NATIVE VILLAGE OF NORTHEAST CAPE REMOVAL ACTION/ SITE INVESTIGATION REPORT

REVISION 1

Northeast Cape, St. Lawrence Island, Alaska

August 2013

Prepared for:

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
%	percent
µg/L	micrograms per liter
µg/kg	micrograms per kilogram
AA	area of additional concern
ACM	asbestos-containing material
ADEC	Alaska Department of Environmental Conservation
ATV	all-terrain vehicle
Bristol	Bristol Environmental Remediation Services, LLC
CA	Cooperative Agreement
CCV	continuing calibration verification
CoC	chain of custody
COELT	Corps of Engineers Loading Tool
CON/HTRW	Containerized Hazardous, Toxic, and Radioactive Waste
CRL	Columbia Ridge Landfill and Recycling Center
CSM	Conceptual Site Model
DL	detection limit
DoD	U.S. Department of Defense
DOT	U.S. Department of Transportation
DP	debris pile
DRO	diesel-range organics
Emerald	Emerald Services, Inc.
EPA	U.S. Environmental Protection Agency
FUDS	formerly used defense site
FY	fiscal year
GPS	Global Positioning System
GRO	gasoline-range organics

ACRONYMS AND ABBREVIATIONS

H	result associated with a holding time exceedance
HBMS	Hazardous Building Materials Survey
HPAH	high molecular weight polynuclear aromatic hydrocarbon
JL	associated result is an estimated quantity with a low bias
LBP	lead-based paint
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LDRs	Land Disposal Restriction Notification and Certification Forms
LOQ	limit of quantitation
LPAH	low molecular weight polynuclear aromatic hydrocarbon
MCL	maximum contamination level
MEK	2-Butanone (methyl ethyl ketone)
mg/kg	milligram per kilogram
mg/L	milligrams per liter
MS	matrix spike
MSD	matrix spike duplicate
MSDS	Material Safety Data Sheet
NALEMP	Native American Lands Environmental Mitigation Program
ND	not detected
NE Cape	Northeast Cape
NOM	natural organic material
Northland	Northland Services, Inc.
NVNC	Native Village of Northeast Cape
NVS	Native Village of Savoonga
oz	ounce
PAH	polynuclear aromatic hydrocarbons
PARCCS	precision, accuracy, representativeness, completeness, comparability, and sensitivity
PCBs	polychlorinated biphenyls
PID	photoionization detector
PM	Project Manager

ACRONYMS AND ABBREVIATIONS

ppm	parts per million
QA	quality assurance
QC	quality control
RA	Removal Action
RCRA	Resource Conservation and Recovery Act
RPD	relative percent difference
RRO	residual-range organics
Satori	Satori Group, Inc.
SDG	sample delivery group
SI	site investigation
SIMS	selective-ion monitoring system
SOW	Scope of Work
SW	Solid Waste Test Method
TAH	total aromatic hydrocarbons
TAqH	total aqueous hydrocarbons
TCLP	Toxicity Characteristic Leaching Procedure
TestAmerica	TestAmerica Laboratories, Inc.
TFT	trifluorotoluene
TOC	total organic carbon
TSCA	Toxic Substances Control Act
TSDF	treatment, storage, and disposal facility
USACE	US Army Corps of Engineers
USEI	US Ecology Idaho, Inc.
VOC	volatile organic compounds
WMI	Waste Management, Inc.
WP	Work Plan

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APPROVALS

This report was prepared under the supervision and direction of the undersigned individuals.

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AUGUST 14, 2013
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EXECUTIVE SUMMARY

This Removal Action (RA)/Site Investigation (SI) Report has been developed for the Native Village of Savoonga (NVS) for submittal to the US Army Corp of Engineers (USACE), Alaska District, and the Alaska Department of Environmental Conservation (ADEC) as documentation of RA/SI activities performed at the Native Village of Northeast Cape (NVNC) site.

The purpose of this report is to document RA activities conducted in order to containerize and remove identified physical and environmental hazards present at the NVNC. In addition, SI activities were performed including the collection and analysis of soil, sediment, and surface water samples from areas throughout the NVNC site.

RA activities performed during the 2012 field season included the following:

- The removal and burning of remaining non-painted wood debris
- The incident-free removal of the following non-hazardous and hazardous materials:
  - 76,932 net pounds of scrap metal and non-burnable debris
  - 5,500 gross pounds of lead contaminated burner ash
  - 1,400 gross pounds of lead based paint (LBP)-containing painted wood debris
  - 3,072 gross pounds of Containerized Hazardous, Toxic, and Radioactive Waste (CON/HTRW)
- The collection and staging of a few remaining CON/HTRW items for characterization, transportation, and disposal in 2013

A review of analytical results collected during the SI indicates that impacted areas are present at the NVNC site with contaminants present in soil, sediment, and surface water at concentrations above established ADEC and site-specific cleanup levels. Although not widespread, contaminants detected in soil, sediment, and/or surface water samples at concentrations above established cleanup levels included: diesel-range organics (DRO),

residual-range organics (RRO), polynuclear aromatic hydrocarbons (PAHs), arsenic, cadmium, chromium, lead, and polychlorinated biphenyls (PCBs).

Additional RA/SI activities are recommended for the NVNC site to further investigate, abate, and remove remaining environmental hazards.

1.0 INTRODUCTION

This Removal Action (RA)/Site Investigation (SI) Report has been developed for the Native Village of Savoonga (NVS) for submittal to the US Army Corp of Engineers (USACE), Alaska District, and the Alaska Department of Environmental Conservation (ADEC) as documentation of RA/SI activities performed at the Native Village of Northeast Cape (NVNC) site. The NVNC is located adjacent to Northeast Cape (NE Cape), a former U.S. Department of Defense (DoD) communications station that impacts the people of St. Lawrence Island, Alaska. This report was prepared by Bristol Environmental Remediation Services, LLC (Bristol), under the direction of the NVS. The project was funded by the Native American Lands Environmental Mitigation Program (NALEMP), and activities were guided by the Fiscal Year (FY) 2012 Cooperative Agreement (CA) No. NALEMP-FY12-04 between the NVS and the DoD. However, sampling, characterization, and removal of Containerized Hazardous, Toxic, and Radioactive Waste (CON/HTRW) was funded under Modification 1 of the FY11 CA No. NALEMP-FY11-01, but was performed during the 2012 field season)

The purpose of this report is to document RA activities conducted in order to containerize and remove identified physical and environmental hazards on Native-owned land in and around the NVNC that has been impacted by past military activities. In addition, SI activities were performed including the collection and analysis of soil, sediment, and surface water samples to identify any contamination which may be present at the NVNC above established cleanup levels. The RA/SI activities conducted at the NVNC during the 2012 field effort included the following:

- Staging, containment, characterization, and removal of Containerized Hazardous, Toxic, and Radioactive Waste (CON/HTRW);
- Collection, staging, containerization, and removal of remaining metallic and non-burnable non-hazardous debris at the NVNC site; and

- Performance of a limited investigation and sampling program including the collection of soil, sediment, and surface water samples submitted for laboratory analysis.

The RA/SI activities were performed in accordance with the NALEMP RA/SI Work Plan (WP) (Bristol, 2012) at the NVNC site, located at the NE Cape of St. Lawrence Island, Alaska. The purpose of the 2012 and future RA/SI activities was to identify, characterize, and conduct interim removal actions associated with exposure risks to current and future receptors. Results of 2012 RA/SI activities will be utilized to guide future remedial actions.

This report describes RA/SI activities that were performed at the NVNC site during the months of August and September 2012.

1.1 ORGANIZATION OF THE REMOVAL ACTION REPORT

This report includes the following sections, in order:

- Executive Summary
- Introduction
- Site Description
- Objectives and Scope of Work (SOW)
- Project Management
- Removal Action Activities
- Site Investigation Activities
- Site Observations and Analytical Results
- Quality Assurance and Quality Control Data Management
- Conclusion, Recommendations, and Project Goals
- References

2.0 SITE DESCRIPTION

2.1 LOCATION AND DESCRIPTION

Saint Lawrence Island is located in the Bering Sea, near the territorial waters of Russia, approximately 135 air miles southwest of Nome, Alaska (Figure 1). The NVNC site, located near the NE Cape of the island, falls between Kitnagak Bay to the northeast, Kangighsak Point to the northwest, and the Kinipaghulghat Mountains to the south (Figure 2). The site is located at 63 degrees 19 minutes 38.9 seconds north latitude, 168 degrees 55 minutes 59.3 seconds west longitude. The legal description of the site is Sections 14 and 15, Township 25 South, Range 54 West. Both sections are in the Kateel River Meridian.

The NVNC was once a year-round village site used by the Siberian Yupik Eskimos of Saint Lawrence Island, Alaska. The NVNC has also been termed "Northeast Cape Fish Camp" and "Fish Camp" by various government agencies and past environmental contractors. The NVNC site, located at NE Cape, is currently mainly used by the residents of the NVS as a traditional fishing, hunting, and food-gathering camp. The site is also utilized throughout the year as a rest stop to wait out storms and bad weather. NVNC residents and visitors once used drinking water collected from the site. However, fear of contamination, due to its close proximity to the NE Cape Formerly Used Defense Site (FUDS), has caused NVNC residents and visitors to transport and use drinking water collected from other locations around the island. The NVNC site and surrounding areas are owned in common by Kukulget, Inc. and Sivuqaq, Inc., consisting of tribal members of the NVS and the Native Village of Gambell, respectively.

2.2 CLIMATE

Saint Lawrence Island has a cool, moist, subarctic maritime climate, with some continental influences during winter when much of the Bering Sea is capped with ice pack. Winds and fog are common, and precipitation occurs approximately 300 days per year as light rain, mist, or snow. Annual snowfall is approximately 80 inches per year. Total annual precipitation is about 16 inches per year, and more than half falls as light rain between June and September. Summer temperatures average between 34 degrees Fahrenheit (°F) and 48°F, with a record high of 65°F. Winter temperatures range from -2°F to 10°F, with an extreme low of -30°F. Freeze-up normally occurs in October or November, and breakup normally occurs in June.

Winds are generally in a northerly to northeasterly direction from September to June and southwesterly in July and August. Winds exceeding 11 miles per hour occur 70 percent of the time. In the winter, winds average 23 miles per hour. The average annual wind speed is 18 miles per hour. Gusts in the NE Cape area have measured as high as 110 miles per hour (USACE, 2002).

2.3 WEATHER CONDITIONS DURING THE PROJECT FIELD SEASON

Weather conditions during the August through September 2012 field season were typical of a summer subarctic maritime climate. Variable winds, light precipitation or fog, and temperatures ranging from the mid-30s to the mid-50s were typical of the daily weather in lowland and lower mountain areas. Periodic violent storms with high, sustained winds in excess of 50 miles per hour and high precipitation were encountered, as well as periods of clear, calm conditions. Wind was often the most significant factor affecting work conditions during the 2012 field season.

2.4 TOPOGRAPHY

The NVNC is located on a coastal plain along the northeast coast of St. Lawrence Island near the base of the Kinipaghulghat Mountains. The lower mountain area consists mainly of flat coastal plains that gradually turn into rolling tundra toward the base of the Kinipaghulghat Mountains. The mountains rise abruptly to a maximum elevation of approximately 1,850 feet above mean sea level. Elevations across the NVNC work area ranged from sea level to approximately 10 feet above mean sea level.

2.5 GEOLOGY

Saint Lawrence Island consists of isolated bedrock highlands of igneous, metamorphic, and older sedimentary rocks surrounded by unconsolidated surficial deposits overlying a relatively shallow erosional bedrock surface. In the immediate vicinity of the NVNC the small creek drainage present has created an erosional valley and alluvial fan of unconsolidated sediments. Granitic bedrock materials are exposed at the coast north of the site at Kitnagak Bay, suggesting that quartz monzonitic bedrock underlies the unconsolidated materials at a relatively shallow depth on a wave-cut erosional platform.

Beach material adjacent to the NVNC is primarily cobble (1-inch stones), with some sand. Some areas have larger boulders and rocks.

2.6 SURFACE WATER AND GROUNDWATER

The primary potential aquifer at the NVNC site is the unconsolidated alluvial material that underlies the area, although a deeper, confined aquifer may also exist. Based on the topography and geology of the site, the regional groundwater flow direction is expected to be from the mountainous recharge area south of the site, flowing north, eventually discharging to the Bering Sea. Groundwater elevations observed at the adjacent NE Cape FUDS site monitoring wells have suggested a groundwater flow to the north-northwest.

Key factors influencing the flow of groundwater at the site are the permafrost and frozen soils, which render the unconsolidated materials effectively impermeable in some areas. The deeper, unconsolidated deposits at the site are probably permanently frozen, and the shallow soils represent the active layer, where soils are thawed only during portions of the year. Frozen soils have a profound effect in retarding groundwater flow during most of the year.

In addition to the Bering Sea north of the NVNC, surface water in the vicinity of the work area consists of a small stream, small-sized ponds, and marshy areas. Surface water generally flows northward from the more southerly located highland area. Small surface water bodies are common throughout the area.

2.7 AIR QUALITY

Air quality in the area is good. There are minimal sources of air emissions at the site because of its remote nature. The occasional boat motor, vehicle engine, or fire has a negligible effect. Air emissions at the site increase during remedial action work because more equipment and vehicles are at the site. Winds typical of the area disperse emissions (USACE, 2002).

2.8 VEGETATION

The habitat type of the NVNC site includes moist tundra dominated by heaths, grasses, sedges, mosses, and lichens, with shrubs that include bearberry, dwarf birch, narrow-leaf Labrador tea, and willow. These plants typically grow in 1 to 3 feet of undecayed organic mat over saturated and frozen soil. The NVNC area can be characterized as low-lying with ponds, bogs, and poorly drained soils.

2.9 SITE BACKGROUND AND HISTORY

The NVNC site is located adjacent to the NE Cape FUDS site (FUDS No. F10AK0969), that consisted of a U.S. Air Force base and White Alice radio relay site that were operated by the military during the 1950s through the early 1970s (Figure 2). During and after the operation of the military base at NE Cape, various building materials were donated and salvaged for use at the NVNC. Residents of NVNC recall that military personnel gave away building materials, including lumber, paint, wiring, and insulation when the DoD abandoned the base. It is widely believed that the majority of painted building materials donated and salvaged for use at the NVNC were painted prior to their transport to the NVNC site. At the time of donation and use of the building materials, local residents were unaware of the potential danger posed by the materials. Some of the materials provided by the military have been identified as asbestos-containing material (ACM), and others have been painted with lead-based paint (LBP), which is potentially harmful to current and future residents. Contamination from polychlorinated biphenyls (PCBs) has also been identified and documented at areas around the nearby NE Cape FUDS facility, raising concerns about the potential presence of PCBs, dioxins, and furans at the NVNC.

Additional contaminants that have been identified at the nearby NE Cape FUDS site include petroleum-based fuels, volatile organic compounds (VOCs), pesticides, heavy metals, and polynuclear aromatic hydrocarbons (PAHs).

The past and current presence of environmental contamination at many of the FUDS-related sites in the NE Cape area is a cause of concern to Saint Lawrence Island residents. Local residents fear that the NVNC may have environmental impacts present that have been caused by the proximity and downgradient location of the NVNC to the NE Cape FUDS.

2.10 1994 TO 2001 REMEDIAL EFFORTS

Various remedial efforts were conducted at and adjacent to the NVNC from 1994 to 2001. These remedial efforts were performed and funded by the FUDS program.

As documented in the 2009 Record of Decision (USACE, 2009), former sources of contamination at the NVNC include abandoned vehicles, drums, and two above ground storage tanks (ASTs) that were used for water storage. The debris, drums, ASTs, and stained soils were removed under a previous RA in 2000-2001. Approximately 1.21 tons of petroleum-contaminated soil were excavated and disposed off-site.

Soil sampling was conducted during the 1994 remedial investigation and one surface soil sample (94NE04SS108) contained DRO at 5,300 mg/kg. The contaminated soil was an isolated occurrence and covered a small area. This area of stained soil is presumed to correspond to the soil excavation performed in 2001 at the AST area. A soil confirmation sample (EXC-CS-04-NB-01-001) analyzed in triplicate (primary, QC, QA) from the removal action demonstrated that DRO in remaining soils ranged from 388 to 1,400 mg/kg from the bottom of the excavation; RRO concentrations ranged from 2,380 to 14,000 mg/kg from the same location. The average concentrations of DRO and RRO in the post-excavation sample were 773 and 6,950 mg/kg, respectively. The average residual soil contamination did not exceed the identified cleanup levels.

Shallow groundwater samples were collected in 1998 and 2001. During the 1998 field investigation, DRO and RRO were detected at concentrations of 3.7 and 6.5 mg/L, respectively. In 2001, an additional 3 well points were installed downgradient of the original well point. The well points were installed to the maximum depth feasible, 3 to 6 feet below ground surface during the 2001 investigation, in saturated ground. The 2001 sampling results indicated levels of DRO ranging from 0.96 to 2.0 mg/L; RRO levels ranged from 2.6 to 6.5 mg/L. Only one location, 01NE04WP103, exceeded the ADEC Table C groundwater cleanup level for DRO of 1.5 mg/L. However, all the 2001 DRO results were qualified as "VB - analyte detected in sample and associated blank indicating a possible false-positive result". All 3 locations exceeded the Table C groundwater cleanup level for RRO. The shallow groundwater present in the tundra surrounding this site is not considered a potential future drinking water source, based on the unreliable volume of water available, extremely slow recharge ability, and potential for salt water intrusion.

The locations of soil, groundwater, and surface water samples referenced above are indicated on Figure 18 of the 2009 Record of Decision (USACE, 2009).

2.11 2009 Hazardous Building Material Survey

In 2009 the NVS, with funding from NALEMP and with support from Bristol and its subcontractor, Satori Group, Inc. (Satori), conducted a SI; including a Hazardous Building Materials Survey (HBMS) at the NVNC site (Bristol, 2009). In summary, the HBMS identified ACM, including 100 square feet of cement asbestos board and eight linear feet of transite piping, in addition to potential ACM not sampled, including Air-O-Cell pipe insulation, hose material, vent stack materials, and electrical wiring.

Survey results also indicated the presence of building construction materials containing LBP. The LBP-containing materials were found on various site structures, including door framing, window trim, roof fascia, and on scattered debris around the NVNC site.

Since the potential existed for the ACM and LBP-containing materials to adversely impact the health of NVNC residents and visitors, the NVS requested that additional NALEMP funding be made available to abate, demolish, remove, transport, and dispose of building materials from the NVNC site. In addition, the physical hazards posed by the debris piles and abandoned structures caused the NVS to request funding support for removal of the debris.

2.12 2011 REMOVAL ACTION

The primary focus of the 2011 field season and SOW was to abate and remove materials associated with the approximately 9 partially or fully collapsed structures, 24 debris piles, and additional scattered debris located throughout the NVNC. These structures and debris piles posed various physical and environmental hazards to both residents and visitors of the NVNC site. In a span of little under a month (29 days), the NVS field crew, with funding provided by NALEMP and support from Bristol, was largely effective in cleaning up identified physical and environmental hazards from a large portion of the NVNC site. Below is a summary of the primary tasks accomplished during the 2011 field effort:

- Successful mobilization and demobilization of personnel and equipment to and from the site;
- Performance of all field tasks in a safe manner with no accidents and zero lost-time incidents;
- Incident-free removal of the following hazardous materials:
  - 1,680 net pounds of ACM (includes weight of overpack drums)

  - 15,500 net pounds of LBP-containing painted wood debris
  - 49,860 net pounds of lead contaminated burner ash (wet)
  - net weights were initially estimated in the field and confirmed using the disposal facility's scale tickets;
- Removal and burning of a significant amount of non-painted wood debris;
- Collection and staging of metallic and non-burnable debris; and
- Identification of remaining suspect CON/HTRW for future sampling and characterization

3.0 OBJECTIVES AND SCOPE

The primary focus of the SOW, under the current FY12 CA, was to collect and stage any remaining non-hazardous and metallic debris collected from around the NVNC site. This debris poses various physical and environmental hazards to residents who utilize the NVNC site. Following the collection and staging of non-hazardous/metallic debris, the debris was to be loaded into 20-foot open-top intermodal containers for transportation and disposal at an off-site landfill located in the Lower-48.

In addition to debris collection, staging, and removal, field personnel were to properly characterize and remove buried drums, incidental stained soil related to buried drum removal, and CON/HTRW that have been identified and collected from around the NVNC. This task was funded under the FY11 CA, but was to be completed during the 2012 field season.

The last task that was to be conducted under the FY12 CA was to perform a SI and comprehensive environmental sampling event, including the collection of soil, sediment, and surface water samples from suspect areas throughout the NVNC site. Environmental samples were to be collected by individual(s) who possess the minimum ADEC-required qualifications and experience with the support of NVS field staff. Environmental samples were to be analyzed for petroleum hydrocarbons including gasoline-range organics (GRO), diesel-range organics (DRO), and residual-range organics (RRO), metals, VOCs, PAHs, PCBs, pesticides/herbicides, and for dioxins/furans.

The three cabins located at the NVNC that remain in good condition and are occupied briefly each year were not to be removed or abated under the current CA. Figure 3 identifies the locations of the three cabins (numbered 1, 2, and 11) that remain in place.

Personnel and equipment required for removal of the physical and environmental hazards were to be mobilized to and from the site. Any additional ACM- and LBP-containing materials that may be identified were to be removed from the NVNC site and properly packaged for transportation and disposal.

3.1 SCOPE OF WORK

The SOW for the RA/SI was as follows:

- Mobilization and demobilization of personnel and equipment to and from the NE Cape of Saint Lawrence Island;
- Document and map field activities and conditions at the NVNC using detailed notes, photographs, and a Global Positioning System (GPS);
- Collection, staging, and containerization of remaining non-hazardous/metallic debris from the NVNC for off-site shipment and disposal;
- Collection, staging, and containerization of any remaining ACM- and LBP-containing materials;
- Containerization and characterization of buried drums, associated soil, and CON/HTRW collected from around the NVNC site for off-site shipment and disposal; and
- Performance of a SI and comprehensive sampling event, including the collection of soil, sediment, and surface water samples from suspect areas throughout the NVNC site.

A summary of the primary activities that were performed during the RA/SI include:

- **Mobilization and Demobilization –** Includes transportation of all materials, personnel, and equipment to and from the site.
- **Work Plans –** Draft and final WPs were prepared for this project.
- **Removal Action –** An RA was performed to remove physical and environmental hazards associated with debris and CON/HTRW.
- **Site Investigation** - An SI was performed with environmental samples having been collected from areas of suspect contamination
- **RA/SI Draft and Final Reporting –** This report documents RA/SI field activities performed and discusses analytical results of the SI.

4.0 PROJECT MANAGEMENT

Fieldwork for the RA/SI was conducted primarily by NVS personnel with project coordination, logistic, and subcontractor oversight provided by Bristol. Additional Bristol assets were provided by the co-occurring NE Cape FUDS project, including the use of heavy equipment, generators, and other field equipment, as needed. Key personnel are described below.

4.1 NATIVE VILLAGE OF SAVOONGA

The NVS Indian Reorganization Act Council designated Robert Annogiyuk as its NALEMP Project Manager (PM) for managing the project for the NVS. Mr. Annogiyuk and his four-person crew of NVS laborers represented the NVS during RA/SI field activities. In addition to Mr. Annogiyuk, the four laborers for the project provided by the NVS included Jess Reynolds, Elmer Rookok, Nicholas Toolie, and Jake Olanna, Jr. The NVS field crew conducted the majority of the remaining debris collection and staging, non-painted wood burning activities, and collection and containerization of CON/HTRW. In addition, Mr. Annogiyuk and Mr. Rookok supported Bristol's ADEC "Qualified Person" with the collection of RA/SI samples.

4.2 BRISTOL

The Bristol PM for the Savoonga NALEMP Project was Tyler Ellingboe. Mr. Ellingboe prepared the WP (Bristol, 2012) for the NVNC site. Mr. Ellingboe was physically present at the NVNC during the final preparation and shipment of the Conexes containing scrap metal/non-burnable debris and the CON/HTRW at the end of the field season. His key tasks included supervising and monitoring RA/SI activities and preparing this report with support from the NVS. He also served as the Regulatory Compliance Manager/Transportation and Disposal Coordinator for the project by preparing all waste profiles and shipment paperwork.

The Bristol Field Manager and ADEC "Qualified Person" for the project was Lesa Nelson. Ms. Nelson directed the containerization and sampling of CON/HTRW for characterization. In addition, Ms. Nelson was supported by Mr. Annogiyuk and Mr. Rookok during the collection of SI samples

The NVNC field effort was also supported by NE Cape FUDS project crew and equipment, as needed.

4.3 SUBCONTRACTORS

4.3.1 TestAmerica Laboratories, Inc. (TestAmerica)

TestAmerica was the environmental laboratory selected for the project. TestAmerica received and analyzed all environmental samples collected and submitted for waste characterization. Ms. Terri Torres served as the laboratory manager for the project.

4.3.2 Northland Services, Inc. (Northland)

Northland provided marine transportation services for the off-island shipment of the Conexes containing bulk scrap metal/non-burnable debris and non-bulk CON/HTRW. Conexes were loaded onto landing crafts at Cargo Beach, transferred to Northland's main barge, and transported to their dock located at the Port of Seattle, Washington.

4.3.3 Emerald Services, Inc. (Emerald)

Emerald provided waste management services for the Conex containing non-bulk containers of CON/HTRW and non-hazardous waste. Emerald transported the non-bulk containers from Northland's Seattle dock to their transfer facility located in Tacoma, Washington prior to forwarding the non-bulk containers to US Ecology Idaho, Inc. for final disposal.

4.3.4 US Ecology Idaho, Inc. (USEI)

USEI provide waste treatment and disposal services at their Subtitle C landfill located in Grand View, Idaho. USEI utilizes a variety of treatment methods including direct landfill, macroencapsulation, and stabilization.

4.3.5 Waste Management, Inc. (WMI)

WMI provided intermodal shipping containers and coordinated the transportation of the containers from Northland's Seattle dock to the NVNC site and back. WMI's Columbia Ridge Landfill and Recycling Center (CRL), a Subtitle D Landfill, located in Arlington, Oregon was used for the recycling/disposal of metallic/non-burnable debris.

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5.0 REMOVAL ACTION ACTIVITIES

This section details RA activities that were performed and procedures that were followed in accordance with the WP. Responses to ADEC and USACE comments on the draft report will be included in Appendix A of the final report.

5.1 MOBILIZATION AND DEMOBILIZATION

Personnel, equipment, and materials were mobilized to and from Anchorage, Alaska, to Nome by commercial airlines (Alaska Airlines). Mobilization of field personnel, equipment, and materials from Nome and Savoonga, to and from NE Cape, was provided by charter airline service (Bering Air). Additional supplies and equipment were mobilized and demobilized to and from the site via the NE Cape FUDS barge operated by Northland. During the NVNC RA field effort, Bristol and NVS personnel were housed at Bristol's camp located at the NE Cape airstrip (the camp was established for the NE Cape FUDS project).

The NVS PM and field crew first mobilized to the NE Cape site on August 20, 2012. NVS laborers remained and worked at the NVNC site until September 12, 2012 in order to support the Bristol Field Manager with the performance of planned RA/SI field activities. Pick-up trucks and the all-terrain vehicles (ATVs) were used to transport field personnel between the NE Cape field camp and the NVNC.

The performance of the Savoonga NALEMP project benefitted greatly from the adjacent NE Cape FUDS activity. Without the NE Cape FUDS infrastructure and equipment availability, the NALEMP project could have been prohibitively expensive.

5.2 DOCUMENTATION

RA/SI activities were carefully documented and recorded. Site photographs documenting field activities performed were collected and are presented in Appendix B. Dates, times, sample locations and identifications, field personnel present, and pertinent field observations were recorded in a field notebook and are attached as Appendix C. Copies of tailgate safety meeting forms are also included in Appendix C. A Trimble GeoExplorer 2008 GeoXH Series handheld GPS unit was used to mark structures, debris piles, and items of interest during the RA/SI.

5.3 SITE RECONNAISSANCE

On August 20, 2012, prior to the start of 2012 RA field activities, Bristol and NVS field personnel walked the NVNC site taking note of all remaining debris. Major site features including the locations of current structures, former structures, and debris piles are shown on Figure 3. The site reconnaissance was performed to confirm the physical boundaries of the NVNC site and to plan a strategy for the collection and removal of remaining debris that was present. The site boundaries have been estimated with a surveyor's tape to be approximately 600 feet from north to south from Cargo Beach, along Cargo Beach Road (Figure 3). East to west dimensions of the site were estimated to be approximately 815 feet, excluding the area east of Cargo Beach Road. Potential physical and chemical hazards that may have been encountered were also discussed.

The three remaining livable structures (Structures 1, 3, and 11) were also identified. Per the Work Plan, these structures were not to be abated or removed under the current FY12 CA.

5.4 DEBRIS REMOVAL, STAGING, AND/OR BURNING

The primary field task for the project was to collect and stage remaining debris from around the NVNC site and creek drainage. Upon arrival at the NE Cape FUDS field camp, the NVS field crew was provided a site orientation in order to familiarize themselves with scheduled field tasks, site concerns, and safe work practices.

Prior to collection and staging, the NVNC was inspected for the presence of LBP-containing debris; metallic and non-burnable debris; burnable, non-painted wood components; and suspect CON/HTRW. The individual components were hand-sorted and transported to each respective staging area. Identified debris was transported to staging areas using ATVs and utility trailers.

Hand tools, including chop saws, chain saws, and Sawsall®-type saws were used to make sections of debris easier to manage. Saws were not used to remove debris that contained painted surfaces. Debris with painted surfaces was removed intact to reduce the potential hazard of LBP-containing chips and dust from becoming airborne and ingested. An excavator was also used to help break up some of the larger debris sections into more manageable sizes. Debris and CON/HTRW were collected and removed from along the ground surface of the NVNC site. A limited amount of the subsurface at the NVNC site was excavated during debris and CON/HTRW removal activities and is further discussed in Section 5.5.4.

The following sections further discuss the removal of LBP-containing debris, metallic and non-burnable debris, non-painted burnable debris, and relatively small amounts of suspect CON/HTRW.

5.4.1 LBP-Containing Debris

Since some of the painted wood surfaces had previously been identified as containing concentrations of LBP, a determination was made that all wood debris containing painted surfaces would be consolidated for removal.

Remaining painted wood debris consisted of smaller pieces of framing lumber and plywood sheeting, as well as small volumes of paint chips. The NVS field crew collected the remaining painted wood debris and paint chips into 1-cubic yard Super Sack® bags. It has been previously estimated that approximately 10–15 percent of all wood debris removed from the NVNC site contained painted surfaces and was characterized as LBP debris.

All wood debris containing painted wood surfaces was removed and consolidated into two Super Sack bags prior to loading into a 20-foot, closed-top intermodal container prior to off-island transportation and disposal.

Previous painted wood debris sampling results collected during the 2011 field season and documented in the 2011 RA Report (Bristol, 2011) were used to characterize the painted wood debris for transportation and disposal purposes. Previous sampling results had indicated that the painted wood debris contained lead at levels regulated by the Resource Conservation and Recovery Act (RCRA).

5.4.2 Consolidation of Metallic and Non-Burnable Debris

In addition to collecting and consolidating painted wood debris, NVS field staff identified, collected, and consolidated the remaining volumes of metallic and non-burnable debris items. Metallic and non-burnable debris included old military bed frames, stoves, corrugated metal siding, and rusted empty metal drums, in addition to many other non-burnable items. Metal drums were visually inspected for the presence of fluids or residual contamination prior to being transported to the scrap metal pile for future removal. The majority of the metallic and non-burnable items appeared to be of military origin; however, some additional non-military items were also consolidated, including a couple of ATV chassis, scrap fishing nets, and snowmachine tracks.

The remaining metallic and non-burnable debris was added to the pre-existing pile of metallic and non-burnable debris that the NVS field staff had collected and staged during the 2011 field season. Photographs of the metallic and non-burnable debris pile are included in Appendix B.

5.4.3 Burning of Non-Painted Wood Debris

During the 2011 field season, two round, 12-foot diameter, steel burn boxes were fabricated for burning non-painted wood debris. The burn boxes were approximately 6 feet tall, with a couple of feet buried in the ground surface. The burn boxes had welded steel bottoms that aided in the collection and containerization of ash and unburned residue. Forced air from a compressor-driven blower was piped into the side of each burn box to aid combustion and reduce smoke emissions. Photographs of the burner units are included in the photograph log in Appendix B.

Most of the non-painted wood debris identified at the NVNC was collected and combusted during the 2011 field season and additional burning of non-painted wood was not expected to occur during the 2012 field season. However, enough additional non-painted wood debris remained and was collected during the 2012 field season to justify the employment of one of the two burn units.

Non-painted wood debris was collected from areas within the NVNC footprint. Non-painted wood debris was either hauled and placed directly into the burner unit or was placed adjacent to the burner unit until it could be burned. Some of the non-painted wood debris contained high moisture content, so dry drift wood was occasionally used to start and/or keep the fires burning and to reduce smoke emissions. It was estimated that 85–90 percent of the wood debris collected from around the NVNC site did not contain painted surfaces and was burned on-site.

Ash recovered from non-painted wood debris burning operations was containerized into 1-cubic yard Super Sack® bags. In total, four bags were used to containerize the ash accumulated from the non-painted wood burning operations. Previous ash sampling results collected during the 2011 field season and documented in the 2011 RA Report (Bristol, 2011) were used to characterize the ash for transportation and disposal. The previous ash sample contained a concentration of lead at 7.9 milligrams per liter (mg/L) using the Toxicity Characteristic Leaching Procedure (TCLP) requiring the waste stream to be managed as RCRA hazardous waste.

At the conclusion of the field season, the burn units were emptied of ash and removed from service. One unit was shipped off-site along with the metallic and non-burnable debris. The second burn unit was moved up to the NE Cape FUDS site for storage and potential future use.

5.4.4 Collection, Containerization, and Characterization of Suspect CON/HTRW

During 2011 and 2012 debris removal activities, relatively small amounts of suspect CON/HTRW were collected from the interior of structures, from the surface of debris piles, and from various locations around the NVNC. CON/HTRW was consolidated and containerized by waste type and sampled for proper characterization, transportation, and disposal.

The types of potential CON/HTRW that were collected included paint cans containing dried paint, cans of grease, broken lead acid batteries, powdered dishwashing soap, light ballasts, and small volumes of potential ACM (fire hose, tiles, and sheathed wiring). In addition, a couple of 55-gallon steel drums found with content and associated soil were excavated from along the ground surface. The suspect CON/HTRW was consolidated by like waste stream and placed in U.S. Department of Transportation (DOT) approved shipping containers (steel drums or 1-cubic yard Super Sack® bags). Overpack drums and drums containing CON/HTRW items were temporarily staged at the Drum Storage Area (Figure 3) until they could be moved into a 20-foot intermodal container for sampling, characterization, storage, transportation, and disposal.

Following containment and consolidation, the CON/HTRW waste streams were characterized for proper transportation and disposal. The CON/HTRW waste streams were characterized using professional knowledge and/or laboratory analysis. Section 5.6 and its related subsections further describe how each waste stream generated was characterized for transportation and disposal. Samples collected for waste characterization were submitted to the project laboratory for analysis.

5.5 WASTE CHARACTERIZATION SAMPLING RESULTS

Waste materials that were shipped off site at the end of the 2012 field season included the following:

- Painted wood debris
- Burner ash
- Paint (solid)
- Broken lead acid batteries
- PCB light ballasts
- Grease
- Dish detergent
- ACM

In addition, a couple of additional waste streams were generated, but not shipped off-site since characterization could not be completed before the last barge shipment. The additional waste streams include two drums containing oily debris and residues that were placed into two 85-gallon steel salvage drums and four 1-cubic yard Super Sack® bags of associated stained soil. In addition, one drum remains at the NVNC site that contained soil contaminated with paint. CON/HTRW items remaining at the NVNC site are further described in Section 5.6.9.

5.5.1 Sampling and Characterization of Painted Wood Debris

In accordance with the WP, all wood debris with painted surfaces was to be removed and transported off site for proper disposal. Proper waste characterization is required to ensure that waste materials are containerized, transported, and disposed of in accordance with DOT and RCRA requirements. The analytical results for grab samples of painted wood debris that were collected during the 2011 field season and documented in the 2011 RA Report (Bristol, 2011) were used to characterize the painted wood debris waste stream.

2011 analytical results for the painted wood debris indicated that the RCRA toxicity characteristic regulatory level for lead (5.0 mg/L) was exceeded in sample number 11NVNCDS002 (Bristol, 2011). Therefore, the painted wood debris was determined to be a RCRA-regulated hazardous waste. The Toxic Substances Control Act (TSCA) regulatory level of 50 milligrams per kilogram was not exceeded in either of the two painted wood debris samples submitted for analysis.

5.5.2 Sampling and Characterization of Burner Ash

The analytical result from the burner ash sample collected and submitted for analysis during the 2011 field season was used to characterize the ash collected from the burner unit during the 2012 field season. The analytical results for the sampling of ash from the burn units are documented in the 2011 RA Report (Bristol, 2011). The 2011 ash sample was submitted to TestAmerica for analysis of TCLP RCRA eight metals (arsenic, barium, cadmium, chromium, lead, nickel, selenium, silver) using U.S. Environmental Protection Agency (EPA) Solid Waste (SW) Method 1311/6020/7470A. The samples were diluted as part of the TCLP extraction procedure.

Previous analytical results for the burner ash sample indicated that the RCRA toxicity characteristic regulatory level for lead (5.0 mg/L) was exceeded and that the ash must be managed as a DOT/RCRA-regulated hazardous waste. In addition, the analytical result for chromium (0.69 mg/L) makes chromium a RCRA “underlying hazardous constituent” that must be treated to below treatment standards at the disposal facility, in addition to the lead, prior to land disposal.

As part of the SI, confirmation soil samples were collected and analyzed from beneath the two burn units after they were removed from service. Analytical results for all analytes were either not detected or detected below established cleanup levels. Confirmation soil sampling results are shown on Table 6-1.

5.5.3 Sampling and Characterization of Solidified Paint

During the 2011 and 2012 field efforts, numerous cans of suspected paint were identified and collected from within structures and debris piles around the NVNC site. All cans of suspect paint were inspected for free liquids; however, all cans were found to be solidified. Paint cans were collected and containerized into two 55-gallon and two 85-gallon steel drums. A total of four drums were generated that contained solidified paint.

Bristol and NVS field staff collected four composite samples of solidified paint from the various cans of paint that were present. Solidified paint samples were submitted to the project laboratory and analyzed for TCLP RCRA 8 Metals by SW 1311/6020/7470A, TCLP VOCs by SW 8260B, and TCLP SVOCs by SW 8270C-SIM. In addition, the samples were analyzed for Total PCBs by SW 8082. The four sample numbers for the solid paint samples were 12NVNCCH03, 12NVNCCH05, 12NVNCCH06, and 12NVNCCH10. Table 5-1 located in the Tables Section of this report shows the analytical results for the four solidified paint samples.

A review of the analytical results for the solidified paint waste stream showed it to be RCRA-regulated hazardous waste for the constituents lead and carbon tetrachloride. Sample 12NVNCCH05 had a TCLP lead result of 31 mg/L which is well above the RCRA regulatory limit of 5.0 mg/L. In addition, sample 12NVNCCH05 also had a concentration of carbon tetrachloride at 1.6 mg/L TCLP which is above the RCRA regulatory limit of 0.5 mg/L TCLP.

5.5.4 Characterization of Broken Lead Acid Batteries

A total of four cracked lead acid batteries and two batteries found in multiple pieces were found within the footprint of the former structures and debris piles during the RA. The broken batteries did not contain any free liquids and were overpacked into one 55-gallon steel drum. Analytical samples were not collected from the batteries since professional knowledge and a representative Material Safety Data Sheet (MSDS) could be used to properly characterize for transportation and disposal. This represents a data gap and potential source(s) of contamination and/or exposure.

Since the batteries were no longer intact they could not be managed using the Universal Waste Regulations (40 CFR Part 273). The drum of broken lead acid batteries was managed as a RCRA-regulated hazardous waste for the constituents lead and arsenic.

5.5.5 Characterization of PCB Containing Light Ballasts (Capacitors)

During debris collection and removal activities, the NVS laborers identified a couple of fluorescent light ballasts (capacitors). The ballasts were consolidated into a DOT-approved 5-gallon poly bucket for transportation and disposal. Due to the suspected age of the ballasts, professional judgment was used to characterize the ballasts as most likely containing PCBs. Samples were not collected and the ballasts were characterized as containing 50-499 parts per million (ppm) PCBs making them regulated by the TSCA.

5.5.6 Sampling and Characterization of Grease

Various cans of grease were also collected from around the NVNC site. The cans of grease were containerized into one 55-gallon steel drum. Four representative samples of the various types of grease that were identified were collected and submitted for TCLP RCRA 8 Metals analysis. The representative sample numbers for the grease waste stream are 12NVNCCH02 and 12NVNCCH07 through 12NVNCCH09.

A review of the TCLP Metal results show that concentrations of metals for the grease waste stream were below RCRA regulatory levels indicating that the grease could be managed as a non-hazardous waste. The analytical results for the grease waste stream are shown in Table 5-1.

5.5.7 Sampling and Characterization of Dish Detergent

During the collection of CON/HTRW from around former structures and debris piles at the NVNC various containers and bags of powdered, chlorinated dish soap were identified and consolidated. The dish soap was originally consolidated into four 5-gallon poly buckets, but were later consolidated into one 55-gallon steel drum that was lined with a poly drum liner.

Two grab samples (samples 12NVNCCH01 and 12NVNCCH04) were collected from the dish soap and submitted to TestAmerica and analyzed for pH (SW 9045C) and oxidizer screening. The results indicated that the powdered dish soap had a pH ranging from 9.7 to 11.6. In addition, one of the samples had a positive result for being an oxidizer. Oxidizer and pH screening results are included on Table 5-1.

In addition to the laboratory results, professional knowledge was used to characterize the dish soap waste stream as a RCRA-regulated oxidizer. Representative MSDSs were researched and provided to the disposal facility for proper profiling.

5.5.8 ACM Characterization

Professional knowledge and previous ACM sampling results from the 2009 SI (Bristol, 2009) were used to characterize small amounts of suspected ACM collected during the 2012 RA, with no need for additional sampling. Suspected ACM items collected from around the NVNC site during the RA included fire hose, sheathed wiring, and floor tiles. These items were wetted, double-bagged and placed into 1-cubic yard Super Sack® bag for off-site transportation and disposal. ACM handling was conducted by Bristol's field lead, a certified EPA/AHERA Building Inspector (training certificate provided in Appendix H).

5.5.9 Remaining CON / HTRW

As mentioned in Section 5.6, a couple of additional waste streams were generated at the end of the 2012 field season, but not shipped off-site since characterization could not be completed before the last barge shipment. The additional waste streams include two drums containing oily debris and residues that were placed into two 85-gallon steel salvage drums, four 1-cubic yard Super Sack® bags of associated stained soil, and one 85-gallon drum containing soil mixed with paint.

Drums No. 5 and 6 were partially crushed 55-gallon steel drums containing water, grease, absorbent boom, and/or soil. Initial sampling results from the two drums (sample numbers 12NVNCCH08 and 12NVNCCH09) for TCLP metals show that RCRA 8 metal concentrations are well below RCRA-regulated levels. Additional analytical sampling will be required for characterization of these two drums including analysis for VOCs, SVOCs, and PCBs.

Four 1-cubic yard Super Sack® bags of stained surface soil were also generated from areas associated with the removal of Drums No. 5 and 6 and from other areas that were encountered with visible surface staining. Stained soil collected in association with the removal of drums No. 5 and 6 was collected into three 1-cubic yard Super Sack® bags (bags No. 16a, 16b, and 16c). In addition, an in situ soil sample (12NVNCSL58) was collected from the area associated with the removal of these two drums and associated supersacks of soil. This area was assigned additional area of concern No. AA19 and sampled for DRO, RRO, and PCBs. Analytical results indicated that the cleanup criteria for DRO, RRO, and PCBs were not exceeded. Bag No. 17 contained stained soil from areas were surface staining was visible and had a noticeable diesel aroma. Analytical samples 12NVNCCH11 and 12NVNCCH12 were collected from these bags and analyzed for TCLP Metals, TCLP VOCs, and Total PCBs. Results indicate that the soil is not a RCRA-regulated waste.

Additional analytical sampling for DRO/RRO will be required for characterization of these four bags for transportation and disposal.

In addition, one 85-gallon steel drum (Drum No. 9) containing soil mixed with paint was generated during CON/HTRW removal activities. This drum was sampled (sample 12NVNCCH13) at the end of the field season for TCLP Metals, TCLP VOCs, TCLP SVOCs, and Total PCBs and remains at the NVNC site. Sample results received after the last barge shipment indicate that the material is not a RCRA-regulated waste. This drum should be managed as a non-hazardous waste and shipped off-site disposal.

5.6 WASTE MANAGEMENT

Waste streams accumulated, consolidated, and transported from the site for proper disposal included painted wood debris, burner ash, paint (solid), broken lead acid batteries, PCB light ballasts, grease, dish detergent, and ACM. Since RCRA and TSCA regulated waste were generated at the site, the waste materials were managed under EPA ID No. AKR000203687. A copy of the EPA Identification Number Notification that was obtained for the site is included in the 2011 RA Report (Bristol, 2011).

Following the collection and analysis of waste characterization samples, waste stream acceptance profiles were prepared for acceptance of waste materials into each respective treatment, storage, and disposal facility (TSDF).

The non-hazardous metallic/non-burnable debris was manifested using Non-Hazardous Waste Manifests. The non-bulk materials that were sent to USEI for treatment and disposal were manifested using a Uniform Hazardous Waste Manifest. Land Disposal Restriction Notification and Certification Forms (LDRs) were also prepared for the hazardous waste manifest.

In addition to EPA and DOT requirements, Environment Canada regulates the transit of waste materials through Canadian waters. Bristol applied for and received transit notices for each receiving facility from the Canadian government since the barge route would transit through Canadian waters. Bristol staff completed and submitted all movement documents required for notification and transit through Canada.

Copies of waste stream profile sheets, manifests, LDRs, Canadian movement documents and transit notices, and the final waste tracking spreadsheet are included in Appendix F.

5.7 WASTE TRANSPORTATION AND DISPOSAL

All waste materials generated during the 2012 field season were packaged, labeled, marked, and placarded in accordance with DOT regulations and shipped off site. NSI served as the DOT-approved marine carrier from the site. NSI used landing crafts to transport the containers to their long-haul barge.

WMI's CRL facility, located in Arlington, Oregon was used for the recycling/disposal of the three 20-foot open-top Conexes containing metallic/non-burnable debris. Upon arrival at the Port of Seattle, the containers of metallic/non-burnable debris were trucked to the railhead by Roadlink and then on the rail (Union Pacific Railroad) to WMI's CRL facility.

All remaining non-bulk waste streams were loaded into a 20-foot closed-top Conex and shipped to Emerald. Emerald transported the Conex containing the non-bulk waste streams from NSI's Seattle dock to their Tacoma facility. The non-bulk waste streams were then forwarded to USEI's TSDF located in Grand View, Idaho for final treatment and disposal. Emerald contracted Steve Forler Trucking to provide transportation of the non-bulk waste containers to USEI.

Copies of waste stream profile sheets, manifests, LDRs, Canadian movement documents and transit notices, and the final waste tracking spreadsheet are included in Appendix F.

6.0 SITE INVESTIGATION ACTIVITIES

At the conclusion of debris and CON/HTRW removal activities, a SI and comprehensive environmental sampling event was conducted. Soil, sediment, and surface water samples were collected from areas throughout the NVNC site. Sampling locations were determined in the field prior to sampling, after walking the entire NVNC site and based on observations made during RA activities. SI sampling locations are depicted on Figures 4 and 5. SI sampling results are discussed in Section 7.0.

6.1 SOIL FIELD SCREENING

Field screening is a useful tool to identify release points and to estimate the extent of hydrocarbon contamination. Field screening was conducted in accordance with the WP to provide a preliminary indication of potential petroleum contamination present at the selected soil sampling locations. Soil sample locations were selected based on visual observations and were first field screened prior to the collection of the soil sample for laboratory analysis.

Field screening for petroleum hydrocarbons in soil was accomplished by assessing appearance, odor, and collecting photoionization detector (PID) readings. The PID used was a MiniRAE Lite, which registered VOCs in ppm using a 10 electron volt photoionization lamp. A zero calibration and a field check were completed daily on the PID to ensure the instrument was operating correctly.

PID readings were collected from a resealable plastic bag containing soil from the interval being sampled. The sealed bag was allowed to sit in a warm location for a minimum of 15 minutes and a maximum of 45 minutes. PID measurements are included with the soil sample results in Table 6-1 and are included in Field Notebooks located in Appendix C.

6.2 SOIL SAMPLING

Soil samples were collected from beneath the locations of former structures and from beneath debris piles. Additional soil samples were collected from areas where distressed vegetation was evident, from areas where surface staining was present, and from areas associated with the removal of CON/HTRW. Soil samples were collected from beneath the vegetative mat when encountered. Soil samples were also collected from beneath the two burn units that were used to combust non-painted wood debris collected from the NVNC site following ash removal and their removal from service. A total of 55 primary soil samples and 8 quality control (QC) soil sample duplicates were collected and submitted for analysis.

Soil samples were collected and analyzed for petroleum hydrocarbons (GRO, DRO, and RRO), VOCs, total RCRA 8 metals plus nickel, vanadium, and zinc, PAHs, PCBs, pesticides, herbicides, and for dioxins/furans. If soil/sediment samples were collected from areas containing plant or peat material, then each sample was also analyzed using the silica gel cleanup method for DRO/RRO, and for total organic carbon (TOC) as described in ADEC Technical Memorandum 06-001 (ADEC, 2006). In accordance with the final approved WP, some soil samples received less than the full suite of analyses. The following table shows the number of primary and QC duplicate soil samples collected by analysis type.

Analysis and Test Method	Primary Samples	QC Duplicate Samples
Gasoline Range Organics (AK 101)	55	6
Diesel Range Organics (AK102)/Residual Range Organics (AK 103)	55	7
Diesel Range Organics (AK 102)/Residual Range Organics (AK 103) – Silica Gel Cleanup	5	1
Total Organic Carbon (SW 9060)	5	1
Volatile Organic Compounds (SW 8260B)	29	4
Polynuclear Aromatic Hydrocarbons (SW 8270C-SIM)	29	4
Total RCRA 8 Metals plus Nickel, Vanadium, and Zinc (SW 6020)	29	4
Organochlorine Pesticides (SW 8081A)	7	1
Polychlorinated Biphenyls (SW 8082)	55	6
Chlorinated Herbicides (SW 8151A)	7	1
Dioxins/Furans (SW 8290)	6	1

6.3 SEDIMENT SAMPLING

Sediment samples were also collected from along the drainage basin that runs through the NVNC site. Sediment was defined as any loose material that is deposited within surface water flow through areas, and that is not active vegetation or part of the vegetative mat. Mineral material atop a vegetative mat, or in a predominantly peat interval, was not considered sediment.

Sediment samples were collected at evenly dispersed locations throughout the creek drainage within the NVNC. A couple of additional sediment samples were collected from along the edge of ponds located within the NVNC site. Sediment samples were collected from along the edges of the drainage and surface ponds from a depth of 0 to 6-inches below the ground surface following removal of any vegetation that was present.

Ten primary sediment samples were collected and analyzed for petroleum hydrocarbons (GRO, DRO, and RRO), VOCs, total RCRA 8 metals plus nickel, vanadium, and zinc, PAHs, and PCBs. Each sediment sample was also analyzed using the silica gel cleanup method for DRO/RRO, and for TOC as described in ADEC Technical Memorandum 06-001 (ADEC, 2006). In conformance with the WP, all sediment samples did not receive the full suite of analyses. Five of the ten primary sediment samples received additional pesticide and herbicide analysis and two primary sediment samples received additional dioxin and furan analysis.

6.4 SURFACE WATER SAMPLING

Surface water samples were collected from standing ponds and from along the drainage basin that runs through the NVNC site. Since the ADEC does not have cleanup levels for DRO, GRO, and RRO in surface water, surface samples were analyzed using SW 8260B and SW 8270C-SIM in order to calculate concentrations of total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH). TAH is the sum of BTEX results and TAqH is calculated by summing BTEX and PAH results. Surface water samples were also analyzed for total RCRA 8 metals plus nickel, vanadium, and zinc, pesticides, herbicides, and PCBs. Laboratory analysis of surface water samples for dioxins/furans was not planned or performed.

Ten surface water samples were collected which included sampling of surface ponds and the creek drainage. Surface water sample locations were evenly dispersed at areas within the NVNC and were based on visual observations of suspected impacted areas. Five of the ten primary surface water samples received additional pesticides and herbicide analysis.

ADEC's surface water cleanup criteria are based on 18 AAC 70. Per 18 AAC 70.020(b), Note 7, surface water samples were to be collected from below the surface and away from any observable sheen." Visible sheens were not observed at any of the surface water sampling locations.

6.5 SURVEYING

The locations of soil, sediment, and surface water samples collected were marked and mapped using a Trimble GeoExplorer 2008 GeoXH Series handheld GPS to sub-meter accuracy after post-processing. Sample locations are shown on Figures 4 and 5.

6.6 DECONTAMINATION AND IDW DISPOSAL

Disposable sampling equipment was used as much as possible to reduce the amount of supplies required for decontamination. Disposable sample scoops and nitrile-gloved hands were used for digging and sampling. Sample scoops were only used once. Disposable sampling equipment was managed as municipal solid waste and was disposed along with other camp trash generated on the NE Cape FUDS project.

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7.0 SITE OBSERVATIONS AND ANALYTICAL RESULTS

Soil, sediment, and surface water samples were collected for laboratory analysis from around the NVNC site. Sampling locations were determined in the field prior to sampling, after walking the entire NVNC site and based on observations made during RA activities. Sediment samples were collected in conjunction with surface water samples. SI sampling locations are depicted on Figures 4 and 5. SI sampling results are discussed in Sections 7.3, 7.4, and 7.5.

7.1 SITE SPECIFIC CLEAN UP LEVELS FOR SOIL AND SEDIMENT

The ADEC allows for site specific clean up levels under the Oil and Other Hazardous Substances Pollution Control site cleanup rules. 18 AAC 75.340(f), referred to as Method 4, specifies that an alternative cleanup level may be approved by the department based upon a site specific risk assessment following the department's Risk Assessment Procedures Manual (ADEC, 2011). For this report, Bristol has compared 2012 SI soil and sediment sampling results to site-specific cleanup levels previously provided in Table 1 of the March 2007 NE Cape FUDS Final Feasibility Study, Volume 1, March 2007 (USACE, 2007) and the 2009 Decision Document (USACE, 2009). Site specific soil and sediment cleanup levels were developed based on the Human Health and Ecological Risk Assessment performed by Montgomery Watson Harza (MWH, 2004).

Where site specific cleanup levels are not established, SI soil and sediment sampling results were compared to the ADEC Method Two Soil Cleanup Criteria for the Under 40-inch Precipitation Zone (Title 18 Alaska Administrative Code, Chapter 75, Section 341 [18 AAC 75 341] [ADEC, 2012]). The cleanup level from Table B1 used was the most stringent, applicable exposure pathway-specific cleanup levels based on direct contact, ingestion, outdoor inhalation, or migration to groundwater.

Screening levels of one-tenth of either site-specific cleanup levels or cleanup levels listed in Method Two Tables B1 and B2 for the Under 40-inch Precipitation Zone, most stringent of pathways were also used for comparing to soil and sediment sample results.

7.2 SITE SPECIFIC CLEAN UP LEVELS FOR SURFACE WATER

Since the NVNC site is a potential source of ground and drinking water, the criteria that was used to determine whether the surface water is contaminated was the drinking water cleanup levels found in the Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances (ADEC, 2008a). In addition TAH and TAqH concentrations were calculated for each surface water sample collected and compared to the cleanup criteria for TAH and TAqH found in 18 AAC 70 and provided in Table 1 of the NE Cape FUDS Final Feasibility Study, Volume 1, March 2007 (USACE, 2007) and the 2009 Decision Document (USACE, 2009). Groundwater cleanup levels found in Table C of the 18 AAC 75, Section 345 (ADEC, 2012) were used where surface water cleanup levels were not established.

Screening levels of one-tenth of established cleanup levels were also used for comparing surface water sample results.

7.3 SOIL SAMPLING RESULTS

Soil samples were collected from beneath former structures and debris piles, from metal and drum staging areas, from additional areas of concern, and from beneath the burn pits. Soil sampling results for contaminants were either not detected or detected at concentrations below established cleanup levels for all GRO, pesticide, herbicide, and for dioxin and furan contaminants. The results for soil samples collected and analyzed during the 2012 SI are further discussed in the following sections and shown in Table 6-2 in the Tables Section of this report. Soil sample locations, including soil sample locations with concentrations of contaminants exceeding established cleanup criteria are shown on Figure 4.

7.3.1 Soil Field Screening Results

Soil samples were collected for both field screening and for laboratory analysis. The majority of soil sample locations exhibited PID results from 0.0 to less than 1.0 ppm with the following exceptions. Soil sample 12NVNCSL44 collected from additional area of concern No. 5 (AA05) had a PID result of 4.6 ppm. Soil sample 12NVNCSL53 collected from sample location AA14 had a PID result of 8.3 ppm. Lastly, soil sample 12NVNCSL54 and its duplicate sample 12NVNCSL66 collected from AA15 exhibited a PID reading of 34.0 ppm. The AA15 sample location is located near Structure No. 3 and petroleum vapors could be detected in the air by sampling personnel. Soil sample locations are shown on Figure 4.

7.3.2 Petroleum Hydrocarbon and Total Organic Carbon Results

Concentrations of DRO were present in five soil samples above the established site-specific cleanup level of 9,200 milligrams per kilogram (mg/kg). Exceedances of the site-specific cleanup level for DRO ranged from 10,000 to 74,000 mg/kg, with the highest concentration of DRO detected in soil sample 12NVNCSL08 collected from beneath former Debris Pile No. 11.

Four soil samples exhibited concentrations of RRO above the established site-specific cleanup level of 9,200 mg/kg. Cleanup level exceedances ranged from 12,000 to 300,000 mg/kg. The highest concentration of RRO was detected in soil sample 12NVNCSL08.

Select soil samples collected from areas containing suspected plant or peat material were also analyzed using the silica gel cleanup method for DRO/RRO and for TOC to evaluate biogenic interference from natural organic material (NOM). The silica gel analyses were done according to the ADEC Technical Memorandum 06-001 titled Biogenic Interference and Silica Gel Cleanup (ADEC, 2006). Only three of the soil samples (samples 12NVNCSL44, 12NVNCSL54, and 12NVNCSL66) that exhibited concentrations of

DRO/RRO above established site-specific cleanup levels received additional analysis using the silica gel cleanup method. Soil sample 12NVNCSL66 was a field duplicate of 12NVNCSL54. A review of sample results and chromatograms indicates that the exceedances of DRO/RRO are likely due to a petroleum hydrocarbon (diesel fuel) release.

Petroleum hydrocarbon soil sampling results are shown in Table 6-1.

7.3.3 PAH Results

A review of soil sampling results indicates only one detection of a PAH contaminant above established cleanup criteria. Soil sample 12NVNCSL24 collected from sample location S4 (former Structure No. 4) exhibited a concentration of benzo[a]pyrene of 900 microgams per kilogram (µg/kg) which is above the ADEC Method Two Cleanup Level of 490 µg/kg. This sampling location is shown on Figure 4 and characterized by an area disturbed by excavator tracks. Soil samples 12NVNCSL01, 12NVNCSL24, and 12NVNCSL40 (and its samples duplicate 12NVNCSL64) also had PAH detections above the established screening level, but below established cleanup levels.

7.3.4 Metal Results

A total of 33 soil samples, which include three duplicate samples, were collected from around the NVNC site and submitted for laboratory analysis for RCRA 8 metals, vanadium, and zinc. Eight of the 33 soil samples contained arsenic concentrations above the established site-specific cleanup level of 11 mg/kg, with concentrations of arsenic ranging from 13 to 42 mg/kg. The highest concentration of arsenic detected was in sample 12NVNCSL44 which was collected from AA05 (shown on Figure 4) which was an area from which trash/debris and CON/HTRW had been removed.

Three of the 33 soil samples analyzed for cadmium exhibited concentrations above the established migration to groundwater cleanup level of 5 mg/kg. Soil samples 12NVNCSL6, 12NVNCSL51, and 12NVNCSL54 contained concentrations of cadmium of 5.1, 24, and 7.9

mg/kg, respectively. Sample 12NVNCSL51 (24 mg/kg) was collected from site location AA12 which was located near former Structure No. 8 and from where a drum had been removed.

Two of the 33 soil samples exhibited concentrations of lead above the ADEC Method Two Soil Cleanup Level of 400 mg/kg for the under 40-inch zone and the direct contact exposure pathway. Soil samples 12NVNCSL30 and 12NVNCSL43 had lead concentrations of 1,100 and 450 mg/kg, respectively. Soil sample 12NVNCSL30 was collected from the metal debris staging area and sample 12NVNCSL43 was collected from site location AA04 which contained a buried drum of trash. These two locations are depicted on Figure 4.

Concentrations of chromium were detected above the ADEC Method Two Soil Cleanup Level for the migration to groundwater exposure pathway (25 mg/kg) in 11 of 33 soil samples collected and analyzed. Chromium results ranged from 27 to 100 mg/kg, with the highest result for chromium (100 mg/kg) found in soil sample 12NVNCSL44 which was collected from site location AA05 (shown on Figure 4) which was an area from which trash/debris and CON/HTRW had been removed.

7.3.5 Polychlorinated Biphenyls

Two soil samples collected during the 2012 SI exhibited concentrations of PCBs greater than the established cleanup criteria of 1.0 mg/kg. Soil sample 12NVNCSL28 collected from the Debris Pile (DP) No. 23 location (DP23) exhibited a result of 29 mg/kg for the PCB-1260 congener. Figure 4 shows the DP23 sampling location which is near the pond that is adjacent to Cargo Beach Road and just south of Structure No. 1.

Soil sample 12NVNCSL64, which was a sample duplicate of primary soil sample 12NVNCSL40, was collected from sample location AA01 which is characterized as a trash and CON/HTRW (paint) removal area (Figure 4). Sample 12NVNCSL64 collected from additional area of concern (AA01) exhibited PCB-1254 and PCB-1260 congener results of

2.5 and 2.0 mg/kg, respectively. Primary soil sample 12NVNCSL40 had detections of these two PCB congeners, but at concentrations below the established 1.0 mg/kg cleanup level.

7.3.6 Volatile Organic Compounds

Four soil samples had results reported above cleanup level. However, each of these results is an estimated result due to be reported below the limit of quantitation (LOQ). While these results were not associated with trip blanks or method blanks with detectable methylene chloride, this laboratory had systematic issues with detectable methylene chloride and acetone in the methanol preserved containers it provided during this time period.

7.4 SEDIMENT SAMPLING RESULTS

Ten primary sediment samples were collected from along the drainage basin that runs through the NVNC site. Sediment was defined as any loose material that was deposited within surface water flow through areas, and that is not active vegetation or part of the vegetative mat. Sediment sample locations, including sediment sample locations with concentrations of contaminants exceeding established cleanup criteria, are shown on Figure 5.

With the exception of sediment sample results for RRO, cadmium, and lead, sediment sampling results for all other contaminants analyzed were either not detected or detected at concentrations below established cleanup levels for all analytes including GRO, PAHs, pesticides, herbicides, PCBs, and for dioxin and furan contaminants.

One sediment sample, of the ten primary sediment samples collected, exhibited concentrations of RCRA 8 metals above established cleanup levels. Sediment sample 12NVNCSD06, collected from a small surface pond near the center of the NVNC site, exhibited concentrations of cadmium (5.7 mg/kg) and lead (650 mg/kg) above their established cleanup levels of 5 and 530 mg/kg, respectively.

In addition, concentrations of total low molecular weight PAHs (LPAH) and high molecular weight PAHs (HPAH) in the sediment samples collected were below site-specific total LPAH and HPAH cleanup concentrations established for the site. Sediment sampling results are included in Table 6-2. The results for sediment sample RRO results are further discussed in the following section.

7.4.1 Petroleum Hydrocarbon and Total Organic Carbon Results

Sediment samples collected from areas containing suspected plant or peat material were also analyzed using the silica gel cleanup method for DRO/RRO and TOC to evaluate biogenic interference from NOM. The silica gel analyses were done according to the ADEC Technical Memorandum 06-001 titled Biogenic Interference and Silica Gel Cleanup (ADEC, 2006). DRO was not detected in sediment samples above the established site-specific cleanup criteria concentration of 3,500 mg/kg.

Concentrations of RRO were detected in 6 of the 10 primary samples collected above the established site-specific cleanup level of 3,500. Review of RRO silica gel cleanup results and the sample chromatograms indicates a non-fuel pattern that resembles NOM (chromatograms are included electronically with the data). Analysis following the silica gel cleanup resulted in concentrations of RRO that were reduced by an average of 50 percent.

7.4.2 Volatile Organic Compounds

One sediment sample had methylene chloride detected above the cleanup level. However, this result is an estimated result for being reported below the LOQ and associated with trip blank contamination.

7.5 SURFACE WATER SAMPLING RESULTS

Surface water samples were collected from standing ponds and from along the drainage basin that runs through the NVNC site. Since the ADEC does not have cleanup levels for DRO, GRO, and RRO in surface water, Bristol calculated TAH and TAqH results using SW 8260B and SW 8270C-SIM. The TAH result is the sum of BTEX results and TAqH is calculated by summing BTEX and PAH results. No visible sheens or petroleum odors were visible or detectable at any of the surface water sampling locations during sample collection. Surface water samples were collected from below the water surface.

The CA budget only allowed for the collection of ten primary surface water samples which included the sampling of surface ponds (surface water samples 12NVNCSW04 through 12NVNCSW10) and the creek drainage (surface water samples 12NVNCSW01 through 12NVNCSW03). Surface water sample locations, including surface water sampling locations exhibiting concentrations of contaminants above established cleanup criteria, are shown on Figure 5.

The only exceedances of surface water cleanup criteria for the site were for the Arochlor-1260 PCB congener. Three primary and one sample duplicate exhibited concentrations of the Arochlor-1260 PCB congener above the cleanup level of 0.5 micrograms per liter (µg/L). Surface water sample locations SW07 (sample 12NVNCSW07) and SW10 (sample 12NVNCSW10) contained concentrations of Arochlor-1260 at 0.66 and 1.0 µg/L, respectively. Surface water sample location SW05 (sample 12NVNCSW05 and its QC sample duplicate 12NVNCSW11) contained concentrations of Arochlor-1260 at 0.5 and 0.67 µg/L, respectively. All of the surface water sample locations are depicted on Figure 5.

These four surface water samples were collected from surface ponds located near Cargo Beach Road. The suspected source area for exceedances of the PCB cleanup criteria in groundwater is currently unknown; however, soil sample location 12NVNCSL28 (also collected from along Cargo Beach Road) exhibited a concentration of 29 mg/kg which significantly exceeds the soil cleanup level of 1.0 mg/kg. In addition, although the PCB cleanup level in sediment (0.7 mg/kg) was not exceeded in any of the sediment samples that were collected, it should be noted that the PCB-1260 Arochlor was detected in all sediment samples collected along the road corridor.

7.6 HUMAN HEALTH CONCEPTUAL SITE MODEL

A Human Health Conceptual Site Model (CSM) was developed for the NVNC site. The purpose of the CSM is to identify all:

- Present and future ways people or animals may be exposed (exposure pathways)
- Routes the contaminants may take as they move through soil, air, groundwater, and/or surface water (migration routes)
- Potential receptors (i.e., different human activities which could result in exposure) at each site

Copies of completed ADEC Human Health CSM Scoping and Graphic Forms for the NVNC site are included in Appendix G.

The CSM illustrates the exposed media, transport mechanisms, and exposure pathways, as well as current and future receptors. The following subsections describe each aspect of the CSM.

7.6.1 Source and Release Mechanism

The source and release mechanisms for the NVNC site appear to be varied. Spills and leaks from CON/HTRW drums and hazardous materials may be one source. The NVNC's proximity to the former NE Cape FUDS Cargo Beach Pump House and re-fueling pipeline may be an additional source of petroleum hydrocarbon contamination. During the November 2012 Restoration Advisory Board meeting that took place in Savoonga, several Savoonga residents mentioned that at one time a break in the pipe had occurred along Cargo Beach Road just upgradient from the NVNC. The USACE intends to further investigate this claim under the FUDS program during the 2013 field season.

In addition, the NVNC is located adjacent to and downgradient from the NE Cape FUDS site. The NE Cape FUDS Main Operations Complex and both Sites 13 and 31 are located approximately 1.5 and 2 miles (aerially) from the NVNC.

7.6.2 Impacted Media and Transport Mechanisms

Based upon the review of 2012 SI sampling results, soil, sediment, and surface water are believed to be the impacted media at the site. Transport mechanisms for contamination present in surface soil are migration to subsurface soil and to groundwater. Additional potential contaminant transport mechanisms include volatilization, runoff or erosion to surface water, and flow of groundwater to surface water bodies and sediment. Potential exposure media include soil, groundwater, air, surface water, and sediment. Bioaccumulation of contaminants in plants and animals is not considered a transport mechanism due to the nature of the contaminants present.

7.6.3 Exposure Media, Exposure Pathways, and Receptors

Potential exposure media include soil, groundwater, air, surface water, and sediment. Potential receptors at the NVNC site include current and future residents, site visitors, construction workers, and subsistence harvesters and consumers. Exposure media are further discussed below.

7.6.3.1 Soil

Incidental soil ingestion is considered an exposure pathway at the site because the impacted soil is buried below and within two feet of the ground surface. Although somewhat unlikely, there is a potential for site users and visitors to accidently and unknowingly ingest impacted soil.

Dermal absorption of contaminants and inhalation of fugitive dust from soil may occur currently and in the future by industrial or construction workers if activities involve digging into the subsurface soils. DRO meets the ADEC definition of a volatile compound of concern which may permeate the skin.

7.6.3.2 Groundwater

Natural conditions found at the NVNC cause the groundwater to be potentially unsuitable for use as a drinking water source. The NVNC is located in a tidal zone on the coast of the Bering Sea, so the ingestion of groundwater does not appear to be a current or future exposure pathway.

Due to the climate and nature of the site, dermal exposure of contaminants in groundwater and the inhalation of volatile compounds in tap water do not appear to be current or future exposure pathways. There are no current wells located at the site and any future sources of drinking water at the site would most likely be located further upgradient.

7.6.3.3 Air

Although unlikely, the inhalation of outdoor air is considered a potential exposure pathway because DRO was present in surface soil above the established cleanup level. Persistent winds present at the site make the inhalation of contaminants in outdoor air unlikely.

Inhalation of indoor air is considered a potential exposure pathway at the site because DRO, which is considered a volatile compound, was detected in surface soil within 30-feet of one of the current site structures (Mr. Eugene Toolie Cabin).

7.6.3.4 Surface Water

Although site surface water bodies are not currently being used as drinking water sources, the ingestion of surface water is a complete exposure pathway. In the future water collected from the creek drainage and from shallow surface ponds could be utilized by site users.

Due to the climate and nature of the site, dermal exposure of contaminants in surface water does not appear to be an exposure pathway of concern. Current residents collect and transport their drinking water to the site from other island drinking water source areas.

7.6.3.5 Sediment

The nature and climate of the NVNC site and a review of sediment sampling results indicate that direct contact with sediment is an unlikely exposure pathway. Climate limits the amount of activities that can occur around sediment.

7.6.3.6 Biota

The NVNC site is located in a remote area where people rely on wild plants and animals as their primary source of food. However, the contaminants that were detected during the 2012 SI do not have the potential to bioaccumulate.

7.7 ECOLOGICAL CONCEPTUAL SITE MODEL

An Ecological CSM was prepared to document how plants and/or animals may be exposed to contaminants found to be present at the NVNC.

During the preparation of the Ecological CSM the following factors were evaluated:

- Direct visual impacts or signs of acute toxicity;
- Terrestrial and aquatic exposure routes;
- Quality and availability of habitat;
- Quantity of contaminated media; and
- Toxicity benchmark levels.

