3080	3.94	0.370	ug/Kg
205-99-2	Benzo(b)fluoranthene	2840	3.94	1.18	ug/Kg
191-24-2	Benzo(g,h,i)perylene	4410	3.94	0.710	ug/Kg
207-08-9	Benzo(k)fluoranthene	2580	3.94	0.463	ug/Kg
218-01-9	Chrysene	2780	3.94	1.32	ug/Kg
53-70-3	Dibenz(a,h)anthracene	4570	3.94	1.18	ug/Kg
206-44-0	Fluoranthene	3050	3.94	0.437	ug/Kg
86-73-7	Fluorene	2960	3.94	0.487	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250605	**HPTP-SB13-2 MS**	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
193-39-5	Indeno(1,2,3-cd)pyrene	4640	3.94	0.502	ug/Kg
91-20-3	Naphthalene	2850	3.94	0.444	ug/Kg
85-01-8	Phenanthrene	2890	3.94	0.566	ug/Kg
129-00-0	Pyrene	2910	3.94	0.659	ug/Kg

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	321	11.9	4.8	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-55-6	1,1,1-Trichloroethane	55.2	5.61	0.182	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	51.1	5.61	0.196	ug/Kg
79-00-5	1,1,2-Trichloroethane	50.6	5.61	0.072	ug/Kg
75-34-3	1,1-Dichloroethane	56.2	5.61	0.108	ug/Kg
75-35-4	1,1-Dichloroethene	53.9	5.61	0.254	ug/Kg
107-06-2	1,2-Dichloroethane	51.7	5.61	0.222	ug/Kg
78-87-5	1,2-Dichloropropane	56.2	5.61	0.085	ug/Kg
78-93-3	2-Butanone	45.1	5.61	0.362	ug/Kg
591-78-6	2-Hexanone	47.4	5.61	0.331	ug/Kg
108-10-1	4-Methyl-2-pentanone	41.4	5.61	0.173	ug/Kg
67-64-1	Acetone	38.2	28.0	0.332	ug/Kg
71-43-2	Benzene	57.7	5.61	0.057	ug/Kg
75-27-4	Bromodichloromethane	54.5	5.61	0.116	ug/Kg
75-25-2	Bromoform	48.0	5.61	0.490	ug/Kg
74-83-9	Bromomethane	58.1	5.61	0.545	ug/Kg
75-15-0	Carbon disulfide	55.6	5.61	0.210	ug/Kg
56-23-5	Carbon tetrachloride	56.3	5.61	0.211	ug/Kg
108-90-7	Chlorobenzene	55.7	5.61	0.145	ug/Kg
75-00-3	Chloroethane	55.2	5.61	0.226	ug/Kg
67-66-3	Chloroform	52.9	5.61	0.193	ug/Kg
74-87-3	Chloromethane	55.1	5.61	0.216	ug/Kg
124-48-1	Dibromochloromethane	52.6	5.61	0.280	ug/Kg
100-41-4	Ethylbenzene	59.1	5.61	0.205	ug/Kg
75-09-2	Methylene chloride	55.4	11.2	0.574	ug/Kg
100-42-5	Styrene	59.9	5.61	0.094	ug/Kg
127-18-4	Tetrachloroethene	57.6	5.61	0.332	ug/Kg
108-88-3	Toluene	58.3	5.61	0.120	ug/Kg
79-01-6	Trichloroethene	56.3	5.61	0.143	ug/Kg
75-01-4	Vinyl chloride	55.5	5.61	0.217	ug/Kg
1330-20-7	Xylene (total)	185	16.8	0.277	ug/Kg
156-59-2	cis-1,2-Dichloroethene	57.9	5.61	0.128	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	51.1	5.61	0.145	ug/Kg
156-60-5	trans-1,2-Dichloroethene	55.4	5.61	0.134	ug/Kg
10061-02-6	trans-1,3-Dichloropropene	48.6	5.61	0.092	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250605	HPTP-SB13-2 MS	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	2010	477	119	ug/Kg
7440-39-3	Barium	9420	477	119	ug/Kg
7440-43-9	Cadmium	2450	477	119	ug/Kg
7440-47-3	Chromium	5660	477	119	ug/Kg
7439-92-1	Lead	4990	477	119	ug/Kg
7782-49-2	Selenium	374J	477	119	ug/Kg
7440-22-4	Silver	2550	477	119	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250606	HPTP-SB13-2 MSD	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	2030	477	119	ug/Kg
7440-39-3	Barium	9410	477	119	ug/Kg
7440-43-9	Cadmium	2480	477	119	ug/Kg
7440-47-3	Chromium	5630	477	119	ug/Kg
7439-92-1	Lead	5210	477	119	ug/Kg
7782-49-2	Selenium	310J	477	119	ug/Kg
7440-22-4	Silver	2560	477	119	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-55-6	1,1,1-Trichloroethane	52.3	5.53	0.179	ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	48.3	5.53	0.193	ug/Kg
79-00-5	1,1,2-Trichloroethane	49.8	5.53	0.071	ug/Kg
75-34-3	1,1-Dichloroethane	53.8	5.53	0.107	ug/Kg
75-35-4	1,1-Dichloroethene	49.5	5.53	0.251	ug/Kg
107-06-2	1,2-Dichloroethane	49.4	5.53	0.219	ug/Kg
78-87-5	1,2-Dichloropropane	53.1	5.53	0.084	ug/Kg
78-93-3	2-Butanone	43.0	5.53	0.357	ug/Kg
591-78-6	2-Hexanone	45.0	5.53	0.327	ug/Kg
108-10-1	4-Methyl-2-pentanone	39.6	5.53	0.171	ug/Kg
67-64-1	Acetone	40.2	27.7	0.328	ug/Kg
71-43-2	Benzene	54.6	5.53	0.056	ug/Kg
75-27-4	Bromodichloromethane	51.5	5.53	0.115	ug/Kg
75-25-2	Bromoform	46.4	5.53	0.483	ug/Kg
74-83-9	Bromomethane	56.3	5.53	0.538	ug/Kg
75-15-0	Carbon disulfide	50.8	5.53	0.207	ug/Kg
56-23-5	Carbon tetrachloride	51.9	5.53	0.209	ug/Kg
108-90-7	Chlorobenzene	53.8	5.53	0.143	ug/Kg
75-00-3	Chloroethane	48.9	5.53	0.223	ug/Kg
67-66-3	Chloroform	50.1	5.53	0.191	ug/Kg
74-87-3	Chloromethane	57.1	5.53	0.213	ug/Kg
124-48-1	Dibromochloromethane	51.1	5.53	0.277	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250606	**HPTP-SB13-2 MSD**	Solid	01/24/2014 09:45	01/25/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
100-41-4	Ethylbenzene	55.5	5.53	0.203	ug/Kg
75-09-2	Methylene chloride	48.3	11.1	0.566	ug/Kg
100-42-5	Styrene	56.9	5.53	0.092	ug/Kg
127-18-4	Tetrachloroethene	53.8	5.53	0.328	ug/Kg
108-88-3	Toluene	55.6	5.53	0.118	ug/Kg
79-01-6	Trichloroethene	52.1	5.53	0.141	ug/Kg
75-01-4	Vinyl chloride	50.7	5.53	0.214	ug/Kg
1330-20-7	Xylene (total)	177	16.6	0.273	ug/Kg
156-59-2	cis-1,2-Dichloroethene	55.0	5.53	0.126	ug/Kg
10061-01-5	cis-1,3-Dichloropropene	48.8	5.53	0.143	ug/Kg
156-60-5	trans-1,2-Dichloroethene	52.5	5.53	0.132	ug/Kg
10061-02-6	trans-1,3-Dichloropropene	47.1	5.53	0.091	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
91-57-6	2-Methylnaphthalene	3330	3.94	0.833	ug/Kg
83-32-9	Acenaphthene	3360	3.94	1.30	ug/Kg
208-96-8	Acenaphthylene	3410	3.94	1.56	ug/Kg
120-12-7	Anthracene	2970	3.94	0.321	ug/Kg
56-55-3	Benzo(a)anthracene	3140	3.94	1.84	ug/Kg
50-32-8	Benzo(a)pyrene	3300	3.94	0.370	ug/Kg
205-99-2	Benzo(b)fluoranthene	3090	3.94	1.18	ug/Kg
191-24-2	Benzo(g,h,i)perylene	4720	3.94	0.710	ug/Kg
207-08-9	Benzo(k)fluoranthene	2770	3.94	0.463	ug/Kg
218-01-9	Chrysene	2990	3.94	1.32	ug/Kg
53-70-3	Dibenz(a,h)anthracene	4890	3.94	1.18	ug/Kg
206-44-0	Fluoranthene	3320	3.94	0.437	ug/Kg
86-73-7	Fluorene	3100	3.94	0.487	ug/Kg
193-39-5	Indeno(1,2,3-cd)pyrene	4960	3.94	0.502	ug/Kg
91-20-3	Naphthalene	3050	3.94	0.444	ug/Kg
85-01-8	Phenanthrene	3080	3.94	0.566	ug/Kg
129-00-0	Pyrene	3100	3.94	0.659	ug/Kg

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	288	11.9	4.8	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250607	**HPTP-SB16-0**	Solid	01/24/2014 12:30	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	998J	2180	546	ug/Kg
7440-39-3	Barium	18400	2180	546	ug/Kg
7440-47-3	Chromium	6550	2180	546	ug/Kg
7439-92-1	Lead	1280J	2180	546	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	14.8J	38.4	0.455	ug/Kg
100-41-4	Ethylbenzene	0.534J	7.69	0.281	ug/Kg
75-09-2	Methylene chloride	3.84J	15.4	0.787	ug/Kg
108-88-3	Toluene	2.35J	7.69	0.165	ug/Kg
1330-20-7	Xylene (total)	2.19J	23.1	0.380	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250608	**HPTP-SB14-0**	Solid	01/24/2014 11:20	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	438J	488	122	ug/Kg
7440-39-3	Barium	23900	488	122	ug/Kg
7440-43-9	Cadmium	675	488	122	ug/Kg
7440-47-3	Chromium	6010	488	122	ug/Kg
7439-92-1	Lead	6670	488	122	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	3.81J	27.0	0.319	ug/Kg
100-41-4	Ethylbenzene	0.439J	5.40	0.197	ug/Kg
75-09-2	Methylene chloride	1.88J	10.8	0.552	ug/Kg
108-88-3	Toluene	2.01J	5.40	0.115	ug/Kg
1330-20-7	Xylene (total)	1.96J	16.2	0.267	ug/Kg

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
56-55-3	Benzo(a)anthracene	7.50	4.06	1.89	ug/Kg
50-32-8	Benzo(a)pyrene	5.13	4.06	0.381	ug/Kg
218-01-9	Chrysene	6.43	4.06	1.37	ug/Kg
206-44-0	Fluoranthene	7.54	4.06	0.450	ug/Kg
129-00-0	Pyrene	6.46	4.06	0.679	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250608	HPTP-SB14-0	Solid	01/24/2014 11:20	01/25/2014 10:15

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	11.7J	13.4	5.4	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250609	HPTP-SB14-2	Solid	01/24/2014 11:20	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	342J	489	122	ug/Kg
7440-39-3	Barium	16100	489	122	ug/Kg
7440-47-3	Chromium	5450	489	122	ug/Kg
7439-92-1	Lead	3200	489	122	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-09-2	Methylene chloride	3.50J	9.94	0.509	ug/Kg
108-88-3	Toluene	0.686J	4.97	0.106	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250610	HPTP-SB14-0 FD	Solid	01/24/2014 11:20	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	322J	511	128	ug/Kg
7440-39-3	Barium	24800	511	128	ug/Kg
7440-47-3	Chromium	6950	511	128	ug/Kg
7439-92-1	Lead	5420	511	128	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-09-2	Methylene chloride	1.78J	12.0	0.612	ug/Kg
108-88-3	Toluene	1.15J	5.98	0.128	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250611	HPTP-SB14-2 FD	Solid	01/24/2014 11:20	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	186J	484	121	ug/Kg
7440-39-3	Barium	13700	484	121	ug/Kg

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250611	**HPTP-SB14-2 FD**	Solid	01/24/2014 11:20	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-47-3	Chromium	6340	484	121	ug/Kg
7439-92-1	Lead	2880	484	121	ug/Kg

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	4.80J	24.1	0.285	ug/Kg
75-09-2	Methylene chloride	3.67J	9.64	0.494	ug/Kg
108-88-3	Toluene	1.07J	4.82	0.103	ug/Kg

EPA 7471B

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	14.4	13.5	5.4	ug/Kg

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250612	**HPTP-MW04-0114**	Water	01/24/2014 10:21	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	0.79J	1.00	0.25	ug/L
7440-39-3	Barium	31.3	1.00	0.25	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-01-4	Vinyl chloride	1.57	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	5.89	1.00	0.103	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250613	**HPTP-MW02-0114**	Water	01/24/2014 12:24	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	10.0	1.00	0.25	ug/L
7440-39-3	Barium	38.6	1.00	0.25	ug/L
7440-47-3	Chromium	0.33J	1.00	0.25	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250614	**HPTP-MW02-0114 MS**	Water	01/24/2014 12:24	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	58.5	1.00	0.25	ug/L
7440-39-3	Barium	88.7	1.00	0.25	ug/L
7440-43-9	Cadmium	49.0	1.00	0.25	ug/L
7440-47-3	Chromium	50.7	1.00	0.25	ug/L
7439-92-1	Lead	49.5	1.00	0.25	ug/L
7782-49-2	Selenium	9.18	1.00	0.25	ug/L
7440-22-4	Silver	48.6	1.00	0.25	ug/L

EPA 7470A

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	4.5	0.20	0.070	ug/L

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
91-57-6	2-Methylnaphthalene	82.6	0.101	0.030	ug/L
83-32-9	Acenaphthene	99.5	0.101	0.00828	ug/L
208-96-8	Acenaphthylene	89.4	0.101	0.026	ug/L
120-12-7	Anthracene	84.7	0.101	0.041	ug/L
56-55-3	Benzo(a)anthracene	76.2	0.101	0.020	ug/L
50-32-8	Benzo(a)pyrene	79.5	0.101	0.012	ug/L
205-99-2	Benzo(b)fluoranthene	77.9	0.101	0.00879	ug/L
191-24-2	Benzo(g,h,i)perylene	68.5	0.101	0.011	ug/L
207-08-9	Benzo(k)fluoranthene	74.6	0.101	0.017	ug/L
218-01-9	Chrysene	71.0	0.101	0.018	ug/L
53-70-3	Dibenz(a,h)anthracene	74.8	0.101	0.016	ug/L
206-44-0	Fluoranthene	83.5	0.101	0.012	ug/L
86-73-7	Fluorene	85.6	0.101	0.040	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	76.9	0.101	0.00525	ug/L
91-20-3	Naphthalene	76.1	0.101	0.00980	ug/L
85-01-8	Phenanthrene	82.5	0.101	0.00727	ug/L
129-00-0	Pyrene	91.3	0.101	0.015	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-55-6	1,1,1-Trichloroethane	50.2	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	50.2	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	50.0	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	49.5	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	49.2	1.00	0.200	ug/L
107-06-2	1,2-Dichloroethane	51.6	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	54.2	1.00	0.150	ug/L
78-93-3	2-Butanone	50.8	5.00	0.142	ug/L
591-78-6	2-Hexanone	53.5	5.00	0.122	ug/L
108-10-1	4-Methyl-2-pentanone	55.6	5.00	0.120	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250614	**HPTP-MW02-0114 MS**	Water	01/24/2014 12:24	01/25/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	45.0	5.00	0.193	ug/L
71-43-2	Benzene	52.2	1.00	0.111	ug/L
75-27-4	Bromodichloromethane	52.7	1.00	0.083	ug/L
75-25-2	Bromoform	47.4	1.00	0.215	ug/L
74-83-9	Bromomethane	61.3	1.00	0.427	ug/L
75-15-0	Carbon disulfide	47.6	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	50.0	1.00	0.248	ug/L
108-90-7	Chlorobenzene	49.6	1.00	0.083	ug/L
75-00-3	Chloroethane	55.9	1.00	0.235	ug/L
67-66-3	Chloroform	50.0	1.00	0.155	ug/L
74-87-3	Chloromethane	53.2	1.00	0.144	ug/L
124-48-1	Dibromochloromethane	49.0	1.00	0.054	ug/L
100-41-4	Ethylbenzene	50.7	1.00	0.109	ug/L
75-09-2	Methylene chloride	49.1	5.00	0.149	ug/L
100-42-5	Styrene	54.4	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	52.6	1.00	0.193	ug/L
108-88-3	Toluene	52.4	1.00	0.122	ug/L
79-01-6	Trichloroethene	50.9	1.00	0.161	ug/L
75-01-4	Vinyl chloride	52.3	1.00	0.127	ug/L
1330-20-7	Xylene (total)	156	3.00	0.179	ug/L
156-59-2	cis-1,2-Dichloroethene	52.5	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	64.8	1.00	0.124	ug/L
156-60-5	trans-1,2-Dichloroethene	50.0	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	61.2	1.00	0.128	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250615	**HPTP-MW02-0114 MSD**	Water	01/24/2014 12:24	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	59.6	1.00	0.25	ug/L
7440-39-3	Barium	91.4	1.00	0.25	ug/L
7440-43-9	Cadmium	49.7	1.00	0.25	ug/L
7440-47-3	Chromium	51.8	1.00	0.25	ug/L
7439-92-1	Lead	51.1	1.00	0.25	ug/L
7782-49-2	Selenium	9.13	1.00	0.25	ug/L
7440-22-4	Silver	49.7	1.00	0.25	ug/L

EPA 7470A

CAS#	Parameter	Result	RDL	MDL	Units
7439-97-6	Mercury	4.8	0.20	0.070	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250615	**HPTP-MW02-0114 MSD**	Water	01/24/2014 12:24	01/25/2014 10:15

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
91-57-6	2-Methylnaphthalene	75.5	0.101	0.030	ug/L
83-32-9	Acenaphthene	109	0.101	0.00828	ug/L
208-96-8	Acenaphthylene	86.3	0.101	0.026	ug/L
120-12-7	Anthracene	75.2	0.101	0.041	ug/L
56-55-3	Benzo(a)anthracene	76.2	0.101	0.020	ug/L
50-32-8	Benzo(a)pyrene	78.5	0.101	0.012	ug/L
205-99-2	Benzo(b)fluoranthene	79.1	0.101	0.00879	ug/L
191-24-2	Benzo(g,h,i)perylene	67.3	0.101	0.011	ug/L
207-08-9	Benzo(k)fluoranthene	72.4	0.101	0.017	ug/L
218-01-9	Chrysene	69.9	0.101	0.018	ug/L
53-70-3	Dibenz(a,h)anthracene	73.1	0.101	0.016	ug/L
206-44-0	Fluoranthene	80.0	0.101	0.012	ug/L
86-73-7	Fluorene	91.4	0.101	0.040	ug/L
193-39-5	Indeno(1,2,3-cd)pyrene	70.0	0.101	0.00525	ug/L
91-20-3	Naphthalene	70.2	0.101	0.00980	ug/L
85-01-8	Phenanthrene	79.4	0.101	0.00727	ug/L
129-00-0	Pyrene	89.8	0.101	0.015	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
71-55-6	1,1,1-Trichloroethane	49.1	1.00	0.123	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	50.7	1.00	0.109	ug/L
79-00-5	1,1,2-Trichloroethane	49.1	1.00	0.159	ug/L
75-34-3	1,1-Dichloroethane	48.7	1.00	0.171	ug/L
75-35-4	1,1-Dichloroethene	47.6	1.00	0.200	ug/L
107-06-2	1,2-Dichloroethane	49.9	1.00	0.116	ug/L
78-87-5	1,2-Dichloropropane	50.9	1.00	0.150	ug/L
78-93-3	2-Butanone	49.7	5.00	0.142	ug/L
591-78-6	2-Hexanone	52.4	5.00	0.122	ug/L
108-10-1	4-Methyl-2-pentanone	53.8	5.00	0.120	ug/L
67-64-1	Acetone	43.4	5.00	0.193	ug/L
71-43-2	Benzene	50.8	1.00	0.111	ug/L
75-27-4	Bromodichloromethane	49.9	1.00	0.083	ug/L
75-25-2	Bromoform	49.5	1.00	0.215	ug/L
74-83-9	Bromomethane	58.5	1.00	0.427	ug/L
75-15-0	Carbon disulfide	46.3	1.00	0.190	ug/L
56-23-5	Carbon tetrachloride	48.5	1.00	0.248	ug/L
108-90-7	Chlorobenzene	49.0	1.00	0.083	ug/L
75-00-3	Chloroethane	48.4	1.00	0.235	ug/L
67-66-3	Chloroform	48.5	1.00	0.155	ug/L
74-87-3	Chloromethane	56.4	1.00	0.144	ug/L
124-48-1	Dibromochloromethane	49.2	1.00	0.054	ug/L
100-41-4	Ethylbenzene	49.4	1.00	0.109	ug/L
75-09-2	Methylene chloride	48.9	5.00	0.149	ug/L
100-42-5	Styrene	55.7	1.00	0.089	ug/L
127-18-4	Tetrachloroethene	47.2	1.00	0.193	ug/L
108-88-3	Toluene	48.6	1.00	0.122	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250615	HPTP-MW02-0114 MSD	Water	01/24/2014 12:24	01/25/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
79-01-6	Trichloroethene	49.3	1.00	0.161	ug/L
75-01-4	Vinyl chloride	50.0	1.00	0.127	ug/L
1330-20-7	Xylene (total)	159	3.00	0.179	ug/L
156-59-2	cis-1,2-Dichloroethene	51.7	1.00	0.103	ug/L
10061-01-5	cis-1,3-Dichloropropene	55.0	1.00	0.124	ug/L
156-60-5	trans-1,2-Dichloroethene	49.0	1.00	0.077	ug/L
10061-02-6	trans-1,3-Dichloropropene	55.6	1.00	0.128	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250616	HPTP-MW03-0114	Water	01/24/2014 14:11	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	8.54	1.00	0.25	ug/L
7440-39-3	Barium	27.0	1.00	0.25	ug/L

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
91-57-6	2-Methylnaphthalene	0.407	0.102	0.030	ug/L
83-32-9	Acenaphthene	0.143	0.102	0.00837	ug/L
120-12-7	Anthracene	0.170	0.102	0.042	ug/L
206-44-0	Fluoranthene	0.136	0.102	0.012	ug/L
86-73-7	Fluorene	0.167	0.102	0.041	ug/L
91-20-3	Naphthalene	0.138	0.102	0.00990	ug/L
85-01-8	Phenanthrene	0.269	0.102	0.00735	ug/L
129-00-0	Pyrene	0.117	0.102	0.015	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-01-4	Vinyl chloride	0.335J	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.823J	1.00	0.103	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250617	HPTP-MW03-0114-FD	Water	01/24/2014 14:11	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	8.71	1.00	0.25	ug/L
7440-39-3	Barium	27.2	1.00	0.25	ug/L
7440-47-3	Chromium	0.36J	1.00	0.25	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250617	HPTP-MW03-0114-FD	Water	01/24/2014 14:11	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7439-92-1	Lead	0.32J	1.00	0.25	ug/L

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
91-57-6	2-Methylnaphthalene	0.337	0.103	0.031	ug/L
120-12-7	Anthracene	0.085J	0.103	0.042	ug/L
206-44-0	Fluoranthene	0.053J	0.103	0.012	ug/L
91-20-3	Naphthalene	0.257	0.103	0.010	ug/L
85-01-8	Phenanthrene	0.210	0.103	0.00742	ug/L
129-00-0	Pyrene	0.066J	0.103	0.015	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-01-4	Vinyl chloride	0.348J	1.00	0.127	ug/L
156-59-2	cis-1,2-Dichloroethene	0.846J	1.00	0.103	ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250618	HPTP-MW01-0114	Water	01/24/2014 15:16	01/25/2014 10:15

EPA 6020A

CAS#	Parameter	Result	RDL	MDL	Units
7440-38-2	Arsenic	1.21	1.00	0.25	ug/L
7440-39-3	Barium	17.1	1.00	0.25	ug/L
7440-47-3	Chromium	0.59J	1.00	0.25	ug/L
7439-92-1	Lead	0.59J	1.00	0.25	ug/L
7782-49-2	Selenium	1.04	1.00	0.25	ug/L

EPA 8270D SIM

CAS#	Parameter	Result	RDL	MDL	Units
91-57-6	2-Methylnaphthalene	0.260	0.100	0.030	ug/L

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	Acetone	2.60J	5.00	0.193	ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250619	**EB012414-SO**	Water	01/24/2014 15:45	01/25/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
67-64-1	**Acetone**	**1.26J**	**5.00**	**0.193**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250621	**TB012414-GW**	Water	01/24/2014 17:35	01/25/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-09-2	**Methylene chloride**	**1.33J**	**5.00**	**0.149**	**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21401250622	**TB012414-SO**	Water	01/24/2014 17:40	01/25/2014 10:15

EPA 8260B

CAS#	Parameter	Result	RDL	MDL	Units
75-09-2	**Methylene chloride**	**1.39J**	**5.00**	**0.149**	**ug/L**

Appendix D
Analytic Results Tables

Groundwater Results
PSC 57
NAS Jacksonville

Analyte	FLGCTL _2005 (a)	FLGCTL_2005_ FRESHWATER_SW (b)	FLGCTL_2005_ MARINE_SW (c)	Units	HPTP-MW01 HPTP-MW01-0114 1/24/2014	HPTP-MW01 HPTP-MW01-0315 3/16/2015	HPTP-MW01 JX-HPTP-MW1-01 10/24/2001	HPTP-MW02 HPTP-MW02-0114 1/24/2014	HPTP-MW02 HPTP-MW02-0315 3/16/2015	HPTP-MW02 JX-HPTP-MW2-01 10/24/2001	HPTP-MW03 HPTP-MW03-0114 1/24/2014	HPTP-MW03 HPTP-MW03-0315 3/16/2015	HPTP-MW03 JAX-17-MW03-02 10/17/2002	HPTP-MW03 JX-HPTP-MW3-01 10/24/2001
Metals														
ARSENIC	10	50	50	UG_L	**1.21**	**1.1**	NA	**10**	**5.97**	NA	**8.54**	**6.21**	NA	NA
BARIUM	2000			UG_L	**17.1**	**11.1**	NA	**38.6 J**	**23.8**	NA	**27**	**24.3**	NA	NA
CADMIUM	5		9.3	UG_L	0.25 U	0.25 U	NA	0.25 U	0.25 U	NA	0.25 U	0.25 U	NA	NA
CHROMIUM, TOTAL	100	11	50	UG_L	**0.59 J**	**0.34 J**	NA	**0.33 J**	0.25 U	NA	0.25 U	0.25 U	NA	NA
LEAD	15		8.5	UG_L	**0.59 J**	0.25 U	1.2 U	0.25 U	0.25 U	1.2 U	0.25 U	0.25 U	NA	1.2 U
MERCURY	2	0.012	0.025	UG_L	0.07 U	0.043 U	NA	0.07 U	0.043 U	NA	0.07 U	0.043 U	NA	NA
SELENIUM	50	5	71	UG_L	**1.04**	0.25 U	NA	0.25 U	0.25 U	NA	0.25 U	0.25 U	NA	NA
SILVER	100	0.07	0.4	UG_L	0.25 U	0.25 U	NA	0.25 U	0.25 U	NA	0.25 U	0.25 U	NA	NA
VOCs														
1,1,1-TRICHLOROETHANE	200	270	270	UG_L	0.123 U	0.123 U	1 U	0.123 U	0.123 U	1 U	0.123 U	0.123 U	NA	1 U
1,1,2,2-TETRACHLOROETHANE	0.2	10.8	10.8	UG_L	0.109 U	0.109 U	1 U	0.109 U	0.109 U	1 U	0.109 U	0.109 U	NA	1 U
1,1,2-TRICHLOROETHANE	5	16	16	UG_L	0.159 U	0.159 U	1 U	0.159 U	0.159 U	1 U	0.159 U	0.159 U	NA	1 U
1,1-DICHLOROETHANE	70			UG_L	0.171 U	0.171 U	1 U	0.171 U	0.171 U	1 U	0.171 U	0.171 U	NA	1 U
1,1-DICHLOROETHENE	7	3.2	3.2	UG_L	0.2 U	0.2 U	1 U	0.2 U	0.2 U	1 U	0.2 U	0.2 U	NA	1 U
1,2-DIBROMOETHANE	0.02	13	13	UG_L	NA	NA	0.02 U	NA	NA	0.02 U	NA	NA	NA	0.02 U
1,2-DICHLOROBENZENE	600	99	99	UG_L	NA	NA	1 U	NA	NA	1 U	NA	NA	NA	1 U
1,2-DICHLOROETHANE	3	37	37	UG_L	0.116 U	0.116 U	1 U	0.116 U	0.116 U	1 U	0.116 U	0.116 U	NA	1 U
1,2-DICHLOROPROPANE	5	14	14	UG_L	0.15 U	0.15 U	1 U	0.15 U	0.15 U	1 U	0.15 U	0.15 U	NA	1 U
1,3-DICHLOROBENZENE	210	85	85	UG_L	NA	NA	1 U	NA	NA	1 U	NA	NA	NA	1 U
1,4-DICHLOROBENZENE	75	3	3	UG_L	NA	NA	1 U	NA	NA	1 U	NA	NA	NA	1 U
2-BUTANONE	4200	120000	120000	UG_L	0.142 U	0.142 U	NA	0.142 U	0.142 U	NA	0.142 U	0.142 U	NA	NA
2-CHLOROETHYL VINYL ETHER				UG_L	NA	NA	1 U	NA	NA	1 U	NA	NA	NA	1 U
2-HEXANONE	280			UG_L	0.122 U	0.122 U	NA	0.122 U	0.122 U	NA	0.122 U	0.122 U	NA	NA
4-METHYL-2-PENTANONE	560	23000	23000	UG_L	0.12 U	0.12 U	NA	0.12 U	0.12 U	NA	0.12 U	0.12 U	NA	NA
ACETONE	6300	1700	1700	UG_L	**2.6 J**	0.193 U	NA	0.193 U	0.193 U	NA	0.193 U	0.193 U	NA	NA
BENZENE	1	71.28	71.28	UG_L	0.111 U	0.111 U	1 U	0.111 U	0.111 U	1 U	0.111 U	0.111 U	NA	1 U
BROMODICHLOROMETHANE	0.6	22	22	UG_L	0.083 U	0.083 U	1 U	0.083 U	0.083 U	1 U	0.083 U	0.083 U	NA	1 U
BROMOFORM	4.4	360	360	UG_L	0.215 U	0.215 U	1 U	0.215 U	0.215 U	1 U	0.215 U	0.215 U	NA	1 U
BROMOMETHANE	9.8	35	35	UG_L	0.427 U	0.427 U	1 U	0.427 U	0.427 U	1 U	0.427 U	0.427 U	NA	1 U
CARBON DISULFIDE	700	110	110	UG_L	0.19 U	0.19 U	NA	0.19 U	0.19 UJ	NA	0.19 U	0.19 UJ	NA	NA
CARBON TETRACHLORIDE	3	4.42	4.42	UG_L	0.248 U	0.248 U	1 U	0.248 U	0.248 U	1 U	0.248 U	0.248 U	NA	1 U
CHLOROBENZENE	100	17	17	UG_L	0.083 U	0.083 U	1 U	0.083 U	0.083 U	1 U	0.083 U	0.083 U	NA	1 U
CHLOROETHANE	12			UG_L	0.235 U	0.235 U	1 U	0.235 U	0.235 UJ	1 U	0.235 U	0.235 UJ	NA	1 U
CHLOROFORM	70	470.8	470.8	UG_L	0.155 U	0.155 U	1 U	0.155 U	0.155 U	1 U	0.155 U	0.155 U	NA	1 U
CHLOROMETHANE	2.7	470.8	470.8	UG_L	0.144 U	0.144 UJ	1 U	0.144 U	0.144 U	1 U	0.144 U	0.144 U	NA	1 U
CIS-1,2-DICHLOROETHENE	70			UG_L	0.103 U	0.103 U	1 U	0.103 U	0.103 U	**0.82 J**	**0.823 J**	**13.6 J**	**6**	**6.2**
CIS-1,3-DICHLOROPROPENE				UG_L	0.124 U	0.124 U	1 U	0.124 U	0.124 U	1 U	0.124 U	0.124 U	NA	1 U
DIBROMOCHLOROMETHANE	0.4	34	34	UG_L	0.054 U	0.054 U	1 U	0.054 U	0.054 U	1 U	0.054 U	0.054 U	NA	1 U
DICHLORODIFLUOROMETHANE	1400			UG_L	NA	NA	1 U	NA	NA	1 U	NA	NA	NA	1 U
ETHYLBENZENE	30	610	610	UG_L	0.109 U	0.109 U	1 U	0.109 U	0.109 U	1 U	0.109 U	0.109 U	NA	1 U
METHYL TERT-BUTYL ETHER	20	34000	34000	UG_L	NA	NA	1 U	NA	NA	1 U	NA	NA	NA	1 U
METHYLENE CHLORIDE	5	1580	1580	UG_L	0.149 U	0.149 U	5 U	0.149 U	0.149 U	5 U	0.149 U	0.149 U	NA	5 U
STYRENE	100	460	460	UG_L	0.089 U	0.089 U	NA	0.089 U	0.089 U	NA	0.089 U	0.089 U	NA	NA
TETRACHLOROETHENE	3	8.85	8.85	UG_L	0.193 U	0.193 U	1 U	0.193 U	0.193 U	1 U	0.193 U	0.193 U	NA	1 U
TOLUENE	40	480	480	UG_L	0.122 U	0.122 U	1 U	0.122 U	0.122 U	1 U	0.122 U	0.122 U	NA	1 U
TRANS-1,2-DICHLOROETHENE	100	11000	11000	UG_L	0.077 U	0.077 U	1 U	0.077 U	0.077 U	1 U	0.077 U	**0.543 J**	1 U	1 U
TRANS-1,3-DICHLOROPROPENE				UG_L	0.128 U	0.128 U	1 U	0.128 U	0.128 U	1 U	0.128 U	0.128 U	NA	1 U
TRICHLOROETHENE	3	80.7	80.7	UG_L	0.161 U	0.161 U	1 U	0.161 U	0.161 U	1 U	0.161 U	0.161 U	**0.8 J**	**0.62 J**
TRICHLOROFLUOROMETHANE	2100			UG_L	NA	NA	1 U	NA	NA	1 U	NA	NA	NA	1 U
VINYL CHLORIDE	**1**	**2.4**	**2.4**	UG_L	0.127 U	0.127 U	1 U	0.127 U	0.127 U	1 U	**0.335 J**	**6.99 J ab**	**3 ab**	**2.3 a**
XYLENES, TOTAL	20	370	370	UG_L	0.179 U	0.179 U	3 U	0.179 U	0.179 U	3 U	0.179 U	0.179 U	NA	3 U

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Analyte	FLGCTL _2005 (a)	FLGCTL_2005_ FRESHWATER_SW (b)	FLGCTL_2005_ MARINE_SW (c)	Units	HPTP-MW01 HPTP-MW01-0114 1/24/2014	HPTP-MW01 HPTP-MW01-0315 3/16/2015	HPTP-MW01 JX-HPTP-MW1-01 10/24/2001	HPTP-MW02 HPTP-MW02-0114 1/24/2014	HPTP-MW02 HPTP-MW02-0315 3/16/2015	HPTP-MW02 JX-HPTP-MW2-01 10/24/2001	HPTP-MW03 HPTP-MW03-0114 1/24/2014	HPTP-MW03 HPTP-MW03-0315 3/16/2015	HPTP-MW03 JAX-17-MW03-02 10/17/2002	HPTP-MW03 JX-HPTP-MW3-01 10/24/2001
PAHs														
1-METHYLNAPHTHALENE	28	95	95	UG_L	NA	NA	2 U	NA	NA	2 U	NA	NA	NA	2 U
2-METHYLNAPHTHALENE	28	30	30	UG_L	**0.26**	0.03 U	2 U	0.03 U	0.03 U	2 U	**0.407**	0.03 U	NA	2 U
ACENAPHTHENE	20	3	3	UG_L	0.0082 U	0.0082 U	4 U	0.00828 U	0.0082 U	4 U	**0.143**	0.0082 U	NA	4 U
ACENAPHTHYLENE	210	0.031	0.031	UG_L	0.025 U	0.025 U	4 U	0.026 U	0.025 U	4 U	0.026 U	0.025 U	NA	4 U
ANTHRACENE	2100	0.3	0.3	UG_L	0.041 U	0.041 U	2 U	0.041 U	0.041 U	2 U	**0.17**	0.041 U	NA	2 U
BENZO[A]ANTHRACENE	0.05	0.031	0.031	UG_L	0.02 U	0.02 U	0.2 U	0.02 U	0.02 U	0.2 U	0.02 U	0.02 U	NA	0.2 U
BENZO[A]PYRENE	0.2	0.031	0.031	UG_L	0.011 U	0.011 U	0.2 U	0.012 U	0.011 U	0.2 U	0.012 U	0.011 U	NA	0.2 U
BENZO[B]FLUORANTHENE	0.05	0.031	0.031	UG_L	0.0087 U	0.0087 U	0.2 U	0.00879 U	0.0087 U	0.2 U	0.00888 U	0.0087 U	NA	0.2 U
BENZO[G,H,I]PERYLENE	210	0.031	0.031	UG_L	0.011 U	0.011 U	0.2 U	0.011 U	0.011 U	0.2 U	0.011 U	0.011 U	NA	0.2 U
BENZO[K]FLUORANTHENE	0.5	0.031	0.031	UG_L	0.017 U	0.017 U	0.2 U	0.017 U	0.017 U	0.2 U	0.017 U	0.017 U	NA	0.2 U
CHRYSENE	4.8	0.031	0.031	UG_L	0.018 U	0.018 U	2 U	0.018 U	0.018 U	2 U	0.018 U	0.018 U	NA	2 U
DIBENZ[A,H]ANTHRACENE	0.005	0.031	0.031	UG_L	0.016 U	0.016 U	0.2 U	0.016 U	0.016 U	0.2 U	0.016 U	0.016 U	NA	0.2 U
FLUORANTHENE	280	0.3	0.3	UG_L	0.012 U	0.012 U	2 U	0.012 U	0.012 U	2 U	**0.136**	0.012 U	NA	2 U
FLUORENE	280	30	30	UG_L	0.04 U	0.04 U	2 U	0.04 U	0.04 U	2 U	**0.167**	0.04 U	NA	2 U
INDENO[1,2,3-CD]PYRENE	0.05	0.031	0.031	UG_L	0.0052 U	0.0052 U	0.2 U	0.00525 U	0.0052 U	0.2 U	0.00531 U	0.0052 U	NA	0.2 U
NAPHTHALENE	14	26	26	UG_L	0.0097 U	0.0097 U	2 U	0.0098 U	0.0097 U	2 U	**0.138**	0.0097 U	NA	2 U
PHENANTHRENE	**210**	**0.031**	**0.031**	UG_L	0.0072 U	0.0072 U	2 U	0.00727 U	0.0072 U	2 U	**0.269 b**	0.0072 U	NA	2 U
PYRENE	210	0.3	0.3	UG_L	0.015 U	0.015 U	2 U	0.015 U	0.015 U	2 U	**0.117**	0.015 U	NA	2 U
TPH				UG_L	NA	NA	250 U	NA	NA	**270**	NA	NA	NA	**726**

Notes:

FLGCTL_2005 (a) - Groundwater Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLGCTL_2005_FRESHWATER_SW (b) - Freshwater Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLGCTL_2005_MARINE_SW (c) - Groundwater Cleanup Target Levels. FAC Chapter 62-777. April 2005.

Bolded results indicate parameter was detected

Shaded cells indicate concentrations greater than screening criteria

NA - Not Analyzed

UG_L - micrograms per liter.

J - Estimated Value

I - Value is between the laboratory MDL and the laboratory PQL.

U - Value is not detected at the MDL.

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Analyte	FLGCTL _2005 (a)	FLGCTL_2005_ FRESHWATER_SW (b)	FLGCTL_2005_ MARINE_SW (c)	Units	HPTP-MW04 HPTP-MW04-0114 1/24/2014	HPTP-MW04 HPTP-MW04-0315 3/16/2015	HPTP-MW04 HPTP-MW04-0814 8/6/2014	HPTP-MW04 JAX-17-MW04-02 10/17/2002	HPTP-MW04 JAX-HPTP-MW04-01 1/3/2002	HPTP-MW05 HPTP-MW05-0114 1/23/2014	HPTP-MW05 HPTP-MW05-0315 3/16/2015	HPTP-MW05 JAX-HPTP-MW05-01 1/3/2002	HPTP-MW06 HPTP-MW06-0315 3/17/2015	HPTP-TW01 HPTP-TW01-0114 1/23/2014
Metals														
ARSENIC	10	50	50	UG_L	**0.79 J**	**0.78 J**	NA	NA	NA	**0.5 J**	**0.28 J**	NA	**2.36**	**2.82**
BARIUM	2000			UG_L	**31.3**	**28.7**	NA	NA	NA	**38.1**	**30**	NA	**28.9**	**50.7**
CADMIUM	5		9.3	UG_L	0.25 U	0.25 U	NA	NA	NA	0.25 U	0.25 U	NA	0.25 U	0.25 U
CHROMIUM, TOTAL	100	11	50	UG_L	0.25 U	0.25 U	NA	NA	NA	0.25 U	0.25 U	NA	**1.47**	0.25 U
LEAD	15		8.5	UG_L	0.25 U	0.25 U	NA	NA	1.7 U	**1.28**	0.25 U	1.9 U	**0.65 J**	**0.33 J**
MERCURY	2	0.012	0.025	UG_L	0.07 U	0.043 U	NA	NA	NA	0.07 U	0.043 U	NA	0.043 U	0.07 U
SELENIUM	50	5	71	UG_L	0.25 U	0.25 U	NA	NA	NA	0.25 U	0.25 U	NA	**0.33 J**	0.25 U
SILVER	100	0.07	0.4	UG_L	0.25 U	0.25 U	NA	NA	NA	0.25 U	0.25 U	NA	0.25 U	0.25 U
VOCs														
1,1,1-TRICHLOROETHANE	200	270	270	UG_L	0.123 U	0.123 U	NA	NA	1 U	0.123 UJ	0.123 U	1 U	0.123 U	0.123 UJ
1,1,2,2-TETRACHLOROETHANE	0.2	10.8	10.8	UG_L	0.109 U	0.109 U	NA	NA	1 U	0.109 UJ	0.109 U	1 U	0.109 U	0.109 UJ
1,1,2-TRICHLOROETHANE	5	16	16	UG_L	0.159 U	0.159 U	NA	NA	1 U	0.159 UJ	0.159 U	1 U	0.159 U	0.159 UJ
1,1-DICHLOROETHANE	70			UG_L	0.171 U	0.171 U	NA	NA	1 U	0.171 UJ	0.171 U	1 U	0.171 U	0.171 UJ
1,1-DICHLOROETHENE	7	3.2	3.2	UG_L	0.2 U	0.2 U	NA	NA	1 U	0.2 UJ	0.2 U	1 U	0.2 U	0.2 UJ
1,2-DIBROMOETHANE	0.02	13	13	UG_L	NA	NA	NA	NA	0.02 U	NA	NA	0.02 U	NA	NA
1,2-DICHLOROBENZENE	600	99	99	UG_L	NA	NA	NA	NA	1 U	NA	NA	1 U	NA	NA
1,2-DICHLOROETHANE	3	37	37	UG_L	0.116 U	0.116 U	NA	NA	1 U	0.116 UJ	0.116 U	1 U	0.116 U	0.116 UJ
1,2-DICHLOROPROPANE	5	14	14	UG_L	0.15 U	0.15 U	NA	NA	1 U	0.15 UJ	0.15 U	1 U	0.15 U	0.15 UJ
1,3-DICHLOROBENZENE	210	85	85	UG_L	NA	NA	NA	NA	1 U	NA	NA	1 U	NA	NA
1,4-DICHLOROBENZENE	75	3	3	UG_L	NA	NA	NA	NA	1 U	NA	NA	1 U	NA	NA
2-BUTANONE	4200	120000	120000	UG_L	0.142 U	0.142 U	NA	NA	NA	0.142 UJ	0.142 U	NA	0.142 U	0.142 UJ
2-CHLOROETHYL VINYL ETHER				UG_L	NA	NA	NA	NA	1 U	NA	NA	1 U	NA	NA
2-HEXANONE	280			UG_L	0.122 U	0.122 U	NA	NA	NA	0.122 UJ	0.122 U	NA	0.122 U	0.122 UJ
4-METHYL-2-PENTANONE	560	23000	23000	UG_L	0.12 U	0.12 U	NA	NA	NA	0.12 UJ	0.12 U	NA	0.12 U	0.12 UJ
ACETONE	6300	1700	1700	UG_L	0.193 U	0.193 U	NA	NA	NA	0.193 UJ	0.193 U	NA	0.193 U	**4.4 J**
BENZENE	1	71.28	71.28	UG_L	0.111 U	0.111 U	NA	NA	1 U	0.111 UJ	0.111 U	1 U	0.111 U	0.111 UJ
BROMODICHLOROMETHANE	0.6	22	22	UG_L	0.083 U	0.083 U	NA	NA	1 U	0.083 UJ	0.083 U	1 U	0.083 U	0.083 UJ
BROMOFORM	4.4	360	360	UG_L	0.215 U	0.215 U	NA	NA	1 U	0.215 UJ	0.215 U	1 U	0.215 U	0.215 UJ
BROMOMETHANE	9.8	35	35	UG_L	0.427 U	0.427 U	NA	NA	1 U	0.427 UJ	0.427 U	1 U	0.427 U	0.427 UJ
CARBON DISULFIDE	700	110	110	UG_L	0.19 U	0.19 UJ	NA	NA	NA	0.19 UJ	0.19 UJ	NA	0.19 UJ	0.19 UJ
CARBON TETRACHLORIDE	3	4.42	4.42	UG_L	0.248 U	0.248 U	NA	NA	1 U	0.248 UJ	0.248 U	1 U	0.248 U	0.248 UJ
CHLOROBENZENE	100	17	17	UG_L	0.083 U	0.083 U	NA	NA	1 U	0.083 UJ	0.083 U	1 U	0.083 U	0.083 UJ
CHLOROETHANE	12			UG_L	0.235 U	0.235 UJ	NA	NA	1 U	0.235 UJ	0.235 UJ	1 U	0.235 UJ	0.235 UJ
CHLOROFORM	70	470.8	470.8	UG_L	0.155 U	0.155 U	NA	NA	1 U	0.155 UJ	0.155 U	1 U	0.155 U	0.155 UJ
CHLOROMETHANE	2.7	470.8	470.8	UG_L	0.144 U	0.144 U	NA	NA	1 U	0.144 UJ	0.144 U	1 U	0.144 U	0.144 UJ
CIS-1,2-DICHLOROETHENE	70			UG_L	**5.89**	**5.73**	NA	**18**	**24.4**	**0.443 J**	0.103 U	**2.8**	**0.764 J**	0.103 UJ
CIS-1,3-DICHLOROPROPENE				UG_L	0.124 U	0.124 U	NA	NA	1 U	0.124 UJ	0.124 U	1 U	0.124 U	0.124 UJ
DIBROMOCHLOROMETHANE	0.4	34	34	UG_L	0.054 U	0.054 U	NA	NA	1 U	0.054 UJ	0.054 U	1 U	0.054 U	0.054 UJ
DICHLORODIFLUOROMETHANE	1400			UG_L	NA	NA	NA	NA	1 U	NA	NA	1 U	NA	NA
ETHYLBENZENE	30	610	610	UG_L	0.109 U	0.109 U	NA	NA	1 U	0.109 UJ	0.109 U	1 U	0.109 U	0.109 UJ
METHYL TERT-BUTYL ETHER	20	34000	34000	UG_L	NA	NA	NA	NA	1 U	NA	NA	1 U	NA	NA
METHYLENE CHLORIDE	5	1580	1580	UG_L	0.149 U	0.149 U	NA	NA	5 U	0.149 UJ	0.149 U	5 U	0.149 U	0.149 UJ
STYRENE	100	460	460	UG_L	0.089 U	0.089 U	NA	NA	NA	0.089 UJ	0.089 U	NA	0.089 U	0.089 UJ
TETRACHLOROETHENE	3	8.85	8.85	UG_L	0.193 U	0.193 U	NA	NA	1 U	0.193 UJ	0.193 U	1 U	0.193 U	0.193 UJ
TOLUENE	40	480	480	UG_L	0.122 U	0.122 U	NA	NA	1 U	0.122 UJ	0.122 U	1 U	0.122 U	0.122 UJ
TRANS-1,2-DICHLOROETHENE	100	11000	11000	UG_L	0.077 U	0.077 U	NA	1 U	**0.5 J**	0.077 UJ	0.077 U	1 U	0.077 U	0.077 UJ
TRANS-1,3-DICHLOROPROPENE				UG_L	0.128 U	0.128 U	NA	NA	1 U	0.128 UJ	0.128 U	1 U	0.128 U	0.128 UJ
TRICHLOROETHENE	3	80.7	80.7	UG_L	0.161 U	0.161 U	NA	**0.8 J**	**0.81 J**	0.161 UJ	0.161 U	**0.49 J**	0.161 U	0.161 UJ
TRICHLOROFLUOROMETHANE	2100			UG_L	NA	NA	NA	NA	1 U	NA	NA	1 U	NA	NA
VINYL CHLORIDE	**1**	**2.4**	**2.4**	UG_L	**1.57 a**	**2.17 a**	**2.47 ab**	**8 ab**	**6.7 ab**	0.127 UJ	0.127 U	**0.84 J**	0.127 U	0.127 UJ
XYLENES, TOTAL	20	370	370	UG_L	0.179 U	0.179 U	NA	NA	3 U	0.179 UJ	0.179 U	3 U	0.179 U	0.179 UJ