7.7.1 Direct Visual Impacts and Acute Toxicity

Site reconnaissance activities and field observations did not indicate the presence of direct visual impacts or acute toxicity. Visibly stressed vegetation was not encountered.

7.7.2 Terrestrial and Aquatic Exposure Routes

Potentially complete terrestrial exposure pathways include particulates deposited on plants directly or from rain splash and the potential ingestion and/or exposure while animals grub for food, burrow, or groom.

Aquatic exposure routes may include direct exposure to contaminated sediments through foraging or burrowing. Aquatic plants rooted in contaminated sediments may also be an exposure route.

7.7.3 Habitat

The NVNC area can be characterized as low-lying with ponds, bogs, and poorly drained soils. There are no known threatened or endangered species within the vicinity of the NVNC; however, the area is regularly used by the native population for subsistence activities. The area could adversely be impacted by the presence of contamination.

7.7.4 Contaminant Quantity

The total contaminated surface area of the NVNC is unknown at this time. Future RA/SI activities will be required to further investigate the extent of contamination present. Initial sampling results have indicated that the aquatic environment may be affected and that petroleum and non-petroleum contaminants are present. At this point, the total area of petroleum-impacted soil does not appear to exceed one-half acre.

7.7.5 Toxicity Determination

Contaminants documented to be present at the NVNC above established cleanup levels are not known to pose a bioaccumulation risk; however, additional RA/SI activities are planned for the site. RA/SI activities include the excavation and removal of contaminated soil and sediment along with follow-up confirmation sampling.

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8.0 QUALITY ASSURANCE AND QUALITY CONTROL DATA MANAGEMENT

A quality assurance (QA) summary has been prepared by the Bristol Chemist. The QA summary presents the data quality for environmental samples collected during the SI and comprehensive environmental sampling event conducted at the NVNC during the 2012 field season. The QA summary is included in the following sections and all validated analytical data tables are included in the Tables Section of this report.

Electronic copies of all data packages, including Corps of Engineers Loading Tool (COELT) deliverables, are included on CD in Appendix D.

8.1 QUALITY ASSURANCE SUMMARY

This QA review summarizes the results and quality of laboratory reports on analytical data from samples collected in support of the 2012 NVNC RA/SI.

Samples were submitted to TestAmerica-Seattle in four sample delivery groups (SDGs): 580-34602, 580-34947, 580-34955, and 580-35165. Samples were also subcontracted to TestAmerica-West Sacramento for dioxin and furan analysis and TestAmerica-Denver for various organic analyses. The ADEC accreditation number is UST-022.

Complete data packages associated with these SDGs are presented in Appendix D. All data were reviewed in accordance with appropriate EPA procedural guidance documents, and ADEC regulatory guidance documents. The reference documents include the EPA Functional Guidelines for Organic Data Review (EPA, 2008b), EPA Functional Guidelines for Inorganic Data Review (EPA, 2004), and ADEC Environmental Laboratory Data and Quality Assurance Requirements—Technical Memorandum 06-002 (ADEC, 2009). ADEC Laboratory Data Review Checklists (ADEC 2010) have been completed for each of the work orders/data packages listed above and are included in Appendix E.

Samples were analyzed in accordance with applicable specifications in EPA Test Methods for Evaluating Solid Waste, SW-846, Final Update IV, Third Edition (EPA, 2008a) and Laboratory Standard Operating Procedures approved by NELAC and the State of Alaska.

The following laboratory analytical methods were used for sample analyses:

- SW 8260B (Volatile Organic Compound Analysis).
- SW 8270C-SIM (Semi-Volatile Organic Compound Analysis)(selective ion monitoring)
- SW 8290 (Dioxin)
- SW 6020 (Metals)
- SW 7470 (Mercury)
- SW 7471 (Mercury)
- SW 8082 (PCBs)
- SW 8081A (Pesticides)
- SW 8151A (Herbicides)
- SW 9045C (pH)
- SW 9060 (Total Organic Carbon)
- AK 101 Gasoline Range Organics (GRO).
- AK 102 Diesel Range Organics (DRO)
- AK 103 Residual Range Organics (RRO)
- Hazcat Oxidizer Screen

This data review focuses on criteria for the following QA/quality control (QC) parameters and their effect on data quality and usability:

- Sample handling and chain of custody (CoC)
- Holding time compliance
- Field QA/QC (trip blanks, field duplicates)
- Laboratory QA/QC (method blanks, laboratory control samples, (LCS/LCSD), surrogates, Matrix spike and matrix spike duplicate (MS/MSD) and analytical methods
- Method reporting limits

- Precision and accuracy
- Representativeness
- Completeness
- Sensitivity-Reporting limits less than allowable maximum contamination levels (MCLs)

In the absence of other QC guidance, method- and/or standard operating procedure-specific QC limits were also utilized to apply qualifiers to the data.

8.2 SAMPLE HANDLING

Samples were transported from NE Cape to Nome via Bering Air and were Goldstreaked from Nome to Anchorage. Samples were hand delivered by Bristol personnel to TestAmerica-Anchorage and shipped via Alaska Airlines Goldstreak to TestAmerica-Seattle or shipped directly to TestAmerica-Seattle by Bristol. TestAmerica-Anchorage added fresh ice prior to forwarding to TestAmerica-Seattle. TestAmerica-Seattle then shipped some samples to TestAmerica-Denver and the dioxin samples to TestAmerica-Sacramento. All sample coolers were shipped with custody seals. CoC forms, laboratory sample receipt forms, and case narratives were reviewed to determine if any sample handling activities might affect the integrity of the samples and the quality of the associated data.

All sample containers in the sample coolers were received at the laboratory intact and within the specified temperature range of 4 degrees Celsius (°C) +/- 2°C except as noted below:

- SDG 580-34602
  - Cooler temperature was recorded at 0.6 °C at receipt. No frozen or broken containers were noted; therefore, no qualifications are necessary on this basis.
- SDG 580-34947
  - Three of the eight coolers in this shipment were received with temperatures less than 2 °C at 1.3, 1.4 and 1.9 °C. However, no frozen or broken containers

were noted in these coolers; therefore, there were no qualifications necessary on this basis.

8.3 HOLDING TIME COMPLIANCE

All samples were extracted, digested, and/or analyzed within the holding time criteria for the applicable analytical methods and in accordance with Work Plan specifications.

- SDG 580-34947
  - The case narrative states that surface water sample 12NVNCSW11 was re-prepared and/or re-analyzed outside of holding time for PCBs by SW 8082 due to a surrogate being below acceptance criteria. However, this sample was re-prepared 10 days after it was collected and re-analyzed another day later. Therefore, the re-prepared and re-analyzed result will be reported without qualification.
  - Surface water samples 12NVNCSW05, 12NVNCSW07, 12NVNCSW08, 12NVNCSW10, and 12NVNCSW11 were initially prepared and analyzed for SW8270C-SIM within holding time but surrogate recoveries were below acceptance criteria. The laboratory re-extracted the samples 25 and 26 days after sample collection which is more than twice the holding time of 7 days. The initial sample results and re-prepared and re-analyzed results were the same for all samples. The initial sample results will be reported with a JL (associated result is an estimated quantity with a low bias) flag for low surrogate recoveries.
- SDG 580-34955
  - TOC analysis was added to soil sample 12NVNCSL66 and analyzed outside of holding time; therefore, this result will be flagged H.

8.4 FIELD QA/QC

Field QA/QC protocols are designed to monitor for possible contamination during collection and transport of samples collected in the field. Collection and analysis of field duplicates also facilitates an evaluation of precision that takes into account potential variables associated with sampling procedures and laboratory analyses. For this project trip blanks and field duplicates were submitted for analysis.

8.4.1 Trip Blanks

Soil trip blanks were prepared at the laboratory by filling 4-ounce (oz) amber soil jars with septa lids with approximately 25 grams of baked Ottawa Sand and 25 mL of methanol containing field surrogate. Water trip blanks were prepared at the laboratory by filling 40 mL volatile organic analysis (VOA) vials with de-ionized water. The trip blanks were analyzed for AK 101 (GRO) and full list SW 8260B analytes.

Trip blanks accompanied all of the sample shipments except for 580-34602, which contained waste samples only.

- SDG 580-34947
  - There were eight coolers in this shipment. While not clearly marked on the CoC, the field sampler confirmed that the two coolers that were received a day later at the lab were those containing all the volatile samples and trip blanks. One cooler had all the water volatiles and trip blank as well as some soil volatile samples and a soil trip blank. The other cooler contained the remaining soil volatiles samples and a soil trip blank. This is corroborated by the electronic data deliverable which assigned coolers names to all the volatile samples.
  - Results were below the LOQ but GRO, acetone, and methylene chloride detected between LOQ and detection limit (DL) in the soil/sediment trip blanks. All associated GRO samples and trip blanks are B flagged due to method blank contamination; therefore, no qualifications on the basis of trip blank contamination for GRO. Acetone was present in both trip blanks at similar concentrations and all detected soil or sediment acetone results are flagged TB to indicate potential trip blank contamination.
  - One of the two methylene chloride trip blanks had a detectable methylene chloride result. The three associated sample results with detectable methylene chloride were flagged TB to indicate an estimated result with a high bias due to trip blank contamination based on the cooler associations in the electronic data.
- SDG 580-34955
  - Four coolers in this shipment. Four trip blanks were submitted. However, what went into which cooler is not clearly indicated on the CoC. The electronic data indicated that all trip blanks went into one cooler, identified in

the electronic data as being “Box #1”. Therefore, only detected VOC and GRO results associated with samples shipped in the cooler identified as “Box 1” could be evaluated for trip contamination and only sample results associated with Box #1 were qualified with a TB.

- Most trip blank results were below the LOQ; however, methyl tert-butyl ether, toluene, 1,1-Dichloroethene, and GRO was reported as detected above the LOQ in three, one, two, and three trip blanks respectively. 1,1-Dichloroethene, 2-Butanone (MEK), acetone, and GRO were reported between LOQ and DL in one, three, four, and one trip blanks respectively. There were no detected methyl tert-butyl ether, toluene, 1,1-Dichloroethene, or MEK results reported in this SDG. Only GRO and acetone results that the electronic data indicated were shipped in Box #1 were qualified TB when reported within ten times of the amount in the trip blank with the lowest concentration. These lowest trip blank concentrations were 140 µg/kg acetone and 1.2 mg/kg GRO. Most of the associated results were B flagged due to method blank contamination; therefore, a flag for trip blank contamination was not added. Only one acetone sample result was qualified TB on this basis.

- SDG 580-35165
  - The trip blank associated with this shipment had three detectable compounds reported – GRO, acetone, and carbon disulfide. The associated GRO samples were either already B flagged for method blank contamination or had GRO results more than ten times the amount in the trip blank with the exception of soil sample 12NVNCBPSS02 which will be flagged TB to indicate potential trip blank contamination. The acetone results in three samples and carbon disulfide results in four samples are TB flagged in addition to the J flag already assigned for being reported below the LOQ.

8.4.2 Field Duplicates

Eight sets of field duplicate soil samples, two sets of sediment duplicates, and one set of water duplicates were collected and analyzed during the completion of the project. The frequency of field duplicate collection met frequency requirements specified in the Work Plan. When analytes were detected in both duplicate pairs above the LOQ, the relative percent differences (RPDs) between the analytes were calculated. When analytes were present at concentrations below the LOQ in one or both samples, no valid comparison could be made. Duplicate sample results that did not meet RPD precision criteria were

QN flagged and are considered estimates. The majority of analytes were not detected. Overall, there was adequate comparability of field duplicate results to meet project data quality objectives with noted exceptions.

- SDG 580-34602
  - No field duplicates were submitted with this shipment containing only waste samples.
- SDG 580-34947
  - One set of soil sample field duplicates, two sets of field duplicate sediment samples, and one set of surface water sample field duplicates were included in this shipment.
  - For the soil sample duplicates, 12NVNCSSL29 and 12NVNCSSL30, all RPDs were within acceptance limits with the exception of barium and lead at 104 percent (%) and 195%, respectively. These results are flagged QN to indicate estimated results without an identified bias.
  - Sediment sample duplicates 12NVNCSD05 and 12NVNCSD11 had RPDs above acceptance criteria for barium, chromium, and lead at 57.1%, 103%, and 52.2% respectively and are flagged QN. Sediment sample duplicates 12NVNCSD10 and 12NVNCSD12 had RPDs above acceptance criteria for five SW 8290 compounds which will also be flagged QN.
  - The surface water duplicate samples 12NVNCSW05 and 12NVNCSW11 had all RPDs within acceptance criteria.
- SDG 580-34955
  - Six sets of soil field duplicates were submitted with this shipment. Duplicate pair 12NVNCSL10 and 12NVNCSL37 had only one RPD exceedances with arsenic at 54.8%. Duplicate pair 12NVNCSL27 and 12NVNCSL39 exceed RPD for RRO results at 81.2%. Duplicate pair 12NVNCSL40 and 12NVNCSL64 exceed chromium, zinc, PCB-1254, PCB-1260, chrysene, DRO, and RRO RPDs at 78.7%, 87.2%, 131%, 152%, 142%, 126%, and 136% respectively. Duplicate pair 12NVNCSL52 and 12NVNCSL65 exceeded RPD criteria for DRO and RRO at 63.2 and 66.7 % respectively. Duplicate pair 12NVNCSL57 and 12NVNCSL67 had no RPDs that exceeded criteria. Duplicate pair 12NVNCSL54 and 12NVNCSL66 exceeded RPD for DRO without silica gel cleanup at 104% and DRO and RRO with silica gel cleanup at 100 and 66.7 % respectively. These results are qualified QN.

- SDG 580-35165
  - One set of soil field duplicates, 12NVNCBPSS03 and 12NVNCBPSS04, was submitted with this shipment. Field duplicate RPDs exceeded criteria for DRO, RRO, and zinc at 139 %, 153%, and 62.1 % respectively. These results are flagged QN to indicate estimated results without a bias identified.

8.5 LABORATORY QA / QC

8.5.1 Laboratory Blanks

Method blanks are analyzed concurrent with a batch of 20 or fewer primary samples for each of the analytical procedures performed for this project. Method blanks were analyzed at the required frequency and target analytes were not detected (ND) with the following exceptions:

- SDG 580-34602
  - All method blank results were less than the LOQ, but some TCLP 8260B analytes were reported as detected with a J flag and associated with detected sample results less than ten times the amount in the method blank. Naphthalene, methylene chloride, m & p-xylenes, o-xylene, and 1,2,4-trimethylbenzene results were flagged B to indicate potential high bias.
- SDG 580-34947
  - All method blank results were less than the LOQ but some analytes were reported between the LOQ and DL. 1,2,3-trichlorobenzene was reported in a method blank and one associated sample result was within ten times the amount in the blank and is B flagged. GRO was detected in a method blank that was analyzed twice. Most of the GRO sample results reported in this SDG are B flagged due to method blank contamination. There was a GRO method blank, 580-121469/1-A, with detectable GRO reported in the hardcopy data that was not in the electronic data. All GRO results are associated with a method blank in the electronic data. Cadmium was reported in the method blank associated with nine sample results and a lab duplicate. Three sediment and two soil results are B flagged because their cadmium results are less than ten times the amount in the method blank. Mercury was detected in the method blank associated with the eleven water samples, all of which are B flagged.

- SDG 580-34955
  - All method blank results were less than the LOQ but m,p-xylene, acetone, GRO, benzo[g,h,i]perylene, pyrene, indeno[1,2,3-cd]pyrene, RRO, cadmium, and mercury were reported between the LOQ and DL. Two method blanks contained m,p-xylenes. One was associated with only a single non-detect sample result. The other method blank resulted in two samples and one trip blank result qualified B. One method blank contained acetone and 17 associated sample results are B flagged. Each of the four GRO method blanks reported in this SDG had detectable GRO and led to 46 samples and 2 trip blanks being qualified with a B flag. Benzo[g,h,i]perylene, pyrene, and indeno[1,2,3-cd]pyrene method blank contamination led to eight, four, and two samples B flagged, respectively. RRO was detected in one silica gel cleanup batch and one without silica gel cleanup. However, only one sample result was within ten times the concentration in the method blank and B flagged. Cadmium was B flagged in one sample associated with a method blank detection. Mercury was detected in the method blank associated with the three waste samples in this SDG and all three sample results are B flagged.
- SDG 580-35165
  - All method blank results were less than the LOQ but GRO was reported as detected between the LOQ and DL with a J flag indicating the concentration should be considered estimated. GRO was B flagged in three samples and the trip blank. Also, although the case narrative does not discuss, the SW 8290 method blank contained five detected dioxin compounds that were reported with a J flag for being less than the LOQ as well as four totals. Qualifications were made to two compounds in each of the two samples analyzed by 8290.

Method blank detections are shown below:

SDG	Method Blank ID	Prep Batch ID	Analyte	Result-units-flag	Analysis Batch ID
580-34602	580-118605/1-A	N/A	Naphthalene	33.3 µg/L J	580-118860
580-34602	580-118605/1-A	N/A	Methylene chloride	43.2 µg/L J	580-118860
580-34602	580-118605/1-A	N/A	m & p-xylenes	97.6 µg/L J	580-118860
580-34602	580-118605/1-A	N/A	o-xylene	63.6 µg/L J	580-118860
580-34602	580-118605/1-A	N/A	1,2,4-trimethylbenzene	56.4 µg/L	580-118860
580-34947	280-138345/6	N/A	1,2,3-trichlorobenzene	0.347 µg/L J	280-138345
580-34947	580-121408/1-A	580-121408	GRO	1.36 mg/kg J	580-121429
580-34947	580-121408/1-A	580-121408	GRO	1.1 mg/kg J	580-121676
580-34947	580-120948/19-A	580-120948	Cadmium	0.0704 mg/kg J	580-121023
580-34947	580-121020/21-A	580-121020	Mercury	0.0000475 mg/L J	580-121127
580-34955	580-120169/1-A	580-120169	m,p-Xylene	12.3 µg/kg J	580-120156
580-34955	580-120241/1-A	580-120241	Acetone	112 µg/kg J	580-120252
580-34955	580-120352/1-A	580-120352	GRO	1.54 mg/kg J	580-120371
580-34955	580-120402/1-A	580-120402	GRO	1.49 m/kg J	580-120417
580-34955	580-120402/1-A	580-120402	GRO	1.28 mg/kg J	580-121243
580-34955	580-120498/1-A	580-120498	GRO	0.848 mg/kg J	580-121300
580-34955	280-138264/1-A	280-138264	Benzo[g,h,i]perylene	2.2 µg/kg J	280-139566
580-34955	280-138264/1-A	280-138264	Pyrene	1.73 µg/kg J	280-139566
580-34955	280-138302/1-A	280-138302	Indeno[1,2,3-cd]pyrene	1.06 µg/kg J	280-139241
580-34955	580-120254/1-A	580-120254	RRO	14.9 mg/kg J	580-120298
580-34955	580-120948/19-A	580-120948	Cadmium	0.0704 mg/kg J	580-121023
580-34955	580-121001/1-B	580-121114	Mercury	0.000627 mg/L J	580-121127

8.5.2 Laboratory Control Samples

Analyses of LCS/LCSDs for target analytes met laboratory and project QC goals for target analytes in all SDGs except as noted below:

- SDG 580-34947
  - The LCS for 1,2-dichloropropane was above acceptance criteria; however, all the associated samples were non-detect so no qualifications were necessary on this basis. The LCSD for the water samples was above acceptance criteria for fluorene. All the associated sample results were reported as non-detect;

therefore, no qualifications on this basis. The LCSD recovery of indeno[1,2,3-cd]pyrene was above acceptance criteria. Only one associated sample result, 12NVNCSD06, was reported as detected above the LOQ and is flagged JH to indicate a potential high bias.

- The lab did not report a LCSD for the soil/sediment batches prepared and analyzed for SW 8081, SW 8082, and SW 8260B. Batch precision information was obtained from MS/MSDs. The MS/MSD on 12NVNCSD05 and 12NVNCSD11 failed precision criteria for all SW 8081 compounds except 4,4'-DDD, aldrin, dieldrin, and toxaphene. The other 17 pesticide compounds will be J flagged in the six sediment samples in this SW 8081 batch to indicate an estimated result without an identifiable bias direction. The MS/MSD on 12NVNCSSL29 was within precision acceptance criteria for the two compounds reported by SW 8082 - PCB-1016 and PCB-1260. The SW 8260B MS/MSD on 12NVNCSSL30 was within precision criteria. None of the associated sample duplicates had detected results reported above the LOQ; therefore, these results were not used to assess precision due to the inherent poor precision below the LOQ.

- SDG 580-34955
  - One 2,2-Dichloropropane LCS was below acceptance criteria and was associated with two reported sample results which are flagged JL to indicate an estimated result with a low bias. One 1,1,1-Trichloroethane LCS was below acceptance criteria and was associated with one reported trip blank result which is flagged JL to indicate an estimated result with a low bias.
  - The RPD for the toxaphene LCS/LCSD was outside acceptance criteria at 52 %; therefore, the five associated sample results will be flagged J to indicate an estimated result without a bias identified.

8.5.3 Surrogates

System Monitoring Compounds (surrogates) are specified for organic chromatographic analytical procedures. Surrogates are compounds similar to target analytes. These compounds are added to each sample prior to collection or extraction. Subsequent surrogate recovery indicates overall method performance. Surrogate recoveries were within prescribed control limits for all primary samples, LCS/LCSD, MS/MSD, and other QA/QC except as noted below.

- SDG 580-34947
  - Recoveries of trifluorotoluene (TFT) were below acceptance limits for eleven sediment and one soil sample. These samples all had percent moisture greater than 20% and therefore were not reanalyzed for the field surrogate below criteria. The associated 8260B sample results will be flagged JL and should be considered estimated with a low bias. Ten of the same sediment samples and the one soil sample also had TFT out for GRO analyses and these results will also be flagged JL.
  - The lab re-prepped and reanalyzed five surface water samples for SW 8270C-SIM analysis because initially the results were associated with surrogates below acceptance criteria. The sample results were all ND at the same LOD for both analyses. The initial results are reported with a JL flag to indicate estimated results with a low bias on the basis of surrogate recoveries.
  - SW 8270C-SIM surrogates were outside acceptance limits in nine sediment samples and one soil sample. Two of these samples, 12NVNCSD07 and 12NVNCSD08, had one surrogate out low and another above acceptance criteria. Therefore, these sample results will be flagged J to indicate an estimated result without a bias identified. The other eight samples will have the detected results flagged JH to indicate a high bias.
  - Surrogates were below acceptance criteria for the six sediment samples analyzed by SW 8081; therefore, these results will be flagged JL to indicate a low bias.
  - Both SW 8082 surrogates associated with 12NVNCSW11 were below acceptance criteria. The laboratory re-prepped and re-analyzed this sample, with acceptable surrogate recoveries, but outside the holding time by more than two times. Both set of results were very similar. The initial results are reported and flagged JL to indicate estimated results with a low bias.
  - All eleven sediment and three soil samples had SW 8082 surrogates below acceptance criteria; therefore, these results are flagged JL to indicate a low bias and estimated result.
  - The surrogates associated with RRO analyses in samples 12NVNCSSL29 and 12NVNCSSL30 were above acceptance criteria. These two results are flagged JH to indicate estimated results with a high bias.
- SDG 580-34955
  - One SW 8260B surrogate was out low for 23 soil samples; therefore these results will be flagged JL to indicated estimated results with a low bias. A

surrogate in two trip blank samples was recovered above acceptance criteria; therefore, the associated detected results are flagged JH to indicate a potential high bias.

- Surrogates were recovered below acceptance criteria in 34 GRO samples; therefore, these results are flagged JL to indicate an estimated results with a low bias.
- Surrogates for SW 8270C-SIM were above acceptance criteria in eight samples that had associated detected sample results; therefore, these results will be flagged JH to indicate an estimated result with a high bias. One sample, 12NVNCSL51, had a single surrogate below acceptance criteria; therefore, this sample is qualified JL. Sample 12NVNCSL56 had surrogate recoveries of 8%, 10%, and 20%. Because this sample is associated with a surrogate recovery of less than 10%, these results are considered rejected, usable for screening purposes only, and are flagged R. Eight samples had one surrogate above acceptance criteria and the other two surrogates recovered below acceptance criteria. For these eight samples, results will be J flagged to indicate an estimated result without a clear bias. Surrogates for SW 8270C-SIM were outside acceptance criteria in eight samples that were diluted at a ratio of 1:20 or greater. No qualifications were made on this basis for these samples.
- One or both of SW 8082 surrogates were outside acceptance criteria in 41 of the 52 samples analyzed by this method. One of these samples, 12NVNCSL28, was reported at a 1:40 dilution so there are no qualifications for this sample on this basis. Another sample, 12NVNCSL08, had one surrogate out above and the other out below acceptance criteria. This sample is flagged J to indicate estimated results without a clear bias. The other 39 samples are associated with surrogates below acceptance criteria and are flagged JL to indicate a low bias.
- The surrogate associated with 12NVNCSL44 was recovered above acceptance criteria for both DRO result reported, with and without silica gel cleanup. The RRO surrogate for sample 12NVNCSL64 was also reported above acceptance criteria. These three results are flagged JH to indicate estimated results with a high bias.
- SW 8081 surrogates associated with sample 12NVNCSL54 results reported under no dilution and a 1:5 dilution were 0 % recovery; therefore, the not detected results are considered rejected and are flagged R and the detected results are considered estimated with a low bias and flagged JL.

- SDG 580-35165
  - The SW 8260B analysis of 12NVNCBPSS04 included one surrogate above acceptance criteria. All SW 8260B compounds were reported as not detected for this sample; therefore, no qualification is necessary on this basis. Surrogate recoveries were above acceptance criteria for three detected GRO samples; therefore, these results will be flagged JH to indicate an estimated result with a high bias. The case narrative incorrectly states that these samples did not contain any target analytes. One of the SW 8081 surrogates associated with 12NVNCBPSS02 was above acceptance limits. There were no detected SW 8081 compounds for this sample; therefore, no qualification necessary on this basis. The AK 103 surrogate associated with 12NVNCBPSS03 was reported above acceptance limits; therefore, this RRO result will be flagged JH to indicate an estimated result with a high bias.

8.5.4 Matrix Spikes

According to the Work Plan, MS/MSDs are not required to be collected in conjunction with project samples for NALEMP projects since NALEMP projects do not have to meet the analysis and reporting requirements of DoD Quality System Manual (QSM) Version 4.2. The batch LCS/LCSDs will be the primary measurement of batch precision and accuracy for this project. However, because MS/MSDs were performed by the lab on project samples, these were included in this data review. All results were within acceptance criteria or did not result in a qualification, for example recovery above criteria associated with a ND result, except for those noted below:

- SDG 580-34947
  - The SW 8260B MS on 12NVNCSSL30 had recoveries above acceptance criteria for 1,1-dichloroethane, 1,2-Dichloropropane, chloroform, cis-1,2-Dichloroethene, and m,p-xylene. All associated sample results were not detected; therefore, no qualifications on the basis of MS/MSD. The SW 8260B MSD on 12NVNCSW01 recovery of methyl tert-butyl ether was above acceptance criteria. The associated sample result was not detected; therefore, there are no qualifications on this basis. The laboratory initially reported in the case narrative and within the hardcopy and electronic data that the methylene chloride MS/MSD for 12NVNCSW01 was outside acceptance criteria but the control limits listed were not exceeded.

- The lab performed an SW 8081 MS/MSD on 12NVNCSD05 and 12NVNCSD11 and several compounds exceeded accuracy and precision limits. Recoveries were below acceptance criteria and therefore associated with a low bias with the exception of beta-BHC which was above acceptance criteria. The SW 8081 results for this sample are all already flagged JL for low surrogate recoveries and, in most cases, J flagged for poor batch precision; therefore, there will be no qualifications on this sample due to MS/MSD precision or accuracy with the exception of beta-BHC which will be flagged just J to indicate an estimated result without a clear bias.
- The PCB-1260 MS/MSD and the PCB-1016 MS was below accuracy acceptance criteria for 12NVNCSSL29. The associated sample results were flagged JL for surrogates below acceptance criteria; therefore, additional flagging was not necessary.

- SDG 580-34955
  - The lab performed MS/MSD on five DRO/RRO samples. The DRO and RRO results with and without silica gel cleanup for sample 12NVNCSL40 are flagged J to indicate estimated results due to recoveries and RPDs outside acceptance criteria. The lab qualified samples 12NVNCSL44 and 12NVCSL66 DRO results, both with and without silica gel cleanup, as estimated due to MS/MSD percent recoveries outside acceptance criteria. However, the concentrations in these samples were greater than four times the amount in the spike; therefore, these results are not qualified on this basis. These results are qualified on another basis. The RRO with silica gel cleanup result for this sample is qualified JH as the percent recoveries exceeded acceptance criteria in both the MS and MSD. The RRO results, both with and without silica gel cleanup, for 12NVNCSL50 are considered estimated on the basis of recoveries of both the MS and MSD and are flagged JH and JL respectively. The silica gel cleanup RRO result for sample 12NVNCSL66 is flagged JL for MS and MSD recoveries below acceptance criteria.
  - MS and MSD recoveries of 1,1-Dichloroethane, chloroethane, and trichlorofluoromethane associated with sample 12NVNCSL01 were above acceptance criteria. However, these compounds were not detected in the sample; therefore, no qualification is necessary on this basis.
  - The MSD recovery of PCB-1260 was below acceptance criteria for sample 12NVNCCH11; therefore, this result will be flagged JL as estimated with a low bias.

- SDG 580-35165
  - No MS/MSDs were designated on the CoC and the lab performed and reported a MS/MSD only on other client samples; therefore, there are no qualifications on this basis for this SDG. Batch accuracy and precision information available from other QC.

8.5.5 Method Reporting Limits (Sensitivity)

Reporting limits for all analyses met or exceeded (i.e., were lower than) the cleanup criteria except when samples were highly diluted due to presence of hydrocarbon target analytes, high moisture contents, limited sample volume, dilutions performed by the laboratory due to dark extracts, and suspected effected continuing calibration verification (CCV) recoveries from undiluted samples.

8.5.6 Calibration Verification

- SDG 580-34947

The CCV for trichlorofluoromethane associated with the soil and sediment samples was reported in the case narrative to be above acceptance criteria. The associated samples were also reported, according to the case narrative, as non-detect for this compound; therefore, there are no qualifications on this basis. The case narrative also states that the closing CCV associated with the SW 8081 analyses of some surface water samples did not meet criteria on both columns and that the associated samples were analyzed twice with similar results. There were no qualifications made on this basis for SW 8081 results.

- SDG 580-34955
  - A CCV associated with sample 12NVNCTB04 was recovered above acceptance criteria for chloroethane, dichlorodifluoromethane, trichlorofluoromethane, MEK and bromomethane. The associated sample results were not detected; therefore, no qualifications are necessary on this basis.
  - A CCV associated with samples 12NVNCSL01 and 12NVNCSL23 had negative recoveries for carbon disulfide and 2,2-Dichloropropane (-21.8). No volume left to re-analysis of samples and a variance was approved. The associated

sample results are flagged R and considered rejected. All other samples were reanalyzed for these two compounds the associated batch (120493).

- SDG 580-35165
  - The CCV for 2-butanone was recovered above acceptance criteria; however, the associated sample results were not detected, according to the case narrative. No qualifications were made on this basis.

8.5.7 Internal Standards

- SDG 580-34947
  - The case narrative indicated that there were issues with internal standard responses in both the SW 8151 and SW 8270C-SIM analyses. Follow-up with the lab indicated that the SW 8270C-SIM internal standard acenaphthene-d10 for sample 12NVNCSD03 was above the criteria for area counts. However, because the associated results were non-detect, no qualification is necessary. The lab's resubmitted case narrative states that there was a low bias in the internal standard associated with the 8151 result for sample 12NVNCSD07 which would cause a high bias. The associated results were not detected; therefore, no qualifications on this basis.

8.5.8 Other Qualifications

- SDG 580-34602
  - The case narrative stated that the detected SW 8082 results contained more than one PCB Aroclor component for sample 12NVNCCH05 and that results should be considered estimated due to shared peaks. The two detected compounds, PCB-1254 and PCB-1260, are flagged J on this basis.
- SDG 580-34955
  - The case narrative stated that the detected 8082 results contained more than one PCB Aroclor component for samples 12NVNCSL10, 12NVNCSL37, 12NVNCSL14, 12NVNCSL40 and 12NVNCSL64 and that results should be considered estimated due to shared peaks. In each of these five samples, the two detected compounds, PCB-1254 and PCB-1260, are flagged J on this basis.
  - The analyte 2,3,7,8-TCDF in samples 12NVNCSL01 and 12NVNCSL54 was noted in the case narrative to have ion abundance ratios outside of criteria. The analyte has been reported as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio for this analyte. These two results are already J flagged for being reported

between the LOQ and the DL; therefore, no qualifications necessary on this basis.

8.6 Precision, Accuracy, Representativeness, Completeness, Comparability and Sensitivity (PARCCS)

The following subsections summarize whether the overall precision, accuracy, completeness, comparability and representative portions of what is sometimes referred to as PARCCS (precision, accuracy, representativeness, completeness, comparability, and sensitivity) were met. Sensitivity is addressed in Section 8.5.5 above entitled Method Reporting Limits (Sensitivity).

8.6.1 Precision and Accuracy

Precision criteria monitor analytical reproducibility. Accuracy criteria monitor agreement of measured results with “true values” established by spiking applicable samples with a known quantity of analyte or surrogate. Precision and accuracy were evaluated by comparing field duplicates, MS/MSD and LCS/LSCD pairs for this project. Field duplicates and MS/MSD samples were collected in accordance with Work Plan specifications. Field duplicate RPDs met applicable control limits except as noted in Section 8.4.2. Recoveries and RPDs for all LCS/LSCD and MS/MSD samples were within required limits except as noted in Sections 8.5.2 and 8.5.4 respectively.

8.6.2 Representativeness

Data representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or environmental condition. The number and selection of samples were determined in the field to account accurately for site variations and sample matrices. The DQO for representativeness was met.

8.6.3 Completeness

Data completeness is defined as the percentage of usable data (usable data divided by the total possible data).

> % completeness = number of valid (i.e., non-R flagged) results/
> number of reported results

A completeness goal of 90% usable data was met.

8.6.4 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another. Data produced for this project followed applicable field sampling techniques and specific analytical methodology. The DQO for comparability was met though some field duplicates had poor agreement between results. Those results were flagged QN as estimates.

8.7 DATA SUMMARY

In general, the overall quality of the data was acceptable. The data quality was determined as acceptable, estimated, or rejected. Acceptable data are associated with QC data that meet all QC criteria or with QC samples that did not meet QC criteria but data quality objectives were not affected. Estimated J results are considered inaccurate due to a bias created by matrix interference or QC acceptance criteria which were not met. Rejected R results are not usable. The EPA National Functional Guidelines (EPA, 2008b; EPA 2010) were used to evaluate the acceptability of the data.

Data quality meets established DQO established for this project. All data are suitable for their intended use, with the exception of those rejected results which are usable for screening purposes only.

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9.0 CONCLUSIONS, RECOMMENDATIONS, AND PROJECT GOALS

The following sections discuss the conclusions of the 2012 RA/SI, recommendations for follow-up work, and overall project goals.

9.1 CONCLUSIONS OF RA

One of the primary focuses of the 2012 field season and SOW was to remove remaining hazardous and non-hazardous items from the NVNC site. Remaining debris and CON/HTRW posed various physical and environmental hazards to both residents and visitors of the NVNC site. In a span of approximately three weeks, the NVS crew, with support from Bristol, was largely successful in removing remaining debris and CON/HTRW from the NVNC. Below is a summary of tasks that were completed as part of the RA:

- Successful mobilization and demobilization of personnel and equipment to and from the site
- Performance of all field tasks in a safe manner with not accidents and zero lost-time incidents
- Removal and burning of remaining non-painted wood debris
- Incident-free removal of the following non-hazardous and hazardous materials:
  - 76,932 net pounds of scrap metal and non-burnable debris
  - 5,500 gross pounds of lead contaminated burner ash
  - 1,400 gross pounds of LBP-containing painted wood debris
  - 3,072 gross pounds of CON/HTRW
- Collection and staging of a few remaining CON/HTRW items for characterization, transportation, and disposal in 2013

9.2 CONCLUSIONS OF SI

A review of analytical results collected during the SI indicates that impacted areas are present at the NVNC site with contaminants present in soil, sediment, and surface water at concentrations above established ADEC and site-specific cleanup levels. Figure 6 shows all of the 2012 sample locations by matrix. Figure 7 shows sample locations with exceedances of cleanup criteria for SI sampling conducted in 2012 as well as from the years 1994, 1998, and 2001.

9.2.1 Soil

Of the soil samples collected, sample analytes were either not detected or exhibited concentrations below established cleanup levels for GRO, VOC, pesticide, herbicide, and for dioxin and furan contaminants. Concentrations of petroleum hydrocarbons (DRO and RRO) were detected in soil at levels above the site-specific cleanup level in five and four soil samples, respectively. One soil sample exhibited a concentration of the PAH contaminant benzo[a]pyrene above the cleanup level.

Nearly a quarter and a third of soil samples collected exhibited concentrations of arsenic and chromium above their respective site-specific cleanup levels. Elevated naturally occurring concentrations of arsenic and chromium have been documented in the area. Cadmium was detected in three soil samples at concentrations above the established cleanup level. Two soil samples exhibited concentrations of lead above the established ADEC cleanup level.

Of most concern was the detection of concentrations of PCBs in two soil samples above the established cleanup criteria of 1.0 mg/kg. Soil sample 12NVNCSL28, collected from beneath Debris Pile No. 23, exhibited a concentration of the Arochlor-1260 PCB congener of 29 mg/kg. Soil sample 12NVNCSL64, collected from the AA01 collection location, exhibited Arochlor-1254 and Arochlor-1260 congener results of 2.5 and 2.0 mg/kg, respectively.

9.2.2 Sediment

Of the ten primary sediment samples that were collected from surface ponds and from along the drainage basin that runs through the NVNC, only RRO, cadmium, and lead were detected at concentrations above established cleanup criteria. Concentrations of

RRO that were detected above the site-specific cleanup level (6 of the 10 samples) could be biogenic in nature instead of being from a petroleum hydrocarbon source.

One sediment sample (12NVNCSD06) exhibited concentrations of cadmium (5.7 mg/kg) and lead (650 mg/kg) above their established cleanup levels of 5 and 530 mg/kg, respectively.

9.2.3 Surface Water

A review of surface water sampling results indicates that the only contaminant detected above cleanup criteria was the Arochlor-1260 PCB congener. Three primary and one sample duplicate surface water samples exhibited concentrations of the Arochlor-1260 PCB congener slightly above the cleanup level of 0.5 µg/L, with the highest result being 1.0 µg/L detected at sample location 12NVNCSW10.

9.3 RECOMMENDATIONS

A future RA should be performed to properly characterize, transport, and dispose of the last few CON/HTRW items that were generated at the end of the 2012 field season.

Although the discovery of contaminants present in the soil, sediment, and surface water of the NVNC is not widespread, further investigation and the performance of potential future RAs at documented areas where cleanup levels were exceeded are warranted. Additional sampling and the potential removal, transportation, and disposal of soil and sediment should be considered.

Although not the focus of the 2012 field season, additional abatement and RAs should be performed on the three remaining structures at the NVNC and on the remaining structures located at the Sipenpak Camp. Remaining structures contain ACM and LBP that should be abated in order to remove the hazard and potential exposure to site visitors and residents.

9.4 PROJECT GOALS

The overall goal of the NALEMP project is to accomplish the following tasks:

- To protect and provide for the health and safety of the people by identifying and eliminating unacceptable exposure risks to human health
- To protect and enhance the environment and preserve Native culture in the NE Cape and NVNC area
- To provide employment opportunities for the Native Village of Savoonga people

It should be noted that NALEMP addresses DoD impacts that directly affect tribes, but it does not have a mandate to clean up FUDS. This responsibility is addressed by the USACE's FUDS program. A priority for the NVS is to identify and eliminate all unacceptable exposure risks to human health and the environment at the NVNC which are a result of previous FUDS activity.

10.0 REFERENCES

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FIGURES

Drawing: O:\JOBS\49029 SAVOONGA NALEMP\ACAD-ENVIRO\FIGURES\DWG\49029_FIG1_MAY09_V2.DWG - Layout: 49029_FIG1_MAY09
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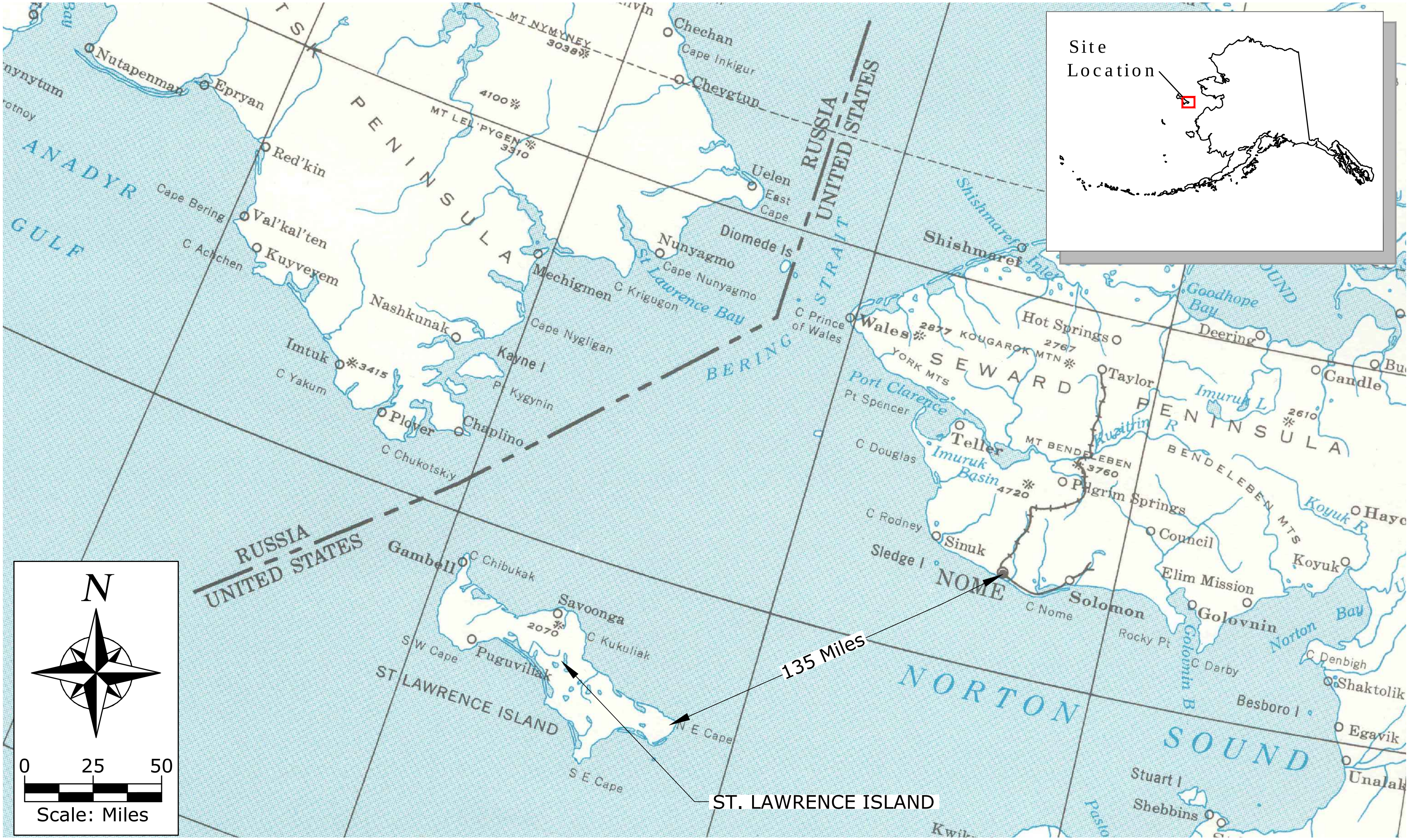

Source: USGS National Atlas Sheet Number 42-43

Legend

NALEMP Native American Lands Environmental Mitigation Program

FIGURE 1
NORTHEAST CAPE, ST. LAWRENCE ISLAND, ALASKA
SAVOONGA NALEMP
VICINITY MAP

Bristol
ENVIRONMENTAL
REMEDIATION SERVICES, LLC
Phone (907) 563-0013 Fax (907) 563-6713
PROJECT NO. 49029

DATUM: NA
PROJECTION: NA

DATE 05/11/09
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SCALE SHOWN
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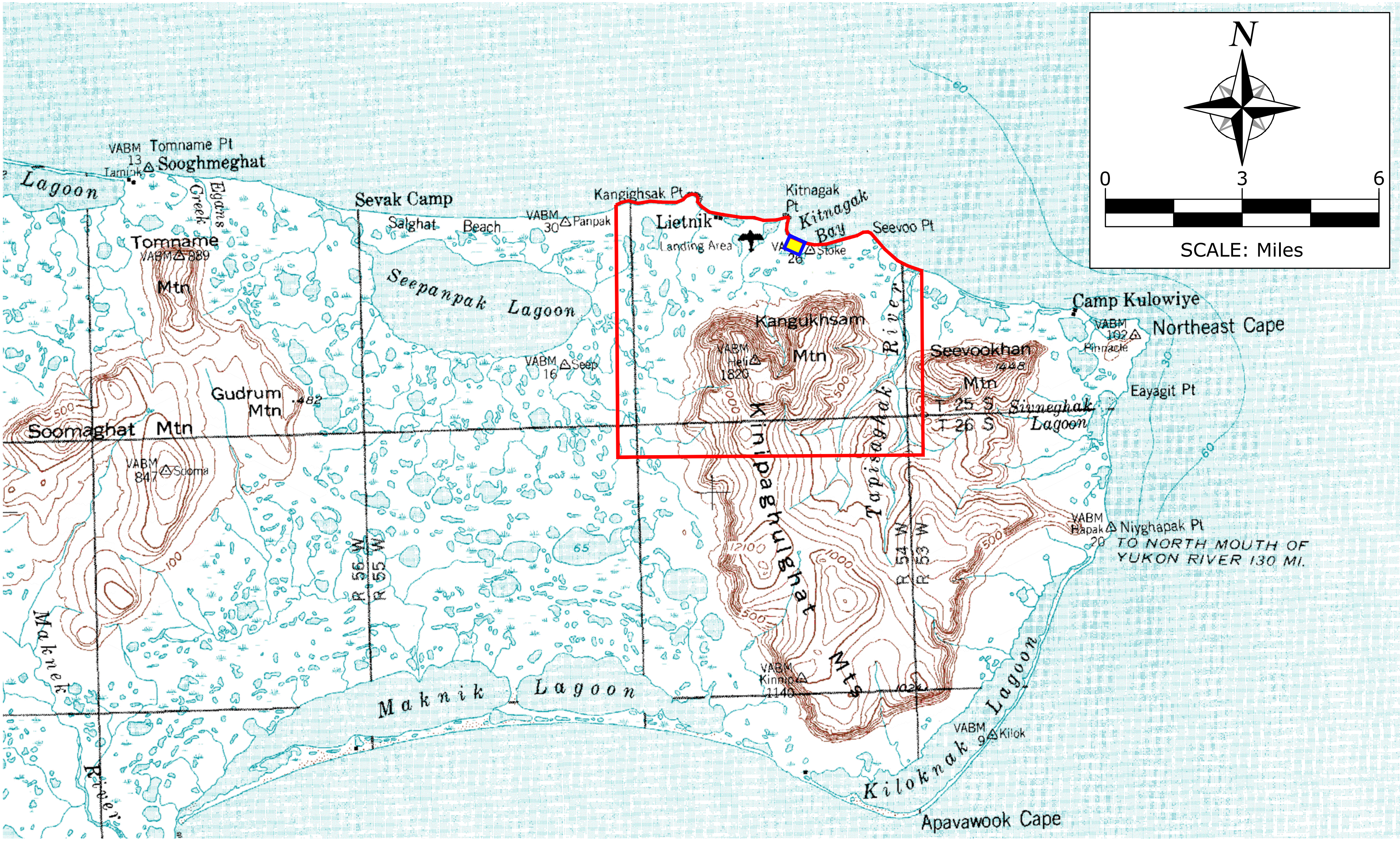


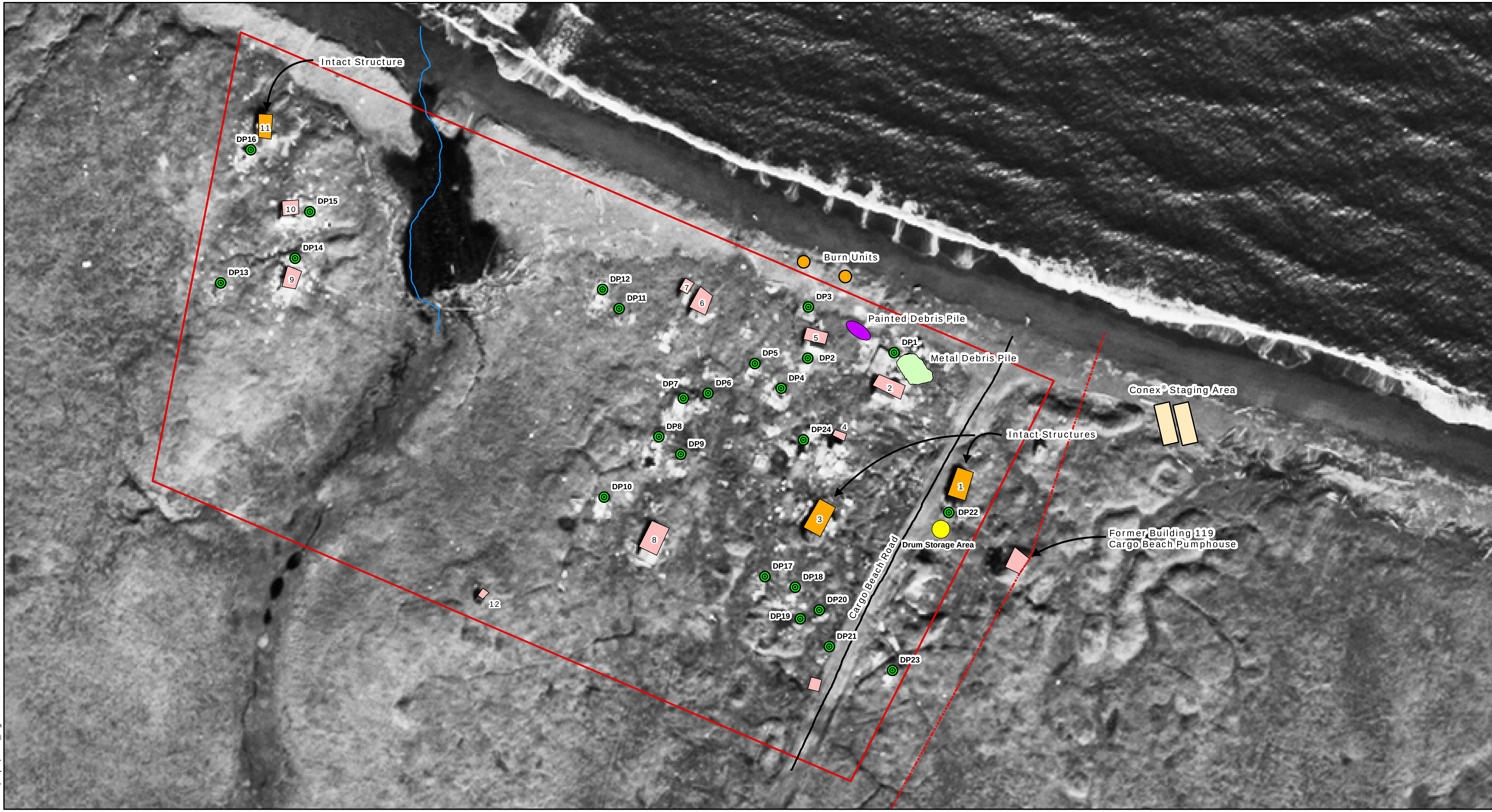
Note:
NALEMP Native American Lands Environmental Mitigation Program
FUDS Formely Used Defense Sites

Legend
Northeast Cape FUDS Project Area
Location of Native Village of Northeast Cape

FIGURE 2
NORTHEAST CAPE, ST. LAWRENCE ISLAND, ALASKA
SAVOONGA NALEMP
SITE AREA MAP

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC
Phone (907) 563-0013 Fax (907) 563-6713

DATUM: NAD 27	DATE	05/30/13
PROJECTION: UTM 2N M	DWN.	NAP
PROJECT NO.: 49029	SCALE	1"=3 Mi
	APPRVD.	TE



Debris Pile	Cargo Beach Road	Former Fuel Pipeline
Drum Storage Area	Creek Drainage	Former Structure
Steel Burn Unit	Estimated NVNC Boundaries (Not to Scale)	Painted Debris Pile
	Current Intact Structure	Metal Debris Pile

Note:
CON/HTRW = Containerized Hazardous, Toxic, and Radioactive Waste
NVNC = Native Village of Northeast Cape

N W E S

0 50 100 150 200
Feet

Figure 3
Northeast Cape, St. Lawrence Island, Alaska
Native Village of Northeast Cape
Major Site Features Map

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC
Phone (907)563-0013 Fax (907)563-6713
Project No. 49029

DATUM: NAD 83	DATE 5/30/13	SHEET	
PROJECTION: Alaska State Plane Zone 9	DWN. BERS-RJ	3	
	SCALE 1" = 100'	of	
	APPRVD. BERS-TE	7	

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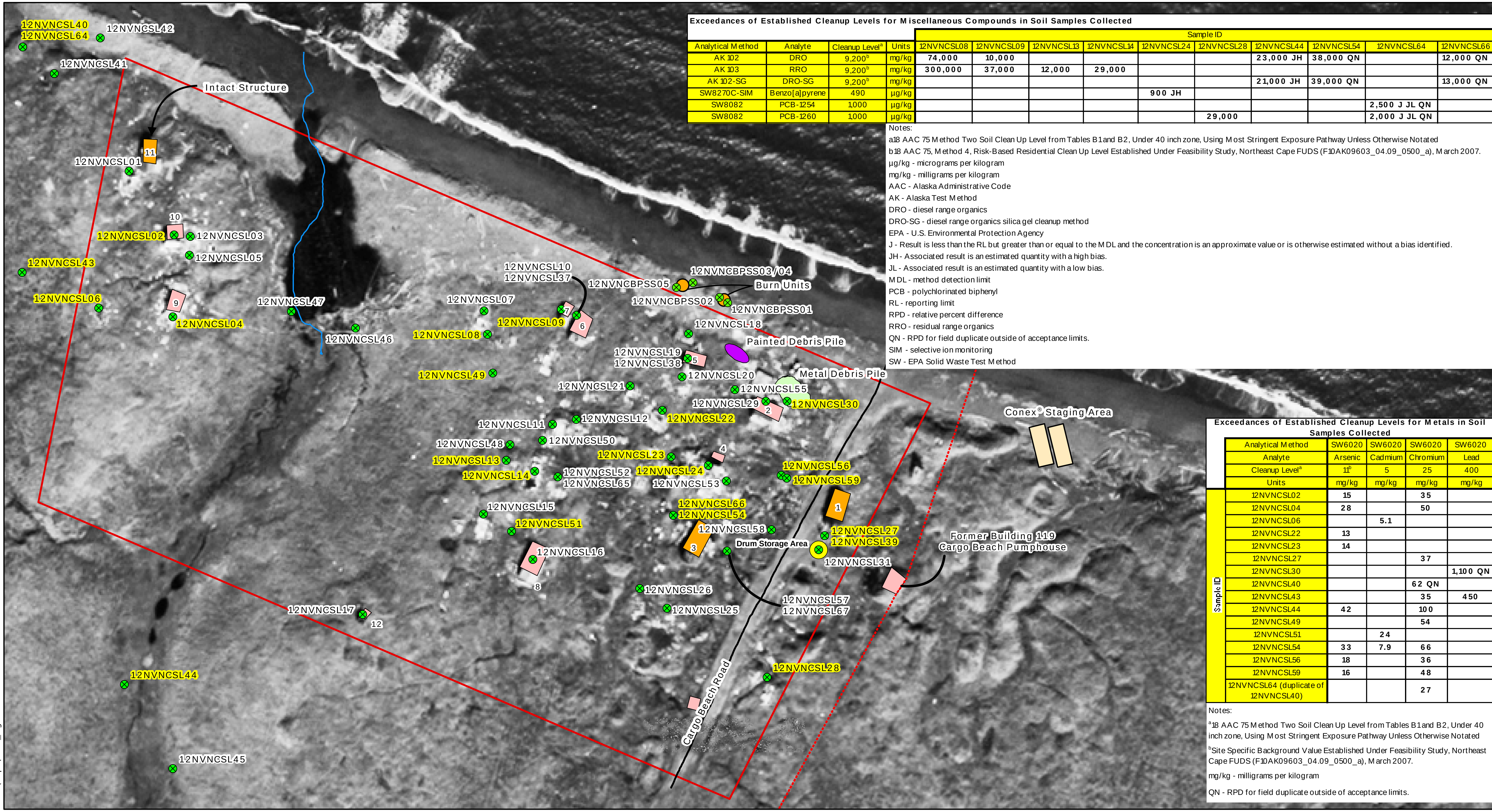

Exceedances of Established Cleanup Levels for Miscellaneous Compounds in Soil Samples Collected

Analytical Method	Analyte	Cleanup Level[a]	Units	Sample ID: 12NVNCSL08	12NVNCSL09	12NVNCSL13	12NVNCSL14	12NVNCSL24	12NVNCSL28	12NVNCSL44	12NVNCSL54	12NVNCSL64	12NVNCSL66
AK 102	DRO	9,200[b]	mg/kg	**74,000**	**10,000**					**23,000 JH**	**38,000 QN**		**12,000 QN**
AK 103	RRO	9,200[b]	mg/kg	**300,000**	**37,000**	**12,000**	**29,000**						
AK 102-SG	DRO-SG	9,200[b]	mg/kg							**21,000 JH**	**39,000 QN**		**13,000 QN**
SW8270C-SIM	Benzo[a]pyrene	490	µg/kg					**900 JH**					
SW8082	PCB-1254	1,000	µg/kg									**2,500 J JL QN**	
SW8082	PCB-1260	1,000	µg/kg						**29,000**			**2,000 J JL QN**	

Notes:

a18 AAC 75 Method Two Soil Clean Up Level from Tables B1and B2, Under 40 inch zone, Using Most Stringent Exposure Pathway Unless Otherwise Notated

b18 AAC 75, Method 4, Risk-Based Residential Clean Up Level Established Under Feasibility Study, Northeast Cape FUDS (F10AK09603_04.09_0500_a), March 2007.

µg/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

AAC - Alaska Administrative Code

AK - Alaska Test Method

DRO - diesel range organics

DRO-SG - diesel range organics silica gel cleanup method

EPA - U.S. Environmental Protection Agency

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value or is otherwise estimated without a bias identified.

JH - Associated result is an estimated quantity with a high bias.

JL - Associated result is an estimated quantity with a low bias.

MDL - method detection limit

PCB - polychlorinated biphenyl

RL - reporting limit

RPD - relative percent difference

RRO - residual range organics

QN - RPD for field duplicate outside of acceptance limits.

SIM - selective ion monitoring

SW - EPA Solid Waste Test Method

Exceedances of Established Cleanup Levels for Metals in Soil Samples Collected

	Analytical Method	SW6020	SW6020	SW6020	SW6020
	Analyte	Arsenic	Cadmium	Chromium	Lead
	Cleanup Level[a]	11[b]	5	25	400
	Units	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	12NVNCSL02	**15**		**35**	
	12NVNCSL04	**28**		**50**	
	12NVNCSL06		**5.1**		
	12NVNCSL22	**13**			
	12NVNCSL23	**14**			
	12NVNCSL27			**37**	
	12NVNCSL30				**1,100 QN**
	12NVNCSL40			**62 QN**	
	12NVNCSL43			**35**	**450**
	12NVNCSL44	**42**		**100**	
	12NVNCSL49			**54**	
	12NVNCSL51		**24**		
	12NVNCSL54	**33**	**7.9**	**66**	
	12NVNCSL56	**18**		**36**	
	12NVNCSL59	**16**		**48**	
	12NVNCSL64 (duplicate of 12NVNCSL40)			**27**	

Notes:

[a]18 AAC 75 Method Two Soil Clean Up Level from Tables B1and B2, Under 40 inch zone, Using Most Stringent Exposure Pathway Unless Otherwise Notated

[b]Site Specific Background Value Established Under Feasibility Study, Northeast Cape FUDS (F10AK09603_04.09_0500_a), March 2007.

mg/kg - milligrams per kilogram

QN - RPD for field duplicate outside of acceptance limits.

Steel Burn Unit
Drum Storage Area
Former Fuel Pipeline
Soil Sample Location
Cargo Beach Road
Creek Drainage
Former Structure
Painted Debris Pile
Metal Debris Pile
Estimated NVNC Boundaries (Not to Scale)
Current Intact Structure

Note:
CON/HTRW = Containerized Hazardous, Toxic, and Radioactive Waste
NVNC = Native Village of Northeast Cape
SI = Site Investigation
Sample IDs with yellow highlighting contain contaminant concentrations that exceed established cleanup levels

N W E S

0 50 100 150 200
Feet

Figure 4
Northeast Cape, St. Lawrence Island, Alaska
Native Village of Northeast Cape
SI Soil Sample Location Map

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC
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Project No. 49029

DATUM: NAD 83	DATE	5/30/13	SHEET	
PROJECTION:	DWN.	BERS-RJ	4	
Alaska State Plane Zone 9	SCALE	1" = 100'	of	
	APPRVD.	BERS-TE	7	

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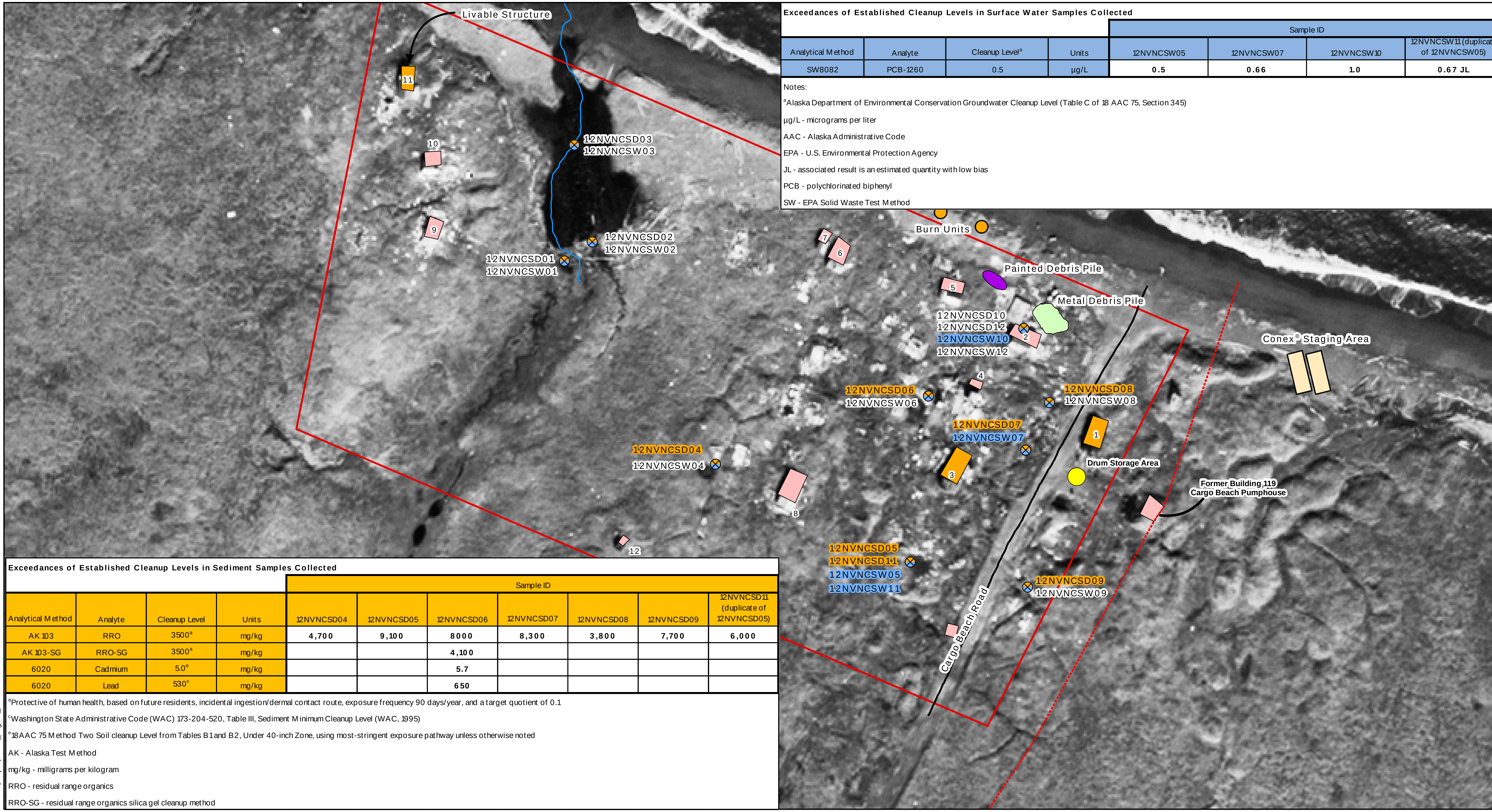

Exceedances of Established Cleanup Levels in Surface Water Samples Collected

Analytical Method	Analyte	Cleanup Level[a]	Units	Sample ID: 12NVNCSW05	12NVNCSW07	12NVNCSW10	12NVNCSW11 (duplicate of 12NVNCSW05)
SW8082	PCB-1260	0.5	µg/L	0.5	0.66	1.0	0.67 JL

Notes:

[a]Alaska Department of Environmental Conservation Groundwater Cleanup Level (Table C of 18 AAC 75, Section 345)

µg/L - micrograms per liter

AAC - Alaska Administrative Code

EPA - U.S. Environmental Protection Agency

JL - associated result is an estimated quantity with low bias

PCB - polychlorinated biphenyl

SW - EPA Solid Waste Test Method

Exceedances of Established Cleanup Levels in Sediment Samples Collected

Analytical Method	Analyte	Cleanup Level	Units	Sample ID: 12NVNCSD04	12NVNCSD05	12NVNCSD06	12NVNCSD07	12NVNCSD08	12NVNCSD09	12NVNCSD11 (duplicate of 12NVNCSD05)
AK 103	RRO	3500[a]	mg/kg	4,700	9,100	8000	8,300	3,800	7,700	6,000
AK 103-SG	RRO-SG	3500[a]	mg/kg			4,100				
6020	Cadmium	5.0[e]	mg/kg			5.7				
6020	Lead	530[c]	mg/kg			650				

[a]Protective of human health, based on future residents, incidental ingestion/dermal contact route, exposure frequency 90 days/year, and a target quotient of 0.1

[c]Washington State Administrative Code (WAC) 173-204-520, Table III, Sediment Minimum Cleanup Level (WAC, 1995)

[e]18AAC 75 Method Two Soil cleanup Level from Tables B1 and B2, Under 40-inch Zone, using most-stringent exposure pathway unless otherwise noted

AK - Alaska Test Method

mg/kg - milligrams per kilogram

RRO - residual range organics

RRO-SG - residual range organics silica gel cleanup method

Steel Burn Unit
Drum Storage Area
Former Fuel Pipeline
Sediment Sample/Surface Water Sample Location
Cargo Beach Road
Creek Drainage
Former Structure
Painted Debris Pile
Metal Debris Pile
Estimated NVNC Boundaries (Not to Scale)
Current Intact Structure

N W E S

0 50 100 150 200
Feet

Note:
CON/HTRW = Containerized Hazardous, Toxic, and Radioactive Waste
NVNC = Native Village of Northeast Cape
SI = Site Investigation

Sample IDs with orange highlighting contain contaminant concentrations in sediment that exceed established cleanup levels

Sample IDs with blue highlighting contain contaminant concentrations in surface water that exceed established cleanup levels

Figure 5
Northeast Cape, St. Lawrence Island, Alaska
Native Village of Northeast Cape
SI Sediment and Surface Water Sample Location Map

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC
Phone (907)563-0013 Fax (907)563-6713
Project No. 49029

DATUM: NAD 83	DATE 06-03-13	SHEET
PROJECTION: Alaska State Plane Zone 9	DWN. BERS-RJ	5
	SCALE 1" = 100'	of
	APPRVD. BERS-TE	7

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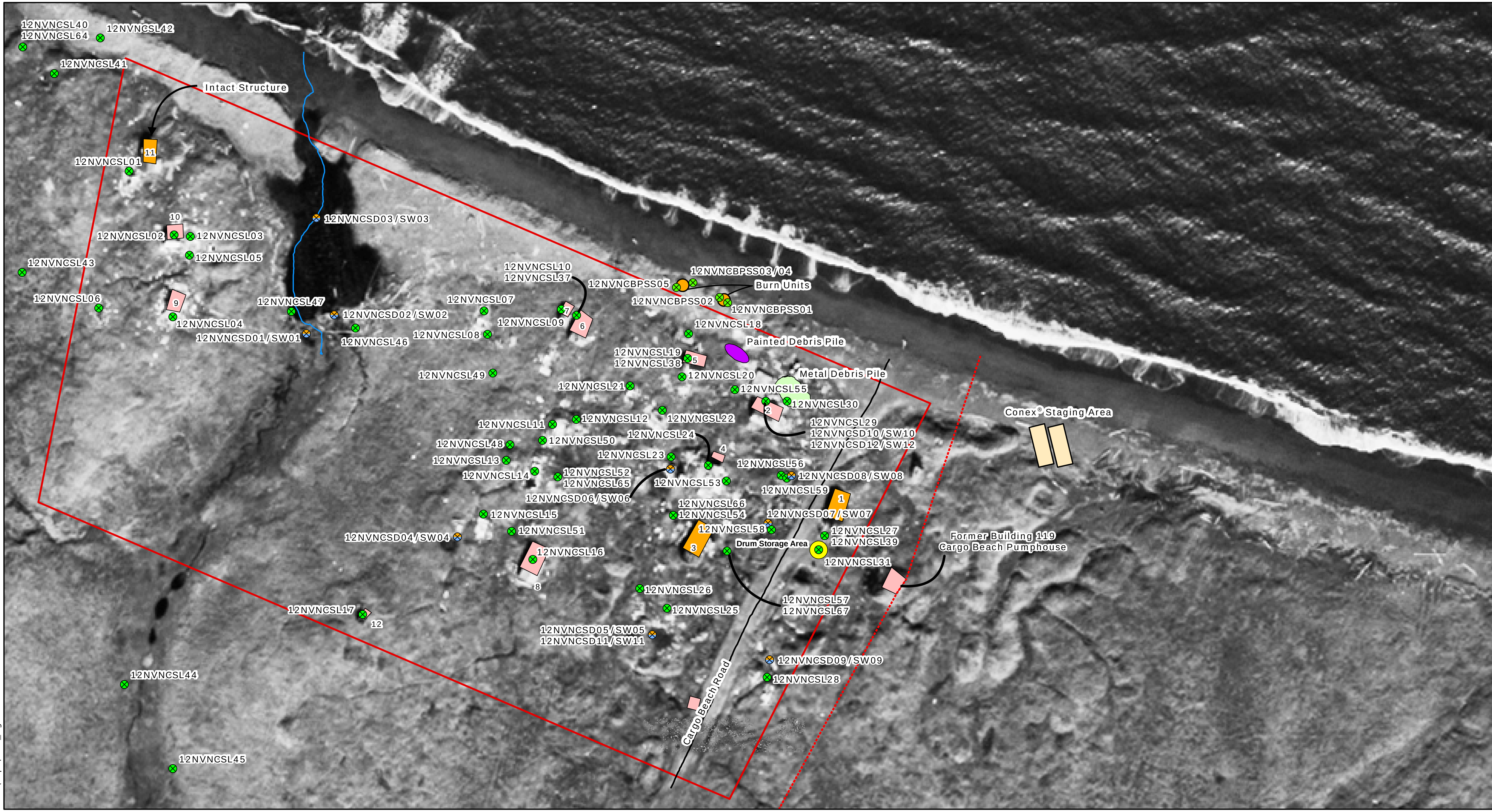