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Analyte	FLGCTL _2005 (a)	FLGCTL_2005_ FRESHWATER_SW (b)	FLGCTL_2005_ MARINE_SW (c)	Units	HPTP-MW04 HPTP-MW04-0114 1/24/2014	HPTP-MW04 HPTP-MW04-0315 3/16/2015	HPTP-MW04 HPTP-MW04-0814 8/6/2014	HPTP-MW04 JAX-17-MW04-02 10/17/2002	HPTP-MW04 JAX-HPTP-MW04-01 1/3/2002	HPTP-MW05 HPTP-MW05-0114 1/23/2014	HPTP-MW05 HPTP-MW05-0315 3/16/2015	HPTP-MW05 JAX-HPTP-MW05-01 1/3/2002	HPTP-MW06 HPTP-MW06-0315 3/17/2015	HPTP-TW01 HPTP-TW01-0114 1/23/2014
PAHs														
1-METHYLNAPHTHALENE	28	95	95	UG_L	NA	NA	NA	NA	2.2 U	NA	NA	2 U	NA	NA
2-METHYLNAPHTHALENE	28	30	30	UG_L	0.03 U	0.03 U	NA	NA	2.2 U	0.03 U	0.03 U	2 U	0.03 U	0.03 U
ACENAPHTHENE	20	3	3	UG_L	0.00828 U	0.0082 U	NA	NA	4.4 U	0.0082 U	0.0082 U	4 U	0.0082 U	0.0082 U
ACENAPHTHYLENE	210	0.031	0.031	UG_L	0.026 U	0.025 U	NA	NA	4.4 U	0.025 U	0.025 U	4 U	0.025 U	0.025 U
ANTHRACENE	2100	0.3	0.3	UG_L	0.041 U	0.041 U	NA	NA	2.2 U	0.041 U	0.041 U	2 U	0.041 U	0.041 U
BENZO[A]ANTHRACENE	0.05	0.031	0.031	UG_L	0.02 U	0.02 U	NA	NA	0.22 U	0.02 U	0.02 U	0.2 U	0.02 U	0.02 U
BENZO[A]PYRENE	0.2	0.031	0.031	UG_L	0.012 U	0.011 U	NA	NA	0.22 U	0.011 U	0.011 U	0.2 U	0.011 U	0.011 U
BENZO[B]FLUORANTHENE	0.05	0.031	0.031	UG_L	0.00879 U	0.0087 U	NA	NA	0.22 U	0.0087 U	0.0087 U	0.2 U	0.0087 U	0.0087 U
BENZO[G,H,I]PERYLENE	210	0.031	0.031	UG_L	0.011 U	0.011 U	NA	NA	0.22 U	0.011 U	0.011 U	0.2 U	0.011 U	0.011 U
BENZO[K]FLUORANTHENE	0.5	0.031	0.031	UG_L	0.017 U	0.017 U	NA	NA	0.22 U	0.017 U	0.017 U	0.2 U	0.017 U	0.017 U
CHRYSENE	4.8	0.031	0.031	UG_L	0.018 U	0.018 U	NA	NA	2.2 U	0.018 U	0.018 U	2 U	0.018 U	0.018 U
DIBENZ[A,H]ANTHRACENE	0.005	0.031	0.031	UG_L	0.016 U	0.016 U	NA	NA	0.22 U	0.016 U	0.016 U	0.2 U	0.016 U	0.016 U
FLUORANTHENE	280	0.3	0.3	UG_L	0.012 U	0.012 U	NA	NA	2.2 U	0.012 U	0.012 U	2 U	0.012 U	0.012 U
FLUORENE	280	30	30	UG_L	0.04 U	0.04 U	NA	NA	2.2 U	0.04 U	0.04 U	2 U	0.04 U	0.04 U
INDENO[1,2,3-CD]PYRENE	0.05	0.031	0.031	UG_L	0.00525 U	0.0052 U	NA	NA	0.22 U	0.0052 U	0.0052 U	0.2 U	0.0052 U	0.0052 U
NAPHTHALENE	14	26	26	UG_L	0.0098 U	0.0097 U	NA	NA	2.2 U	0.0097 U	0.0097 U	2 U	0.0097 U	0.0097 U
PHENANTHRENE	**210**	**0.031**	**0.031**	UG_L	0.00727 U	0.0072 U	NA	NA	2.2 U	0.0072 U	0.0072 U	2 U	0.0072 U	0.0072 U
PYRENE	210	0.3	0.3	UG_L	0.015 U	0.015 U	NA	NA	2.2 U	0.015 U	0.015 U	2 U	0.015 U	0.015 U
TPH				UG_L	NA	NA	NA	NA	250 U	NA	NA	250 U	NA	NA

Notes:

FLGCTL_2005 (a) - Groundwater Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLGCTL_2005_FRESHWATER_SW (b) - Freshwater Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLGCTL_2005_MARINE_SW (c) - Groundwater Cleanup Target Levels. FAC Chapter 62-777. April 2005.

Bolded results indicate parameter was detected

Shaded cells indicate concentrations greater than screening criteria

NA - Not Analyzed

UG_L - micrograms per liter.

J - Estimated Value

I - Value is between the laboratory MDL and the laboratory PQL.

U - Value is not detected at the MDL.

Surface Soil Results (0 - 0.5 feet bgs)
PSC 57
NAS Jacksonville

Analyte	FLSCTL RES 2005 (a)	FLSCTL IND 2005 (b)	FLSCTL LEACHGW 2005 (c)	Units	HPTP-SB01 HPTP-SB01-0-0114 01/23/2014	HPTP-SB02 HPTP-SB02-0-0114 01/23/2014	HPTP-SB05 HPTP-SB05-0-0114 01/23/2014	HPTP-SB07 HPTP-SB07-0-0114 01/23/2014	HPTP-SB09 HPTP-SB09-0-0114 01/23/2014	HPTP-SB10 HPTP-SB10-0-0114 01/23/2014	HPTP-SB11 HPTP-SB11-0-0114 01/23/2014	HPTP-SB13 HPTP-SB13-0-0114 01/24/2014	HPTP-SB14 HPTP-SB14-0-0114 01/24/2014	HPTP-SB16 HPTP-SB16-0-0114 01/24/2014	HPTP-TW01 HPTP-TW01-0-0114 01/21/2014
Metals															
ARSENIC	2.1	12		MG_KG	**0.299 J**	**0.262 J**	**0.189 J**	**0.364 J**	**0.499**	**0.573**	0.115 U	**0.326 J**	**0.438 J**	**0.998 J**	**0.751 J**
BARIUM	120	130000	1600	MG_KG	**15.8**	**15.7**	**10.9**	**7.62**	**13.5**	**10.7**	**3.35**	**16.9**	**23.9**	**18.4**	**14.6**
CADMIUM	82	1700	7.5	MG_KG	0.116 U	0.117 U	0.114 U	**0.221 J**	**0.326 J**	**0.299 J**	0.115 U	0.116 U	**0.675**	0.546 U	**0.205 J**
CHROMIUM, TOTAL	210	470	38	MG_KG	**5.54**	**5.39**	**3.6**	**3.51**	**7.21**	**6.41**	**1.6**	**4.91 J**	**6.01**	**6.55**	**6.12 J**
LEAD	400	1400		MG_KG	**4.04**	**3.19**	**3.14**	**106**	**6.39**	**7.73**	**1.61**	**3.87 J**	**6.67**	**1.28 J**	**7.64 J**
SELENIUM	440	11000	5.2	MG_KG	0.116 U	0.117 U	0.114 U	0.115 U	0.114 U	0.111 U	0.115 U	0.116 UJ	0.122 U	0.546 U	0.129 UJ
SILVER	410	8200	17	MG_KG	0.116 U	0.117 U	0.114 U	0.115 U	0.114 U	0.111 U	0.115 U	0.116 U	0.122 U	0.546 U	0.129 U
MERCURY	3	17	2.1	MG_KG	0.0054 U	**0.0654**	0.0053 U	**0.0067 J**	0.0053 U	0.0052 U	0.0049 U	**0.0092 J**	**0.0117 J**	0.0051 U	**0.008 J**
VOCs															
1,1,1-TRICHLOROETHANE	730	3900	1.9	MG_KG	0.00017 U	0.00017 U	0.00018 U	0.00018 U	0.00017 U	0.00016 U	0.00018 U	0.00017 U	0.00017 U	0.00025 U	0.00018 U
1,1,2,2-TETRACHLOROETHANE	0.7	1.2	0.001	MG_KG	0.00018 U	0.00018 U	0.0002 U	0.00019 U	0.00018 U	0.00017 U	0.0002 U	0.00019 U	0.00019 U	0.00027 U	0.0002 U
1,1,2-TRICHLOROETHANE	1.4	2	0.03	MG_KG	7E-05 U	7E-05 U	7E-05 U	7E-05 U	7E-05 U	6E-05 U	7E-05 U	7E-05 U	7E-05 U	0.0001 U	7E-05 U
1,1-DICHLOROETHANE	390	2100	0.4	MG_KG	0.0001 U	0.0001 U	0.00011 U	0.0001 U	0.0001 U	9E-05 U	0.00011 U	0.0001 U	0.0001 U	0.00015 U	0.00011 U
1,1-DICHLOROETHENE	95	510	0.06	MG_KG	0.00023 U	0.00024 U	0.00026 U	0.00025 U	0.00023 U	0.00022 U	0.00026 U	0.00024 U	0.00025 U	0.00035 U	0.00026 U
1,2-DICHLOROETHANE	0.5	0.7	0.01	MG_KG	0.00021 U	0.00021 U	0.00023 U	0.00022 U	0.00021 U	0.00019 U	0.00022 U	0.00021 U	0.00021 U	0.0003 U	0.00022 U
1,2-DICHLOROPROPANE	0.6	0.9	0.03	MG_KG	8E-05 U	8E-05 U	9E-05 U	8E-05 U	8E-05 U	8E-05 U	9E-05 U	8E-05 U	8E-05 U	0.00012 U	9E-05 U
2-BUTANONE	16000	110000	17	MG_KG	0.00033 U	0.00034 U	0.00037 U	0.00035 U	0.00033 U	0.00032 U	0.00037 U	0.00035 U	0.00035 U	0.0005 U	**0.00387 J**
2-HEXANONE	24	130	1.4	MG_KG	0.00031 U	0.00031 U	0.00034 UJ	0.00032 UJ	0.0003 U	0.00029 UJ	0.00034 U	0.00032 UJ	0.00032 UJ	0.00045 UJ	0.00033 U
4-METHYL-2-PENTANONE	4300	44000	2.6	MG_KG	0.00016 U	0.00016 U	0.00018 U	0.00017 U	0.00016 U	0.00015 U	0.00017 U	0.00017 U	0.00017 U	0.00024 U	0.00017 U
ACETONE	11000	68000	25	MG_KG	0.00031 U	0.00031 U	0.00034 UJ	0.00032 UJ	0.00031 U	0.00029 UJ	0.00034 U	0.00032 U	0.00032 U	0.00046 U	0.00033 U
BENZENE	1.2	1.7	0.007	MG_KG	5E-05 U	5E-05 U	6E-05 U	6E-05 U	5E-05 U	5E-05 U	6E-05 U	6E-05 U	6E-05 U	8E-05 U	6E-05 U
BROMODICHLOROMETHANE	1.5	2.2	0.004	MG_KG	0.00011 U	0.00011 U	0.00012 U	0.00011 U	0.00011 U	0.0001 U	0.00012 U	0.00011 U	0.00011 U	0.00016 U	0.00012 U
BROMOFORM	48	93	0.03	MG_KG	0.00045 U	0.00046 U	0.0005 U	0.00048 U	0.00045 U	0.00043 U	0.00049 U	0.00047 U	0.00047 U	0.00067 U	0.00049 U
BROMOMETHANE	3.1	16	0.05	MG_KG	0.0005 U	0.00051 U	0.00055 U	0.00053 U	0.0005 U	0.00048 U	0.00055 U	0.00052 U	0.00052 U	0.00075 U	0.00055 U
CARBON DISULFIDE	270	1500	5.6	MG_KG	0.00019 U	0.00019 U	0.00021 U	0.0002 U	0.00019 U	0.00018 U	0.00021 U	0.0002 U	0.0002 U	0.00029 U	0.00021 U
CARBON TETRACHLORIDE	0.5	0.7	0.04	MG_KG	0.00019 U	0.0002 U	0.00022 U	0.00021 U	0.00019 U	0.00018 U	0.00021 U	0.0002 U	0.0002 U	0.00029 U	0.00021 U
CHLOROBENZENE	120	650	1.3	MG_KG	0.00013 U	0.00014 U	0.00015 U	0.00014 U	0.00013 U	0.00013 U	0.00015 U	0.00014 U	0.00014 U	0.0002 U	0.00015 U
CHLOROETHANE	3.9	5.4	0.06	MG_KG	0.00021 U	0.00021 U	0.00023 U	0.00022 U	0.00021 U	0.0002 U	0.00023 U	0.00022 U	0.00022 U	0.00031 U	0.00023 U
CHLOROFORM	0.4	0.6	0.4	MG_KG	0.00018 U	0.00018 U	0.0002 U	0.00019 U	0.00018 U	0.00017 U	0.00019 U	0.00018 U	0.00019 U	0.00026 U	0.00019 U
CHLOROMETHANE	4	5.7	0.01	MG_KG	0.0002 U	0.0002 U	0.00022 U	0.00021 U	0.0002 U	0.00019 U	0.00022 U	0.00021 U	0.00021 U	0.0003 U	0.00022 U
CIS-1,2-DICHLOROETHENE	33	180	0.4	MG_KG	0.00012 U	0.00012 U	0.00013 U	0.00012 U	0.00012 U	0.00011 U	0.00013 U	0.00012 U	0.00012 U	0.00017 U	0.00013 U
CIS-1,3-DICHLOROPROPENE				MG_KG	0.00013 U	0.00014 U	0.00015 U	0.00014 U	0.00013 U	0.00013 U	0.00015 U	0.00014 U	0.00014 U	0.0002 U	0.00015 U
DIBROMOCHLOROMETHANE	1.5	2.3	0.003	MG_KG	0.00026 U	0.00026 U	0.00028 U	0.00027 U	0.00026 U	0.00025 U	0.00028 U	0.00027 U	0.00027 U	0.00038 U	0.00028 U
ETHYLBENZENE	1500	9200	0.6	MG_KG	**0.00048 J**	**0.0004 J**	0.00021 U	**0.00042 J**	**0.00037 J**	**0.00038 J**	**0.00035 J**	**0.00048 J**	**0.00044 J**	**0.00053 J**	**0.00107 J**
METHYLENE CHLORIDE	17	26	0.02	MG_KG	0.00053 U	0.00053 U	0.00058 U	0.00056 U	0.00053 U	0.0005 U	0.00058 U	0.00055 U	0.00055 U	0.00079 U	0.00058 U
STYRENE	3600	23000	3.6	MG_KG	9E-05 U	9E-05 U	9E-05 U	9E-05 U	9E-05 U	8E-05 U	9E-05 U	9E-05 U	9E-05 U	0.00013 U	9E-05 U
TETRACHLOROETHENE	8.8	18	0.03	MG_KG	0.00031 U	0.00031 U	0.00034 U	0.00032 U	0.00031 U	**0.0004 J**	0.00034 U	0.00032 U	0.00032 U	0.00046 U	0.00033 U
TOLUENE	7500	60000	0.5	MG_KG	**0.00226 J**	**0.00197 J**	**0.00136 J**	**0.00196 J**	**0.00182 J**	**0.00156 J**	**0.0016 J**	**0.00203 J**	**0.00201 J**	**0.00235 J**	**0.00477 J**
TRANS-1,2-DICHLOROETHENE	53	290	0.7	MG_KG	0.00012 U	0.00012 U	0.00014 U	0.00013 U	0.00012 U	0.00012 U	0.00014 U	0.00013 U	0.00013 U	0.00018 U	0.00013 U
TRANS-1,3-DICHLOROPROPENE				MG_KG	8E-05 U	9E-05 U	9E-05 U	9E-05 U	8E-05 U	8E-05 U	9E-05 U	9E-05 U	9E-05 U	0.00013 U	9E-05 U
TRICHLOROETHENE	6.4	9.3	0.03	MG_KG	0.00013 U	0.00013 U	0.00014 U	0.00014 U	0.00013 U	0.00012 U	0.00014 U	0.00014 U	0.00014 U	0.00019 U	0.00014 U
VINYL CHLORIDE	0.2	0.8	0.007	MG_KG	0.0002 U	0.0002 U	0.00022 U	0.00021 U	0.0002 U	0.00019 U	0.00022 U	0.00021 U	0.00021 U	0.0003 U	0.00022 U
XYLENES, TOTAL	130	700	0.2	MG_KG	**0.00226 J**	**0.002 J**	0.00028 U	**0.00165 J**	**0.00169 J**	**0.00164 J**	**0.00162 J**	**0.00228 J**	**0.00196 J**	**0.00219 J**	**0.00538 J**

Surface Soil Results (0 - 0.5 feet bgs)
PSC 57
NAS Jacksonville

Analyte	FLSCTL RES 2005 (a)	FLSCTL IND 2005 (b)	FLSCTL LEACHGW 2005 (c)	Units	HPTP-SB01 HPTP-SB01-0-0114 01/23/2014	HPTP-SB02 HPTP-SB02-0-0114 01/23/2014	HPTP-SB05 HPTP-SB05-0-0114 01/23/2014	HPTP-SB07 HPTP-SB07-0-0114 01/23/2014	HPTP-SB09 HPTP-SB09-0-0114 01/23/2014	HPTP-SB10 HPTP-SB10-0-0114 01/23/2014	HPTP-SB11 HPTP-SB11-0-0114 01/23/2014	HPTP-SB13 HPTP-SB13-0-0114 01/24/2014	HPTP-SB14 HPTP-SB14-0-0114 01/24/2014	HPTP-SB16 HPTP-SB16-0-0114 01/24/2014	HPTP-TW01 HPTP-TW01-0-0114 01/21/2014
PAHs															
2-METHYLNAPHTHALENE	210	2100	8.5	MG_KG	0.00081 U	0.00082 U	0.0008 U	0.0008 U	0.00079 U	0.00078 U	0.0008 U	0.00081 U	0.00086 U	0.00076 U	0.00089 U
ACENAPHTHENE	2400	20000	2.1	MG_KG	0.00126 U	0.00128 U	0.00125 U	0.00125 U	0.00124 U	0.00121 U	0.00125 U	0.00127 U	0.00134 U	0.00119 U	0.0014 U
ACENAPHTHYLENE	1800	20000	27	MG_KG	0.00151 U	0.00153 U	0.0015 U	0.0015 U	**0.0356**	**0.0511**	0.00151 U	0.00152 U	0.00161 U	0.00143 U	0.00168 U
ANTHRACENE	21000	300000	2500	MG_KG	0.00031 U	0.00032 U	0.00031 U	**0.00575**	**0.0831**	**0.0685**	**0.00142 J**	0.00031 U	0.00033 U	0.00029 U	0.00035 U
BENZO[A]ANTHRACENE	**0**	**0**	0.8	MG_KG	0.00178 U	0.0018 U	**0.00895 ab**	**0.0523 ab**	**0.308 ab**	**0.0367 ab**	**0.0167 ab**	0.00179 U	**0.0075 ab**	0.00168 U	0.00197 U
BENZO[A]PYRENE	**0.1**	0.7	8	MG_KG	0.00036 U	0.00036 U	**0.00705**	**0.053**	**0.299 a**	**0.0762**	**0.0161**	0.00036 U	**0.00513**	0.00034 U	0.0004 U
BENZO[B]FLUORANTHENE	**0**	**0**	2.4	MG_KG	0.00114 U	0.00116 U	**0.0671 ab**	**0.13 ab**	**0.63 ab**	**0.357 ab**	**0.0781 ab**	0.00115 U	0.00122 U	0.00108 U	0.00127 U
BENZO[G,H,I]PERYLENE	2500	52000	32000	MG_KG	0.00069 U	0.0007 U	**0.00731**	**0.0504**	**0.277**	**0.135**	**0.0161**	0.00069 U	0.00073 U	0.00065 U	0.00076 U
BENZO[K]FLUORANTHENE	**0**	**0**	24	MG_KG	0.00045 U	0.00045 U	**0.00428 ab**	**0.0259 ab**	**0.134 ab**	**0.0256 ab**	**0.0105 ab**	0.00045 U	0.00048 U	0.00042 U	0.0005 U
CHRYSENE	**0**	**0**	77	MG_KG	0.00128 U	0.0013 U	**0.00829 ab**	**0.053 ab**	**0.262 ab**	**0.0404 ab**	**0.0162 ab**	0.00129 U	**0.00643 ab**	0.00121 U	0.00142 U
DIBENZ[A,H]ANTHRACENE	**0**	**0**	0.7	MG_KG	0.00114 U	0.00116 U	0.00113 U	**0.00645 ab**	**0.0356 ab**	0.00552 U	**0.00211 J ab**	0.00115 U	0.00122 U	0.00108 U	0.00127 U
FLUORANTHENE	3200	59000	1200	MG_KG	0.00042 U	0.00043 U	**0.00811**	**0.0702**	**0.539**	**0.0312**	**0.0194**	0.00043 U	**0.00754**	0.0004 U	0.00047 U
FLUORENE	2600	33000	160	MG_KG	0.00047 U	0.00048 U	0.00047 U	0.00047 U	0.00046 U	**0.00616**	0.00047 U	0.00047 U	0.0005 U	0.00044 U	0.00052 U
INDENO[1,2,3-CD]PYRENE	**0**	**0**	6.6	MG_KG	0.00049 U	0.00049 U	**0.0546 ab**	**0.107 ab**	**0.58 ab**	**0.353 ab**	**0.0657 ab**	0.00049 U	0.00052 U	0.00046 U	0.00054 U
NAPHTHALENE	55	300	1.2	MG_KG	0.00043 U	0.00044 U	0.00043 U	0.00043 U	0.00042 U	0.00041 U	0.00043 U	0.00043 U	0.00046 U	0.00041 U	0.00048 U
PHENANTHRENE	2200	36000	250	MG_KG	0.00055 U	0.00056 U	0.00054 U	**0.0205**	**0.0705**	**0.00591**	**0.00481**	0.00055 U	0.00058 U	0.00052 U	0.00061 U
PYRENE	2400	45000	880	MG_KG	0.00064 U	0.00065 U	**0.00716**	**0.0637**	**0.339**	**0.0348**	**0.0172**	0.00064 U	**0.00646**	0.0006 U	0.00071 U

Notes:

FLSCTL_RES_2005 (a)- Residential Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLSCTL_IND_2005 (b)- Industrial Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLSCTL_LEACHGW_2005 (c) - Leachability to Groundwater Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

Bolded results indicate parameter was detected

Shaded cells indicate concentrations greater than screening criteria

NA - Not Analyzed

MG_KG - micrograms per liter.

J - Estimated Value

I - Value is between the laboratory MDL and the laboratory PQL.

U - Value is not detected at the MDL.

Soil Results (0.5 - 2 feet bgs)
PSC 57
NAS Jacksonville

Analyte	FLSCTL RESID 2005 (a)	FLSCTL IND 2005 (b)	FLSCTL LEACHGW 2005 (c)	Units	HPTP-SB01 HPTP-SB01-2-0114 01/23/2014	HPTP-SB02 HPTP-SB02-2-0114 01/23/2014	HPTP-SB05 HPTP-SB05-2-0114 01/23/2014	HPTP-SB07 HPTP-SB07-2-0114 01/23/2014	HPTP-SB11 HPTP-SB11-2-0114 01/23/2014	HPTP-SB13 HPTP-SB13-2-0114 01/24/2014	HPTP-SB14 HPTP-SB14-2-0114 01/24/2014	HPTP-TW01 HPTP-TW01-2-0114 01/21/2014
Metals												
ARSENIC	2.1	12		MG_KG	**0.666**	**0.299 J**	**0.18 J**	**0.202 J**	**0.162 J**	**0.137 J**	**0.342 J**	**0.7**
BARIUM	120	130000	1600	MG_KG	**32.6**	**17.2**	**10.8**	**6.3**	**5.54**	**4.8 J**	**16.1**	**43.6**
CADMIUM	82	1700	7.5	MG_KG	0.13 U	0.122 U	0.117 U	0.12 U	0.123 U	0.119 U	0.122 U	0.115 U
CHROMIUM, TOTAL	210	470	38	MG_KG	**7.25**	**6.84**	**3.66 J**	**3.24**	**2.53**	**1.73 J**	**5.45**	**8.11**
LEAD	400	1400		MG_KG	**7.17**	**3.65**	**3.46**	**16.9**	**2.03**	**1.58 J**	**3.2**	**5.79**
SELENIUM	440	11000	5.2	MG_KG	0.13 U	0.122 U	0.117 UJ	0.12 U	0.123 U	0.119 UJ	0.122 U	0.115 U
SILVER	410	8200	17	MG_KG	0.13 U	0.122 U	0.117 U	0.12 U	0.123 U	0.119 U	0.122 U	0.115 U
MERCURY	3	17	2.1	MG_KG	**0.0592**	**0.0064 J**	0.0053 U	0.0058 U	0.0056 U	**0.0052 J**	0.0056 U	0.0055 U
VOCs												
1,1,1-TRICHLOROETHANE	730	3900	1.9	MG_KG	0.00016 U	0.00016 U	0.00016 U	0.00017 U	0.00018 U	0.00017 U	0.00016 U	0.00017 U
1,1,2,2-TETRACHLOROETHANE	0.7	1.2	0.001	MG_KG	0.00017 U	0.00017 U	0.00017 U	0.00019 U	0.00019 U	0.00018 U	0.00017 U	0.00019 U
1,1,2-TRICHLOROETHANE	1.4	2	0.03	MG_KG	6E-05 U	6E-05 U	6E-05 U	7E-05 U	7E-05 U	7E-05 U	6E-05 U	7E-05 U
1,1-DICHLOROETHANE	390	2100	0.4	MG_KG	9E-05 U	0.0001 U	9E-05 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
1,1-DICHLOROETHENE	95	510	0.06	MG_KG	0.00022 U	0.00022 U	0.00022 U	0.00024 U	0.00025 U	0.00024 U	0.00022 U	0.00024 U
1,2-DICHLOROETHANE	0.5	0.7	0.01	MG_KG	0.00019 U	0.0002 U	0.00019 U	0.00021 U	0.00022 U	0.00021 U	0.0002 U	0.00021 U
1,2-DICHLOROPROPANE	0.6	0.9	0.03	MG_KG	8E-05 U	8E-05 U	7E-05 U	8E-05 U	8E-05 U	8E-05 U	8E-05 U	8E-05 U
2-BUTANONE	16000	110000	17	MG_KG	0.00032 U	0.00032 U	0.00031 U	0.00035 U	0.00035 U	0.00034 U	0.00032 U	0.00035 U
2-HEXANONE	24	130	1.4	MG_KG	0.00029 U	0.00029 UJ	0.00028 UJ	0.00032 UJ	0.00032 U	0.00031 UJ	0.00029 UJ	0.00032 U
4-METHYL-2-PENTANONE	4300	44000	2.6	MG_KG	0.00015 U	0.00015 U	0.00015 U	0.00017 U	0.00017 U	0.00016 U	0.00015 U	0.00017 U
ACETONE	11000	68000	25	MG_KG	0.00029 U	0.00029 UJ	0.00028 UJ	0.00032 U	0.00032 U	0.00031 U	0.00029 U	0.00032 U
BENZENE	1.2	1.7	0.007	MG_KG	5E-05 U	5E-05 U	5E-05 U	5E-05 U	6E-05 U	5E-05 U	5E-05 U	6E-05 U
BROMODICHLOROMETHANE	1.5	2.2	0.004	MG_KG	0.0001 U	0.0001 U	0.0001 U	0.00011 U	0.00011 U	0.00011 U	0.0001 U	0.00011 U
BROMOFORM	48	93	0.03	MG_KG	0.00043 U	0.00043 U	0.00042 U	0.00047 U	0.00048 U	0.00046 U	0.00043 U	0.00047 U
BROMOMETHANE	3.1	16	0.05	MG_KG	0.00048 U	0.00048 U	0.00047 U	0.00052 U	0.00053 U	0.00051 U	0.00048 U	0.00052 U
CARBON DISULFIDE	270	1500	5.6	MG_KG	0.00018 U	0.00019 U	0.00018 U	0.0002 U	0.00021 U	0.0002 U	0.00019 U	0.0002 U
CARBON TETRACHLORIDE	0.5	0.7	0.04	MG_KG	0.00019 U	0.00019 U	0.00018 U	0.0002 U	0.00021 U	0.0002 U	0.00019 U	0.0002 U
CHLOROBENZENE	120	650	1.3	MG_KG	0.00013 U	0.00013 U	0.00012 U	0.00014 U	0.00014 U	0.00014 U	0.00013 U	0.00014 U
CHLOROETHANE	3.9	5.4	0.06	MG_KG	0.0002 U	0.0002 U	0.00019 U	0.00022 U	0.00022 U	0.00021 U	0.0002 U	0.00022 U
CHLOROFORM	0.4	0.6	0.4	MG_KG	0.00017 U	0.00017 U	0.00017 U	0.00018 U	0.00019 U	0.00018 U	0.00017 U	0.00019 U
CHLOROMETHANE	4	5.7	0.01	MG_KG	0.00019 U	0.00019 U	0.00019 U	0.00021 U	0.00021 U	0.0002 U	0.00019 U	0.00021 U
CIS-1,2-DICHLOROETHENE	33	180	0.4	MG_KG	0.00011 U	0.00011 U	0.00011 U	0.00012 U	0.00013 U	0.00012 U	0.00011 U	0.00012 U
CIS-1,3-DICHLOROPROPENE				MG_KG	0.00013 U	0.00013 U	0.00012 U	0.00014 U	0.00014 U	0.00014 U	0.00013 U	0.00014 U
DIBROMOCHLOROMETHANE	1.5	2.3	0.003	MG_KG	0.00025 U	0.00025 U	0.00024 U	0.00027 U	0.00027 U	0.00026 U	0.00025 U	0.00027 U
ETHYLBENZENE	1500	9200	0.6	MG_KG	**0.00047 J**	**0.00036 J**	0.00018 U	**0.00056 J**	**0.00035 J**	**0.00045 J**	0.00018 U	**0.00066 J**
METHYLENE CHLORIDE	17	26	0.02	MG_KG	0.0005 U	0.00051 U	0.00049 U	0.00055 U	0.00056 U	0.00054 U	0.00051 U	0.00055 U
STYRENE	3600	23000	3.6	MG_KG	8E-05 U	8E-05 U	8E-05 U	9E-05 U	9E-05 U	9E-05 U	8E-05 U	9E-05 U
TETRACHLOROETHENE	8.8	18	0.03	MG_KG	0.00029 U	0.00029 U	0.00028 U	0.00032 U	0.00032 U	0.00031 U	0.00029 U	**0.00125 J**
TOLUENE	7500	60000	0.5	MG_KG	**0.00191 J**	**0.00202 J**	**0.0014 J**	**0.00271 J**	**0.00167 J**	**0.00197 J**	**0.00069 J**	**0.00277 J**
TRANS-1,2-DICHLOROETHENE	53	290	0.7	MG_KG	0.00012 U	0.00012 U	0.00012 U	0.00013 U	0.00013 U	0.00013 U	0.00012 U	0.00013 U
TRANS-1,3-DICHLOROPROPENE				MG_KG	8E-05 U	8E-05 U	8E-05 U	9E-05 U	9E-05 U	9E-05 U	8E-05 U	9E-05 U
TRICHLOROETHENE	6.4	9.3	0.03	MG_KG	0.00013 U	0.00013 U	0.00012 U	0.00014 U	0.00014 U	0.00013 U	0.00013 U	0.00014 U
VINYL CHLORIDE	0.2	0.8	0.007	MG_KG	0.00019 U	0.00019 U	0.00019 U	0.00021 U	0.00021 U	0.0002 U	0.00019 U	0.00021 U
XYLENES, TOTAL	130	700	0.2	MG_KG	**0.00156 J**	**0.00098 J**	0.00024 U	**0.00243 J**	**0.00149 J**	**0.00205 J**	0.00025 U	**0.00311 J**

Soil Results (0.5 - 2 feet bgs)
PSC 57
NAS Jacksonville

Analyte	FLSCTL RESID 2005 (a)	FLSCTL IND 2005 (b)	FLSCTL LEACHGW 2005 (c)	Units	HPTP-SB01 HPTP-SB01-2-0114 01/23/2014	HPTP-SB02 HPTP-SB02-2-0114 01/23/2014	HPTP-SB05 HPTP-SB05-2-0114 01/23/2014	HPTP-SB07 HPTP-SB07-2-0114 01/23/2014	HPTP-SB11 HPTP-SB11-2-0114 01/23/2014	HPTP-SB13 HPTP-SB13-2-0114 01/24/2014	HPTP-SB14 HPTP-SB14-2-0114 01/24/2014	HPTP-TW01 HPTP-TW01-2-0114 01/21/2014
PAHs												
2-METHYLNAPHTHALENE	210	2100	8.5	MG_KG	0.00089 U	0.00085 U	0.00081 U	**0.00359 J**	0.00087 U	0.00083 U	0.00085 U	0.00081 U
ACENAPHTHENE	2400	20000	2.1	MG_KG	0.00139 U	0.00133 U	0.00127 U	**0.00626**	0.00135 U	0.0013 U	0.00133 U	0.00127 U
ACENAPHTHYLENE	1800	20000	27	MG_KG	0.00167 U	0.0016 U	0.00153 U	**0.00507**	0.00162 U	0.00156 U	0.0016 U	0.00152 U
ANTHRACENE	21000	300000	2500	MG_KG	0.00034 U	0.00033 U	0.00031 U	**0.00866**	**0.00196 J**	0.00032 U	0.00033 U	0.00031 U
BENZO[A]ANTHRACENE			0.8	MG_KG	0.00197 U	0.00188 U	**0.00587**	**0.0609**	**0.0144**	**0.0131**	0.00188 U	0.00179 U
BENZO[A]PYRENE	0.1	0.7	8	MG_KG	0.0004 U	0.00038 U	0.00036 U	**0.0602**	**0.0125**	**0.012**	0.00038 U	0.00036 U
BENZO[B]FLUORANTHENE			2.4	MG_KG	0.00126 U	0.00121 U	0.00115 U	**0.134**	**0.0805**	**0.0756**	0.00121 U	0.00115 U
BENZO[G,H,I]PERYLENE	2500	52000	32000	MG_KG	0.00076 U	0.00073 U	0.00069 U	**0.0625**	**0.0144**	**0.0123**	0.00073 U	0.00069 U
BENZO[K]FLUORANTHENE			24	MG_KG	0.0005 U	0.00047 U	0.00045 U	**0.0321**	**0.0081**	**0.00702**	0.00047 U	0.00045 U
CHRYSENE			77	MG_KG	0.00142 U	0.00136 U	**0.00448**	**0.0599**	**0.0149**	**0.0128**	0.00136 U	0.00129 U
DIBENZ[A,H]ANTHRACENE			0.7	MG_KG	0.00126 U	0.00121 U	0.00116 U	**0.00814**	**0.00208 J**	0.00118 U	0.00121 U	0.00115 U
FLUORANTHENE	3200	59000	1200	MG_KG	0.00047 U	0.00045 U	**0.00454**	**0.084**	**0.0175**	**0.0153**	0.00045 U	0.00043 U
FLUORENE	2600	33000	160	MG_KG	0.00052 U	0.0005 U	0.00048 U	**0.00371 J**	0.00051 U	0.00049 U	0.0005 U	0.00047 U
INDENO[1,2,3-CD]PYRENE			6.6	MG_KG	0.00054 U	0.00051 U	0.00049 U	**0.125**	**0.0681**	**0.0631**	0.00051 U	0.00049 U
NAPHTHALENE	55	300	1.2	MG_KG	0.00048 U	0.00045 U	0.00043 U	**0.00411**	0.00046 U	0.00044 U	0.00046 U	0.00043 U
PHENANTHRENE	2200	36000	250	MG_KG	0.00061 U	0.00058 U	0.00055 U	**0.0271**	**0.0062**	0.00057 U	0.00058 U	0.00055 U
PYRENE	2400	45000	880	MG_KG	0.0007 U	0.00067 U	**0.00534**	**0.0705**	**0.0154**	**0.014**	0.00068 U	0.00064 U

Notes:

FLSCTL_RES_2005 (a)- Residential Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLSCTL_IND_2005 (b)- Industrial Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLSCTL_LEACHGW_2005 (c) - Leachability to Groundwater Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

Bolded results indicate parameter was detected

Shaded cells indicate concentrations greater than screening criteria

NA - Not Analyzed

MG_KG - micrograms per liter.

J - Estimated Value

I - Value is between the laboratory MDL and the laboratory PQL.

U - Value is not detected at the MDL.