Steel Burn Unit
Drum Storage Area
Former Fuel Pipeline
Former Structure
Painted Debris Pile
Metal Debris Pile
Soil Sample Location
Sediment/Surface Water Sample Location
Cargo Beach Road
Creek Drainage
Estimated NVNC Boundaries (Not to Scale)
Current Intact Structure

Note:
CON/HTRW = Containerized Hazardous, Toxic, and Radioactive Waste
NVNC = Native Village of Northeast Cape
SI = Site Investigation

N W E S

0 50 100 150 200
Feet

Figure 6
Northeast Cape, St. Lawrence Island, Alaska
Native Village of Northeast Cape
2012 SI Sample Locations

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC
Phone (907)563-0013 Fax (907)563-6713
Project No. 49029

DATUM: NAD 83	DATE 6/3/13	SHEET
PROJECTION: Alaska State Plane Zone 9	DWN. BERS-RJ	6
	SCALE 1" = 100'	of
	APPRVD. BERS-TE	7

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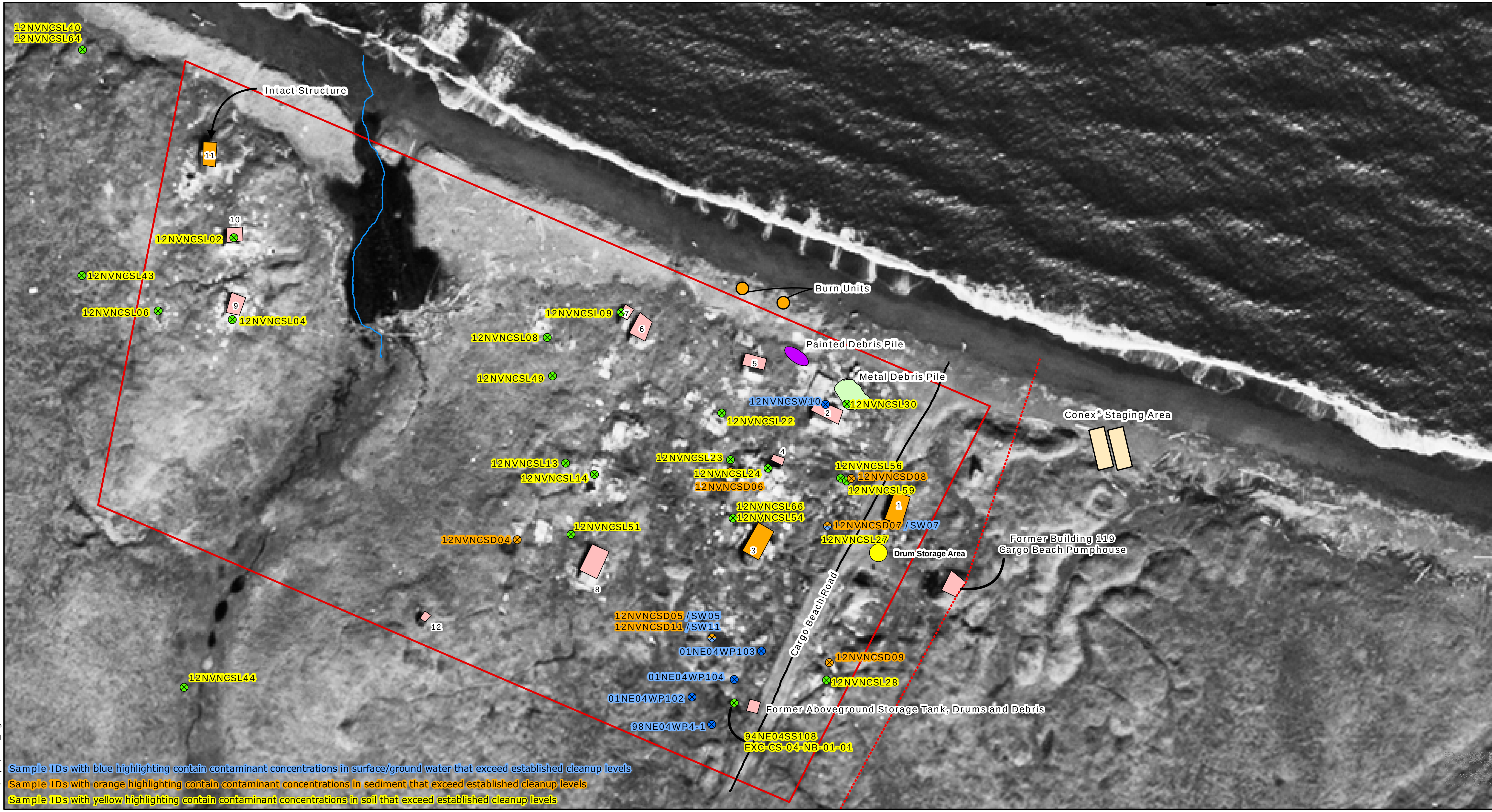

Former Fuel Pipeline
Steel Burn Unit
Drum Storage Area
Soil Sample
Sediment Sample
Water Sample
Sediment and Surface Water Sample
Former Structure
Painted Debris Pile
Metal Debris Pile
Estimated NVNC Boundaries (Not to Scale)
Current Intact Structure
Cargo Beach Road
Creek Drainage

N W E S

0 50 100 150 200
Feet

Note:
CON/HTRW = Containerized Hazardous, Toxic, and Radioactive Waste
NVNC = Native Village of Northeast Cape
SI = Site Investigation

Path: G:\Jobs\49029_Savoonga_NALEMP\Maps\2012_Fig07.mxd

Figure 7
Northeast Cape, St. Lawrence Island, Alaska
Native Village of Northeast Cape
Exceedances of Cleanup Criteria

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC
Phone (907)563-0013 Fax (907)563-6713
Project No. 49029

DATUM: NAD 83	DATE 6/4/13	SHEET
PROJECTION: Alaska State Plane Zone 9	DWN. BERS-RJ	7
	SCALE 1" = 100'	of
	APPRVD. BERS-TE	7

TABLES

Table 5-1 CON/HTRW Waste Characterization Sampling Results

	Sample ID			12NVNCCH01	12NVNCCH02	12NVNCCH03	12NVNCCH04	12NVNCCH05	12NVNCCH06	12NVNCCH07	12NVNCCH08	12NVNCCH09	12NVNCCH10	12NVNCCH11	12NVNCCH12	2NVNCCH13
	Laboratory Work Order			580-34602	580-34602	580-34602	580-34602	580-34602	580-34602	580-34602	580-34602	580-34602	580-34602	580-34955	580-34955	580-34955
	Sample Collection Date			8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	9/10/2012	9/10/2012	9/10/2012
	Drum ID and Description			Drum 1 Chlorinated Dish Soap	Drum 1 Grease	Drum 2 Paint	Drum 3 Chlorinated Dish Soap	Drum 3 Paint	Drum 4 Paint	Drum 4 Grease	Drum 5 Grease	Drum 6 Grease	Drum 7 Paint	Super Sack 16a, 16b, 16c	Super Sack 17	Drum 9
Analytical Method	**Analyte**	**RCRA/TSCA Regulatory Level**	**Unit**	**Analytical Results**												
9045C	pH	≤ 2 or ≥ 12.5	pH unit	9.71			11.6									
HazCat	Oxidizer Screen	see 40 CFR 261.20	N/A	Negative			**Positive**									
6020 TCLP	Arsenic	5.0	mg/L		ND (0.0080)	ND (0.0080)		0.044	ND (0.0080)	ND (0.0080)	ND (0.0080)	ND (0.0080)	0.0094 J	ND (0.0080)	ND (0.0080)	ND (0.0080)
6020 TCLP	Barium	100	mg/L		0.031	0.27		0.11	0.044	0.03	0.21	0.25	0.081	0.3	0.27	0.27
6020 TCLP	Cadmium	1.0	mg/L		0.025	0.0021 J		0.0041	0.0016 J	0.0034 J	0.0018 J	0.0031 J	0.0015 J	0.0013 J	0.00095 J	0.00060 J
6020 TCLP	Chromium	5.0	mg/L		0.69	0.35		0.01	0.044	0.0042	0.0081	0.0071	0.45	0.0055	0.008	0.0055
6020 TCLP	Lead	5.0	mg/L		0.75	2.1		**31**	3.8	0.024	0.058	0.037	2.2	0.0065	0.008	0.011
6020 TCLP	Selenium	1.0	mg/L		ND (0.0080)	ND (0.0080)		ND (0.0080)	ND (0.0080)	ND (0.0080)	ND (0.0080)	ND (0.0080)	ND (0.0080)	ND (0.0080)	ND (0.0080)	ND (0.0080)
6020 TCLP	Silver	5.0	mg/L		ND (0.00050)	ND (0.00050)		ND (0.00050)	ND (0.00050)	ND (0.00050)	ND (0.00050)	ND (0.00050)	ND (0.00050)	ND (0.00050)	ND (0.00050)	ND (0.00050)
7470A TCLP	Mercury	0.2	mg/L		ND (0.0010)	ND (0.0010)		ND (0.0010)	ND (0.0010)	ND (0.0010)	ND (0.0010)	ND (0.0010)	0.00074 J	0.00064 J B	0.00058 J B	0.00057 J B
8082	PCB-1016	50	mg/kg			ND (0.18)		ND (0.18)	ND (0.24)				ND (0.15)	ND (0.010)	ND (0.012)	0.65
8082	PCB-1221	50	mg/kg			ND (0.36)		ND (0.36)	ND (0.49)				ND (0.30)	ND (0.021)	ND (0.023)	ND (0.024)
8082	PCB-1232	50	mg/kg			ND (0.36)		ND (0.36)	ND (0.49)				ND (0.30)	ND (0.021)	ND (0.023)	ND (0.024)
8082	PCB-1242	50	mg/kg			ND (0.18)		ND (0.18)	ND (0.24)				ND (0.15)	ND (0.010)	ND (0.012)	ND (0.012)
8082	PCB-1248	50	mg/kg			ND (0.18)		ND (0.18)	ND (0.24)				ND (0.15)	ND (0.010)	ND (0.012)	ND (0.012)
8082	PCB-1254	50	mg/kg			ND (0.18)		1.1 J	ND (0.24)				ND (0.15)	ND (0.010)	ND (0.012)	ND (0.012)
8082	PCB-1260	50	mg/kg			0.93		0.30 J	ND (0.24)				ND (0.15)	0.030 JL	0.045	0.14
8260B TCLP	1,1,1,2-Tetrachloroethane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,1,1-Trichloroethane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,1,2,2-Tetrachloroethane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,1,2-Trichloroethane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,1-Dichloroethane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)	ND (45)	ND (45)	ND (45)
8260B TCLP	1,1-Dichloroethene	700	µg/L			ND (45)		ND (45)	ND (45)				ND (45)	ND (45)	ND (45)	ND (45)
8260B TCLP	1,1-Dichloropropene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,2,3-Trichlorobenzene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,2,3-Trichloropropane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,2,4-Trichlorobenzene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,2,4-Trimethylbenzene	NE	µg/L			860		3700	1300 B				32 J B			
8260B TCLP	1,2-Dibromo-3-Chloropropane	NE	µg/L			ND (150)		ND (150)	ND (150)				ND (150)			
8260B TCLP	1,2-Dichlorobenzene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,2-Dichloroethane	500	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,2-Dichloropropane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,3,5-Trichlorobenzene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,3-Dichlorobenzene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,3-Dichloropropane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	1,4-Dichlorobenzene	7,500	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	2,2-Dichloropropane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	2-Butanone	200,000	µg/L			2300		400 J	ND (450)				ND (450)	ND (450)	ND (450)	ND (450)
8260B TCLP	2-Chlorotoluene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	2-Hexanone	NE	µg/L			ND (230)		ND (230)	ND (230)				ND (230)			
8260B TCLP	4-Chlorotoluene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	4-Isopropyltoluene	NE	µg/L			20 J		24 J	45 J				ND (45)			
8260B TCLP	4-Methyl-2-pentanone	NE	µg/L			3600		ND (230)	4300				ND (230)			
8260B TCLP	Acetone	NE	µg/L			1000		ND (450)	260 J				ND (450)			
8260B TCLP	Benzene	NE	µg/L			ND (45)		150	33 J				ND (45)	ND (45)	ND (45)	ND (45)
8260B TCLP	Bromobenzene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Bromoform	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Bromomethane	NE	µg/L			ND (230)		ND (230)	ND (230)				ND (230)			
8260B TCLP	Carbon disulfide	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Carbon tetrachloride	500	µg/L			ND (45)		**1600**	ND (45)				ND (45)	ND (45)	ND (45)	ND (45)

	Sample ID			12NVNCCH01	12NVNCCH02	12NVNCCH03	12NVNCCH04	12NVNCCH05	12NVNCCH06	12NVNCCH07	12NVNCCH08	12NVNCCH09	12NVNCCH10	12NVNCCH11	12NVNCCH12	2NVNCCH13
	Laboratory Work Order			580-34602	580-34602	580-34602	580-34602	580-34602	580-34602	580-34602	580-34602	580-34602	580-34602	580-34955	580-34955	580-34955
	Sample Collection Date			8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	8/21/2012	9/10/2012	9/10/2012	9/10/2012
	Drum ID and Description			Drum 1 Chlorinated Dish Soap	Drum 1 Grease	Drum 2 Paint	Drum 3 Chlorinated Dish Soap	Drum 3 Paint	Drum 4 Paint	Drum 4 Grease	Drum 5 Grease	Drum 6 Grease	Drum 7 Paint	Super Sack 16a, 16b, 16c	Super Sack 17	Drum 9
Analytical Method	**Analyte**	**RCRA/TSCA Regulatory Level**	**Unit**	**Analytical Results**												
8260B TCLP	Chlorobenzene	100,000	µg/L			ND (45)		ND (45)	ND (45)				ND (45)	ND (45)	ND (45)	ND (45)
8260B TCLP	Chlorobromomethane	NE	µg/L			ND (70)		ND (70)	ND (70)				ND (70)			
8260B TCLP	Chlorodibromomethane	NE	µg/L			ND (90)		ND (90)	ND (90)				ND (90)			
8260B TCLP	Chloroethane	NE	µg/L			ND (230)		ND (230)	ND (230)				ND (230)			
8260B TCLP	Chloroform	6,000	µg/L			26 J		280	ND (45)				ND (45)	ND (45)	ND (45)	ND (45)
8260B TCLP	Chloromethane	NE	µg/L			ND (230)		ND (230)	ND (230)				ND (230)			
8260B TCLP	cis-1,2-Dichloroethene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	cis-1,3-Dichloropropene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Dibromomethane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Dichlorobromomethane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Dichlorodifluoromethane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Ethylbenzene	NE	µg/L			1900		6400	1900				ND (45)			
8260B TCLP	Ethylene bromide	NE	µg/L			ND (90)		ND (90)	ND (90)				ND (90)			
8260B TCLP	Hexachlorobutadiene	500	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Isopropylbenzene	NE	µg/L			68 J		64 J	73 J				ND (45)			
8260B TCLP	Methyl tert-butyl ether	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Methylene Chloride	NE	µg/L			47 J B		290 J B	43 J B				42 J B			
8260B TCLP	m-Xylene & p-Xylene	NE	µg/L			12000		21000	7500				34 J B			
8260B TCLP	Naphthalene	NE	µg/L			26 J B		39 J B	190 B				ND (45)			
8260B TCLP	n-Butylbenzene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	N-Propylbenzene	NE	µg/L			61 J		160	160				ND (45)			
8260B TCLP	o-Xylene	NE	µg/L			9200		6700	1600				17 J B			
8260B TCLP	sec-Butylbenzene	NE	µg/L			17 J		ND (45)	42 J				ND (45)			
8260B TCLP	Styrene	NE	µg/L			270		190	49 J				ND (45)			
8260B TCLP	t-Butylbenzene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Tetrachloroethene	700	µg/L			23 J		ND (45)	21 J				ND (45)	ND (45)	ND (45)	ND (45)
8260B TCLP	Toluene	NE	µg/L			690		19000	770				ND (45)			
8260B TCLP	trans-1,2-Dichloroethene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	trans-1,3-Dichloropropene	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Trichloroethene	500	µg/L			ND (45)		ND (45)	ND (45)				ND (45)	ND (45)	ND (45)	ND (45)
8260B TCLP	Trichlorofluoromethane	NE	µg/L			ND (45)		ND (45)	ND (45)				ND (45)			
8260B TCLP	Vinyl chloride	200	µg/L			ND (45)		ND (45)	ND (45)				ND (45)	ND (45)	ND (45)	ND (45)
8270C TCLP	1,4-Dichlorobenzene	NE	µg/L			ND (1.0)		ND (1.0)	ND (1.0)				ND (1.0)			
8270C TCLP	2,4,5-Trichlorophenol	400,000	µg/L			ND (1.0)		ND (1.0)	ND (1.0)				ND (1.0)			
8270C TCLP	2,4,6-Trichlorophenol	2,000	µg/L			ND (1.0)		ND (1.0)	ND (1.0)				ND (1.0)			
8270C TCLP	2,4-Dinitrotoluene	130	µg/L			ND (1.0)		ND (1.0)	ND (1.0)				ND (1.0)			
8270C TCLP	2-Methylphenol	NE	µg/L			ND (1.0)		1.8 J	1.9 J				ND (1.0)			
8270C TCLP	3 & 4 Methylphenol	NE	µg/L			ND (1.0)		5.7	8.1				6.1			
8270C TCLP	Hexachlorobenzene	NE	µg/L			ND (1.0)		ND (1.0)	ND (1.0)				ND (1.0)			
8270C TCLP	Hexachlorobutadiene	NE	µg/L			ND (1.0)		ND (1.0)	ND (1.0)				ND (1.0)			
8270C TCLP	Hexachloroethane	NE	µg/L			ND (1.0)		ND (1.0)	ND (1.0)				ND (1.0)			
8270C TCLP	Nitrobenzene	2,000	µg/L			ND (1.0)		ND (1.0)	ND (1.0)				ND (1.0)			
8270C TCLP	Pentachlorophenol	100,000	µg/L			ND (1.0)		ND (1.0)	ND (1.0)				ND (1.0)			
8270C TCLP	Pyridine	5,000	µg/L			ND (5.0) J		ND (5.0) J	ND (5.0) J				ND (5.0) J			

Notes:

Bolded entries depict exceedances of RCRA or TSCA regulatory levels

B - The analyte was found in the method blank at greater than one-tenth the concentration in the sample. Results may be biased high or be a false positive.

J = Result is less than the LOQ but greater than or equal to the LOD, and the concentration is an approximate value or is otherwise estimated without a bias identified.

JL = Associated result is an estimated quantity with a low bias.

µg/L = micrograms per liter

CFR = Code of Federal Regulations

HazCat = hazardous characterization

LOD = limit of detection

LOQ = limit of quantitation

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

N/A = not applicable

ND = non-detect, LoD in parentheses

NE = none established

PCB = polychlorinated biphenyl

RCRA = Resource Conservation and Recovery Act

TCLP = Toxicity Characteristic Leaching Procedure

TSCA = Toxic Substances Control Act

Table 6-1 Soil Sampling Results

				Sample ID	12NVNCSL01	12NVNCSL02	12NVNCSL03	12NVNCSL04	12NVNCSL05	12NVNCSL06	12NVNCSL07	12NVNCSL08	12NVNCSL09	12NVNCSL10	12NVNCSL37	12NVNCSL11	12NVNCSL12	12NVNCSL13	12NVNCSL14
				Duplicate										12NVNCSL37	12NVNCSL10				
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/6/2012	9/6/2012	9/6/2012	9/6/2012	9/6/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012
				Location	DP16	S10	DP15	S9	DP14	DP13	DP12	DP11	S7	S6	S6	DP7	DP6	DP8	DP9
				PID Reading (ppm)	0.4	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**															
AK101	GRO (C6–C10)	300	30	mg/kg	4.0 J B JL	6.1 J B JL	3.7 J B JL	3.6 J B JL	1.7 J B JL	7.0 J B JL	1.7 J B JL	3.3 J B JL	1.2 J B	1.4 J B	1.9 J B	1.1 J B	5.0 J B JL	5.0 J B JL	5.4 J B JL
AK102 & 103	DRO (nC10–<nC25)	9,200[b]	920	mg/kg	650	430	560	440	220	700	700	**74,000**	**10,000**	95	92	97	870	**1,700**	**3,300**
AK102 & 103	RRO (nC25–nC36)	9,200[b]	920	mg/kg	**6,200**	**4,200**	**5,600**	**2,600**	**1,700**	**7,500**	**5,700**	**300,000**	**37,000**	740	730	800	**8,500**	**12,000**	**29,000**
AK102/103-SG	DRO (nC10–<nC25)	9,200[b]	920	mg/kg															
AK102/103-SG	RRO (nC25–nC36)	9,200[b]	920	mg/kg															
9060	Total Organic Carbon	NE	NE	mg/kg															
8260B	1,1,1,2-Tetrachloroethane	NE	NE	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,1,1-Trichloroethane	820	82	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,1,2,2-Tetrachloroethane	17	1.7	µg/kg	ND (23) JL	ND (38) JL	ND (25) JL	ND (24) JL		ND (29)				ND (7.3) JL	ND (6.9)				
8260B	1,1,2-Trichloroethane	18	1.8	µg/kg	ND (23) JL	ND (38) JL	ND (25) JL	ND (24) JL		ND (29)				ND (7.3) JL	ND (6.9)				
8260B	1,1-Dichloroethane	25,000	2,500	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,1-Dichloroethene	30	3.0	µg/kg	ND (39) JL	ND (65) JL	ND (43) JL	ND (42) JL		ND (49)				ND (12) JL	ND (12)				
8260B	1,1-Dichloropropene	NE	NE	µg/kg	ND (39) JL	ND (65) JL	ND (43) JL	ND (42) JL		ND (49)				ND (12) JL	ND (12)				
8260B	1,2,3-Trichlorobenzene	NE	NE	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,2,3-Trichloropropane	0.53	0.053	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,2,4-Trichlorobenzene	850	85	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,2,4-Trimethylbenzene	23,000	2,300	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,2-Dibromo-3-Chloropropane	NE	NE	µg/kg	ND (390) JL	ND (650) JL	ND (430) JL	ND (420) JL		ND (490)				ND (120) JL	ND (120)				
8260B	1,2-Dibromoethane	0.16	0.016	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,2-Dichlorobenzene	5,100	510	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,2-Dichloroethane	16	1.6	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,2-Dichloropropane	18	1.8	µg/kg	ND (26) JL	ND (44) JL	ND (29) JL	ND (28) JL		ND (33)				ND (8.3) JL	ND (7.8)				
8260B	1,3,5-Trimethylbenzene	23,000	2,300	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,3-Dichlorobenzene	28,000	2,800	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,3-Dichloropropane	NE	NE	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	1,4-Dichlorobenzene	640	64	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	2,2-Dichloropropane	NE	NE	µg/kg	ND (77) JL R	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	2-Butanone (MEK)	59,000	5,900	µg/kg	ND (770) JL	ND (1300) JL	ND (860) JL	ND (830) JL		ND (990)				ND (250) JL	ND (230)				
8260B	2-Chlorotoluene	NE	NE	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	2-Hexanone	NE	NE	µg/kg	ND (390) JL	ND (650) JL	ND (430) JL	ND (420) JL		ND (490)				ND (120) JL	ND (120)				
8260B	4-Chlorotoluene	NE	NE	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	4-Methyl-2-pentanone (MIBK)	8,100	810	µg/kg	ND (390) JL	ND (650) JL	ND (430) JL	ND (420) JL		ND (490)				ND (120) JL	ND (120)				
8260B	Acetone	88,000	8,800	µg/kg	840 J B JL	2,000 JL	860 J B JL	810 J B JL		1,000 J B				260 J B JL	160 J B				
8260B	Benzene	2,000[b]	200	µg/kg	ND (26) JL	ND (44) JL	ND (29) JL	ND (28) JL		ND (33)				ND (8.3) JL	ND (7.8)				
8260B	Bromobenzene	NE	NE	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Bromochloromethane	NE	NE	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Bromodichloromethane	44	4.4	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Bromoform	340	34	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Bromomethane	160	16	µg/kg	ND (260) JL	ND (440) JL	ND (290) JL	ND (280) JL		ND (330)				ND (83) JL	ND (78)				
8260B	Carbon disulfide	12,000	1,200	µg/kg	ND (77) JL R	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Carbon tetrachloride	23	2.3	µg/kg	ND (39) JL	ND (65) JL	ND (43) JL	ND (42) JL		ND (49)				ND (12) JL	ND (12)				
8260B	Chlorobenzene	630	63	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Chlorodibromomethane	32	3.2	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Chloroethane	580,000	58,000	µg/kg	ND (770) JL	ND (1300) JL	ND (860) JL	ND (830) JL		ND (990)				ND (250) JL	ND (230)				
8260B	Chloroform	460	46	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Chloromethane	210	21	µg/kg	ND (770) JL	ND (1300) JL	ND (860) JL	ND (830) JL		ND (990)				ND (250) JL	ND (230)				
8260B	cis-1,2-Dichloroethene	240	24	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCSL01	12NVNCSL02	12NVNCSL03	12NVNCSL04	12NVNCSL05	12NVNCSL06	12NVNCSL07	12NVNCSL08	12NVNCSL09	12NVNCSL10	12NVNCSL37	12NVNCSL11	12NVNCSL12	12NVNCSL13	12NVNCSL14
				Duplicate										12NVNCSL37	12NVNCSL10				
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/6/2012	9/6/2012	9/6/2012	9/6/2012	9/6/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012
				Location	DP16	S10	DP15	S9	DP14	DP13	DP12	DP11	S7	S6	S6	DP7	DP6	DP8	DP9
				PID Reading (ppm)	0.4	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**															
8260B	cis-1,3-Dichloropropene	NE	NE	µg/kg	ND (26) JL	ND (44) JL	ND (29) JL	ND (28) JL		ND (33)				ND (8.3) JL	ND (7.8)				
8260B	Dibromomethane	1,100	110	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Dichlorodifluoromethane	140,000	14,000	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Ethylbenzene	6,900	690	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Hexachlorobutadiene	120	12	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Isopropylbenzene	51,000	5,100	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Methyl tert-butyl ether	1,300	130	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Methylene Chloride	16	1.6	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Naphthalene	120,000[b]	12,000	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	n-Butylbenzene	15,000	1,500	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	N-Propylbenzene	15,000	1,500	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	m,p-Xylene	NE	NE	µg/kg	ND (52) JL	50 J	ND (57) JL	32 J		ND (66)				ND (17) JL	ND (16)				
8260B	o-Xylene	NE	NE	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Total Xylenes	63,000	6,300	µg/kg	ND (129) JL	50 J	ND (143) JL	32 J		ND (165)				ND (42) JL	ND (39)				
8260B	p-Isopropyltoluene	NE	NE	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	sec-Butylbenzene	12,000	1,200	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Styrene	960	96	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	tert-Butylbenzene	12,000	1,200	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Tetrachloroethene	24	2.4	µg/kg	ND (39) JL	ND (65) JL	ND (43) JL	ND (42) JL		ND (49)				ND (12) JL	ND (12)				
8260B	Toluene	6,500	650	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	trans-1,2-Dichloroethene	370	37	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	trans-1,3-Dichloropropene	NE	NE	µg/kg	ND (26) JL	ND (44) JL	ND (29) JL	ND (28) JL		ND (33)				ND (8.3) JL	ND (7.8)				
8260B	Trichloroethene	20	57	µg/kg	ND (26) JL	ND (44) JL	ND (29) JL	ND (28) JL		ND (33)				ND (8.3) JL	ND (7.8)				
8260B	Trichlorofluoromethane	86,000	8,600	µg/kg	ND (77) JL	ND (130) JL	ND (86) JL	ND (83) JL		ND (99)				ND (25) JL	ND (23)				
8260B	Vinyl chloride	8.5	0.85	µg/kg	ND (13) JL	ND (22) JL	ND (14) JL	ND (14) JL		ND (16)				ND (4.1) JL	ND (3.9)				
8270C SIM	1-Methylnaphthalene	6,200	620	µg/kg	3.6 J JH	ND (5.2) J	ND (4.6) J	6.7 J JH		ND (5.5) J				1.1 J JH	1.1 J JH				
8270C SIM	2-Methylnaphthalene	6,100	610	µg/kg	6.5 J JH	ND (13) J	ND (11) J	9.8 J JH		ND (14) J				1.3 J JH	1.3 J JH				
8270C SIM	Acenaphthene	180,000	18,000	µg/kg	ND (1.4)	ND (5.2) J	ND (4.6) J	ND (5.1)		ND (5.5) J				ND (0.31)	2.3 J JH				
8270C SIM	Acenaphthylene	180,000	18,000	µg/kg	ND (3.5)	ND (13) J	ND (11) J	ND (13)		ND (14) J				ND (0.78)	ND (0.78)				
8270C SIM	Anthracene	3,000,000	300,000	µg/kg	19 J JH	ND (48) J	ND (43) J	ND (48)		ND (51) J				6.0 JH	5.2 J JH				
8270C SIM	Benzo(a)anthracene	3,600	360	µg/kg	51 JH	ND (48) J	ND (43) J	ND (48)		ND (51) J				13 JH	11 JH				
8270C SIM	Benzo(a)pyrene	490	49	µg/kg	**54 JH**	ND (48) J	ND (43) J	25 J JH		ND (51) J				12 JH	10 JH				
8270C SIM	Benzo(b)fluoranthene	4,900	490	µg/kg	52 JH	ND (48) J	ND (43) J	33 J JH		ND (51) J				17 JH	15 JH				
8270C SIM	Benzo(g,h,i)perylene	1,400,000	140,000	µg/kg	43 JH	38 J	31 J	56 J JH		49 J				9.9 B JH	9.0 B JH				
8270C SIM	Benzo(k)fluoranthene	49,000	4,900	µg/kg	18 J JH	ND (48) J	ND (43) J	ND (48)		ND (51) J				5.8 J JH	4.7 J JH				
8270C SIM	Chrysene	360,000	36,000	µg/kg	76 JH	ND (48) J	ND (43) J	ND (48)		ND (51) J				13 JH	12 JH				
8270C SIM	Dibenz(a,h)anthracene	490	49	µg/kg	ND (13)	ND (48) J	ND (43) J	ND (48)		ND (51) J				ND (2.9)	ND (2.9)				
8270C SIM	Fluoranthene	1,400,000	140,000	µg/kg	100 JH	ND (48) J	ND (43) J	36 J JH		ND (51) J				33 JH	30 JH				
8270C SIM	Fluorene	220,000	22,000	µg/kg	ND (3.5)	ND (13) J	ND (11) J	ND (13)		ND (14) J				2.6 J JH	3.5 J JH				
8270C SIM	Indeno(1,2,3-cd)pyrene	4,900	490	µg/kg	34 JH	ND (48) J	ND (43) J	ND (48)		ND (51) J				11 JH	8.7 JH				
8270C SIM	Naphthalene	120,000[b]	12,000	µg/kg	16 J JH	ND (13) J	ND (11) J	15 J JH		ND (14) J				1.4 J JH	1.0 J JH				
8270C SIM	Phenanthrene	3,000,000	300,000	µg/kg	35 JH	ND (48) J	28 J	38 J JH		ND (51) J				17 JH	19 JH				
8270C SIM	Pyrene	1,000,000	100,000	µg/kg	150 JH	ND (48) J	20 J	72 J JH		ND (51) J				28 JH	25 JH				
6020	Arsenic	11[c]	1.1	mg/kg	**5.9**	**15**	**5.5**	**28**		**2.4**				**5.7 QN**	**10 QN**				
6020	Barium	1,100	110	mg/kg	**120**	**210**	85	**240**		81				38	42				
6020	Cadmium	5	0.5	mg/kg	**0.94 J**	**0.72 J**	**3.9**	**1.4**		**5.1**				0.17 J	0.17 J				
6020	Chromium	25	2.5	mg/kg	**6.9**	**35**	**12**	**50**		**5.9**				**9.9**	**9.7**				
6020	Lead	400	40	mg/kg	21	33	**58**	**140**		4.9				8.6	9.7				

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCSL01	12NVNCSL02	12NVNCSL03	12NVNCSL04	12NVNCSL05	12NVNCSL06	12NVNCSL07	12NVNCSL08	12NVNCSL09	12NVNCSL10	12NVNCSL37	12NVNCSL11	12NVNCSL12	12NVNCSL13	12NVNCSL14
				Duplicate										12NVNCSL37	12NVNCSL10				
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/6/2012	9/6/2012	9/6/2012	9/6/2012	9/6/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012
				Location	DP16	S10	DP15	S9	DP14	DP13	DP12	DP11	S7	S6	S6	DP7	DP6	DP8	DP9
				PID Reading (ppm)	0.4	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**															
6020	Nickel	86	8.6	mg/kg	**10**	**9.7**	**15**	**36**		**10**				**11**	**11**				
6020	Selenium	3.4	0.34	mg/kg	**1.9 J**	**1.3 J**	**1.6 J**	**1.1 J**		**2.1**				**0.38 J**	**0.52 J**				
6020	Silver	11.2	1.12	mg/kg	0.092 J	0.098 J	0.12 J	0.22 J		0.10 J				0.038 J	0.035 J				
6020	Vanadium	710	71	mg/kg	17	13	9.7	26		26				21	21				
6020	Zinc	4,100	410	mg/kg	130	73	190	**820**		48				56	62				
7471A	Mercury	1.4	0.14	mg/kg	**0.55**	**0.19**	**0.21**	**0.71**		0.13				0.031	0.029				
8081A	4,4'-DDD	7,200	720	µg/kg	5.5 J														
8081A	4,4'-DDE	5,100	510	µg/kg	1.2 J														
8081A	4,4'-DDT	7,300	730	µg/kg	10														
8081A	Aldrin	70	7	µg/kg	ND (2.4)														
8081A	alpha-BHC	6.4	0.64	µg/kg	ND (2.4)														
8081A	alpha-Chlordane	NE	NE	µg/kg	ND (2.4)														
8081A	beta-BHC	22	2.2	µg/kg	ND (3.6)														
8081A	delta-BHC	NE	NE	µg/kg	ND (3.6)														
8081A	Dieldrin	7.6	0.76	µg/kg	ND (2.4)														
8081A	Endosulfan I	NE	NE	µg/kg	ND (2.4)														
8081A	Endosulfan II	NE	NE	µg/kg	ND (2.4)														
8081A	Endosulfan	64,000	6,400	µg/kg	ND (4.8)														
8081A	Endosulfan sulfate	NE	NE	µg/kg	ND (2.4)														
8081A	Endrin	290	29	µg/kg	ND (2.4)														
8081A	Endrin aldehyde	NE	NE	µg/kg	ND (2.4)														
8081A	Endrin ketone	NE	NE	µg/kg	ND (3.6)														
8081A	gamma-BHC (Lindane)	9.5	0.95	µg/kg	ND (3.6)														
8081A	gamma-Chlordane	NE	NE	µg/kg	ND (3.6)														
8081A	Heptachlor	280	28	µg/kg	ND (2.4)														
8081A	Heptachlor epoxide	14	1.4	µg/kg	ND (3.6)														
8081A	Methoxychlor	23,000	2,300	µg/kg	ND (3.6)														
8081A	Toxaphene	3,900	390	µg/kg	ND (140) J														
8082	PCB-1016	1,000	100	µg/kg	ND (52) JL	ND (39) JL	ND (35) JL	ND (38) JL	ND (16) JL	ND (35) JL	ND (18) JL	ND (99) J	ND (11) JL	ND (12) JL	ND (12)	ND (11)	ND (41) JL	ND (37) JL	ND (33) JL
8082	PCB-1221	1,000	100	µg/kg	ND (100) JL	ND (78) JL	ND (70) JL	ND (77) JL	ND (32) JL	ND (69) JL	ND (36) JL	ND (200) J	ND (23) JL	ND (24) JL	ND (23)	ND (23)	ND (81) JL	ND (74) JL	ND (65) JL
8082	PCB-1232	1,000	100	µg/kg	ND (52) JL	ND (39) JL	ND (35) JL	ND (38) JL	ND (16) JL	ND (35) JL	ND (18) JL	ND (99) J	ND (11) JL	ND (12) JL	ND (12)	ND (11)	ND (41) JL	ND (37) JL	ND (33) JL
8082	PCB-1242	1,000	100	µg/kg	ND (52) JL	ND (39) JL	ND (35) JL	ND (38) JL	ND (16) JL	ND (35) JL	ND (18) JL	ND (99) J	ND (11) JL	ND (12) JL	ND (12)	ND (11)	ND (41) JL	ND (37) JL	ND (33) JL
8082	PCB-1248	1,000	100	µg/kg	ND (52) JL	ND (39) JL	ND (35) JL	ND (38) JL	ND (16) JL	ND (35) JL	ND (18) JL	ND (99) J	ND (11) JL	ND (12) JL	ND (12)	ND (11)	ND (41) JL	ND (37) JL	ND (33) JL
8082	PCB-1254	1000	100	µg/kg	ND (52) JL	ND (39) JL	ND (35) JL	**190 J JL**	ND (16) JL	ND (35) JL	ND (18) JL	ND (99) J	ND (11) JL	**230 J JL**	**160 J**	ND (11)	ND (41) JL	ND (37) JL	63 J JL
8082	PCB-1260	1000	100	µg/kg	ND (52) JL	31 J JL	ND (35) JL	**140 JL**	ND (16) JL	ND (35) JL	ND (18) JL	ND (99) J	ND (11) JL	79 J JL	57 J	ND (11)	**120 J JL**	**160 JL**	59 J JL
8151A	2,4,5-T	NE	NE	µg/kg	ND (18)														
8151A	2,4-D	210	21	µg/kg	ND (18)														
8151A	2,4-DB	NE	NE	µg/kg	ND (18)														
8151A	4-Nitrophenol	NE	NE	µg/kg	ND (18)														
8151A	Dalapon	NE	NE	µg/kg	ND (70)														
8151A	Dicamba	NE	NE	µg/kg	ND (35)														
8151A	Dichlorprop	NE	NE	µg/kg	ND (18)														
8151A	Dinoseb	NE	NE	µg/kg	ND (18)														
8151A	MCPA	NE	NE	µg/kg	ND (18)														
8151A	Mecoprop (MCPP)	NE	NE	µg/kg	ND (18)														
8151A	Pentachlorophenol	47	4.7	µg/kg	ND (35)														

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCSL01	12NVNCSL02	12NVNCSL03	12NVNCSL04	12NVNCSL05	12NVNCSL06	12NVNCSL07	12NVNCSL08	12NVNCSL09	12NVNCSL10	12NVNCSL37	12NVNCSL11	12NVNCSL12	12NVNCSL13	12NVNCSL14
				Duplicate										12NVNCSL37	12NVNCSL10				
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/6/2012	9/6/2012	9/6/2012	9/6/2012	9/6/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012
				Location	DP16	S10	DP15	S9	DP14	DP13	DP12	DP11	S7	S6	S6	DP7	DP6	DP8	DP9
				PID Reading (ppm)	0.4	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**															
8151A	Silvex (2,4,5-TP)	190	19	µg/kg	ND (18)														
8290	1,2,3,4,6,7,8-HpCDD	NE	NE	pg/g	540														
8290	1,2,3,4,6,7,8-HpCDF	NE	NE	pg/g	200														
8290	1,2,3,4,7,8,9-HpCDF	NE	NE	pg/g	13 J														
8290	1,2,3,4,7,8-HxCDD	NE	NE	pg/g	ND (25)														
8290	1,2,3,4,7,8-HxCDF	NE	NE	pg/g	33														
8290	1,2,3,6,7,8-HxCDD	NE	NE	pg/g	21 J														
8290	1,2,3,6,7,8-HxCDF	NE	NE	pg/g	ND (25)														
8290	1,2,3,7,8,9-HxCDD	NE	NE	pg/g	ND (25)														
8290	1,2,3,7,8,9-HxCDF	NE	NE	pg/g	ND (25)														
8290	1,2,3,7,8-PeCDD	NE	NE	pg/g	ND (25)														
8290	1,2,3,7,8-PeCDF	NE	NE	pg/g	ND (25)														
8290	2,3,4,6,7,8-HxCDF	NE	NE	pg/g	ND (25)														
8290	2,3,4,7,8-PeCDF	NE	NE	pg/g	13 J														
8290	2,3,7,8-TCDD	47	4.7	pg/g	ND (5.1)														
8290	2,3,7,8-TCDF	NE	NE	pg/g	2.7 J														
8290	OCDD	NE	NE	pg/g	4,900														
8290	OCDF	NE	NE	pg/g	490														
8290	Total HpCDD	NE	NE	pg/g	1,000														
8290	Total HpCDF	NE	NE	pg/g	910														
8290	Total HxCDD	NE	NE	pg/g	85														
8290	Total HxCDF	NE	NE	pg/g	310														
8290	Total PeCDD	NE	NE	pg/g	ND (25)														
8290	Total PeCDF	NE	NE	pg/g	66														
8290	Total TCDD	NE	NE	pg/g	ND (5.1)														
8290	Total TCDF	NE	NE	pg/g	25														

Analytical Method	Analyte	Clean Up Level[a]	Screening Level[d]	Unit															
				Sample ID	12NVNCSL15	12NVNCSL16	12NVNCSL17	12NVNCSL18	12NVNCSL19	12NVNCSL20	12NVNCSL21	12NVNCSL22	12NVNCSL23	12NVNCSL24	12NVNCSL25	12NVNCSL26	12NVNCSL27	12NVNCSL39	12NVNCSL28
				Duplicate													12NVNCSL39	12NVNCSL27	
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/9/2012	9/9/2012	9/9/2012
				Location	DP10	S8	S12	DP3	S5	DP2	DP5	DP4	S4	DP33	DP18	DP17	DP22	DP22	DP23
				PID Reading (ppm)	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.0
AK101	GRO (C6–C10)	300	30	mg/kg	2.9 J B	5.7 J B JL	6.0 J B JL	1.2 J B	1.8 J B	1.2 J B	6.0 J B JL	0.97 J B	3.3 J B JL	0.79 J B JL	1.1 J B JL	1.5 J B JL	1.9 J B	0.91 J B	5.3 J B JL
AK102 & 103	DRO (nC10–<nC25)	9,200[b]	920	mg/kg	840	400	**1,200**	65	170	78	620	270	440	**1,700**	490	570	400	270	540
AK102 & 103	RRO (nC25–nC36)	9,200[b]	920	mg/kg	**5,000**	**4,200**	**2,600**	430	**1,300**	790	**6,100**	**2,100**	**4,200**	**8,900**	**4,500**	**5,400**	**2,200 QN**	**930 QN**	**4,400**
AK102/103-SG	DRO (nC10–<nC25)	9,200[b]	920	mg/kg															
AK102/103-SG	RRO (nC25–nC36)	9,200[b]	920	mg/kg															
9060	Total Organic Carbon	NE	NE	mg/kg															
8260B	1,1,1,2-Tetrachloroethane	NE	NE	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,1,1-Trichloroethane	820	82	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,1,2,2-Tetrachloroethane	17	1.7	µg/kg		ND (29) JL	ND (30) JL		ND (8.9) JL			ND (8.2) JL	ND (18) JL	ND (8.9) JL			ND (7.8) JL		
8260B	1,1,2-Trichloroethane	18	1.8	µg/kg		ND (29) JL	ND (30) JL		ND (8.9) JL			ND (8.2) JL	ND (18) JL	ND (8.9) JL			ND (7.8) JL		
8260B	1,1-Dichloroethane	25,000	2,500	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,1-Dichloroethene	30	3.0	µg/kg		ND (49) JL	ND (50) JL		ND (15) JL			ND (14) JL	ND (31) JL	ND (15) JL			ND (13) JL		
8260B	1,1-Dichloropropene	NE	NE	µg/kg		ND (49) JL	ND (50) JL		ND (15) JL			ND (14) JL	ND (31) JL	ND (15) JL			ND (13) JL		
8260B	1,2,3-Trichlorobenzene	NE	NE	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,2,3-Trichloropropane	0.53	0.053	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,2,4-Trichlorobenzene	850	85	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,2,4-Trimethylbenzene	23,000	2,300	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,2-Dibromo-3-Chloropropane	NE	NE	µg/kg		ND (490) JL	ND (500) JL		ND (150) JL			ND (140) JL	ND (310) JL	ND (150) JL			ND (130) JL		
8260B	1,2-Dibromoethane	0.16	0.016	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,2-Dichlorobenzene	5,100	510	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,2-Dichloroethane	16	1.6	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,2-Dichloropropane	18	1.8	µg/kg		ND (33) JL	ND (34) JL		ND (10) JL			ND (9.3) JL	ND (20) JL	ND (10) JL			ND (8.9) JL		
8260B	1,3,5-Trimethylbenzene	23,000	2,300	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,3-Dichlorobenzene	28,000	2,800	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,3-Dichloropropane	NE	NE	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	1,4-Dichlorobenzene	640	64	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	2,2-Dichloropropane	NE	NE	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL R	ND (30) JL			ND (27) JL		
8260B	2-Butanone (MEK)	59,000	5,900	µg/kg		ND (980) JL	ND (1000) JL		ND (300) JL			ND (280) JL	ND (610) JL	ND (300) JL			ND (270) JL		
8260B	2-Chlorotoluene	NE	NE	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	2-Hexanone	NE	NE	µg/kg		ND (490) JL	ND (500) JL		ND (150) JL			ND (140) JL	ND (310) JL	ND (150) JL			ND (130) JL		
8260B	4-Chlorotoluene	NE	NE	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	4-Methyl-2-pentanone (MIBK)	8,100	810	µg/kg		ND (490) JL	ND (500) JL		75 J JL			ND (140) JL	ND (310) JL	ND (150) JL			ND (130) JL		
8260B	Acetone	88,000	8,800	µg/kg		1,100 J B JL	450 J B JL		440 B JL			290 J B JL	540 J B JL	250 J B JL			200 J JL		
8260B	Benzene	2,000[b]	200	µg/kg		ND (33) JL	ND (34) JL		ND (10) JL			ND (9.3) JL	ND (20) JL	ND (10) JL			ND (8.9) JL		
8260B	Bromobenzene	NE	NE	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Bromochloromethane	NE	NE	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Bromodichloromethane	44	4.4	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Bromoform	340	34	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Bromomethane	160	16	µg/kg		ND (330) JL	ND (340) JL		ND (100) JL			ND (93) JL	ND (200) JL	ND (100) JL			ND (89) JL		
8260B	Carbon disulfide	12,000	1,200	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL R	ND (30) JL			ND (27) JL		
8260B	Carbon tetrachloride	23	2.3	µg/kg		ND (49) JL	ND (50) JL		ND (15) JL			ND (14) JL	ND (31) JL	ND (15) JL			ND (13) JL		
8260B	Chlorobenzene	630	63	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Chlorodibromomethane	32	3.2	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Chloroethane	580,000	58,000	µg/kg		ND (980) JL	ND (1000) JL		ND (300) JL			ND (280) JL	ND (610) JL	ND (300) JL			ND (270) JL		
8260B	Chloroform	460	46	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Chloromethane	210	21	µg/kg		ND (980) JL	ND (1000) JL		ND (300) JL			ND (280) JL	ND (610) JL	ND (300) JL			ND (270) JL		
8260B	cis-1,2-Dichloroethene	240	24	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCSL15	12NVNCSL16	12NVNCSL17	12NVNCSL18	12NVNCSL19	12NVNCSL20	12NVNCSL21	12NVNCSL22	12NVNCSL23	12NVNCSL24	12NVNCSL25	12NVNCSL26	12NVNCSL27	12NVNCSL39	12NVNCSL28
				Duplicate													12NVNCSL39	12NVNCSL27	
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/9/2012	9/9/2012	9/9/2012
				Location	DP10	S8	S12	DP3	S5	DP2	DP5	DP4	S4	DP33	DP18	DP17	DP22	DP22	DP23
				PID Reading (ppm)	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.0
Analytical Method	Analyte	Clean Up Level[a]	Screening Level[d]	Unit															
8260B	cis-1,3-Dichloropropene	NE	NE	µg/kg		ND (33) JL	ND (34) JL		ND (10) JL			ND (9.3) JL	ND (20) JL	ND (10) JL			ND (8.9) JL		
8260B	Dibromomethane	1,100	110	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Dichlorodifluoromethane	140,000	14,000	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Ethylbenzene	6,900	690	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Hexachlorobutadiene	120	12	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Isopropylbenzene	51,000	5,100	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Methyl tert-butyl ether	1,300	130	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Methylene Chloride	16	1.6	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			**17 J JL**		
8260B	Naphthalene	120,000[b]	12,000	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	n-Butylbenzene	15,000	1,500	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	N-Propylbenzene	15,000	1,500	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	m,p-Xylene	NE	NE	µg/kg		ND (66) JL	ND (67) JL		12 J JL			ND (19) JL	ND (41) JL	ND (20) JL			11 J B JL		
8260B	o-Xylene	NE	NE	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Total Xylenes	63,000	6,300	µg/kg		ND (164) JL	ND (167) JL		12 J JL			ND (47) JL	ND (102) JL	ND (50) JL			11 J B JL		
8260B	p-Isopropyltoluene	NE	NE	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			41 JL		
8260B	sec-Butylbenzene	12,000	1,200	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Styrene	960	96	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	tert-Butylbenzene	12,000	1,200	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Tetrachloroethene	24	2.4	µg/kg		ND (49) JL	ND (50) JL		ND (15) JL			ND (14) JL	ND (31) JL	ND (15) JL			ND (13) JL		
8260B	Toluene	6,500	650	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	trans-1,2-Dichloroethene	370	37	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	trans-1,3-Dichloropropene	NE	NE	µg/kg		ND (33) JL	ND (34) JL		ND (10) JL			ND (9.3) JL	ND (20) JL	ND (10) JL			ND (8.9) JL		
8260B	Trichloroethene	20	57	µg/kg		ND (33) JL	ND (34) JL		ND (10) JL			ND (9.3) JL	ND (20) JL	ND (10) JL			ND (8.9) JL		
8260B	Trichlorofluoromethane	86,000	8,600	µg/kg		ND (98) JL	ND (100) JL		ND (30) JL			ND (28) JL	ND (61) JL	ND (30) JL			ND (27) JL		
8260B	Vinyl chloride	8.5	0.85	µg/kg		ND (16) JL	ND (17) JL		ND (5.1) JL			ND (4.7) JL	ND (10) JL	ND (5.0) JL			ND (4.4) JL		
8270C SIM	1-Methylnaphthalene	6,200	620	µg/kg		3.7 J	ND (14)		2.4 J			2.0 J	1.6 J	15 JH			ND (17)		
8270C SIM	2-Methylnaphthalene	6,100	610	µg/kg		2.6 J	ND (35)		3.6 J			4.6 J	1.8 J	22 JH			ND (41)		
8270C SIM	Acenaphthene	180,000	18,000	µg/kg		ND (1.3) J	ND (14)		ND (1.8) J			ND (0.36) J	ND (0.67) J	ND (0.46)			ND (17)		
8270C SIM	Acenaphthylene	180,000	18,000	µg/kg		ND (3.3) J	ND (35)		ND (4.4) J			ND (0.91) J	ND (1.7) J	ND (1.2)			ND (41)		
8270C SIM	Anthracene	3,000,000	300,000	µg/kg		ND (12) J	ND (130)		5.3 J			4.0 J	5.0 J	250 JH			ND (150)		
8270C SIM	Benzo(a)anthracene	3,600	360	µg/kg		8.5 J	ND (130)		14 J			7 J	6.9 J	**870 JH**			62 J		
8270C SIM	Benzo(a)pyrene	490	49	µg/kg		11 J	ND (130)		17 J			8.1 J	6.8 J	**900 JH**			ND (150)		
8270C SIM	Benzo(b)fluoranthene	4,900	490	µg/kg		18 J	ND (130)		21 J			21 J	11 J	**1,200 JH**			ND (150)		
8270C SIM	Benzo(g,h,i)perylene	1,400,000	140,000	µg/kg		19 J B	140 J		24 J			13 B J	ND (6.3) J	620 JH			ND (150)		
8270C SIM	Benzo(k)fluoranthene	49,000	4,900	µg/kg		5.4 J	ND (130)		7.9 J			5.5 J	3.9 J	370 JH			ND (150)		
8270C SIM	Chrysene	360,000	36,000	µg/kg		16 J	ND (130) J		19 J			19 J	9.3 J	890 JH			72 J		
8270C SIM	Dibenz(a,h)anthracene	490	49	µg/kg		ND (12) J	ND (130)		ND (17) J			ND (3.4) J	ND (6.3) J	**170 JH**			ND (150)		
8270C SIM	Fluoranthene	1,400,000	140,000	µg/kg		39 J	ND (130)		32 J			24 J	25 J	2,900 JH			ND (150)		
8270C SIM	Fluorene	220,000	22,000	µg/kg		ND (3.3) J	73 J		ND (4.4) J			2.6 J	5.3 J	60 JH			ND (41)		
8270C SIM	Indeno(1,2,3-cd)pyrene	4,900	490	µg/kg		12 J	ND (130)		15 J			ND (3.4) J	ND (6.3) J	**730 JH**			ND (150)		
8270C SIM	Naphthalene	120,000[b]	12,000	µg/kg		4.5 J	ND (35)		3.9 J			7.5 J	2.8 J	19 JH			ND (41)		
8270C SIM	Phenanthrene	3,000,000	300,000	µg/kg		38 J	ND (130)		16 J			15 J	20 J	630 JH			ND (150)		
8270C SIM	Pyrene	1,000,000	100,000	µg/kg		38 J	ND (130)		34 J			42 J	22 J	2,300 JH			ND (150)		
6020	Arsenic	11[c]	1.1	mg/kg		**3.9**	**3.5**		**9.7**			**13**	**14**	**7.9**			**6.2**		
6020	Barium	1,100	110	mg/kg		83	44		42			42	70	47			**220**		
6020	Cadmium	5	0.5	mg/kg		0.24 J	0.47 J		0.36 B			0.41	**1.3**	**1.7**			**0.65**		
6020	Chromium	25	2.5	mg/kg		**3.5**	**2.7**		**11**			**10**	**19**	**14**			**37**		
6020	Lead	400	40	mg/kg		14	**220**		20			26	**79**	40			**52**		

Table 6-1 Soil Sampling Results (continued)

Analytical Method	Analyte	Clean Up Level[a]	Screening Level[d]	Unit	12NVNCSL15	12NVNCSL16	12NVNCSL17	12NVNCSL18	12NVNCSL19	12NVNCSL20	12NVNCSL21	12NVNCSL22	12NVNCSL23	12NVNCSL24	12NVNCSL25	12NVNCSL26	12NVNCSL27	12NVNCSL39	12NVNCSL28
				Duplicate													12NVNCSL39	12NVNCSL27	
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/9/2012	9/9/2012	9/9/2012
				Location	DP10	S8	S12	DP3	S5	DP2	DP5	DP4	S4	DP33	DP18	DP17	DP22	DP22	DP23
				PID Reading (ppm)	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.0
6020	Nickel	86	8.6	mg/kg		4.1	3.4		**12**			8	**8.8**	**9.2**			**20**		
6020	Selenium	3.4	0.34	mg/kg		**1.0 J**	**3.3**		**0.72 J**			**0.62 J**	**1.8**	**0.63 J**			**0.77 J**		
6020	Silver	11.2	1.12	mg/kg		0.079 J	ND (0.052)		0.077 J			0.049 J	0.18 J	0.13 J			0.15 J		
6020	Vanadium	710	71	mg/kg		16	4		22			21	32	20			32		
6020	Zinc	4,100	410	mg/kg		170	120		100			86	220	110			290		
7471A	Mercury	1.4	0.14	mg/kg		**0.24**	**0.29**		0.058			0.12	**0.22**	**0.62**			**0.22**		
8081A	4,4'-DDD	7,200	720	µg/kg					1.4 J										
8081A	4,4'-DDE	5,100	510	µg/kg					ND (0.61)										
8081A	4,4'-DDT	7,300	730	µg/kg					10 J										
8081A	Aldrin	70	7	µg/kg					ND (0.61)										
8081A	alpha-BHC	6.4	0.64	µg/kg					0.35 J										
8081A	alpha-Chlordane	NE	NE	µg/kg					ND (0.61)										
8081A	beta-BHC	22	2.2	µg/kg					ND (0.92)										
8081A	delta-BHC	NE	NE	µg/kg					ND (0.92)										
8081A	Dieldrin	7.6	0.76	µg/kg					**2.5**										
8081A	Endosulfan I	NE	NE	µg/kg					ND (0.61)										
8081A	Endosulfan II	NE	NE	µg/kg					ND (0.61)										
8081A	Endosulfan	64,000	6,400	µg/kg					ND (1.22)										
8081A	Endosulfan sulfate	NE	NE	µg/kg					ND (0.61)										
8081A	Endrin	290	29	µg/kg					ND (0.61)										
8081A	Endrin aldehyde	NE	NE	µg/kg					ND (0.61)										
8081A	Endrin ketone	NE	NE	µg/kg					ND (0.92)										
8081A	gamma-BHC (Lindane)	9.5	0.95	µg/kg					ND (0.92)										
8081A	gamma-Chlordane	NE	NE	µg/kg					ND (0.92)										
8081A	Heptachlor	280	28	µg/kg					ND (0.61)										
8081A	Heptachlor epoxide	14	1.4	µg/kg					ND (0.92)										
8081A	Methoxychlor	23,000	2,300	µg/kg					ND (4.6)										
8081A	Toxaphene	3,900	390	µg/kg					ND (180) J										
8082	PCB-1016	1,000	100	µg/kg	ND (18) JL	ND (49) JL	ND (26) JL	ND (9.8)	ND (13) JL	ND (15) JL	ND (34) JL	ND (14)	ND (26) JL	ND (17)	ND (22)	ND (41)	ND (12)	ND (14) JL	ND (1300)
8082	PCB-1221	1,000	100	µg/kg	ND (36) JL	ND (99) JL	ND (52) JL	ND (20)	ND (27) JL	ND (29) JL	ND (67) JL	ND (28)	ND (52) JL	ND (34)	ND (43)	ND (82)	ND (24) JL	ND (27) JL	ND (2600)
8082	PCB-1232	1,000	100	µg/kg	ND (18) JL	ND (49) JL	ND (26) JL	ND (9.8)	ND (13) JL	ND (15) JL	ND (34) JL	ND (14)	ND (26) JL	ND (17)	ND (22)	ND (41)	ND (12) JL	ND (14) JL	ND (1300)
8082	PCB-1242	1,000	100	µg/kg	ND (18) JL	ND (49) JL	ND (26) JL	ND (9.8)	ND (13) JL	ND (15) JL	ND (34) JL	ND (14)	ND (26) JL	ND (17)	ND (22)	ND (41)	ND (12) JL	ND (14) JL	ND (1300)
8082	PCB-1248	1,000	100	µg/kg	ND (18) JL	ND (49) JL	ND (26) JL	ND (9.8)	ND (13) JL	ND (15) JL	ND (34) JL	ND (14)	ND (26) JL	ND (17)	ND (22)	ND (41)	ND (12) JL	ND (14) JL	ND (1300)
8082	PCB-1254	1000	100	µg/kg	ND (18) JL	ND (49) JL	ND (26) JL	ND (9.8)	ND (13) JL	ND (15) JL	ND (34) JL	ND (14)	ND (26) JL	ND (17)	ND (22)	ND (41)	ND (12) JL	ND (14) JL	ND (1300)
8082	PCB-1260	1000	100	µg/kg	ND (18) JL	**260 JL**	ND (26) JL	57	ND (13) JL	ND (15) JL	ND (34) JL	**240**	ND (26) JL	33 J	**230**	78 J	54 JL	77 JL	**29,000**
8151A	2,4,5-T	NE	NE	µg/kg					ND (4.5)										
8151A	2,4-D	210	21	µg/kg					ND (4.5)										
8151A	2,4-DB	NE	NE	µg/kg					ND (4.5)										
8151A	4-Nitrophenol	NE	NE	µg/kg					ND (4.5)										
8151A	Dalapon	NE	NE	µg/kg					ND (18)										
8151A	Dicamba	NE	NE	µg/kg					ND (9.0)										
8151A	Dichlorprop	NE	NE	µg/kg					ND (4.5)										
8151A	Dinoseb	NE	NE	µg/kg					ND (4.5)										
8151A	MCPA	NE	NE	µg/kg					ND (4.5)										
8151A	Mecoprop (MCPP)	NE	NE	µg/kg					ND (4.5)										
8151A	Pentachlorophenol	47	4.7	µg/kg					ND (9.0)										

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCSL15	12NVNCSL16	12NVNCSL17	12NVNCSL18	12NVNCSL19	12NVNCSL20	12NVNCSL21	12NVNCSL22	12NVNCSL23	12NVNCSL24	12NVNCSL25	12NVNCSL26	12NVNCSL27	12NVNCSL39	12NVNCSL28
				Duplicate													12NVNCSL39	12NVNCSL27	
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/7/2012	9/9/2012	9/9/2012	9/9/2012
				Location	DP10	S8	S12	DP3	S5	DP2	DP5	DP4	S4	DP33	DP18	DP17	DP22	DP22	DP23
				PID Reading (ppm)	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.0
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**															
8151A	Silvex (2,4,5-TP)	190	19	µg/kg					ND (4.5)										
8290	1,2,3,4,6,7,8-HpCDD	NE	NE	pg/g					320										
8290	1,2,3,4,6,7,8-HpCDF	NE	NE	pg/g					68										
8290	1,2,3,4,7,8,9-HpCDF	NE	NE	pg/g					4.1 J										
8290	1,2,3,4,7,8-HxCDD	NE	NE	pg/g					ND (8)										
8290	1,2,3,4,7,8-HxCDF	NE	NE	pg/g					4.3 J										
8290	1,2,3,6,7,8-HxCDD	NE	NE	pg/g					8.1										
8290	1,2,3,6,7,8-HxCDF	NE	NE	pg/g					ND (8)										
8290	1,2,3,7,8,9-HxCDD	NE	NE	pg/g					4.8 J										
8290	1,2,3,7,8,9-HxCDF	NE	NE	pg/g					ND (8)										
8290	1,2,3,7,8-PeCDD	NE	NE	pg/g					ND (8)										
8290	1,2,3,7,8-PeCDF	NE	NE	pg/g					ND (8)										
8290	2,3,4,6,7,8-HxCDF	NE	NE	pg/g					ND (8)										
8290	2,3,4,7,8-PeCDF	NE	NE	pg/g					ND (8)										
8290	2,3,7,8-TCDD	47	4.7	pg/g					ND (1.6)										
8290	2,3,7,8-TCDF	NE	NE	pg/g					0.85 J										
8290	OCDD	NE	NE	pg/g					2,900										
8290	OCDF	NE	NE	pg/g					290										
8290	Total HpCDD	NE	NE	pg/g					610										
8290	Total HpCDF	NE	NE	pg/g					270										
8290	Total HxCDD	NE	NE	pg/g					58										
8290	Total HxCDF	NE	NE	pg/g					49										
8290	Total PeCDD	NE	NE	pg/g					ND (8)										
8290	Total PeCDF	NE	NE	pg/g					7.9										
8290	Total TCDD	NE	NE	pg/g					ND (1.6)										
8290	Total TCDF	NE	NE	pg/g					9.4										

Table 6-1 Soil Sampling Results (continued)

Analytical Method	Analyte	Clean Up Level[a]	Screening Level[d]	Unit															
				Sample ID	12NVNCSSL29	12NVNCSSL30	12NVNCSSL31	12NVNCSL38	12NVNCSL40	12NVNCSL64	12NVNCSL41	12NVNCSL42	12NVNCSL43	12NVNCSL44	12NVNCSL45	12NVNCSL46	12NVNCSL47	12NVNCSL48	12NVNCSL49
				Duplicate	12NVNCSSL30	12NVNCSSL29			12NVNCSL64	12NVNCSL40									
				Laboratory Work Order	580-34947	580-34947	580-34947	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/11/2012	9/11/2012	9/11/2012	9/7/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012
				Location	Metal Debris Staging Area	Metal Debris Staging Area	Drum Staging Area	S5	AA01	AA01	AA02	AA03	AA04	AA05	AA06	AA07	AA08	AA09	AA10
				PID Reading (ppm)	NS	NS	NS	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.4	0.1	0.2	0.0	0.1
AK101	GRO (C6–C10)	300	30	mg/kg	1.1 J B JL	3.4 J B	2.4 J B	1.4 J B	2.8 J B JL	2.2 J B JL	2.6 J B JL	2.5 J B	4.3 J B JL	1.5 J B JL	6.6 J B JL	0.70 J B JL	1.1 J B	1.3 J B JL	0.53 J B JL
AK102 & 103	DRO (nC10–<nC25)	9,200[b]	920	mg/kg	560	500	23	270	250 J QN	**1,100 QN**	300	7.6 J	280	**23,000 JH**	70 J	290	38	690	370
AK102 & 103	RRO (nC25–nC36)	9,200[b]	920	mg/kg	**4,500 JH**	**4,500 JH**	110	**2,100**	**1,400 J QN**	**7,400 JH QN**	**2,300**	30 J B	**2,000**	**5,000**	**1,000**	**2,500**	400	**5,700**	**2,200**
AK102/103-SG	DRO (nC10–<nC25)	9,200[b]	920	mg/kg					58 J					**21,000 JH**					
AK102/103-SG	RRO (nC25–nC36)	9,200[b]	920	mg/kg					650 J					**2,200 JH**					
9060	Total Organic Carbon	NE	NE	mg/kg					140,000					200,000					
8260B	1,1,1,2-Tetrachloroethane	NE	NE	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,1,1-Trichloroethane	820	82	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,1,2,2-Tetrachloroethane	17	1.7	µg/kg	ND (15) JL	ND (21)	ND (6.0)		ND (24) JL	ND (19) JL			ND (35) JL	ND (17) JL					ND (5.7) JL
8260B	1,1,2-Trichloroethane	18	1.8	µg/kg	ND (15) JL	ND (21)	ND (6.0)		ND (24) JL	ND (19) JL			ND (35) JL	ND (17) JL					ND (5.7) JL
8260B	1,1-Dichloroethane	25,000	2,500	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,1-Dichloroethene	30	3.0	µg/kg	ND (25) JL	ND (36)	ND (10)		ND (41) JL	ND (33) JL			ND (60) JL	ND (30) JL					ND (9.8) JL
8260B	1,1-Dichloropropene	NE	NE	µg/kg	ND (25) JL	ND (36)	ND (10)		ND (41) JL	ND (33) JL			ND (60) JL	ND (30) JL					ND (9.8) JL
8260B	1,2,3-Trichlorobenzene	NE	NE	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,2,3-Trichloropropane	0.53	0.053	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,2,4-Trichlorobenzene	850	85	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,2,4-Trimethylbenzene	23,000	2,300	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,2-Dibromo-3-Chloropropane	NE	NE	µg/kg	ND (250) JL	ND (360)	ND (100)		ND (410) JL	ND (330) JL			ND (600) JL	ND (300) JL					ND (98) JL
8260B	1,2-Dibromoethane	0.16	0.016	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,2-Dichlorobenzene	5,100	510	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,2-Dichloroethane	16	1.6	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,2-Dichloropropane	18	1.8	µg/kg	ND (17) JL	ND (24)	ND (6.8)		ND (27) JL	ND (22) JL			ND (40) JL	ND (20) JL					ND (6.5) JL
8260B	1,3,5-Trimethylbenzene	23,000	2,300	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,3-Dichlorobenzene	28,000	2,800	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,3-Dichloropropane	NE	NE	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	1,4-Dichlorobenzene	640	64	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	2,2-Dichloropropane	NE	NE	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	2-Butanone (MEK)	59,000	5,900	µg/kg	ND (510) JL	ND (720)	ND (200)		ND (820) JL	ND (650) JL			ND (1200) JL	ND (590) JL					ND (200) JL
8260B	2-Chlorotoluene	NE	NE	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	2-Hexanone	NE	NE	µg/kg	ND (250) JL	ND (360)	ND (100)		ND (410) JL	ND (330) JL			ND (600) JL	ND (300) JL					ND (98) JL
8260B	4-Chlorotoluene	NE	NE	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	4-Methyl-2-pentanone (MIBK)	8,100	810	µg/kg	ND (250) JL	ND (360)	ND (100)		ND (410) JL	ND (330) JL			ND (600) JL	ND (300) JL					ND (98) JL
8260B	Acetone	88,000	8,800	µg/kg	350 J JL TB	470 J TB	ND (200)		830 J B JL	660 J JL			2,100 JL	690 J B JL					140 J B JL
8260B	Benzene	2,000[b]	200	µg/kg	ND (17) JL	ND (24)	ND (6.8)		ND (27) JL	ND (22) JL			ND (40) JL	ND (20) JL					ND (6.5) JL
8260B	Bromobenzene	NE	NE	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Bromochloromethane	NE	NE	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Bromodichloromethane	44	4.4	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Bromoform	340	34	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Bromomethane	160	16	µg/kg	ND (170) JL	ND (240)	ND (68)		ND (270) JL	ND (220) JL			ND (400) JL	ND (200) JL					ND (65) JL
8260B	Carbon disulfide	12,000	1,200	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Carbon tetrachloride	23	2.3	µg/kg	ND (25) JL	ND (36)	ND (10)		ND (41) JL	ND (33) JL			ND (60) JL	ND (30) JL					ND (9.8) JL
8260B	Chlorobenzene	630	63	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Chlorodibromomethane	32	3.2	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Chloroethane	580,000	58,000	µg/kg	ND (510) JL	ND (720)	ND (200)		ND (820) JL	ND (650) JL			ND (1200) JL	ND (590) JL					ND (200) JL
8260B	Chloroform	460	46	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Chloromethane	210	21	µg/kg	ND (510) JL	ND (240)	ND (200)		ND (820) JL	ND (650) JL			ND (1200) JL	ND (590) JL					ND (200) JL
8260B	cis-1,2-Dichloroethene	240	24	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCSSL29	12NVNCSSL30	12NVNCSSL31	12NVNCSL38	12NVNCSL40	12NVNCSL64	12NVNCSL41	12NVNCSL42	12NVNCSL43	12NVNCSL44	12NVNCSL45	12NVNCSL46	12NVNCSL47	12NVNCSL48	12NVNCSL49
				Duplicate	12NVNCSSL30	12NVNCSSL29			12NVNCSL64	12NVNCSL40									
				Laboratory Work Order	580-34947	580-34947	580-34947	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/11/2012	9/11/2012	9/11/2012	9/7/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012
				Location	Metal Debris Staging Area	Metal Debris Staging Area	Drum Staging Area	S5	AA01	AA01	AA02	AA03	AA04	AA05	AA06	AA07	AA08	AA09	AA10
				PID Reading (ppm)	NS	NS	NS	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.4	0.1	0.2	0.0	0.1
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**															
8260B	cis-1,3-Dichloropropene	NE	NE	µg/kg	ND (17) JL	ND (24)	ND (6.8)		ND (27) JL	ND (22) JL			ND (40) JL	ND (20) JL					ND (6.5) JL
8260B	Dibromomethane	1,100	110	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Dichlorodifluoromethane	140,000	14,000	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Ethylbenzene	6,900	690	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Hexachlorobutadiene	120	12	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Isopropylbenzene	51,000	5,100	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Methyl tert-butyl ether	1,300	130	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Methylene Chloride	16	1.6	µg/kg	ND (51) JL	ND (72)	**8.9 J TB**		ND (82) JL	**43 J JL**			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Naphthalene	120,000[b]	12,000	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	n-Butylbenzene	15,000	1,500	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	N-Propylbenzene	15,000	1,500	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	m,p-Xylene	NE	NE	µg/kg	ND (34) JL	ND (16)	ND (14)		ND (55) JL	ND (43) JL			62 J JL	ND (39) JL					8.0 J JL
8260B	o-Xylene	NE	NE	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Total Xylenes	63,000	6,300	µg/kg	ND (85) JL	ND (88)	ND (34)		ND (137) JL	ND (108) JL			62 J JL	ND (98) JL					8.0 J JL
8260B	p-Isopropyltoluene	NE	NE	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	sec-Butylbenzene	12,000	1,200	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Styrene	960	96	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	tert-Butylbenzene	12,000	1,200	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Tetrachloroethene	24	2.4	µg/kg	ND (25) JL	ND (36)	ND (10)		ND (41) JL	ND (33) JL			ND (60) JL	ND (30) JL					ND (9.8) JL
8260B	Toluene	6,500	650	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	trans-1,2-Dichloroethene	370	37	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	trans-1,3-Dichloropropene	NE	NE	µg/kg	ND (17) JL	ND (24)	ND (6.8)		ND (27) JL	ND (22) JL			ND (40) JL	ND (20) JL					ND (6.5) JL
8260B	Trichloroethene	20	57	µg/kg	ND (17) JL	ND (24)	ND (6.8)		ND (27) JL	ND (22) JL			ND (40) JL	ND (20) JL					ND (6.5) JL
8260B	Trichlorofluoromethane	86,000	8,600	µg/kg	ND (51) JL	ND (72)	ND (20)		ND (82) JL	ND (65) JL			ND (120) JL	ND (59) JL					ND (20) JL
8260B	Vinyl chloride	8.5	0.85	µg/kg	ND (8.4) JL	ND (12)	ND (3.4)		ND (14) JL	ND (11) JL			ND (20) JL	ND (9.9) JL					ND (3.3) JL
8270C SIM	1-Methylnaphthalene	6,200	620	µg/kg	ND (46) JL	ND (24)	0.76 J JH		2.7 J JH	ND (34)			57 JH	ND (40)					1.6 J JH
8270C SIM	2-Methylnaphthalene	6,100	610	µg/kg	ND (110) JL	ND (59)	0.90 J JH		4.0 J JH	ND (86)			110 JH	ND (100)					2.5 J JH
8270C SIM	Acenaphthene	180,000	18,000	µg/kg	ND (46) JL	ND (24)	ND (0.30)		15 JH	ND (34)			ND (1.4)	ND (40)					ND (0.36)
8270C SIM	Acenaphthylene	180,000	18,000	µg/kg	ND (110) JL	ND (59)	ND (0.74)		ND (1.9)	ND (86)			ND (3.4)	ND (100)					ND (0.90)
8270C SIM	Anthracene	3,000,000	300,000	µg/kg	ND (430) JL	ND (220)	ND (2.8)		28 JH	ND (320)			7.6 J JH	1,700					1.1 J JH
8270C SIM	Benzo(a)anthracene	3,600	360	µg/kg	ND (430) JL	ND (220)	ND (2.8)		49 JH	260 J			ND (13)	ND (380)					ND (3.4)
8270C SIM	Benzo(a)pyrene	490	49	µg/kg	ND (430) JL	ND (220)	ND (2.8)		**51 JH**	**240 J**			ND (13)	ND (380)					ND (3.4)
8270C SIM	Benzo(b)fluoranthene	4,900	490	µg/kg	ND (430) JL	ND (220)	ND (2.8)		95 JH	330 J			ND (13)	ND (380)					ND (3.4)
8270C SIM	Benzo(g,h,i)perylene	1,400,000	140,000	µg/kg	ND (430) JL	ND (220)	ND (2.8)		120 JH	540 J			15 J B JH	220 J					7.6 B JH
8270C SIM	Benzo(k)fluoranthene	49,000	4,900	µg/kg	ND (430) JL	ND (220)	ND (2.8)		23 JH	ND (320)			ND (13)	ND (380)					ND (3.4)
8270C SIM	Chrysene	360,000	36,000	µg/kg	ND (430) JL	ND (220)	ND (2.8)		140 JH QN	820 QN			ND (13)	ND (380)					3.0 J JH
8270C SIM	Dibenz(a,h)anthracene	490	49	µg/kg	ND (430) JL	ND (220)	ND (2.8)		26 JH	ND (320)			ND (13)	ND (380)					ND (3.4)
8270C SIM	Fluoranthene	1,400,000	140,000	µg/kg	310 J JL	ND (220)	1.6 J JH		78 JH	ND (320)			11 J JH	ND (380)					1.6 J JH
8270C SIM	Fluorene	220,000	22,000	µg/kg	ND (110) JL	ND (59)	ND (0.74)		ND (1.9)	ND (86)			ND (3.4)	750 J					ND (0.90)
8270C SIM	Indeno(1,2,3-cd)pyrene	4,900	490	µg/kg	ND (430) JL	ND (220)	ND (2.8)		55 JH	ND (320)			ND (13)	ND (380)					ND (3.4)
8270C SIM	Naphthalene	120,000[b]	12,000	µg/kg	ND (110) JL	ND (59)	2.6 J JH		9.4 J JH	ND (86)			140 JH	ND (100)					5.3 J JH
8270C SIM	Phenanthrene	3,000,000	300,000	µg/kg	ND (430) JL	ND (220)	2.2 J JH		76 JH	ND (320)			37 JH	3,100					4.8 J JH
8270C SIM	Pyrene	1,000,000	100,000	µg/kg	370 J JL	ND (220)	1.8 J JH		78 JH	220 J			13 J B JH	250 J					3.9 J B JH
6020	Arsenic	11[c]	1.1	mg/kg	**6.1**	**7.5**	**9.4**		**7.4**	**9.4**			**10**	**42**					**6.7**
6020	Barium	1,100	110	mg/kg	**130 QN**	41 QN	42		**360**	**360**			**200**	100					**200**
6020	Cadmium	5	0.5	mg/kg	0.49 B	0.36 B	0.23		**0.61**	**0.59**			**0.99**	0.43 J					0.46
6020	Chromium	25	2.5	mg/kg	**18**	**11**	**9**		**62 QN**	**27**			**35**	**100**					**54**
6020	Lead	400	40	mg/kg	13 QN	**1,100 QN**	23		**230**	**190**			**450**	**240**					**140**