Soil Results (2 - 4 feet bgs)
PSC 57
NAS Jacksonville

Analyte	FLSCTL_RESID_2005 (a)	FLSCTL_IND_2005 (b)	FLSCTL_LEACHGW_2005 (c)	Units	HPTP-SB01 HPTP-SB01-2-0114 01/23/2014	HPTP-SB02 HPTP-SB02-2-0114 01/23/2014	HPTP-SB05 HPTP-SB05-2-0114 01/23/2014	HPTP-SB07 HPTP-SB07-2-0114 01/23/2014	HPTP-SB09 HPTP-SB09-2 03/12/2015	HPTP-SB10 HPTP-SB10-2 03/12/2015	HPTP-SB11 HPTP-SB11-2-0114 01/23/2014	HPTP-SB13 HPTP-SB13-2-0114 01/24/2014	HPTP-SB14 HPTP-SB14-2-0114 01/24/2014	HPTP-TW01 HPTP-TW01-2-0114 01/21/2014
Metals														
ARSENIC	2.1	12		MG_KG	**0.666**	**0.299 J**	**0.18 J**	**0.202 J**	**0.557**	**0.207 J**	**0.162 J**	**0.137 J**	**0.342 J**	**0.7**
BARIUM	120	130000	1600	MG_KG	**32.6**	**17.2**	**10.8**	**6.3**	**6.82**	**4.91**	**5.54**	**4.8 J**	**16.1**	**43.6**
CADMIUM	82	1700	7.5	MG_KG	0.13 U	0.122 U	0.117 U	0.12 U	**0.133 J**	**0.267 J**	0.123 U	0.119 U	0.122 U	0.115 U
CHROMIUM, TOTAL	210	470	38	MG_KG	**7.25**	**6.84**	**3.66 J**	**3.24**	**6.64**	**4.6**	**2.53**	**1.73 J**	**5.45**	**8.11**
LEAD	400	1400		MG_KG	**7.17**	**3.65**	**3.46**	**16.9**	**2.14**	**3.85**	**2.03**	**1.58 J**	**3.2**	**5.79**
SELENIUM	440	11000	5.2	MG_KG	0.13 U	0.122 U	0.117 UJ	0.12 U	0.108 U	0.118 U	0.123 U	0.119 UJ	0.122 U	0.115 U
SILVER	410	8200	17	MG_KG	0.13 U	0.122 U	0.117 U	0.12 U	0.108 U	0.118 U	0.123 U	0.119 U	0.122 U	0.115 U
MERCURY	3	17	2.1	MG_KG	**0.0592**	**0.0064 J**	0.0053 U	0.0058 U	0.0046 U	0.0053 U	0.0056 U	**0.0052 J**	0.0056 U	0.0055 U
VOCs														
1,1,1-TRICHLOROETHANE	730	3900	1.9	MG_KG	0.00016 U	0.00016 U	0.00016 U	0.00017 U	0.00014 U	0.00019 U	0.00018 U	0.00017 U	0.00016 U	0.00017 U
1,1,2,2-TETRACHLOROETHANE	0.7	1.2	0.001	MG_KG	0.00017 U	0.00017 U	0.00017 U	0.00019 U	0.00016 U	0.00021 U	0.00019 U	0.00018 U	0.00017 U	0.00019 U
1,1,2-TRICHLOROETHANE	1.4	2	0.03	MG_KG	6E-05 U	6E-05 U	6E-05 U	7E-05 U	6E-05 U	8E-05 U	7E-05 U	7E-05 U	6E-05 U	7E-05 U
1,1-DICHLOROETHANE	390	2100	0.4	MG_KG	9E-05 U	0.0001 U	9E-05 U	0.0001 U	9E-05 U	0.00011 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U
1,1-DICHLOROETHENE	95	510	0.06	MG_KG	0.00022 U	0.00022 U	0.00022 U	0.00024 U	0.0002 U	0.00027 U	0.00025 U	0.00024 U	0.00022 U	0.00024 U
1,2-DICHLOROETHANE	0.5	0.7	0.01	MG_KG	0.00019 U	0.0002 U	0.00019 U	0.00021 U	0.00018 U	0.00023 U	0.00022 U	0.00021 U	0.0002 U	0.00021 U
1,2-DICHLOROPROPANE	0.6	0.9	0.03	MG_KG	8E-05 U	8E-05 U	7E-05 U	8E-05 U	7E-05 U	9E-05 U	8E-05 U	8E-05 U	8E-05 U	8E-05 U
2-BUTANONE	16000	110000	17	MG_KG	0.00032 U	0.00032 U	0.00031 U	0.00035 U	0.00029 U	0.00038 U	0.00035 U	0.00034 U	0.00032 U	0.00035 U
2-HEXANONE	24	130	1.4	MG_KG	0.00029 U	0.00029 UJ	0.00028 UJ	0.00032 UJ	0.00026 U	0.00035 U	0.00032 U	0.00031 UJ	0.00029 UJ	0.00032 U
4-METHYL-2-PENTANONE	4300	44000	2.6	MG_KG	0.00015 U	0.00015 U	0.00015 U	0.00017 U	0.00014 U	0.00018 U	0.00017 U	0.00016 U	0.00015 U	0.00017 U
ACETONE	11000	68000	25	MG_KG	0.00029 U	0.00029 UJ	0.00028 UJ	0.00032 U	0.00026 U	0.00035 U	0.00032 U	0.00031 U	0.00029 U	0.00032 U
BENZENE	1.2	1.7	0.007	MG_KG	5E-05 U	5E-05 U	5E-05 U	5E-05 U	5E-05 U	6E-05 U	6E-05 U	5E-05 U	5E-05 U	6E-05 U
BROMODICHLOROMETHANE	1.5	2.2	0.004	MG_KG	0.0001 U	0.0001 U	0.0001 U	0.00011 U	9E-05 U	0.00012 U	0.00011 U	0.00011 U	0.0001 U	0.00011 U
BROMOFORM	48	93	0.03	MG_KG	0.00043 U	0.00043 U	0.00042 U	0.00047 U	0.00039 U	0.00051 U	0.00048 U	0.00046 U	0.00043 U	0.00047 U
BROMOMETHANE	3.1	16	0.05	MG_KG	0.00048 U	0.00048 U	0.00047 U	0.00052 U	0.00043 U	0.00057 U	0.00053 U	0.00051 U	0.00048 U	0.00052 U
CARBON DISULFIDE	270	1500	5.6	MG_KG	0.00018 U	0.00019 U	0.00018 U	0.0002 U	0.00017 U	0.00022 U	0.00021 U	0.0002 U	0.00019 U	0.0002 U
CARBON TETRACHLORIDE	0.5	0.7	0.04	MG_KG	0.00019 U	0.00019 U	0.00018 U	0.0002 U	0.00017 U	0.00022 U	0.00021 U	0.0002 U	0.00019 U	0.0002 U
CHLOROBENZENE	120	650	1.3	MG_KG	0.00013 U	0.00013 U	0.00012 U	0.00014 U	0.00012 U	0.00015 U	0.00014 U	0.00014 U	0.00013 U	0.00014 U
CHLOROETHANE	3.9	5.4	0.06	MG_KG	0.0002 U	0.0002 U	0.00019 U	0.00022 U	0.00018 U	0.00024 U	0.00022 U	0.00021 U	0.0002 U	0.00022 U
CHLOROFORM	0.4	0.6	0.4	MG_KG	0.00017 U	0.00017 U	0.00017 U	0.00018 U	0.00015 U	0.0002 U	0.00019 U	0.00018 U	0.00017 U	0.00019 U
CHLOROMETHANE	4	5.7	0.01	MG_KG	0.00019 U	0.00019 U	0.00019 U	0.00021 U	0.00017 U	0.00023 U	0.00021 U	0.0002 U	0.00019 U	0.00021 U
CIS-1,2-DICHLOROETHENE	33	180	0.4	MG_KG	0.00011 U	0.00011 U	0.00011 U	0.00012 U	0.0001 U	0.00013 U	0.00013 U	0.00012 U	0.00011 U	0.00012 U
CIS-1,3-DICHLOROPROPENE				MG_KG	0.00013 U	0.00013 U	0.00012 U	0.00014 U	0.00012 U	0.00015 U	0.00014 U	0.00014 U	0.00013 U	0.00014 U
DIBROMOCHLOROMETHANE	1.5	2.3	0.003	MG_KG	0.00025 U	0.00025 U	0.00024 U	0.00027 U	0.00022 U	0.00029 U	0.00027 U	0.00026 U	0.00025 U	0.00027 U
ETHYLBENZENE	1500	9200	0.6	MG_KG	**0.00047 J**	**0.00036 J**	0.00018 U	**0.00056 J**	0.00016 U	0.00022 U	**0.00035 J**	**0.00045 J**	0.00018 U	**0.00066 J**
METHYLENE CHLORIDE	17	26	0.02	MG_KG	0.0005 U	0.00051 U	0.00049 U	0.00055 U	0.00046 U	0.0006 U	0.00056 U	0.00054 U	0.00051 U	0.00055 U
STYRENE	3600	23000	3.6	MG_KG	8E-05 U	8E-05 U	8E-05 U	9E-05 U	7E-05 U	0.0001 U	9E-05 U	9E-05 U	8E-05 U	9E-05 U
TETRACHLOROETHENE	8.8	18	0.03	MG_KG	0.00029 U	0.00029 U	0.00028 U	0.00032 U	0.00026 U	0.00035 U	0.00032 U	0.00031 U	0.00029 U	**0.00125 J**
TOLUENE	7500	60000	0.5	MG_KG	**0.00191 J**	**0.00202 J**	**0.0014 J**	**0.00271 J**	9E-05 U	0.00013 U	**0.00167 J**	**0.00197 J**	**0.00069 J**	**0.00277 J**
TRANS-1,2-DICHLOROETHENE	53	290	0.7	MG_KG	0.00012 U	0.00012 U	0.00012 U	0.00013 U	0.00011 U	0.00014 U	0.00013 U	0.00013 U	0.00012 U	0.00013 U
TRANS-1,3-DICHLOROPROPENE				MG_KG	8E-05 U	8E-05 U	8E-05 U	9E-05 U	7E-05 U	0.0001 U	9E-05 U	9E-05 U	8E-05 U	9E-05 U
TRICHLOROETHENE	6.4	9.3	0.03	MG_KG	0.00013 U	0.00013 U	0.00012 U	0.00014 U	0.00011 U	0.00015 U	0.00014 U	0.00013 U	0.00013 U	0.00014 U
VINYL CHLORIDE	0.2	0.8	0.007	MG_KG	0.00019 U	0.00019 U	0.00019 U	0.00021 U	0.00017 U	0.00023 U	0.00021 U	0.0002 U	0.00019 U	0.00021 U
XYLENES, TOTAL	130	700	0.2	MG_KG	**0.00156 J**	**0.00098 J**	0.00024 U	**0.00243 J**	0.00022 U	0.00029 U	**0.00149 J**	**0.00205 J**	0.00025 U	**0.00311 J**

Soil Results (2 - 4 feet bgs)
PSC 57
NAS Jacksonville

Analyte	FLSCTL_RESID_2005 (a)	FLSCTL_IND_2005 (b)	FLSCTL_LEACHGW_2005 (c)	Units	HPTP-SB01 HPTP-SB01-2-0114 01/23/2014	HPTP-SB02 HPTP-SB02-2-0114 01/23/2014	HPTP-SB05 HPTP-SB05-2-0114 01/23/2014	HPTP-SB07 HPTP-SB07-2-0114 01/23/2014	HPTP-SB09 HPTP-SB09-2 03/12/2015	HPTP-SB10 HPTP-SB10-2 03/12/2015	HPTP-SB11 HPTP-SB11-2-0114 01/23/2014	HPTP-SB13 HPTP-SB13-2-0114 01/24/2014	HPTP-SB14 HPTP-SB14-2-0114 01/24/2014	HPTP-TW01 HPTP-TW01-2-0114 01/21/2014
PAHs														
2-METHYLNAPHTHALENE	210	2100	8.5	MG_KG	0.00089 U	0.00085 U	0.00081 U	**0.00359 J**	0.00075 U	0.00082 U	0.00087 U	0.00083 U	0.00085 U	0.00081 U
ACENAPHTHENE	2400	20000	2.1	MG_KG	0.00139 U	0.00133 U	0.00127 U	**0.00626**	0.00117 U	0.00128 U	0.00135 U	0.0013 U	0.00133 U	0.00127 U
ACENAPHTHYLENE	1800	20000	27	MG_KG	0.00167 U	0.0016 U	0.00153 U	**0.00507**	0.0014 U	0.00153 U	0.00162 U	0.00156 U	0.0016 U	0.00152 U
ANTHRACENE	21000	300000	2500	MG_KG	0.00034 U	0.00033 U	0.00031 U	**0.00866**	0.00029 U	0.00032 U	**0.00196 J**	0.00032 U	0.00033 U	0.00031 U
BENZO[A]ANTHRACENE			0.8	MG_KG	0.00197 U	0.00188 U	**0.00587**	**0.0609**	**0.00193 J**	**0.00336 J**	**0.0144**	**0.0131**	0.00188 U	0.00179 U
BENZO[A]PYRENE	0.1	0.7	8	MG_KG	0.0004 U	0.00038 U	0.00036 U	**0.0602**	**0.00401**	**0.00432**	**0.0125**	**0.012**	0.00038 U	0.00036 U
BENZO[B]FLUORANTHENE			2.4	MG_KG	0.00126 U	0.00121 U	0.00115 U	**0.134**	**0.00534**	**0.00672**	**0.0805**	**0.0756**	0.00121 U	0.00115 U
BENZO[G,H,I]PERYLENE	2500	52000	32000	MG_KG	0.00076 U	0.00073 U	0.00069 U	**0.0625**	**0.00443**	**0.00336 J**	**0.0144**	**0.0123**	0.00073 U	0.00069 U
BENZO[K]FLUORANTHENE			24	MG_KG	0.0005 U	0.00047 U	0.00045 U	**0.0321**	**0.00182 J**	**0.00243 J**	**0.0081**	**0.00702**	0.00047 U	0.00045 U
CHRYSENE			77	MG_KG	0.00142 U	0.00136 U	**0.00448**	**0.0599**	**0.0025 J**	**0.00396**	**0.0149**	**0.0128**	0.00136 U	0.00129 U
DIBENZ[A,H]ANTHRACENE			0.7	MG_KG	0.00126 U	0.00121 U	0.00116 U	**0.00814**	0.00106 U	0.00116 U	**0.00208 J**	0.00118 U	0.00121 U	0.00115 U
FLUORANTHENE	3200	59000	1200	MG_KG	0.00047 U	0.00045 U	**0.00454**	**0.084**	**0.00203 J**	**0.00566**	**0.0175**	**0.0153**	0.00045 U	0.00043 U
FLUORENE	2600	33000	160	MG_KG	0.00052 U	0.0005 U	0.00048 U	**0.00371 J**	0.00044 U	0.00048 U	0.00051 U	0.00049 U	0.0005 U	0.00047 U
INDENO[1,2,3-CD]PYRENE			6.6	MG_KG	0.00054 U	0.00051 U	0.00049 U	**0.125**	**0.00482**	**0.00368 J**	**0.0681**	**0.0631**	0.00051 U	0.00049 U
NAPHTHALENE	55	300	1.2	MG_KG	0.00048 U	0.00045 U	0.00043 U	**0.00411**	0.0004 U	0.00043 U	0.00046 U	0.00044 U	0.00046 U	0.00043 U
PHENANTHRENE	2200	36000	250	MG_KG	0.00061 U	0.00058 U	0.00055 U	**0.0271**	0.00051 U	**0.00171 J**	**0.0062**	0.00057 U	0.00058 U	0.00055 U
PYRENE	2400	45000	880	MG_KG	0.0007 U	0.00067 U	**0.00534**	**0.0705**	**0.00225 J**	**0.00454**	**0.0154**	**0.014**	0.00068 U	0.00064 U

Notes:

FLSCTL_RES_2005 (a)- Residential Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLSCTL_IND_2005 (b)- Industrial Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLSCTL_LEACHGW_2005 (c) - Leachability to Groundwater Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

Bolded results indicate parameter was detected

NA - Not Analyzed

MG_KG - micrograms per liter.

J - Estimated Value

I - Value is between the laboratory MDL and the laboratory PQL.

U - Value is not detected at the MDL.

Soil Results (4 -6 feet bgs)
PSC 57
NAS Jacksonville

Analyte	FLSCTL_RES_2005 (a)	FLSCTL_IND_2005 (b)	FLSCTL_LEACHGW_2005 (c)	Units	HPTP-SB09 HPTP-SB09-4 03/12/2015	HPTP-SB10 HPTP-SB10-4 03/12/2015	HPTP-TW01 HPTP-TW01-4-0114 01/21/2014
Metals							
ARSENIC	2.1	12		MG_KG	**0.213 J**	0.128 UJ	**0.615**
BARIUM	120	130000	1600	MG_KG	**12.4**	**9.42 J**	**23.4**
CADMIUM	82	1700	7.5	MG_KG	**0.166 J**	0.128 U	0.118 U
CHROMIUM, TOTAL	210	470	38	MG_KG	**5.62**	**4.06 J**	**6.81**
LEAD	400	1400		MG_KG	**3.27**	**2.02 J**	**3.72**
SELENIUM	440	11000	5.2	MG_KG	0.108 U	0.128 UJ	0.118 U
SILVER	410	8200	17	MG_KG	0.108 U	0.128 U	0.118 U
MERCURY	3	17	2.1	MG_KG	**0.0087 J**	**0.0071 J**	0.0055 U
VOCs							
1,1,1-TRICHLOROETHANE	730	3900	1.9	MG_KG	0.00014 U	0.00017 U	0.00018 U
1,1,2,2-TETRACHLOROETHANE	0.7	1.2	0.001	MG_KG	0.00015 U	0.00018 U	0.00019 U
1,1,2-TRICHLOROETHANE	1.4	2	0.03	MG_KG	5E-05 U	7E-05 U	7E-05 U
1,1-DICHLOROETHANE	390	2100	0.4	MG_KG	8E-05 U	0.0001 U	0.00011 U
1,1-DICHLOROETHENE	95	510	0.06	MG_KG	0.00019 U	0.00024 U	0.00025 U
1,2-DICHLOROETHANE	0.5	0.7	0.01	MG_KG	0.00017 U	0.00021 U	0.00022 U
1,2-DICHLOROPROPANE	0.6	0.9	0.03	MG_KG	6E-05 U	8E-05 U	8E-05 U
2-BUTANONE	16000	110000	17	MG_KG	0.00027 U	0.00034 U	0.00036 U
2-HEXANONE	24	130	1.4	MG_KG	0.00025 U	0.00031 U	0.00033 U
4-METHYL-2-PENTANONE	4300	44000	2.6	MG_KG	0.00013 U	0.00016 U	0.00017 U
ACETONE	11000	68000	25	MG_KG	0.00025 U	0.00031 U	0.00033 U
BENZENE	1.2	1.7	0.007	MG_KG	4E-05 U	5E-05 U	6E-05 U
BROMODICHLOROMETHANE	1.5	2.2	0.004	MG_KG	9E-05 U	0.00011 U	0.00012 U
BROMOFORM	48	93	0.03	MG_KG	0.00036 U	0.00046 U	0.00048 U
BROMOMETHANE	3.1	16	0.05	MG_KG	0.0004 U	0.00051 U	0.00054 U
CARBON DISULFIDE	270	1500	5.6	MG_KG	0.00016 U	0.0002 U	0.00021 U
CARBON TETRACHLORIDE	0.5	0.7	0.04	MG_KG	0.00016 U	0.0002 U	0.00021 U
CHLOROBENZENE	120	650	1.3	MG_KG	0.00011 U	0.00014 U	0.00014 U
CHLOROETHANE	3.9	5.4	0.06	MG_KG	0.00017 U	0.00021 U	0.00022 U
CHLOROFORM	0.4	0.6	0.4	MG_KG	0.00014 U	0.00018 U	0.00019 U
CHLOROMETHANE	4	5.7	0.01	MG_KG	0.00016 U	0.0002 U	0.00021 U
CIS-1,2-DICHLOROETHENE	33	180	0.4	MG_KG	9E-05 U	0.00012 U	0.00013 U
CIS-1,3-DICHLOROPROPENE				MG_KG	0.00011 U	0.00014 U	0.00014 U
DIBROMOCHLOROMETHANE	1.5	2.3	0.003	MG_KG	0.00021 U	0.00026 U	0.00028 U
ETHYLBENZENE	1500	9200	0.6	MG_KG	0.00015 U	0.00019 U	**0.00066 J**
METHYLENE CHLORIDE	17	26	0.02	MG_KG	0.00043 U	0.00054 U	0.00057 U
STYRENE	3600	23000	3.6	MG_KG	7E-05 U	9E-05 U	9E-05 U
TETRACHLOROETHENE	8.8	18	0.03	MG_KG	0.00025 U	0.00031 U	0.00033 U
TOLUENE	7500	60000	0.5	MG_KG	9E-05 U	0.00011 U	**0.00282 J**
TRANS-1,2-DICHLOROETHENE	53	290	0.7	MG_KG	0.0001 U	0.00013 U	0.00013 U
TRANS-1,3-DICHLOROPROPENE				MG_KG	7E-05 U	9E-05 U	9E-05 U
TRICHLOROETHENE	6.4	9.3	0.03	MG_KG	0.00011 U	0.00013 U	0.00014 U
VINYL CHLORIDE	0.2	0.8	0.007	MG_KG	0.00016 U	0.0002 U	0.00022 U
XYLENES, TOTAL	130	700	0.2	MG_KG	0.00021 U	0.00026 U	**0.0031 J**

Soil Results (4 -6 feet bgs)
PSC 57
NAS Jacksonville

Analyte	FLSCTL_RES_2005 (a)	FLSCTL_IND_2005 (b)	FLSCTL_LEACHGW_2005 (c)	Units	HPTP-SB09 HPTP-SB09-4 03/12/2015	HPTP-SB10 HPTP-SB10-4 03/12/2015	HPTP-TW01 HPTP-TW01-4-0114 01/21/2014
PAHs							
2-METHYLNAPHTHALENE	210	2100	8.5	MG_KG	**0.00256 J**	0.00089 U	0.00082 U
ACENAPHTHENE	2400	20000	2.1	MG_KG	0.00123 U	0.00139 U	0.00128 U
ACENAPHTHYLENE	1800	20000	27	MG_KG	0.00147 U	0.00167 U	0.00154 U
ANTHRACENE	21000	300000	2500	MG_KG	0.0003 U	0.00034 U	0.00032 U
BENZO[A]ANTHRACENE			0.8	MG_KG	0.00173 U	0.00197 U	0.00181 U
BENZO[A]PYRENE	0.1	0.7	8	MG_KG	0.00035 U	0.0004 U	0.00037 U
BENZO[B]FLUORANTHENE			2.4	MG_KG	**0.00218 J**	0.00126 U	0.00116 U
BENZO[G,H,I]PERYLENE	2500	52000	32000	MG_KG	0.00067 U	0.00076 UJ	0.0007 U
BENZO[K]FLUORANTHENE			24	MG_KG	0.00044 U	0.0005 U	0.00046 U
CHRYSENE			77	MG_KG	0.00125 U	0.00142 U	0.00131 U
DIBENZ[A,H]ANTHRACENE			0.7	MG_KG	0.00111 U	0.00127 U	0.00117 U
FLUORANTHENE	3200	59000	1200	MG_KG	0.00041 U	0.00047 U	0.00043 U
FLUORENE	2600	33000	160	MG_KG	0.00046 U	0.00052 U	0.00048 U
INDENO[1,2,3-CD]PYRENE			6.6	MG_KG	0.00047 U	0.00054 U	0.0005 U
NAPHTHALENE	55	300	1.2	MG_KG	0.00042 U	0.00048 U	0.00044 U
PHENANTHRENE	2200	36000	250	MG_KG	0.00053 U	0.00061 U	0.00056 U
PYRENE	2400	45000	880	MG_KG	0.00062 U	0.0007 U	0.00065 U

Notes:

FLSCTL_RES_2005 (a)- Residential Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLSCTL_IND_2005 (b)- Industrial Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

FLSCTL_LEACHGW_2005 (c) - Leachability to Groundwater Soil Cleanup Target Levels. FAC Chapter 62-777. April 2005.

Bolded results indicate parameter was detected

NA - Not Analyzed

MG_KG - micrograms per liter.

J - Estimated Value

I - Value is between the laboratory MDL and the laboratory PQL.

U - Value is not detected at the MDL.

Appendix E

Laboratory Analytical Package (CD-ROM)

Appendix F
Data Validation Summary Report

VALIDATION SUMMARY

This report summarizes data review findings for samples collected at Naval Air Station (NAS) Jacksonville Potential Source of Contamination (PSC) 57 — Former S3 High Power Turn-up Pad in Jacksonville, Florida, in accordance with the *Sampling and Analysis Plan, Site Inspection for PSC 57 S3 High Power Turn-up Pad at NAS Jacksonville, Florida,* (Resolution Consultants, December 2013).

Data were evaluated independently from the laboratory to assess data quality. Soil and groundwater samples discussed in this report were collected 21, 23, and 24 January 2014. Samples were submitted to Gulf Coast Analytical Laboratories, Inc., in Baton Rouge, Louisiana. A Resolution Consultants chemist reviewed the data packages reported for these samples. The quality assurance criteria used to assess all data were established by the analytical methods, consistent with the measurement performance criteria provided in the project's Sampling and Analysis Plan and relevant standards in the following guidance documents:

- *Department of Defense Quality Systems Manual for Environmental Laboratories*, *Version 4.2*. (October 2010)
- *U.S. Environmental Protection Agency Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review.* (June 2008)
- *U.S. Environmental Protection Agency Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review.* (January 2010)

Validation was performed on the samples from sample delivery groups (SDGs) 214012207, 214012420, and 214012506. Table A-1 in Attachment A provides a summary of all samples collected. Samples discussed in this validation summary were analyzed and reported as definitive data. A full deliverable data package, including quality control (QC) summaries and raw data, was submitted for data review. When the QC parameters did not fall within the specific method or data review guidelines, the data reviewer annotated or "flagged" the corresponding compounds. All samples were received intact by the laboratory and with the proper documentation. This data review encompassed the following parameters.

* Data completeness	Laboratory blanks
* Sample receipt and preservation	Trip blanks (volatile organic compounds only)
Holding times	Equipment blanks
* Instrument tuning	Surrogate recoveries
* Initial calibration	Matrix spike/matrix spike duplicates
Initial calibration verification	Laboratory control samples (LCS)
* Continuing calibration verification	Field duplicate precision
Serial Dilution (metals)	

Acceptable data parameters for which all criteria were met, as indicated above with an asterisk (*), are not discussed further.

Holding Times

Groundwater samples HPTP-MW05-0114 and HPTP-TW01-0114 submitted for volatile organic compound (VOC) analysis were analyzed one day outside the seven-day holding time for

unpreserved samples; therefore, all positive and undetected results were qualified as estimated ("J"), indicating potential low-result bias.

Initial Calibration Verification

Three VOCs (2-hexanone, chloromethane, and chloroethane) and one metal (selenium) had percent recoveries (%Rs) outside control limits. Sample qualification for VOCs is shown in Table 1; qualifications were not necessary for selenium because all associated results were undetected. All remaining calibration criteria were met.