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCSSL29	12NVNCSSL30	12NVNCSSL31	12NVNCSL38	12NVNCSL40	12NVNCSL64	12NVNCSL41	12NVNCSL42	12NVNCSL43	12NVNCSL44	12NVNCSL45	12NVNCSL46	12NVNCSL47	12NVNCSL48	12NVNCSL49
				Duplicate	12NVNCSSL30	12NVNCSSL29			12NVNCSL64	12NVNCSL40									
				Laboratory Work Order	580-34947	580-34947	580-34947	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/11/2012	9/11/2012	9/11/2012	9/7/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012
				Location	Metal Debris Staging Area	Metal Debris Staging Area	Drum Staging Area	S5	AA01	AA01	AA02	AA03	AA04	AA05	AA06	AA07	AA08	AA09	AA10
				PID Reading (ppm)	NS	NS	NS	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.4	0.1	0.2	0.0	0.1
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**															
6020	Nickel	86	8.6	mg/kg	**9.5**	**8.7**	**9**		**13**	**17**			**16**	**60**					**18**
6020	Selenium	3.4	0.34	mg/kg	**1.6**	**1.1 J**	**0.98**		**0.90 J**	**0.69 J**			**1.3 J**	**1.3 J**					**0.83 J**
6020	Silver	11.2	1.12	mg/kg	0.072 J	0.059 J	0.096 J		0.62	0.45 J			**3.5**	0.21 J					0.095 J
6020	Vanadium	710	71	mg/kg	45	30	20		21	18			27	37					36
6020	Zinc	4,100	410	mg/kg	56	60	45		280	110 QN			400	270					120
7471A	Mercury	1.4	0.14	mg/kg	0.097	0.078	0.021		**0.96**	**0.71**			**0.68**	**0.39**					0.12
8081A	4,4'-DDD	7,200	720	µg/kg				0.94 J											
8081A	4,4'-DDE	5,100	510	µg/kg				ND (0.68)											
8081A	4,4'-DDT	7,300	730	µg/kg				9.3											
8081A	Aldrin	70	7	µg/kg				ND (0.68)											
8081A	alpha-BHC	6.4	0.64	µg/kg				ND (0.68)											
8081A	alpha-Chlordane	NE	NE	µg/kg				ND (0.68)											
8081A	beta-BHC	22	2.2	µg/kg				ND (1.0)											
8081A	delta-BHC	NE	NE	µg/kg				ND (1.0)											
8081A	Dieldrin	7.6	0.76	µg/kg				0.66 J											
8081A	Endosulfan I	NE	NE	µg/kg				ND (0.68)											
8081A	Endosulfan II	NE	NE	µg/kg				ND (0.68)											
8081A	Endosulfan	64,000	6,400	µg/kg				ND (1.36)											
8081A	Endosulfan sulfate	NE	NE	µg/kg				ND (0.68)											
8081A	Endrin	290	29	µg/kg				ND (0.68)											
8081A	Endrin aldehyde	NE	NE	µg/kg				ND (0.68)											
8081A	Endrin ketone	NE	NE	µg/kg				ND (1.0)											
8081A	gamma-BHC (Lindane)	9.5	0.95	µg/kg				ND (1.0)											
8081A	gamma-Chlordane	NE	NE	µg/kg				ND (1.0)											
8081A	Heptachlor	280	28	µg/kg				ND (0.68)											
8081A	Heptachlor epoxide	14	1.4	µg/kg				ND (1.0)											
8081A	Methoxychlor	23,000	2,300	µg/kg				ND (1.0)											
8081A	Toxaphene	3,900	390	µg/kg				ND (40) J											
8082	PCB-1016	1,000	100	µg/kg	ND (20) JL	ND (18) JL	ND (10) JL	ND (15) JL	ND (28) JL	ND (130) JL	ND (26) JL	ND (9.8)	ND (51)	ND (30) JL	ND (89) JL	ND (16)	ND (15) JL	ND (20) JL	ND (14) JL
8082	PCB-1221	1,000	100	µg/kg	ND (40) JL	ND (36) JL	ND (21) JL	ND (30) JL	ND (57) JL	ND (260) JL	ND (52) JL	ND (20)	ND (100)	ND (60) JL	ND (180) JL	ND (32)	ND (30) JL	ND (40) JL	ND (28) JL
8082	PCB-1232	1,000	100	µg/kg	ND (20) JL	ND (18) JL	ND (10) JL	ND (15) JL	ND (28) JL	ND (130) JL	ND (26) JL	ND (9.8)	ND (51)	ND (30) JL	ND (89) JL	ND (16)	ND (15) JL	ND (20) JL	ND (14) JL
8082	PCB-1242	1,000	100	µg/kg	ND (20) JL	ND (18) JL	ND (10) JL	ND (15) JL	ND (28) JL	ND (130) JL	ND (26) JL	ND (9.8)	ND (51)	ND (30) JL	ND (89) JL	ND (16)	ND (15) JL	ND (20) JL	ND (14) JL
8082	PCB-1248	1,000	100	µg/kg	ND (20) JL	ND (18) JL	ND (10) JL	ND (15) JL	ND (28) JL	ND (130) JL	ND (26) JL	ND (9.8)	ND (51)	ND (30) JL	ND (89) JL	ND (16)	ND (15) JL	ND (20) JL	ND (14) JL
8082	PCB-1254	1000	100	µg/kg	ND (20) JL	ND (18) JL	ND (10) JL	ND (15) JL	**520 J JL QN**	**2,500 J JL QN**	ND (26) JL	ND (9.8)	ND (51)	ND (30) JL	ND (89) JL	ND (16)	ND (15) JL	36 J JL	ND (14) JL
8082	PCB-1260	1000	100	µg/kg	43 J JL	ND (18) JL	5.4 J JL	ND (15) JL	**270 J JL QN**	**2,000 J JL QN**	ND (26) JL	36	ND (51)	ND (30) JL	ND (89) JL	85	47 J JL	ND (20) JL	16 J JL
8151A	2,4,5-T	NE	NE	µg/kg				ND (4.9)											
8151A	2,4-D	210	21	µg/kg				ND (4.9)											
8151A	2,4-DB	NE	NE	µg/kg				ND (4.9)											
8151A	4-Nitrophenol	NE	NE	µg/kg				ND (4.9)											
8151A	Dalapon	NE	NE	µg/kg				ND (20)											
8151A	Dicamba	NE	NE	µg/kg				ND (9.8)											
8151A	Dichlorprop	NE	NE	µg/kg				ND (4.9)											
8151A	Dinoseb	NE	NE	µg/kg				ND (4.9)											
8151A	MCPA	NE	NE	µg/kg				ND (4.9)											
8151A	Mecoprop (MCPP)	NE	NE	µg/kg				ND (4.9)											
8151A	Pentachlorophenol	47	4.7	µg/kg				ND (9.8)											

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCSSL29	12NVNCSSL30	12NVNCSSL31	12NVNCSL38	12NVNCSL40	12NVNCSL64	12NVNCSL41	12NVNCSL42	12NVNCSL43	12NVNCSL44	12NVNCSL45	12NVNCSL46	12NVNCSL47	12NVNCSL48	12NVNCSL49
				Duplicate	12NVNCSSL30	12NVNCSSL29			12NVNCSL64	12NVNCSL40									
				Laboratory Work Order	580-34947	580-34947	580-34947	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955
				Sample Collection Date	9/11/2012	9/11/2012	9/11/2012	9/7/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012	9/8/2012
				Location	Metal Debris Staging Area	Metal Debris Staging Area	Drum Staging Area	S5	AA01	AA01	AA02	AA03	AA04	AA05	AA06	AA07	AA08	AA09	AA10
				PID Reading (ppm)	NS	NS	NS	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.4	0.1	0.2	0.0	0.1
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**															
8151A	Silvex (2,4,5-TP)	190	19	µg/kg				ND (4.9)											
8290	1,2,3,4,6,7,8-HpCDD	NE	NE	pg/g				330											
8290	1,2,3,4,6,7,8-HpCDF	NE	NE	pg/g				77											
8290	1,2,3,4,7,8,9-HpCDF	NE	NE	pg/g				ND (45)											
8290	1,2,3,4,7,8-HxCDD	NE	NE	pg/g				ND (45)											
8290	1,2,3,4,7,8-HxCDF	NE	NE	pg/g				ND (45)											
8290	1,2,3,6,7,8-HxCDD	NE	NE	pg/g				ND (45)											
8290	1,2,3,6,7,8-HxCDF	NE	NE	pg/g				ND (45)											
8290	1,2,3,7,8,9-HxCDD	NE	NE	pg/g				ND (45)											
8290	1,2,3,7,8,9-HxCDF	NE	NE	pg/g				ND (45)											
8290	1,2,3,7,8-PeCDD	NE	NE	pg/g				ND (8.9)											
8290	1,2,3,7,8-PeCDF	NE	NE	pg/g				ND (8.9)											
8290	2,3,4,6,7,8-HxCDF	NE	NE	pg/g				ND (45)											
8290	2,3,4,7,8-PeCDF	NE	NE	pg/g				ND (8.9)											
8290	2,3,7,8-TCDD	47	4.7	pg/g				ND (1.8)											
8290	2,3,7,8-TCDF	NE	NE	pg/g				ND (1.8)											
8290	OCDD	NE	NE	pg/g				3,200											
8290	OCDF	NE	NE	pg/g				300											
8290	Total HpCDD	NE	NE	pg/g				610											
8290	Total HpCDF	NE	NE	pg/g				260											
8290	Total HxCDD	NE	NE	pg/g				32											
8290	Total HxCDF	NE	NE	pg/g				24											
8290	Total PeCDD	NE	NE	pg/g				ND (8.9)											
8290	Total PeCDF	NE	NE	pg/g				22											
8290	Total TCDD	NE	NE	pg/g				2.2											
8290	Total TCDF	NE	NE	pg/g				15											

Table 6-1 Soil Sampling Results (continued)

Analytical Method	Analyte	Clean Up Level[a]	Screening Level[d]	Unit	12NVNCSL50	12NVNCSL51	12NVNCSL52	12NVNCSL65	12NVNCSL53	12NVNCSL54	12NVNCSL66	12NVNCSL55	12NVNCSL56	12NVNCSL57	12NVNCSL67	12NVNCSL58	12NVNCSL59	12NVNCBPSS01	12NVNCBPSS02
				Duplicate			12NVNCSL65	12NVNCSL52		12NVNCSL66	12NVNCSL54			12NVNCSL67	12NVNCSL57				
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-35165	580-35165
				Sample Collection Date	9/8/2012	9/8/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/22/2012	9/22/2012
				Location	AA11	AA12	AA13	AA13	AA14	AA15	AA15	AA16	AA17	AA18	AA18	AA19	AA20	BPE-1	BPE-2
				PID Reading (ppm)	0.0	0.0	0.1	0.1	8.3	34.0	34.0	0.1	0.2	0.0	0.0	0.0	0.2	NS	NS
AK101	GRO (C6–C10)	300	30	mg/kg	2.3 J B JL	2.7 J B JL	5.6 J B	7 J B	5.0 J B JL	54		0.88 J B	1.7 J B JL	0.46 J B		0.62 J B JL	1.2 J B JL	**220**	11 TB
AK102 & 103	DRO (nC10–<nC25)	9,200[b]	920	mg/kg	660	340	500 QN	260 QN	**7,700**	**38,000 QN**	**12,000 QN**	140	**1,100**	28		530	330	300	190
AK102 & 103	RRO (nC25–nC36)	9,200[b]	920	mg/kg	**4,400**	**3,400**	**4,200 QN**	**2,100 QN**	**5,000**	**4,400**	**3,900**	**1,000**	**7,100**	210		**3,500**	**1,700**	**1,600**	**1,200**
AK102/103-SG	DRO (nC10–<nC25)	9,200[b]	920	mg/kg	440				**8,600**	**39,000 QN**	**13,000 QN**								
AK102/103-SG	RRO (nC25–nC36)	9,200[b]	920	mg/kg	**2,500 JL**				**3,800**	**3,200 QN**	**1,600 JL QN**								
9060	Total Organic Carbon	NE	NE	mg/kg	210,000				350,000	250,000	440,000 H								
8260B	1,1,1,2-Tetrachloroethane	NE	NE	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,1,1-Trichloroethane	820	82	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,1,2,2-Tetrachloroethane	17	1.7	µg/kg		ND (35) JL				ND (56) JL		ND (7.2) JL	ND (14) JL	ND (4.1)			ND (12) JL	ND (8.3)	ND (6.9)
8260B	1,1,2-Trichloroethane	18	1.8	µg/kg		ND (35) JL				ND (56) JL		ND (7.2) JL	ND (14) JL	ND (4.1)			ND (12) JL	ND (8.3)	ND (6.9)
8260B	1,1-Dichloroethane	25,000	2,500	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,1-Dichloroethene	30	3.0	µg/kg		ND (60) JL				ND (95) JL		ND (12) JL	ND (24) JL	ND (6.9)			ND (21) JL	ND (14)	ND (12)
8260B	1,1-Dichloropropene	NE	NE	µg/kg		ND (60) JL				ND (95) JL		ND (12) JL	ND (24) JL	ND (6.9)			ND (21) JL	ND (14)	ND (12)
8260B	1,2,3-Trichlorobenzene	NE	NE	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,2,3-Trichloropropane	0.53	0.053	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,2,4-Trichlorobenzene	850	85	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,2,4-Trimethylbenzene	23,000	2,300	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	**6,100**	200
8260B	1,2-Dibromo-3-Chloropropane	NE	NE	µg/kg		ND (600) JL				ND (950) JL		ND (120) JL	ND (240) JL	ND (69)			ND (210) JL	ND (140)	ND (120)
8260B	1,2-Dibromoethane	0.16	0.016	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,2-Dichlorobenzene	5,100	510	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,2-Dichloroethane	16	1.6	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,2-Dichloropropane	18	1.8	µg/kg		ND (40) JL				ND (63) JL		ND (8.2) JL	ND (16) JL	ND (4.6)			ND (14) JL	ND (9.4)	ND (7.9)
8260B	1,3,5-Trimethylbenzene	23,000	2,300	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	2,200	67
8260B	1,3-Dichlorobenzene	28,000	2,800	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,3-Dichloropropane	NE	NE	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	1,4-Dichlorobenzene	640	64	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	2,2-Dichloropropane	NE	NE	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	2-Butanone (MEK)	59,000	5,900	µg/kg		ND (1200) JL				ND (1,900) JL		ND (250) JL	ND (490) JL	ND (140)			ND (420) JL	96 J	ND (240)
8260B	2-Chlorotoluene	NE	NE	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	2-Hexanone	NE	NE	µg/kg		ND (600) JL				ND (950) JL		ND (120) JL	ND (240) JL	ND (69)			ND (210) JL	ND (140)	ND (120)
8260B	4-Chlorotoluene	NE	NE	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	4-Methyl-2-pentanone (MIBK)	8,100	810	µg/kg		ND (600) JL				ND (950) JL		ND (120) JL	ND (240) JL	ND (69)			ND (210) JL	ND (140)	ND (120)
8260B	Acetone	88,000	8,800	µg/kg		1,200 J JL				1,400 J JL		200 J B JL	490 J JL TB	95 J			470 J JL	220 J TB	130 J TB
8260B	Benzene	2,000[b]	200	µg/kg		ND (40) JL				ND (63) JL		ND (8.2) JL	ND (16) JL	ND (4.6)			ND (14) JL	14 J	100
8260B	Bromobenzene	NE	NE	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Bromochloromethane	NE	NE	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Bromodichloromethane	44	4.4	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Bromoform	340	34	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Bromomethane	160	16	µg/kg		ND (400) JL				ND (630) JL		ND (82) JL	ND (160) JL	ND (46)			ND (140) JL	ND (94)	ND (79)
8260B	Carbon disulfide	12,000	1,200	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	20 J TB	10 J TB
8260B	Carbon tetrachloride	23	2.3	µg/kg		ND (60) JL				ND (95) JL		ND (12) JL	ND (24) JL	ND (6.9)			ND (21) JL	ND (14)	ND (12)
8260B	Chlorobenzene	630	63	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Chlorodibromomethane	32	3.2	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Chloroethane	580,000	58,000	µg/kg		ND (1200) JL				ND (1,900) JL		ND (250) JL	ND (490) JL	ND (140)			ND (420) JL	ND (280)	ND (240)
8260B	Chloroform	460	46	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Chloromethane	210	21	µg/kg		ND (1200) JL				ND (1,900) JL		ND (250) JL	ND (490) JL	ND (140)			ND (420) JL	ND (280)	ND (240)
8260B	cis-1,2-Dichloroethene	240	24	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCSL50	12NVNCSL51	12NVNCSL52	12NVNCSL65	12NVNCSL53	12NVNCSL54	12NVNCSL66	12NVNCSL55	12NVNCSL56	12NVNCSL57	12NVNCSL67	12NVNCSL58	12NVNCSL59	12NVNCBPSS01	12NVNCBPSS02
				Duplicate			12NVNCSL65	12NVNCSL52		12NVNCSL66	12NVNCSL54			12NVNCSL67	12NVNCSL57				
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-35165	580-35165
				Sample Collection Date	9/8/2012	9/8/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/22/2012	9/22/2012
				Location	AA11	AA12	AA13	AA13	AA14	AA15	AA15	AA16	AA17	AA18	AA18	AA19	AA20	BPE-1	BPE-2
				PID Reading (ppm)	0.0	0.0	0.1	0.1	8.3	34.0	34.0	0.1	0.2	0.0	0.0	0.0	0.2	NS	NS
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**															
8260B	cis-1,3-Dichloropropene	NE	NE	µg/kg		ND (40) JL				ND (63) JL		ND (8.2) JL	ND (16) JL	ND (4.6)			ND (14) JL	ND (9.4)	ND (7.9)
8260B	Dibromomethane	1,100	110	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Dichlorodifluoromethane	140,000	14,000	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Ethylbenzene	6,900	690	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	2,300	130
8260B	Hexachlorobutadiene	120	12	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Isopropylbenzene	51,000	5,100	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	300	ND (24)
8260B	Methyl tert-butyl ether	1,300	130	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Methylene Chloride	16	1.6	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	**26 J JL**	**8.6 J**			**30 J JL**	ND (28)	ND (24)
8260B	Naphthalene	120,000[b]	12,000	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	120	ND (24)
8260B	n-Butylbenzene	15,000	1,500	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	**4,600**	130
8260B	N-Propylbenzene	15,000	1,500	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	**2,000**	57
8260B	m,p-Xylene	NE	NE	µg/kg		ND (79) JL				120 J JL		9.8 J JL	ND (33) JL	5.4 J B			ND (28) JL	7,200	310
8260B	o-Xylene	NE	NE	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	3,500	200
8260B	Total Xylenes	63,000	6,300	µg/kg		ND (199) JL				120 J JL		9.8 J JL	ND (82) JL	5.4 J B			ND (70) JL	**10,700**	510
8260B	p-Isopropyltoluene	NE	NE	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	150	ND (24)
8260B	sec-Butylbenzene	12,000	1,200	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Styrene	960	96	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	tert-Butylbenzene	12,000	1,200	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Tetrachloroethene	24	2.4	µg/kg		ND (60) JL				ND (95) JL		ND (12) JL	ND (24) JL	ND (6.9)			ND (21) JL	ND (14)	ND (12)
8260B	Toluene	6,500	650	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	750	830
8260B	trans-1,2-Dichloroethene	370	37	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	trans-1,3-Dichloropropene	NE	NE	µg/kg		ND (40) JL				ND (63) JL		ND (8.2) JL	ND (16) JL	ND (4.6)			ND (14) JL	ND (9.4)	ND (7.9)
8260B	Trichloroethene	20	57	µg/kg		ND (40) JL				ND (63) JL		ND (8.2) JL	ND (16) JL	ND (4.6)			ND (14) JL	ND (9.4)	ND (7.9)
8260B	Trichlorofluoromethane	86,000	8,600	µg/kg		ND (120) JL				ND (190) JL		ND (25) JL	ND (49) JL	ND (14)			ND (42) JL	ND (28)	ND (24)
8260B	Vinyl chloride	8.5	0.85	µg/kg		ND (20) JL				ND (32) JL		ND (4.1) JL	ND (8.2) JL	ND (2.3)			ND (7.0) JL	ND (4.7)	ND (3.9)
8270C SIM	1-Methylnaphthalene	6,200	620	µg/kg		18 J JL				ND (44)		5.3 J	ND (0.55) R	0.61 J			ND (25)	450	6.6
8270C SIM	2-Methylnaphthalene	6,100	610	µg/kg		23 JL				ND (110)		6.5 J	ND (1.4) R	1.2 J			ND (63)	380	5.8
8270C SIM	Acenaphthene	180,000	18,000	µg/kg		ND (1.2) JL				ND (44)		ND (0.37) J	ND (0.55) R	ND (0.29)			ND (25)	ND (3.4)	ND (2.6)
8270C SIM	Acenaphthylene	180,000	18,000	µg/kg		ND (3.0) JL				ND (110)		ND (0.92) J	ND (1.4) R	ND (0.72)			ND (63)	ND (3.4)	ND (2.6)
8270C SIM	Anthracene	3,000,000	300,000	µg/kg		17 J JL				ND (420)		4.5 J	ND (5.1) R	ND (2.7)			ND (240)	ND (3.4)	ND (2.6)
8270C SIM	Benzo(a)anthracene	3,600	360	µg/kg		10 J JL				ND (420)		3.9 J	ND (5.1) R	ND (2.7)			ND (240)	ND (3.4)	ND (2.6)
8270C SIM	Benzo(a)pyrene	490	49	µg/kg		11 J JL				ND (420)		4.2 J	1.8 J R	ND (2.7)			ND (240)	ND (3.4)	ND (2.6)
8270C SIM	Benzo(b)fluoranthene	4,900	490	µg/kg		46 JL				ND (420)		9.4 J	ND (5.1) R	ND (2.7)			ND (240)	ND (3.4)	ND (2.6)
8270C SIM	Benzo(g,h,i)perylene	1,400,000	140,000	µg/kg		17 J B JL				260 J		7.5 B J	2.2 J R	1.6 J			ND (240)	ND (3.4)	ND (2.6)
8270C SIM	Benzo(k)fluoranthene	49,000	4,900	µg/kg		ND (11) JL				ND (420)		2.7 J	ND (5.1) R	ND (2.7)			ND (240)	ND (3.4)	ND (2.6)
8270C SIM	Chrysene	360,000	36,000	µg/kg		31 JL				ND (420)		7.9 J	ND (5.1) R	ND (2.7)			ND (240)	ND (3.4)	ND (2.6)
8270C SIM	Dibenz(a,h)anthracene	490	49	µg/kg		ND (11) JL				ND (420)		ND (3.4) J	ND (5.1) R	ND (2.7)			ND (240)	ND (3.4)	ND (2.6)
8270C SIM	Fluoranthene	1,400,000	140,000	µg/kg		20 J JL				ND (420)		11 J	ND (5.1) R	ND (2.7)			ND (240)	ND (3.4)	ND (2.6)
8270C SIM	Fluorene	220,000	22,000	µg/kg		ND (3.0) JL				ND (110)		ND (0.92) J	ND (1.4) R	ND (0.72)			ND (63)	ND (3.4)	ND (2.6)
8270C SIM	Indeno(1,2,3-cd)pyrene	4,900	490	µg/kg		24 JL				ND (420)		7.6 J	2.2 J B R	1.2 J B			ND (240)	ND (3.4)	ND (2.6)
8270C SIM	Naphthalene	120,000[b]	12,000	µg/kg		75 JL				ND (110)		5.3 J	ND (1.4) R	0.71 J			ND (63)	220	ND (2.6)
8270C SIM	Phenanthrene	3,000,000	300,000	µg/kg		68 JL				ND (420)		13 J	ND (5.1) R	ND (2.7)			ND (240)	9.1	1.7 J
8270C SIM	Pyrene	1,000,000	100,000	µg/kg		17 J B JL				ND (420)		14 B	4.0 J R	1.6 J			ND (240)	ND (3.4)	ND (2.6)
6020	Arsenic	11[c]	1.1	mg/kg		**2.1**				**33**		**6.0**	**18**	**4.6**			**16**	**3.5**	**5.6**
6020	Barium	1,100	110	mg/kg		**170**				42		46	82	64			86	110	35
6020	Cadmium	5	0.5	mg/kg		**24**				**7.9**		**1.3**	0.32 J	**0.77**			0.30 J	0.22 J	0.047 J
6020	Chromium	25	2.5	mg/kg		**14**				**66**		**11**	**36**	**24**			**48**	**23.0**	**10.0**
6020	Lead	400	40	mg/kg		**120**				**280**		25	**140**	**43**			**180**	6.6	6.2

Table 6-1 Soil Sampling Results (continued)

Analytical Method	Analyte	Clean Up Level[a]	Screening Level[d]	Unit	12NVNCSL50	12NVNCSL51	12NVNCSL52	12NVNCSL65	12NVNCSL53	12NVNCSL54	12NVNCSL66	12NVNCSL55	12NVNCSL56	12NVNCSL57	12NVNCSL67	12NVNCSL58	12NVNCSL59	12NVNCBPSS01	12NVNCBPSS02
				Duplicate			12NVNCSL65	12NVNCSL52		12NVNCSL66	12NVNCSL54			12NVNCSL67	12NVNCSL57				
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-35165	580-35165
				Sample Collection Date	9/8/2012	9/8/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/22/2012	9/22/2012
				Location	AA11	AA12	AA13	AA13	AA14	AA15	AA15	AA16	AA17	AA18	AA18	AA19	AA20	BPE-1	BPE-2
				PID Reading (ppm)	0.0	0.0	0.1	0.1	8.3	34.0	34.0	0.1	0.2	0.0	0.0	0.0	0.2	NS	NS
6020	Nickel	86	8.6	mg/kg		**25**				**110**		**13**	**22**	**15**			**27**	**17**	**9.5**
6020	Selenium	3.4	0.34	mg/kg		**2.5 J**				**1.2 J**		**0.60 J**	**1.6**	**0.52 J**			**1.5**	**0.86 J**	**0.46 J**
6020	Silver	11.2	1.12	mg/kg		0.38 J				0.13 J		0.035 J	0.071 J	0.17 J			0.078 J	0.062 J	0.026 J
6020	Vanadium	710	71	mg/kg		11				15		22	32	31			35	34	24
6020	Zinc	4,100	410	mg/kg		**870**				**610**		84	120	170			110	48	28
7471A	Mercury	1.4	0.14	mg/kg		**0.36**				**0.25**		0.080	0.12	0.015 J			0.11	0.045	0.017
8081A	4,4'-DDD	7,200	720	µg/kg						410 R				ND (0.76)	ND (0.76)				ND (0.32)
8081A	4,4'-DDE	5,100	510	µg/kg						49 R				ND (0.50)	ND (0.51)				ND (0.32)
8081A	4,4'-DDT	7,300	730	µg/kg						66 R				ND (3.8)	ND (3.8)				ND (0.32)
8081A	Aldrin	70	7	µg/kg						ND (1.6) R				ND (0.50)	ND (0.51)				ND (0.32)
8081A	alpha-BHC	6.4	0.64	µg/kg						ND (1.6) R				ND (0.50)	ND (0.51)				ND (0.32)
8081A	alpha-Chlordane	NE	NE	µg/kg						ND (1.6) R				ND (0.50)	ND (0.51)				ND (0.32)
8081A	beta-BHC	22	2.2	µg/kg						**6.4 JL**				ND (0.76)	ND (0.76)				ND (0.53)
8081A	delta-BHC	NE	NE	µg/kg						ND (2.4) R				ND (0.76)	ND (0.76)				ND (0.32)
8081A	Dieldrin	7.6	0.76	µg/kg						ND (1.6) R				ND (0.50)	ND (0.51)				ND (0.32)
8081A	Endosulfan I	NE	NE	µg/kg						ND (1.6) R				ND (0.50)	ND (0.51)				ND (0.32)
8081A	Endosulfan II	NE	NE	µg/kg						ND (1.6) R				ND (0.50)	ND (0.51)				ND (0.32)
8081A	Endosulfan	64,000	6,400	µg/kg						ND (3.2) R				ND (1.00)	ND (1.02)				ND (0.64)
8081A	Endosulfan sulfate	NE	NE	µg/kg						20 R				ND (0.50)	ND (0.51)				ND (0.32)
8081A	Endrin	290	29	µg/kg						ND (1.6) R				ND (0.50)	ND (0.51)				ND (0.32)
8081A	Endrin aldehyde	NE	NE	µg/kg						ND (1.6) R				ND (0.50)	ND (0.51)				ND (0.32)
8081A	Endrin ketone	NE	NE	µg/kg						ND (2.4) R				ND (0.76)	ND (0.76)				ND (0.32)
8081A	gamma-BHC (Lindane)	9.5	0.95	µg/kg						ND (2.4) R				ND (0.76)	ND (0.76)				ND (0.53)
8081A	gamma-Chlordane	NE	NE	µg/kg						ND (2.4) R				ND (0.76)	ND (0.76)				ND (0.32)
8081A	Heptachlor	280	28	µg/kg						ND (1.6)				ND (0.50)	ND (0.51)				ND (0.53)
8081A	Heptachlor epoxide	14	1.4	µg/kg						**2.8 JL**				ND (0.76)	ND (0.76)				ND (0.32)
8081A	Methoxychlor	23,000	2,300	µg/kg						ND (2.4) R				ND (3.8)	ND (3.8)				ND (0.32)
8081A	Toxaphene	3,900	390	µg/kg						ND (95) R				ND (150) J	ND (150) J				ND (530)
8082	PCB-1016	1,000	100	µg/kg		ND (45) JL	ND (24) JL	ND (20) JL	ND (53)	ND (35)		ND (17) JL	ND (21) JL	ND (11) JL		ND (35) JL	ND (19) JL	ND (0.0068)	ND (0.0053)
8082	PCB-1221	1,000	100	µg/kg		ND (90) JL	ND (47) JL	ND (39) JL	ND (110)	ND (70)		ND (33) JL	ND (42) JL	ND (22) JL		ND (71) JL	ND (37) JL	ND (0.014)	ND (0.011)
8082	PCB-1232	1,000	100	µg/kg		ND (45) JL	ND (24) JL	ND (20) JL	ND (53)	ND (35)		ND (17) JL	ND (21) JL	ND (11) JL		ND (35) JL	ND (19) JL	ND (0.014)	ND (0.011)
8082	PCB-1242	1,000	100	µg/kg		ND (45) JL	ND (24) JL	ND (20) JL	ND (53)	ND (35)		ND (17) JL	ND (21) JL	ND (11) JL		ND (35) JL	ND (19) JL	ND (0.0068)	ND (0.0053)
8082	PCB-1248	1,000	100	µg/kg		ND (45) JL	ND (24) JL	ND (20) JL	ND (53)	ND (35)		ND (17) JL	ND (21) JL	ND (11) JL		ND (35) JL	ND (19) JL	ND (0.0068)	ND (0.0053)
8082	PCB-1254	1000	100	µg/kg		ND (45) JL	ND (24) JL	ND (20) JL	ND (53)	ND (35)		ND (17) JL	ND (21) JL	ND (11) JL		ND (35) JL	ND (19) JL	ND (0.0068)	ND (0.0053)
8082	PCB-1260	1000	100	µg/kg		ND (45) JL	ND (24) JL	27 J JL	75 J	**590**		62 JL	ND (21) JL	45 JL		**680 JL**	59 J JL	ND (0.0068)	0.010 J
8151A	2,4,5-T	NE	NE	µg/kg						ND (17)				ND (3.7)	ND (3.7)				ND (61)
8151A	2,4-D	210	21	µg/kg						ND (17)				ND (3.7)	ND (3.7)				ND (200)
8151A	2,4-DB	NE	NE	µg/kg						ND (17)				ND (3.7)	ND (3.7)				ND (61)
8151A	4-Nitrophenol	NE	NE	µg/kg						ND (17)				ND (3.7)	ND (3.7)				
8151A	Dalapon	NE	NE	µg/kg						ND (70)				ND (15)	ND (15)				ND (61)
8151A	Dicamba	NE	NE	µg/kg						ND (35)				ND (7.3)	ND (7.3)				ND (61)
8151A	Dichlorprop	NE	NE	µg/kg						ND (17)				ND (3.7)	ND (3.7)				ND (61)
8151A	Dinoseb	NE	NE	µg/kg						ND (17)				ND (3.7)	ND (3.7)				ND (61)
8151A	MCPA	NE	NE	µg/kg						ND (17)				ND (3.7)	ND (3.7)				ND (52,000)
8151A	Mecoprop (MCPP)	NE	NE	µg/kg						ND (17)				ND (3.7)	ND (3.7)				ND (52,000)
8151A	Pentachlorophenol	47	4.7	µg/kg						ND (35)				ND (7.3)	ND (7.3)				

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCSL50	12NVNCSL51	12NVNCSL52	12NVNCSL65	12NVNCSL53	12NVNCSL54	12NVNCSL66	12NVNCSL55	12NVNCSL56	12NVNCSL57	12NVNCSL67	12NVNCSL58	12NVNCSL59	12NVNCBPSS01	12NVNCBPSS02
				Duplicate			12NVNCSL65	12NVNCSL52		12NVNCSL66	12NVNCSL54			12NVNCSL67	12NVNCSL57				
				Laboratory Work Order	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-34955	580-35165	580-35165
				Sample Collection Date	9/8/2012	9/8/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/9/2012	9/22/2012	9/22/2012
				Location	AA11	AA12	AA13	AA13	AA14	AA15	AA15	AA16	AA17	AA18	AA18	AA19	AA20	BPE-1	BPE-2
				PID Reading (ppm)	0.0	0.0	0.1	0.1	8.3	34.0	34.0	0.1	0.2	0.0	0.0	0.0	0.2	NS	NS
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**															
8151A	Silvex (2,4,5-TP)	190	19	µg/kg						ND (17)				ND (3.7)	ND (3.7)				ND (61)
8290	1,2,3,4,6,7,8-HpCDD	NE	NE	pg/g						930				12	13				15
8290	1,2,3,4,6,7,8-HpCDF	NE	NE	pg/g						340				3.3 J	3.9 J				5.1 J
8290	1,2,3,4,7,8,9-HpCDF	NE	NE	pg/g						11 J				ND (5.4)	ND (5.5)				ND (7.2)
8290	1,2,3,4,7,8-HxCDD	NE	NE	pg/g						12 J				ND (5.4)	ND (5.5)				0.32 J
8290	1,2,3,4,7,8-HxCDF	NE	NE	pg/g						9.1 J				ND (5.4)	ND (5.5)				0.23 J B
8290	1,2,3,6,7,8-HxCDD	NE	NE	pg/g						35				ND (5.4)	ND (5.5)				0.48 J
8290	1,2,3,6,7,8-HxCDF	NE	NE	pg/g						ND (16)				ND (5.4)	ND (5.5)				0.23 J B
8290	1,2,3,7,8,9-HxCDD	NE	NE	pg/g						22				ND (5.4)	ND (5.5)				0.24 J
8290	1,2,3,7,8,9-HxCDF	NE	NE	pg/g						ND (16)				ND (5.4)	ND (5.5)				ND (7.2)
8290	1,2,3,7,8-PeCDD	NE	NE	pg/g						ND (16)				ND (5.4)	ND (5.5)				ND (7.2)
8290	1,2,3,7,8-PeCDF	NE	NE	pg/g						ND (16)				ND (5.4)	ND (5.5)				0.15 J
8290	2,3,4,6,7,8-HxCDF	NE	NE	pg/g						ND (16)				ND (5.4)	ND (5.5)				0.35 J
8290	2,3,4,7,8-PeCDF	NE	NE	pg/g						ND (16)				ND (5.4)	ND (5.5)				0.18 J
8290	2,3,7,8-TCDD	47	4.7	pg/g						ND (13.2)				ND (1.1)	ND (1.1)				ND (1.4)
8290	2,3,7,8-TCDF	NE	NE	pg/g						2.0 J				ND (1.1)	ND (1.1)				0.37 J
8290	OCDD	NE	NE	pg/g						7,600				100	110				140
8290	OCDF	NE	NE	pg/g						730				10 J	13				17
8290	Total HpCDD	NE	NE	pg/g						1,800				22	26				31
8290	Total HpCDF	NE	NE	pg/g						810				11	14				19
8290	Total HxCDD	NE	NE	pg/g						370				ND (5.4)	ND (5.5)				4.0
8290	Total HxCDF	NE	NE	pg/g						200				ND (5.4)	ND (5.5)				4.2
8290	Total PeCDD	NE	NE	pg/g						11				ND (5.4)	ND (5.5)				0.27
8290	Total PeCDF	NE	NE	pg/g						16				ND (5.4)	ND (5.5)				2.7
8290	Total TCDD	NE	NE	pg/g						1.8				ND (1.1)	ND (1.1)				1.4
8290	Total TCDF	NE	NE	pg/g						18				ND (1.1)	ND (1.1)				6.4

Table 6-1 Soil Sampling Results (continued)

				Sample ID	12NVNCBPSS03	12NVNCBPSS04	12NVNCBPSS05
				Duplicate	12NVNCBPSS04	12NVNCBPSS03	
				Laboratory Work Order	580-35165	580-35165	580-35165
				Sample Collection Date	9/22/2012	9/22/2012	9/22/2012
				Location	BPW-1	BPW-1	BPW-2
				PID Reading (ppm)	NS	NS	NS
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**			
AK101	GRO (C6–C10)	300	30	mg/kg	0.98 J B JH	0.92 J B JH	0.71 J B JH
AK102 & 103	DRO (nC10–<nC25)	9,200[b]	920	mg/kg	480 QN	86 QN	57
AK102 & 103	RRO (nC25–nC36)	9,200[b]	920	mg/kg	**5,000 JH QN**	660 QN	510
AK102/103-SG	DRO (nC10–<nC25)	9,200[b]	920	mg/kg			
AK102/103-SG	RRO (nC25–nC36)	9,200[b]	920	mg/kg			
9060	Total Organic Carbon	NE	NE	mg/kg			
8260B	1,1,1,2-Tetrachloroethane	NE	NE	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,1,1-Trichloroethane	820	82	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,1,2,2-Tetrachloroethane	17	1.7	µg/kg	ND (5.2)	ND (5.7)	ND (5.8)
8260B	1,1,2-Trichloroethane	18	1.8	µg/kg	ND (5.2)	ND (5.7)	ND (5.8)
8260B	1,1-Dichloroethane	25,000	2,500	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,1-Dichloroethene	30	3.0	µg/kg	ND (8.9)	ND (9.8)	ND (10)
8260B	1,1-Dichloropropene	NE	NE	µg/kg	ND (8.9)	ND (9.8)	ND (10)
8260B	1,2,3-Trichlorobenzene	NE	NE	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,2,3-Trichloropropane	0.53	0.053	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,2,4-Trichlorobenzene	850	85	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,2,4-Trimethylbenzene	23,000	2,300	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,2-Dibromo-3-Chloropropane	NE	NE	µg/kg	ND (89)	ND (98)	ND (100)
8260B	1,2-Dibromoethane	0.16	0.016	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,2-Dichlorobenzene	5,100	510	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,2-Dichloroethane	16	1.6	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,2-Dichloropropane	18	1.8	µg/kg	ND (5.9)	ND (6.5)	ND (6.6)
8260B	1,3,5-Trimethylbenzene	23,000	2,300	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,3-Dichlorobenzene	28,000	2,800	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,3-Dichloropropane	NE	NE	µg/kg	ND (18)	ND (20)	ND (20)
8260B	1,4-Dichlorobenzene	640	64	µg/kg	ND (18)	ND (20)	ND (20)
8260B	2,2-Dichloropropane	NE	NE	µg/kg	ND (18)	ND (20)	ND (20)
8260B	2-Butanone (MEK)	59,000	5,900	µg/kg	ND (180)	ND (200)	ND (200)
8260B	2-Chlorotoluene	NE	NE	µg/kg	ND (18)	ND (20)	ND (20)
8260B	2-Hexanone	NE	NE	µg/kg	ND (89)	ND (98)	ND (100)
8260B	4-Chlorotoluene	NE	NE	µg/kg	ND (18)	ND (20)	ND (20)
8260B	4-Methyl-2-pentanone (MIBK)	8,100	810	µg/kg	ND (89)	ND (98)	ND (100)
8260B	Acetone	88,000	8,800	µg/kg	ND (180)	ND (200)	140 J TB
8260B	Benzene	2,000[b]	200	µg/kg	ND (5.9)	ND (6.5)	ND (6.6)
8260B	Bromobenzene	NE	NE	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Bromochloromethane	NE	NE	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Bromodichloromethane	44	4.4	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Bromoform	340	34	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Bromomethane	160	16	µg/kg	ND (59)	ND (65)	ND (66)
8260B	Carbon disulfide	12,000	1,200	µg/kg	9.7 J TB	9.6 J TB	ND (20)
8260B	Carbon tetrachloride	23	2.3	µg/kg	ND (8.9)	ND (9.8)	ND (10)
8260B	Chlorobenzene	630	63	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Chlorodibromomethane	32	3.2	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Chloroethane	580,000	58,000	µg/kg	ND (180)	ND (200)	ND (200)
8260B	Chloroform	460	46	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Chloromethane	210	21	µg/kg	ND (180)	ND (200)	ND (200)
8260B	cis-1,2-Dichloroethene	240	24	µg/kg	ND (18)	ND (20)	ND (20)

Table 6-1 Soil Sampling Results (continued)

Analytical Method	Analyte	Clean Up Level[a]	Screening Level[d]	Unit			
				Sample ID	12NVNCBPSS03	12NVNCBPSS04	12NVNCBPSS05
				Duplicate	12NVNCBPSS04	12NVNCBPSS03	
				Laboratory Work Order	580-35165	580-35165	580-35165
				Sample Collection Date	9/22/2012	9/22/2012	9/22/2012
				Location	BPW-1	BPW-1	BPW-2
				PID Reading (ppm)	NS	NS	NS
8260B	cis-1,3-Dichloropropene	NE	NE	µg/kg	ND (5.9)	ND (6.5)	ND (6.6)
8260B	Dibromomethane	1,100	110	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Dichlorodifluoromethane	140,000	14,000	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Ethylbenzene	6,900	690	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Hexachlorobutadiene	120	12	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Isopropylbenzene	51,000	5,100	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Methyl tert-butyl ether	1,300	130	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Methylene Chloride	16	1.6	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Naphthalene	120,000[b]	12,000	µg/kg	ND (18)	ND (20)	ND (20)
8260B	n-Butylbenzene	15,000	1,500	µg/kg	ND (18)	ND (20)	ND (20)
8260B	N-Propylbenzene	15,000	1,500	µg/kg	ND (18)	ND (20)	ND (20)
8260B	m,p-Xylene	NE	NE	µg/kg	ND (12)	ND (13)	ND (13)
8260B	o-Xylene	NE	NE	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Total Xylenes	63,000	6,300	µg/kg	ND (30)	ND (33)	ND (33)
8260B	p-Isopropyltoluene	NE	NE	µg/kg	ND (18)	ND (20)	ND (20)
8260B	sec-Butylbenzene	12,000	1,200	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Styrene	960	96	µg/kg	ND (18)	ND (20)	ND (20)
8260B	tert-Butylbenzene	12,000	1,200	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Tetrachloroethene	24	2.4	µg/kg	ND (8.9)	ND (9.8)	ND (10)
8260B	Toluene	6,500	650	µg/kg	ND (18)	ND (20)	ND (20)
8260B	trans-1,2-Dichloroethene	370	37	µg/kg	ND (18)	ND (20)	ND (20)
8260B	trans-1,3-Dichloropropene	NE	NE	µg/kg	ND (5.9)	ND (6.5)	ND (6.6)
8260B	Trichloroethene	20	57	µg/kg	ND (5.9)	ND (6.5)	ND (6.6)
8260B	Trichlorofluoromethane	86,000	8,600	µg/kg	ND (18)	ND (20)	ND (20)
8260B	Vinyl chloride	8.5	0.85	µg/kg	ND (3.0)	ND (3.3)	ND (3.3)
8270C SIM	1-Methylnaphthalene	6,200	620	µg/kg	ND (2.7)	ND (2.7)	2.3 J
8270C SIM	2-Methylnaphthalene	6,100	610	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Acenaphthene	180,000	18,000	µg/kg	ND (2.7)	ND (2.7)	2.7 J
8270C SIM	Acenaphthylene	180,000	18,000	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Anthracene	3,000,000	300,000	µg/kg	ND (2.7)	ND (2.7)	2.1 J
8270C SIM	Benzo(a)anthracene	3,600	360	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Benzo(a)pyrene	490	49	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Benzo(b)fluoranthene	4,900	490	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Benzo(g,h,i)perylene	1,400,000	140,000	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Benzo(k)fluoranthene	49,000	4,900	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Chrysene	360,000	36,000	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Dibenz(a,h)anthracene	490	49	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Fluoranthene	1,400,000	140,000	µg/kg	ND (2.7)	ND (2.7)	3.7 J
8270C SIM	Fluorene	220,000	22,000	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Indeno(1,2,3-cd)pyrene	4,900	490	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Naphthalene	120,000[b]	12,000	µg/kg	ND (2.7)	ND (2.7)	ND (2.9)
8270C SIM	Phenanthrene	3,000,000	300,000	µg/kg	7.7	5.5	7.4
8270C SIM	Pyrene	1,000,000	100,000	µg/kg	ND (2.7)	5.1 J	5.2 J
6020	Arsenic	11[c]	1.1	mg/kg	**5.9**	**6.4**	**6.2**
6020	Barium	1,100	110	mg/kg	34	36	49
6020	Cadmium	5	0.5	mg/kg	0.067 J	0.060 J	0.071 J
6020	Chromium	25	2.5	mg/kg	**11.0**	**9.8**	**14.0**
6020	Lead	400	40	mg/kg	6.9	6.5	7.6

Table 6-1 Soil Sampling Results (continued)

Analytical Method	Analyte	Clean Up Level[a]	Screening Level[d]	Unit	Sample ID 12NVNCBPSS03	Sample ID 12NVNCBPSS04	Sample ID 12NVNCBPSS05
				Duplicate	12NVNCBPSS04	12NVNCBPSS03	
				Laboratory Work Order	580-35165	580-35165	580-35165
				Sample Collection Date	9/22/2012	9/22/2012	9/22/2012
				Location	BPW-1	BPW-1	BPW-2
				PID Reading (ppm)	NS	NS	NS
6020	Nickel	86	8.6	mg/kg	7.8	7.9	**14**
6020	Selenium	3.4	0.34	mg/kg	**0.47 J**	**0.52 J**	**0.48 J**
6020	Silver	11.2	1.12	mg/kg	0.020 J	0.020 J	0.034 J
6020	Vanadium	710	71	mg/kg	19	20	25
6020	Zinc	4,100	410	mg/kg	57 QN	30 QN	40
7471A	Mercury	1.4	0.14	mg/kg	0.027	0.017	0.018
8081A	4,4'-DDD	7,200	720	µg/kg			ND (0.36)
8081A	4,4'-DDE	5,100	510	µg/kg			ND (0.36)
8081A	4,4'-DDT	7,300	730	µg/kg			ND (0.36)
8081A	Aldrin	70	7	µg/kg			ND (0.36)
8081A	alpha-BHC	6.4	0.64	µg/kg			ND (0.36)
8081A	alpha-Chlordane	NE	NE	µg/kg			ND (0.36)
8081A	beta-BHC	22	2.2	µg/kg			ND (0.59)
8081A	delta-BHC	NE	NE	µg/kg			ND (0.36)
8081A	Dieldrin	7.6	0.76	µg/kg			ND (0.36)
8081A	Endosulfan I	NE	NE	µg/kg			ND (0.36)
8081A	Endosulfan II	NE	NE	µg/kg			ND (0.36)
8081A	Endosulfan	64,000	6,400	µg/kg			ND (0.72)
8081A	Endosulfan sulfate	NE	NE	µg/kg			ND (0.36)
8081A	Endrin	290	29	µg/kg			ND (0.36)
8081A	Endrin aldehyde	NE	NE	µg/kg			ND (0.36)
8081A	Endrin ketone	NE	NE	µg/kg			ND (0.36)
8081A	gamma-BHC (Lindane)	9.5	0.95	µg/kg			ND (0.59)
8081A	gamma-Chlordane	NE	NE	µg/kg			ND (0.36)
8081A	Heptachlor	280	28	µg/kg			ND (0.59)
8081A	Heptachlor epoxide	14	1.4	µg/kg			ND (0.36)
8081A	Methoxychlor	23,000	2,300	µg/kg			ND (0.36)
8081A	Toxaphene	3,900	390	µg/kg			ND (59)
8082	PCB-1016	1,000	100	µg/kg	ND (0.0055)	ND (0.0054)	ND (0.0059)
8082	PCB-1221	1,000	100	µg/kg	ND (0.011)	ND (0.011)	ND (0.012)
8082	PCB-1232	1,000	100	µg/kg	ND (0.011)	ND (0.011)	ND (0.012)
8082	PCB-1242	1,000	100	µg/kg	ND (0.0055)	ND (0.0054)	ND (0.0059)
8082	PCB-1248	1,000	100	µg/kg	ND (0.0055)	ND (0.0054)	ND (0.0059)
8082	PCB-1254	1000	100	µg/kg	ND (0.0055)	ND (0.0054)	ND (0.0059)
8082	PCB-1260	1000	100	µg/kg	0.025	0.016	0.013
8151A	2,4,5-T	NE	NE	µg/kg			ND (65)
8151A	2,4-D	210	21	µg/kg			ND (220)
8151A	2,4-DB	NE	NE	µg/kg			ND (65)
8151A	4-Nitrophenol	NE	NE	µg/kg			
8151A	Dalapon	NE	NE	µg/kg			ND (65)
8151A	Dicamba	NE	NE	µg/kg			ND (65)
8151A	Dichlorprop	NE	NE	µg/kg			ND (65)
8151A	Dinoseb	NE	NE	µg/kg			ND (65)
8151A	MCPA	NE	NE	µg/kg			ND (55,000)
8151A	Mecoprop (MCPP)	NE	NE	µg/kg			ND (55,000)
8151A	Pentachlorophenol	47	4.7	µg/kg			

Table 6-1 Soil Sampling Results (continued)

	Sample ID				12NVNCBPSS03	12NVNCBPSS04	12NVNCBPSS05
	Duplicate				12NVNCBPSS04	12NVNCBPSS03	
	Laboratory Work Order				580-35165	580-35165	580-35165
	Sample Collection Date				9/22/2012	9/22/2012	9/22/2012
	Location				BPW-1	BPW-1	BPW-2
	PID Reading (ppm)				NS	NS	NS
Analytical Method	**Analyte**	**Clean Up Level[a]**	**Screening Level[d]**	**Unit**			
8151A	Silvex (2,4,5-TP)	190	19	µg/kg			ND (65)
8290	1,2,3,4,6,7,8-HpCDD	NE	NE	pg/g			12
8290	1,2,3,4,6,7,8-HpCDF	NE	NE	pg/g			4.5 J
8290	1,2,3,4,7,8,9-HpCDF	NE	NE	pg/g			0.28 J
8290	1,2,3,4,7,8-HxCDD	NE	NE	pg/g			0.34 J
8290	1,2,3,4,7,8-HxCDF	NE	NE	pg/g			ND (6.5)
8290	1,2,3,6,7,8-HxCDD	NE	NE	pg/g			0.84 J
8290	1,2,3,6,7,8-HxCDF	NE	NE	pg/g			0.18 J B
8290	1,2,3,7,8,9-HxCDD	NE	NE	pg/g			0.70 J
8290	1,2,3,7,8,9-HxCDF	NE	NE	pg/g			ND (6.5)
8290	1,2,3,7,8-PeCDD	NE	NE	pg/g			ND (6.5)
8290	1,2,3,7,8-PeCDF	NE	NE	pg/g			ND (6.5)
8290	2,3,4,6,7,8-HxCDF	NE	NE	pg/g			ND (6.5)
8290	2,3,4,7,8-PeCDF	NE	NE	pg/g			ND (6.5)
8290	2,3,7,8-TCDD	47	4.7	pg/g			ND (1.3)
8290	2,3,7,8-TCDF	NE	NE	pg/g			ND (1.3)
8290	OCDD	NE	NE	pg/g			93
8290	OCDF	NE	NE	pg/g			11 J B
8290	Total HpCDD	NE	NE	pg/g			26
8290	Total HpCDF	NE	NE	pg/g			13
8290	Total HxCDD	NE	NE	pg/g			5.5
8290	Total HxCDF	NE	NE	pg/g			2.4
8290	Total PeCDD	NE	NE	pg/g			ND (6.5)
8290	Total PeCDF	NE	NE	pg/g			3.0
8290	Total TCDD	NE	NE	pg/g			1.0
8290	Total TCDF	NE	NE	pg/g			5.7

Table 6-1 Soil Sampling Results (continued)

Notes:

[a]18 AAC 75 Method Two Soil Cleanup Level from Tables B1 and B2, Under 40-inch zone, Using Most Stringent Exposure Pathway Unless Otherwise Notated

[b]18 AAC 75, Method 4, Risk-Based Residential Cleanup Level Established Under Feasibility Study, Northeast Cape FUDS (F10AK09603_04.09_0500_a), March 2007.

[c]Site Specific Background Value Established Under Feasibility Study, Northeast Cape FUDS (F10AK09603_04.09_0500_a), March 2007.

[d]One-tenth most restrictive of 18 AAC 75, Table B1 and B2

Cleanup level exceeded

Cleanup level not exceeded but screening level exceeded

B = The analyte was found in the method blank at greater than one-tenth the concentration in the sample. Results may be biased high or be a false positive.

H = Result is associated with holding time exceedance.

J = Result is less than the LOQ but greater than or equal to the LOD, and the concentration is an approximate value or is otherwise estimated without a bias identified.

JH = Associated result is an estimated quantity with a high bias.

JL = Associated result is an estimated quantity with a low bias.

ND = non-detect, limit of detection in parentheses or minimum level in brackets

QN = RPD for field duplicate outside of acceptance limits.

R = rejected

TB = The analyte was found in the trip blank at greater than one-tenth the concentration in the sample. Results may be biased high or be a false positive.

µg/kg = micrograms per kilogram
AAC = Alaska Administrative Code
AK = Alaska Test Method
BHC = benzene hexachloride
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethene
DDT = dichlorodiphenyltrichloroethane
DRO = diesel range organics
FUDS = formerly used defense site
GRO = gasoline range organics
LOD = limit of detection
LOQ = limit of quantitation
MCPA = 2-Methyl-4-Chlorophenoxyacetic Acid
MEK = methyl ethyl ketone
mg/kg = milligrams per kilogram
MIBK = methyl isobutyl ketone
N/A = not applicable
NE = not established
NS = not screened
PCB = polychlorinated biphenyl
pg/g = picograms per gram
PID = photoionization detector
ppm = parts per million
RPD = relative percent differenct
RRO = residual range organics
SG = silica gel

Table 6-2 Sediment Sampling Results

				Sample ID	12NVNCSD01	12NVNCSD02	12NVNCSD03	12NVNCSD04	12NVNCSD05	12NVNCSD11	12NVNCSD06	12NVNCSD07	12NVNCSD08	12NVNCSD09	12NVNCSD10	12NVNCSD12
				Duplicate					12NVNCSD11	12NVNCSD05					12NVNCSD12	12NVNCSD10
				Laboratory Work Order	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947
				Sample Collection Date	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012
				Location	SD01	SD02	SD03	SD04	SD05	SD05	SD06	SD07	SD08	SD09	SD10	SD10
Analytical Method	**Analyte**	**Clean Up Level[d]**	**Screening Level[e]**	**Unit**												
AK101	GRO (C6–C10)	300	30	mg/kg	1.1 J B JL	1.0 J B JL	2.4 J B JL	16 J	5.9 J B JL	4.6 J B JL	1.4 J B JL	1.5 J B JL	1.7 J B JL	2.1 J B JL	0.77 J B JL	
AK102 & 103	DRO (nC10–<nC25)	3,500[a]	350	mg/kg	43	180	310	**540**	**750**	**530**	**1,100**	**1,200**	**1,300**	**880**	260	
AK102 & 103	RRO (nC25–nC36)	3,500[a]	350	mg/kg	270	**1,500**	**1,400**	**4,700**	**9,100**	**6,000**	**8,000**	**8,300**	**3,800**	**7,700**	**1,800**	
AK102/103-SG	DRO (nC10–<nC25)	3,500[a]	350	mg/kg	8.1 J	61	63 J	220	200	170	**570**	**810**	**780**	**350**	110	
AK102/103-SG	RRO (nC25–nC36)	3,500[a]	350	mg/kg	95	**400**	**430**	**2,400**	**2,500**	**1,500**	**4,100**	**3,400**	**2,800**	**2,600**	**580**	
9060	Total Organic Carbon	NE	NE	mg/kg	42,000	75,000	120,000	330,000	460,000	340,000	270,000	250,000	170,000	190,000	140,000	
8260B	1,1,1,2-Tetrachloroethane	NE	NE	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,1,1-Trichloroethane	820	82	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,1,2,2-Tetrachloroethane	17	1.7	µg/kg	ND (6.9) JL	ND (12) JL	ND (23) JL	ND (120) JL	ND (40) JL	ND (35) JL	ND (18) JL	ND (15) JL	ND (13) JL	ND (23) JL	ND (9.7) JL	
8260B	1,1,2-Trichloroethane	18	1.8	µg/kg	ND (6.9) JL	ND (12) JL	ND (23) JL	ND (120) JL	ND (40) JL	ND (35) JL	ND (18) JL	ND (15) JL	ND (13) JL	ND (23) JL	ND (9.7) JL	
8260B	1,1-Dichloroethane	25,000	2,500	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,1-Dichloroethene	30	3	µg/kg	ND (12) JL	ND (20) JL	ND (40) JL	ND (210) JL	ND (68) JL	ND (59) JL	ND (31) JL	ND (26) JL	ND (21) JL	ND (39) JL	ND (17) JL	
8260B	1,1-Dichloropropene	NE	NE	µg/kg	ND (12) JL	ND (20) JL	ND (40) JL	ND (210) JL	ND (68) JL	ND (59) JL	ND (31) JL	ND (26) JL	ND (21) JL	ND (39) JL	ND (17) JL	
8260B	1,2,3-Trichlorobenzene	NE	NE	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,2,3-Trichloropropane	0.53	0.053	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,2,4-Trichlorobenzene	850	85	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,2,4-Trimethylbenzene	23,000	2,300	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,2-Dibromo-3-Chloropropane	NE	NE	µg/kg	ND (120) JL	ND (200) JL	ND (400) JL	ND (2,100) JL	ND (680) JL	ND (590) JL	ND (310) JL	ND (260) JL	ND (210) JL	ND (390) JL	ND (170) JL	
8260B	1,2-Dibromoethane	0.16	0.016	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,2-Dichlorobenzene	5,100	510	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,2-Dichloroethane	16	1.6	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,2-Dichloropropane	18	1.8	µg/kg	ND (7.8) JL	ND (13) JL	ND (26) JL	ND (140) JL	ND (46) JL	ND (39) JL	ND (21) JL	ND (17) JL	ND (14) JL	ND (26) JL	ND (11) JL	
8260B	1,3,5-Trimethylbenzene	23,000	2,300	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,3-Dichlorobenzene	28,000	2,800	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,3-Dichloropropane	NE	NE	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	1,4-Dichlorobenzene	640	64	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	2,2-Dichloropropane	NE	NE	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	2-Butanone (MEK)	59,000	5,900	µg/kg	ND (230) JL	ND (400) JL	ND (790) JL	ND (4,200) JL	ND (1,400) JL	ND (1200) JL	ND (620) JL	ND (510) JL	ND (430) JL	ND (770) JL	ND (330) JL	
8260B	2-Chlorotoluene	NE	NE	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	2-Hexanone	NE	NE	µg/kg	ND (120) JL	ND (200) JL	ND (400) JL	ND (2,100) JL	ND (680) JL	ND (590) JL	ND (310) JL	ND (260) JL	ND (210) JL	ND (390) JL	ND (170) JL	
8260B	4-Chlorotoluene	NE	NE	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	4-Methyl-2-pentanone (MIBK)	8,100	810	µg/kg	ND (120) JL	ND (200) JL	ND (400) JL	ND (2,100) JL	ND (680) JL	ND (590) JL	ND (310) JL	ND (260) JL	ND (210) JL	ND (390) JL	ND (170) JL	
8260B	Acetone	88,000	8,800	µg/kg	110 J JL TB	180 J JL TB	500 J JL TB	3,000 J JL TB	600 J JL TB	1,200 J JL TB	230 J JL TB	200 J JL TB	180 J JL TB	350 J JL TB	ND (330) JL	
8260B	Benzene	25	2.5	µg/kg	ND (7.8) JL	ND (13) JL	ND (26) JL	ND (140) JL	ND (46) JL	ND (39) JL	ND (21) JL	ND (17) JL	ND (14) JL	ND (26) JL	ND (11) JL	
8260B	Bromobenzene	NE	NE	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Bromochloromethane	NE	NE	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Bromodichloromethane	44	4.4	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Bromoform	340	34	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Bromomethane	160	16	µg/kg	ND (78) JL	ND (130) JL	ND (260) JL	ND (1,400) JL	ND (460) JL	ND (390) JL	ND (210) JL	ND (170) JL	ND (140) JL	ND (260) JL	ND (110) JL	
8260B	Carbon disulfide	12,000	1,200	µg/kg	ND (23) JL	ND (40) JL	42 J JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	15 J	
8260B	Carbon tetrachloride	23	2.3	µg/kg	ND (12) JL	ND (20) JL	ND (40) JL	ND (210) JL	ND (68) JL	ND (59) JL	ND (31) JL	ND (26) JL	ND (21) JL	ND (39) JL	ND (17) JL	
8260B	Chlorobenzene	630	63	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Chlorodibromomethane	32	3.2	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Chloroethane	580,000	58,000	µg/kg	ND (230) JL	ND (400) JL	ND (790) JL	ND (4,200) JL	ND (1,400) JL	ND (1,200) JL	ND (620) JL	ND (510) JL	ND (430) JL	ND (770) JL	ND (330) JL	
8260B	Chloroform	460	46	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Chloromethane	210	21	µg/kg	ND (230) JL	ND (400) JL	ND (790) JL	ND (4,200) JL	ND (1,400) JL	ND (1,200) JL	ND (620) JL	ND (510) JL	ND (430) JL	ND (770) JL	ND (330) JL	

Table 6-2 Sediment Sampling Results (continued)

				Sample ID	12NVNCSD01	12NVNCSD02	12NVNCSD03	12NVNCSD04	12NVNCSD05	12NVNCSD11	12NVNCSD06	12NVNCSD07	12NVNCSD08	12NVNCSD09	12NVNCSD10	12NVNCSD12
				Duplicate					12NVNCSD11	12NVNCSD05					12NVNCSD12	12NVNCSD10
				Laboratory Work Order	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947
				Sample Collection Date	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012
				Location	SD01	SD02	SD03	SD04	SD05	SD05	SD06	SD07	SD08	SD09	SD10	SD10
Analytical Method	**Analyte**	**Clean Up Level[d]**	**Screening Level[e]**	**Unit**												
8260B	cis-1,2-Dichloroethene	240	24	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	cis-1,3-Dichloropropene	NE	NE	µg/kg	ND (7.8) JL	ND (13) JL	ND (26) JL	ND (140) JL	ND (46) JL	ND (39) JL	ND (21) JL	ND (17) JL	ND (14) JL	ND (26) JL	ND (11) JL	
8260B	Dibromomethane	1,100	110	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Dichlorodifluoromethane	140,000	14,000	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Ethylbenzene	6,900	690	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Hexachlorobutadiene	120	12	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Isopropylbenzene	51,000	5,100	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Methyl tert-butyl ether	1,300	130	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Methylene Chloride	16	1.6	µg/kg	ND (23) JL	ND (40) JL	**29 J JL TB**	ND (420) JL	**47 J JL TB**	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Naphthalene	1,700[c]	170	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	n-Butylbenzene	15,000	1,500	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	N-Propylbenzene	15,000	1,500	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	m,p-Xylene	NE	NE	µg/kg	ND (16) JL	ND (27) JL	ND (53) JL	ND (280) JL	ND (91) JL	ND (79) JL	ND (41) JL	ND (34) JL	ND (29) JL	ND (52) JL	ND (22) JL	
8260B	o-Xylene	NE	NE	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Total Xylenes	63,000	6,300		ND (39) JL	ND (67) JL	ND (132) JL	ND (700) JL	ND (231) JL	ND (199) JL	ND (103) JL	ND (85) JL	ND (72) JL	ND (129) JL	ND (55) JL	
8260B	p-Isopropyltoluene	NE	NE	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	sec-Butylbenzene	12,000	1,200	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Styrene	960	96	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	tert-Butylbenzene	12,000	1,200	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Tetrachloroethene	24	2.4	µg/kg	ND (12) JL	ND (20) JL	ND (40) JL	ND (210) JL	ND (68) JL	ND (59) JL	ND (31) JL	ND (26) JL	ND (21) JL	ND (39) JL	ND (17) JL	
8260B	Toluene	6,500	650	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	trans-1,2-Dichloroethene	370	37	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	trans-1,3-Dichloropropene	NE	NE	µg/kg	ND (7.8) JL	ND (13) JL	ND (26) JL	ND (140) JL	ND (46) JL	ND (39) JL	ND (21) JL	ND (17) JL	ND (14) JL	ND (26) JL	ND (11) JL	
8260B	Trichloroethene	20	2	µg/kg	ND (7.8) JL	ND (13) JL	ND (26) JL	ND (140) JL	ND (46) JL	ND (39) JL	ND (21) JL	ND (17) JL	ND (14) JL	ND (26) JL	ND (11) JL	
8260B	Trichlorofluoromethane	86,000	8,600	µg/kg	ND (23) JL	ND (40) JL	ND (79) JL	ND (420) JL	ND (140) JL	ND (120) JL	ND (62) JL	ND (51) JL	ND (43) JL	ND (77) JL	ND (33) JL	
8260B	Vinyl chloride	8.5	0.85	µg/kg	ND (3.9) JL	ND (6.6) JL	ND (13) JL	ND (70) JL	ND (23) JL	ND (20) JL	ND (10) JL	ND (8.6) JL	ND (7.2) JL	ND (13) JL	ND (5.5) JL	
8270C SIM	1-Methylnaphthalene	6,200	620	µg/kg	ND (3.7)	ND (0.51)	ND (1.1)	ND (5.9)	9.8 J	ND (2.1)	ND (1.6)	11 J	ND (0.77) J	13 J JH	ND (3.5)	
8270C SIM	2-Methylnaphthalene	600[c]	60	µg/kg	8.9 J JH	ND (1.3)	ND (2.7)	ND (15)	ND (15)	4.4 J JH	46 JH	9.6 J	27 J	11 J JH	ND (8.6)	
8270C SIM	Acenaphthene	500[c]	50	µg/kg	ND (3.7)	ND (0.51)	ND (1.1)	ND (5.9)	ND (15)	ND (2.1)	ND (1.6)	ND (0.88) J	ND (0.77) J	ND (1.2)	ND (3.5)	
8270C SIM	Acenaphthylene	180,000	18,000	µg/kg	ND (9.2)	ND (1.3)	ND (2.7)	ND (15)	ND (15)	ND (5.2)	ND (4.1)	ND (2.2) J	ND (1.9) J	ND (3.0)	970 JH	
8270C SIM	Anthracene	3,000,000	300,000	µg/kg	ND (34)	ND (4.8)	ND (10)	ND (55)	ND (15)	ND (19)	120 JH	ND (8.3) J	ND (7.2) J	ND (11)	ND (32)	
8270C SIM	Benzo[a]anthracene	3,600	360	µg/kg	ND (34)	4.7 J JH	ND (10)	ND (55)	ND (15)	ND (19)	**370 JH**	8.7 J	2.9 J	ND (11)	ND (32)	
8270C SIM	Benzo[a]pyrene	490	49	µg/kg	ND (34)	4.5 J JH	ND (10)	ND (55)	ND (15)	ND (19)	**340 JH**	8.9 J	ND (7.2) J	ND (11)	ND (32)	
8270C SIM	Benzo[b]fluoranthene	4,900	490	µg/kg	ND (34)	8.1 J JH	ND (10)	ND (55)	ND (15)	ND (19)	**580 JH**	19 J	ND (7.2) J	ND (11)	ND (32)	
8270C SIM	Benzo[g,h,i]perylene	1,700[b]	170	µg/kg	ND (34)	10 JH	ND (10)	24 J JH	ND (15)	ND (19)	**280 JH**	13 J	6.4 J	ND (11)	ND (32)	
8270C SIM	Benzo[k]fluoranthene	49,000	4,900	µg/kg	ND (34)	8.2 J JH	ND (10)	ND (55)	ND (15)	ND (19)	180 JH	5.6 J	ND (7.2) J	ND (11)	ND (32)	
8270C SIM	Chrysene	360,000	36,000	µg/kg	ND (34)	6.4 J JH	ND (10)	ND (55)	ND (15)	ND (19)	480 JH	12 J	5.4 J	ND (11)	ND (32)	
8270C SIM	Dibenz(a,h)anthracene	490	49	µg/kg	ND (34)	ND (4.8)	ND (10)	ND (55)	ND (15)	ND (19)	**90 JH**	ND (8.3) J	ND (7.2) J	ND (11)	ND (32)	
8270C SIM	Fluoranthene	2,000[b]	200	µg/kg	ND (34)	3.4 J JH	ND (10)	ND (55)	ND (15)	10 J JH	**1,300 JH**	24 J	8.8 J	4.7 J JH	ND (32)	
8270C SIM	Fluorene	800[c]	80	µg/kg	53 J JH	ND (1.3)	21 JH	**150 JH**	28 J	ND (5.2)	52 JH	ND (2.2) J	ND (1.9) J	ND (3.0)	ND (8.6)	
8270C SIM	Indeno[1,2,3-cd]pyrene	3,200[b]	320	µg/kg	ND (34)	9.3 J JH	ND (10)	ND (55)	ND (15)	ND (19)	**350 JH**	12 J	ND (7.2) J	ND (11)	ND (32)	
8270C SIM	Naphthalene	1,700[c]	170	µg/kg	31 J JH	ND (1.3)	ND (2.7)	ND (15)	ND (15)	7.1 J JH	88 JH	ND (2.2) J	28 J	ND (3.0)	ND (8.6)	
8270C SIM	Phenanthrene	4,800[c]	480	µg/kg	23 J JH	ND (4.8)	ND (10)	ND (55)	10 J	16 J JH	400 JH	14 J	ND (7.2) J	ND (11)	ND (32)	
8270C SIM	Pyrene	1,000,000	100,000	µg/kg	ND (34)	5.4 J JH	ND (10)	ND (55)	ND (15)	12 J JH	1,100 JH	44 J	16 J	5.1 J JH	65 JH	
8270C SIM	Total LPAH	7,800[c]	780	µg/kg	107	4.8	21	150	38	23.1	660	14	28	11	**970**	
8270C SIM	Total HPAH	9,600[c]	960	µg/kg	34	60	10	24	15	22	**5070**	147.2	39.5	9.8	65	