Table 1
Initial Calibration Verification Outliers

SDG	Calibration ID	Analyte	%R	Limits	Associated Samples	Flags
214012420	ICVSTD50 1/29/14	2-Hexanone	122.07	80-120	HPTP-SB02-2, HPTP-SB05-0, HPTP-SB05-2, HPTP-SB07-0, HPTP-SB07-2, HPTP-SB10-0	J+/-
214012420	LLCV 2/6/14	Selenium	121	80-120	HPTP-SB01-0, HPTP-SB01-2, HPTP-SB02-0, HPTP-SB02-2, HPTP-SB05-0, HPTP-SB05-2	None (a)
214012506	ICVSTD50 2/3/14	Chloromethane	137	80-120	HPTP-SB13-0, HPTP-SB13-2, HPTP-SB16-0, HPTP-SB14-0, HPTP-SB14-2, HPTP-SB14-2-FD	J+/-
214012506	ICVSTD50 2/3/14	Chloroethane	133.24	80-120	HPTP-SB13-0, HPTP-SB13-2, HPTP-SB16-0, HPTP-SB14-0, HPTP-SB14-2, HPTP-SB14-2-FD	J+/-

Notes:
SDG = Sample delivery group
%R = Percent recovery
J+/- = Associated positive and undetected results flagged "J" estimated
(a) = Analyte undetected, no qualification necessary

Serial Dilution (Metals)

The serial dilution percent difference for barium (17.1%) in sample HPTP-MW02-0114 was above the control limit of less than 10 and was qualified as estimated ("J"), indicating potentially poor precision.

Laboratory and Field Blank Contamination

Five trip blanks and two equipment rinsate blanks comprised the field blanks collected during this sampling effort. Samples were flagged in accordance with United States Environmental Protection Agency (U.S. EPA) Functional Guidelines where detections were not believed to be site related. Because blank samples may not be prepared using the same sample weight, volume, or dilution, those variables were considered when using the blank criteria. Concentrations detected in blanks resulting in sample qualification are shown in Table 2.

Table 2
Laboratory and Field Blank Outliers

Blank	Analyte	Sample Result	LOQ	2x LOQ (*)	Units	Associated Samples	Flags
1276247-LB	Barium	13.4	40	NA	µg/kg	HPTP-TW01-0-0114 HPTP-TW01-2-0114 HPTP-TW01-4-0114	None, all results are greater than the LOQ
1276974-LB	Barium	27.4	40	NA	µg/kg	HPTP-SB01-0-0114 HPTP-SB01-2-0114 HPTP-SB02-0-0114 HPTP-SB02-2-0114 HPTP-SB05-0-0114 HPTP-SB05-2-0114 HPTP-SB07-0-0114 HPTP-SB07-2-0114 HPTP-SB09-0-0114 HPTP-SB10-0-0114 HPTP-SB11-0-0114 HPTP-SB11-2-0114	None, all results are greater than the LOQ
1276974-LB	Selenium	16.3	40	NA	µg/kg	HPTP-SB01-0-0114 HPTP-SB01-2-0114 HPTP-SB02-0-0114 HPTP-SB02-2-0114 HPTP-SB05-0-0114 HPTP-SB05-2-0114 HPTP-SB07-0-0114 HPTP-SB07-2-0114 HPTP-SB09-0-0114 HPTP-SB10-0-0114 HPTP-SB11-0-0114 HPTP-SB11-2-0114	None - all undetected
1278351-LB	Methylene Chloride	1.46	10	20	µg/kg	HPTP-TW01-0-0114 HPTP-TW01-2-0114 HPTP-TW01-4-0114	All associated samples flagged "U"
1278351-LB	Methylene Chloride	1.46	10	20	µg/kg	HPTP-SB01-0-0114 HPTP-SB01-2-0114 HPTP-SB02-0-0114 HPTP-SB09-0-0114 HPTP-SB11-0-0114 HPTP-SB11-2-0114	All associated samples flagged "U"
1279216-LB	Methylene Chloride	1.64	10	20	µg/kg	HPTP-SB13-0-0114 HPTP-SB13-2-0114 HPTP-SB14-0-0114 HPTP-SB14-0-0114-FD HPTP-SB14-2-0114 HPTP-SB16-0-0114	All associated samples flagged "U"
1279491-LB	Methylene Chloride	1.1	10	20	µg/kg	HPTP-SB14-2-0114-FD	Sample flagged "U"

Table 2
Laboratory and Field Blank Outliers

Blank	Analyte	Sample Result	LOQ	2x LOQ (*)	Units	Associated Samples	Flags
EB012414-SO	Acetone	1.26	5	10	µg/L	HPTP-SB01-0-0114 HPTP-SB01-2-0114 HPTP-SB02-0-0114 HPTP-SB02-2-0114 HPTP-SB05-0-0114 HPTP-SB05-2-0114 HPTP-SB07-0-0114 HPTP-SB07-2-0114 HPTP-SB09-0-0114 HPTP-SB10-0-0114 HPTP-SB11-0-0114 HPTP-SB11-2-0114 HPTP-SB13-0-0114 HPTP-SB13-2-0114 HPTP-SB14-0-0114 HPTP-SB14-0-0114-FD HPTP-SB14-2-0114 HPTP-SB14-2-0114-FD HPTP-SB16-0-0114 HPTP-TW01-0-0114 HPTP-TW01-2-0114 HPTP-TW01-4-0114	Associated samples HPTP-TW01-0-0114, HPTP-TW01-2-0114, HPTP-TW01-4-0114, HPTP-SB14-0-0114, HPTP-SB14-2-0114-FD, HPTP-SB16-0-0114 flagged "U"
TB012114	Methylene Chloride	1.52	5	10	µg/L	HPTP-TW01-0-0114 HPTP-TW01-2-0114 HPTP-TW01-4-0114	All associated samples flagged "U"
TB012314-GW	Methylene Chloride	1.54	5	10	µg/L	HPTP-MW05-0114 HPTP-TW01-0114	None - all undetected
TB012314-SO	Methylene Chloride	1.6	5	10	µg/L	HPTP-SB01-0-0114 HPTP-SB01-2-0114 HPTP-SB02-0-0114 HPTP-SB02-2-0114 HPTP-SB05-0-0114 HPTP-SB05-2-0114 HPTP-SB07-0-0114 HPTP-SB07-2-0114 HPTP-SB09-0-0114 HPTP-SB10-0-0114 HPTP-SB11-0-0114 HPTP-SB11-2-0114	All associated samples flagged "U"
TB012414-GW	Methylene Chloride	1.33	5	10	µg/L	HPTP-MW01-0114 HPTP-MW02-0114 HPTP-MW03-0114 HPTP-MW03-0114-FD HPTP-MW04-0114	None - all undetected
TB012414-SO	Methylene Chloride	1.39	5	10	µg/L	HPTP-SB13-0-0114 HPTP-SB13-2-0114 HPTP-SB14-0-0114 HPTP-SB14-0-0114-FD HPTP-SB14-2-0114 HPTP-SB14-2-0114-FD HPTP-SB16-0-0114	All associated samples flagged "U"

Notes:
LOQ = Limit of quantitation
* = Acetone and methylene chloride
NA = Not applicable
µg/kg = Micrograms per kilogram
µg/L = Micrograms per liter
U = Sample qualified as undetected

Surrogate Recoveries

The polynuclear aromatic hydrocarbon p-terphenyl-d14 had surrogate %Rs outside the control limits in samples HPTP-MW03-0114 and HPTP-MW04-0114; however, no qualifications were necessary because only one base-neutral surrogate was outside the control limit.

Matrix Spike/Matrix Spike Duplicate

Five field samples were spiked by the laboratory to assess potential matrix interference, and outliers are shown in Table 3. Selenium in sample HPTP-TW01-0-0114 had a 0 %R but was not rejected because the post-digestion spike recovery was acceptable. The remaining results were qualified (flagged) as indicated in Table 3.

Table 3
MS/MSD Outliers

Spiked Sample	Analyte	Sample Result	MS Result (µg/kg)	MSD Result (µg/kg)	MS %R	MSD %R	%R Limits	RPD	RPD Limits	Flags
HPTP-SB05-2-0114	Arsenic	180	1760	1690	68*	65*	80-120	4	20	J-
HPTP-SB05-2-0114	Barium	10800	11900	14600	50*	165*	80-120	20	20	None (a)
HPTP-SB05-2-0114	Chromium	3660	6210	7930	109	183*	80-120	24*	20	J+
HPTP-SB05-2-0114	Selenium	<234	354	278	72*	56*	80-120	24*	20	J-
HPTP-SB13-0-0114	Lead	3870	7090	7820	138*	170*	80-120	10	20	J+
HPTP-SB13-0-0114	Barium	16900	24300	29700	321*	553*	80-120	20	20	None (a)
HPTP-SB13-0-0114	Chromium	4910	7570	8890	115	171*	80-120	16	20	J+
HPTP-SB13-0-0114	Selenium	<232	230	104	49*	22*	80-120	76*	20	J-
HPTP-SB13-2-0114	Lead	1580	4990	5210	143*	152*	80-120	4	20	J+
HPTP-SB13-2-0114	Arsenic	137	2020	2030	79*	79*	80-120	1	20	J+
HPTP-SB13-2-0114	Barium	4800	9430	9410	194*	193*	80-120	0	20	J+
HPTP-SB13-2-0114	Chromium	1730	5660	5630	164*	163*	80-120	1	20	J+
HPTP-SB13-2-0114	Selenium	<239	375	310	71*	57*	80-120	19	20	J-
HPTP-TW01-0-0114	Lead	7640	12500	10800	189*	124*	80-120	14	20	J+
HPTP-TW01-0-0114	Arsenic	751	2990	2790	87	79*	80-120	7	20	J+
HPTP-TW01-0-0114	Chromium	6120	10100	9440	153*	129*	80-120	6	20	J+
HPTP-TW01-0-0114	Selenium	<258	0	0	0*	0*	80-120	0	20	J-
HPTP-TW01-0-0114	Barium	14600	21100	18100	253*	134*	80-120	16	20	None (a)

Notes:
MS = Matrix spike
MSD = Matrix spike duplicate
µg/kg = Micrograms per kilogram
%R = Percent recovery
RPD = Relative percent difference
* = Outside control limits
J- = Positive and undetected results were qualified as estimated due to potential low bias or poor precision.

(a) = Sample result is greater than four times the spike added, no qualification was necessary.
J+ = Positive results were qualified as estimated due to potential high bias

Laboratory Control Samples

All LCS had %Rs within control limits except for acetone in laboratory sample 1277912-BS (34%), which is above the control limit of less than 30. Positive and undetected results in associated samples HPTP-SB02-2-0114, HPTP-SB05-0-0114, HPTP-SB05-2-0114, HPTP-SB07-0-0114, HPTP-SB07-2-0114, and HPTP-SB10-0-0114 were qualified as estimated ("J" and "UJ" respectively), indicating potential poor precision.

Field Duplicate Precision

Two soil samples (HPTP-SB14-0-0114 and HPTP-SB14-2-0114) and one groundwater sample (HPTP-MW03-0114) were duplicated in the field to assess precision. As shown in Table 4, several analytes had a relative percent difference above 50 for soil and 30 for groundwater; however, the results were not qualified because one or both were below five times the limit of quantitation.

Table 4
Field Duplicate Precision Outlier

Sample ID	Duplicate ID	Analyte	Sample Result	Duplicate Result	Units	RPD	Flags
HPTP-SB14-0-0114	HPTP-SB14-0-0114-FD	Cadmium	675	255	µg/kg	90.3	None (a)
HPTP-SB14-2-0114	HPTP-SB14-2-0114-FD	Arsenic	342	186	µg/kg	59.1	None (a)
HPTP-MW03-0114	HPTP-MW03-0114-FD	Lead	0.5	0.32	µg/L	43.9	None (a)
HPTP-MW03-0114	HPTP-MW03-0114-FD	Chromium, Total	0.5	0.36	µg/L	32.6	None (a)
HPTP-SB14-0-0114	HPTP-SB14-0-0114-FD	Toluene	2.01	1.15	µg/kg	54.4	None (a)
HPTP-SB14-2-0114	HPTP-SB14-2-0114-FD	Acetone	1.99	4.8	µg/kg	82.8	None (a)
HPTP-SB14-0-0114	HPTP-SB14-0-0114-FD	Pyrene	6.46	2.13	µg/kg	100.8	None (a)
HPTP-SB14-0-0114	HPTP-SB14-0-0114-FD	Fluoranthene	7.54	2.13	µg/kg	111.9	None (a)
HPTP-SB14-0-0114	HPTP-SB14-0-0114-FD	Chrysene	6.43	2.13	µg/kg	100.5	None (a)
HPTP-SB14-0-0114	HPTP-SB14-0-0114-FD	Benzo[a]pyrene	5.13	2.13	µg/kg	82.6	None (a)
HPTP-SB14-0-0114	HPTP-SB14-0-0114-FD	Benzo[a]anthracene	7.5	2.13	µg/kg	111.5	None (a)
HPTP-MW03-0114	HPTP-MW03-0114-FD	Anthracene	0.17	0.085	µg/L	66.7	None (a)
HPTP-MW03-0114	HPTP-MW03-0114-FD	Pyrene	0.117	0.066	µg/L	55.7	None (a)
HPTP-MW03-0114	HPTP-MW03-0114-FD	Fluoranthene	0.136	0.053	µg/L	87.8	None (a)
HPTP-MW03-0114	HPTP-MW03-0114-FD	Acenaphthene	0.143	0.052	µg/L	93.3	None (a)
HPTP-MW03-0114	HPTP-MW03-0114-FD	Fluorene	0.167	0.052	µg/L	105	None (a)
HPTP-MW03-0114	HPTP-MW03-0114-FD	Naphthalene	0.138	0.257	µg/L	60.3	None (a)

Notes:
RPD = Relative percent difference
µg/kg = Micrograms per kilogram
µg/L = Micrograms per liter
(a) = No qualifications needed because one or both results were below five times the limit of quantitation .

OVERALL ASSESSMENT

The data from SDGs 214012207, 214012420, and 214012506 were reviewed independently from the laboratory to assess data quality. No results were rejected; therefore, analytical completeness was calculated to be 100 percent. Data not qualified during data review are considered usable by the project. The remaining results qualified as estimated may be high or low, but the data are usable for their intended purpose, according to U.S. EPA and Department of Defense guidelines.

Table 5 shows final data review qualifiers used to describe results and how they should be interpreted by the end data user. Attachment B provides final results after data review.

Table 5
Result Flagging Codes

Data Qualifier	Qualifier Definition	Interpret Result As a Detection?	Result Usable?	Potential Result Bias
no qualifier	Acceptable	Yes	Yes	None expected
U	Undetected	No	Yes	None expected
J	Estimated	Yes	Yes	High or Low
UJ	Undetected and Estimated	No	Yes	High or Low

Attachment A
Sample and Analysis Summary

Table A-1
Sample and Analysis Summary
Naval Air Station Jacksonville – January 2014

SDG	Sample Identification	Laboratory Identification	Sample Date	Sample Type	6020A	7470A/ 7471B	8260B	8270D SIM
214012207	HPTP-TW01-0-0114	21401220701	1/21/2014	Soil	X	X	X	X
214012207	HPTP-TW01-2-0114	21401220702	1/21/2014	Soil	X	X	X	X
214012207	HPTP-TW01-4-0114	21401220703	1/21/2014	Soil	X	X	X	X
214012207	TB012114	21401220704	1/21/2014	Trip Blank			X	
214012420	HPTP-SB01-0-0114	21401242001	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB01-2-0114	21401242002	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB02-0-0114	21401242003	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB02-2-0114	21401242004	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB05-0-0114	21401242005	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB05-2-0114	21401242006	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB07-0-0114	21401242007	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB07-2-0114	21401242008	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB09-0-0114	21401242009	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB10-0-0114	21401242010	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB11-0-0114	21401242011	1/23/2014	Soil	X	X	X	X
214012420	HPTP-SB11-2-0114	21401242012	1/23/2014	Soil	X	X	X	X
214012420	TB012314-SO	21401242015	1/23/2014	Trip Blank			X	
214012420	TB012314-GW	21401242016	1/23/2014	Trip Blank			X	
214012506	HPTP-SB13-0-0114	21401250601	1/24/2014	Soil	X	X	X	X
214012506	HPTP-SB13-2-0114	21401250604	1/24/2014	Soil	X	X	X	X
214012506	HPTP-SB14-0-0114	21401250608	1/24/2014	Soil	X	X	X	X
214012506	HPTP-SB14-0-0114-FD	21401250610	1/24/2014	Duplicate of HPTP-SB14-0-0114	X	X	X	X
214012506	HPTP-SB14-2-0114	21401250609	1/24/2014	Soil	X	X	X	X
214012506	HPTP-SB14-2-0114-FD	21401250611	1/24/2014	Duplicate of HPTP-SB14-2-0114	X	X	X	X
214012506	HPTP-SB16-0-0114	21401250607	1/24/2014	Soil	X	X	X	X
214012420	HPTP-MW05-0114	21401242014	1/23/2014	Groundwater	X	X	X	X
214012420	HPTP-TW01-0114	21401242013	1/23/2014	Groundwater	X	X	X	X
214012506	HPTP-MW01-0114	21401250618	1/24/2014	Groundwater	X	X	X	X
214012506	HPTP-MW02-0114	21401250613	1/24/2014	Groundwater	X	X	X	X
214012506	HPTP-MW03-0114	21401250616	1/24/2014	Groundwater	X	X	X	X
214012506	HPTP-MW03-0114-FD	21401250617	1/24/2014	Duplicate of HPTP-MW03-0114	X	X	X	X

Table A-1
Sample and Analysis Summary
Naval Air Station Jacksonville – January 2014

SDG	Sample Identification	Laboratory Identification	Sample Date	Sample Type	6020A	7470A/ 7471B	8260B	8270D SIM
214012506	HPTP-MW04-0114	21401250612	1/24/2014	Groundwater	X	X	X	X
214012506	TB012414-SO	21401250622	1/24/2014	Trip Blank			X	
214012506	TB012414-GW	21401250621	1/24/2014	Trip Blank			X	

Notes:

SDG	=	Sample delivery group
6020A	=	Metals, selected compounds: arsenic, barium, cadmium, total chromium, lead, selenium, and silver
7470A/7471B	=	Mercury
8260B	=	Volatile organic compounds
8270DSIM	=	Polynuclear aromatic hydrocarbons via selective ion monitoring
X	=	Sample was analyzed for the method indicated in the column header.

Attachment B
Final Results after Data Review
Sample Delivery Groups: 214012207, 214012420, and 214012506

Table B-1
Final Interpreted Qualifiers

Interpreted Qualifier	Definition
U	**Undetected** — The parameter was analyzed but undetected or was found in a sample at a concentration less than five times the blank concentration for other constituents; the associated value presented is the detection limit.
J	**Estimated Value** — One or more QC parameters were outside control limits.
UJ	**Undetected and Estimated** — The parameter was analyzed but undetected at concentrations above the listed DL; the DL is estimated because one QC parameter was outside control limits.
D	**Diluted** — Sample was diluted to report the value on-scale.
R/UR	**Rejected/Unusable Data** — One or more QC parameters grossly exceeded control limits.

Table B-2
Validator Reason Codes

Reason Code	Reason Code Description
a	Tracer recovery (radiochemical data only)
be	Equipment blank contamination
Bf	Field blank contamination
Bl	Laboratory blank contamination
bm	Missing Blank Information
C	Calibration issue
cl	Clean-up standard recovery
cp	Insufficient in growth (radiochemical data only)
cr	Chromatographic resolution
d	Reporting limit raised due to chromatographic interference
e	Ether interference
fd	Field duplicate RPDs
g	Cromatographic pattern match issue
H	Holding times
i	Internal standard areas
ii	Injection internal standard area or retention time exceedance
k	Estimated Maximum Possible Concentrations
l	LCS recoveries
lc	Labeled compound recovery
Ld	Laboratory duplicate RPDs (matrix duplicate, MSD, LCSD)
M	Matrix spike recovery
nb	Negative laboratory blank contamination
p	Chemical preservation issue
pe	Post Extraction Spike
q	Quantitation issue
r	Dual column RPD
rp	Re-extraction precision issue [PAHs only]
rt	SIM ions not within + 2 seconds
s	Surrogate recovery
sp	Sample preparation issue
su	Evidence of ion suppression
t	Temperature Preservation Issue
u	High combined sample result uncertainty (radiochemical data only)
v	Compound identification issue
x	Low % solids
Y	Serial dilution results
z	ICS results

Table B-3
Soil Results after Data Review

		Sample Delivery Group	214012207			214012207			214012207			214012420		
		Lab ID	21401220701			21401220702			21401220703			21401242001		
		Sample ID	HPTP-TW01-0-0114			HPTP-TW01-2-0114			HPTP-TW01-4-0114			HPTP-SB01-0-0114		
		Sample Date	01/21/14			01/21/14			01/21/14			01/23/14		
		Sample Type	Soil			Soil			Soil			Soil		
		Units	µg/kg			µg/kg			µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
6020A	ARSENIC	7440-38-2	751	J	m	700			615			299	J	
6020A	BARIUM	7440-39-3	14600			43600			23400			15800		
6020A	CADMIUM	7440-43-9	205	J		230	U		236	U		231	U	
6020A	CHROMIUM, TOTAL	7440-47-3	6120	J	m	8110			6810			5540		
6020A	LEAD	7439-92-1	7640	J	m	5790			3720			4040		
6020A	SELENIUM	7782-49-2	258	UR	m	230	U		236	U		231	U	
6020A	SILVER	7440-22-4	258	U		230	U		236	U		231	U	
7471B	MERCURY	7439-97-6	8	J		13.7	U		13.9	U		13.6	U	
8260B	1,1,1-TRICHLOROETHANE	71-55-6	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	1,1,2,2-TETRACHLOROETHANE	79-34-5	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	1,1,2-TRICHLOROETHANE	79-00-5	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	1,1-DICHLOROETHANE	75-34-3	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	1,1-DICHLOROETHENE	75-35-4	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	1,2-DICHLOROETHANE	107-06-2	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	1,2-DICHLOROPROPANE	78-87-5	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	2-BUTANONE	78-93-3	3.87	J		2.15	U		2.22	U		2.07	U	
8260B	2-HEXANONE	591-78-6	2.26	U		2.15	U		2.22	U		2.07	U	
8260B	4-METHYL-2-PENTANONE	108-10-1	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	ACETONE	67-64-1	2.26	U	bf	2.15	U	bf	2.22	U	bf	2.07	U	
8260B	BENZENE	71-43-2	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	BROMODICHLOROMETHANE	75-27-4	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	BROMOFORM	75-25-2	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	BROMOMETHANE	74-83-9	2.26	U		2.15	U		2.22	U		2.07	U	
8260B	CARBON DISULFIDE	75-15-0	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	CARBON TETRACHLORIDE	56-23-5	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	CHLOROBENZENE	108-90-7	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	CHLOROETHANE	75-00-3	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	CHLOROFORM	67-66-3	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	CHLOROMETHANE	74-87-3	2.26	U		2.15	U		2.22	U		2.07	U	
8260B	CIS-1,2-DICHLOROETHENE	156-59-2	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	CIS-1,3-DICHLOROPROPENE	10061-01-5	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	DIBROMOCHLOROMETHANE	124-48-1	0.565	U		0.538	U		0.555	U		0.518	U	