Table 6-2 Sediment Sampling Results (continued)

				Sample ID	12NVNCSD01	12NVNCSD02	12NVNCSD03	12NVNCSD04	12NVNCSD05	12NVNCSD11	12NVNCSD06	12NVNCSD07	12NVNCSD08	12NVNCSD09	12NVNCSD10	12NVNCSD12
				Duplicate					12NVNCSD11	12NVNCSD05					12NVNCSD12	12NVNCSD10
				Laboratory Work Order	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947
				Sample Collection Date	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012
				Location	SD01	SD02	SD03	SD04	SD05	SD05	SD06	SD07	SD08	SD09	SD10	SD10
Analytical Method	**Analyte**	**Clean Up Level[d]**	**Screening Level[e]**	**Unit**												
6020	Arsenic	93[c]	9.3	mg/kg	7.6	4.1	**9.1**	1.7 J	**17**	**19**	**32**	**13**	**47**	**9.9**	5	
6020	Barium	1,100	110	mg/kg	26	83	47	86	100 QN	**180 QN**	**430**	**150**	**120**	**220**	55	
6020	Cadmium	5	0.5	mg/kg	0.053 J	0.090 J	0.40 J	ND (0.16)	**0.54 J B**	**0.50 J B**	**5.7**	**2.5**	**1**	**0.61 J B**	**0.9**	
6020	Chromium	270[c]	27	mg/kg	10	15	16	4.7	7.4 QN	23 QN	**71**	**35**	**69**	**31**	15	
6020	Lead	530[c]	53	mg/kg	4.7 J	13	12	20	5.8 QN	9.9 QN	**650**	**190**	**190**	**110**	37	
6020	Nickel	86	8.6	mg/kg	**14**	**8.7**	**13**	3.2 J	**9.2**	**8.1**	**27**	**21**	**59**	**17**	**13**	
6020	Selenium	3.4	0.34	mg/kg	0.31 J	**0.74 J**	ND (1.6)	ND (3.2)	**2.5 J**	**2.6 J**	**2.7 J**	**2.1**	**1.7 J**	**2.0 J**	**0.81 J**	
6020	Silver	11.2	1.12	mg/kg	0.021 J	0.046 J	0.12 J	ND (0.16)	ND (0.12)	0.063 J	**7.4**	0.45 J	0.20 J	0.097 J	0.14 J	
6020	Vanadium	710	71	mg/kg	19	16	34	9.6	30	41	45	45	43	54	23	
6020	Zinc	960[c]	96	mg/kg	30	39	61	31	**140**	**100**	**720**	**410**	**230**	49	**630**	
7471A	Mercury	1.4	0.14	mg/kg	ND (0.012)	0.068	0.025 J	**0.16**	**0.14**	**0.16**	**0.44**	**0.21**	0.11	0.10	0.077	
8081A	4,4'-DDD	7,200	720	µg/kg					ND (4.2) JL	ND (18) JL	120 JL	ND (11) JL		ND (3.2) JL	ND (8.7) JL	
8081A	4,4'-DDE	5,100	510	µg/kg					ND (2.8) J JL	ND (12) J JL	13 J JL	ND (7.3) J JL		ND (11) J JL	ND (5.8) J JL	
8081A	4,4'-DDT	7,300	730	µg/kg					7.2 J JL	ND (18) J JL	62 J JL	ND (11) J JL		ND (16) J JL	ND (8.7) J JL	
8081A	Aldrin	70	7	µg/kg					ND (2.8) JL	ND (12) JL	ND (14) JL	ND (7.3) JL		ND (11) JL	ND (5.8) JL	
8081A	alpha-BHC	6.4	0.64	µg/kg					ND (2.8) J JL	ND (12) J JL	ND (14) J JL	ND (7.3) J JL		ND (11) J JL	ND (5.8) J JL	
8081A	alpha-Chlordane	NE	NE	µg/kg					ND (2.8) J JL	ND (12) J JL	ND (14) J JL	ND (7.3) J JL		ND (11) J JL	ND (5.8) J JL	
8081A	beta-BHC	22	2.2	µg/kg					ND (4.2) J	ND (18) J JL	ND (21) J JL	ND (11) J JL		ND (16) J JL	ND (8.7) J JL	
8081A	delta-BHC	NE	NE	µg/kg					ND (4.2) J JL	ND (18) J JL	ND (21) J JL	ND (11) J JL		ND (16) J JL	ND (8.7) J JL	
8081A	Dieldrin	7.6	0.76	µg/kg					ND (2.8) JL	ND (12) JL	ND (14) JL	ND (7.3) JL		ND (11) JL	ND (5.8) JL	
8081A	Endosulfan I	NE	NE	µg/kg					ND (2.8) J JL	ND (12) J JL	ND (14) J JL	ND (7.3) J JL		ND (11) J JL	ND (5.8) J JL	
8081A	Endosulfan II	NE	NE	µg/kg					ND (2.8) J JL	ND (12) J JL	ND (14) J JL	ND (7.3) J JL		ND (11) J JL	ND (5.8) J JL	
8081A	Endosulfan	64,000	6,400	µg/kg					ND (5.6) J JL	ND (24) J JL	ND (28) J JL	ND (14.6) J JL		ND (22) J JL	ND (11.6) J JL	
8081A	Endosulfan sulfate	NE	NE	µg/kg					ND (2.8) J JL	ND (12) J JL	ND (14) J JL	ND (7.3) J JL		ND (11) J JL	ND (5.8) J JL	
8081A	Endrin	290	29	µg/kg					ND (2.8) J JL	ND (12) J JL	ND (14) J JL	ND (7.3) J JL		ND (11) J JL	ND (5.8) J JL	
8081A	Endrin aldehyde	NE	NE	µg/kg					ND (2.8) J JL	ND (12) J JL	ND (14) J JL	ND (7.3) J JL		ND (11) J JL	ND (5.8) J JL	
8081A	Endrin ketone	NE	NE	µg/kg					ND (4.2) J JL	ND (18) J JL	ND (21) J JL	ND (11) J JL		ND (16) J JL	ND (8.7) J JL	
8081A	gamma-BHC (Lindane)	9.5	0.95	µg/kg					ND (4.2) J JL	ND (18) J JL	ND (21) J JL	ND (11) J JL		ND (16) J JL	ND (8.7) J JL	
8081A	gamma-Chlordane	NE	NE	µg/kg					ND (4.2) J JL	ND (18) J JL	ND (21) J JL	ND (11) J JL		ND (16) J JL	ND (8.7) J JL	
8081A	Heptachlor	280	28	µg/kg					ND (2.8) J JL	ND (12) J JL	11 J JL	ND (7.3) J JL		ND (11) J JL	ND (5.8) J JL	
8081A	Heptachlor epoxide	14	1.4	µg/kg					ND (4.2) J JL	ND (18) J JL	ND (21) J JL	ND (11) J JL		ND (16) J JL	ND (8.7) J JL	
8081A	Methoxychlor	23,000	2,300	µg/kg					ND (4.2) J JL	ND (18) J JL	ND (21) J JL	ND (11) J JL		ND (16) J JL	ND (8.7) J JL	
8081A	Toxaphene	3,900	390	µg/kg					ND (160) J JL	ND (140) J JL	ND (170) J JL	ND (86) J JL		ND (120) J JL	ND (68) J JL	
8082	PCB-1016	700[bc]	70	µg/kg	ND (14) JL	ND (19) JL	ND (40) JL	ND (76) JL	ND (61) JL	ND (52) JL	ND (62) JL	ND (32) JL	ND (28) JL	ND (46) JL	ND (25) JL	
8082	PCB-1221	700[bc]	70	µg/kg	ND (29) JL	ND (38) JL	ND (80) JL	ND (150) JL	ND (120) JL	ND (100) JL	ND (120) JL	ND (63) JL	ND (56) JL	ND (92) JL	ND (51) JL	
8082	PCB-1232	700[bc]	70	µg/kg	ND (14) JL	ND (19) JL	ND (40) JL	ND (76) JL	ND (61) JL	ND (52) JL	ND (62) JL	ND (32) JL	ND (28) JL	ND (46) JL	ND (25) JL	
8082	PCB-1242	700[bc]	70	µg/kg	ND (14) JL	ND (19) JL	ND (40) JL	ND (76) JL	ND (61) JL	ND (52) JL	ND (62) JL	ND (32) JL	ND (28) JL	ND (46) JL	ND (25) JL	
8082	PCB-1248	700[bc]	70	µg/kg	ND (14) JL	ND (19) JL	ND (40) JL	ND (76) JL	ND (61) JL	ND (52) JL	ND (62) JL	ND (32) JL	ND (28) JL	ND (46) JL	ND (25) JL	
8082	PCB-1254	700[bc]	70	µg/kg	ND (14) JL	ND (19) JL	ND (40) JL	ND (76) JL	ND (61) JL	ND (52) JL	ND (62) JL	ND (32) JL	ND (28) JL	ND (46) JL	ND (25) JL	
8082	PCB-1260	700[bc]	70	µg/kg	13 J JL	ND (19) JL	ND (40) JL	**84 J JL**	**210**	**110 J JL**	**470**	**400**	60 J JL	**490**	25 J JL	
8151A	2,4,5-T	NE	NE	µg/kg					ND (20)	ND (17)	ND (21)	ND (11)		ND (16)	ND (8.6)	
8151A	2,4-D	210	21	µg/kg					ND (20)	ND (17)	ND (21)	ND (11)		ND (16)	ND (8.6)	
8151A	2,4-DB	NE	NE	µg/kg					ND (20)	ND (17)	ND (21)	ND (11)		ND (16)	ND (8.6)	
8151A	4-Nitrophenol	NE	NE	µg/kg					ND (20)	ND (17)	ND (21)	ND (11)		ND (16)	ND (8.6)	
8151A	Dalapon	NE	NE	µg/kg					ND (80)	ND (70)	ND (83)	ND (44)		ND (65)	ND (35)	
8151A	Dicamba	NE	NE	µg/kg					ND (40)	ND (35)	ND (41)	ND (22)		ND (32)	ND (17)	
8151A	Dichlorprop	NE	NE	µg/kg					ND (20)	ND (17)	ND (21)	ND (11)		ND (16)	ND (8.6)	

Table 6-2 Sediment Sampling Results (continued)

	Sample ID				12NVNCSD01	12NVNCSD02	12NVNCSD03	12NVNCSD04	12NVNCSD05	12NVNCSD11	12NVNCSD06	12NVNCSD07	12NVNCSD08	12NVNCSD09	12NVNCSD10	12NVNCSD12
	Duplicate								12NVNCSD11	12NVNCSD05					12NVNCSD12	12NVNCSD10
	Laboratory Work Order				580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947
	Sample Collection Date				9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012
	Location				SD01	SD02	SD03	SD04	SD05	SD05	SD06	SD07	SD08	SD09	SD10	SD10
Analytical Method	**Analyte**	**Clean Up Level[d]**	**Screening Level[e]**	**Unit**												
8151A	Dinoseb	NE	NE	µg/kg					ND (20)	ND (17)	ND (21)	ND (11)		ND (16)	ND (8.6)	
8151A	MCPA	NE	NE	µg/kg					ND (20)	ND (17)	ND (21)	ND (11)		ND (16)	ND (8.6)	
8151A	Mecoprop	NE	NE	µg/kg					ND (20)	ND (17)	ND (21)	ND (11)		ND (16)	ND (8.6)	
8151A	Pentachlorophenol	47	4.7	µg/kg					ND (40)	ND (35)	ND (41)	ND (22)		ND (32)	ND (17)	
8151A	Silvex (2,4,5-TP)	190	19	µg/kg					ND (20)	ND (17)	ND (21)	ND (11)		ND (16)	ND (8.6)	
8290	1,2,3,4,6,7,8-HpCDD	NE	NE	pg/g								990			46	52
8290	1,2,3,4,6,7,8-HpCDF	NE	NE	pg/g								280			45 QN	17 QN
8290	1,2,3,4,7,8,9-HpCDF	NE	NE	pg/g								26			6.0 J	ND [13]
8290	1,2,3,4,7,8-HxCDD	NE	NE	pg/g								ND [16]			ND [12]	ND [13]
8290	1,2,3,4,7,8-HxCDF	NE	NE	pg/g								15 J			19	ND [13]
8290	1,2,3,6,7,8-HxCDD	NE	NE	pg/g								33			ND [12]	ND [13]
8290	1,2,3,6,7,8-HxCDF	NE	NE	pg/g								ND [16]			ND [12]	ND [13]
8290	1,2,3,7,8,9-HxCDD	NE	NE	pg/g								11 J			ND [12]	ND [13]
8290	1,2,3,7,8,9-HxCDF	NE	NE	pg/g								ND [16]			ND [12]	ND [13]
8290	1,2,3,7,8-PeCDD	NE	NE	pg/g								ND [16]			ND [12]	ND [13]
8290	1,2,3,7,8-PeCDF	NE	NE	pg/g								ND [16]			ND [12]	ND [13]
8290	2,3,4,6,7,8-HxCDF	NE	NE	pg/g								ND [16]			ND [12]	ND [13]
8290	2,3,4,7,8-PeCDF	NE	NE	pg/g								ND [16]			11 J	ND [13]
8290	2,3,7,8-TCDD	47	4.7	pg/g								ND [3.2]			ND [2.4]	ND [2.7]
8290	2,3,7,8-TCDF	NE	NE	pg/g								6.4			10	1.4 J
8290	OCDD	NE	NE	pg/g								8,600			340	400
8290	OCDF	NE	NE	pg/g								1,400			72 QN	42 QN
8290	Total HpCDD	NE	NE	pg/g								1,800			97	97
8290	Total HpCDF	NE	NE	pg/g								1,900			90	64
8290	Total HxCDD	NE	NE	pg/g								180			6.2	ND [13]
8290	Total HxCDF	NE	NE	pg/g								250			27 QN	8.0 QN
8290	Total PeCDD	NE	NE	pg/g								9.3			ND [12]	ND [13]
8290	Total PeCDF	NE	NE	pg/g								25			87 QN	8.7 QN
8290	Total TCDD	NE	NE	pg/g								3.7			ND [2.4]	ND [2.7]
8290	Total TCDF	NE	NE	pg/g								46			61 QN	11 QN

Notes:

[a]Protective of human health, based on future residents, incidental ingestion/dermal contact route, exposure frequency 90 days/year, and a target hazard quotient of 0.1.

[b]MacDonald et al, consensus-based Probable Effects Concentration (EPA, 2002)

[c]Washington State Administrative Code (WAC) 173-204-520, Table III, Sediment Minimum Cleanup Level (WAC, 1995)

[d]18 AAC 75 Method Two Soil Clean Up Level from Tables B1 and B2, Under 40 inch zone, Using Most Stringent Exposure Pathway Unless Otherwise Notated

[e]One-tenth most restrictive of 2009 Decision Document or 18 AAC 75 (Table B1 or B2)

Format indicates exceedance of cleanup criteria

Format indicates exceedance of screening level but not cleanup criteria

B = The analyte was found in the method blank at greater than one-tenth the concentration in the sample. Results may be biased high or be a false positive.

J = Result is less than the RL but greater than or equal to the MDL, and the concentration is an approximate value or is otherwise estimated without a bias identified.

JH = Associated result is an estimated quantity with a high bias.

JL = Associated result is an estimated quantity with a low bias.

ND = non-detect, limit of detection in parentheses or minimum level in brackets.

QN = RPD for field duplicate is outside of acceptance limits.

TB = The analyte was found in the trip blank at greater than one-tenth the concentration in the sample. Results may be biased high or be a false positive.

µg/kg = micrograms per kilogram
2,4,5-T = 2,4,5-Trichlorophenoxyacetic acid
2,4-D = 2,4-Dichlorophenoxyacetic acid
2,4-DB = 4-(2,4-dichlorophenoxy)butyric acid
AAC = Alaska Administrative Code
AK = Alaska Test Method
BHC = benzene hexachloride
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethene
DDT = dichlorodiphenyltrichloroethane
DRO = diesel range organics
EPA = U.S. Environmental Protection Agency
GRO = gasoline range organics
HPAH = high molecular weight PAHs - fluoranthene, pyrene, benzo(a)anthracene, chrysene, total benzofluoranthenes, benzo(a)pyrene, indeno(1,2,3-c,d)pyrene, dibenzo(a,h)anthracene, and benzo(g, h, i)perylene
LOD = limit of detection
LPAH = low molecular weight PAHs - naphthalene, acenaphthylene, fluorene, phenanthrene, and anthracene (summed according to Wa not AK direction for treatment of non-detects)
MCPA = 2-Methyl-4-Chlorophenoxyacetic Acid
MDL = method detection limit
MEK = methyl ethyl ketone
mg/kg = milligrams per kilogram
MIBK = methyl isobutyl ketone
ML = minimum level (dioxins)
NE = not established
OCDD = Octachlorodibenzo-p-dioxin
OCDF = Octachlorodibenzofuran
PAH = polynuclear aromatic hydrocarbons
PCB = polychlorinated biphenyl
pg/g = picograms per gram
RL = reporting limit
RPD = relative percent difference
RRO = residual range organics
SG = silica gel
SIM = selective ion monitoring

Table 6-3 Surface Water Sampling Results

				Sample ID	12NVNCSW01	12NVNCSW02	12NVNCSW03	12NVNCSW04	12NVNCSW05	12NVNCSW11	12NVNCSW06	12NVNCSW07	12NVNCSW08	12NVNCSW09	12NVNCSW10
				Duplicate					12NVNCSW11	12NVNCSW05					
				Laboratory Work Order	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947
				Sample Collection Date	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012
				Location	SW01	SW02	SW03	SW04	SW05	SW05	SW06	SW07	SW08	SW09	SW10
Analytical Method	**Analyte**	**Cleanup Level**	**Screening Level[d]**	**Unit**											
8260B	1,1,1,2-Tetrachloroethane	NE	NE	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	1,1,1-Trichloroethane	200[b]	20	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	1,1,2,2-Tetrachloroethane	4.3[c]	0.43	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	1,1,2-Trichloroethane	5[b]	0.5	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	1,1-Dichloroethane	7,300[c]	730	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	1,1-Dichloroethene	7[b]	0.7	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	1,1-Dichloropropene	NE	NE	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	1,2,3-Trichlorobenzene	NE	NE	µg/L	0.38 J B	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	1,2,3-Trichloropropane	0.12[c]	0.012	µg/L	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)
8260B	1,2,4-Trichlorobenzene	70[b]	7	µg/L	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)
8260B	1,2,4-Trimethylbenzene	1,800[c]	180	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	1,2-Dibromo-3-Chloropropane	0.2[b]	0.02	µg/L	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)
8260B	1,2-Dichlorobenzene	600[c]	60	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	1,2-Dichloroethane	5[b]	0.5	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	1,2-Dichloropropane	5[c]	0.5	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	1,3,5-Trimethylbenzene	1,800[c]	180	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	1,3-Dichlorobenzene	3,300[c]	330	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	0.37 J	ND (0.20)	ND (0.20)	ND (0.20)
8260B	1,3-Dichloropropane	NE	NE	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	1,4-Dichlorobenzene	75[b]	7.5	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	0.25 J	ND (0.40)	ND (0.40)	ND (0.40)
8260B	2,2-Dichloropropane	NE	NE	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	2-Butanone (MEK)	22,000[c]	2,200	µg/L	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)
8260B	2-Chlorotoluene	NE	NE	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	2-Hexanone	NE	NE	µg/L	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)
8260B	4-Chlorotoluene	NE	NE	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	4-Isopropyltoluene	NE	NE	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	4-Methyl-2-pentanone (MIBK)	2,900[c]	290	µg/L	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)	ND (3.2)
8260B	Acetone	33,000[c]	3,300	µg/L	ND (6.4)	ND (6.4)	ND (6.4)	2.3 J	ND (6.4)	ND (6.4)	ND (6.4)	5.7 J	ND (6.4)	ND (6.4)	ND (6.4)
8260B	Benzene	5[b]	0.5	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	Bromobenzene	NE	NE	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	Bromoform	110[c]	11	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Bromomethane	51[c]	5.1	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Carbon disulfide	3,700[c]	370	µg/L	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)
8260B	Carbon tetrachloride	5[b]	0.5	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Chlorobenzene	100[c]	10	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	Chlorobromomethane	NE	NE	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	Chlorodibromomethane	10[c]	1	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Chloroethane	290[c]	29	µg/L	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)
8260B	Chloroform	140[c]	14	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	Chloromethane	66[c]	6.6	µg/L	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)
8260B	cis-1,2-Dichloroethene	70[b]	7	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	cis-1,3-Dichloropropene	NE	NE	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	Dibromomethane	370[c]	37	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Dichlorobromomethane	14[c]	1.4	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	Dichlorodifluoromethane	7,300[c]	730	µg/L	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)
8260B	Ethylbenzene	700[b]	70	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	Ethylene Dibromide	0.05[b]	0.005	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	Hexachlorobutadiene	7.3[c]	0.73	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Isopropylbenzene	3,700[c]	370	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)

Table 6-3 Surface Water Sampling Results (continued)

				Sample ID	12NVNCSW01	12NVNCSW02	12NVNCSW03	12NVNCSW04	12NVNCSW05	12NVNCSW11	12NVNCSW06	12NVNCSW07	12NVNCSW08	12NVNCSW09	12NVNCSW10
				Duplicate					12NVNCSW11	12NVNCSW05					
				Laboratory Work Order	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947
				Sample Collection Date	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012
				Location	SW01	SW02	SW03	SW04	SW05	SW05	SW06	SW07	SW08	SW09	SW10
Analytical Method	**Analyte**	**Cleanup Level**	**Screening Level[d]**	**Unit**											
8260B	Methyl tert-butyl ether	470[c]	47	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Methylene Chloride	5[b]	0.5	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Naphthalene	730[c]	73	µg/L	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)
8260B	n-Butylbenzene	370[c]	37	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	N-Propylbenzene	370[c]	37	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	m-Xylene & p-Xylene	NE	NE	µg/L	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)
8260B	o-Xylene	NE	NE	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Total xylenes	10,000[b]	1,000	µg/L	ND (1.20)	ND (1.20)	ND (1.20)	ND (1.20)	ND (1.20)	ND (1.20)	ND (1.20)	ND (1.20)	ND (1.20)	ND (1.20)	ND (1.20)
8260B	sec-Butylbenzene	370[c]	37	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Styrene	100[b]	10	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	tert-Butylbenzene	370[c]	37	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Tetrachloroethene	5[b]	0.5	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Toluene	1,000[b]	100	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	0.24 J	0.19 J	0.18 J	ND (0.40)	ND (0.40)	ND (0.40)	0.47 J	ND (0.40)
8260B	trans-1,2-Dichloroethene	100[b]	10	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	trans-1,3-Dichloropropene	NE	NE	µg/L	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
8260B	Trichloroethene	5[b]	0.5	µg/L	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
8260B	Trichlorofluoromethane	11,000[c]	1,100	µg/L	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)
8260B	Vinyl chloride	2[b]	0.2	µg/L	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)
8270C SIM	1-Methylnaphthalene	150[c]	15	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	2-Methylnaphthalene	150[c]	15	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Acenaphthene	2,200[b]	220	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Acenaphthylene	2,200[c]	220	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Anthracene	11,000[c]	1,100	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Benzo(a)anthracene	1.2[c]	0.12	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	0.098	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Benzo(a)pyrene	0.2[b]	0.02	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	**0.067 J**	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Benzo(b)fluoranthene	1.2[c]	0.12	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	0.078 J	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Benzo(g,h,i)perylene	1,100[c]	110	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	0.044 J	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Benzo(k)fluoranthene	12[c]	1.2	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	0.041 J	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Chrysene	120[c]	12	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	0.11	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Dibenzo(a,h)anthracene	0.12[c]	0.012	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Fluoranthene	1,500[c]	150	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	0.32	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Fluorene	1,500[c]	150	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Indeno(1,2,3-cd)pyrene	1.2[c]	0.12	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	0.051 J	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Naphthalene	730[c]	73	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Phenanthrene	11,000[c]	1,100	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	0.090 J	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
8270C SIM	Pyrene	1,100[c]	110	µg/L	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072)	ND (0.072) JL	ND (0.072) JL	0.27	ND (0.072) JL	ND (0.072) JL	ND (0.072)	ND (0.072) JL
TAH	Sum of BTEX	10[a]	NE	µg/L	2	2	2	1.84	1.79	1.78	2	2	2	2.07	2
TAqH	Sum of BTEX + PAH	15[a]	NE	µg/L	3.3	3.3	3.3	3.14	3.09	3.08	3.75	3.3	3.3	3.37	3.3
Visual	Petrogenic Sheen	Presence/ Absence[a]	NE	NE	No Sheen Observed	No Sheen Observed	No Sheen Observed	No Sheen Observed	No Sheen Observed	No Sheen Observed	No Sheen Observed	No Sheen Observed	No Sheen Observed	No Sheen Observed	No Sheen Observed
6020	Arsenic	0.01[b]	0.001	mg/L	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)
6020	Barium	2[b]	0.2	mg/L	0.016	0.017	0.016	0.027	0.14	0.14	0.036	0.02	0.026	0.033	0.024
6020	Cadmium	0.005[b]	0.0005	mg/L	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	0.00021 J	ND (0.00025)	0.00027 J	ND (0.00025)	ND (0.00025)
6020	Chromium	0.1[b]	0.01	mg/L	ND (0.0015)	ND (0.0015)	ND (0.0015)	0.0014 J	0.0019 J	0.002	ND (0.0015)	0.0016 J	0.0028	0.0025	0.0025
6020	Lead	0.015[b]	0.0015	mg/L	ND (0.00025)	0.00075 J	0.00037 J	**0.003**	**0.0063**	**0.0061**	0.00069 J	**0.0031**	**0.014**	**0.002**	**0.0066**
6020	Nickel	0.1[b]	0.01	mg/L	ND (0.0025)	ND (0.0025)	ND (0.0025)	0.0030 J	**0.013 J**	**0.014 J**	0.0034 J	0.0050 J	0.0061 J	0.0031 J	**0.0042 J**
6020	Selenium	0.05[b]	0.005	mg/L	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)	ND (0.0040)
6020	Silver	0.1[b]	0.01	mg/L	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)	ND (0.00025)

Table 6-3 Surface Water Sampling Results (continued)

Analytical Method	Analyte	Cleanup Level	Screening Level[d]	Unit	12NVNCSW01	12NVNCSW02	12NVNCSW03	12NVNCSW04	12NVNCSW05	12NVNCSW11	12NVNCSW06	12NVNCSW07	12NVNCSW08	12NVNCSW09	12NVNCSW10
				Sample ID	12NVNCSW01	12NVNCSW02	12NVNCSW03	12NVNCSW04	12NVNCSW05	12NVNCSW11	12NVNCSW06	12NVNCSW07	12NVNCSW08	12NVNCSW09	12NVNCSW10
				Duplicate					12NVNCSW11	12NVNCSW05					
				Laboratory Work Order	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947	580-34947
				Sample Collection Date	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/10/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012
				Location	SW01	SW02	SW03	SW04	SW05	SW05	SW06	SW07	SW08	SW09	SW10
6020	Vanadium	0.26[b]	0.026	mg/L	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0070 J	0.0086 J	0.0062 J
6020	Zinc	5[b]	0.5	mg/L	ND (0.0050)	0.0044 J	0.0051 J	0.034	0.07	0.069	0.083	0.037	0.075	0.0091	0.061
7470A	Mercury	0.002[b]	0.0002	mg/L	0.000056 J B	0.000057 J B	0.000055 J B	0.000059 J B	0.000053 J B	0.000054 J B	0.000049 J B	0.000060 J B	0.000078 J B	0.000055 J B	0.000087 J B
8081A	4,4'-DDD	3.5[c]	0.35	µg/L					ND (0.0050)	ND (0.0050)	0.048	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	4,4'-DDE	2.5[c]	0.25	µg/L					ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	
8081A	4,4'-DDT	2.5[c]	0.25	µg/L					ND (0.0050)	ND (0.0050)	0.043	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	Aldrin	0.05[c]	0.005	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	alpha-BHC	0.14[c]	0.014	µg/L					ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	
8081A	alpha-Chlordane	NE	NE	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	beta-BHC	0.47[c]	0.047	µg/L					ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	
8081A	delta-BHC	NE	NE	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	Dieldrin	0.053[c]	0.0053	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	Endosulfan I	NE	NE	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	Endosulfan II	NE	NE	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	Endosulfan	220[c]	22	µg/L					ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0100)	
8081A	Endosulfan sulfate	NE	NE	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	Endrin	2[b]	0.2	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	Endrin aldehyde	NE	NE	µg/L					ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	
8081A	Endrin ketone	NE	NE	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	gamma-BHC (Lindane)	0.2[b]	0.02	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	gamma-Chlordane	NE	NE	µg/L					ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	ND (0.0030)	
8081A	Heptachlor	0.4[b]	0.04	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	Heptachlor epoxide	0.2[b]	0.02	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	Methoxychlor	40[b]	4	µg/L					ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
8081A	Toxaphene	3[b]	0.3	µg/L					ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	
8082	PCB-1016	NE	NE	µg/L	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10) JL	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)
8082	PCB-1221	NE	NE	µg/L	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13) JL	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13)
8082	PCB-1232	NE	NE	µg/L	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10) JL	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)
8082	PCB-1242	NE	NE	µg/L	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10) JL	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)
8082	PCB-1248	NE	NE	µg/L	ND (0.080)	ND (0.080)	ND (0.080)	ND (0.080)	ND (0.080)	ND (0.080) JL	ND (0.080)	ND (0.080)	ND (0.080)	ND (0.080)	ND (0.080)
8082	PCB-1254	NE	NE	µg/L	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13) JL	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13)
8082	PCB-1260	NE	NE	µg/L	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	0.50	0.67 JL	0.26 J	0.66	0.49 J	0.17 J	1.0
8082	Total PCBs	0.5[b]	0.05	µg/L	ND (0.13)	ND (0.13)	ND (0.13)	ND (0.13)	**0.50**	**0.67 JL**	**0.26 J**	**0.66**	**0.49 J**	**0.17 J**	**1.0**
8151A	2,4,5-T	NE	NE	µg/L					ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	
8151A	2,4-D	70[c]	7	µg/L					ND (0.051)	ND (0.050)	ND (0.051)	ND (0.051)	ND (0.052)	ND (0.050)	
8151A	2,4-DB	NE	NE	µg/L					ND (0.051)	ND (0.050)	ND (0.051)	ND (0.051)	ND (0.052)	0.039 J	
8151A	4-Nitrophenol	NE	NE	µg/L					ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	
8151A	Dalapon	200[b]	20	µg/L					ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.21)	ND (0.20)	
8151A	Dicamba	NE	NE	µg/L					ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	
8151A	Dichlorprop	NE	NE	µg/L					ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	
8151A	Dinoseb	7[b]	0.7	µg/L					ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	
8151A	MCPA	NE	NE	µg/L					ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	
8151A	Mecoprop	NE	NE	µg/L					ND (0.051)	ND (0.050)	ND (0.051)	ND (0.051)	ND (0.052)	ND (0.050)	
8151A	Pentachlorophenol	1[b]	0.1	µg/L					ND (0.051)	ND (0.050)	ND (0.051)	ND (0.051)	ND (0.052)	ND (0.050)	
8151A	Silvex (2,4,5-TP)	50[c]	5	µg/L					ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	

Table 6-3 Surface Water Sampling Results (continued)

Notes:

[a]Surface Water Cleanup Levels for TAH and TAqH based on ADEC Water Quality Standards 18 AAC 70.020(b), Amended as of April 8, 2012

[b]Cleanup Criteria from ADEC Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances, as Amended through December 12, 2008

[c]Alaska Department of Environmental Conservation Groundwater Cleanup Level (Table C of Title 18 Alaska Administrative Code 75, Chapter 345 [18 AAC 345])

[d]Screening Level is One-Tenth of Established Cleanup Level

Format indicates exceedance of cleanup criteria

Format indicates exceedance of screening level but not cleanup criteria

ND = not detected, limit of detection in parentheses

J = Result is less than the RL but greater than or equal to the MDL, and the concentration is an approximate value or is otherwise estimated without a bias identified.

JL = Associated result is an estimated quantity with a low bias.

B = The analyte was found in the method blank at greater than one-tenth the concentration in the sample. Results may be biased high or be a false positive.

µg/L = micrograms per kilogra

2,4,5-T = 2,4,5-Trichlorophenoxyacetic acid

2,4-D = 2,4-Dichlorophenoxyacetic acid

2,4-DB = 4-(2,4-dichlorophenoxy)butyric acid

BHC = benzene hexachloride

BTEX = benzene, toluene, ethylbenzene, and xylenes

MCPA = 2-Methyl-4-Chlorophenoxyacetic Acid

MDL = method detection limit

MEK = methyl ethyl ketone

MIBK = methyl isobutyl ketone

NE = not established

PAH = polynuclear aromatic hydrocarbon

PCB = polychlorinated biphenyl

RL = reporting limit

APPENDIX A

Responses to ADEC/USACE Report Comments

Alaska Department of Environmental Conservation (ADEC)
Contaminated Sites Program
Document Reviewed: Draft January 2013 Native Village of Northeast Cape NALEMP RA/SI Report
Commenter: Curtis Dunkin-ADEC **Date Submitted:** March 19, 2013
Responder: Tyler Ellingboe-Bristol **Date Resubmitted:** June 13, 2013;ADEC Reviewed RTCs on July 24, and August 09, 2013

#	Page #	Section	ADEC Comment	Response
1.	1	1.0	Change the word 'comprehensive' in the last bullet on this page to 'limited' due to the fact that sample numbers (locations and intervals) and analytes were limited due to limited funding; and that not all areas of concern were characterized in 2012.	Accept (A) – Replace "comprehensive" with "limited" **ADEC-Accepted July 24, 2013**
2.	2	1.0	Rephrase the last sentence of this first paragraph on this page to state that the purpose of the 2012 and future RA/SI was to identify, characterize, and conduct interim removal actions associated with exposure risks to current and future receptors. Revise the last half of this sentence be a new sentence stating: 'Results of the 2012 RA/SI activities will be utilized to guide future remedial actions'.	A – Rephrased and revised as recommended **ADEC-Accepted July 24, 2013**
3.	3	2.1	Revise the second sentence of the second paragraph on this page to state '…at NE Cape, is currently mainly used…'. Provide more specific information if available re: the surface water feature(s) from which residents previously collected and used drinking water.	A – Revised as recommended. **ADEC-Accepted July 24, 2013**
4.	4	2.2	Revise the statements re: average wind speed. Sentences state the average wind speed is 23 and 18 mph.	A – Modified second to last sentence to read "The average annual wind speed is 18 miles per hour." **ADEC-Accepted July 24, 2013**
5.	6	2.9	Clarify in the narrative whether the building materials were donated when the base was abandoned; and/or did donation also occur during the time the facility was occupied/operated?	Noted (N) – Second sentence of first paragraph states "During and after the operation of the military base……" **ADEC-Accepted July 24, 2013**
6.	8	2.11	Explain in the narrative how the weights of materials were determined. Were they weighed or estimated?	A – Added verbiage stating net weights were estimated in the field and confirmed using the

				disposal facility's scale tickets **ADEC-Accepted July 24, 2013**
7.		2.0	A new section needs to be inserted between sections 2.9 and 2.10 that summarizes the remedial efforts (soil, sediment, surface water, and groundwater characterization, AST, contaminated soil removal) that were conducted at the 'NVNC' or 'Fishcamp' site between 1994 and 2001. The appropriate information is included in the summary of this site on pages 29-30 of the final 2009 ROD. See also comment #35 below.	A – Inserted text from 2009 ROD as new Section 2.10 documenting 1994-2001 remedial efforts. **ADEC-Accepted July 24, 2013**
8.	9	3.0	Revise the use of 'ADEC Qualified Persons' in the third paragraph of this section and elsewhere throughout the document. This is not a 'promulgated' term, and should instead state i.e. 'individual(s) who possess the minimum ADEC-required qualifications and experience'.	A – Amended text as recommended **ADEC-Accepted July 24, 2013**
9.	17	5.4	Last sentence of this section requires clarification; it is unclear whether this is intended to mean that the project team anticipated the dust counts to not exceed the PEL or whether this was determined to be a critical compliance point for the 2012 season, or both.	A – Propose to delete Section 5.4 in its entirety. Monitoring and sampling for lead exposure was not conducted since lead abatement and demolition activities were not performed in 2012. In addition, lead-based paint renovation, repair, and painting activities were not performed. **ADEC-Accepted July 24, 2013**
10.	17	5.5	Second to last sentence of third paragraph of this section, insert the word 'from'; '…and removed [from] the ground…'.	A – Inserted word "from" as recommended **ADEC-Accepted July 24, 2013**
11.	22	5.6.2	Section should also state the results of confirmation samples which were required to be taken from underneath the footprint of the removed ash.	A – Inserted text at end of Section 5.6.2 "As part of the SI, confirmation soil samples were collected and analyzed from beneath the two burn units after they were removed from service. Analytical results for all analytes were either not detected or detected below established cleanup levels. Confirmation soil sampling results are shown on Table 6-1.

				ADEC-Accepted July 24, 2013
12.	24	5.6.4	Was sampling and/or soil removal not conducted in association with soils at locations where batteries were identified? Were these locations recorded w/ a GPS? These locations should also be depicted on a figure(s).	N – Batteries were found within the footprint of the former structures and debris piles. The exact locations of batteries removed were inadvertently not documented. **ADEC-Accepted July 24, 2013; please include the response in the narrative and also state that this represents a data gap and potential source(s) of contamination and/or exposure.**
13.	26	5.6.9	Last sentence of second full paragraph on this page, is this future sampling referring to unexcavated soils associated with the locations of Drums 5 and 6? If so, future sampling should include the full suite of analytes listed until it is determined that no contamination remains in place above ADEC cleanup levels. This same rationale should be applied to all of the sites/areas of concern and should be clarified throughout the narrative.	A – Amended text to clarify that CON/HTRW drums No. 5 and 6 will require additional sampling for VOCs, SVOCs, and PCBs prior to transportation and disposal. **ADEC-Accepted July 24, 2013** The soil collected in association with the removal of these two drums was collected into three 1-cubic yard supersacks (#16a, 16b, and 16c). Additional sampling of the bags for disposal is addressed in the third paragraph of this section **ADEC-Accepted July 24, 2013; please include response in the report narrative** An in situ soil sample (12NVNCSL58) was collected from soil associated with the removal of these two drums and associated supersacks of soil. This area was assigned additional area of concern #AA19 and sampled for DRO, RRO, and PCBs. Analytical results show that the cleanup criteria for DRO, RRO, and PCBs were not exceeded. **ADEC-Accepted July 24, 2013; please include response in the report narrative**
14.	29	6.1	More detail should be provided in the narrative regarding	A – Inserted following as 1st paragraph of Section

			screening locations, intervals and frequencies. A summary table of screening results should also be provided.	6.1 "Field screening is a useful tool to identify release points and to estimate the extent of hydrocarbon contamination. Field screening was conducted in accordance with the WP to provide a preliminary indication of potential petroleum contamination present at the selected soil sampling locations. Soil sample locations were selected based on visual observations and were first field screened prior to the collection of the soil sample for laboratory analysis." **ADEC-Accepted July 24, 2013**
15.	29	6.2	Last sentence on this page, state whether the soil samples collected from beneath the two burn boxes were collected post ash removal; also state the number of samples collected whenever referring to samples.	A - Modified 4th and 5th sentence of first paragraph of Section 6.2 to read "Soil samples were also collected from beneath the two burn units that were used to combust non-painted wood debris collected from the NVNC site following ash removal and their removal from service. A total of 55 primary soil samples and 8 quality control (QC) soil sample duplicates were collected and submitted for analysis." **ADEC-Accepted July 24, 2013**
16.	30	6.2	Clarify whether the 'less than the full suite of analyses' due to a limited budget was a deviation to or whether this was previously identified in the final work plan.	A – Modified 3rd sentence of 2nd paragraph to read "In accordance with the final approved WP, some soil samples received less than the full suite of analyses." Included a table summarizing number of primary and QC soil samples collected by analysis type. **ADEC-Accepted August 09, 2013**
17.	30	6.3	Re: sediment samples, state the range of depth(s) at which and how the sediment samples were collected?	A – Inserted following text as 3rd sentence of 2nd paragraph "Sediment samples were collected from along the edges of the drainage and surface ponds from a depth of 0 to 6-inches below the ground surface following removal of any vegetation that was present." **ADEC-Accepted August 09, 2013**

			Third paragraph of this section, similar to comment #16 above, state whether 'only 10 primary samples' was a deviation; or revise this and other statements to simply state the number of samples collected and omit 'due to a limited budget'. Statements in the last paragraph on this page are conflicting and require revision. States that sediment samples were collected and analyzed for COCs (of which pesticides and herbicides are listed), but then later states that only 5 samples were analyzed for pesticides/herbicides and only two for dioxins/furans.	A – Amended 3rd and 4th sentences of 3rd paragraph to read "In conformance with the WP, all sediment samples did not receive the full suite of analyses. Five of the ten primary sediment samples received additional pesticide and herbicide analysis and two primary sediment samples received additional dioxin and furan analysis." **ADEC-Accepted August 09, 2013** A – Removed reference to pesticides, herbicides, and dioxins/furans in 1st sentence and modified 3rd and 4th sentences as mentioned above. **ADEC-Accepted August 09, 2013**
18.	33	7.1	Last sentence of this first paragraph of this section, why is the 2007 FS referenced for cleanup levels instead of the final 2009 ROD?	A – Added reference to 2009 ROD in Sections 7.1 and 7.2. **ADEC-Accepted August 09, 2013** Added following as last sentence of 1st paragraph of Section 7.1 "Site specific soil and sediment cleanup levels were developed based on the Human Health and Ecological Risk Assessment performed by Montgomery Watson Harza (MWH, 2004)." **ADEC-Accepted August 09, 2013** Modified 2nd sentence of 1st paragraph of Section 7.2 to read "In addition TAH and TAqH concentrations were calculated for each surface water sample collected and compared to the cleanup criteria for TAH and TAqH found in 18 AAC 70 and provided in Table 1 of the NE Cape FUDS Final Feasibility Study, Volume 1, March 2007 (USACE, 2007) and the 2009 Decision Document (USACE, 2009)." **ADEC-Accepted August 09, 2013**

19.	39	7.5	Include more discussion in this section about the PCB-exceedances in surface water. What is the suspected source area? Are there relationships between sediment and surface water results and the exceedance observed in sample 12NVNCSL28?	A – Added text "The suspected source area for exceedances of the PCB cleanup criteria in groundwater is currently unknown; however, soil sample location 12NVNCSL28 (also collected from along Cargo Beach Road) exhibited a concentration of 29 mg/kg which significantly exceeds the soil cleanup level of 1.0 mg/kg. In addition, although the PCB cleanup level in sediment (0.7 mg/kg) was not exceeded in any of the sediment samples that were collected, it should be noted that the PCB-1260 Arochlor was detected in all sediment samples collected along the road corridor." **ADEC-Accepted August 09, 2013**
20.	40	7.6	Third bullet in this section, replace 'types of people' with 'different human activities which could result in exposure'.	A – Amended text as recommended **ADEC-Accepted August 09, 2013**
21.	40	7.6.1	The former Cargo Beach Pump House and associated pipelines should be depicted on figures; and/or create a new figure with this information. It should also be discussed in the narrative that several residents of Savoonga brought to the Nov. 2012 RAB meeting's attention that there was a broken fuel pipeline section along Cargo Beach Road. The Army Corps intends to investigate this in 2013. Revise the last sentence on this page. It is too broad of a statement to refer to all of the 'NEC FUDS' as a potential general source and release mechanism. The MOC sites and both sites 13 and 31 are between 1.5 and 2 miles (aerially) from the NVNC. Revise this and other similar statements to only refer to/discuss specific pathways and possibilities of contamination and/or	A – Added location of Cargo Beach Pumphouse and associated pipeline to Figures 3 thru 7. **ADEC-Accepted August 09, 2013** A – Added text to end of first paragraph "During the November 2012 Remedial Action Board meeting that took place in Savoonga, several Savoonga residents mentioned that at one time a break in the pipe had occurred along Cargo Beach Road just up gradient from the NVNS. The USACE intends to further investigate during the 2013 field season." **ADEC-Accepted August 09, 2013; Note: Revise RAB to Restoration Advisory Board meeting.** A – Revised text referencing the MOC and Sites 13 and 31. **ADEC-Accepted August 09, 2013**

			contaminant migration that would be associated with the NVNC.	
22.	42	7.6.3.2	Revise statements in this section re: 'ingestion of groundwater' to clarify that it is not the natural conditions that make ingestion in the future unlikely, rather the natural conditions making the groundwater potentially unsuitable for use as drinking water (therefore making ingestion unlikely).	A – Modify first paragraph to read as follows: "Natural conditions found at the NVNC cause the groundwater to be potentially unsuitable for use as a drinking water source. The NVNC is located in a tidal zone on the coast of the Bering Sea, so the ingestion of groundwater does not appear to be a current or future exposure pathway." **ADEC-Accepted August 09, 2013**
23.	66	9.2.1	Revise the first sentence of the second paragraph of this section to state '...of soil samples collected [respectively] exhibited …'.	A – Modified text as recommended **ADEC-Accepted August 09, 2013**
24.	66	9.2.2	Section requires further discussion about the supporting evidence for why the concentrations of RRO appear to be biogenic and not from a petroleum source. Revise the last sentence on this page; replace 'appear to be biogenic' with '…could be biogenic in nature instead of from a petroleum hydrocarbon source'.	N - Sediment sampling results for RRO are more thoroughly discussed in Section 7.4.1. **ADEC-Accepted August 09, 2013** A - Revised last sentence as recommended **ADEC-Accepted August 09, 2013**
25.	68	9.4	A project goal should be added to this section that states: 'Identify and eliminate all unacceptable exposure risks to human health and the environment at the NVNC which are the result of previous FUDS activity'.	N – NALEMP addresses DoD impacts that affect Tribes, but it does not have a mandate to clean up FUDS. That is the responsibility of USACE's FUDS program. **ADEC-Accepted August 09, 2013; however, both the comment and RTC are valid and should be included as either a project goal and/or stated in the associated narrative for clarity.** A – Added verbiage to first bullet item"…by identifying and eliminating unacceptable exposure risks to human health." **ADEC-Accepted August 09, 2013**
26.		Table 5-1	Highlight Hazardous Waste threshold exceedances i.e. 31 mg/kg TCLP lead result for sample 12NVNCCH05. It would also be	A – Inserted column showing RCRA/TSCA Regulatory Levels and bolded exceedances

			helpful to include a column that has the Hazardous Waste threshold concentrations listed.	**ADEC-Accepted August 09, 2013**
27.		Table 6-1	Many of the cleanup levels listed in this table are incorrect and need to be revised. There are also numerous instances where screening levels are listed as orders of magnitude higher than cleanup levels and need to be revised. Why is a sample result for the analyte 2,3,7,8-TCDF listed in red font (which is not listed in the notes); and what does the qualifier 'CON'.	A -Footnotes and screening levels were reviewed and corrected in both Tables 6-1 and 6-2. The cleanup levels for two compounds were corrected - 2,3,7,8-TCDD and vinyl chloride. This review and edits led to an addition of sections 7.3.6 and 7.4.2 to the report text. Lab note CON was deleted. **ADEC-Accepted August 09, 2013**
28.		Table 6-3	Although not specifically stated in the list of cleanup levels in Table 1 of the 2009 ROD, the final ROD does state that all surface water cleanup levels are based on 18 AAC 70. This should be clarified in the narrative and future analyses of surface water.	A – Footnoted TAH and TAqH cleanup levels with ([a]) and inserted footnote that "Surface water cleanup levels for TAH and TAqH based on 18 AAC 70. Added cleanup criteria from ADEC Alaska Water Quality Manual for Toxic and Other Deleterious Organic and Inorganic Substances. Used Table C of 18 AAC 75 groundwater cleanup levels for contaminants not covered by 18 AAC 70 or under the Alaska Water Quality Manual for Toxic and Other Deleterious Organic and Inorganic Substances. Added verbiage to Section 7.2 identifying cleanup levels used for surface water. **ADEC-Accepted August 09, 2013**
29.		Figure 3	Change 'livable structures' to another name; i.e. 'intact structures' both in the figure call outs and in the legend.	A – Amend terminology on figures from "livable structure" to "intact structure" **ADEC-Accepted August 09, 2013**
30.		Photo log	A photo should have been taken for every sample location. Include photos from all sampling locations where exceedances were observed. Photograph 18: Was there sheen on the surface water depicted in	A – Added available photos for sampling locations where exceedances were observed to the Photo Log **ADEC-Accepted August 09, 2013** No sheen was observed, just reflection from the

			this picture?	sky. **ADEC-Accepted August 09, 2013; state in a footnote to photo for clarity**
31.		ADEC Checklists	There are numerous instances throughout all of the ADEC Checklists which are attached with this draft report, where the 'Data Quality or Usability Affected' sections simply state 'see above'. However in nearly every instance, the referenced 'see above' sections only discuss specific discrepancies and qualifications added to data, but do not specifically address usability. Section 8.7 on page 64 states 'Rejected results are not usable' however then also states 'All data are suitable for their intended use'. Data usability needs to be clearly assessed and clarified in both the ADEC Checklists as well as the narrative of section 8.0.	A- All checklists were reviewed and revised, as appropriate to clarify impact to data usability. **ADEC-Accepted August 09, 2013** Section 8.7 text modified to state "All data are suitable for their intended use, with the exception of those rejected results which are usable for screening purposes only." **ADEC-Accepted August 09, 2013**
32.	5	HHCSM SF	Comments under Dermal Exposure to Contaminants in Groundwater and Surface Water: revise this section since two primary and one duplicate surface water sample had PCB exceedances at concentrations above cleanup level; not one as stated.	A – The reference on the form pertains to one contaminant (PCB-1260) and is correct. Added additional text stating that three surface water samples and one sample duplicate exhibited concentrations of PCB-1260 at or above the cleanup level. **ADEC-Accepted August 09, 2013**
33.	5	HHCSM SF	Comments under Direct Contact with Sediment: revise to state that the site specific cleanup level for lead in sediment is 530 mg/kg.	A – Revised as recommended. **ADEC-Accepted August 09, 2013**
34.		Current and Future Receptors	All of the activities which are currently selected should be revised to include both Current and Future (including ingestion of surface water). All of the activities for Direct Contact with Sediment should be	A – Revised as recommended **ADEC-Accepted August 09, 2013** A – Revised as recommended

			selected to include both Current and Future based on the exceedances in sediments at concentrations above the site-specific cleanup levels.	**ADEC-Accepted August 09, 2013**
35.		Figures	Two new figures should be included; one that depicts all of the sample locations (depicted by matrix) and one that depicts all of the sample locations that had analytical results exceeding ADEC cleanup levels (also depicted by matrix). The exceedances figure should also include/depict sample locations prior to 2012 where cleanup level exceedances of COCs were observed (i.e. previous FUDS sampling between 1994 and 2001 where analytical results of soil and groundwater indicated RRO and DRO concentrations above cleanup levels). See also comment #7 above.	A – Added two new figures as recommended (Figure 6 – 2012 SI Sample Locations and Figure 7 – Exceedances of Cleanup Criteria). **ADEC-Accepted August 09, 2013** A – Added previous FUDS sampling exceedances from 1994, 1998, and 2001 to Figure 7 **ADEC-Accepted August 09, 2013**
36.			**End of ADEC Comments**	

REVIEW COMMENTS

PROJECT: Native Village of Northeasdt Cape Contract Number: NALEMP 12-04

DOCUMENT: Removal Action/Site Investigation Report/Revision 0, Jan 2013 **Location: NE Cape, Alaska**

U.S. ARMY CORPS OF ENGINEERS	**DATE: 2/11/2013** **REVIEWER: Andrea Elconin** **PHONE: 753-5680**	**Action taken on comment by:** Tyler Ellingboe, Project Manager, Bristol Environmental Remediation Services June 13, 2013

Item No.	**Drawing Sheet No., Spec. Para.**	**COMMENTS**	**REVIEW CONFERENCE** **A - comment accepted** **W - comment withdrawn** **(if neither, explain)**	**CONTRACTOR RESPONSE**	**USAED/ADEC RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)**
1.	p. 1, sec. 1.0, 1st para, last sen	According to 1st bullet on this page, some of the FY12 field work was funded by the FY11 CA. Please include that information in this sentence.	A	Moved reference to tasks funded by FY11 CA from first bullet item to last sentence of 1st paragraph.	
2.	p. 6, sec 2.9	Please provide a map showing the locations of the FUDS project and the Northeast Cape Native Village	A	Added reference to Figure 2 in first paragraph of Section 2.9. Edited Figure 2 to clearly show location of NE Cape FUDS Project Area and the NVNC.	
3.	Fig 2	On a related note, please show location of Fig. 3 on Fig. 2	A	Edited Figure 2 to clearly show location of NE Cape FUDS Project Area and the NVNC.	
4.	p. 9, Sec 3.0, 4th para.	No reason to mention possible future unfunded work. Suggest deleting this paragraph.	A	Deleted second sentence.	
5.	p. 17, sec. 5.5, 2nd para, 1st sen	Remove second "inspected"	A	First sentence reads "Prior to collection and staging, the NVNC was inspected…."Z	
6.	Global	Please remove all references to a future CA. Each CA is a standalone response to an environmental impact. In general, if the site conditions change and additional funds are required, the CA is modified.	A	Removed all references to future CAs	
7.	p. 26, Sec 5.6.9	On that note, remove references to a future CA from this section (and throughout the report). The work should be completed under the FY12 CA, even if it is done in FY13.	A	Removed all references to future CAs	
8.	p. 6, sec 6.1, 1st para	Please state reason for field screening.	A	Inserted the following as first paragraph of Section 6.1"Field screening is a useful tool to identify release points and to estimate the extent of hydrocarbon contamination. Field screening was conducted in accordance with the WP to provide a preliminary indication of potential petroleum contamination present at	

REVIEW COMMENTS — **PROJECT: Native Village of Northeasdt Cape** Contract Number: NALEMP 12-04

DOCUMENT: Removal Action/Site Investigation Report/Revision 0, Jan 2013 **Location: NE Cape, Alaska**

U.S. ARMY CORPS OF ENGINEERS	**DATE: 2/11/2013** **REVIEWER: Andrea Elconin** **PHONE: 753-5680**	**Action taken on comment by:** Tyler Ellingboe, Project Manager, Bristol Environmental Remediation Services June 13, 2013

Item No.	Drawing Sheet No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	CONTRACTOR RESPONSE	USAED/ADEC RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)
				the selected soil sampling locations.”	
9.	p. 6, 2nd para, last sen	Should 6-2 be changed to 6-1?	A	Corrected text to read Table 6-1	
10.	Sections 6.2, 6.3 and 6.4	Please remove all references to limited CA budget. The question is, did you sample in accordance with the work plan or not? Did you meet the data objectives or not?	A	Removed references to CA budget in Sections 6.2, 6.3, and 6.4.	
11.	p. 30, sec 6.3, 3rd para	Delete “All sediment samples did not receive the full suite of analyses.” If the analyses differed from the workplan, then explain that. Negative statements like that imply you didn’t do something you were supposed to do.	A	Modified last two sentences of third paragraph to address comment as well as Craig Scola comment #7.	
12.	p. 31, sec. 6.4, 1st para, last sen	Same comment as above. Remove sentence	A	Modified sentence to address comment in conjunction with Craig Scola comment #8.	
13.	p. 38, sec. 7.4, 1st para, 3rd sen	See comment 10	A	Deleted third sentence to address comment.	
14.	p. 65, sec 9.1, last bullet	Remove “or under a future CA”	A	Deleted “or under a future CA”	
15.	Fig ,3 4, and 5	Former Site Structure should be Former Structure	A	Edited Figures 3, 4, and 5 by removing word “Site”	
16.	Fig 3, 4, and 5	What is the significance of the drum storage area on these figures? I couldn’t find a reference to it in the text. Please resolve.	A	Added text to Section 5.5.4 referencing the drum storage area used for temporary staging of overpacked CON/HTRW.	
17.	p. 66	Is there some way to designate the locations of samples with results above clean up levels on a map? I find it very difficult to find the contaminated sample locations on Fig. 4	A	Edited Figure 4 to show soil sample locations with established cleanup level exceedances as a different color than soil sample locations without exceedances.	
		----- End of Comments ----			

REVIEW COMMENTS **PROJECT: Northeast Cape, St. Lawrence Island, AK**
DOCUMENT: Removal Action/ Site Investigation Report Rev0 - January 2013 **Location: St. Lawrence Island, Alaska**

U.S. ARMY CORPS OF ENGINEERS	DATE: 02/06/2013 REVIEWER: Craig Scola PHONE: 753-5769	Action taken on comment by: Tyler Ellingboe, Project Manager, Bristol Environmental Remediation Services June 13, 2013

Item No.	Drawing Sheet No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	CONTRACTOR RESPONSE	USAED/ADEC RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)
1.	Sect 5.5, pg 17, 3rd Paragraph, 5th Sentence	Suggest inserting “from” between “removed” and “the ground”.	A	Amended sentence to read “Debris and Con/HTRW were collected and removed from along the ground surface of the NVNC site.”	
2.	Sect 5.5.4, 2nd paragraph	Suggest inserting “55-Gallon” before “drums” in last sentence.	A	Different sizes of steel drums were used, so I have inserted the word “steel” before the word “drums” to add clarification.	
3.	Sect 5.5.4, 3rd paragraph	Recommend explaining what “professional knowledge and or laboratory analysis” means.	A	Inserted sentence “Section 5.6 and its related subsections further describe how each waste stream generated was characterized for transportation and disposal.”	
4.	6.2, General	In subsequent sections the numbers of sediment and water samples are stated. For consistency, state the total number of primary soil samples collected.	A	Inserted text at end of first paragraph “A total of 55 primary soil samples and 8 quality control (QC) soil sample duplicates were collected and submitted for analysis.”	
5.	6.2, End of paragraph, last sentence	How many is some?	A	Inserted table at the end of Section 6.2 showing the number of primary and duplicate samples per analysis	
6.	6.3, Beginning of 3rd paragraph	Text states 10 primary sediment samples were collected. Fig 5 shows 11 different locations. Why?	Noted	Ten sediment sample locations are shown on Figure 5. Sediment samples 12NVNCSD11 and 12NVNCSD12 are QC sample duplicates of sediment samples 12NVNCSD05 and	

Item No.	Drawing Sheet No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	CONTRACTOR RESPONSE	USAED/ADEC RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)
				12NVNCSD10, respectively.	
7	6.3, last sentence of last paragraph	Further clarification/explanation is needed. "Five sediment samples were analyzed for pesticides and herbicides, and two sediment samples were analyzed for dioxins and furans." Are these samples the only ones collected or in addition to GRO, DRO, RRO, VOCs?	A	Amended last sentence to read "Five of the ten primary sediment samples received additional pesticide and herbicide analysis and two primary sediment samples received additional dioxin and furan analysis."	
8	6.4, 1st sentence in 2nd paragraph	Same as comment 6 above.	A	Amended last sentence of second paragraph to read "Five of the ten primary surface water samples received additional pesticides and herbicide analysis."	
9	6.4, End of 2nd paragraph	Were the 5 surface water samples analyzed for pesticides and herbicides only? Or in addition to the above referenced analytes?	A	Comment addressed as part of Comment #8 above.	
10	7.6.3.1 Soil, last sentence	Disagree. The previous paragraph states dermal absorption of contamination may occur due to digging. Why can't the same apply to inhalation of fugitive dust?	A	Amend second paragraph in Section 7.6.3.1 to read "Dermal absorption of contaminants and inhalation of fugitive dust from soil may occur currently and in the future by industrial or construction workers if activities involve digging into the subsurface soils. DRO meets the ADEC definition of a volatile compound of concern which may permeate the skin." Delete last paragraph.	
11	7.6.3	Was an ecological conceptual site model completed for wildlife as required in the ADEC Ecoscoping Guidance A Tool for Developing an Ecological Conceptual Site Model,	A	Completed Ecological CSM Form to be included in Appendix G – Conceptual Site Models. Added Ecological CSM discussion in	

U.S. ARMY CORPS OF ENGINEERS	**DATE: 02/06/2013** **REVIEWER: Craig Scola** **PHONE: 753-5769**	**Action taken on comment by:** Tyler Ellingboe, Project Manager, Bristol Environmental Remediation Services June 13, 2013

Item No.	Drawing Sheet No., Spec. Para.	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	CONTRACTOR RESPONSE	USAED/ADEC RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)
		January 2012?		Section 7.7.	
12	Fig 5	Why aren't exceedences for metals in sample 12NVNCS006 on a table in Fig 5 as they are for Fig 4? (cadmium and lead)	A	Cadmium and lead exceedances for sediment sample 12NVNCSD06 have been added to Figure 5.	
13	9.1, 3rd sentence	Replace "of" with "than".	A	Deleted "less of"	
		----- End of Comments ----			

Response to Comments added in red text below.
Comments added by Tyler Ellingboe, Project Manager, Bristol Environmental Remediation Services, June 13, 2013

From: Elconin, Andrea B POA <Andrea.B.Elconin@usace.army.mil>
Sent: Wednesday, February 13, 2013 10:07 AM
To: Ellingboe, Tyler
Cc: Robert Annogiyuk (ryannogiyuk@yahoo.com)
Subject:FW: NALEMP Removal Action/Site Investigation Report Reiew (UNCLASSIFIED)

Follow Up Flag: Follow up
Flag Status: Flagged

Classification: UNCLASSIFIED
Caveats: NONE

Tyler, here are the last Corps comments on the Jan 2013 Savoonga report. These are from Teresa Lee, our chemist.

Andrea Elconin, P.G.
Project Manager
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1. It is against OSHA regulation to assume negative exposure for asbestos or lead in air utilizing the prior year's results.
Propose to remove Section 5.4 since lead abatement and demolition activities were not performed in 2012. In addition, lead-based paint renovation, repair, and painting activities were not performed.

2. If Satori was never involved with the abatement, Contractor must supply documentation of lead and asbestos abatement qualifications as required by the state off Alaska for those workers involved.
Added following verbiage as last sentence in Section 5.6.8 "ACM handling was conducted by Bristol's field lead, a certified EPA/AHERA Building Inspector (training certificate provided in Appendix H)."

3. Section 7.2, surface water results should not compared to groundwater cleanup criteria.
Based on the determination that surface water at the site could potentially be used as drinking water, see Conceptual Site Model in Appendix G and discussion in Section 7.2 of report text, the surface water results will be compared to 18 AAC 70 water quality standards for surface water and 18 AAC 75 Table C groundwater cleanup levels. Use of groundwater cleanup levels for comparison to surface water results included USACE input. An email dated 11/9/2012 from Carey Cossaboom, USACE Project Manager, to Bristol referenced the ADEC November 2011 Risk Assessment Procedures Manual which stated the following:
"If ingestion of surface water is a pathway of concern, the groundwater screening levels can be used as risk-based screening levels for surface water, as well. However, water quality standards for surface water (18 AAC 70) must be considered when evaluating a site with surface water contamination. Water quality standards are to be considered ARARs and, therefore, should also be used as screening levels. Water quality standards for applicable fresh and marine water classes should be used."

Also addressed in Curtis Dunkin (ADEC) comment #18.

4. Section 8.2, It should be described how the samples were conveyed from NE Cape to Anchorage.
Section 8.2 will be revised to include the following: “Samples were transported from NE Cape to Nome via Bering Air and were Goldstreaked from Nome to Anchorage.”

5. Section 8.4.1, SDG 580-34955, please discuss the impact to the data as a result of not having a trip blank in each cooler.
Text in Section 8.4.1 will be revised to add the clarifying text “Therefore, only detected VOC and GRO results associated with samples shipped in the cooler identified as “Box 1” could be evaluated for trip contamination…”

6. Table 6-1, last page, there is an entry that is written in red with the qualifier CON. What is a CON Qualifier and why is it in red?
Table 6-1 was revised to remove the lab note CON.

7. Photograph 5, the handing of the ACM in this photo is not in compliance with regulation. Tiles are not labeled nor are they in a leak tight container. In addition, the bottom bag appears to have been compromised with something sticking out of the bag.
Items in question were double-bagged, packaged, and properly labeled prior to off-site transportation and disposal.
Classification: UNCLASSIFIED
Caveats: NONE

APPENDIX B

Photograph Log

Photograph 1: Drum Containing Cans of Grease
Direction: N/A

Date: August 21, 2012
Photographer: L. Nelson

Photograph #2: Drum Containing Dried Paint
Direction: N/A

Date: August 21, 2012
Photographer: L. Nelson

Photograph 3: Scrap Metal and Non-Burnable Debris Staged for Removal
Direction: Northwest

Date: August 21, 2012
Photographer: L.. Nelson

Photograph 4: Scrap Metal and Non-Burnable Debris Staged for Removal
Direction: East

Date: August 21, 2012
Photographer: L. Nelson

Photograph 5: Suspected Asbestos Containing Material — Date: August 21, 2012
Direction: N/A — Photographer: L. Nelson

Photograph 6: NALEMP Crew Cleaning Up Debris Along Creek Drainage — Date: August 21, 2012
Direction: Southwest — Photographer: L. Nelson

Photograph 7: Non-Painted Wood Burning Units
Direction: North

Date: August 21, 2012
Photographer: L. Nelson

Photograph 8: Debris Along Creek Drainage
Direction: N/A

Date: August 21, 2012
Photographer: L. Nelson

Photograph 9: Soil Sample Location 12NVNCSL01 Collected from Debris Pile Location #16
Date: September 6, 2012 Direction: North-Northwest Photographer: L. Nelson

Photograph 10: Soil Sample Location 12NVNCSL06 Collected from Debris Pile Location #13
Date: September 7, 2012 Direction: North Photographer: L. Nelson

Photograph 11: Soil Sample Location 12NVNCSL17 Collected from Former Structure #12 Location
Date: September 7, 2012 Direction: North Photographer: L. Nelson

Photograph 12: Soil Sample Location 12NVNCSL23 Collected from Debris Pile #33 Location
Date: September 7, 2012 Direction: East Photographer: L. Nelson

Photograph 13: Soil Sample Location 12NVNCSL40 Collected from Trash/CON/HTRW Removal Site AA01
Date: September 8, 2012 Direction: North-Northeast Photographer: L. Nelson

Photograph 14: Soil Sample Location 12NVNCSL44 Collected from Trash/CON/HTRW Removal Site AA05
Date: September 8, 2012 Direction: North Photographer: L. Nelson

Photograph 15: Soil Sample Location 12NVNCSL46 Collected from Debris Area AA07
Date: September 8, 2012 Direction: Northwest Photographer: L. Nelson

Photograph 16: Soil Sample Location 12NVNCSL54 Collected from Additional Area AA15
Date: September 9, 2012 Direction: N/A Photographer: L. Nelson

Photograph 17: Soil Sample Location 12NVNCSL56 Collected from Soil removal Location AA17
Date: September 9, 2012 Direction: Northwest Photographer: L. Nelson

Photograph 18: Soil Sample 12NVNCSL58 Collected from Drum Removal Area near E. Toolie Cabin (AA19)
(no visible sheen was present on the surface water)
Date: September 9, 2012 Direction: Northwest Photographer: L. Nelson

Photograph 19: Surface Water/Sediment Sample Location 12NVNCSW03/12NVNCSD03
Date: September 10, 2012 Direction: Northwest Photographer: L. Nelson

Photograph 20: Surface Water/Sediment Sample Location 12NVNCSW06/12NVNCSD06
Date: September 11, 2012 Direction: South Photographer: L. Nelson

Photograph 21: Loading of CON/HTRW for Transportation and Disposal Date: September 22, 2012
Direction: Northwest Photographer: R. James

Photograph 22: Confirmation Sampling of Burn Pit Area Date: September 22, 2012
Direction: Southeast Photographer: R. James

Photograph 23: Soil Sample Location 12NVNCSL08 Collected from Debris Pile #11
Date: September 7, 2012 Direction: North Photographer: L. Nelson

Photograph 24: Soil Sample Location 12NVNCSL09 Collected from location of Former Structure #7
Date: September 7, 2012 Direction: North Northwest Photographer: L. Nelson

Photograph 25: Soil Sample Location 12NVNCSL13 Collected from Location of Debris Pile #9
Date: September 7, 2012 Direction: North Photographer: L. Nelson

Photograph 26: Soil Sample Location 12NVNCSL14 Collected from Location of Debris Pile #8
Date: September 7, 2012 Direction: North Photographer: L. Nelson

Photograph 27: Soil Sample Location 12NVNCSL24 Collected from Location of Former Structure #4
Date: September 7, 2012 Direction: Southeast Photographer: L. Nelson

Photograph 28: Soil Sample Location 12NVNCSL28 Collected from Location of Debris Pile #23
Date: September 8, 2012 Direction: North Photographer: L. Nelson

Photograph 29: Soil Sample Location 12NVNCSL43 Collected from Additional Area of Concern AA04
Date: September 8, 2012 Direction: East Southeast Photographer: L. Nelson

Photograph 30: Soil Sample Location 12NVNCSL51 Collected from Additional Area of Concern AA12
Date: September 8, 2012 Direction: East Photographer: L. Nelson

Photograph 31: Sediment Sample Location 12NVNCSD04 Date: September 10, 2012
Direction: Southeast Photographer: L. Nelson

Photograph 32: Surface Water/Sediment Sample Location 12NVNCSW05/SD05 and Duplicate SW11/SD11
Date: September 11, 2012 Direction: North Photographer: L. Nelson

Photograph 33: Photograph of Shipping Containers After Arrival At Port of Seatlte Date: November 16, 2012
Direction: N/A Photographer: T. Ellingboe

APPENDIX C

Field Notebook and Safety Meeting Forms

-Logbook 1

-Logbook 2

-Safety Meeting Sign-in Sheets

Logbook #1

"Rite in the Rain"®
ALL-WEATHER
FIELD
No. 351

Savoonga
NALEMP

Project #49029

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

Name Savoonga NALEMP
Removal Action + Site Investigation
Address Bristol Environmental Remediation Services
111 W. 16th Ave, Anchorage, AK 99501
Phone Tyler Ellingboe (907) 563-0013

Project

Additional Information
is provided in Logbook #2

CONTENTS

PAGE	REFERENCE	DATE

Sun August 21, 2012 Rainy, Windy, + ~40°F

→ Health and safety meeting

→ Mobilize to Site

→ L. Nelson and Elmer collect CON/HTRW Samples ——— LN

→ 8 drums Located behind Connex East of Houses

Drums

3 Paint debris

1 battery

2 debris

2 unknown

——— LN

Paint drum 1

Grease Air craft

General Purpose

MIL-G 7711A

9150-257-5361

America oil company

May, 1971 Batch ISO

DSA 600-71-C-1623 Qual AML 78297-64

12 visable Grease containers

Approx 3 cans of Dark Grease like material. Additional material at the bottom. chlorinated dish soap.