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012207			214012207			214012207			214012420		
		Lab ID	21401220701			21401220702			21401220703			21401242001		
		Sample ID	HPTP-TW01-0-0114			HPTP-TW01-2-0114			HPTP-TW01-4-0114			HPTP-SB01-0-0114		
		Sample Date	01/21/14			01/21/14			01/21/14			01/23/14		
		Sample Type	Soil			Soil			Soil			Soil		
		Units	µg/kg			µg/kg			µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
8260B	ETHYLBENZENE	100-41-4	1.07	J		0.656	J		0.656	J		0.479	J	
8260B	METHYLENE CHLORIDE	75-09-2	1.13	U	bl,bf	1.08	U	bl,bf	1.11	U	bl,bf	1.04	U	bl,bf
8260B	STYRENE	100-42-5	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	TETRACHLOROETHENE	127-18-4	0.565	U		1.25	J		0.555	U		0.518	U	
8260B	TOLUENE	108-88-3	4.77	J		2.77	J		2.82	J		2.26	J	
8260B	TRANS-1,2-DICHLOROETHENE	156-60-5	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	TRICHLOROETHENE	79-01-6	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	VINYL CHLORIDE	75-01-4	0.565	U		0.538	U		0.555	U		0.518	U	
8260B	XYLENES, TOTAL	1330-20-7	5.38	J		3.11	J		3.1	J		2.26	J	
8270D_SIM	2-METHYLNAPHTHALENE	91-57-6	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	ACENAPHTHENE	83-32-9	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	ACENAPHTHYLENE	208-96-8	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	ANTHRACENE	120-12-7	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	BENZO[A]ANTHRACENE	56-55-3	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	BENZO[A]PYRENE	50-32-8	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	BENZO[B]FLUORANTHENE	205-99-2	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	BENZO[G,H,I]PERYLENE	191-24-2	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	BENZO[K]FLUORANTHENE	207-08-9	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	CHRYSENE	218-01-9	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	DIBENZ[A,H]ANTHRACENE	53-70-3	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	FLUORANTHENE	206-44-0	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	FLUORENE	86-73-7	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	INDENO[1,2,3-CD]PYRENE	193-39-5	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	NAPHTHALENE	91-20-3	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	PHENANTHRENE	85-01-8	2.14	U		1.94	U		1.97	U		1.93	U	
8270D_SIM	PYRENE	129-00-0	2.14	U		1.94	U		1.97	U		1.93	U	

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012420			214012420			214012420			214012420		
		Lab ID	21401242002			21401242003			21401242004			21401242005		
		Sample ID	HPTP-SB01-2-0114			HPTP-SB02-0-0114			HPTP-SB02-2-0114			HPTP-SB05-0-0114		
		Sample Date	01/23/14			01/23/14			01/23/14			01/23/14		
		Sample Type	Soil			Soil			Soil			Soil		
		Units	µg/kg			µg/kg			µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
6020A	ARSENIC	7440-38-2	666			262	J		299	J		189	J	
6020A	BARIUM	7440-39-3	32600			15700			17200			10900		
6020A	CADMIUM	7440-43-9	260	U		234	U		244	U		227	U	
6020A	CHROMIUM, TOTAL	7440-47-3	7250			5390			6840			3600		
6020A	LEAD	7439-92-1	7170			3190			3650			3140		
6020A	SELENIUM	7782-49-2	260	U		234	U		244	U		227	U	
6020A	SILVER	7440-22-4	260	U		234	U		244	U		227	U	
7471B	MERCURY	7439-97-6	59.2			65.4			6.4	J		13.2	U	
8260B	1,1,1-TRICHLOROETHANE	71-55-6	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	1,1,2,2-TETRACHLOROETHANE	79-34-5	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	1,1,2-TRICHLOROETHANE	79-00-5	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	1,1-DICHLOROETHANE	75-34-3	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	1,1-DICHLOROETHENE	75-35-4	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	1,2-DICHLOROETHANE	107-06-2	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	1,2-DICHLOROPROPANE	78-87-5	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	2-BUTANONE	78-93-3	1.97	U		2.09	U		1.99	U		2.28	U	
8260B	2-HEXANONE	591-78-6	1.97	U		2.09	U		1.99	UJ	c	2.28	UJ	c
8260B	4-METHYL-2-PENTANONE	108-10-1	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	ACETONE	67-64-1	1.97	U		2.09	U		1.99	UJ	ld	2.28	UJ	ld
8260B	BENZENE	71-43-2	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	BROMODICHLOROMETHANE	75-27-4	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	BROMOFORM	75-25-2	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	BROMOMETHANE	74-83-9	1.97	U		2.09	U		1.99	U		2.28	U	
8260B	CARBON DISULFIDE	75-15-0	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	CARBON TETRACHLORIDE	56-23-5	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	CHLOROBENZENE	108-90-7	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	CHLOROETHANE	75-00-3	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	CHLOROFORM	67-66-3	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	CHLOROMETHANE	74-87-3	1.97	U		2.09	U		1.99	U		2.28	U	
8260B	CIS-1,2-DICHLOROETHENE	156-59-2	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	CIS-1,3-DICHLOROPROPENE	10061-01-5	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	DIBROMOCHLOROMETHANE	124-48-1	0.493	U		0.522	U		0.497	U		0.57	U	

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012420			214012420			214012420			214012420		
		Lab ID	21401242002			21401242003			21401242004			21401242005		
		Sample ID	HPTP-SB01-2-0114			HPTP-SB02-0-0114			HPTP-SB02-2-0114			HPTP-SB05-0-0114		
		Sample Date	01/23/14			01/23/14			01/23/14			01/23/14		
		Sample Type	Soil			Soil			Soil			Soil		
		Units	µg/kg			µg/kg			µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
8260B	ETHYLBENZENE	100-41-4	0.466	J		0.398	J		0.358	J		0.57	U	
8260B	METHYLENE CHLORIDE	75-09-2	0.985	U	bl,bf	1.04	U	bl,bf	0.993	U	bf	1.14	U	bf
8260B	STYRENE	100-42-5	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	TETRACHLOROETHENE	127-18-4	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	TOLUENE	108-88-3	1.91	J		1.97	J		2.02	J		1.36	J	
8260B	TRANS-1,2-DICHLOROETHENE	156-60-5	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	TRICHLOROETHENE	79-01-6	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	VINYL CHLORIDE	75-01-4	0.493	U		0.522	U		0.497	U		0.57	U	
8260B	XYLENES, TOTAL	1330-20-7	1.56	J		2	J		0.981	J		1.71	U	
8270D_SIM	2-METHYLNAPHTHALENE	91-57-6	2.13	U		1.96	U		2.04	U		1.91	U	
8270D_SIM	ACENAPHTHENE	83-32-9	2.13	U		1.96	U		2.04	U		1.91	U	
8270D_SIM	ACENAPHTHYLENE	208-96-8	2.13	U		1.96	U		2.04	U		1.91	U	
8270D_SIM	ANTHRACENE	120-12-7	2.13	U		1.96	U		2.04	U		1.91	U	
8270D_SIM	BENZO[A]ANTHRACENE	56-55-3	2.13	U		1.96	U		2.04	U		8.95		
8270D_SIM	BENZO[A]PYRENE	50-32-8	2.13	U		1.96	U		2.04	U		7.05		
8270D_SIM	BENZO[B]FLUORANTHENE	205-99-2	2.13	U		1.96	U		2.04	U		67.1		
8270D_SIM	BENZO[G,H,I]PERYLENE	191-24-2	2.13	U		1.96	U		2.04	U		7.31		
8270D_SIM	BENZO[K]FLUORANTHENE	207-08-9	2.13	U		1.96	U		2.04	U		4.28		
8270D_SIM	CHRYSENE	218-01-9	2.13	U		1.96	U		2.04	U		8.29		
8270D_SIM	DIBENZ[A,H]ANTHRACENE	53-70-3	2.13	U		1.96	U		2.04	U		1.91	U	
8270D_SIM	FLUORANTHENE	206-44-0	2.13	U		1.96	U		2.04	U		8.11		
8270D_SIM	FLUORENE	86-73-7	2.13	U		1.96	U		2.04	U		1.91	U	
8270D_SIM	INDENO[1,2,3-CD]PYRENE	193-39-5	2.13	U		1.96	U		2.04	U		54.6		
8270D_SIM	NAPHTHALENE	91-20-3	2.13	U		1.96	U		2.04	U		1.91	U	
8270D_SIM	PHENANTHRENE	85-01-8	2.13	U		1.96	U		2.04	U		1.91	U	
8270D_SIM	PYRENE	129-00-0	2.13	U		1.96	U		2.04	U		7.16		

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012420			214012420			214012420			214012420		
		Lab ID	21401242006			21401242007			21401242008			21401242009		
		Sample ID	HPTP-SB05-2-0114			HPTP-SB07-0-0114			HPTP-SB07-2-0114			HPTP-SB09-0-0114		
		Sample Date	01/23/14			01/23/14			01/23/14			01/23/14		
		Sample Type	Soil			Soil			Soil			Soil		
		Units	µg/kg			µg/kg			µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
6020A	ARSENIC	7440-38-2	180	J	m	364	J		202	J		499		
6020A	BARIUM	7440-39-3	10800			7620			6300			13500		
6020A	CADMIUM	7440-43-9	234	U		221	J		240	U		326	J	
6020A	CHROMIUM, TOTAL	7440-47-3	3660	J	m,ld	3510			3240			7210		
6020A	LEAD	7439-92-1	3460			106000			16900			6390		
6020A	SELENIUM	7782-49-2	234	UJ	m,ld	230	U		240	U		227	U	
6020A	SILVER	7440-22-4	234	U		230	U		240	U		227	U	
7471B	MERCURY	7439-97-6	13.2	U		6.7	J		14.4	U		13.4	U	
8260B	1,1,1-TRICHLOROETHANE	71-55-6	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	1,1,2,2-TETRACHLOROETHANE	79-34-5	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	1,1,2-TRICHLOROETHANE	79-00-5	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	1,1-DICHLOROETHANE	75-34-3	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	1,1-DICHLOROETHENE	75-35-4	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	1,2-DICHLOROETHANE	107-06-2	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	1,2-DICHLOROPROPANE	78-87-5	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	2-BUTANONE	78-93-3	1.93	U		2.17	U		2.15	U		2.07	U	
8260B	2-HEXANONE	591-78-6	1.93	UJ	c	2.17	UJ	c	2.15	UJ	c	2.07	U	
8260B	4-METHYL-2-PENTANONE	108-10-1	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	ACETONE	67-64-1	1.93	UJ	ld	2.17	UJ	ld	2.15	U		2.07	U	
8260B	BENZENE	71-43-2	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	BROMODICHLOROMETHANE	75-27-4	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	BROMOFORM	75-25-2	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	BROMOMETHANE	74-83-9	1.93	U		2.17	U		2.15	U		2.07	U	
8260B	CARBON DISULFIDE	75-15-0	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	CARBON TETRACHLORIDE	56-23-5	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	CHLOROBENZENE	108-90-7	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	CHLOROETHANE	75-00-3	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	CHLOROFORM	67-66-3	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	CHLOROMETHANE	74-87-3	1.93	U		2.17	U		2.15	U		2.07	U	
8260B	CIS-1,2-DICHLOROETHENE	156-59-2	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	CIS-1,3-DICHLOROPROPENE	10061-01-5	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	DIBROMOCHLOROMETHANE	124-48-1	0.482	U		0.543	U		0.537	U		0.517	U	

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012420			214012420			214012420			214012420		
		Lab ID	21401242006			21401242007			21401242008			21401242009		
		Sample ID	HPTP-SB05-2-0114			HPTP-SB07-0-0114			HPTP-SB07-2-0114			HPTP-SB09-0-0114		
		Sample Date	01/23/14			01/23/14			01/23/14			01/23/14		
		Sample Type	Soil			Soil			Soil			Soil		
		Units	µg/kg			µg/kg			µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
8260B	ETHYLBENZENE	100-41-4	0.482	U		0.418	J		0.559	J		0.37	J	
8260B	METHYLENE CHLORIDE	75-09-2	0.963	U	bf	1.09	U	bf	1.07	U	bf	1.03	U	bl,bf
8260B	STYRENE	100-42-5	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	TETRACHLOROETHENE	127-18-4	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	TOLUENE	108-88-3	1.4	J		1.96	J		2.71	J		1.82	J	
8260B	TRANS-1,2-DICHLOROETHENE	156-60-5	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	TRICHLOROETHENE	79-01-6	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	VINYL CHLORIDE	75-01-4	0.482	U		0.543	U		0.537	U		0.517	U	
8260B	XYLENES, TOTAL	1330-20-7	1.45	U		1.65	J		2.43	J		1.69	J	
8270D_SIM	2-METHYLNAPHTHALENE	91-57-6	1.95	U		1.92	U		3.59	J		1.9	U	
8270D_SIM	ACENAPHTHENE	83-32-9	1.95	U		1.92	U		6.26			1.9	U	
8270D_SIM	ACENAPHTHYLENE	208-96-8	1.95	U		1.92	U		5.07			35.6		
8270D_SIM	ANTHRACENE	120-12-7	1.95	U		5.75			8.66			83.1		
8270D_SIM	BENZO[A]ANTHRACENE	56-55-3	5.87			52.3			60.9			308		
8270D_SIM	BENZO[A]PYRENE	50-32-8	1.95	U		53			60.2			299		
8270D_SIM	BENZO[B]FLUORANTHENE	205-99-2	1.95	U		130			134			630		
8270D_SIM	BENZO[G,H,I]PERYLENE	191-24-2	1.95	U		50.4			62.5			277		
8270D_SIM	BENZO[K]FLUORANTHENE	207-08-9	1.95	U		25.9			32.1			134		
8270D_SIM	CHRYSENE	218-01-9	4.48			53			59.9			262		
8270D_SIM	DIBENZ[A,H]ANTHRACENE	53-70-3	1.95	U		6.45			8.14			35.6		
8270D_SIM	FLUORANTHENE	206-44-0	4.54			70.2			84			539		
8270D_SIM	FLUORENE	86-73-7	1.95	U		1.92	U		3.71	J		1.9	U	
8270D_SIM	INDENO[1,2,3-CD]PYRENE	193-39-5	1.95	U		107			125			580		
8270D_SIM	NAPHTHALENE	91-20-3	1.95	U		1.92	U		4.11			1.9	U	
8270D_SIM	PHENANTHRENE	85-01-8	1.95	U		20.5			27.1			70.5		
8270D_SIM	PYRENE	129-00-0	5.34			63.7			70.5			339		

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012420			214012420			214012420			214012506		
		Lab ID	21401242010			21401242011			21401242012			21401250601		
		Sample ID	HPTP-SB10-0-0114			HPTP-SB11-0-0114			HPTP-SB11-2-0114			HPTP-SB13-0-0114		
		Sample Date	01/23/14			01/23/14			01/23/14			01/24/14		
		Sample Type	Soil			Soil			Soil			Soil		
		Units	µg/kg			µg/kg			µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
6020A	ARSENIC	7440-38-2	573			230	U		162	J		326	J	
6020A	BARIUM	7440-39-3	10700			3350			5540			16900		
6020A	CADMIUM	7440-43-9	299	J		230	U		246	U		232	U	
6020A	CHROMIUM, TOTAL	7440-47-3	6410			1600			2530			4910	J	m
6020A	LEAD	7439-92-1	7730			1610			2030			3870	J	m
6020A	SELENIUM	7782-49-2	223	U		230	U		246	U		232	UJ	m,ld
6020A	SILVER	7440-22-4	223	U		230	U		246	U		232	U	
7471B	MERCURY	7439-97-6	13.1	U		12.3	U		14	U		9.2	J	
8260B	1,1,1-TRICHLOROETHANE	71-55-6	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	1,1,2,2-TETRACHLOROETHANE	79-34-5	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	1,1,2-TRICHLOROETHANE	79-00-5	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	1,1-DICHLOROETHANE	75-34-3	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	1,1-DICHLOROETHENE	75-35-4	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	1,2-DICHLOROETHANE	107-06-2	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	1,2-DICHLOROPROPANE	78-87-5	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	2-BUTANONE	78-93-3	1.96	U		2.27	U		2.19	U		2.15	U	
8260B	2-HEXANONE	591-78-6	1.96	UJ	c	2.27	U		2.19	U		2.15	UJ	c
8260B	4-METHYL-2-PENTANONE	108-10-1	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	ACETONE	67-64-1	1.96	UJ	ld	2.27	U		2.19	U		2.15	U	
8260B	BENZENE	71-43-2	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	BROMODICHLOROMETHANE	75-27-4	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	BROMOFORM	75-25-2	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	BROMOMETHANE	74-83-9	1.96	U		2.27	U		2.19	U		2.15	U	
8260B	CARBON DISULFIDE	75-15-0	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	CARBON TETRACHLORIDE	56-23-5	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	CHLOROBENZENE	108-90-7	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	CHLOROETHANE	75-00-3	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	CHLOROFORM	67-66-3	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	CHLOROMETHANE	74-87-3	1.96	U		2.27	U		2.19	U		2.15	U	
8260B	CIS-1,2-DICHLOROETHENE	156-59-2	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	CIS-1,3-DICHLOROPROPENE	10061-01-5	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	DIBROMOCHLOROMETHANE	124-48-1	0.49	U		0.567	U		0.547	U		0.538	U	

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012420			214012420			214012420			214012506		
		Lab ID	21401242010			21401242011			21401242012			21401250601		
		Sample ID	HPTP-SB10-0-0114			HPTP-SB11-0-0114			HPTP-SB11-2-0114			HPTP-SB13-0-0114		
		Sample Date	01/23/14			01/23/14			01/23/14			01/24/14		
		Sample Type	Soil			Soil			Soil			Soil		
		Units	µg/kg			µg/kg			µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
8260B	ETHYLBENZENE	100-41-4	0.383	J		0.35	J		0.348	J		0.475	J	
8260B	METHYLENE CHLORIDE	75-09-2	0.979	U	bf	1.13	U	bl,bf	1.09	U	bl,bf	1.08	U	bl,bf
8260B	STYRENE	100-42-5	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	TETRACHLOROETHENE	127-18-4	0.396	J		0.567	U		0.547	U		0.538	U	
8260B	TOLUENE	108-88-3	1.56	J		1.6	J		1.67	J		2.03	J	
8260B	TRANS-1,2-DICHLOROETHENE	156-60-5	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	TRICHLOROETHENE	79-01-6	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	VINYL CHLORIDE	75-01-4	0.49	U		0.567	U		0.547	U		0.538	U	
8260B	XYLENES, TOTAL	1330-20-7	1.64	J		1.62	J		1.49	J		2.28	J	
8270D_SIM	2-METHYLNAPHTHALENE	91-57-6	1.86	U		1.92	U		2.07	U		1.94	U	
8270D_SIM	ACENAPHTHENE	83-32-9	1.86	U		1.92	U		2.07	U		1.94	U	
8270D_SIM	ACENAPHTHYLENE	208-96-8	51.1			1.92	U		2.07	U		1.94	U	
8270D_SIM	ANTHRACENE	120-12-7	68.5			1.42	J		1.96	J		1.94	U	
8270D_SIM	BENZO[A]ANTHRACENE	56-55-3	36.7			16.7			14.4			1.94	U	
8270D_SIM	BENZO[A]PYRENE	50-32-8	76.2			16.1			12.5			1.94	U	
8270D_SIM	BENZO[B]FLUORANTHENE	205-99-2	357			78.1			80.5			1.94	U	
8270D_SIM	BENZO[G,H,I]PERYLENE	191-24-2	135			16.1			14.4			1.94	U	
8270D_SIM	BENZO[K]FLUORANTHENE	207-08-9	25.6			10.5			8.1			1.94	U	
8270D_SIM	CHRYSENE	218-01-9	40.4			16.2			14.9			1.94	U	
8270D_SIM	DIBENZ[A,H]ANTHRACENE	53-70-3	9.3	U		2.11	J		2.08	J		1.94	U	
8270D_SIM	FLUORANTHENE	206-44-0	31.2			19.4			17.5			1.94	U	
8270D_SIM	FLUORENE	86-73-7	6.16			1.92	U		2.07	U		1.94	U	
8270D_SIM	INDENO[1,2,3-CD]PYRENE	193-39-5	353			65.7			68.1			1.94	U	
8270D_SIM	NAPHTHALENE	91-20-3	1.86	U		1.92	U		2.07	U		1.94	U	
8270D_SIM	PHENANTHRENE	85-01-8	5.91			4.81			6.2			1.94	U	
8270D_SIM	PYRENE	129-00-0	34.8			17.2			15.4			1.94	U	

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012506			214012506			214012506			214012506		
		Lab ID	21401250604			21401250607			21401250608			21401250609		
		Sample ID	HPTP-SB13-2-0114			HPTP-SB16-0-0114			HPTP-SB14-0-0114			HPTP-SB14-2-0114		
		Sample Date	01/24/14			01/24/14			01/24/14			01/24/14		
		Sample Type	Soil			Soil			Soil			Soil		
		Units	µg/kg			µg/kg			µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
6020A	ARSENIC	7440-38-2	137	J	m	998	J		438	J		342	J	
6020A	BARIUM	7440-39-3	4800	J	m	18400			23900			16100		
6020A	CADMIUM	7440-43-9	239	U		1090	U		675			244	U	
6020A	CHROMIUM, TOTAL	7440-47-3	1730	J	m	6550			6010			5450		
6020A	LEAD	7439-92-1	1580	J	m	1280	J		6670			3200		
6020A	SELENIUM	7782-49-2	239	UJ	m	1090	U		244	U		244	U	
6020A	SILVER	7440-22-4	239	U		1090	U		244	U		244	U	
7471B	MERCURY	7439-97-6	5.2	J		12.8	U		11.7	J		14.1	U	
8260B	1,1,1-TRICHLOROETHANE	71-55-6	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	1,1,2,2-TETRACHLOROETHANE	79-34-5	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	1,1,2-TRICHLOROETHANE	79-00-5	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	1,1-DICHLOROETHANE	75-34-3	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	1,1-DICHLOROETHENE	75-35-4	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	1,2-DICHLOROETHANE	107-06-2	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	1,2-DICHLOROPROPANE	78-87-5	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	2-BUTANONE	78-93-3	2.1	U		3.07	U		2.16	U		1.99	U	
8260B	2-HEXANONE	591-78-6	2.1	UJ	c	3.07	UJ	c	2.16	UJ	c	1.99	UJ	c
8260B	4-METHYL-2-PENTANONE	108-10-1	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	ACETONE	67-64-1	2.1	U		3.07	U	bf	2.16	U	bf	1.99	U	
8260B	BENZENE	71-43-2	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	BROMODICHLOROMETHANE	75-27-4	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	BROMOFORM	75-25-2	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	BROMOMETHANE	74-83-9	2.1	U		3.07	U		2.16	U		1.99	U	
8260B	CARBON DISULFIDE	75-15-0	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	CARBON TETRACHLORIDE	56-23-5	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	CHLOROBENZENE	108-90-7	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	CHLOROETHANE	75-00-3	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	CHLOROFORM	67-66-3	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	CHLOROMETHANE	74-87-3	2.1	U		3.07	U		2.16	U		1.99	U	
8260B	CIS-1,2-DICHLOROETHENE	156-59-2	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	CIS-1,3-DICHLOROPROPENE	10061-01-5	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	DIBROMOCHLOROMETHANE	124-48-1	0.526	U		0.769	U		0.54	U		0.497	U	