2x16oz container TCLP RCRA 8 metals

Lesa E. Nelson 8/21/12

August 21, 2012

: Paint Drum 1

Chlorinated Dishwashing Soap } ~~1x8oz~~ 1x8oz LN oxidizer + pH

——— LN

Paint Drum 2

- 1 Small Can Aircraft Grease (as seen in PC1)
- misc. Paints: Silver, red, brown, + black all dried + hardened
- Grease Gun
- Absorbant pads
- unable to see into bottom of drum for additional materials

* ~~1x16oz~~ 2x8oz Container: Total PCBs, TCLP RCRA 8 metals, TCLP VOCs + SVOC

——— LN

Paint Drum 3

- misc. Paint: Grey, Silver, + Orange Paint flakes
- Liquid Paint Pen - Chlorinated Dish Soap
- Absorbant Pads
- Materials @ bottom not visible

* ~~1x16oz~~ 2x8 LN OZ Container: Total PCBs, TCLP RCRA 8 metals, TCLP VOCs + SVOCs

* ~~1x4oz~~ 2x4oz LN. Oxidizer + pH

- 30 mm Shell

Lesa E. Nelson 8/21/12

August 21, 2012

Drum ~~5~~ zn 4

- Misc Paints: Orange, green, silver, + brow
- Joint Compound
- Grease containers as described in Drum1
- Empty kerosene containers

~~1×8oz~~ 2×4oz zn + ~~1×16oz~~ zn 2×8oz

Drum 5

Overpack Containing 1×55 gal grease drum

~~1×8oz~~ zn 2×4oz

zn

Drum 6

- Overpack containing 1×55gal grease drum
- Boom
- Dirt covered in grease

~~1×8oz~~ zn 2×4oz

zn

Drum 7

- overpack containing partial paint drum
- and unknown rusted container

~~1×16oz container~~ zn 2×8oz

zn

Drum8

Batteries

8/21/12

August 21, 2012

- 12NVNCCH01 @ 0830
  Chlorinated Dishwasher Soap from Drum 1
- 12NVNCCH02 @ 0840
  Grease from Drum 1
- 12NVNCCH03 @ 0900
  Paint from drum 2
- 12NVNCCH04 @ 0915
  Chlorinated Dishwasher Soap from Drum 3
- 12NVNCCH05 @ 0925
  Paint from Drum 3
- 12NVNCCH06 @ 0945
  Paint from Drum 4
- 12NVNCCH07 @ 0955
  Grease from Drum4
- 12NVNCCH08 @ 1015
  Grease from Drum5
- 12NVNCCH09 @ 1035
  Grease from Drum 6
- 12NVNCCH10 @ 1300
  Paint from Drum7

8/21/12

Photo ID	Date	Time	Direction Facing	Description
DSCN Ø187	8/21/12	1458	Ø	Drum 6 lid -> contents described on Pg 6
DSCN Ø188	8/21/12	1459	Ø	Drum 6 Contents -> Described on Page 6
DSCN Ø189	8/21/12	1459	Ø	Drum 6 -> Overall View
DSCN Ø19Ø	8/21/12	1459	Ø	Drum 6 -> Label on exterior of drum
DSCN Ø191	8/21/12	15ØØ	Ø	Drum 7 -> Lid. Contents described on Pg 6
DSCN Ø192	8/21/12	15Ø1	Ø	Drum 7 -> Overall view
DSCN Ø193	8/21/12	15Ø1	Ø	Drum 7 -> Label on outside of drum
DSCN Ø194	8/21/12	15Ø1	Ø	Drum 7 Contents -> Described on Page 6
DSCN Ø195	8/21/12	15Ø2	Ø	Drum 7 -> Container found in Drum 7
DSCN Ø196	8/21/12	15Ø2	Ø	Same as Photo DSCNØ195
DSCN Ø197	8/21/12	15Ø2	Ø	Drum 8 Lid -> Contents described on Pg 6
DSCN Ø198	8/21/12	15Ø2	Ø	Drum 8 -> Overall View
DSCN Ø199	8/21/12	151Ø	North-Northwest	Debris Pile staged for segregation + disposal
DSCN Ø2ØØ	8/21/12	151Ø	North West	Yellow flags mark debris. Debris Pile NE of Pond
DSCN Ø2Ø1	8/21/12	1511	Northwest	Debris Pile
DSCN Ø2Ø2	8/21/12	1511	North West	Debris Pile

Lesa E. Nelson 8/21/12

Photo log

Photo ID	Date	Time	Direction Facing	Description
DSCNØ183 Ø170	8/21/12	~~1455~~ 1449	South	CON/HTRW Staging area
DSCN Ø171	8/21/12	145Ø	Ø	Drum 1 Lid -> Contents described on page 4+5
DSCN Ø172	8/21/12	145Ø	Ø	Drum 1 Interior -> Contents described on Pg 4+5
DSCN Ø173	8/21/12	1451	Ø	Blurry photo of grease container in Drums 1, 2, +4
DSCN Ø174	8/21/12	1451	Ø	Photo of grease container found in Drums, 1, 2 + 4
DSCN Ø175	8/21/12	1452	Ø	Drum 2 Lid -> Contents described on page 5
DSCN Ø176	8/21/12	1452	Ø	Drum 2 Contents -> Described on page 5
DSCN Ø177	8/21/12	1452	Ø	Drum ~~3~~ 2 -> overall view of drum
DSCN Ø178	8/21/12	1454	Ø	Drum 3 Lid -> contents described on Page 5
DSCN Ø179	8/21/12	1454	Ø	Drum 3 Contents -> described on page 5
DSCN Ø18Ø	8/21/12	1454	Ø	Drum 3 -> overall view
DSCN Ø181	8/21/12	1455	Ø	Drum 4 Lid -> contents described on page 6
DSCN Ø182	8/21/12	1455	Ø	Drum 4 Contents -> described on page 6
DSCN Ø183	8/21/12	1455	Ø	Drum 4 Overall view
DSCN Ø184	8/21/12	1456	Ø	Drum 5 lid -> contents described on page 6
DSCN Ø185	8/21/12	1456	Ø	Drum 5 -> overall view
DSCN Ø186	8/21/12	1457	Ø	Drum 5 Contents -> Described on page 6

Lesa E. Nelson 8/21/12

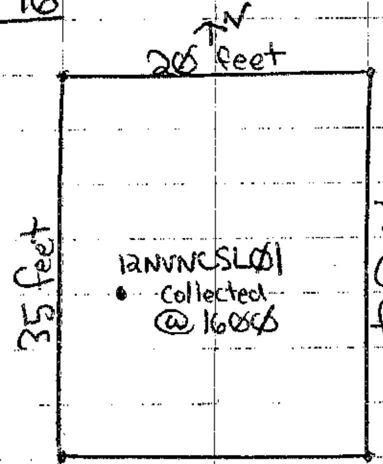
Photo ID	Date	Time	Direction Facing	Description
DSCN0203	8/21/12	1512	South-Southeast	Debris Pile
DSCN0204	8/21/12	1512	South	Debris Pile — Along Beach
DSCN0205	8/21/12	1512	~~East~~ East-Southeast	Debris Pile — Access Road
DSCN0206	8/21/12	1513	East	Debris Pile
DSCN0207	8/21/12	1513	North	Debris Pile
DSCN0208	8/21/12	1513	Ø	Dishwasher Soap stored in asbestos ~~pile~~ box in Debris Pile, SE corner of pile
DSCN0209	8/21/12	1513	Ø	Same as photo DSCN 0208
~~DSCN0210~~	~~8/21/12~~	~~1513~~	Ø	~~Tile Stored SE corner of debris Pile~~
DSCN0211	8/21/12	1514	Southwest	Crew Cleaning up debris near the creek. Livable Structure 11 visible on right side of photo
DSCN0212	8/21/12	1514	North	Burn Units
DSCN0213	8/21/12	1515	East	View of Debris Pile along beach access road
DSCN0214	8/21/12	1515	North	wood debris stage west of Debris Pile along beach
DSCN0215	8/22/12	0927	South-Southwest	Creek located east of Livable Structure 11
DSCN0216	8/22/12	0927	North west	Same as photo DSCN0215
DSCN0217	8/22/12	0927	Northwest	Drum Debris along creek
DSCN0218	8/22/12	0927	west	Debris along the creek
DSCN0219	8/22/12	0928	Northeast	Wire coming out of ground from Creek heading Northeast
DSCN0220	8/22/12	0928	Ø	Wire shown entering creek w/ misc. debris
DSCN0221	8/22/12	0928	Ø	Debris in Creek
DSCN0222	8/22/12	0929	North-Northwest	Creek located east of livable Unit 11

08/22/12

September 6, 2012 ~40-50°, drizzly

|0700| Health and safety meeting ——— ZN
|0730| Upload GPS coordinates to trimble
|0830| Relocate all of the debris pile and former structure locations. ——— ZN
|1200| Break for lunch ——— ZN
|1230| Prepare to collect samples —— ZN from debris areas and former structure locations
|1330| Complete collecting samples from Debris Pile 16, Former Structure 10+9, —— ZN Debris Pile 15, and Debris Pile 14. ——— ZN

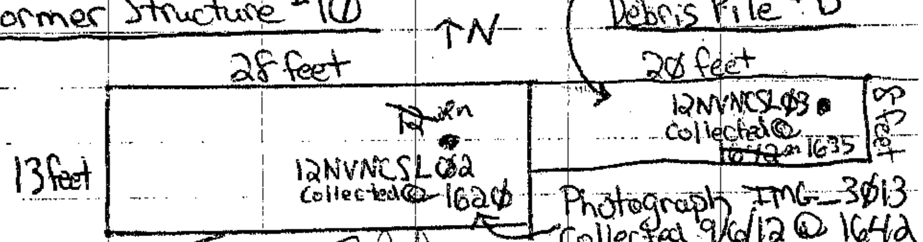
Debris Pile #16



Photograph IMG-3012 Collect 9/6/12 @ 1625 facing North-Northwest

Former Structure #10

Debris Pile #15



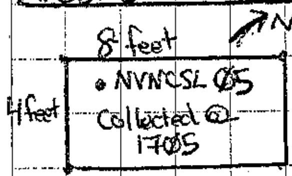
Photograph IMG 3014 collected @ 1642 facing North

Photograph IMG-3013 collected 9/6/12 @ 1642 facing east-northeast

Zean E. Nelson 9/6/12

September 6, 2012

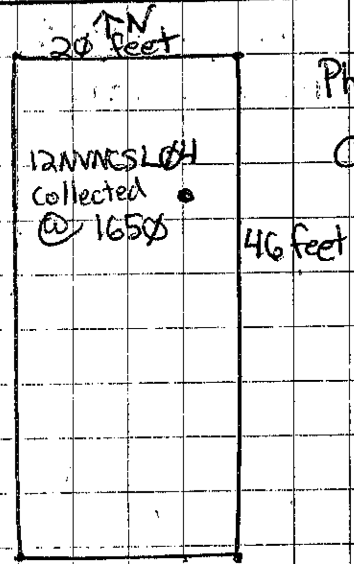
Debris Pile #14



Clay

Photograph IMG_3016 collected @ 1713 facing North

Former Structure #9



Photograph IMG_3015 collected @ 1652 facing Northeast-North

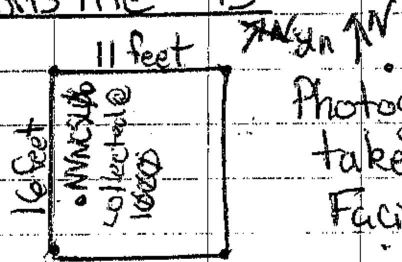
|1730| Done for the day ——— ZN

Zean E. Nelson 9/6/12

September 7, 2012 ~45°F partly Cloudy

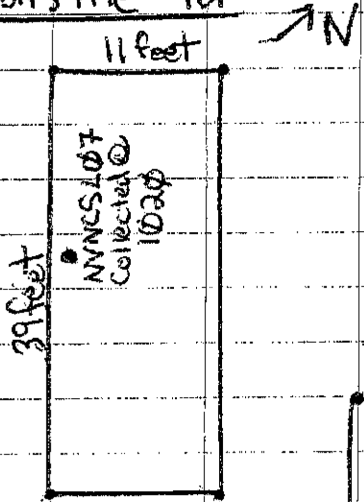
0700	Safety Meeting	LN
0730	Prepare for Sampling	LN
1000	Begin Sampling	

Debris Pile #13



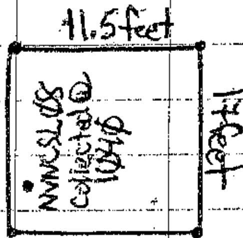
Photograph IMG_~~3016~~ 3021
taken @ 1013
Facing North

Debris Pile #12



Photograph IMG_3022
taken@ 1046
Facing North

Debris Pile #11

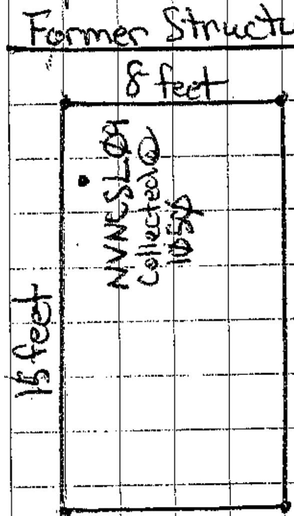


Photograph
IMG_3023
taken @ 1046
facing North

Lesa E. Nel 9/7/12

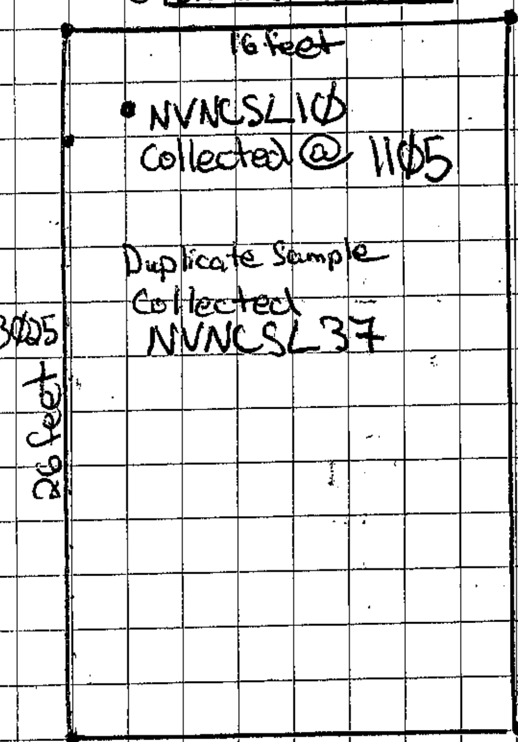
September 7, 2012

Former Structure #7



Photograph IMG_3024
taken@ 1151
facing North-Northwest

Former Structure #6

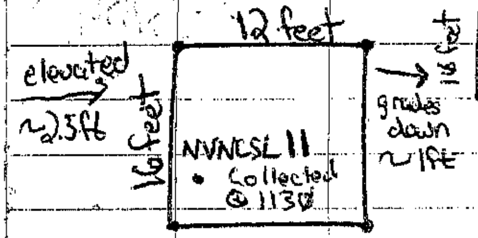


Photograph IMG_3025
taken @ 1152
facing North

Lesa E. Nel 9/7/12

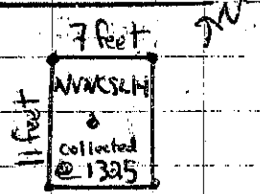
September 7, 2012

Debris Pile #7



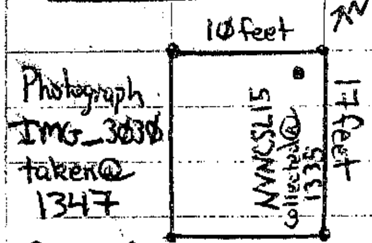
Photograph IMG_3026
taken @ 1153
facing North

Debris Pile #8



Photograph IMG_3029
taken @ 1333
facing North

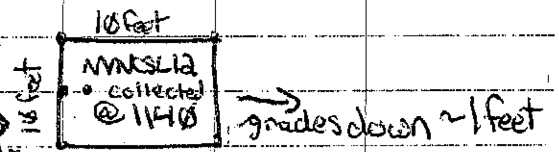
Debris Pile #10



Photograph
IMG_3030
taken @
1347
facing North

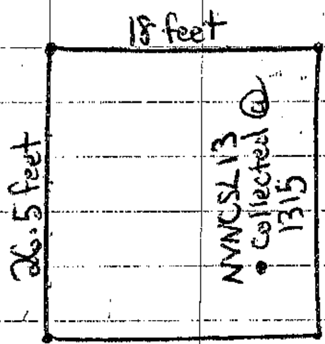
Lesa E. Nelson

Debris Pile #6



Photograph IMG_3027
taken @ 1153
facing North

Debris Pile #9



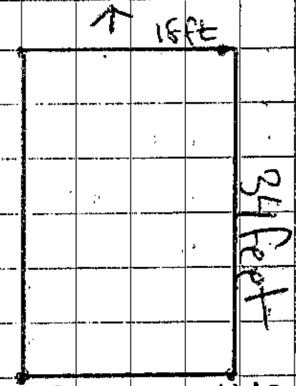
Photograph
IMG_3028
taken @
1332
facing North

~~Pho~~

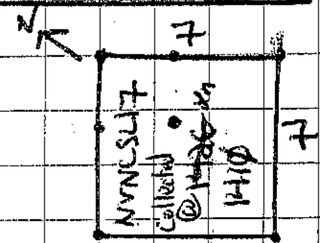
Lesa E. Nelson 9/7/12

September 7, 2012

Former Structure #8

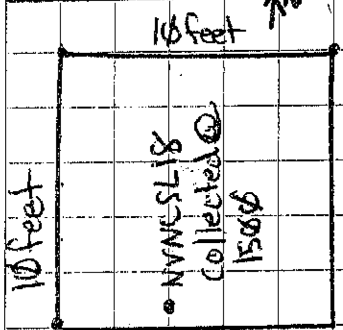


Former Structure #12



Photograph IMG_3031
taken @ 1426 facing North
Photograph IMG_3032
taken 1426
facing West-Northwest

Debris Pile #3

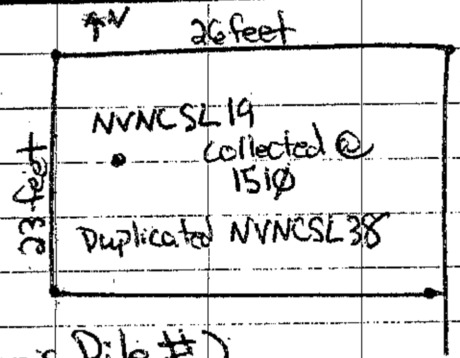


Photograph IMG_3033
taken facing North
taken @ 1534

Lesa E. Nelson 9/7/12

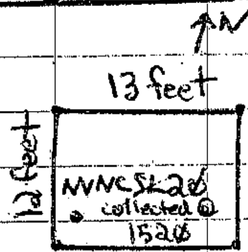
September 7, 2012

Former Structure #5



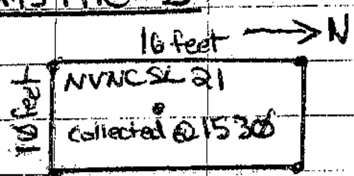
Photograph IMG_3034
taken @ 1534
facing East

Debris Pile #2



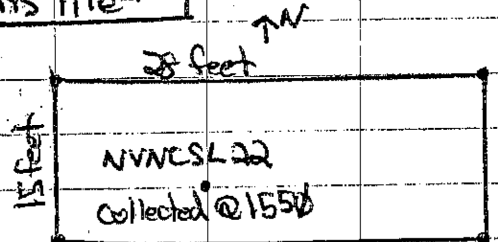
Photograph IMG__3035
taken @ 1535
facing North

Debris Pile #5



Photograph IMG_3036
taken @ 1536 facing North

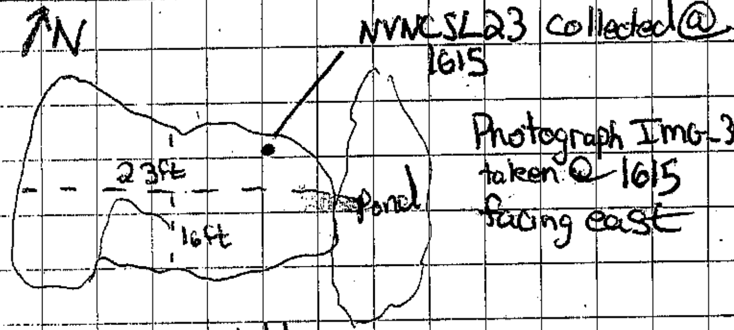
Debris Pile #4



Photograph IMG__

September 7, 2012

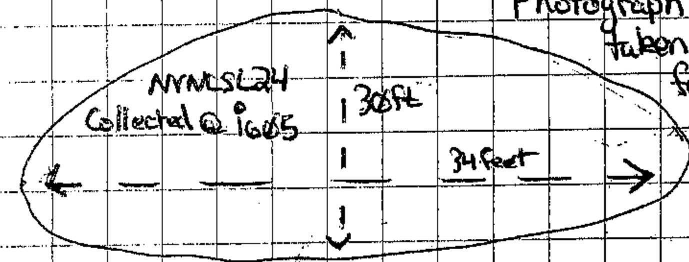
Debris Pile #33 listed as S3 in GPS



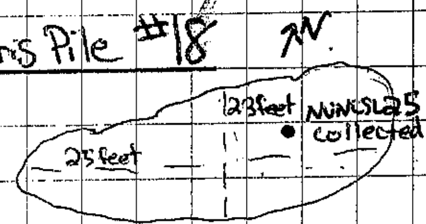
Photograph IMG_3037
taken @ 1615
facing east

Former Structure #4

Photograph IMG__3038
taken @ 1617
facing Southeast

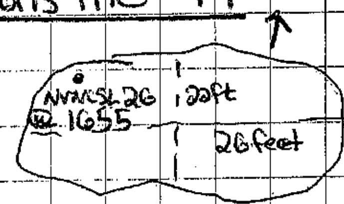


Debris Pile #18



Photograph IMG__3039
taken @ 1634
facing North

Debris Pile #17



September 8, 2ø12

Additional Area ø1 (AAø1) ——— LN

* Areas were choosen by Robert based on his largest concerns + he described type of wasted removed from these areas

AAø1: Appears to have been a trash dump site. Some paint removed from this area

1415 Photograph IMG_3ø43. Facing North-Northeast. ——— LN

* Paint contaminated soil was removed from this area LN

Addition Area ø2 (AAø2) ——— LN

-Appears to have been a trash dump site including paint. ——— LN

1415 Photograph IMG_3ø44, facing east-Southeast

Current Structure #11 is visible in the background

Additional Area ø3 (AAø3) ——— LN

-Drum Removed from this area — LN

1429 Photograph IMG_3ø45. Facing east-Southeast

Current Structure #11 is visible in the background

Additional Area ø4 (AAø4)

-Burried trash drum ——— LN

1448 Photograph IMG_3ø46. Direction = NA

Closeup of sample location ——— LN

Photograph IMG_3ø47. Facing North-Northeast.

Current Structure #11 is visible in the background

Lesa E. Nelson 9/8/12

September 8, 2ø12

Additional Area ø5 (AAø5) ——— LN

-Debris, trash, D size battery, Paint, etc...

15ø5 Photograph IMG_3ø48. Facing North

Additional Area ø6 (AAø6) ——— LN

-Trash and potential fuels — LN

1514 Photograph IMG_3ø49. Direction = NA

Closeup of sample location ——— LN

1515 Photograph IMG_3ø5ø, Facing North

Additional Area ø7 (AAø7) ——— LN

-A mixture of debris types. Trash still in area

1552 Photograph IMG_3ø51, Facing Northwest

Current Structure #11 visible in background

Additional Area ø8 (AAø8) ——— LN

-A mixture of debris types. Trash still present

16ø2 Photograph IMG_3ø52. Facing Northwest

Current Structure #11 visible in background

*Note

-Located next to debris pile #8

163ø Photograph IMG_3ø53 Facing east

Additional Area ø9 (AAø9) ——— LN

Additional Area 1ø (AA1ø) ——— LN

-Potentially a drum was removed

164ø Photograph IMG_3ø54, Facing East

Additional Area 11 (AA11) ——— LN

-Next to Debris Pile #7 ——— LN

1644 Photograph IMG_3ø55. Facing East - LN

Lesa E. Nelson 9/8/12

September 8, 2012 / September 9, 2012

Additional Area 12 (AA12)

— Next to former Structure 8. Possible Drum removed

1656 Photograph IMG_3056 Facing Northeast

Additional Area 13 (AA13)

— Location of a former Structure — zn

0848 Photograph IMG_3081. Facing East

Additional Area 14 (AA14)

— Area disturbed by excavator tracks

0929 Photograph IMG_3082 Facing Northeast

0930 Photograph IMG_3083. Closeup View of Sample location

Additional Area 15 (AA15)

— Behind Current Structure 3. PCL odors apparent

0942 Photograph IMG_3084. Facing Southeast

Additional Area 16 (AA16)

— Disturbed area southeast of the burn pits

1011 Photograph IMG_3085. Facing Northwest

Additional Area 17 (AA17)

— Drums + ~3 CY Soil removed — zn

1025 Photograph IMG_3086. Facing West

Additional Area 18 (AA18)

— Current Structure 3 driveway — zn

1038 Photograph IMG_3087. Facing Northwest

Additional Area 19 (AA19)

— Drum Removal Area adjacent to Rd

1101 Photograph IMG_3088. Facing North. AA ~~17~~ 20 visible in Background zn

9/8/12

Sept ~~8~~ 9 2012

Additional Area 20 (AA20)

— Drum Removal Area — zn

1115 Photograph IMG_3089. Facing South

AA19 visible in background — zn

Debris Pile 22

— Located just South of Current Structure 1

1343 Photograph IMG_3090. Facing North

Debris Pile 23

1353 Photograph IMG_3091. Facing Southeast

Located adjacent to Pond adjacent to Road just south of Current Structure 1 — zn

September 10, 2012

Surface Water / Sediment Sample 01 (SW/SD01)

[1445] Photograph IMG_3092. Facing South~~west~~ east

Surface Water/ Sediment Sample 02 (SW/SD02)

[1509] Photograph IMG_3093. Facing Northwest

Surface Water/ Sediment Sample 03 (SW/SD 03)

[1547] Photograph IMG_3094. Facing North

Surface Water/Sediment Sample 04 (SW/SD 04)

[1610] Photograph IMG_3095. Facing Northwest

September 11, 2012

Surface Water /Sediment Sample Location 05

[1002] Photograph IMG_3096. Facing North

Surface Water/ Sediment Sample Location 06

[1021] Photograph IMG_3097. Facing South

NALEMP CREW

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for Outdoor writing people

Need to Ask Tyler About Pulling the Galv. Points per Jeremy

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Logbook #2

Rite in the Rain®
ALL-WEATHER
FIELD
№ 351

Northeast Cape Fish Camp Removal Action + Site Investigation

Project #49029

INCH

Rite in the Rain®
ALL-WEATHER WRITING PAPER

Name PAT Bradley

Address 111 W 76th Ave.

Phone 907-563-0013

Project SAVOONGA NALEMP
49029

Additional Information
is provided in Logbook #1

CONTENTS

PAGE	REFERENCE	DATE

Wed. 9/5/12

0630 Arrive office

0800 MEL drops me off @ ANC Airport.

1000 Flight having mechanical problems — Delayed.

1145 Board flight to Nome.
- Chuck C.
- Lesa N.
- PAT B.

1500 @ Bering Air on weather Hold.

1730 Arrive Base camp & will unload gear.

1830 End of Day

12hr

Thursday 9/6/12 — CLEAR wind 30's+

0700 Safety meeting & well
- Meet w/ Russel to get GPS.
- Pick up Side by Side & go to site
- Robert, Elmer on site → clean up
- Lesa GPS potential sample Locations. Pin flag each spot.

1200 - off site for lunch

1230 - on site to consolidate waste drums per Tyler.

Drum 8 = Batteries — 60lbs
Broken & cracked No Fluids

Drum 6 = Old oil drum w/ soccer
some oil & H_2O in overpak. 30lbs

DRUM 5 = old oil drum / crushed
30 lbs

DRUM 2 = PAINT - MIX
220lb

DRUM 3 = PAINT - MIX
220lb

DRUM 4 = PAINT MIX
190lb

DRUM 7 = PAINT MIX
300lb

- DRUM 1 = 100lb. PAINT MIX

- SOAP = 25lb ea. X2

Thursday 9/6/12

1540 Arrive @ DP16 & will Collect Sample. Have Elmer & Robert w/us for Assist.

1600 Collect Sample @ DP16

→ 12NVNCSL01

4oz GRO/VOC. MeOH

4oz Dioxin/Furans. No pres.

8oz DRO/RRO, RCRA, PAH, PCB, Pest, Herb. No pres.

PID = 0.4

1620 Collect Sample @ S10 2

4oz GRO/VOC, 12NVNCSL02

8oz DRO/RRO/RCRA/PAH/PCB.

PID = 0.1

1635 Collect Sample @ DP15

→ 12NVNCSL03

4oz GRO/VOC,

8oz DRO/RRO, PAH, RCRA, PCB.

PID = 0.1

1650 Collect Sample @ S9

→ 12NVNCSL04

4oz GRO/VOC,

8oz DRO/RRO, RCRA, PAH, PCB.

PID = 0.1

1705 Collect Sample @ DP14

→ 12NVNCSL05 PID = 0.2

4oz - GRO. 8oz - DRO/RRO, PCB.

1740 Arrive Camp & will Do Sample Management.

1800 End of Day

10.5

FRIDAY 9/7/12

0700 SAFETY meeting.

1000 Collect Sample @ DP 13

→ 12NVNCSL06

4oz GRO/VOC.

8oz DRO/RRO, RCRA, PAH, PCB.

PID = 0.0

1020 Collect Sample @ DP12

→ 12NVNCSL07

4oz GRO.

8oz DRO/RRO, PCB.

PID = 0.0

1040 Collect Sample @ DP11

~~1040~~ → 12NVNCSL08

4oz GRO.

8oz DRO/RRO, PCB.

PID = 0.0

1050 Collect Sample @ ~~DP7~~ 59 dn

→ 12NVNCSL09

4oz GRO.

8oz DRO/RRO, PCB

PID = 0.0

1105 Collect Sample @ ~~DP~~ S6

→ 12NVNCSL10

★ Dup 12NVNCSL37 @-1110

4oz - GRO/VOC.

8oz - DRO/RRO, RCRA. PAH. PCB.

PID = 0.0

1130 Collect Sample @ DP7

→ 12NVNCSL11

4oz GRO.

8oz DRO/RRO, PCB.

PID = 0.0

1140 Collect Sample @ DP6

→ 12NVNCSL12

4oz GRO.

8oz DRO/RRO, PCB

PID = 0.1

1315 Collect Sample @ DP8

→ 12NVNCSL13

4oz GRO.

8oz DRO/RRO, PCB.

PID = 0.2

1325 Collect Sample @ DP9

→ 12NVNCSL14

4oz GRO.

8oz DRO/RRO, PCB.

PID = 0.0

1335 Collect Sample @ DP10

→ 12NVNCSL15

4oz GRO.

8oz DRO/RRO, PCB.

PID = Ø

* NOTE - NO MS/MSD WP/ Required per SOW

1355 Collect Sample @ S8 ~~+ MS/MSD~~ dn
→ 12NVNCSL16
4oz GRO/VOC. → ~~2~~ 1 Jars 1-Primary ~~+ MS/MSD~~
8oz DRO/RRO, RCRA, PAH, PCB. → ~~2~~ 1 Jars dn
PID = 0.1

1410 Collect Sample @ S12
→ 12NVNCSL17
4oz GRO/VOC,
8oz DRO/RRO, RCRA, PAH, PCB.
PID = 0.0

1500 Collect Sample @ DP3
→ 12NVNCSL18
4oz GRO,
8oz DRO/RRO, PCB.
PID = 0.0

1510 Collect Sample @ S5
→ 12NVNCSL19
* Dup 12NVNCSL38 @ 1515
4oz GRO/VOC.
4oz Dioxin/Furans
8oz DRO/RRO, RCRA, PAH, PCB, Pest, Herb.
PID. 0.0

1520 Collect Sample @ DP2
→ 12NVNCSL20
4oz GRO.
8oz DRO/RRO. PCB.
PID = 0.0

1530 Collect Sample @ DP5
→ 12NVNCSL21
4oz GRO.
8oz DRO/RRO, PCB.
PID = 0.1

1550 Collect Sample @ DP4
→ 12NVNCSL22
4oz GRO/VOC.
8oz DRO/RRO, RCRA, PAH, PCB.
PID = 0.0

1615 Collect Sample @ S4
→ 12NVNCSL23
4oz GRO/VOC.
8oz DRO/RRO, RCRA, PAH, PCB.
PID = 0.0

1605 Collect Sample @ DP33
→ 12NVNCSL24
4oz GRO/VOC
8oz DRO/RRO, RCRA, PAH, PCB
PID = 0.2

1635 Collect Sample @ DP18
→ 12NVNCSL25
4oz GRO,
8oz DRO/RRO, PCB,
PID = 0.0

NOTE - S4 collected after DP33

1655 Collect Sample @ DP17
→ 12NVNCSL26
4oz GRO,
8oz DRO/RRO, PCB.
PID = 0.1
~~Collect Sample @ DP21~~
~~→ 12NVNCSL27~~
~~4oz GRO.~~
~~8oz DRO/RRO, PCB.~~
changed to A Sediment Sample,
1730 Arrive camp
Sample management
End of day

10 hr + 1.5
11.5 TOTAL

NOTE worked 1.5 hr extra
sample management,

Saturday 9/8/12
0700 Safety meeting & will go w/ Robert to I.D. Areas of Concern.
1030 Go back to camp & pick up Lisa & we'll go to site & check out Additional Areas of Concern.
1300 Robert wants to remove Ash & containerize so need to get tyvek/Resp/PPE for Jess.
1330 Back on site & we'll start sampling.
- NE Cape crew will remove & contain Ash.
1400 Collect sample @ AA01
→ 12NVNCSL40
Dup 12NVNCSL64 @ 1410
4oz x 2 - GRO/VOC,
~~4oz~~ 8oz x 2 DRO/RRO, RCRA, PAH, PCB, ~~PEST~~ ~~Herb.~~
1- 8oz DRO/RRO-SG, TOC (NO Dup)
PID = 0.0

1425 Collect Sample @ AA02
→ 12NVNCSL41
4oz GRO~~VOC~~
8oz DRO/RRO, PCB
PID=0.0
1435 Collect Sample @ AA03
→ 12NVNCSL42
4oz GRO
8oz DRO/RRO, PCB
PID 0.0
1445 Collect Sample @ AA04
→ 12NVNCSL43
4oz GRO
8oz DRO/RRO, RCRA, PAH, PCB
PID = 0.0
1500 Collect Sample @ AA05
→ 12NVNCSL44
4oz GRO/VOC
8oz DRO/RRO, RCRA, PCB, PAH
~~PID~~ 8oz DRO/RRO-SG, TOC
PID = 4.6
1535 Collect Sample @ AA06
→ 12NVNCSL45
4oz GRO.
8oz DRO/RRO, PCB.
PID = 0.4

1555 Collect Sample @ AA07
→ 12NVNCSL46
4oz GRO.
8oz DRO/RRO, PCB.
PID = 0.1
1605 Collect Sample @ AA08
→ 12NVNCSL47
4oz GRO.
8oz DRO/RRO, PCB.
PID = 0.2
1630 Collect Sample @ AA09
→ 12NVNCSL48
4oz GRO
8oz DRO/RRO, PCB
PID = 0.0
1645 Collect Sample @ AA10
→ 12NVNCSL49
4oz GRO/VOC
8oz DRO/RRO, RCRA, PAH, PCB.
PID = 0.1
1650 Collect Sample @ AA11
4oz - GRO~~VOC~~ → 12NVNCSL50
4oz DRO/RRO PCB
4oz DRO/RRO-SG / TOC
PID = 0.0

1700 Collect Sample @ AA 12
→ 12NVNCSL 51
4oz GRO/VOC.
8oz DRO/RRO, RCRA, PAH, PCB.
PID = 0.0
1720 End of Day

10

Sunday 9/9/12
0700 Safety meeting + gear up.
0900 Collect Sample @ AA 13
→ 12NVNCSL 52
4oz GRO.
4oz DRO/RRO, PCB.
PID = 0.1
*Dup 12NVNCSL 65 @ 0910
4oz GRO.
4oz DRO/RRO, PCB.
*Note: 2 MeOH added to GRO. for sample 52 + 65.
0930 Collect Sample @ AA 14
→ 12NVNCSL 53.
4oz GRO
4oz DRO/RRO, PCB
4oz DRO/RRO SG-TOC
PID - 8.3
0940 Collect Sample @ AA 15
→ 12 NVNCSL 54
4oz GRO/VOC. — X2 MeOH
4oz Dioxin; Furans
8oz DRO/RRO, RCRA, PAH, PCB, Pest, Herb.
PID = 34.0
4oz DRO/RRO SG-TOC

4oz DRO/RRO SG-TOC → 12NVNCSL66
☆Note: This is a Dup of DRO/RRO SG-TOC
sample 54 only @ 0945
1010 Collect Sample @ AA16
→ 12NVNCSL55
4oz GRO/VOC.
8oz DRO/RRO, RCRA, PAH, PCB.
PID 0.1
1030 Collect Sample @ AA17
→ 12NVNCSL56
4oz GRO/VOC.
8oz DRO/RRO, RCRA, PAH, PCB.
PID = 0.2
1045 Collect Sample @ AA18
→ 12NVNCSL57
Dup → 12NVNCSL67 is for 4oz Dioxin, Furan &
4oz Pest & Herb @ 1050
4oz GRO/VOC
4oz X 2 - Dioxin Furan
4oz Pest & Herb
8oz DRO/RRO, RCRA, PAH, PCB, Pest, Herb.
PID - 0.0

1110 Collect Sample @ AA19
→ 12NVNCSL58
4oz GRO
8oz DRO/RRO, PCB
PID = 0.0
1120 Collect Sample @ AA20
→ 12NVNCSL59
4oz - GRO/VOC
8oz - DRO/RRO, RCRA, PAH, PCB
PID = 0.2
☆ 1330 finish w/AA sampling &
will go back to samples of
DP's & S.
1335 Collect Sample @ DP22
→ 12NVNCSL27
4oz GRO/VOC.
8oz DRO/RRO, RCRA, PAH, PCB
PID = 0.1
1340
→ 12NVNCSL39 is a Dup for
sample "27" "DRO/RRO, PCB + GRO" only
1350 Collect Sample @ DP23
4oz GRO → 12NVNCSL28 ←
4oz DRO/RRO, PCB
PID 0.0

1440 Locate S Water Areas w/ Robert.
1600 Back to camp to get supplies & Lisa's waders.
1645 Back @ site & discover T/Am. did not send All bottles required for H_2O sampling.
- Call Tyler
1730 Dinner
1815 Sample management.
1945 End of day

10.5

Monday 9/10/12 NOTE: SS = Super S Site

0700 Safety Meeting
1000 Collect Sample @ SS
→ 12NVNCCH11
4oz - TCLP metals
4oz - PCB
4oz - VOCs
1010 Collect Sample @ SS
→ 12NVNCCH12
4 oz - ~~TCLP~~ met
4 oz - PCB
4 oz - VOC
1020 Collect Sample @ SS
→ 12NVNCCH13
4oz - ~~TCLP~~ met
4oz - PCB
4oz - VOC
Begin Lesa Nelson Entry
1450 Collect Surface Water Sample
~~Form~~ Sample ID: 12NVNCSWØ1
4x 1 Liter = PCBs + PAHs
3x VOA = VOCs including BTEX
1x Poly = RCRA Metals
1455 Collect Sediment Sample
Sample ID: 12NVNCSDØ1
GRO, DRO/RRO, DRO/RRO-SG, RCRA, VOCs, PAHs, TOCs, & PCBS

9/10/12

1505 Collect Surface Water Sample: 12NVNCSW02. Analyses: Metals, VOCs, PAHs, + PCBs

1515 Collect Sediment Sample: 12NVNCSD02 GRO, DRO/RRO, DRO/RRO-SG, Metals, VOCs, PAHs, TOCs + PCBs. —— LN

1530 Collect Surface Water Sample: 12NVNCSW03 Analyses: Metals, VOCs, PAHs + PCBs —— LN

1540 Collect Sediment Sample: 12NVNCSD03 —— LN
Analyses: GRO, DRO/RRO, DRO/RRO-SG, TOC, Metals, VOCs, PAHs, + PCBs.

1550 Collect Surface Water Sample: 12NVNCSW04 Analyses: Metals, VOCs, PAHs, + PCBs. —— LN

1600 Collect Sediment Sample: 12NVNCSD04 Analyses: GRO, DRO/RRO, DRO/RRO-SG, TOC, Metals, VOCs, PAHs, + PCBs +

1650 Collect Surface Water Sample: 12NVNCSW05 Analyses: Metals, VOCs, PAHs, PCBs, Pesticides, + Herbicides

1655 Collect Sediment Sample: 12NVNCSD05 —— LN
Analyses: GRO, DRO/RRO, DRO/RRO-SG, TOC, Metals, VOCs, PAHs, PCB, Herbicides, + Pesticides —— LN

1700 Collect Surface Water Sample: 12NVNCSW11 —— LN
Duplicate of 12NVNCSW05 —— LN
Analyses: Metals, VOCs, PAHs, PCBs, Pesticides, + Herbicides

1705 Duplicate of 12NVNCSD05 -> 12NVNCSD11
Analyses: GRO, DRO/RRO, DRO/RRO-SG, TOC, Metals, VOCs, PAHs, PCBs, Pesticides, and Herbicides —— LN

1800 DONE FOR THE DAY —— LN

Lora S. Nel

9/11/12 Clear, 35-45°F

0700 Health + Safety Meeting

0730 Prepare to sample + Coordinate days activities

1000 Collect Surface Water Sample 12NVNCSW06
Analyses: Metals, VOCs, PCBs, PAHs, Pesticides + Herbicides

1010 Collect Sediment Sample 12NVNCSD06
Analyses: GRO/VOCs, Metals, PCBs, PAHs, DRO/RRO, DRO/RRO-SG, TOC, Pesticides, + Herbicides —— LN

~~1030~~ 1045 Collect Surface Water Sample: 12NVNCSW07
Analyses: Metals, VOCs, PCBs, PAHs, Pesticides, + Herbicides

1055 Collect Sediment Sample: 12NVNCSD07
Analyses: GRO/VOCs, Metals, PCBs, PAHs, DRO/RRO, DRO/RRO-SG, TOC, Pesticides, + Herbicides, Dioxins + Furans —— LN

1100 Collect Surface Water Sample: 12NVNCSW08 —— LN
Analyses: Metals, VOCs, PCBs, PAHs, Pesticides, + Herbicides

1110 Collect Sediment Sample: 12NVNCSD08 —— LN
Analyses: GRO/VOCs, Metals, PCBs, PAHs, DRO/RRO, DRO/RRO-SG, TOC, Pesticides + Herbicides —— LN

1130 Collect Surface Water Sample: 12NVNCSW09
Analyses: Metals, VOCs, PCBs, PAHs, Pesticides, + Herbicides

1140 Collect Sediment Sample: 12NVNCSD09 —— LN
Analyses: GRO/VOCs, Metals, PCBs, PAHs, DRO/RRO, DRO/RRO-SG, TOC, Pesticides, + Herbicides. —— LN

1200 Break for lunch —— LN

1230 Head back to site —— LN

Lora S. Nel 9/11/12 Rite in the Rain

9/11/12

1330 Collect Surface Water Sample: 12NVNCSW10
Analyses: Metals, VOCs, PCBs, + PAHs — LN
1340 Collect Sediment Sample: 12NVNCSD10 — LN
Analyses: VOCs, Metals, PCBs, PAHs, GRO, DRO/RRO, DRO/RRO-SG
TOC, + Dioxins/Furans — LN
Duplicate Sample 12NVNCSD12 only for dioxins/Furans
1400 Collect GPS coordinates for all locations
1730 Break for dinner — LN
1900 Sample Processing — LN
2400 Done for the day — LN

9/11/12

* Note: 2 samples collected from the metal debris staging area LN
-> 12NVNCSL29: GRO, DRO/RRO, metals, VOCs, PAHs, + PCBs @ 1630
-> 12NVNCSL30: Same as above @ 1645
-> 12NVNCSL31 collected from drum staging area @ 1700

9/12/12

0700 Sample Processing — LN
1530 Catch Plane to nome — LN
1630 Layover in nome — LN
2100 Plane to Anchorage — LN
2230 Done for day

9/12/12

9/21/12 Tyler Ellinghoe arrives at NE Cape to prepare metallic debris and CON/HTRW connexes for shipment

1630 Perform brief site visit (NVNC) to confirm CON/HTRW storage location. Will label and load containers of CON/HTRW items for shipment tomorrow

9/22/12
0900 Arrive at NVNC site to label all containers in conformance with waste manifest 004376114FLE. All CON/HTRW will be loaded into 20' open top connex # CMCU205324.

The following CON/HTRW containers will need to remain on-site until the 2013 field season:

Drum # 5 - overpacked oily drum 55DM/85DM
Associated sample # 12NVNCCH08

9/22/12 (cont.)

Drum 6 - Overpacked oily drum
55DM inside 85DM
Associated sample # 12NVNCCH09

Supersacks 16a, 16b, 16c
Stained soil associated with removal of drums 5 + 6
Associated sample # 12NVNCCH11

Supersack # 17
Stained soil associated with removal of surface stains ~~and~~ with diesel smell/odor
Associated sample # 12NVNCCH12

Drum # 9
85 gallon steel drum containing soil mixed with paint generated during CON/HTRW removal
Associated sample 12NVNCCH13

Tyler 9/22/12

9/22/12

1130 Confirm containers of scrap metal/ non-burnable debris are ready for shipment

Can #	Manifest #
WMXU6326	MD001
WMXU6132	MD002
WMXU6249	MD003

1305 Prepare to collect soil samples from beneath NVNC burn pits. Will collect two soil samples from beneath east burn pit. Will collect two soil samples and soil sample duplicate from beneath west burn pit. MS/MSD not required

1405 Sample 12NVNCBPS01 collected from eastern base of east burn pit at depth of 6' bgs.

1413 Sample 12NVNCBPS02 collected from western base of east burn pit at depth of 6' bgs

9/22/12

1421 Sample 12NVNCBPS03 collected from eastern base of west burn pit at depth of 6' bgs. Collected duplicate sample 12NVNCBPS04 from same location. Assigned time of 1431 for duplicate sample.

1445 Sample 12NVNCBPS05 collected from western base of west burn pit at depth of 6' bgs

1515 Complete donnaging and bracing of CON/ATRW shipping container CMCU205324

1600 Complete placarding of shipping container CMCU205324 with Class 9 and Class 5.1 oxidizer placards.

Head back to camp to complete shipping and sample paperwork

Bristol ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

Date: AUG. 21, 22, 23, & 24, 2012

877-370-0628 Office
877-370-0627 Moral

Subjects:

ALL WEEK

1 RAIN, SLIPPERY, BE CAREFUL WHEN HANDLING CABLE/WIRE FOR THEY ARE SHARP!
2 WINDY, WATCH FOR FLYING DEBRIS, PLYWOODS, ETC.
3 LOOKOUT FOR FOXES, BEARS, WOLVES
4 COMPLETELY GO OFF ROAD FOR LOADERS, CAN'T SEE YOU
5 DON'T OVERSWEAT, SLIPS, TRIPS AND FALLS
6 USE SAFETY GOGGLES
7 REFLECTIVE VESTS, HARD HAT - ALWAYS TO PUT ON
8 TIPPY TRAILER, GO SLOW

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGMUK	Robert Annogiyuk	NVS NALEMP
2	Nicholas Toolie	Nicholas Toolie	NVS Nalemp
3	JESS V. REYNOLDS	Jess V. Reynolds	NVS NALEMP
4	Jake Oluanna Jr.	Jake Oluanna Jr.	NVS NALEMP
5	ELMER ROOKOK	Elmer Rookok	NALEMP
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Bristol ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: AUG. 25, 2012

Subjects:

1 OVERSWEATING, COOLING DOWN = CHILLS
2 RAINY DAYS, & SUNNY DAYS, & RAIN GEAR DAMP
3 DON'T OVEREXERT YOURSELVES
4
5
6
7
8

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NALEMP
2	JESS V. REYNOLDS	Jess V. Reynolds	NALEMP
3	Jake Olanna Jr.	Jake Olanna Jr.	NALEMP
4	Nicholas Toolie	Nicholas Toolie	Nalemp
5	ELMER ROOKOK	Elmer Rookok	NALEMP
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Bristol ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

Date: Aug. 26, 2012

N. E. Cape
St. Lawrence Island, AK.
877-370-0628 Office
877-370-0627 Moral

Subjects:

1 DON'T OVEREXERT YOURSELVES
2 RAIN GEAR & SWEATING, & COOLING DOWN
3 WATCH WHAT YOU PUT IN FIRE
4 DO NOT GET TOO CLOSE TO BURNER
5 DO NOT PUT SOMETHING THAT MAY EXPLODE IN FIRE (COMPRESSED CANS, BULLETS, ETC.)
6
7
8

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS NALEMP
2	Jake Olanna Jr.	Jake Olanna Jr.	NALEMP/NVS
3	JESS V. REYNOLDS	Jess V. Reynolds	NALEMP - NVS
4	Nicholas Toolie	Nicholas Toolie	NAlemp - NVS
5	ELMER ROOKOK	Elmer Rookok	NALEMP
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Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

Date: AUG. 27, 2012

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Subjects:

1 LIFTING HEAVY LOGS TO BURN, USE HELP
2 STILL WARM & SUNNY – DON'T OVEREXERT
3 YOURSELVES & SWEAT THRU CLOTHING
4 WATCH OUT FOR OTHERS – LOOK OUT FOR
5 FOXES
6
7
8

	PRINTED NAME	SIGNATURE	COMPANY
1	JESS V. REYNOLDS	Jess V. Reynolds	NVS - NALEMP
2	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS - NALEMP
3	Nicholas Toolie	Nicholas Toolie	NVS - NALEMP
4	JAKE OLANNA JR	Jake Olanna Jr.	NVS - NALEMP
5	ELMER ROOKOK	Elmer Rookok	NVS - NALEMP
6			NALEMP
7			
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Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

Date: Aug. 28, 2012

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Subjects:

1 ATV'S WITH PASSENGER - GO SLOW, DON'T FALL OFF
2 GO OFF ROAD WHEN TRUCKS OR LOADERS COME BY
3 WATCH YOUR FOOTING, SLIPS, TRIPS and FALLS
4 Don't lift anything Heavy by yourself, ASK for some help.
5
6
7
8

	PRINTED NAME	SIGNATURE	COMPANY
1	JESS V. REYNOLDS	Jess V. Reynolds	NVS - NALEMP
2	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS NALEMP
3	Jake Olanna Jr.	Jake Olanna Jr.	NVS - NALEMP
4	Nicholas Toolie	Nicholas Toolie	NVS - NALEMP
5	ELMER ROOKOK	Elmer Rookok	NALEMP
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Bristol ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: AUGUST 29, 2012

Subjects:

1 SLIPS, TRIPS, & FALLS
2 DRIZZLY DAY, WIND FROM NORTH, RAINCOATS &
3 PANTS CAN LEAD TO SWEATING & DAMPENING
4 CLOTHES, DON'T OVER EXERT YOURSELVES
5 LOADERS RUNNING TODAY, GO COMPLETELY OFF
6 ROAD WHERE THEY CAN SEE YOU.
7
8

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS NALEMP
2	JESS V. REYNOLDS	Jess V. Reynolds	NVS NALEMP
3	ELMER ROOKOK	Elmer Rookok	NALEMP
4	Jake Olanna Jr.	Jake Olanna Jr.	NALEMP
5	Nick Toolie	Nicholas Toolie	NALEMP
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Bristol ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

Date: Aug. 30, 2012

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Subjects:

1 SLOW DOWN DRIVING ATV WHILE TURNING ON
2 HILL, KEEP RIGHT, TRUCKS OR LOADERS
3 MIGHT BE COMING UP OR DOWN.
4 COOL NORTH WIND BLOWING, DON'T EXERT
5 YOURSELVES & SWEAT.
6 KEEP AWAY FROM SMOKE OR FIRE IN BURNER
7 WEAR EYE PROTECTION NEAR BURNER FROM
8 ASH OR SPARKS.

	PRINTED NAME	SIGNATURE	COMPANY
1	JESS V. REYNOLDS	Jess V. Reynolds	NVS - NALEMP
2	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS NALEMP
3	ELMER ROOKOK	Elmer Rookok	NALEMP
4	Jake Olanna Jr.	Jake Olanna Jr.	NVS NALEMP
5	~~Nathalas~~ Nicholas Toolie	Nicholas Toolie	NVS Nalemp
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ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: AUG. 31, 2012

Subjects:

1 GETTING CHILLY / COOL, DRESS APPROPRIATELY,
2 DON'T RUSH / CONTROL YOUR WORK TASKS
3 DO NOT OVERWORK / SWEAT
4
5
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	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS NALEMP
2	Jake Olanna Jr.	Jake Olanna Jr.	NVS NALEMP
3	ELMER ROOKOK	Elmer Rookok	NALEMP
4	Nick Toolie	Nick Toolie	Nalemp
5	JESS V. REYNOLDS	Jess V. Reynolds	NVS NALEMP
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Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: SEPT. 1ST, 2012

Subjects:

1. STILL OLD RUSTED DRUMS TO DIG OUT, BE
2. CAREFUL OF SHARP RAGGED BROKEN EDGES
3. DO NOT RUSH, THINK BEFORE YOU DO THINGS
4.
5.
6.
7.
8.

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS NALEMP
2	JESS V. REYNOLDS	Jess V. Reynolds	NVS NALEMP
3	Jake Olanna Jr.	Jake Olanna Jr.	NVS NALEMP
4	ELMER ROOKOK	Elmer Rookok	NALEMP
5	Nick Toolie	Nick Toolie	
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2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: SEPT. 2, 2012

Subjects:

1 PACE YOURSELVES, DO NOT RUSH TO
2 FINISH YOUR TASKS, WORK AS A
3 TEAM.
4
5
6
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8

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS NALEMP
2	JESSU. REYNOLDS	Jessu Y. Reynolds	NVS NALEMP
3	Jake Olanna Jr.	Jake Olanna Jr.	NVS NALEMP
4	ELMER ROOKOK	Elmer Rookok	NALEMP
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Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: 9-3-12

Subjects:

1. WINDY DAY, WATCH OUT FOR FLYING
2. DEBRIS, WEAR SAFETY GLASSES
3.
4.
5.
6.
7.
8.

	PRINTED NAME	SIGNATURE	COMPANY
1	JESS V. REYNOLDS	Jess V. Reynolds	NVS NALEMP
2	ELMER ROOKOK	Elmer Rookok	NALEMP
3	Jake Olanna Jr.	Jake Olanna Jr.	Nalemp
4	ROBERT ANNOGIYUK	Robert Annogiyuk	NALEMP
5	Nick Toolie	Nicholas	
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Bristol ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

Date: SEPT. 04, 2012

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Subjects:

1 2nd Week Today, POSSIBLY LAST DAY
2 OF DEBRIS, LUMBER, PLYWOODS, LBP WOOD,
3 ETC. METAL, CLEAN UP, WILL KNOW
4 LATER ABOUT OUR OTHER TASKS.
5
6
7
8

	PRINTED NAME	SIGNATURE	COMPANY
1	JESS V. REYNOLDS	Jess V. Reynolds	NVS NALEMP
2	ELMER ROOKOK	Elmer Rookok	NALEMP
3	Jake Olanna Jr.	Jake Olanna Jr.	NVS NALEMP
4	Nick Toolie	Nick Toolie	NALEMP
5	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS NALEMP
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Bristol
ENVIRONMENTAL REMEDIATION
SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.
877-370-0628 Office
877-370-0627 Moral

Date: SEPT. 5, 2012

Subjects:

1 DON'T RUSH TO COMPLETE THE TASK OF
2 CLEANING & PICKING UP, RUSHING THINGS
3 CAN GET US CARELESS
4 SOME OF METAL PILE IS VERY HEAVY,
5 WE NEED EXCAVATOR TO DO THE JOB
6 FOR US.
7
8

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS NALEMP
2	ELMER ROOKOK	[redacted] Elmer Rookok	NALEMP
3	JESS N. REYNOLDS	Jess V. Reynolds	NALEMP
4	Jake Olanna Jr.	Jake Olanna Jr.	NALEMP
5	Nick Toolie	Nicholas Toolie	NALEMP
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Bristol ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: SEPT. 6, 2012

Subjects:

1 BE AWARE OF YOUR SURROUNDING, FOXES OCCASIONALLY
2 SEEN.
3 - STILL SOME SMALL SHARP BROKEN GLASSES AROUND
4 BE CAREFUL
5
6
7
8

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NVS NALEMP
2	JESS V. REYNOLDS	Jess V. Reynolds	NVS NALEMP
3	ELMER ROOKOK	Elmer Rookok	NALEMP
4	Lisa Nelson	Lisa E. Nelson	BERS
5	PAT Braley	Pat F Braley	BERS
6	Jake Olanna JR.	Jake Olanna Jr.	NALEMP
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2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

Date: SEPT. 07, 2012

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Subjects:

1. SLIPS, TRIPS, & FALLS
2. ~~[illegible]~~ Warm, Chilly Morning
3.
4.
5.
6.
7.
8.

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NALEMP
2	Jake Olumna Jr.	Jake Olumna Jr.	NALEMP
3	JESS V. REYNOLDS	Jess V. Reynolds	NALEMP
4	ELMER ROOKOK	Elmer Rookok	NALEMP
5	Lesa Nelson	Lesa E Nelson	BERS
6	Pat Braley	Pat Braley	BERS
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2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: SEPT. 8, 2012

Subjects:

1 WINDY & CHILLY FROM NORTH, KEEP WARM
2 IF & WHEN WORKING ON METAL PILE, WATCH
3 YOUR GRIP FOR SHARP EDGES, EXCAVATOR
4 WILL DO WORK FOR US, BE WHERE OPERATOR
5 WILL ALWAYS SEE YOU, NOT BEHIND
6
7
8

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NALEMP
2	JESS W. REYNOLDS	Jess W. Reynolds	NALEMP
3	ELMER RAOKOK	Elmer Raokok	NALEMP
4	Jake Olanna Jr.	Jake Olanna Jr	NALEMP
5	Lesa Nelson	Lesa E. Nelson	BERS
6	Pat Brawley	[illegible]	BERS
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2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: SEPT. 09, 2012

Subjects:

1. BE CAREFUL OF SHARP SMALL GLASSES JUST UNDERNEATH SOIL
2. Slips trips and Falls
3.
4.
5.
6.
7.
8.

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NALEMP
2	ELMER ROOKOK	Elmer Rookok	NALEMP
3	JESS V. REYNOLDS	Jess V. Reynolds	NALEMP
4	Pat Braley	Pat L Braley	BERS
5	Lesa Nelson	Lesa E. Nelson	BERS
6	Jake Olunna Jr.	Jake Olunna Jr.	NALEMP
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2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: SEPT. 10, 2012

Subjects:

1 PONDS GOT SOFT, SOGGY BOTTOMS, KIND OF
2 SUCKING, SOME ARE DEEP, BE CAREFUL
3 WHEN WADING IN THEM
4
5
6
7
8

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NALEMP
2	ELMER ROOKOK	Elmer Rookok	NALEMP
3	Pat Bratley	[illegible]	BERS
4	Lesa Nelson	Lesa E. Nelson	BERS
5	Jake Olanna Jr.	Jake Olanna Jr.	NALEMP
6	JESS V. REYNOLDS	Jess V. Reynolds	NALEMP
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2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: SEPT. 11, 2012

Subjects:

1 IF MOVING PAINT DRUMS, DON'T STRAIN TOO
2 MUCH, SOME DRUMS ARE HEAVY
3
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7
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	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NALEMP
2	ELMER ROOKOK	Elmer Rookok	NALEMP
3	Lesa Nelson	Lesa E. Nelson	BERS
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Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 NE Cape HTRW Remedial Actions

TOOLBOX SAFETY MEETING RECORD

N. E. Cape
St. Lawrence Island, AK.

877-370-0628 Office
877-370-0627 Moral

Date: SEPT. 12, 2012

Subjects:

1 LEAVING NEC TODAY, LET THE PILOT DO THE
2 FLYING
3 FEW THINGS TO DO BEFORE GOING BACK, MAKE
4 SURE YOU GOT EVERYTHING DONE & PACKED.
5
6
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8

	PRINTED NAME	SIGNATURE	COMPANY
1	ROBERT ANNOGIYUK	Robert Annogiyuk	NALEMP
2	ELMER ROOKOK	Elmer Rookok	NALEMP
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APPENDIX D

Laboratory Data Reports and COELT (provided on CD)

-SDG 580-34602

-SDG 580-34947

-SDG 580-34955

-SDG 580-35165

APPENDIX E

ADEC Laboratory Data Review Checklists

-SDG 580-34602 Checklist

-SDG 580-34947 Checklist

-SDG 580-34955 Checklist

-SDG 580-35165 Checklist

Laboratory Data Review Checklist

Completed by: Keather McLoone

Title: Project Chemist   Date: 10/24/2012 (rev 5/13/13)

CS Report Name: Northeast Cape NALEMP Fish Camp   Report Date: 9/24/12

Consultant Firm: Bristol Environmental Remediation Services

Laboratory Name: TestAmerica-Tacoma   Laboratory Report Number: 580-34602

ADEC File Number: 475.38.023   ADEC RecKey Number: Haz ID 25681

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      X Yes No NA (Please explain.)   Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      Yes No X NA (Please explain.)   Comments:

      Samples were received at TA Anchorage and forwarded to TA-Tacoma for analyses. All samples were analyzed by TA-Tacoma.

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      X Yes No NA (Please explain.)   Comments:

   b. Correct analyses requested?
      X Yes No NA (Please explain.)   Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      Yes X No NA (Please explain.)   Comments:

      Cooler temperature was recorded at 0.6 degrees Celsius at receipt; however, no frozen or broken containers were noted. Therefore, no impact to data quality on this basis.

c. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
X Yes No NA (Please explain.) Comments:

d. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?
X Yes No NA (Please explain.) Comments:

All samples received in good condition.

e. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?
Yes No X NA (Please explain.) Comments:

No discrepancies with this SDG.

f. Data quality or usability affected? (Please explain.)
Comments:

No impact to data usability.

4. Case Narrative

a. Present and understandable?
X Yes No NA (Please explain.) Comments:

b. Discrepancies, errors or QC failures identified by the lab?
X Yes No NA (Please explain.) Comments:

RPD topics addressed in the case narrative are addressed further in the following sections. Other issues noted include the PCB results for 12NVNCCH05 should be considered estimated due to shared peaks due to more than one Aroclor in the sample. Therefore, these results will be flagged J to indicate estimated results without a bias identified. Also, SW1311 includes particle size reduction which was not possible for half the samples (12NVNCCH03, 12NVNCCH05, 12NVNCCH06, 12NVNCCH10) prepared by this method, due to physical characteristics of the samples which prevent crushing, cutting or grinding of the samples. No qualifications were made on this basis.

c. Were all corrective actions documented?
X Yes No NA (Please explain.) Comments:

d. What is the effect on data quality/usability according to the case narrative?
Comments:

All results are usable for project purposes with qualifiers applied to results with quality control issues. No results were rejected.

5. Samples Results
   a. Correct analyses performed/reported as requested on COC?
      X Yes No NA (Please explain.) Comments:

   b. All applicable holding times met?
      X Yes No NA (Please explain.) Comments:

   c. All soils reported on a dry weight basis?
      Yes No X NA (Please explain.) Comments:

      Waste samples only.

   d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?
      X Yes No NA (Please explain.)
      Comments:

      Waste samples.

   e. Data quality or usability affected?
      Comments:

      No.

6. QC Samples
   a. Method Blank
      i. One method blank reported per matrix, analysis and 20 samples?
      X Yes No NA (Please explain.) Comments:

      ii. All method blank results less than PQL?
      X Yes No NA (Please explain.) Comments:

      All method blank results were less than the LOQ but some TCLP 8260 analytes were reported as detected with a J flag.

      iii. If above PQL, what samples are affected?

      Method blank results were less than the LOQ. Detected sample results less than 10 times the reported concentration in the method blank are B flagged to indicate potential high bias. Qualifications were made to naphthalene, methylene chloride, m & p-xylenes, o-xylene, and 1,2,4-trimethylbenzene results in four or less samples.

Comments:

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?
X Yes No NA (Please explain.) Comments:

Affected sample results are B flagged.

v. Data quality or usability affected? (Please explain.)
Comments:

Affected sample results are usable for project purposes though a potential for high bias as indicated by the reported concentrations in the method blank.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
X Yes No NA (Please explain.) Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
X Yes No NA (Please explain.) Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
X Yes No NA (Please explain.) Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
Yes X No NA (Please explain.) Comments:

The RPD for pyridine in the MS/MSD was outside acceptance limits. This is the only batch precision information for the 8270 TCLP samples in this SDG; therefore, these results are flagged J to indicate estimated results without a bias direction.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments:

All four samples analyzed for TCLP 8270 - 12NVNCCH03, 12NVNCCH05, 12NVNCCH06, 12NVNCCH10 – have pyridine results qualified as estimated without a bias direction and flagged J.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
X Yes □ No □ NA (Please explain.) Comments:

No exceedances or qualifications on this basis.

vii. Data quality or usability affected? (Use comment box to explain.)
Comments:

See above.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
X Yes □ No □NA (Please explain.) Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
X□Yes No □NA (Please explain.) Comments:

All sample surrogates were within acceptance criteria.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
□Yes □ No X NA (Please explain.) Comments:

No qualifications on this basis.

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

No effect on sample data quality or usability on this basis.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): <u>Water and Soil</u>

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)
Yes □ No X□NA (Please explain.) Comments:

Waste samples.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)
Yes □ No X□NA (Please explain.) Comments:

See above.

iii. All results less than PQL?

Yes No X NA (Please explain.) Comments:

See above.

iv. If above PQL, what samples are affected?

Comments:

See above.

v. Data quality or usability affected? (Please explain.)

Comments:

See above.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes X No NA (Please explain.) Comments:

No field duplicates were submitted with this SDG containing only waste samples

ii. Submitted blind to lab?

Yes No X NA (Please explain.) Comments:

See above.

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$RPD(\%) = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

 Yes No X NA (Please explain.) Comments:

See above.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

No qualifications on this basis for this SDG.

f. Decontamination or Equipment Blank (If not used explain why).

Yes No X NA (Please explain.) Comments:

All samples were collected using disposable or dedicated equipment.

i. All results less than PQL?

□Yes □ No X□NA (Please explain.) Comments:

All samples were collected using disposable or dedicated equipment.

ii. If above PQL, what samples are affected?

Comments:

n/a

iii. Data quality or usability affected? (Please explain.)

Comments:

n/a

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)
   a. Defined and appropriate?

X Yes □ No □NA (Please explain.) Comments:

Lab specific flags were reported in the hardcopy and electronic data provided by the lab; but later during data review, some of these were replaced with data review flags.

Laboratory Data Review Checklist

Completed by: Keather McLoone

Title: Project Chemist Date: 11/5/2012 (rev 5/13/13)

CS Report Name: Northeast Cape NALEMP Fish Camp Report Date: 11/5/12

Consultant Firm: Bristol Environmental Remediation Services

Laboratory Name: TestAmerica-Tacoma Laboratory Report Number: 580-34947

ADEC File Number: 475.38.023 ADEC RecKey Number: Haz ID 25681

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      X Yes □ No □NA (Please explain.) Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      □Yes □ No X NA (Please explain.) Comments:

      Samples were received at TA Anchorage and forwarded to TA-Tacoma for analyses. Most samples were analyzed by TA-Tacoma. TA-Denver performed 8082, 8081, and 8270 analyses of the sediments and soils as well as 8260 analyses of the water samples. Dioxins were analyzed at TA-Sacramento.

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      X Yes □ No □NA (Please explain.) Comments:

   b. Correct analyses requested?
      X Yes □ No □NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      Yes □X No□NA (Please explain.) Comments:

      Three of the eight coolers in this shipment were received with temperatures less than 2 degrees Celsius at 1.3, 1.4 and 1.9 degrees Celsius. However, no frozen or broken containers were noted in these coolers; therefore, there were no qualifications on this basis.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
X Yes □ No □NA (Please explain.) Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?
X Yes □ No NA (Please explain.) Comments:

One unpreserved 1 liter amber for sample 12NVNCSW11 was received broken, but sufficient sample volume was provided to complete sample preparation and analyses. Therefore, no impact to data quality on this basis.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?
X Yes □ No □ NA (Please explain.) Comments:

The container label did not list a date or time for sample 12NVNCSTB05. Sample logged in per CoC. Two coolers in this eight cooler shipment did not arrive until the day after the first six coolers were received due to HazMat shipping requirements. However, there was no impact to data quality on this basis.

e. Data quality or usability affected? (Please explain.)
Comments:

See above.