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012506			214012506			214012506			214012506		
		Lab ID	21401250604			21401250607			21401250608			21401250609		
		Sample ID	HPTP-SB13-2-0114			HPTP-SB16-0-0114			HPTP-SB14-0-0114			HPTP-SB14-2-0114		
		Sample Date	01/24/14			01/24/14			01/24/14			01/24/14		
		Sample Type	Soil			Soil			Soil			Soil		
		Units	µg/kg			µg/kg			µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
8260B	ETHYLBENZENE	100-41-4	0.451	J		0.534	J		0.439	J		0.497	U	
8260B	METHYLENE CHLORIDE	75-09-2	1.05	U	bl,bf	1.54	U	bl,bf	1.08	U	bl,bf	0.994	U	bl,bf
8260B	STYRENE	100-42-5	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	TETRACHLOROETHENE	127-18-4	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	TOLUENE	108-88-3	1.97	J		2.35	J		2.01	J		0.686	J	
8260B	TRANS-1,2-DICHLOROETHENE	156-60-5	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	TRICHLOROETHENE	79-01-6	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	VINYL CHLORIDE	75-01-4	0.526	U		0.769	U		0.54	U		0.497	U	
8260B	XYLENES, TOTAL	1330-20-7	2.05	J		2.19	J		1.96	J		1.49	U	
8270D_SIM	2-METHYLNAPHTHALENE	91-57-6	1.99	U		1.82	U		2.05	U		2.04	U	
8270D_SIM	ACENAPHTHENE	83-32-9	1.99	U		1.82	U		2.05	U		2.04	U	
8270D_SIM	ACENAPHTHYLENE	208-96-8	1.99	U		1.82	U		2.05	U		2.04	U	
8270D_SIM	ANTHRACENE	120-12-7	1.99	U		1.82	U		2.05	U		2.04	U	
8270D_SIM	BENZO[A]ANTHRACENE	56-55-3	13.1			1.82	U		7.5			2.04	U	
8270D_SIM	BENZO[A]PYRENE	50-32-8	12			1.82	U		5.13			2.04	U	
8270D_SIM	BENZO[B]FLUORANTHENE	205-99-2	75.6			1.82	U		2.05	U		2.04	U	
8270D_SIM	BENZO[G,H,I]PERYLENE	191-24-2	12.3			1.82	U		2.05	U		2.04	U	
8270D_SIM	BENZO[K]FLUORANTHENE	207-08-9	7.02			1.82	U		2.05	U		2.04	U	
8270D_SIM	CHRYSENE	218-01-9	12.8			1.82	U		6.43			2.04	U	
8270D_SIM	DIBENZ[A,H]ANTHRACENE	53-70-3	1.99	U		1.82	U		2.05	U		2.04	U	
8270D_SIM	FLUORANTHENE	206-44-0	15.3			1.82	U		7.54			2.04	U	
8270D_SIM	FLUORENE	86-73-7	1.99	U		1.82	U		2.05	U		2.04	U	
8270D_SIM	INDENO[1,2,3-CD]PYRENE	193-39-5	63.1			1.82	U		2.05	U		2.04	U	
8270D_SIM	NAPHTHALENE	91-20-3	1.99	U		1.82	U		2.05	U		2.04	U	
8270D_SIM	PHENANTHRENE	85-01-8	1.99	U		1.82	U		2.05	U		2.04	U	
8270D_SIM	PYRENE	129-00-0	14			1.82	U		6.46			2.04	U	

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012506			214012506		
		Lab ID	21401250610			21401250611		
		Sample ID	HPTP-SB14-0-0114-FD			HPTP-SB14-2-0114-FD		
		Sample Date	01/24/14			01/24/14		
		Sample Type	Duplicate			Duplicate		
		Units	µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC
6020A	ARSENIC	7440-38-2	322	J		186	J	
6020A	BARIUM	7440-39-3	24800			13700		
6020A	CADMIUM	7440-43-9	255	U		242	U	
6020A	CHROMIUM, TOTAL	7440-47-3	6950			6340		
6020A	LEAD	7439-92-1	5420			2880		
6020A	SELENIUM	7782-49-2	255	U		242	U	
6020A	SILVER	7440-22-4	255	U		242	U	
7471B	MERCURY	7439-97-6	14.2	U		14.4		
8260B	1,1,1-TRICHLOROETHANE	71-55-6	0.598	U		0.482	U	
8260B	1,1,2,2-TETRACHLOROETHANE	79-34-5	0.598	U		0.482	U	
8260B	1,1,2-TRICHLOROETHANE	79-00-5	0.598	U		0.482	U	
8260B	1,1-DICHLOROETHANE	75-34-3	0.598	U		0.482	U	
8260B	1,1-DICHLOROETHENE	75-35-4	0.598	U		0.482	U	
8260B	1,2-DICHLOROETHANE	107-06-2	0.598	U		0.482	U	
8260B	1,2-DICHLOROPROPANE	78-87-5	0.598	U		0.482	U	
8260B	2-BUTANONE	78-93-3	2.39	U		1.93	U	
8260B	2-HEXANONE	591-78-6	2.39	U		1.93	UJ	c
8260B	4-METHYL-2-PENTANONE	108-10-1	0.598	U		0.482	U	
8260B	ACETONE	67-64-1	2.39	U		1.93	U	bf
8260B	BENZENE	71-43-2	0.598	U		0.482	U	
8260B	BROMODICHLOROMETHANE	75-27-4	0.598	U		0.482	U	
8260B	BROMOFORM	75-25-2	0.598	U		0.482	U	
8260B	BROMOMETHANE	74-83-9	2.39	U		1.93	U	
8260B	CARBON DISULFIDE	75-15-0	0.598	U		0.482	U	
8260B	CARBON TETRACHLORIDE	56-23-5	0.598	U		0.482	U	
8260B	CHLOROBENZENE	108-90-7	0.598	U		0.482	U	
8260B	CHLOROETHANE	75-00-3	0.598	U		0.482	U	
8260B	CHLOROFORM	67-66-3	0.598	U		0.482	U	
8260B	CHLOROMETHANE	74-87-3	2.39	U		1.93	U	
8260B	CIS-1,2-DICHLOROETHENE	156-59-2	0.598	U		0.482	U	
8260B	CIS-1,3-DICHLOROPROPENE	10061-01-5	0.598	U		0.482	U	
8260B	DIBROMOCHLOROMETHANE	124-48-1	0.598	U		0.482	U	

Table B-3 (Continued)
Soil Results after Data Review

		Sample Delivery Group	214012506			214012506		
		Lab ID	21401250610			21401250611		
		Sample ID	HPTP-SB14-0-0114-FD			HPTP-SB14-2-0114-FD		
		Sample Date	01/24/14			01/24/14		
		Sample Type	Duplicate			Duplicate		
		Units	µg/kg			µg/kg		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC
8260B	ETHYLBENZENE	100-41-4	0.598	U		0.482	U	
8260B	METHYLENE CHLORIDE	75-09-2	1.2	U	bl,bf	0.964	U	bl,bf
8260B	STYRENE	100-42-5	0.598	U		0.482	U	
8260B	TETRACHLOROETHENE	127-18-4	0.598	U		0.482	U	
8260B	TOLUENE	108-88-3	1.15	J		1.07	J	
8260B	TRANS-1,2-DICHLOROETHENE	156-60-5	0.598	U		0.482	U	
8260B	TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.598	U		0.482	U	
8260B	TRICHLOROETHENE	79-01-6	0.598	U		0.482	U	
8260B	VINYL CHLORIDE	75-01-4	0.598	U		0.482	U	
8260B	XYLENES, TOTAL	1330-20-7	1.79	U		1.45	U	
8270D_SIM	2-METHYLNAPHTHALENE	91-57-6	2.13	U		2.04	U	
8270D_SIM	ACENAPHTHENE	83-32-9	2.13	U		2.04	U	
8270D_SIM	ACENAPHTHYLENE	208-96-8	2.13	U		2.04	U	
8270D_SIM	ANTHRACENE	120-12-7	2.13	U		2.04	U	
8270D_SIM	BENZO[A]ANTHRACENE	56-55-3	2.13	U		2.04	U	
8270D_SIM	BENZO[A]PYRENE	50-32-8	2.13	U		2.04	U	
8270D_SIM	BENZO[B]FLUORANTHENE	205-99-2	2.13	U		2.04	U	
8270D_SIM	BENZO[G,H,I]PERYLENE	191-24-2	2.13	U		2.04	U	
8270D_SIM	BENZO[K]FLUORANTHENE	207-08-9	2.13	U		2.04	U	
8270D_SIM	CHRYSENE	218-01-9	2.13	U		2.04	U	
8270D_SIM	DIBENZ[A,H]ANTHRACENE	53-70-3	2.13	U		2.04	U	
8270D_SIM	FLUORANTHENE	206-44-0	2.13	U		2.04	U	
8270D_SIM	FLUORENE	86-73-7	2.13	U		2.04	U	
8270D_SIM	INDENO[1,2,3-CD]PYRENE	193-39-5	2.13	U		2.04	U	
8270D_SIM	NAPHTHALENE	91-20-3	2.13	U		2.04	U	
8270D_SIM	PHENANTHRENE	85-01-8	2.13	U		2.04	U	
8270D_SIM	PYRENE	129-00-0	2.13	U		2.04	U	

Notes:

ug/kg	=	Micrograms per kilogram
CAS No	=	Chemical Abstract Number
Qual	=	Final interpreted qualifier (Refer to Table B-1)
RC	=	Reason code (Refer to Table B-2)
6020A	=	Metals, selected compounds: arsenic, barium, cadmium, total chromium, lead, selenium, and silver
7471B	=	Mercury
8260B	=	Volatile organic compounds
8270D_SIM	=	Polynuclear aromatic hydrocarbons via selective ion monitoring

Table B-4
Groundwater Results after Data Review

		Sample Delivery Group	214012420			214012420			214012506			214012506		
		Lab ID	21401242013			21401242014			21401250612			21401250613		
		Sample ID	HPTP-TW01-0114			HPTP-MW05-0114			HPTP-MW04-0114			HPTP-MW02-0114		
		Sample Date	01/23/14			01/23/14			01/24/14			01/24/14		
		Sample Type	Groundwater			Groundwater			Groundwater			Groundwater		
		Units	µg/L			µg/L			µg/L			µg/L		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
6020A	ARSENIC	7440-38-2	2.82			0.5	J		0.79	J		10		
6020A	BARIUM	7440-39-3	50.7			38.1			31.3			38.6	J	y
6020A	CADMIUM	7440-43-9	0.5	U		0.5	U		0.5	U		0.5	U	
6020A	CHROMIUM, TOTAL	7440-47-3	0.5	U		0.5	U		0.5	U		0.33	J	
6020A	LEAD	7439-92-1	0.33	J		1.28			0.5	U		0.5	U	
6020A	SELENIUM	7782-49-2	0.5	U		0.5	U		0.5	U		0.5	U	
6020A	SILVER	7440-22-4	0.5	U		0.5	U		0.5	U		0.5	U	
7470A	MERCURY	7439-97-6	0.2	U		0.2	U		0.2	U		0.2	U	
8260B	1,1,1-TRICHLOROETHANE	71-55-6	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	1,1,2,2-TETRACHLOROETHANE	79-34-5	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	1,1,2-TRICHLOROETHANE	79-00-5	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	1,1-DICHLOROETHANE	75-34-3	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	1,1-DICHLOROETHENE	75-35-4	0.5	UJ	h	0.5	UJ	h	0.5	U		0.5	U	
8260B	1,2-DICHLOROETHANE	107-06-2	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	1,2-DICHLOROPROPANE	78-87-5	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	2-BUTANONE	78-93-3	0.5	UJ	h	0.5	UJ	h	0.5	U		0.5	U	
8260B	2-HEXANONE	591-78-6	1	UJ	h	1	UJ	h	1	U		1	U	
8260B	4-METHYL-2-PENTANONE	108-10-1	0.5	UJ	h	0.5	UJ	h	0.5	U		0.5	U	
8260B	ACETONE	67-64-1	4.4	J	h	1	UJ	h	1	U		1	U	
8260B	BENZENE	71-43-2	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	BROMODICHLOROMETHANE	75-27-4	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	BROMOFORM	75-25-2	0.5	UJ	h	0.5	UJ	h	0.5	U		0.5	U	
8260B	BROMOMETHANE	74-83-9	0.5	UJ	h	0.5	UJ	h	0.5	U		0.5	U	
8260B	CARBON DISULFIDE	75-15-0	0.5	UJ	h	0.5	UJ	h	0.5	U		0.5	U	
8260B	CARBON TETRACHLORIDE	56-23-5	0.5	UJ	h	0.5	UJ	h	0.5	U		0.5	U	
8260B	CHLOROBENZENE	108-90-7	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	CHLOROETHANE	75-00-3	0.5	UJ	h	0.5	UJ	h	0.5	U		0.5	U	
8260B	CHLOROFORM	67-66-3	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	CHLOROMETHANE	74-87-3	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	CIS-1,2-DICHLOROETHENE	156-59-2	0.2	UJ	h	0.443	J	h	5.89			0.2	U	
8260B	CIS-1,3-DICHLOROPROPENE	10061-01-5	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	DIBROMOCHLOROMETHANE	124-48-1	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	

Table B-4 (Continued)
Groundwater Results after Data Review

		Sample Delivery Group	214012420			214012420			214012506			214012506		
		Lab ID	21401242013			21401242014			21401250612			21401250613		
		Sample ID	HPTP-TW01-0114			HPTP-MW05-0114			HPTP-MW04-0114			HPTP-MW02-0114		
		Sample Date	01/23/14			01/23/14			01/24/14			01/24/14		
		Sample Type	Groundwater			Groundwater			Groundwater			Groundwater		
		Units	µg/L			µg/L			µg/L			µg/L		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
8260B	ETHYLBENZENE	100-41-4	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	METHYLENE CHLORIDE	75-09-2	0.5	UJ	h	0.5	UJ	h	0.5	U		0.5	U	
8260B	STYRENE	100-42-5	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	TETRACHLOROETHENE	127-18-4	0.5	UJ	h	0.5	UJ	h	0.5	U		0.5	U	
8260B	TOLUENE	108-88-3	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	TRANS-1,2-DICHLOROETHENE	156-60-5	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	TRICHLOROETHENE	79-01-6	0.2	UJ	h	0.2	UJ	h	0.2	U		0.2	U	
8260B	VINYL CHLORIDE	75-01-4	0.2	UJ	h	0.2	UJ	h	1.57			0.2	U	
8260B	XYLENES, TOTAL	1330-20-7	0.6	UJ	h	0.6	UJ	h	0.6	U		0.6	U	
8270D_SIM	2-METHYLNAPHTHALENE	91-57-6	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	ACENAPHTHENE	83-32-9	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	ACENAPHTHYLENE	208-96-8	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	ANTHRACENE	120-12-7	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	BENZO[A]ANTHRACENE	56-55-3	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	BENZO[A]PYRENE	50-32-8	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	BENZO[B]FLUORANTHENE	205-99-2	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	BENZO[G,H,I]PERYLENE	191-24-2	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	BENZO[K]FLUORANTHENE	207-08-9	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	CHRYSENE	218-01-9	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	DIBENZ[A,H]ANTHRACENE	53-70-3	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	FLUORANTHENE	206-44-0	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	FLUORENE	86-73-7	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	INDENO[1,2,3-CD]PYRENE	193-39-5	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	NAPHTHALENE	91-20-3	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	PHENANTHRENE	85-01-8	0.05	U		0.05	U		0.051	U		0.051	U	
8270D_SIM	PYRENE	129-00-0	0.05	U		0.05	U		0.051	U		0.051	U	

Table B-4 (Continued)
Groundwater Results after Data Review

		Sample Delivery Group	214012506			214012506			214012506		
		Lab ID	21401250616			21401250617			21401250618		
		Sample ID	HPTP-MW03-0114			HPTP-MW03-0114-FD			HPTP-MW01-0114		
		Sample Date	01/24/14			01/24/14			01/24/14		
		Sample Type	Groundwater			Duplicate			Groundwater		
		Units	µg/L			µg/L			µg/L		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
6020A	ARSENIC	7440-38-2	8.54			8.71			1.21		
6020A	BARIUM	7440-39-3	27			27.2			17.1		
6020A	CADMIUM	7440-43-9	0.5	U		0.5	U		0.5	U	
6020A	CHROMIUM, TOTAL	7440-47-3	0.5	U		0.36	J		0.59	J	
6020A	LEAD	7439-92-1	0.5	U		0.32	J		0.59	J	
6020A	SELENIUM	7782-49-2	0.5	U		0.5	U		1.04		
6020A	SILVER	7440-22-4	0.5	U		0.5	U		0.5	U	
7470A	MERCURY	7439-97-6	0.2	U		0.2	U		0.2	U	
8260B	1,1,1-TRICHLOROETHANE	71-55-6	0.2	U		0.2	U		0.2	U	
8260B	1,1,2,2-TETRACHLOROETHANE	79-34-5	0.2	U		0.2	U		0.2	U	
8260B	1,1,2-TRICHLOROETHANE	79-00-5	0.2	U		0.2	U		0.2	U	
8260B	1,1-DICHLOROETHANE	75-34-3	0.2	U		0.2	U		0.2	U	
8260B	1,1-DICHLOROETHENE	75-35-4	0.5	U		0.5	U		0.5	U	
8260B	1,2-DICHLOROETHANE	107-06-2	0.2	U		0.2	U		0.2	U	
8260B	1,2-DICHLOROPROPANE	78-87-5	0.2	U		0.2	U		0.2	U	
8260B	2-BUTANONE	78-93-3	0.5	U		0.5	U		0.5	U	
8260B	2-HEXANONE	591-78-6	1	U		1	U		1	U	
8260B	4-METHYL-2-PENTANONE	108-10-1	0.5	U		0.5	U		0.5	U	
8260B	ACETONE	67-64-1	1	U		1	U		2.6	J	
8260B	BENZENE	71-43-2	0.2	U		0.2	U		0.2	U	
8260B	BROMODICHLOROMETHANE	75-27-4	0.2	U		0.2	U		0.2	U	
8260B	BROMOFORM	75-25-2	0.5	U		0.5	U		0.5	U	
8260B	BROMOMETHANE	74-83-9	0.5	U		0.5	U		0.5	U	
8260B	CARBON DISULFIDE	75-15-0	0.5	U		0.5	U		0.5	U	
8260B	CARBON TETRACHLORIDE	56-23-5	0.5	U		0.5	U		0.5	U	
8260B	CHLOROBENZENE	108-90-7	0.2	U		0.2	U		0.2	U	
8260B	CHLOROETHANE	75-00-3	0.5	U		0.5	U		0.5	U	
8260B	CHLOROFORM	67-66-3	0.2	U		0.2	U		0.2	U	
8260B	CHLOROMETHANE	74-87-3	0.2	U		0.2	U		0.2	U	
8260B	CIS-1,2-DICHLOROETHENE	156-59-2	0.823	J		0.846	J		0.2	U	
8260B	CIS-1,3-DICHLOROPROPENE	10061-01-5	0.2	U		0.2	U		0.2	U	
8260B	DIBROMOCHLOROMETHANE	124-48-1	0.2	U		0.2	U		0.2	U	
8260B	ETHYLBENZENE	100-41-4	0.2	U		0.2	U		0.2	U	
8260B	METHYLENE CHLORIDE	75-09-2	0.5	U		0.5	U		0.5	U	
8260B	STYRENE	100-42-5	0.2	U		0.2	U		0.2	U	
8260B	TETRACHLOROETHENE	127-18-4	0.5	U		0.5	U		0.5	U	
8260B	TOLUENE	108-88-3	0.2	U		0.2	U		0.2	U	
8260B	TRANS-1,2-DICHLOROETHENE	156-60-5	0.2	U		0.2	U		0.2	U	
8260B	TRANS-1,3-DICHLOROPROPENE	10061-02-6	0.2	U		0.2	U		0.2	U	

Table B-4 (Continued)
Groundwater Results after Data Review

		Sample Delivery Group	214012506			214012506			214012506		
		Lab ID	21401250616			21401250617			21401250618		
		Sample ID	HPTP-MW03-0114			HPTP-MW03-0114-FD			HPTP-MW01-0114		
		Sample Date	01/24/14			01/24/14			01/24/14		
		Sample Type	Groundwater			Duplicate			Groundwater		
		Units	µg/L			µg/L			µg/L		
Method	**Analyte**	**CAS No**	Result	Qual	RC	Result	Qual	RC	Result	Qual	RC
8260B	TRICHLOROETHENE	79-01-6	0.2	U		0.2	U		0.2	U	
8260B	VINYL CHLORIDE	75-01-4	0.335	J		0.348	J		0.2	U	
8260B	XYLENES, TOTAL	1330-20-7	0.6	U		0.6	U		0.6	U	
8270D_SIM	2-METHYLNAPHTHALENE	91-57-6	0.407			0.337			0.26		
8270D_SIM	ACENAPHTHENE	83-32-9	0.143			0.052	U		0.05	U	
8270D_SIM	ACENAPHTHYLENE	208-96-8	0.051	U		0.052	U		0.05	U	
8270D_SIM	ANTHRACENE	120-12-7	0.17			0.085	J		0.05	U	
8270D_SIM	BENZO[A]ANTHRACENE	56-55-3	0.051	U		0.052	U		0.05	U	
8270D_SIM	BENZO[A]PYRENE	50-32-8	0.051	U		0.052	U		0.05	U	
8270D_SIM	BENZO[B]FLUORANTHENE	205-99-2	0.051	U		0.052	U		0.05	U	
8270D_SIM	BENZO[G,H,I]PERYLENE	191-24-2	0.051	U		0.052	U		0.05	U	
8270D_SIM	BENZO[K]FLUORANTHENE	207-08-9	0.051	U		0.052	U		0.05	U	
8270D_SIM	CHRYSENE	218-01-9	0.051	U		0.052	U		0.05	U	
8270D_SIM	DIBENZ[A,H]ANTHRACENE	53-70-3	0.051	U		0.052	U		0.05	U	
8270D_SIM	FLUORANTHENE	206-44-0	0.136			0.053	J		0.05	U	
8270D_SIM	FLUORENE	86-73-7	0.167			0.052	U		0.05	U	
8270D_SIM	INDENO[1,2,3-CD]PYRENE	193-39-5	0.051	U		0.052	U		0.05	U	
8270D_SIM	NAPHTHALENE	91-20-3	0.138			0.257			0.05	U	
8270D_SIM	PHENANTHRENE	85-01-8	0.269			0.21			0.05	U	
8270D_SIM	PYRENE	129-00-0	0.117			0.066	J		0.05	U	

Notes:

µg/L	=	Micrograms per liter
CAS No	=	Chemical Abstract Number
Qual	=	Final interpreted qualifier (Refer to Table B-1)
RC	=	Reason code (Refer to Table B-2)
6020A	=	Metals, selected compounds: arsenic, barium, cadmium, total chromium, lead, selenium, and silver
7470A	=	Mercury
8260B	=	Volatile organic compounds
8270D_SIM	=	Polynuclear aromatic hydrocarbons via selective ion monitoring