4. <u>Case Narrative</u>

a. Present and understandable?
X Yes □ No □NA (Please explain.) Comments:

b. Discrepancies, errors or QC failures identified by the lab?
X Yes □ No □NA (Please explain.) Comments:

Most topics addressed in the case narrative are addressed further in the following sections - the topics were CCVs, internal standards, method blank contamination, LCS/LCSD recoveries, surrogate recoveries, and MS/MSD recoveries. See QA Summary for more details.

c. Were all corrective actions documented?
X Yes □ No □NA (Please explain.) Comments:

d. What is the effect on data quality/usability according to the case narrative?
Comments:

All results are usable for project purposes with qualifiers applied to results with quality control issues. No results were rejected.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

X Yes No NA (Please explain.) Comments:

b. All applicable holding times met?

Yes X No NA (Please explain.) Comments:

The case narrative states that sample 12NVNCSW11 was re-prepared and/or re-analyzed outside of holding time for PCBs by 8020 due to a surrogate being below acceptance criteria. However, this sample was re-prepared 10 days after it was collected and re-analyzed another day later. Therefore, the re-prepared and re-analyzed result will be reported without qualification. 12NVNCSW05, 12NVNCSW07, 12NVNCSW08, 12NVNCSW10, and 12NVNCSW11 were initially prepared and analyzed within holding time but surrogate recoveries were below acceptance criteria. The laboratory re-extracted the samples 25 and 26 days after sample collection which is more than twice the holding time of 7 days. The initial sample results and re-prepared and reanalyzed results were the same for all samples. The initial sample results will be reported with JL for low surrogate recoveries to indicate estimated results with a low bias.

c. All soils reported on a dry weight basis?

Yes X No NA (Please explain.) Comments:

Yes, except for Total Organic Carbon (TOC). TOC samples are dried to a constant weight at 70 degrees F and then a representative, weighed aliquot is analyzed of dried material. There is no significant impact to data usability because dry weight samples are corrected by percent moisture determinations on samples dried to 104 degrees F.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes X No NA (Please explain.)

Comments:

For most nondetect results the LOQ are less than cleanup levels. A few sediment samples had some results reported as non-detect at dilutions due to dark extracts (8270), suspected effected CCV recoveries (8081) from undiluted samples, high moisture content in methanol preserved samples (8260), and limited sample volume (8082). The elevated reporting mostly impacted comparison to screening criteria, rather than cleanup levels with only comparisons to cleanup levels for a couple of chlorinated compounds affected by dilution alone. Some compounds, such as 1,2,3- trichloropropane have very low cleanup levels and alternative methodology may be necessary in order to detect below cleanup levels if these are determined to be COPCs. In addition, all but one sample in this SDG had high moisture contents ranging from 31.8 to 87.8 percent moisture, further elevating reporting limits.

e. Data quality or usability affected?

Comments:

See above.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

X Yes ☐ No ☐NA (Please explain.) Comments:

ii. All method blank results less than PQL?

X Yes No ☐NA (Please explain.) Comments:

All method blank results were less than the LOQ but some analytes were reported between the LOQ and DL. 1,2,3-trichlorobenzene was reported in a method blank and one associated sample result was within ten times the amount in the blank and is B flagged. GRO was detected in a method blank that was analyzed twice. Most of the GRO sample results reported in this SDG are B flagged due to method blank contamination. Cadmium was reported in the method blank associated with nine sample results and a lab duplicate. Three sediment and two soil results are B flagged because their cadmium results are less than ten times the amount in the method blank. Mercury was detected in the method blank associated with the eleven water samples, all of which are B flagged.

iii. If above PQL, what samples are affected?

Comments:

Method blank results were less than the LOQ. Detected sample results less than 10 times the reported concentration in the method blank are B flagged to indicate potential high bias.

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?

X Yes ☐ No ☐NA (Please explain.) Comments:

Affected sample results are B flagged.

v. Data quality or usability affected? (Please explain.)

Comments:

Affected sample results are usable for project purposes though a potential for high bias as indicated by the reported concentrations in the method blank.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes ☐X No☐NA (Please explain.) Comments:

The lab did not report a LCSD for the soil/sediment batches prepared and analyzed for 8081, 8082, and 8260. Batch precision information was obtained from MS/MSDs.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☐X Yes ☐ No ☐ NA (Please explain.) Comments:

LCS and LCSD were reported for all metals in addition to sample duplicates.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

□Yes X□No□NA (Please explain.) Comments:

The LCS for 1,2-dichloropropane was above acceptance criteria; however, all the associated samples were non-detect so no qualifications were necessary on this basis. The LCSD for the water samples was above acceptance criteria for fluorene. All the associated sample results were reported as non-detect; therefore, no qualifications on this basis. The LCSD recovery of indeno[1,2,3-cd]pyrene was above acceptance criteria. Only one associated sample result, 12NVNCSD06, was reported as detected above the LOQ and is flagged JH to indicate a potential high bias.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes X No □NA (Please explain.) Comments:

All LCS/LCSD were within precision limits. Since the laboratory didn't prepare and run LCSDs for 8081, 8082, or 8260 analyses of soil and sediment samples, evaluation of batch precision must rely on MSD and sample duplicate data. The MS/MSD on 12NVNCSD05 failed precision criteria for all 8081 compounds except 4,4'-DDD, aldrin, dieldrin, and toxaphene. The other 17 pesticide compounds will be J flagged in the six sediment samples in this 8081 batch to indicate an estimated result without an identifiable bias direction. The MS/MSD on 12NVNCSSL29 was within precision acceptance criteria for the two compounds used in the 8082 spike: PCB-1016 and PCB-1260. The 8260 MS/MSD on 12NVNCSSL30 was within precision criteria. None of the associated sample duplicates had detected results reported above the LOQ; therefore, these results were not used to assess precision due to the inherent poor precision below the LOQ.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

See above.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

X Yes □ No □ NA (Please explain.) Comments:

See above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Affected sample results are usable for project purposes though flagged results should be considered estimates. See above for more details.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
X Yes No NA (Please explain.) Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
Yes X No NA (Please explain.) Comments:

Recoveries of trifluorotoluene (TFT) were below acceptance limits for eleven sediment and one soil sample. These samples all had percent moistures greater than 20 percent and therefore were not reanalyzed for the field surrogate below criteria. The associated 8260 sample results will be flagged JL and should be considered estimated with a low bias. Ten of the same sediment samples and the one soil sample also had TFT out for GRO analyses and these results will also be flagged JL.

The lab re-prepped and reanalyzed five surface water samples for 8270 SIM analysis because initially the results were associated with surrogates below acceptance criteria. The sample results were all nondetect at the same LOD for both analyses. The initial results are reported with a JL flag to indicate estimated results with a low bias on the basis of surrogate recoveries.

8270C SIM surrogates were outside acceptance limits in nine sediment samples and one soil sample. Two of these samples, 12NVNCSD07 and 12NVNCSD08, had one surrogate out low and another above acceptance criteria. Therefore, these sample results will be flagged J to indicate an estimated result without a bias identified. The other eight samples will have the detected results flagged JH to indicate a high bias.

Surrogates were below acceptance criteria for the six sediment samples analyzed by 8081; therefore, these results will be flagged JL to indicate a low bias.

Both 8082 surrogates associated with 12NVNCSW11 were below acceptance criteria. The laboratory re-prepped and re-analyzed this sample, with acceptable surrogate recoveries, but outside the holding time by more than two times. Both set of results were very similar. The initial results are reported and flagged JL to indicate estimated results with a low bias.

All eleven sediment and three soil samples had 8082 surrogates below acceptance criteria; therefore, these results are flagged JL to indicate a low bias and estimated result.

The surrogates associated with RRO analyses in samples 12NVNCSSL29 and 12NVNCSSL30 were above acceptance criteria. These two results are flagged JH to indicate estimated results with a high bias.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
X Yes No NA (Please explain.) Comments:

See above.

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

See above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

X Yes ☐ No ☐NA (Please explain.) Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes X☐ No☐NA (Please explain.) Comments:

There were eight coolers in this shipment. While not clearly marked on the COC, the field sampler confirmed that the two coolers that were received a day later at the lab were those containing all the volatile samples and trip blanks. One cooler had all the water volatiles and trip blank as well as some soil volatile samples and a soil trip blank. The other cooler contained the remaining soil volatiles samples and a soil trip blank. This is corroborated by the electronic data deliverable which assigned coolers names to all the volatile samples. Therefore, there is no impact to data quality on this basis.

iii. All results less than PQL?

X Yes ☐ No NA (Please explain.) Comments:

Results were below the LOQ but GRO, acetone, and methylene chloride detected between LOQ and DL in the soil/sediment trip blanks. All associated GRO samples and trip blanks are B flagged due to method blank contamination; therefore, no qualifications on the basis of trip blank contamination for GRO. Acetone was present in both trip blanks at similar concentrations and all detected soil or sediment acetone results are flagged TB to indicate potential contamination from the "trip".

One of the two methylene chloride trip blanks had a detectable methylene chloride result. Only three samples results had detectable methylene chloride which were flagged TB to indicate potential trip blank contamination based on the cooler associations in the electronic data.

Results flagged TB indicate an analyte result that can be considered estimated high.

iv. If above PQL, what samples are affected?

Comments:

See above.

v. Data quality or usability affected? (Please explain.)

Comments:

See above.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
X Yes No NA (Please explain.) Comments:

One set of soil sample field duplicates, two sets of field duplicate sediment samples, and one set of surface water sample field duplicates were included in this shipment.

ii. Submitted blind to lab?
X Yes No X NA (Please explain.) Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$RPD (\%) = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

☐ Yes X No NA (Please explain.) Comments:

RPDs were not evaluated when one or both of the results were reported as less than LOQ, due to the inherent poor precision below the LOQ. For the soil duplicates, 12NVNCSSL29 and 12NVNCSSL30, all RPDs were within acceptance limits with the exception of barium and lead at 104% and 195%, respectively. These results are flagged QN to indicate estimated results without an identified bias. Sediment duplicate samples, 12NVNCSD05 and 12NVNCSD11, had RPDs above acceptance criteria for barium, chromium, and lead at 57.1%, 103%, and 52.2% respectively and are flagged QN. Sediment sample duplicates 12NVNCSD10 and 12NVNCSD12 had RPDs above acceptance criteria for five 8290 compounds which will also be flagged QN to indicate estimated results without an identified bias. The surface water duplicate samples 12NVNCSW05 and 12NVNCSW11 had all RPDs within acceptance criteria.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

See above.

f. Decontamination or Equipment Blank (If not used explain why).

All samples were collected using disposable or dedicated equipment.

□Yes □ No X□NA (Please explain.) Comments:

i. All results less than PQL?

□Yes □ No X□NA (Please explain.) Comments:

All samples were collected using disposable or dedicated equipment.

ii. If above PQL, what samples are affected?

Comments:

n/a

iii. Data quality or usability affected? (Please explain.)

Comments:

n/a

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)
   a. Defined and appropriate?

X Yes □ No □NA (Please explain.) Comments:

Lab specific flags were reported in the hardcopy and electronic data provided by the lab; but later during data review, some of these were replaced with data review flags.

Laboratory Data Review Checklist

Completed by:	Keather McLoone
Title:	Project Chemist
Date:	11/5/2012 (revised 5/13/13)
CS Report Name:	Northeast Cape NALEMP Fish Camp
Report Date:	11/5/12
Consultant Firm:	Bristol Environmental Remediation Services
Laboratory Name:	TestAmerica-Tacoma
Laboratory Report Number:	580-34955
ADEC File Number:	475.38.023
ADEC RecKey Number:	Haz ID 25681

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      X Yes ☐ No ☐NA (Please explain.) Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      ☐Yes ☐ No X NA (Please explain.) Comments:

      Samples were received at TA Anchorage and forwarded to TA-Tacoma for analyses. Most samples were analyzed by TA-Tacoma. TA-Denver performed the 8081, 8082, and 8270 SIM analyses. Dioxins were analyzed at TA-Sacramento.

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      X Yes ☐ No ☐NA (Please explain.) Comments:

   b. Correct analyses requested?
      X Yes ☐ No ☐NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      X Yes ☐ No ☐NA (Please explain.) Comments:

c. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

X Yes No NA (Please explain.) Comments:

d. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

X Yes No NA (Please explain.) Comments:

All samples received in good condition.

e. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

X Yes No NA (Please explain.) Comments:

The container label for 12NVNCSL38 did not match the information listed on the COC). The container label on the methanol preserved container for this sample did not list a sampling date but the COC listed a date of 9/7/12. The sample was logged in per COC.

The container labels for 12NVNCTB01, 12NVNCTB02, 12NVNCTB03, and 12NVNCTB04 did not match the information listed on the COC. The container labels did not list the sampling date or time. The samples were logged in per COC for date and times.

The container labels listed 12NVNC01, 12NVNC02, and 12NVNC03 for the sample IDs while the COC listed 12NVNCTB01, 12NVNCTB02, and 12NVNCTB03. The samples were logged in per COC.

f. Data quality or usability affected? (Please explain.)

Comments:

No impact to data usability.

4. <u>Case Narrative</u>

a. Present and understandable?

X Yes No NA (Please explain.) Comments:

b. Discrepancies, errors or QC failures identified by the lab?

X Yes No NA (Please explain.) Comments:

Most topics addressed in the case narrative are addressed further in the following sections. The case narrative also notes that the room temperature during the TCLP extraction procedure fell below the specifications in SW1311 to less than 21 degrees Celsius; however, there was no impact to data quality or usability noted by the laboratory. Also, the case narrative stated that the detected 8082 results contained more than one PCB Aroclor component for samples 12NVNCSL10, 12NVNCSL37, 12NVNCSL14, 12NVNCSL40 and 12NVNCSL64 and that results should be considered estimated due to shared peaks. In each of these five samples, the two detected compounds, PCB-1254 and PCB-1260, are flagged J on this basis to indicate an estimated result.

There were also CCV discrepancies and an ion abundance issue with a single analyte in two dioxin samples noted by the lab in the case narrative. See QA Summary for more details.

c. Were all corrective actions documented?
X Yes ☐ No ☐NA (Please explain.) Comments:

d. What is the effect on data quality/usability according to the case narrative?
Comments:

All but a few results are usable for project purposes with qualifiers applied to results with quality control issues. See QA Summary for more details.

5. <u>Samples Results</u>

a. Correct analyses performed/reported as requested on COC?
X Yes ☐ No ☐NA (Please explain.) Comments:

b. All applicable holding times met?
Yes X No ☐NA (Please explain.) Comments:

TOC analysis was added to sample 12NVNCSL66 and analyzed outside of holding time; therefore, this results will be flagged H. Results flagged H are considered estimated results with a potential low bias.

c. All soils reported on a dry weight basis?
Yes ☐X No☐ NA (Please explain.) Comments:

Yes, except for Total Organic Carbon (TOC). TOC samples are dried to a constant weight at 70 degrees F and then a representative, weighed aliquot is analyzed of dried material. There is no significant impact to data usability because dry weight samples are corrected by percent moisture determinations on samples dried to 104 degrees F.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?
X Yes X No NA (Please explain.)
Comments:

In most cases, the LOQ was less than the cleanup levels for nondetect results. Some dilutions were required due to colored extracts, or the lab diluted the samples for other analytical reasons which led to elevated LOQs as is discussed in the case narrative. Also, methanol preserved samples with high percent moisture resulted in elevated LOQs.

e. Data quality or usability affected?
Comments:

7. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

X Yes □ No □NA (Please explain.) Comments:

ii. All method blank results less than PQL?

X Yes No □NA (Please explain.) Comments:

All method blank results were less than the LOQ but m,p-xylene, acetone, GRO, benzo[g,h,i]perylene, pyrene, indeno[1,2,3-cd]pyrene, RRO, cadmium, and mercury were reported between the LOQ and DL. Two method blanks contained m,p-xylenes. One was associated with only a single non-detect sample result. The other method blank resulted in two samples and one trip blank result qualified B. One method blank contained acetone and 18 associated sample results are B flagged. Each of the four GRO method blanks reported in this SDG had detectable GRO and led to 46 samples and 2 trip blanks being qualified with a B flag. Benzo[g,h,i]perylene, pyrene, and indeno[1,2,3-cd]pyrene method blank contamination led to eight, four, and two samples B flagged, respectively. RRO was detected in one silica gel cleanup batch and one without silica gel cleanup. However, only one sample result was within ten times the concentration in the method blank and B flagged. Cadmium was B flagged in one sample associated with a method blank detection. Mercury was detected in the method blank associated with the three waste samples in this SDG and all three sample results are B flagged.

B flagged results can be considered estimated results with a potential high bias. See QA summary for more details.

iii. If above PQL, what samples are affected?

Comments:

Method blank results were less than the LOQ. Detected sample results less than 10 times the reported concentration in the method blank are B flagged to indicate potential high bias.

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?

X Yes □ No □NA (Please explain.) Comments:

Affected sample results are B flagged.

v. Data quality or usability affected? (Please explain.)

Comments:

Affected sample results are usable for project purposes though a potential for high bias as indicated by the reported concentrations in the method blank.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes ☐X No☐NA (Please explain.) Comments:

LCSD was not reported for 8260 preparation batch 580-120241 or 580-120169 but a LCSD was reported for the other two preparation batches reported in this SDG. An LCSD was also not reported for 8290. There is no significant impact to data usability as accuracy and precision can be evaluated using other QC reported.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

X☐Yes ☐ No ☐ NA (Please explain.) Comments:

An LCSD as well as a sample duplicate was reported for reported for the metals methods included in this SDG.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☐Yes ☐X No☐NA (Please explain.) Comments:

One 2,2-Dichloropropane LCS was below acceptance criteria and was associated with two reported sample results which are flagged JL to indicate an estimated result with a low bias. One 1,1,1-Trichloroethane LCS was below acceptance criteria and was associated with one reported trip blank result which is flagged JL to indicate an estimated result with a low bias.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes X No ☐NA (Please explain.) Comments:

The RPD for the toxaphene LCS/LCSD was outside acceptance criteria at 52 %; therefore, the five associated sample results will be flagged J to indicate an estimated result without a bias identified.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

See above

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

X Yes ☐ No ☐ NA (Please explain.) Comments:

viii. Data quality or usability affected? (Use comment box to explain.)
Comments:

See above.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
X Yes No NA (Please explain.) Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
Yes X No NA (Please explain.) Comments:

One 8260 surrogate was out low for 23 soil samples; therefore these results will be flagged JL to indicated estimated results with a low bias. A surrogate in two trip blank samples was recovered above acceptance criteria; therefore, the associated detected results are flagged JH to indicate a potential high bias.

Surrogates were recovered below acceptance criteria in 34 GRO samples; therefore, these results are flagged JL to indicate an estimated results with a low bias.

Surrogates for 8270C SIM were above acceptance criteria in eight samples that had associated detected sample results; therefore, these results will be flagged JH to indicate an estimated result with a high bias. One sample, 12NVNCSL51, had a single surrogate below acceptance criteria; therefore, this sample is qualified JL. Sample 12NVNCSL56 had surrogate recoveries of 8, 10, and 20 percent. Because this sample is associated with a surrogate recovery of less than 10 percent, these results are considered rejected, usable for screening purposes only, and are flagged R. Eight samples had one surrogate above acceptance criteria and the other two surrogates recovered below acceptance criteria. For these eight samples, results will be J flagged to indicate an estimated result without a clear bias. Surrogates for 82070 SIM were outside acceptance criteria in eight samples that were diluted 1:20 or greater. No qualifications were made on this basis for these samples.

One or both of 8082 surrogates were outside acceptance criteria in 41 of the 52 samples analyzed by this method. One of these samples, 12NVNCSL28, was reported at a 1:40 dilution so there are no qualifications for this sample on this basis. Another sample, 12NVNCSL08, had one surrogate out above and the other out below acceptance criteria. This sample is flagged J to indicate estimated results without a clear bias. The other 39 samples are associated with surrogates below acceptance criteria and are flagged JL to indicate a low bias.

The surrogate associated with 12NVNCSL44 was recovered above acceptance criteria for both DRO result reported, with and without silica gel cleanup. The RRO surrogate for sample 12NVNCSL64 was also reported above acceptance criteria. These three results are flagged JH to indicate estimated results with a high bias.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
XYes No NA (Please explain.) Comments:

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

See above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)
X Yes ☐ No ☐NA (Please explain.) Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)
X Yes ☐ No ☐NA (Please explain.) Comments:

Four coolers in this shipment. Four trip blanks were submitted. However, what went into which cooler is not clearly indicated on the CoC. The electronic data indicated that all trip blanks went into one cooler, identified in the electronic data as being “Box #1”. Only sample results associated with Box #1 were qualified with a TB.

iii. All results less than PQL?
Yes ☐X No NA (Please explain.) Comments:

Most trip blank results were below the LOQ; however, methyl tert-butyl ether, toluene, 1,1-Dichloroethene, and GRO was reported as detected above the LOQ in three, one, two, and three trip blanks respectively. 1,1-Dichloroethene, 2-Butanone (MEK), acetone, and GRO were reported between LOQ and DL in one, three, four, and one trip blanks respectively. There were no detected methyl tert-butyl ether, toluene, 1,1-Dichloroethene, or 2-Butanone (MEK) results reported in this SDG. Only GRO and acetone results that the electronic data indicated were shipped in Box #1 were qualified TB when reported within ten times of the amount in the trip blank with the lowest concentration. These lowest trip blank concentrations were 140 ug/kg acetone and 1.2 mg/kg GRO. Most of the associated results were B flagged due to method blank contamination; therefore, a flag for trip blank contamination was not added. Only one acetone sample result was qualified TB on this basis.

iv. If above PQL, what samples are affected?

See above.

Comments:

v. Data quality or usability affected? (Please explain.)

Comments:

Even though the trip blanks, volatiles samples, and cooler associations were not documented other than in the electronic data, the overall impact to the project is minimal as the GRO and acetone sample results that were detected are orders of magnitude lower than cleanup levels. Therefore, there was no overall impact. Results that are flagged TB (or B) indicate an estimated results with a potential high bias.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

X Yes No NA (Please explain.) Comments:

Six sets of soil field duplicates were submitted with this shipment. Duplicate frequency calculated on a project basis, rather than per SDG.

ii. Submitted blind to lab?

X Yes No NA (Please explain.) Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

 Yes X No NA (Please explain.) Comments:

Duplicate pair 12NVNCSL10 and 12NVNCSL37 had only one RPD exceedances with arsenic at 54.8%. Duplicate pair 12NVNCSL27 and 12NVNCSL39 exceed RPD for RRO results at 81.2%. Duplicate pair 12NVNCSL40 and 12NVNCSL64 exceed chromium, zinc, PCB-1254, PCB-1260, chrysene, DRO, and RRO RPDs at 78.7%, 87.2%, 131%, 152%, 142%, 126%, and 136% respectively. Duplicate pair 12NVNCSL52 and 12NVNCSL65 exceeded RPD criteria for DRO and RRO at 63.2 and 66.7 % respectively. Duplicate pair 12NVNCSL57 and 12NVNCSL67 had no RPDs that exceeded criteria. Duplicate pair 12NVNCSL54 and 12NVNCSL66 exceeded RPD for DRO without silica gel cleanup at 104% and DRO and RRO with silica gel cleanup at 100 and 66.7 % respectively. These results are qualified QN to indicate an estimated result with an uncertain bias.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

See above.

f. Decontamination or Equipment Blank (If not used explain why).

☐Yes ☐ No X☐NA (Please explain.) Comments:

All samples were collected using disposable or dedicated equipment.

i. All results less than PQL?

☐Yes ☐ No X☐NA (Please explain.) Comments:

All samples were collected using disposable or dedicated equipment.

ii. If above PQL, what samples are affected?

Comments:

n/a

iii. Data quality or usability affected? (Please explain.)

Comments:

n/a

8. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

X Yes ☐ No ☐NA (Please explain.) Comments:

Lab specific flags were reported in the hardcopy and electronic data provided by the lab; but later during data review, some of these were replaced with data review flags.

Laboratory Data Review Checklist

Completed by: Keather McLoone

Title: Project Chemist   Date: 10/29/2012 (revised 5/13/13)

CS Report Name: Northeast Cape NALEMP Fish Camp   Report Date: 10/26/12

Consultant Firm: Bristol Environmental Remediation Services

Laboratory Name: TestAmerica-Tacoma   Laboratory Report Number: 580-35165

ADEC File Number: 475.38.023   ADEC RecKey Number: Haz ID 25681

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      X Yes □ No □NA (Please explain.)   Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      □Yes □ No X NA (Please explain.)   Comments:

      Samples were received at TA Anchorage and forwarded to TA-Tacoma for analyses. Most samples were analyzed by TA-Tacoma. TA-Denver performed 8151 analyses. Dioxins were analyzed at TA-Sacramento.

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      X Yes □ No □NA (Please explain.)   Comments:

   b. Correct analyses requested?
      X Yes □ No □NA (Please explain.)   Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      Yes □X No □NA (Please explain.)   Comments:

      Cooler temperature was recorded at 0.2 degrees Celsius at receipt; however, no frozen or broken containers were noted. Therefore, there is no impact to data usability.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
X Yes No NA (Please explain.) Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?
X Yes No NA (Please explain.) Comments:

All samples received in good condition.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?
Yes No X NA (Please explain.) Comments:

No discrepancies with this SDG.

e. Data quality or usability affected? (Please explain.)
Comments:

No impact to data usability.

4. Case Narrative
a. Present and understandable?
X Yes No NA (Please explain.) Comments:

b. Discrepancies, errors or QC failures identified by the lab?
X Yes No NA (Please explain.) Comments:

Most topics addressed in the case narrative are addressed further in the following sections such as surrogate recoveries, MS/MSD recoveries, and method blank contamination. Other issues noted include CCVs are discussed in the QA Summary.

c. Were all corrective actions documented?
X Yes No NA (Please explain.) Comments:

d. What is the effect on data quality/usability according to the case narrative?
Comments:

All results are usable for project purposes with qualifiers applied to results with quality control issues. No results were rejected.

6. Samples Results
   a. Correct analyses performed/reported as requested on COC?
      X Yes ☐ No ☐NA (Please explain.) Comments:

   b. All applicable holding times met?
      X Yes No ☐NA (Please explain.) Comments:

   c. All soils reported on a dry weight basis?
      X Yes ☐ No ☐ NA (Please explain.) Comments:

   d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?
      X Yes ☐X No NA (Please explain.)
      Comments:

In most cases, the LOQ was less than the cleanup levels for nondetect results. Some dilutions were required for analytical reasons which led to elevated LOQs as is discussed in the case narrative. Also, methanol preserved samples with high percent moisture resulted in elevated LOQs. The elevated reporting mostly impacted comparison to screening criteria, rather than cleanup levels. Some compounds, such as 1,2,3- trichloropropane have very low cleanup levels and alternative methodology may be necessary in order to detect below cleanup levels if these are determined to be COPCs.

   e. Data quality or usability affected?
      Comments:

.

7. QC Samples
   a. Method Blank
      i. One method blank reported per matrix, analysis and 20 samples?
      X Yes ☐ No ☐NA (Please explain.) Comments:

      ii. All method blank results less than PQL?
      X Yes No ☐NA (Please explain.) Comments:

All method blank results were less than the LOQ but GRO was reported as detected between the LOQ and DL with a J flag indicating the concentration should be considered estimated. Also, although the case narrative does not discuss, the 8290 method blank contained five detected compounds and four totals reported as detected.

iii. If above PQL, what samples are affected?

Comments:

Method blank results were less than the LOQ. Detected sample results less than 10 times the reported concentration in the method blank are B flagged to indicate potential high bias. GRO was B flagged in three samples and the trip blank. Qualifications were made to two compounds in each of the two samples analyzed by 8290.

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?

X Yes □ No □NA (Please explain.) Comments:

Affected sample results are B flagged.

v. Data quality or usability affected? (Please explain.)

Comments:

Affected sample results are usable for project purposes though a potential for high bias as indicated by the reported concentrations in the method blank.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

X Yes □ No □NA (Please explain.) Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

X□Yes □ No □ NA (Please explain.) Comments:

LCS and LCSD were reported for all metals in addition to sample duplicates.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

X□Yes □ No □NA (Please explain.) Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

X Yes No □NA (Please explain.) Comments:

vi. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments:

n/a

vii. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
X Yes ☐ No ☐ NA (Please explain.) Comments:

No exceedances or qualifications on this basis.

viii. Data quality or usability affected? (Use comment box to explain.)
Comments:

No exceedances or qualifications on this basis.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
X Yes ☐ No ☐NA (Please explain.) Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
Yes X No ☐NA (Please explain.) Comments:

The 8260 analysis of 12NVNCBPSS04 included one surrogate above acceptance criteria. All 8260 compounds were reported as not detected for this sample; therefore, no qualification is necessary on this basis. Surrogate recoveries were above acceptance criteria for three detected GRO samples; therefore, these results will be flagged JH to indicate an estimated result with a high bias. The case narrative incorrectly states that these samples did not contain any target analytes. One of the 8081 surrogates associated with 12NVNCBPSS02 was above acceptance limits. There were no detected 8081 compounds for this sample; therefore, no qualification necessary on this basis. The AK103 surrogate associated with 12NVNCBPSS03 was reported above acceptance limits; therefore, this RRO result will be flagged JH to indicate an estimated result with a high bias.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
☐ X Yes ☐ No NA (Please explain.) Comments:

See above.

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

See above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

X Yes No NA (Please explain.) Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

X Yes No NA (Please explain.) Comments:

iii. All results less than PQL?

Yes X No NA (Please explain.) Comments:

The trip blank associated with this shipment had three detectable compounds reported – GRO, acetone, and carbon disulfide. The associated GRO samples were either already B flagged for method blank contamination or had GRO results more than ten times the amount in the trip blank with the exception of 12NVNCBPSS02 which will be flagged TB to indicate potential trip blank contamination. The acetone results in three samples and carbon disulfide results in four samples are TB flagged in addition to the J flag already assigned for being reported below the LOQ. Results that are B flagged indicate an estimated result with a potential high bias.

iv. If above PQL, what samples are affected?

Comments:

See above.

v. Data quality or usability affected? (Please explain.)

Comments:

See above

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

X Yes No NA (Please explain.) Comments:

One set of soil field duplicates, 12NVNCBPSS03 and 12NVNCBPSS04, was submitted with this shipment.

ii. Submitted blind to lab?

See above.

X Yes No NA (Please explain.) Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

□ Yes No X NA (Please explain.) Comments:

Field duplicate RPDs exceeded criteria for DRO, RRO, and zinc at 139 %, 153%, and 62.1 % respectively.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

These results are flagged QN to indicate estimated results without a bias identified.

f. Decontamination or Equipment Blank (If not used explain why).

□Yes □ No X□NA (Please explain.) Comments:

All samples were collected using disposable or dedicated equipment.

i. All results less than PQL?

□Yes □ No X□NA (Please explain.) Comments:

All samples were collected using disposable or dedicated equipment.

ii. If above PQL, what samples are affected?

Comments:

n/a

iii. Data quality or usability affected? (Please explain.)

Comments:

n/a

8. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

X Yes □ No □NA (Please explain.) Comments:

Lab specific flags were reported in the hardcopy and electronic data provided by the lab; but later during data review, some of these were replaced with data review flags.

APPENDIX F

Transportation and Disposal Paperwork

-Waste Stream Profile Sheets

-Initial Manifest Paperwork Package

-Final Disposal Facility Paperwork Package

-Waste Tracking Summary Spreadsheet

US ECOLOGY IDAHO, INC.

Waste Profile Questionnaire #: USE29381

A. Generator Information

EPA ID AKR000203687 Generator Status SQG

Generator Name NATIVE VILLAGE OF NORTHEAST CA Phone (907) 984-6414

Site Address 57 MILES SE OF SAVOONGA, KITNA City ST Zip SAVOONGA, AK 99769 Fax

Contact/Title Sulfide Producing Industry: N

B. Shipping Information

Proper Shipping Name WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (LEAD, CARBON TETRACHLORIDE)

DOT ID UN3077 Hazard Class 9 Packing Group III ERG 171 RQD008

C. Regulatory Information

Name of Material LEAD BASED PAINT SOLIDS Generating Proces SITE CLEAN-UP

Form Code W307 Source Code G06 Origin Code System Code H132

EPA Codes D008 D019 State Codes

Container Type Number of Units Frequency

D. Chemical / Constituent Composition

Constituent	PPM	% Volume	Constituent	PPM	% Volume
PAINT CANS		100			

E. Physical Characteristics

Physical State (Including Range) % Liquid 0 % Sludges/Solid 0 / 100 Bi-Layer Liqui N Color VARIES

Odor / Describe PAINT Specific Gravity N/A BTUs / Lb N/A pH: ☐ <= 2 ☐ >2 and <12.5 ☐ >=12.5 ☒ N/A

FlashPt: ☐ <100F (38C) ☐ 100-140F (38-60C) ☐ 141-200F (61-93C) ☐ >200F (93C) ☒ None

F. Comments

ENCAPSULATION

Generator's Certification

NATIVE VILLAGE OF NORTHEAST CA
57 MILES SE OF SAVOONGA, KITNA
SAVOONGA, AK 99769

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all material described by this profile.

Generator's Authorized Signature: Tyler J. Ellingboe On Behalf Of Savoonga IRA Council **Date** 10/23/12

Name (Print) Tyler Ellingboe **Title** Project Manager

TSDF's Certification

US ECOLOGY IDAHO, INC.
20400 LEMLEY RD
GRAND VIEW, ID 83624

As an authorized representative of Emerald Services, Inc. I certify, by my signature below, that Emerald Services, Inc. has the necessary permits to accept and properly manage the waste stream identified above.

TSDF's Authorized Signature: **Date**

Reviewer Information Only VOC Level 1 ☐ < 11.1 psia ☐ >= 11.1 psia ☐ NA At Risk Waste Steam

Process ☐ Storage ☐ FB ☐ OB ☐ RY ☐ RR ☐ AF ☐ UW ☐ RY150 ☐ MT Initials

US ECOLOGY IDAHO, INC.

Waste Profile Questionnaire #: 15418

A. Generator Information

EPA ID AKR000203687 Generator Status SQG

Generator Name NATIVE VILLAGE OF NORTHEAST CA Phone (907) 984-6414

Site Address 57 MILES SE OF SAVOONGA, KITNA City ST Zip SAVOONGA, AK 99769 Fax

Contact/Title

Sulfide Producing Industry: N

B. Shipping Information

Proper Shipping Name Hazardous waste, solid, n.o.s.

DOT ID NA3077 Hazard Class 9 Packing Group III ERG 171 RQ

C. Regulatory Information

Name of Material Debris containing lead Generating Proces Demolition, remediation

Form Code W002 Source Code G19 Origin Code System Code H132

EPA Codes D008 State Codes

Container Type Number of Units Frequency

D. Chemical / Constituent Composition

Constituent	PPM	% Volume
Windows		65-99
Lead	>10	

Constituent	PPM	% Volume
Wood Debris		0-25

E. Physical Characteristics

Physical State (Including Range) % Liquid % Sludges/Solid / 100 Bi-Layer Liqui Color

Odor / Describe Specific Gravity BTUs / Lb pH: ☐ <= 2 ☐ >2 and <12.5 ☐ >=12.5 ☐ N/A

FlashPt: ☐ <100F (38C) ☐ 100-140F (38-60C) ☐ 141-200F (61-93C) ☐ >200F (93C) ☐ None

F. Comments

Generator's Certification

NATIVE VILLAGE OF NORTHEAST CA
57 MILES SE OF SAVOONGA, KITNA
SAVOONGA, AK 99769

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all material described by this profile.

Generator's Authorized Signature: Tyler G. Ellingboe On Behalf Of Savoonga IRA Council **Date** 10/23/12

Name (Print) Tyler Ellingboe **Title** Project Manager

TSDF's Certification

US ECOLOGY IDAHO, INC.
20400 LEMLEY RD
GRAND VIEW, ID 83624

As an authorized representative of Emerald Services, Inc. I certify, by my signature below, that Emerald Services, Inc. has the necessary permits to accept and properly manage the waste stream identified above.

TSDF's Authorized Signature: **Date**

Reviewer Information Only VOC Level 1 ☐ < 11.1 psia ☐ >= 11.1 psia ☐ NA At Risk Waste Steam

Process ☐ Storage ☐ FB ☐ OB ☐ RY ☐ RR ☐ AF ☐ UW ☐ RY150 ☐ MT Initials

US ECOLOGY IDAHO, INC.

Waste Profile Questionnaire #: USE29380

A. Generator Information

EPA ID AKR000203687 Generator Status SQG

Generator Name NATIVE VILLAGE OF NORTHEAST CA Phone (907) 984-6414

Site Address 57 MILES SE OF SAVOONGA, KITNA City ST Zip SAVOONGA, AK 99769 Fax

Contact/Title

Sulfide Producing Industry: N

B. Shipping Information

Proper Shipping Name WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (LEAD)

DOT ID UN3077 Hazard Class P Packing Group III ERG 171 RQ D008

C. Regulatory Information

Name of Material BURNER ASH WITH LEAD Generating Proces SITE CLEAN-UP

Form Code W303 Source Code G44 Origin Code System Code H131

EPA Codes D008 State Codes

Container Type Number of Units Frequency

D. Chemical / Constituent Composition

Constituent	PPM	% Volume	Constituent	PPM	% Volume
BURNER ASH		100			

E. Physical Characteristics

Physical State (Including Range) % Liquid 0 % Sludges/Solid 0 / 100 Bi-Layer Liqui N Color BLACK

Odor / Describe NONE Specific Gravity N/A BTUs / Lb N/A pH: ☐ <= 2 ☐ >2 and <12.5 ☐ >=12.5 ☒ N/A

FlashPt ☐ <100F (38C) ☐ 100-140F (38-60C) ☐ 141-200F (61-93C) ☐ >200F (93C) ☒ None

F. Comments

STABILIZATION

Generator's Certification

NATIVE VILLAGE OF NORTHEAST CA
57 MILES SE OF SAVOONGA, KITNA
SAVOONGA, AK 99769

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all material described by this profile. On Behalf of

Generator's Authorized Signature: Tyler G. Ellingboe Savoonga IRA Council **Date** 10/23/12

Name (Print) Tyler Ellingboe **Title** Project Manager

TSDF's Certification

US ECOLOGY IDAHO, INC.
20400 LEMLEY RD
GRAND VIEW, ID 83624

As an authorized representative of Emerald Services, Inc. I certify, by my signature below, that Emerald Services, Inc. has the necessary permits to accept and properly manage the waste stream identified above.

TSDF's Authorized Signature: **Date**

Reviewer Information Only VOC Level 1 ☐ < 11.1 psia ☐ >= 11.1 psia ☐ NA At Risk Waste Steam

Process ☐ Storage ☐ FB ☐ OB ☐ RY ☐ RR ☐ AF ☐ UW ☐ RY150 ☐ MT Initials

US ECOLOGY IDAHO, INC. **Waste Profile Questionnaire #: USE28412**

A. Generator Information

EPA ID AKR000203687 Generator Status SQG

Generator Name NATIVE VILLAGE OF NORTHEAST CA Phone (907) 984-6414

Site Address 57 MILES SE OF SAVOONGA, KITNA City ST Zip SAVOONGA, AK 99769 Fax

Contact/Title Sulfide Producing Industry: N

B. Shipping Information

Proper Shipping Name WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (LEAD, ARSENIC)

DOT ID UN3077 Hazard Class 9 Packing Group III ERG 171 RQLEAD

C. Regulatory Information

Name of Material BROKEN BATTERY PARTS IN SOIL Generating Proces SITE CLEAN-UP

Form Code W307 Source Code G32 Origin Code System Code H112

EPA Codes D004 D008 State Codes

Container Type Number of Units Frequency

D. Chemical / Constituent Composition

Constituent	PPM	% Volume	Constituent	PPM	% Volume
BROKEN BATTERY PARTS		75	SOIL		25
ARSENIC	>5		LEAD	>5	

E. Physical Characteristics

Physical State (Including Range) % Liquid 0 % Sludges/Solid 0 / 100 Bi-Layer Liqui N Color VARIES

Odor / Describe NONE Specific Gravity N/A BTUs / Lb N/A pH: ☐ <= 2 ☐ >2 and <12.5 ☐ >=12.5 ☒ N/A

FlashPt: ☐ <100F (38C) ☐ 100-140F (38-60C) ☐ 141-200F (61-93C) ☐ >200F (93C) ☒ None

F. Comments

Generator's Certification NATIVE VILLAGE OF NORTHEAST CA
57 MILES SE OF SAVOONGA, KITNA
SAVOONGA, AK 99769

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all material described by this profile. On Behalf Of

Generator's Authorized Signature: Tyler A. Ellingboe Savoonga IRA Council **Date** 10/23/12

Name (Print) Tyler Ellingboe **Title** Project Manager

TSDF's Certification US ECOLOGY IDAHO, INC.
20400 LEMLEY RD
GRAND VIEW, ID 83624

As an authorized representative of Emerald Services, Inc. I certify, by my signature below, that Emerald Services, Inc. has the necessary permits to accept and properly manage the waste stream identified above.

TSDF's Authorized Signature: **Date**

Reviewer Information Only VOC Level 1 ☐ < 11.1 psia ☐ >= 11.1 psia ☐ NA At Risk Waste Steam__

Process ☐ Storage ☐ FB ☐ OB ☐ RY ☐ RR ☐ AF ☐ UW ☐ RY150 ☐ MT Initials

US ECOLOGY IDAHO, INC.

Waste Profile Questionnaire #: USE15593

A. Generator Information

EPA ID AKR000203687 Generator Status SQG

Generator Name NATIVE VILLAGE OF NORTHEAST CA Phone (907) 984-6414

Site Address 57 MILES SE OF SAVOONGA, KITNA City ST Zip SAVOONGA, AK 99769 Fax

Contact/Title Sulfide Producing Industry: N

B. Shipping Information

Proper Shipping Name R.Q. POLYCHLORINATED BIPHENYLS, SOLID

DOT ID UN3432 Hazard Class 9 Packing Group II ERG 171 RQ

C. Regulatory Information

Name of Material PCB LIGHT BALLAST Generating Proces OUT OF SERVICE

Form Code W309 Source Code G15 Origin Code 2 System Code

EPA Codes TSCA State Codes

Container Type Number of Units Frequency

D. Chemical / Constituent Composition

Constituent	PPM	% Volume	Constituent	PPM	% Volume
PCB LIGHT BALLAST		100			

E. Physical Characteristics

Physical State (Including Range) % Liquid % Sludges/Solid / 100 Bi-Layer Liqui Color VARIES

Odor / Describe NONE Specific Gravity BTUs / Lb pH: ☐ <= 2 ☐ >2 and <12.5 ☐ >=12.5 ☒ N/A

FlashPt: ☐ <100F (38C) ☐ 100-140F (38-60C) ☐ 141-200F (61-93C) ☐ >200F (93C) ☒ None

F. Comments

Generator's Certification

NATIVE VILLAGE OF NORTHEAST CA
57 MILES SE OF SAVOONGA, KITNA
SAVOONGA, AK 99769

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all material described by this profile. On Behalf Of

Generator's Authorized Signature: Tyler Ellingboe Savoonga IRA Council **Date** 10/23/12

Name (Print) Tyler Ellingboe **Title** Project Manager

TSDF's Certification

US ECOLOGY IDAHO, INC.
20400 LEMLEY RD
GRAND VIEW, ID 83624

As an authorized representative of Emerald Services, Inc. I certify, by my signature below, that Emerald Services, Inc. has the necessary permits to accept and properly manage the waste stream identified above.

TSDF's Authorized Signature: **Date**

Reviewer Information Only VOC Level 1 ☐ < 11.1 psia ☐ >= 11.1 psia ☐ NA At Risk Waste Steam

Process ☐ Storage ☐ FB ☐ OB ☐ RY ☐ RR ☐ AF ☐ UW ☐ RY150 ☐ MT Initials

US ECOLOGY IDAHO, INC.

Waste Profile Questionnaire #: 23762

A. Generator Information

EPA ID AKR000203687 Generator Status SQG

Generator Name NATIVE VILLAGE OF NORTHEAST CA Phone (907) 984-6414

Site Address 57 MILES SE OF SAVOONGA, KITNA City ST Zip SAVOONGA, AK 99769 Fax

Contact/Title Sulfide Producing Industry: N

B. Shipping Information

Proper Shipping Name ASBESTOS

DOT ID NA2212 Hazard Class 9 Packing Group III ERG 171 RQ1

C. Regulatory Information

Name of Material ASBESTOS CONTAINING MATERIAL Generating Proces FACILITY MAINTENANCE

Form Code W409 Source Code G19 Origin Code 1 System Code H131

EPA Codes State Codes

Container Type Number of Units Frequency

D. Chemical / Constituent Composition

Constituent	PPM	% Volume	Constituent	PPM	% Volume

E. Physical Characteristics

Physical State (Including Range) % Liquid % Sludges/Solid / 100 Bi-Layer Liqui Color GRAY

Odor / Describe MILD Specific Gravity 1.3 BTUs / Lb pH: ☐ <= 2 ☐ >2 and <12.5 ☐ >=12.5 ☒ N/A

FlashPt: ☐ <100F (38C) ☐ 100-140F (38-60C) ☐ 141-200F (61-93C) ☐ >200F (93C) ☒ None

F. Comments

Generator's Certification

NATIVE VILLAGE OF NORTHEAST CA
57 MILES SE OF SAVOONGA, KITNA
SAVOONGA, AK 99769

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all material described by this profile.

Generator's Authorized Signature: Tyler J. Ellingboe On Behalf of Savoonga IRA Council **Date** 10/23/12

Name (Print) Tyler Ellingboe **Title** Project Manager

TSDF's Certification

US ECOLOGY IDAHO, INC.
20400 LEMLEY RD
GRAND VIEW, ID 83624

As an authorized representative of Emerald Services, Inc. I certify, by my signature below, that Emerald Services, Inc. has the necessary permits to accept and properly manage the waste stream identified above.

TSDF's Authorized Signature: **Date**

Reviewer Information Only VOC Level 1 ☐ < 11.1 psia ☐ >= 11.1 psia ☐ NA At Risk Waste Steam

Process ☐ Storage ☐ FB ☐ OB ☐ RY ☐ RR ☐ AF ☐ UW ☐ RY150 ☐ MT Initials

US ECOLOGY IDAHO, INC.

Waste Profile Questionnaire #: USE29382

A. Generator Information

EPA ID AKR000203687 Generator Status SQG

Generator Name NATIVE VILLAGE OF NORTHEAST CA Phone (907) 984-6414

Site Address 57 MILES SE OF SAVOONGA, KITNA City ST Zip SAVOONGA, AK 99769 Fax

Contact/Title

Sulfide Producing Industry: N

B. Shipping Information

Proper Shipping Name MATERIAL NOT REGULATED BY D.O.T.

DOT ID Hazard Class Packing Group ERG RQ

C. Regulatory Information

Name of Material POL GREASE Generating Proces DISCARDED

Form Code Source Code Origin Code System Code

EPA Codes State Codes

Container Type Number of Units Frequency

D. Chemical / Constituent Composition

Constituent	PPM	% Volume	Constituent	PPM	% Volume
POL GREASE		100			

E. Physical Characteristics

Physical State (Including Range) % Liquid % Sludges/Solid / 100 Bi-Layer Liqui N Color BROWN

Odor / Describe PETROLEUM Specific Gravity N/A BTUs / Lb N/A pH: ☐ <= 2 ☐ >2 and <12.5 ☐ >=12.5 ☒ N/A

FlashPt: ☐ <100F (38C) ☐ 100-140F (38-60C) ☐ 141-200F (61-93C) ☐ >200F (93C) ☒ None

F. Comments

DIRECT LANDFILL

Generator's Certification

NATIVE VILLAGE OF NORTHEAST CA
57 MILES SE OF SAVOONGA, KITNA
SAVOONGA, AK 99769

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all material described by this profile.

Generator's Authorized Signature: Tyler G. Ellingboe On Behalf of Savoonga IRA Council **Date** 10/23/12

Name (Print) Tyler Ellingboe **Title** Project Manager

TSDF's Certification

US ECOLOGY IDAHO, INC.
20400 LEMLEY RD
GRAND VIEW, ID 83624

As an authorized representative of Emerald Services, Inc. I certify, by my signature below, that Emerald Services, Inc. has the necessary permits to accept and properly manage the waste stream identified above.

TSDF's Authorized Signature: **Date**

Reviewer Information Only VOC Level 1 ☐ < 11.1 psia ☐ >= 11.1 psia ☐ NA At Risk Waste Steam

Process ☐ Storage ☐ FB ☐ OB ☐ RY ☐ RR ☐ AF ☐ UW ☐ RY150 ☐ MT Initials

US ECOLOGY IDAHO, INC.

Waste Profile Questionnaire #: USE29383

A. Generator Information

EPA ID AKR000203687 Generator Status SQG

Generator Name NATIVE VILLAGE OF NORTHEAST CA Phone (907) 984-6414

Site Address 57 MILES SE OF SAVOONGA, KITNA City ST Zip SAVOONGA, AK 99769 Fax

Contact/Title Sulfide Producing Industry: N

B. Shipping Information

Proper Shipping Name WASTE OXIDIZING SOLID, N.O.S. (SODIUM HYPOCHLORITE, SODIUM HYDROXIDE)

DOT ID UN1479 Hazard Class 5.1 Packing Group II ERG 140 RQD001

C. Regulatory Information

Name of Material DETERGENT Generating Proces DISCARDED

Form Code W405 Source Code G11 Origin Code System Code H131

EPA Codes D001 State Codes

Container Type Number of Units Frequency

D. Chemical / Constituent Composition

Constituent	PPM	% Volume	Constituent	PPM	% Volume
INERT		60-70	Sodium hydroxide		15-20
Sodium hypochlorite		15-20			

E. Physical Characteristics

Physical State (Including Range) % Liquid ____ % Sludges/Solid ____/ 100 Bi-Layer Liqui N Color WHITE

Odor / Describe NONE Specific Gravity N/A BTUs / Lb N/A pH: ☐ <= 2 ☐ >2 and <12.5 ☐ >=12.5 ☒ N/A

FlashPt: ☐ <100F (38C) ☐ 100-140F (38-60C) ☐ 141-200F (61-93C) ☐ >200F (93C) ☒ None

F. Comments

D001 STABILIZATION

Generator's Certification

NATIVE VILLAGE OF NORTHEAST CA
57 MILES SE OF SAVOONGA, KITNA
SAVOONGA, AK 99769

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine that no deliberate or willful omissions of composition properties exist and that all known or suspected hazards have been disclosed. I certify that the materials tested are representative of all material described by this profile.

Generator's Authorized Signature: Tyler G. Ellingboe On Behalf Of Savoonga IRA Council **Date** 10/23/12

Name (Print) Tyler Ellingboe **Title** Project Manager

TSDF's Certification

US ECOLOGY IDAHO, INC.
20400 LEMLEY RD
GRAND VIEW, ID 83624

As an authorized representative of Emerald Services, Inc. I certify, by my signature below, that Emerald Services, Inc. has the necessary permits to accept and properly manage the waste stream identified above.

TSDF's Authorized Signature: ____ **Date** ____

Reviewer Information Only VOC Level 1 ☐ < 11.1 psia ☐ >= 11.1 psia ☐ NA At Risk Waste Steam__

Process ☐ Storage ☐ FB ☐ OB ☐ RY ☐ RR ☐ AF ☐ UW ☐ RY150 ☐ MT Initials ____

WASTE MANAGEMENT

EZ Profile™

Requested Facility: Columbia Ridge Landfill ☐ Unsure Profile Number: 111503OR

☐ Check if there are multiple generator locations. Attach locations. ☐ Renewal? Original Profile Number: ____

A. GENERATOR INFORMATION (MATERIAL ORIGIN)

1. Generator Name: NATIVE VILLAGE OF NORTHEAST CAPE
2. Site Address: 57 MILES ESE OF SAVOONGA, KITNAGAK BAY
   (City, State, ZIP) SAVOONGA AK 99769
3. County: NOME
4. Contact Name: TYLER ELLINGBOE
5. Email: tellingboe@bristol-companies.com
6. Phone: (907) 563-0013 7. Fax: (907) 563-6713
8. Generator EPA ID: AKR000203687 ☐ N/A
9. State ID: ____ ☑ N/A

B. BILLING INFORMATION ☐ SAME AS GENERATOR

1. Billing Name: BRISTOL ENVIRONMENTAL REMEDIATION
2. Billing Address: 111 W. 16TH AVENUE, THIRD FLOOR
   (City, State, ZIP) ANCHORAGE AK 99501
3. Contact Name: Tyler Ellingboe
4. Email: tellingboe@bristol-companies.com
5. Phone: (907) 563-0013 6. Fax: (907) 563-6713
7. WM Hauled? ☐ Yes ☑ No
8. P.O. Number: 49029

C. MATERIAL INFORMATION

1. Common Name: METALLIC AND NON-BURNABLE DEBRIS

Describe Process Generating Material: ☐ See Attached

BUILDING DEMOLITION AND GENERAL SITE CLEAN-UP

2. Material Composition and Contaminants: ☐ See Attached

1. SCRAP RUSTED METAL	50-95 %
2. WOOD	0-50 %
3. RUBBER	0-50 %
4. WIRE	0-10 %
	≥100%

3. State Waste Codes: ____ ☑ N/A
4. Color: VARIES
5. Physical State at 70°F: ☑ Solid ☐ Liquid ☐ Other: ____
6. Free Liquid Range Percentage: ____ to ____ ☑ N/A (Solid)
7. pH: ____ to ____ ☑ N/A (Solid)
8. Strong Odor: ☐ Yes ☑ No Describe: ____
9. Flash Point: ☐ <140°F ☐ 140°–199°F ☐ ≥200° ☑ N/A (Solid)

D. REGULATORY INFORMATION

1. EPA Hazardous Waste? ☐ Yes* ☑ No
   Code: ____
2. State Hazardous Waste? ☐ Yes ☑ No
   Code: ____
3. Excluded waste under 40 CFR 261.4 (a) or (b)? ☐ Yes* ☑ No
4. Contains Underlying Hazardous Constituents? ☐ Yes* ☑ No
5. Contains benzene **and** subject to Benzene NESHAP? ☐ Yes* ☑ No
6. Facility remediation subject to 40 CFR 63 GGGGG? ☐ Yes* ☑ No
7. CERCLA or State-mandated clean-up? ☐ Yes* ☑ No
8. NRC or State-regulated radioactive or NORM waste? ☐ Yes* ☑ No

***If Yes, see Addendum (page 2) for additional questions and space.**

9. Contains PCBs? → If Yes, answer a, b and c. ☐ Yes ☑ No
   a. Regulated by 40 CFR 761? ☐ Yes ☐ No
   b. Remediation under 40 CFR 761.61 (a)? ☐ Yes ☐ No
   c. Were PCB imported into the US? ☐ Yes ☐ No
10. Regulated and/or Untreated Medical/Infectious Waste? ☐ Yes ☑ No
11. Contains Asbestos? ☐ Yes: Friable ☐ Yes: Non-Friable ☑ No

E. ANALYTICAL AND OTHER REPRESENTATIVE INFORMATION

1. Analytical attached ☐ Yes

Please identify applicable samples and/or lab reports:

2. Other information attached (such as MSDS)? ☐ Yes

F. SHIPPING AND DOT INFORMATION

1. ☐ One-Time Event ☑ Repeat Event/Ongoing Business
2. Estimated Quantity/Unit of Measure: 250
   ☐ Tons ☑ Yards ☐ Drums ☐ Gallons ☐ Other: ____
3. Container Type and Size: 20 FOOT OPEN-TOP CONNEXES
4. USDOT Proper Shipping Name: ☐ N/A
   MATERIAL NOT REGULATED BY D.O.T.

G. GENERATOR CERTIFICATION (PLEASE READ AND CERTIFY BY SIGNATURE)

By signing this EZ Profile™ form, I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material, and that all relevant information necessary for proper material characterization and to identify known and suspected hazards has been provided. Any analytical data attached was derived from a sample that is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. All changes occurring in the character of the material (i.e., changes in the process or new analytical) will be identified by the Generator and be disclosed to Waste Management prior to providing the material to Waste Management.

If I am an agent signing on behalf of the Generator, I have confirmed with the Generator that information contained in this Profile is accurate and complete.

Name (Print): Tyler Ellingboe Date: 09/10/2012

Title: PROJECT MANAGER/SR. WASTE SPECIALIST

Company: Bristol Environmental Remediation Services, LLC

Certification Signature

Tyler S. Ellingboe

Columbia Ridge Landfill

18177 Cedar Springs Lane, Arlington Oregon 97812

Profile # 111503OR

PERMIT TO DISPOSE OF NON-HAZARDOUS MATERIALS

This permit authorizes disposal of Customer's waste materials in accordance with the Industrial Waste & Disposal Services Agreement dated _____ _________.

EXPIRES: 9/11/2013

GENERATOR: NATIVE VILLAGE OF NORTHEAST CAPE

DESCRIPTION: ***SCRAP METAL, WOOD, RUBBER, WIRE***	**VOLUME:** ***350 tons***
☒ **SPECIAL WASTE** ☐ **PCS** ☐ **CLEAN-UP MATERIAL**	
LOCATION: ***SAVOONGA, ALASKA 57 MILES ESE OF SAVOONGA, KITNAGAK BAY***	**COUNTY:***
CONTACT: ***TYLER ELLINGBOE***	**PHONE:** ***907-563-0013***
	FAX : ***907-563-6713***

BILLING: ***Landfill account BRISTOL ENVIRONMENTAL REMEDIATION***	**PO#:** ***49029***	**JOB#:** ***N/A***

TYPE OF DISPOSAL/ SPECIAL HANDLING/LOAD TYPE: ***BULK, CO-MINGLE, NO FREE LIQUIDS***

****

ALL LOADS MUST BE SCHEDULED 24 HOURS IN ADVANCE.
CONTACT GREG AT 541-454-3220

APPROVED: KC ***KRISTIN CASTNER*** DATE: ***09/11/12 3:37:54 PM***

A COPY OF THIS PERMIT MUST BE SHOWN BY EACH DRIVER

WASTE MANAGEMENT

NON-HAZARDOUS WAM APPROVAL FORM

WASTE MANAGEMENT

Requested Management Facility Columbia Ridge Landfill

Profile Number 111503OR Waste Approval Expiration Date 09/11/2013

APPROVAL DETAILS

Approval Decision ☑ Approved ❑ Not Approved Profile Renewal ❑ Yes ☑ No

Management Method: Direct Landfill

Generator Name: NATIVE VILLAGE OF NORTHEAST CAPE

Management Facility Precautions, Special Handling Procedures or Limitation on approval:

- Shall not contain free liquid
- Shipment must be scheduled into disposal facility
- Approval Number must accompany each shipment
- Waste Manifest must accompany load
- Shall not pose a dust nuisance
- Shall not pose a odor nuisance
- Drums must have removable lids and shall not contain free liquids
- Containers must be RCRA empty per 40 CFR 261.7
- Shall comply with applicable DOT and OSHA labeling, packaging and manifesting requirements
- Shall notify WM disposal location of changes associated with original waste generating process prior to shipment

Additional Conditions:

WM Authorization Name: Kristin Castner Title: Waste Approval Manager

WM Authorization Signature: Date: 09/11/2012

Agency Authorization (if Required): Date:

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC

BILL OF LADING ORIGINAL-NOT NEGOTIABLE

Bill of lading instructions as given by shipper of his represenative

Date:	Booking No.	Vessel and Voyage No.	Bill of lading No.
9/24/2012		Greta	017
Consignee: Bristol	Port of Discharge: NE Cape	Destination: Seattle, Washington	Beyond Carrier: Emerald Services

SHIPPER:	CONSIGNEE:	Charter:
Bristol Environmental Remediations Services, LLC N.E. Cape, St. Lawrence Island, Alaska	Emerald Services Inc 1825 Alexander Avenue Tacoma, WA 98421	Bill To: Bristol Environmental Remediations Services, LLC 111 W. 16th Ave, Third Floor Anchorage, AK 99501
Telephone 907-563-0013	Telephone 253-627-4822	

Incoming Carrier				Incoming Carriers advance charges	$
Containor or P.F.	HM	No of Pieces	Kind of PKG	Commodity Description	Gross Weight in lbs
CMCU 205324		1ea	20'CS	Various Waste Materials	
				Attached are Itemized Uniform Hazardous	
				Waste Manifests and Canadian Manifests for	
				Container contents	
				Tare	5050 lbs
				Gross	14920 lbs
				Net	9870 lbs

In accepting the bill of lading the shipper agrees that the custody and carriage of the goods identified shall be subject to the terms and conditions of this bill of lading and carrier's tariff or applicable contract of affreightment, which shall govern the relations, whatsoever they may be, between the carrier and the shipper, owner and/or consignee of the goods, in every contingency and whatsoever occurring.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked , and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national government regulations.

SHIPPER Charles L. Corley DATE: 9-24-12

It is declared that the packing of the container has been carried out in accordance with the provisions of 49 CFR 176.27©

SHIPPER DATE:

Northland Services
MARINE TRANSPORTATION

202836

P.O. BOX 24527 • SEATTLE, WA 98124
(206) 763-3000 (800) 426-3113 FAX: (206) 767-5579

STRAIGHT BILL OF LADING – SHORT FORM
ORIGINAL – NOT NEGOTIABLE

BILL OF LADING INSTRUCTIONS AS GIVEN BY SHIPPER OR HIS REPRESENTATIVE

DATE	BOOKING NO.	VESSEL AND VOYAGE NO.	NSI CONTROL NOL.
9/22/12			
PORT OF LOADING	PORT OF DISCHARGE	DESTINATION	BEYOND CARRIER
NE Cape, Alaska	Seattle, WA		

CONSIGNEE	SHIPPER	COLLECT ☐ PREPAID ☐ OTHER ☒ Please Specify Account
Emerald Services, Inc.	Native Village of Northeast Cape	BILL TO: Please show complete address - include zip
1825 Alexander Avenue	57 Miles ESE of Savoonga	Bristol Environmental Remediation Services, LLC
Tacoma, WA 98421	Savoonga, AK 99769	111 W. 16th Avenue Third Floor
		Anchorage, AK 99501
TELEPHONE (253) 627-4822	TELEPHONE (907) 984-6414	(907) 563-0013

INCOMING CARRIER ______ INCOMING CARRIER'S ADVANCE CHARGES: $______

CONTAINER OR P.F.	NO. OF PIECES	KIND OF PACKAGE	COMMODITY DESCRIPTION	GROSS WEIGHT
CMCU205324	1	20' Connex	See Attached Manifest # 004376114FLE	14920
			Placards Provided: Class 5.1	
			Class 9	
			PCB, Marine Pollutant	
			For 24-Hour Emergency Response Call 1-800-424-9300	
			Tare	5050
			Net	9870
			(15 Total Pieces)	

* Notify Tyler Ellingboe (Bristol) Upon Arrival at POS (907) 563-0013

In accepting this bill of lading the shipper agrees that the custody and carriage of the goods identified shall be subject to the terms and conditions of this bill of lading and carrier's tariff or applicable contract of affreightment, which shall govern the relations, whatsoever they may be, between the carrier and the shipper, owner and/or consignee of the goods, in every contingency and whensoever occurring.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

SHIPPER: Tyler G Ellingboe DATE: 9/22/12 BY: ______

It is declared that the packing of the container has been carried out in accordance with the provisions of 49 CFR 176.27(c).

SHIPPER: Tyler G. Ellingboe DATE: 9/22/12 BY: ______

NSI RECEIVING STAMP

Date: ______

Received By: ______

Quantity: ______

Equipment Number: ______

Where rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. THE AGREED OR DECLARED VALUE OF THE PROPERTY IS HEREBY SPECIFICALLY STATED BY THE SHIPPER TO BE NOT EXCEEDING $ ______ PER ______.

WHITE – Original **CANARY – Wharf Copy** **PINK – Memo Copy** **GOLDENROD – Memo Copy**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number AKR000203687	2. Page 1 of 2	3. Emergency Response Phone 1-800-424-9300	4. Manifest Tracking Number 004376114 FLE

5. Generator's Name and Mailing Address Native Village of NE Cape
c/o Savoonga IRA Council
P.O. Box 120, Savoonga, AK 99769
Generator's Phone: 907-984-6414

Generator's Site Address (if different than mailing address)
Native Village of Northeast Cape
57 miles ESE of Savoonga, Kitnagak Bay
Savoonga, AK 99769

6. Transporter 1 Company Name: Northland Services, Inc. — U.S. EPA ID Number: WAD981773005

7. Transporter 2 Company Name: Emerald Services, Inc. — U.S. EPA ID Number: WAD058364647

8. Designated Facility Name and Site Address
US Ecology Idaho, Inc.
20400 Lemley Road
Grand View, ID 83624
Facility's Phone: 208-834-2275
U.S. EPA ID Number: IDD073114654

GENERATOR

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
RQ	1. UN3077, Waste environmentally hazardous substances solid, n.o.s. (lead, carbon tetrachloride) 9, PGIII (D008), ERG#171	004 ~~005~~	DM	2000	P	D008 D019
RQ	2. UN3077, Waste environmentally hazardous substances, solid, n.o.s. (lead), 9, PGIII, (D008), ERG#171	002	BA	1400	P	D008
RQ	3. UN3077, Waste environmentally hazardous substances, solid, n.o.s. (lead), 9, PGIII (D008), ERG#171	004	BA	5500	P	D008
RQ	4. UN3077, Waste environmentally hazardous substances, solid, n.o.s. (lead, arsenic), 9, PGIII, (D004), ERG#171	001	DM	200	P	D004 D008

14. Special Handling Instructions and Additional Information
a) USE29381 LBP Solid
b) 15418 LBP Wood debris
c) USE29380 Burner ash
d) USE28412 Broken batteries
Please mail original manifest and CD to: Bristol Environmental Remediation Services, LLC, Attn: Tyler Ellingboe, 111 W. 16th Ave., Third Floor, Anchorage, AK 9950[illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Tyler Ellingboe On Behalf Of Savoonga IRA Council — Signature: Tyler G. Ellingboe — Month Day Year: 09 22 12

INT'L
16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER
17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name — Signature — Month Day Year
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY
18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. 2. 3. 4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name — Signature — Month Day Year

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: AKR000203687

22. Page: 2 of 2

23. Manifest Tracking Number: 004376114 FLE

24. Generator's Name: Native Village of Northeast Cape

25. Transporter 3 Company Name: Steve Forler Trucking — U.S. EPA ID Number: WAR000001263

26. Transporter ______ Company Name — U.S. EPA ID Number:

GENERATOR

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
RQ	UN3432, Polychlorinated biphenyls, Solid, 9, PGII, (PCB), marine pollutant, ERG#171	001	DF	10	K	TSCA		
RQ	NA2212, Asbestos, 9, PGIII, (Asbestos), ERG#171	001	BA	500	P			
	Material not regulated by D.O.T.	001	DM	150	P			
RQ	UN1479, Waste oxidizing solid, n.o.s. (sodium hypochlorite, sodium hydroxide), PGII, (D001), ERG#140	001 ~~003~~	Dm ~~DF~~	200	P	D001		

32. Special Handling Instructions and Additional Information

1. USE15593 PCB Ballasts; ASD: 9/10/12
2. 23762 ACM
3. USE29382 Grease
4. USE29383 Dish Detergent

TRANSPORTER

33. Transporter ______ Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

34. Transporter ______ Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

Emerald Alaska, Inc. RCRA Land Disposal Restriction Notification Form EZ

(This form is applicable to characteristic (D codes), listed waste (F, K, U and P codes), Contaminated Soil and Hazardous Debris)

Generator: Native Village of Northeast Cape U.S. E.P.A. I.D. #: AKR000203687

Profile #: USE29381, 15418, USE29380, USE28412 Manifest #: 004376114FLE

The wastes identified in this form are subject to the land disposal restrictions of 40CFR Part 268. The wastes do not meet the treatment standards specified in Part 268 , Subpart D or do not meet the applicable prohibition levels specified in 268.32 or RCRA Section 3004(d). Pursuant to 40CFR 256.7(a), the required information applicable to each waste is identified below *(check all boxes that apply):*

Treatability Group: ☐ Wastewater ■ Non-Wastewater

(Wastewaters containing less than 1% filterable solids and less than 1% Total Organic Carbon)

- ☐ **D001 Ignitable (except for high TOC) managed in non-CWA/non-CWA equivalent non-Class I SDWA systems** *(Complete Form U.C. Underlying hazardous constituents need not be addressed if the waste is to be combusted or recovered.)*
- ☐ D001 Ignitable (except for high TOC) managed in CWA/CWA-equivalent /Class I SDWA systems
- ☐ D001 High TOC Ignitable (Greater than 10% organic carbon)
- ☐ **D002 Corrosive managed in non-CWA/non-CWA-equivalent/non Class I SDWA systems** *(Complete Form U.C.)*
- ☐ D002 Corrosive managed in CWA/CWA-equivalent /Class I systems
- ☐ D003 Reactive Sulfides based on 261.23(a)(5)
- ☐ D003 Reactive Cyanides based on 261.23(a)(5)
- ☐ **D003 Water Reactives based on 261.23(a)(2), (3), and (4) managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems** *(Complete Form U.C.)*
- ☐ D003 Water Reactives based on 261.23(a)(2), (3) and (4) managed in CWA/CWA-equivalent /Class I SDWA systems
- ☐ D003 Other Reactives based on 261.23(a)(1)

If D004 – D043 boxes are checked, complete and attach Form U.C. to address underlying hazardous constituents (unless these wastes are to be managed in a CWA/CWA-equivalent/Class I SDWA system):

☒ D004 Arsenic 1d	☐ D018 Benzene	☐ D032 Hexachlorobenzene
☐ D005 Barium	1a ☒ D019 Carbon Tetrachloride	☐ D033 Hexachlorobutadiene
☐ D006 Cadmium	☐ D020 Chlordane	☐ D034 Hexachloroethane
☐ D007 Chromium	☐ D021 Chlorobenzene	☐ D035 Methyl Ethyl Ketone
☒ D008 Lead 1a, 1b, 1c, 1d	☐ D022 Chloroform	☐ D036 Nitrobenzene
☐ D009 Mercury	☐ D023 *o*-Cresol	☐ D037 Pentachlorophenol
☐ D010 Selenium	☐ D024 *m*-Cresol	☐ D038 Pyridine
☐ D011 Silver	☐ D025 *p*-Cresol	☐ D039 Tetrachloroethylene
☐ D012 Endrin	☐ D026 Cresols (Total)	☐ D040 Trichloroethylene
☐ D013 Lindane	☐ D027 *p*-Dichlorobenzene	☐ D041 2,4,5-Trichlorophenol
☐ D014 Methoxychlor	☐ D028 1,2-Dichloroethane	☐ D042 2,4,6-Trichlorophenol
☐ D015 Toxaphene	☐ D029 1,1-Dichloroethylene	☐ D043 Vinyl Chloride
☐ D016 2,4-D	☐ D030 2,4-Dinitrotoluene	
☐ D017 2,4,5-TP (Silvex)	☐ D031 Heptachlor	

<u>In addition, the following wastes are included in this shipment:</u>

- ☐ F001 – F005 Spent Solvents. (If this box is checked, complete F001-F005 section on the back of this form. Check the hazardous number(s) that apply and identify the constituents likely to be present in the waste.)
- ☐ **F039 Multisource Leachate. If this box is checked, complete and attach Form U.C. to identify the individual constituents.**
- ☐ Contaminated Soil that meets the LDR standard found in 268 Subpart D (If this box is checked, complete the Contaminated Soil section on the back of this form.)
- 1a 1b ☒ Hazardous Debris (If this box is checked, complete the Hazardous Debris section on the back of this form.)

If this shipment carries additional waste codes that are not addressed above, identify them here:

EPA Waste Code	Subcategory (if any)	EPA Waste Code	Subcategory (if any)	EPA Waste Code	Subcategory (if any)

F001 – F005 Spent Solvents

(Form EZ Page 2)

Check the box (es) that apply. Identify the individual constituents likely to be present.

Hazardous Waste Description	Regulated Hazardous Constituents	
☐ F001 Spent Halogenated Solvents used in Degreasing	☐ Carbon Tetrachloride ☐ Tetrachloroethylene ☐ Trichloroethylene ☐ Trichloromonofluoromethane	☐ Methylene Chloride ☐ 1,1,1-Trichloroethane ☐ 1,1,2-Trichloro-1,2,2-trifluoroethane
☐ F002 Spent Halogenated Solvents	☐ Carbon Tetrachloride ☐ Tetrachloroethylene ☐ Trichloroethylene ☐ Trichloromonofluoromethane	☐ Methylene Chloride ☐ 1,1,1-Trichloroethane ☐ 1,1,2-Trichloro-1,2,2-trifluoroethane
☐ F003 Spent Non-Halogenated Solvents	☐ Acetone ☐ Cyclohexanone * ☐ Ethyl Benzene ☐ Methanol * ☐ Xylenes (Total)	☐ *n*-Butyl Alcohol ☐ Ethyl Acetate ☐ Ethyl Ether ☐ Methyl Isobutyl Ketone
☐ F004 Spent Non-Halogenated Solvents	☐ *m*-Cresol ☐ *p*-Cresol ☐ Nitrobenzene	☐ *o*-Cresol ☐ Cresol Mixed Isomers (Cresylic Acid)
☐ F005 Spent Non-Halogenated Solvents	☐ Benzene ☐ 2-Ethoxyethanol ☐ Methyl Ethyl Ketone ☐ Pyridine	☐ Carbon Disulfide * ☐ Isobutyl Alcohol ☐ 2-Nitropropane ☐ Toluene

** The treatment standards for carbon disulfide, cyclohexanone and methanol non-wastewaters are based on the TCLP and apply to spent solvent non-wastewaters containing only one, two or all three of these constituents. The treatment standards for these three constituents do no apply when any of the other F001-F005 constituents are present in the waste.*

Contaminated Soil Waste

☐ This shipment contain contaminated soil with listed hazardous waste and does not exhibit a characteristic of hazardous waste and is subject to the soil treatment standards as provided by 268.49(c) of the universal treatment standards.

☐ This shipment contains contaminated soil which does not contain hazardous waste and does not exhibit a characteristic of hazardous waste and complies with the soil treatment standards as provided by 268.49(c) of the universal treatment standards.

Hazardous Debris

The definition of "debris" and "hazardous debris" are in 40CFR 268.2. Per 268.45, hazardous debris must be treated for each "contaminant subject to treatment." To determine these, look up the waste code in 268.40 and list the regulated hazardous constituents for each code. Check the box that applies.

1a 1b ☒ This shipment contains hazardous debris that will be treated to comply with the alternative treatment standards of 268.45 (e.g. macroencapsulation or abrasive blasting).

☐ This shipment contains hazardous debris that will be treated to meet the 258.40 treatment standards for the waste(s) contaminating the debris.

The contaminants subject to treatment for this debris are identified below:

EPA Waste Code	Subcategory (if any)	Contaminants Subject to Treatment

Emerald Alaska, Inc. RCRA Land Disposal Restriction Notification Form UC

Generator: Native Village of Northeast Cape U.S. E.P.A. I.D. #: AKR000203687

Profile #: USE29381, 15418, USE29380, USE28412 Manifest #: 004376114FLE

In accordance with 40CFR 268.7(a), the underlying hazardous constituents must be addressed in the waste Per 268.2(l), "underlying hazardous constituents means any constituent listed in 268.48, Table UTS Universal Treatment Standards, except zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste, at a concentration above the constituent-specific UTS treatment standard." Refer to Form EZ (attached) for the waste code(s), Treatability group, and Subcategory applicable to this waste. This form may also be used to identify F039 constituents.

Please check the appropriate box:

☐ This waste includes F039 multisource leachate. The individual constituents likely to be present are identified below:

☒ 1a 1b This shipment includes D001[other than (1) High TOC ignitables or (2) other ignitables that will be combusted or recovered], D002, D003 [other than (1) Reactive Sulfides or (2) Reactive Cyanides or (3) Other Reactives] and/or D004-D043 Characteristic Wastes. The wastes will not be managed in CWA/CWA-equivalent/Class I SDWA Systems. The underlying hazardous constituents must be addressed for this waste.

In order to address underlying hazardous constituents in characteristic wastes, please check the appropriate box:

☒ 1a 1b I have reviewed the UTS list of 268.48 and 268.7(a), and I have determined that there are no underlying hazardous constituents reasonably expected to be present in this waste.

☒ 1c 1d I have reviewed the UTS list of 268.48 and 268.7(a), and I have determined that underlying hazardous constituents are present in this waste. The underlying hazardous constituents are identified as:

The determination of underlying hazardous constituents was based on:

☒ 1d Generators Knowledge of the waste

☒ 1a 1b 1c Analysis

Generator's Certification:

I certify that I have personally examined and am familiar with the waste through analysis and testing, or through knowledge of the waste to support this certification. I certify that as an authorized representative of the generator named above, all the information submitted in this notification is true and correct to the best of my knowledge.

Printed Name: Tyler Ellingboe On Behalf of Savoonga IRA Council Title Project Manager

Signature: Tyler G Ellingboe Date 9/22/12

Underlying Hazardous Waste Constituents (Form UC Page 2)

Circle or otherwise identify the underlying hazardous constituents (or F039 constituents) present in the waste:

Acenapthene
Acenaphthylene
Acetone
Acetonitrile
Acetophenone
2-Acetylaminofluorene
Acrolein
Acrylamide
Acrylonitrile
Aldrin
4-Aminobiphenyl
Aniline
Anthracene
Aramite
Alpha-BHC
Beta-BHC
Delta-BHC
Benz(a)anthracene
Benzal Chloride*
Benzene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(p,h,I)perylene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate
Bromodichloromethane
Bromomethane (Methyl Bromide)
4-Bromophenol Phenyl Ether
n-Butyl Alcohol
Butyl Benzyl Phthalate
2-*sec*-Butyl-4,6-dinitrophenol (Dinoseb)
Carbon Disulfide
Carbon Tetrachloride
Chlordane (alpha and gamma isomers)
p-Chloroaniline
Chlorobenzene
Chlorobenzilate
2-Chloro-1,3-butadiene
Chlorodibromomethane
Chloroethane
Chloroform
p-Chloro-*m*-cresol
2-Chloro Vinyl Ether
Chloromethane (Methyl Chloride)
2-Chloronaphthylene
2-Chlorophenol
3-Chloropropylene

Chrysene
o-Cresol
m-Cresol
p-Cresol
Cyclohexanone
o,p'-DDD
p,p'-DDD
o,p'-DDE
p,p'-DDE
o,p'-DDT
p,p'-DDT
Dibenz(a,b)anthracene
Dibenz(a,e) pyrene
1,2-Dibromo-3-chloropropane
1,2-Dibromoehtane (Ethylene Dibromide)
Dibromomethane
m-Dichlorobenzene
o-Dichlorobenzene
p-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
trans-1,2-Dichloroethylene
2,4-Dichlorophenol
2,6-Dichlorophenol
2,4-Dichlorophenoxyacetic Acid (2,4-D)
1,2-Dichloropropane
cis-1,3-Dichloropropylene
trans-1,3-Dichloropropylene
Dieldrin
Diethyl Phthalate
p-Dimethylaminoazaobenzene*
2,4-Dimethyl Phenol
Dimethyl Phthalate
Di-*n*-butyl Phthalate
1,4-Dinitrobenzene
2.4.6-Dinitro-*o*-cresol
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-*n*-octyl Phthalate
Di-*n*-propylnitrosamine
1,4-Dioxane
Diphenlyamine
Diphenylnitrosamine
1,2-Diphenly Hydrazine
Disulfoton
Endosulfan I
Endosulfan II

Endosulfan Sulfate
Endrin
Endrin Aldehyde
Ethyl Acetate
Ethyl Benzene
Ethyl Ether
Ethyl Methacrylate
Ethylene Oxide
Famphur
Fluoranthene
Fluorene
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachlorodibenzo-*p*-dioxins
Hexachlorodibenzofurans
Hexachloroethane
Hexachloropropylene
Indeno(1,2,3-c,d)pyrene
Indomethane
Isobutyl Alcohol
Isodrin
Isosafrole
Kepone
Methacrylonitrile
Methanol
Methapyrilene
Methoxychlor
3-Methylcholanithrene
4,4-Methylene-bis(2-chloroaniline)
Methylene Chloride
Methyl Ethyl Ketone
Methyl Isobutyl Ketone
Methyl Methacrylate
Methyl Methansulfonate
Methyl Parathion
Naphthalene
2-Naphtbylamine
o-Nitroaniline*
p-Nitroaniline
Nitrobenzene
5-Nitro-*o*-toluidine
o-Nitrophenol
p-Nitrophenol
N-Nitrosodiethylamine
N-Nitrosodimethylamine
N-Nitrosodi-*n*-butylamine
N-Nitrosomethylethylamine
N-Nitrosmorpholine
N-Nitrosopiperidine

N-Nitrosopyrrolidine
Parathion
PCBs (Total)
Pentachlorobenzene
Pentachlorodibenzo-*p*-dioxins
Pentachlorodibenzofurans
Pentachloroethane*
Pentachloronitrobenzene
Pentacholorphenol
Phenacetin
Phenanthrene
Phenol
Phorate
Phthalic Acid*
Phthalic Anhydrice
Pronamide
Propanenitrile (Ethyl Cyanide)
Pyrene
Pyridine
Safrole
Silvex (2,4,5-TP)
1,2,4,5-Tetrachlorobenzene
Tetrachlorodibenzo-*p*-dioxins
Tetrachlorodibenzofurans
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroehtane
Tetrachloroethylene
2,3,4,6-Tetrachlorophenol
Toluene
Toxaphene
Tribromomethane (Bromoform)
1,2,4-Tricblorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
Trichloromonofluoromethane
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4,5-Trichlorophenoxyacetic Acid (2,4,5-T)
1,2,3-Trichloropropane
1,1,2-Trichloro-1,2,2-trifluoro-ethane
Tris(2,3-dibromopropyl) Phosphate
Vinyl Chloride
Xylenes (Total)

Antimony 1d
Arsenic
Barium
Beryllium

Cadmium
Chromium (total) 1c
Cyanide (total)
Cyanide (amenable)

Mercury (retort residues)*
Mercury (all others)
Fluoride
Lead

Nickel
Selenium
Silver
Sulfide

Thallium
Vanadium

US Ecology
PCB Control Sheet

Generator: Native Village of Northeast Cape
Site Address: 57 Miles ESE of Savoonga, Kitnagak Bay
City, State: Savoonga, Alaska 99769
EPA ID#: AKR000203687
Page: 1 of 1

Manifest #: 004376114FLE

For US Ecology Use-Only
Load #:
Received:

1 WSID#	2 QTY	3 PKG	4 Type of Material	5 D/F	6 Manuf	7 Manifest Line #	8 Serial# / Unique# / Drum#	9 KVA	10 Weight K	11 Dielect Vol	12 PPM	13 OSD	14 Category	15 Absorbents Added
	1	DF05	PCB Light Ballast	n/a	n/a	2a	PCB-1	n/a		n/a	50-499	9/10/12	n/a	no

Explanation:
1. **WSID#:** US Ecology approved waste stream ID#.
2. **QTY:** Enter quantity. (Idaho Only)
3. **PKG:** Enter packaging type-same as container type on manifest.
4. **Type of Material:** Enter description of material. Be specific.
5. **D/F:** Specify if the transformer or article is full (F), drained (D), or drained and flushed (D/F).
6. **Manuf:** Enter the manufacturer. (Idaho Only)
7. **Manifest Line#:** for each item, indicate which line # of the manifest it is shipped on.
8. **Serial# / Unique#:** Enter the nameplate serial number for transformers or articles or a unique number for each container.
   (Note: if there is no name plate serial#, you must assign a unique number to each container.)
9. **KVA:** enter the nameplate KVA rating of the transformer or article
10. **Weight K:** Enter the weight in kilograms.
11. **Dielect Vol:** Enter the nameplate dielectric volume of the transformer or article.
12. **PPM:** Enter the parts per million PCB contained in the material.
13. **OSD:** Enter the date the material was removed from service and designated for disposal [761.65(a), 761.180(a), 761.207(a)].
14. **Category:** Specify US Ecology Beatty Category (see attachment). **(Beatty Only)**
15. **Absorbents Added:** Specify non-biodegradable absorbents added. **(Beatty Only)**

Certification: In order for US Ecology to accept the waste material specified at the US Ecology-Grand View, Idaho or Beatty, Nevada facility the undersigned as an authorized employee of the generating company hereby warrants and certifies to US Ecology that the waste material listed above, delivered to and accepted for disposal by US Ecology shall conform to the above description and that all waste material and packaging shall comply with all current state and federal regulations.

Signature: [signature] On Behalf Of Savoonga IRA Title: Project Manager Date: 9/22/12

Note: A completed PCB Control Sheet, including generator's signature, must accompany each shipment of regulated PCB waste.

Emerald Alaska, Inc. RCRA Land Disposal Restriction Notification Form EZ

(This form is applicable to characteristic (D codes), listed waste (F, K, U and P codes), Contaminated Soil and Hazardous Debris)

Generator: Native Village of Northeast Cape U.S. E.P.A. I.D. #: AKR000203687

Profile #: USE29383 Manifest #: 004376114FLE

The wastes identified in this form are subject to the land disposal restrictions of 40CFR Part 268. The wastes do not meet the treatment standards specified in Part 268 , Subpart D or do not meet the applicable prohibition levels specified in 268.32 or RCRA Section 3004(d). Pursuant to 40CFR 256.7(a), the required information applicable to each waste is identified below *(check all boxes that apply):*

Treatability Group: ☐ Wastewater ■ Non-Wastewater

(Wastewaters containing less than 1% filterable solids and less than 1% Total Organic Carbon)

2d

☒ **D001 Ignitable (except for high TOC) managed in non-CWA/non-CWA equivalent non-Class I SDWA systems** *(Complete Form U.C. Underlying hazardous constituents need not be addressed if the waste is to be combusted or recovered.)*

☐ D001 Ignitable (except for high TOC) managed in CWA/CWA-equivalent /Class I SDWA systems

☐ D001 High TOC Ignitable (Greater than 10% organic carbon)

☐ **D002 Corrosive managed in non-CWA/non-CWA-equivalent/non Class I SDWA systems** *(Complete Form U.C.)*

☐ D002 Corrosive managed in CWA/CWA-equivalent /Class I systems

☐ D003 Reactive Sulfides based on 261.23(a)(5)

☐ D003 Reactive Cyanides based on 261.23(a)(5)

☐ **D003 Water Reactives based on 261.23(a)(2), (3), and (4) managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems** *(Complete Form U.C.)*

☐ D003 Water Reactives based on 261.23(a)(2), (3) and (4) managed in CWA/CWA-equivalent /Class I SDWA systems

☐ D003 Other Reactives based on 261.23(a)(1)

If D004 – D043 boxes are checked, complete and attach Form U.C. to address underlying hazardous constituents (unless these wastes are to be managed in a CWA/CWA-equivalent/Class I SDWA system):

☐ D004 Arsenic	☐ D018 Benzene	☐ D032 Hexachlorobenzene
☐ D005 Barium	☐ D019 Carbon Tetrachloride	☐ D033 Hexachlorobutadiene
☐ D006 Cadmium	☐ D020 Chlordane	☐ D034 Hexachloroethane
☐ D007 Chromium	☐ D021 Chlorobenzene	☐ D035 Methyl Ethyl Ketone
☐ D008 Lead	☐ D022 Chloroform	☐ D036 Nitrobenzene
☐ D009 Mercury	☐ D023 *o*-Cresol	☐ D037 Pentachlorophenol
☐ D010 Selenium	☐ D024 *m*-Cresol	☐ D038 Pyridine
☐ D011 Silver	☐ D025 *p*-Cresol	☐ D039 Tetrachloroethylene
☐ D012 Endrin	☐ D026 Cresols (Total)	☐ D040 Trichloroethylene
☐ D013 Lindane	☐ D027 *p*-Dichlorobenzene	☐ D041 2,4,5-Trichlorophenol
☐ D014 Methoxychlor	☐ D028 1,2-Dichloroethane	☐ D042 2,4,6-Trichlorophenol
☐ D015 Toxaphene	☐ D029 1,1-Dichloroethylene	☐ D043 Vinyl Chloride
☐ D016 2,4-D	☐ D030 2,4-Dinitrotoluene	
☐ D017 2,4,5-TP (Silvex)	☐ D031 Heptachlor	

<u>In addition, the following wastes are included in this shipment:</u>

☐ F001 – F005 Spent Solvents. (If this box is checked, complete F001-F005 section on the back of this form. Check the hazardous number(s) that apply and identify the constituents likely to be present in the waste.)

☐ **F039 Multisource Leachate. If this box is checked, complete and attach Form U.C. to identify the individual constituents.**

☐ Contaminated Soil that meets the LDR standard found in 268 Subpart D (If this box is checked, complete the Contaminated Soil section on the back of this form.)

☐ Hazardous Debris (If this box is checked, complete the Hazardous Debris section on the back of this form.)

If this shipment carries additional waste codes that are not addressed above, identify them here:

EPA Waste Code	Subcategory (if any)	EPA Waste Code	Subcategory (if any)	EPA Waste Code	Subcategory (if any)

F001 – F005 Spent Solvents

Check the box (es) that apply. Identify the individual constituents likely to be present.

Hazardous Waste Description	Regulated Hazardous Constituents	
☐ F001 Spent Halogenated Solvents used in Degreasing	☐ Carbon Tetrachloride ☐ Tetrachloroethylene ☐ Trichloroethylene ☐ Trichloromonofluoromethane	☐ Methylene Chloride ☐ 1,1,1-Trichloroethane ☐ 1,1,2-Trichloro-1,2,2-trifluoroethane
☐ F002 Spent Halogenated Solvents	☐ Carbon Tetrachloride ☐ Tetrachloroethylene ☐ Trichloroethylene ☐ Trichloromonofluoromethane	☐ Methylene Chloride ☐ 1,1,1-Trichloroethane ☐ 1,1,2-Trichloro-1,2,2-trifluoroethane
☐ F003 Spent Non-Halogenated Solvents	☐ Acetone ☐ Cyclohexanone * ☐ Ethyl Benzene ☐ Methanol * ☐ Xylenes (Total)	☐ *n*-Butyl Alcohol ☐ Ethyl Acetate ☐ Ethyl Ether ☐ Methyl Isobutyl Ketone
☐ F004 Spent Non-Halogenated Solvents	☐ *m*-Cresol ☐ *p*-Cresol ☐ Nitrobenzene	☐ *o*-Cresol ☐ Cresol Mixed Isomers (Cresylic Acid)
☐ F005 Spent Non-Halogenated Solvents	☐ Benzene ☐ 2-Ethoxyethanol ☐ Methyl Ethyl Ketone ☐ Pyridine	☐ Carbon Disulfide * ☐ Isobutyl Alcohol ☐ 2-Nitropropane ☐ Toluene

** The treatment standards for carbon disulfide, cyclohexanone and methanol non-wastewaters are based on the TCLP and apply to spent solvent non-wastewaters containing only one, two or all three of these constituents. The treatment standards for these three constituents do no apply when any of the other F001-F005 constituents are present in the waste.*

Contaminated Soil Waste

- ☐ This shipment contain contaminated soil with listed hazardous waste and does not exhibit a characteristic of hazardous waste and is subject to the soil treatment standards as provided by 268.49(c) of the universal treatment standards.
- ☐ This shipment contains contaminated soil which does not contain hazardous waste and does not exhibit a characteristic of hazardous waste and complies with the soil treatment standards as provided by 268.49(c) of the universal treatment standards.

Hazardous Debris

The definition of "debris" and "hazardous debris" are in 40CFR 268.2. Per 268.45, hazardous debris must be treated for each "contaminant subject to treatment." To determine these, look up the waste code in 268.40 and list the regulated hazardous constituents for each code. Check the box that applies.

- ☐ This shipment contains hazardous debris that will be treated to comply with the alternative treatment standards of 268.45 (e.g. macroencapsulation or abrasive blasting).
- ☐ This shipment contains hazardous debris that will be treated to meet the 258.40 treatment standards for the waste(s) contaminating the debris.

The contaminants subject to treatment for this debris are identified below:

EPA Waste Code	Subcategory (if any)	Contaminants Subject to Treatment

Emerald Alaska, Inc. RCRA Land Disposal Restriction Notification Form UC

Generator: Native Village of Northeast Cape U.S. E.P.A. I.D. #: AKR000203687
Profile #: USE29383 Manifest #: 004376114FLE

In accordance with 40CFR 268.7(a), the underlying hazardous constituents must be addressed in the waste Per 268.2(l), "underlying hazardous constituents means any constituent listed in 268.48, Table UTS Universal Treatment Standards, except zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste, at a concentration above the constituent-specific UTS treatment standard." Refer to Form EZ (attached) for the waste code(s), Treatability group, and Subcategory applicable to this waste. This form may also be used to identify F039 constituents.

Please check the appropriate box:

☐ This waste includes F039 multisource leachate. The individual constituents likely to be present are identified below:

☒ 2d This shipment includes D001[other than (1) High TOC ignitables or (2) other ignitables that will be combusted or recovered], D002, D003 [other than (1) Reactive Sulfides or (2) Reactive Cyanides or (3) Other Reactives] and/or D004-D043 Characteristic Wastes. The wastes will not be managed in CWA/CWA-equivalent/Class I SDWA Systems. The underlying hazardous constituents must be addressed for this waste.

In order to address underlying hazardous constituents in characteristic wastes, please check the appropriate box:

☒ 2d I have reviewed the UTS list of 268.48 and 268.7(a), and I have determined that there are no underlying hazardous constituents reasonably expected to be present in this waste.

☐ I have reviewed the UTS list of 268.48 and 268.7(a), and I have determined that underlying hazardous constituents are present in this waste. The underlying hazardous constituents are identified as:

The determination of underlying hazardous constituents was based on:

☒ 2d Generators Knowledge of the waste

☒ 2d Analysis

Generator's Certification:

I certify that I have personally examined and am familiar with the waste through analysis and testing, or through knowledge of the waste to support this certification. I certify that as an authorized representative of the generator named above, all the information submitted in this notification is true and correct to the best of my knowledge.

Printed Name: Tyler Ellingboe On Behalf of Savoonga IRA Council Title Project Manager

Signature: Tyler G. Ellingboe Date 9/22/12

Underlying Hazardous Waste Constituents (Form UC Page 2)

Circle or otherwise identify the underlying hazardous constituents (or F039 constituents) present in the waste:

Acenapthene
Acenaphthylene
Acetone
Acetonitrile
Acetophenone
2-Acetylaminofluorene
Acrolein
Acrylamide
Acrylonitrile
Aldrin
4-Aminobiphenyl
Aniline
Anthracene
Aramite
Alpha-BHC
Beta-BHC
Delta-BHC
Benz(a)anthracene
Benzal Chloride*
Benzene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(p,h,I)perylene
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl)ether
Bis(2-ethylhexyl)phthalate
Bromodichloromethane
Bromomethane (Methyl Bromide)
4-Bromophenol Phenyl Ether
n-Butyl Alcohol
Butyl Benzyl Phthalate
2-*sec*-Butyl-4,6-dinitrophenol
(Dinoseb)
Carbon Disulfide
Carbon Tetrachloride
Chlordane
(alpha and gamma isomers)
p-Chloroaniline
Chlorobenzene
Chlorobenzilate
2-Chloro-1,3-butadiene
Chlorodibromomethane
Chloroethane
Chloroform
p-Chloro-*m*-cresol
2-Chloro Vinyl Ether
Chloromethane (Methyl Chloride)
2-Chloronaphthylene
2-Chlorophenol
3-Chloropropylene

Chrysene
o-Cresol
m-Cresol
p-Cresol
Cyclohexanone
o,p'-DDD
p,p'-DDD
o,p'-DDE
p,p'-DDE
o,p'-DDT
p,p'-DDT
Dibenz(a,b)anthracene
Dibenz(a,e) pyrene
1,2-Dibromo-3-chloropropane
1,2-Dibromoehtane
(Ethylene Dibromide)
Dibromomethane
m-Dichlorobenzene
o-Dichlorobenzene
p-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
trans-1,2-Dichloroethylene
2,4-Dichlorophenol
2,6-Dichlorophenol
2,4-Dichlorophenoxyacetic Acid
(2,4-D)
1,2-Dichloropropane
cis-1,3-Dichloropropylene
trans-1,3-Dichloropropylene
Dieldrin
Diethyl Phthalate
p-Dimethylaminoazaobenzene*
2,4-Dimethyl Phenol
Dimethyl Phthalate
Di-*n*-butyl Phthalate
1,4-Dinitrobenzene
2.4.6-Dinitro-*o*-cresol
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dimitrotoluene
Di-*n*-octyl Phthalate
Di-*n*-propylnitrosamine
1,4-Dioxane
Diphenlyamine
Diphenylnitrosamine
1,2-Diphenly Hydrazine
Disulfoton
Endosulfan I
Endosulfan II

Endosulfan Sulfate
Endrin
Endrin Aldehyde
Ethyl Acetate
Ethyl Benzene
Ethyl Ether
Ethyl Methacrylate
Ethylene Oxide
Famphur
Fluoranthene
Fluorene
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachlorodibenzo-*p*-dioxins
Hexachlorodibenzofurans
Hexachloroethane
Hexachloropropylene
Indeno(1,2,3-c,d)pyrene
Indomethane
Isobutyl Alcohol
Isodrin
Isosafrole
Kepone
Methacrylonitrile
Methanol
Methapyrilene
Methoxychlor
3-Methylcholanithrene
4,4-Methylene-bis(2-chloroaniline)
Methylene Chloride
Methyl Ethyl Ketone
Methyl Isobutyl Ketone
Methyl Methacrylate
Methyl Methansulfonate
Methyl Parathion
Naphthalene
2-Naphthylamine
o-Nitroaniline*
p-Nitroaniline
Nitrobenzene
5-Nitro-*o*-toluidine
o-Nitrophenol
p-Nitrophenol
N-Nitrosodiethylamine
N-Nitrosodimethylamine
N-Nitrosodi-*n*-butylamine
N-Nitrosomethylethylamine
N-Nitrosmorpholine
N-Nitrosopiperidine

N-Nitrosopyrrolidine
Parathion
PCBs (Total)
Pentachlorobenzene
Pentachlorodibenzo-*p*-dioxins
Pentachlorodibenzofurans
Pentachloroethane*
Pentachloronitrobenzene
Pentacholorphenol
Phenacetin
Phenanthrene
Phenol
Phorate
Phthalic Acid*
Phthalic Anhydrice
Pronamide
Propanenitrile (Ethyl Cyanide)
Pyrene
Pyridine
Safrole
Silvex (2,4,5-TP)
1,2,4,5-Tetrachlorobenzene
Tetrachlorodibenzo-*p*-dioxins
Tetrachlorodibenzofurans
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroehtane
Tetrachloroethylene
2,3,4,6-Tetrachlorophenol
Toluene
Toxaphene
Tribromomethane (Bromoform)
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
Trichloromonofluoromethane
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4,5-Trichlorophenoxyacetic
Acid (2,4,5-T)
1,2,3-Trichloropropane
1,1,2-Trichloro-1,2,2-trifluoro-
ethane
Tris(2,3-dibromopropyl)
Phosphate
Vinyl Chloride
Xylenes (Total)

Antimony
Arsenic
Barium
Beryllium

Cadmium
Chromium (total)
Cyanide (total)
Cyanide (amenable)

Mercury (retort residues)*
Mercury (all others)
Fluoride
Lead

Nickel
Selenium
Silver
Sulfide

Thallium
Vanadium

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

BE78139-4

Movement Document / Manifest Reference No.
N° de référence du document de mouvement/manifeste

A Generator / consignor — Producteur / expéditeur

1 Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: AKR000203687

Company name / Nom de l'entreprise: Native Village of Northeast Cape IRA Council Savoonga NALEMP

Mailing address / Adresse postale, City / Ville, Province, Postal code / Code postal: P.O. Box 126 Savoonga AK 99769

E-mail / Courrier électronique: ryannogiyuk@yahoo.com — Tel. No. / N° de tél.: 907 984 6414

Shipping site address / Adresse de lieu de l'expédition: 57 Miles ESE of Savoonga, Kitnagak Bay

City / Ville: Savoonga — Province: AK — Postal code / Code postal: 99769

Intended Receiver / consignee — Réceptionnaire / destinataire prévu

2 Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: IDD073114654

US Ecology Idaho, Inc.

Mailing address / Adresse postale, City / Ville, Province, Postal code / Code postal: Same As Below

E-mail / Courrier électronique: mmcmonigle@usecology.com — Tel. No. / N° de tél.: 800 274 1516

Receiving site address / Adresse de lieu de l'expédition: 20400 Lemley Road

City / Ville: Grand View — Province: ID — Postal code / Code postal: 83624

B Carrier — Transporteur

23 Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial: WAD981773005

Company name / Nom de l'entreprise: Northland Services, Inc.

Mailing address / Adresse postale, City / Ville, Province, Postal code / Code postal: P.O. Box 24527 Seattle WA 98124

E-mail / Courrier électronique: randyp@northlandservices.com — Tel. No. / N° de tél.: 800 426 3113

Vehicle / Véhicule	Registration No. / N° d'immatriculation	Prov. 24
Trailer - Rail car No. 1 / 1er remorque - wagon		
Trailer - Rail car No. 2 / 2e remorque - wagon		

Port of entry / Point d'entrée: Dixon Entrance — Port of exit / Point de sortie: Strait of San Juan de Fuca (25 International use only)

26 *Carrier Certification: I certify that I have received waste or recyclable material from the generator / consignor for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct.*
Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.

Name of authorized person (print): / Nom de l'agent autorisé (caractères d'imprimerie) : — Tel. No. / N° de tél. ( )

Year / Année — Month / Mois — Day / Jour — Signature :

C Receiver / consignee — Réceptionnaire / destinataire

27 Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés

28 Registration No. / Provincial ID No. — N° d'immatriculation - d'id. provincial

Receiver / consignee information same as in Part A / Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A
☒ Yes / Oui ☐ No, complete the box below / Non, remplir la case ci-dessous

Company name / Nom de l'entreprise

Mailing address / Adresse postale

City / Ville — Province — Postal code / Code postal

E-mail / Courrier électronique — Tel. No. / N° de tél. ( )

Receiving site address / Adresse de lieu de destination

29 Date received / Date de réception: Year / Année — Month / Mois — Day / Jour — Time / Heure ☐ A.M. ☐ P.M.

30 If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire — Registration No./Provincial ID No. / N° d'immatriculation/d'id provincial

	3 Prov. code / Code prov.	4 Shipping name / Appellation réglementaire	5 Class / Classe Sub. class(es) / Classe(s) sub.	6 UN No. / N°NU	7 Packing / risk gr. / Gr. d'emballage/ de risque	Quantity shipped / Quantité expédiée	8 Units L or / ou Kg / Unités	9 Packaging/Contenant No. / N°	Codes int.– ext.	10 Phys. state / État phys.
(i)	N/A	Waste Environmentally Hazardous Substances solid n.o.s. (lead, arsenic)	N/A	N/A	N/A	4128	KG	11	01/05	S
(ii)	N/A	Waste Polychlorinated Biphenyls, Solid	9	UN3432	II	10	KG	01	01	S
(iii)	N/A	Waste Asbestos	9	UN2212	II	227	KG	01	05	S
(iv)	N/A	Waste Oxidizing Solid, n.o.s. (Sodium Hypochlorite, Sodium Hydroxide)	5.1	UN1479	II	91	KG	01	01	S

Quantity received / Quantité reçue	31 Units L or / ou Kg / Unités	32 Comments / Commentaires	33 Handling Code / Code de manutention	34 Shipment / Envoi Accepted / Accepté	Refused / Refusé	35 Decont. Pack. / Cont.	Veh. / Véh.

	11 Notice No. / N° de notification	Notice Line No / N° de ligne de la notification	12 Shipment / Envoi	Of / De	13 D or R code / Code E ou R	14 C code / Code C	15 Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE	16 H code / Code H	17 Y code / Code Y	18 National code in country of / Code du pays: Export / Exportation	Import / Importation	19 Customs code(s) / Code(s) de douanes
(i)	530646	3	1	5	D5	C18 C11	A1020	H13	Y31 Y26	USA	USA	7802.00.0090
(ii)	530646	6	1	5	D5	C32	A1180	H12	Y10	USA	USA	8504.10.0000
(iii)	530646	8	1	5	D5	C25	A2050	H11	Y36	USA	USA	2524.90.0000
(iv)	530646	9	1	5	D5	C22	N/A	H5.1	Y0	USA	USA	2828.10.0000

36 If handling code "Other" (specify) / Si code de manutention « autre » (spécifier)

37 *Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. / Attestation du réceptionnaire / destinataire : J'atteste que tous les renseignements à la partie C sont exacts et complets.*

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)

Signature — Tel. No. / N° de tél. ( )

22 Special handling / Manutention spéciale: For 24 Hour Emergency Response Call 1-800-424-9300
☐ Attached / Ci-joint ☒ As follows / Ci-contre :

20 *Generator / consignor certification: I certify that the information contained in Part A is correct and complete.*
Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.

Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie): Tyler Ellingboe — Signature: [signature] — Tel. No. / N° de tél.: 907 563 0013

21 Date shipped / Date d'expédition: Year / Année — Month / Mois — Day / Jour — Time / Heure ☐ A.M. ☐ PM

Scheduled arrival date / Date d'arrivée prévue: Year / Année — Month / Mois — Day / Jour

MOE 04-1917 (06/05)

Instructions for completion and distribution on reverse / Instructions pour compléter et distribuer au verso

Copy / Copie 1 (white / blanche)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number AKR 000203687	2. Page 1 of 2	3. Emergency Response Phone 1-800-424-9300	4. Waste Tracking Number MD 001

5. Generator's Name and Mailing Address Native Village of NE Cape
c/o Savoonga IRA Council
P.O. Box 120
Savoonga, AK 99769
Generator's Phone: 907-984-6414

Generator's Site Address (if different than mailing address)
Native Village of Northeast Cape
57 miles ESE of Savoonga, Kitnagak Bay
Savoonga, AK 99769

6. Transporter 1 Company Name
Northland Services, Inc.
U.S. EPA ID Number WAD 981773005

7. Transporter 2 Company Name
Roadlink
U.S. EPA ID Number WAH 000016683

8. Designated Facility Name and Site Address Columbia Ridge Landfill & Recycling Center
18177 Cedar Springs Lane
Arlington, OR 97812-6512
Facility's Phone: 541-454-2030
U.S. EPA ID Number ORD 987173457

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1. Material not regulated by D.O.T.	1	CM	~~26690~~ 31540	P	TARE 5,510 NET 26,030
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
a) 111503 OR Metallic/Non-Burnable Debris Container Type: 20-foot open top
Container #: WMXU6326 Please mail original manifest, scale ticket, & CD to:
Bristol Environmental Remediation Services, LLC, Attn: Tyler Ellingboe
111 W 16th Ave., 3rd Floor, Anchorage, AK 99501

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Tyler Ellingboe On Behalf Of Savoonga IRA Council
Signature: Tyler S. Ellingboe
Month 09 Day 22 Year 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name Signature Month Day Year
Transporter 2 Printed/Typed Name Signature Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name Signature Month Day Year

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST (Continuation Sheet)	19. Generator ID Number AKR 000203687	20. Page 2 of 2	21. Waste Tracking Number MD 001

22. Generator's Name Native Village of Northeast Cape
c/o Savoonga IRA Council
P.O. Box 120, Savoonga, AK 99769

23. Transporter 3 Company Name Union Pacific Railroad — U.S. EPA ID Number NED 001792910

24. Transporter 4 Company Name Columbia Ridge Landfill — U.S. EPA ID Number ORD 987173457

25. Waste Shipping Name and Description	26. Containers No.	Type	27. Total Quantity	28. Unit Wt./Vol.	
			l		

29. Special Handling Instructions and Additional Information

GENERATOR

30. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

31. Transporter 4 Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

TRANSPORTER

32. Discrepancy

DESIGNATED FACILITY

GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number AKR 000203687	2. Page 1 of 2	3. Emergency Response Phone 1-800-424-9300	4. Waste Tracking Number MD 002

5. Generator's Name and Mailing Address Native Village of NE Cape
c/o Savoonga IRA Council
P.O. Box 120
Savoonga, AK 99769
Generator's Phone: 907-984-6414

Generator's Site Address (if different than mailing address)
Native Village of Northeast Cape
57 miles ESE of Savoonga, Kitnagak Bay
Savoonga, AK 99769

6. Transporter 1 Company Name: Northland Services, Inc. — U.S. EPA ID Number: WAD 981773005

7. Transporter 2 Company Name: Roadlink — U.S. EPA ID Number: WAH 000016683

8. Designated Facility Name and Site Address: Columbia Ridge Landfill & Recycling Center
18177 Cedar Springs Lane
Arlington, OR 97812-6512
Facility's Phone: 541-454-2030
U.S. EPA ID Number: ORD 987173457

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1. Material not regulated by D.O.T.	1	CM	34160	P	TARE 4,888 NET 29,272
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
a) 111503 OR Metallic/Non-Burnable Debris Container Type: 20-foot open top
Container #: WMXU6132 Please mail original manifest, scale ticket, & CD to:
Bristol Environmental Remediation Services, LLC, Attn: Tyler Ellingboe
111 W 16th Ave., 3rd Floor, Anchorage, AK 99501

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: On Behalf of Tyler Ellingboe Savoonga IRA Council — Signature: Tyler G. Ellingboe — Month 09 Day 22 Year 12

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name — Signature — Month Day Year
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature — Month Day Year

NON-HAZARDOUS WASTE MANIFEST (Continuation Sheet)	19. Generator ID Number AKR 000203687	20. Page 2 of 2	21. Waste Tracking Number MD 002

22. Generator's Name Native Village of Northeast Cape
c/o Savoonga IRA Council
P.O. Box 120, Savoonga, AK 99769

23. Transporter 3 Company Name Union Pacific Railroad — U.S. EPA ID Number NED 001792910

24. Transporter 4 Company Name Columbia Ridge Landfill — U.S. EPA ID Number ORD 987173457

	25. Waste Shipping Name and Description	26. Containers No.	26. Containers Type	27. Total Quantity	28. Unit Wt./Vol.	

29. Special Handling Instructions and Additional Information

GENERATOR

30. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

31. Transporter 4 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

32. Discrepancy

DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
AKR 000203687	2	1-800-424-9300	MD003

5. Generator's Name and Mailing Address: Native Village of NE Cape
c/o Savoonga IRA Council
P.O. Box 120
Savoonga, AK 99769

Generator's Phone: 907-984-6414

Generator's Site Address (if different than mailing address):
Native Village of Northeast Cape
57 miles ESE of Savoonga, Kitnagak Bay
Savoonga, AK 99769

6. Transporter 1 Company Name: Northland Services, Inc. — U.S. EPA ID Number: WAD 981773005

7. Transporter 2 Company Name: Roadlink — U.S. EPA ID Number: WAH 000016683

8. Designated Facility Name and Site Address: Columbia Ridge Landfill & Recycling Center
18177 Cedar Springs Lane
Arlington, OR 97812-6512

Facility's Phone: 541-454-2030 — U.S. EPA ID Number: ORD 987173457

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Material not regulated by D.O.T.	1	CM	26700	P	TARE 5070 NET 21,630
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
a) 111503 OR Metallic/Non-Burnable Debris Container Type: 20-foot open top
Container #: WMXU6249 Please mail original manifest, scale ticket, & CD to:
Bristol Environmental Remediation Services, LLC, Attn: Tyler Ellingboe
111 W 16th Ave., 3rd Floor, Anchorage, AK 99501

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Tyler Ellingboe On Behalf Of Savoonga IRA Council — Signature: Tyler G. Ellingboe — Month 09 Day 22 Year 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name — Signature — Month Day Year
Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature — Month Day Year

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST (Continuation Sheet)	19. Generator ID Number AKR 000203687	20. Page 2 of 2	21. Waste Tracking Number MD 003

22. Generator's Name Native Village of Northeast Cape
c/o Savoonga IRA Council
P.O. Box 120, Savoonga, AK 99769

23. Transporter 3 Company Name Union Pacific Railroad — U.S. EPA ID Number NED 001792910

24. Transporter 4 Company Name Columbia Ridge Landfill — U.S. EPA ID Number ORD 987173457

	25. Waste Shipping Name and Description	26. Containers No.	26. Containers Type	27. Total Quantity	28. Unit Wt./Vol.	

29. Special Handling Instructions and Additional Information

GENERATOR

30. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

31. Transporter 4 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

32. Discrepancy

DESIGNATED FACILITY

WASTE MANAGEMENT

COLUMBIA RIDGE LANDFILL & RECYCLING CENTER
18177 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2030
(541) 454-3312 Fax

December 6, 2012

Bristol Environmental & Engineering BERS
111 W. 16th Ave. Suite 301
Anchorage, AK 99501

CERTIFICATE OF DISPOSAL

Waste Management, Inc. dba Columbia Ridge Landfill has received NON HAZARDOUS Waste material from the Native Village of NE Cape on behalf of Bristol Environmental.

Date of Disposal:	December 4, 2012
Profile #:	111503OR
Manifest #:	MD001
Container #:	WMXU6326
Weight Disposed:	26100 lbs.
Waste Type:	Scrap Metal, Wood, Rubber, & Wire

I certify, on behalf of the above listed facility, that the above-described non hazardous waste was managed in compliance with all applicable laws.

Sarah Mastriona

Sarah Mastriona
Special Waste Scale Clerk

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number AKR 000203687	2. Page 1 of 2	3. Emergency Response Phone 1-800-424-9300	4. Waste Tracking Number MD 001

GENERATOR

5. Generator's Name and Mailing Address Native Village of NE Cape
c/o Savoonga IRA Council
P.O. Box 120
Savoonga, AK 99769
Generator's Phone: 907-984-6414

Generator's Site Address (if different than mailing address)
Native Village of Northeast Cape
57 miles ESE of Savoonga, Kitnagak Bay
Savoonga, AK 99769

6. Transporter 1 Company Name: Northland Services, Inc. — U.S. EPA ID Number: WAD 981773005

7. Transporter 2 Company Name: Roadlink — U.S. EPA ID Number: WAH 000016683

8. Designated Facility Name and Site Address ~~Columbia Ridge Landfill & Recycling Center~~
18177 Cedar Springs Lane
Arlington, OR 97812-6512
Facility's Phone: 541-454-2030
U.S. EPA ID Number: ORD 987173457

9. Waste Shipping Name and Description	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	
1. Material not regulated by D.O.T.	1	CM	~~28690~~ 31540	P	TARE 5,510 NET 26030
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
a) 111503 OR Metallic/Non-Burnable Debris Container Type: 20-foot open top
Container #: WMXU6326 Please mail original manifest, scale ticket, & CD to:
Bristol Environmental Remediation Services, LLC, Attn: Tyler Ellingboe
111 W 16th Ave., 3rd Floor, Anchorage, AK 99501

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Tyler Ellingboe On Behalf Of Savoonga IRA Council — Signature: Tyler S. Ellingboe — Month 09 Day 22 Year 12

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MICHAEL DAWSON — Signature: Michael Dawson — Month 9 Day 24 Year 12
Transporter 2 Printed/Typed Name: YAROSLAV — Signature: — Month 11 Day 29 Year 12

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Sarah Mastricola — Signature: Sarah Mastricola — Month 12 Day 04 Year 12

NON-HAZARDOUS WASTE MANIFEST (Continuation Sheet)	19. Generator ID Number AKR 000203687	20. Page 2 of 2	21. Waste Tracking Number MD 001

22. Generator's Name Native Village of Northeast Cape
c/o Savoonga IRA Council
P.O. Box 120, Savoonga, AK 99769

23. Transporter 3 Company Name Union Pacific Railroad — U.S. EPA ID Number NED 001792910

24. Transporter 4 Company Name Columbia Ridge Landfill — U.S. EPA ID Number ORD 987173457

25. Waste Shipping Name and Description	26. Containers No.	26. Containers Type	27. Total Quantity	28. Unit Wt./Vol.	

29. Special Handling Instructions and Additional Information

GENERATOR

30. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Cindi Cregg	Cindi Cregg	11	29	12

31. Transporter 4 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Sarah Madruga	Sarah Madruga	12	01	12

TRANSPORTER

32. Discrepancy

DESIGNATED FACILITY

Columbia Ridge
18177 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2030

Original Ticket# 116810 188081

Customer Name	BRISTOL ENVIRONMENTAL BRISTOL	Carrier	6000
Ticket Date	12/04/2012	Vehicle#	6326
Payment Type	Credit Account	Container	6326
Manual Ticket#	766985	Billing #	0000552
Hauling Ticket#		Manifest	MD001
Destination	UP/ROAD LINK	PO	49029
Profile	111503OR (SCRAP METAL, WOOD, RUBBER, WIRE - CM)		
Generator	OR-NATIVE VILLAGE OF NE CAPE NATIVE VILLAGE OF NORTHEAST CAPE		

Volume

	Time	Scale	Operator	Inbound		
In	12/01/2012 12:07:32	MANUAL WT	SMastrio		Gross	71440 lb*
Out	12/04/2012 12:07:32		SMastrio		Tare	45340 lb*
			* Manual Weight		Net	26100 lb
					Tons	13.05

Comments

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	13.05	Tons				AK-SAVOOGN
2	FEA T SPW-FUEL,ENV	100	13.05	Tons				AK-SAVOOGN
3	RAIL 20FT SPW-RAIL	100	1	Load				AK-SAVOOGN
4	INBOUND SPW-CAN HA	100	1	Load				AK-SAVOOGN
5	OUTBOUND SPW-CONT	100	1	Load				AK-SAVOOGN
6	DEL U SPW-DELIVERY	100	1	Each				AK-SAVOOGN
7	LOC U SPW-LOCAL TR	100	1	Load				AK-SAVOOGN

WASTE MANAGEMENT

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

No. 766985

2012 DEC 4 PM 12:41:20

DATE:/TIME:
LOAD DATE:
CUSTOMER: Bristol Env./NE Cape
PROFILE NUMBER: 111503OR
TRUCK NUMBER: 6326
TRAILER/CONTAINER NUMBER:
SEAL NUMBER: MD001
CUSTOMER INVOICE NO.:

GROSS WEIGHT: 71440
TARE WEIGHT-TRACTOR: 45340
TARE WGT.-TRAILER/CONTAINER:
NET WEIGHT: 26100

GATEHOUSE: SW
DRIVER:
TRAIN ID: Weel 30 ORIGIN:
WASTE TYPE: Scrap metal, wood, rubber, hose
DISPOSAL: CM DC BU GRID SEGREGATE
REMARKS:

HAULER:

902-ARLINGTON

WASTE MANAGEMENT

COLUMBIA RIDGE LANDFILL & RECYCLING CENTER
18177 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2030
(541) 454-3312 Fax

December 6, 2012

Bristol Environmental & Engineering BERS
111 W. 16th Ave. Suite 301
Anchorage, AK 99501

CERTIFICATE OF DISPOSAL

Waste Management, Inc. dba Columbia Ridge Landfill has received NON HAZARDOUS Waste material from the Native Village of NE Cape on behalf of Bristol Environmental.

Date of Disposal:	December 4, 2012
Profile #:	111503OR
Manifest #:	MD002
Container #:	WMXU6132
Weight Disposed:	28500 lbs.
Waste Type:	Scrap Metal, Wood, Rubber, & Wire

I certify, on behalf of the above listed facility, that the above-described non hazardous waste was managed in compliance with all applicable laws.

Sarah Mastriona

Sarah Mastriona
Special Waste Scale Clerk

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number AKR 000203687	2. Page 1 of 2	3. Emergency Response Phone 1-800-424-9300	4. Waste Tracking Number MD 002

GENERATOR

5. Generator's Name and Mailing Address Native Village of NE Cape
c/o Savoonga IRA Council
P.O. Box 120
Savoonga, AK 99769
Generator's Phone: 907-984-6414

Generator's Site Address (if different than mailing address)
Native Village of Northeast Cape
57 miles ESE of Savoonga, Kitnagak Bay
Savoonga, AK 99769

6. Transporter 1 Company Name: Northland Services, Inc. — U.S. EPA ID Number: WAD 981773005

7. Transporter 2 Company Name: Roadlink — U.S. EPA ID Number: WAH 000016683

8. Designated Facility Name and Site Address Columbia Ridge Landfill & Recycling Center
18177 Cedar Springs Lane
Arlington, OR 97812-6512
Facility's Phone: 541-454-2030
U.S. EPA ID Number: ORD 987173457

9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1. Material not regulated by D.O.T.	1	CM	34160	P	TARE 4,888 NET 29272
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
a) 111503 OR Metallic/Non-Burnable Debris Container Type: 20-foot open top
Container #: WMXU6132 Please mail original manifest, scale ticket, & CD to:
Bristol Environmental Remediation Services, LLC, Attn: Tyler Ellingboe
111 W 16th Ave., 3rd Floor, Anchorage, AK 99501

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Tyler Ellingboe On Behalf Of Savoonga IRA Council — Signature: Tyler S. Ellingboe — Month 09 Day 22 Year 12

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MICHAEL DAWSON — Signature: Michael Dawson — Month 9 Day 24 Year 12
Transporter 2 Printed/Typed Name: TAADS KLEES — Signature: — Month 11 Day 29 Year 12

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Sarah Mastriona — Signature: Sarah Mastriona — Month 12 Day 04 Year 12

NON-HAZARDOUS WASTE MANIFEST (Continuation Sheet)

19. Generator ID Number	20. Page	21. Waste Tracking Number
AKR 000203687	2 of 2	MD 002

22. Generator's Name: Native Village of Northeast Cape
c/o Savoonga IRA Council
P.O. Box 120, Savoonga, AK 99769

23. Transporter 3 Company Name: Union Pacific Railroad — U.S. EPA ID Number: NED 001792910

24. Transporter 4 Company Name: Columbia Ridge Landfill — U.S. EPA ID Number: ORD 987173457

	25. Waste Shipping Name and Description	26. Containers No.	26. Containers Type	27. Total Quantity	28. Unit Wt./Vol.	

29. Special Handling Instructions and Additional Information

GENERATOR

30. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Cindi Cryer	Cindi Cryer	11	29	12

31. Transporter 4 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Sarah Mastricua	Sarah Mastricua	12	04	12

TRANSPORTER

32. Discrepancy

DESIGNATED FACILITY

Columbia Ridge
18177 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2030

Original
Ticket# 188080

Customer Name	BRISTOL ENVIRONMENTAL BRISTOL	Carrier	6000
Ticket Date	12/04/2012	Vehicle#	6132
Payment Type	Credit Account	Container	6132
Manual Ticket#	766983	Billing #	0000552
Hauling Ticket#		Manifest	MD002
Destination	UP/ROAD LINK	PO	49029
Profile	111503OR (SCRAP METAL, WOOD, RUBBER, WIRE - CM)		
Generator	OR-NATIVE VILLAGE OF NE CAPE NATIVE VILLAGE OF NORTHEAST CAPE		

Volume

	Time	Scale	Operator	Inbound		
In	12/01/2012 12:06:52	MANUAL WT	SMastrio		Gross	73060 lb*
Out	12/04/2012 12:06:52		SMastrio		Tare	44560 lb*
			* Manual Weight		Net	28500 lb
					Tons	14.25

Comments

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	14.25	Tons				AK-SAVOOGN
2	FEA T SPW-FUEL,ENV	100	14.25	Tons				AK-SAVOOGN
3	RAIL 20FT SPW-RAIL	100	1	Load				AK-SAVOOGN
4	INBOUND SPW-CAN HA	100	1	Load				AK-SAVOOGN
5	OUTBOUND SPW-CONT	100	1	Load				AK-SAVOOGN
6	DEL U SPW-DELIVERY	100	1	Each				AK-SAVOOGN
7	LOC U SPW-LOCAL TR	100	1	Load				AK-SAVOOGN

WM WASTE MANAGEMENT

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

No. 766983

DATE/TIME: 2012 DEC 4 PM 12:04:52
LOAD DATE:
CUSTOMER: Bristol Env. / NE Cape
PROFILE NUMBER: 111503OR
TRUCK NUMBER: 6132
TRAILER/CONTAINER NUMBER:
SEAL NUMBER: MD002
CUSTOMER INVOICE NO.:

GROSS WEIGHT: 73060
TARE WEIGHT-TRACTOR: 44560
TARE WGT.-TRAILER/CONTAINER:
NET WEIGHT: 28500

GATEHOUSE: SW
DRIVER:
TRAIN ID: Vleegl 36 ORIGIN:
WASTE TYPE: Scrap metal, wood, rubber, hose
DISPOSAL: CM DC BU GRID SEGREGATE
REMARKS:

HAULER:

902-ARLINGTON

WASTE MANAGEMENT

COLUMBIA RIDGE LANDFILL & RECYCLING CENTER
18177 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2030
(541) 454-3312 Fax

December 6, 2012

Bristol Environmental & Engineering BERS
111 W. 16th Ave. Suite 301
Anchorage, AK 99501

CERTIFICATE OF DISPOSAL

Waste Management, Inc. dba Columbia Ridge Landfill has received NON HAZARDOUS Waste material from the Native Village of NE Cape on behalf of Bristol Environmental.

Date of Disposal:	December 3, 2012
Profile #:	111503OR
Manifest #:	MD003
Container #:	WMXU6249
Weight Disposed:	21560 lbs.
Waste Type:	Scrap Metal, Wood, Rubber, & Wire

I certify, on behalf of the above listed facility, that the above-described non hazardous waste was managed in compliance with all applicable laws.

Sarah Mastriona

Sarah Mastriona
Special Waste Scale Clerk

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: AKR 000203687

2. Page 1 of 2

3. Emergency Response Phone: 1-800-424-9300

4. Waste Tracking Number: MD003

5. Generator's Name and Mailing Address: ~~Native Village of NE Cape~~
c/o Savoonga IRA Council
P.O. Box 120
Savoonga, AK 99769
Generator's Phone: 907-984-6414

Generator's Site Address (if different than mailing address):
Native Village of Northeast Cape
57 miles ESE of Savoonga, Kitnagak Bay
Savoonga, AK 99769

6. Transporter 1 Company Name: Northland Services, Inc. — U.S. EPA ID Number: WAD 981773005

7. Transporter 2 Company Name: Roadlink — U.S. EPA ID Number: WAH 000016683

8. Designated Facility Name and Site Address: Columbia Ridge Landfill & Recycling Center
18177 Cedar Springs Lane
Arlington, OR 97812-6512
Facility's Phone: 541-454-2030
U.S. EPA ID Number: ORD 987173457

9. Waste Shipping Name and Description	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	
1. Material not regulated by D.O.T.	1	CM	26700	P	TARE 5070 NET 21,630
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
a) 111503 OR Metallic/Non-Burnable Debris Container Type: 20-foot open top
Container #: WMXU6249 Please mail original manifest, scale ticket, & CD to:
Bristol Environmental Remediation Services, LLC, Attn: Tyler Ellingboe
111 W 16th Ave., 3rd Floor, Anchorage, AK 99501

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Tyler Ellingboe On Behalf Of Savoonga IRA Council
Signature: Tyler A. Ellingboe
Month/Day/Year: 09 22 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MICHAEL DAWSON — Signature: Michael Dawson — Month/Day/Year: 9 24 12
Transporter 2 Printed/Typed Name: ANATOLIY — Signature: [illegible] — Month/Day/Year: 11 29 12

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Sarah Mastriona — Signature: Sarah Mastriona — Month/Day/Year: 12 03 12

NON-HAZARDOUS WASTE MANIFEST (Continuation Sheet)	19. Generator ID Number AKR 000203687	20. Page 2 of 2	21. Waste Tracking Number MD 003

22. Generator's Name Native Village of Northeast Cape
c/o Savoonga IRA Council
P.O. Box 120, Savoonga, AK 99769

23. Transporter 3 Company Name Union Pacific Railroad — U.S. EPA ID Number NED 001792910

24. Transporter 4 Company Name Columbia Ridge Landfill — U.S. EPA ID Number ORD 987173457

25. Waste Shipping Name and Description	26. Containers No.	26. Containers Type	27. Total Quantity	28. Unit Wt./Vol.	

29. Special Handling Instructions and Additional Information

GENERATOR

30. Transporter 3 Acknowledgment of Receipt of Materials
Printed/Typed Name Cindi Cryo — Signature Cindi Cryo — Month Day Year 11 29 12

31. Transporter 4 Acknowledgment of Receipt of Materials
Printed/Typed Name Sarah Mastriona — Signature Sarah Mastriona — Month Day Year 12 01 12

TRANSPORTER

32. Discrepancy

DESIGNATED FACILITY

Columbia Ridge
18177 Cedar Springs Lane
Arlington, OR, 97812
Ph: (541) 454-2030

Original 188079
Ticket# 116096

Customer Name	BRISTOL ENVIRONMENTAL BRISTOL	Carrier	6000
Ticket Date	12/03/2012	Vehicle#	6249
Payment Type	Credit Account	Container	6249
Manual Ticket#	766984	Billing #	0000552
Hauling Ticket#		Manifest	MD003
Destination	UP/ROAD LINK	PO	49029
Profile	1115030R (SCRAP METAL, WOOD, RUBBER, WIRE - CM)		
Generator	OR-NATIVE VILLAGE OF NE CAPE NATIVE VILLAGE OF NORTHEAST CAPE		

Volume

	Time	Scale	Operator	Inbound		
In	12/01/2012 12:05:12	MANUAL WT	SMastrio		Gross	66360 lb*
Out	12/03/2012 12:05:12		SMastrio		Tare	44800 lb*
					Net	21560 lb
			* Manual Weight		Tons	10.78

Comments

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-	100	10.78	Tons				AK-SAVOOGN
2	FEA T SPW-FUEL,ENV	100	10.78	Tons				AK-SAVOOGN
3	RAIL 20FT SPW-RAIL	100	1	Load				AK-SAVOOGN
4	INBOUND SPW-CAN HA	100	1	Load				AK-SAVOOGN
5	OUTBOUND SPW-CONT	100	1	Load				AK-SAVOOGN
6	DEL U SPW-DELIVERY	100	1	Each				AK-SAVOOGN
7	LOC U SPW-LOCAL TR	100	1	Load				AK-SAVOOGN

WASTE MANAGEMENT

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

Nº 766984

DATE:/TIME: 2012 DEC 3 AM10:11:45
LOAD DATE:
CUSTOMER: Bristol Env. / NE Cape
PROFILE NUMBER: 1115030R
TRUCK NUMBER: 6249
TRAILER/CONTAINER NUMBER:
SEAL NUMBER: MD003
CUSTOMER INVOICE NO.:

GROSS WEIGHT: 66360
TARE WEIGHT-TRACTOR: 44800
TARE WGT.-TRAILER/CONTAINER:
NET WEIGHT: 21560

GATEHOUSE:
DRIVER:
TRAIN ID: Vargl 36 ORIGIN:
WASTE TYPE: Scrap metal, wood, rubber, wire
DISPOSAL: CM DC BU GRID SEGREGATE
REMARKS:

HAULER:

902-ARLINGTON

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 1212131402 8 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number: AKR000203687	2. Page 1 of 2	3. Emergency Response Phone: 1-800-424-9300	4. Manifest Tracking Number: 004376114 FLE

GENERATOR

5. Generator's Name and Mailing Address: Native Village of NE Cape
c/o Savoonga IRA Council
P.O. Box 120, Savoonga, AK 99769
Generator's Phone: 907-984-6414

Generator's Site Address (if different than mailing address):
Native Village of Northeast Cape
57 miles ESE of Savoonga, Kitnagak Bay
Savoonga, AK 99769

6. Transporter 1 Company Name: Northland Services, Inc. — U.S. EPA ID Number: WAD981773005

7. Transporter 2 Company Name: Emerald Services, Inc. — U.S. EPA ID Number: WAD058364647

8. Designated Facility Name and Site Address: US Ecology Idaho, Inc.
20400 Lemley Road
Grand View, ID 83624
Facility's Phone: 208-834-2275
U.S. EPA ID Number: IDD073114654

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
RQ	1. UN3077, Waste environmentally hazardous substances solid, n.o.s. (lead, carbon tetrachloride) 9, PGIII (D008), ERG#171	004 ~~005~~	DM	2000	P	D008	D019	
RQ	2. UN3077, Waste environmentally hazardous substances, solid, n.o.s. (lead), 9, PGIII, (D008), ERG#171	002	BA	1400	P	D008		
RQ	3. UN3077, Waste environmentally hazardous substances, solid, n.o.s. (lead), 9, PGIII (D008), ERG#171	004	BA	5500	P	D008		
RQ	4. UN3077, Waste environmentally hazardous substances, solid, n.o.s. (lead, arsenic), 9, PGIII, (D004) ERG#171	001	DM	200	P	D004	D008	

14. Special Handling Instructions and Additional Information
a) USE29381 LBP Solid
b) 15418 LBP Wood debris
c) USE29380 Burner ash
d) USE28412 Broken batteries

Please mail original manifest and CD to: Bristol Environmental Remediation Services, LLC, Attn: Tyler Ellingboe, 111 W. 16th Ave., Third Floor, Anchorage, AK 9950[illegible]

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Tyler Ellingboe On Behalf Of Savoonga IRA Council — Signature: Tyler S. Ellingboe — Month Day Year: 09 22 12

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Michael Dawson — Signature: Michael Dawson — Month Day Year: 9 24 12
Transporter 2 Printed/Typed Name: Tim Simon — Signature: [illegible] — Month Day Year: 12 10 12

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132	H132	H132	H132

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Donna Pullen — Signature: Donna Pullen — Month Day Year: 12 14 12

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.
DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 121213 14028 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: AKR000203687

22. Page: 2 of 2

23. Manifest Tracking Number: 004376114 FLE

24. Generator's Name: Native Village of Northeast Cape

25. Transporter 3 Company Name: Steve Forler Trucking — U.S. EPA ID Number: WAR000001263

26. Transporter ______ Company Name — U.S. EPA ID Number:

GENERATOR

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
RQ	UN3432, Polychlorinated biphenyls, Solid, 9, PGII, (PCB), marine pollutant, ERG#171	001	DF	10	K	TSCA		
RQ	NA2212, Asbestos, 9, PGIII, (Asbestos), ERG#171	001	BA	500	P			
	Material not regulated by D.O.T.	001	DM	150	P			
RQ	UN1479, Waste oxidizing solid, n.o.s. (sodium hypochlorite, sodium hydroxide), PGII, (D001), ERG#140	001 ~~003~~	Dm ~~DF~~	200	P	D001		

32. Special Handling Instructions and Additional Information

1. USE15593 PCB Ballasts; ASD: 9/10/12
2. 23762 ACM
3. USE29382 Grease
4. USE29383 Dish Detergent

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name: Mike Padget — Signature: [signature] — Month Day Year: 12 13 12

34. Transporter ______ Acknowledgment of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

H132 | H132 | H132 | H132

EPA Form 8700-22A (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

CERTIFICATE OF DISPOSAL

January 12,2013

NATIVE VILLAGE OF NORTHEAST CAPE
57 MILE ESE OF SAVOONGA, AK
SAVOONGA, AK 99769

This is to certify that waste as defined on Waste Manifest number **004376114 FLE/** was received by U.S. Ecology, Inc., on **12/14/2012**.The waste(s) were subsequently treated, if required by 40 CFR Part 268 and U.S. Ecology's permits and disposed of by **01/09/2013** in accordance with permits and laws regulating this facility.

Reference Number:	12121314028-004376114 FLE-1-1
Material:	1 55 GALLON DRUM (ENCAP MATERIAL)
Process:	Microencap
Management Code:	H132 Landfill or surface impoundment that will be closed as landfill
Facility:	U.S. ECOLOGY IDAHO, INC. 20400 LEMLEY ROAD GRAND VIEW, ID 83624 EPA ID: IDD073114654
Waste Type:	RCRA HAZARDOUS WASTE
Customer:	EMERALD ALASKA

Printed Name: DONNA PULLEN

Signature: Donna Pullen

Title: RECEIVING SUPERVISOR

CERTIFICATE OF DISPOSAL

January 12,2013

NATIVE VILLAGE OF NORTHEAST CAPE
57 MILE ESE OF SAVOONGA, AK
SAVOONGA, AK 99769

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Reference Number: 12121314028-004376114 FLE-1-1
Material: 3 85 GALLON DRUM (ENCAP MATERIAL)
Process: Microencap
Management Code: H132 Landfill or surface impoundment that will be closed as landfill
Facility: U.S. ECOLOGY IDAHO, INC.
20400 LEMLEY ROAD
GRAND VIEW, ID 83624
EPA ID: IDD073114654
Waste Type: RCRA HAZARDOUS WASTE
Customer: EMERALD ALASKA

Printed Name: DONNA PULLEN

Signature: Donna Pullen

Title: RECEIVING SUPERVISOR

CERTIFICATE OF DISPOSAL

January 12,2013

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SAVOONGA, AK 99769

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Reference Number: 12121314028-004376114 FLE-1-1
Material: 1 55 GALLON DRUM (EMPTY CONTAINER)
Process: Microencap
Management Code: H132 Landfill or surface impoundment that will be closed as landfill
Facility: U.S. ECOLOGY IDAHO, INC.
20400 LEMLEY ROAD
GRAND VIEW, ID 83624
EPA ID: IDD073114654
Waste Type: RCRA HAZARDOUS WASTE
Customer: EMERALD ALASKA

Printed Name: DONNA PULLEN

Signature: Donna Pullen

Title: RECEIVING SUPERVISOR

CERTIFICATE OF DISPOSAL

January 12,2013

NATIVE VILLAGE OF NORTHEAST CAPE
57 MILE ESE OF SAVOONGA, AK
SAVOONGA, AK 99769

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Reference Number: 12121314028-004376114 FLE-1-1
Material: 3 85 GALLON DRUM (EMPTY CONTAINER)
Process: Microencap
Management Code: H132 Landfill or surface impoundment that will be closed as landfill
Facility: U.S. ECOLOGY IDAHO, INC.
20400 LEMLEY ROAD
GRAND VIEW, ID 83624
EPA ID: IDD073114654
Waste Type: RCRA HAZARDOUS WASTE
Customer: EMERALD ALASKA

Printed Name: DONNA PULLEN

Signature: Donna Pullen

Title: RECEIVING SUPERVISOR

CERTIFICATE OF DISPOSAL

January 12,2013

NATIVE VILLAGE OF NORTHEAST CAPE
57 MILE ESE OF SAVOONGA, AK
SAVOONGA, AK 99769

This is to certify that waste as defined on Waste Manifest number **004376114 FLE/** was received by U.S. Ecology, Inc., on **12/14/2012**. The waste(s) were subsequently treated, if required by 40 CFR Part 268 and U.S. Ecology's permits and disposed of by **01/09/2013** in accordance with permits and laws regulating this facility.

Reference Number: 12121314028-004376114 FLE-1-2
Material: 2 CUBIC YARD BAG (ENCAP MATERIAL)
Process: Microencap
Management Code: H132 Landfill or surface impoundment that will be closed as landfill
Facility: U.S. ECOLOGY IDAHO, INC.
20400 LEMLEY ROAD
GRAND VIEW, ID 83624
EPA ID: IDD073114654
Waste Type: RCRA HAZARDOUS WASTE
Customer: EMERALD ALASKA

Printed Name: DONNA PULLEN

Signature: Donna Pullen

Title: RECEIVING SUPERVISOR

CERTIFICATE OF DISPOSAL

January 12,2013

NATIVE VILLAGE OF NORTHEAST CAPE
57 MILE ESE OF SAVOONGA, AK
SAVOONGA, AK 99769

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Reference Number: 12121314028-004376114 FLE-1-2
Material: 2 CUBIC YARD BAG (EMPTY CONTAINER)
Process: Microencap
Management Code: H132 Landfill or surface impoundment that will be closed as landfill
Facility: U.S. ECOLOGY IDAHO, INC.
20400 LEMLEY ROAD
GRAND VIEW, ID 83624
EPA ID: IDD073114654
Waste Type: RCRA HAZARDOUS WASTE
Customer: EMERALD ALASKA

Printed Name: DONNA PULLEN

Signature: Donna Pullen

Title: RECEIVING SUPERVISOR

CERTIFICATE OF DISPOSAL

January 12,2013

NATIVE VILLAGE OF NORTHEAST CAPE
57 MILE ESE OF SAVOONGA, AK
SAVOONGA, AK 99769

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Reference Number: 12121314028-004376114 FLE-1-4
Material: 1 55 GALLON DRUM (ENCAP MATERIAL)
Process: Microencap
Management Code: H132 Landfill or surface impoundment that will be closed as landfill
Facility: U.S. ECOLOGY IDAHO, INC.
20400 LEMLEY ROAD
GRAND VIEW, ID 83624
EPA ID: IDD073114654
Waste Type: RCRA HAZARDOUS WASTE
Customer: EMERALD ALASKA

Printed Name: DONNA PULLEN

Signature: Donna Pullen

Title: RECEIVING SUPERVISOR

CERTIFICATE OF DISPOSAL

January 12,2013

NATIVE VILLAGE OF NORTHEAST CAPE
57 MILE ESE OF SAVOONGA, AK
SAVOONGA, AK 99769

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Reference Number: 12121314028-004376114 FLE-1-4
Material: 1 55 GALLON DRUM (ENCAP MATERIAL)
Process: Microencap
Management Code: H132 Landfill or surface impoundment that will be closed as landfill
Facility: U.S. ECOLOGY IDAHO, INC.
20400 LEMLEY ROAD
GRAND VIEW, ID 83624
EPA ID: IDD073114654
Waste Type: RCRA HAZARDOUS WASTE
Customer: EMERALD ALASKA

Printed Name: DONNA PULLEN

Signature: Donna Pullen

Title: RECEIVING SUPERVISOR

CERTIFICATE OF DISPOSAL

January 12,2013

NATIVE VILLAGE OF NORTHEAST CAPE
57 MILE ESE OF SAVOONGA, AK
SAVOONGA, AK 99769

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Reference Number: 12121314028-004376114 FLE-2-6
Material: 1 CUBIC YARD BAG
Process: Direct Landfill
Management Code: H132 Landfill or surface impoundment that will be closed as landfill
Facility: U.S. ECOLOGY IDAHO, INC.
20400 LEMLEY ROAD
GRAND VIEW, ID 83624
EPA ID: IDD073114654
Waste Type: NON HAZARDOUS WASTE
Customer: EMERALD ALASKA

Printed Name: DONNA PULLEN

Signature: Donna Pullen

Title: RECEIVING SUPERVISOR

CERTIFICATE OF DISPOSAL

January 12,2013

NATIVE VILLAGE OF NORTHEAST CAPE
57 MILE ESE OF SAVOONGA, AK
SAVOONGA, AK 99769

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Reference Number: 12121314028-004376114 FLE-2-7
Material: 1 OVER PACK
Process: Direct Landfill
Management Code: H132 Landfill or surface impoundment that will be closed as landfill
Facility: U.S. ECOLOGY IDAHO, INC.
20400 LEMLEY ROAD
GRAND VIEW, ID 83624
EPA ID: IDD073114654
Waste Type: NON HAZARDOUS WASTE
Customer: EMERALD ALASKA

Printed Name: DONNA PULLEN

Signature: Donna Pullen

Title: RECEIVING SUPERVISOR

Bristol
ENVIRONMENTAL REMEDIATION SERVICES, LLC

2012 Waste Tracking Summary Spreadsheet

Waste Name	Generation Start Date	RCRA HAZ or NON-HAZ Waste?	Waste Package ID Code	Container Type/Size	Waste Package Quantity (cy, gal, etc.)	Waste Package Gross Weight (lb)	Waste Package Tare Weight (lb)	Waste Package Net Weight (lb)	Waste Profile No.	Manifest No.	Manifest Line No.	Bill of Lading No.	Consolidated Container Type or 20' Flatbed No.	TSDF Destination	Treatment Category	Date Manifest Signed by TSDF	Receipt of Return Manifest from TSDF	Receipt of Certificate of Disposal	Pounds Disposed
Scrap Metal Debris	9/22/2012	Non-Haz	WMXU 6326	20' Connex	pounds	31,540	5,510	26,030	111503OR	MD001	1a	MD001	N/A	Columbia Ridge Landfill	Direct Landfill	12/4/2012	12/28/2012	12/28/2012	26,100
Scrap Metal Debris	9/22/2012	Non-Haz	WMXU 6132	20' Connex	pounds	34,106	4,888	29,272	111503OR	MD002	1a	MD002	N/A	Columbia Ridge Landfill	Direct Landfill	12/4/2012	12/28/2012	12/28/2012	28,500
Scrap Metal Debris	9/22/2012	Non-Haz	WMXU 6249	20' Connex	pounds	26,700	5,070	21,630	111503OR	MD003	1a	MD003	N/A	Columbia Ridge Landfill	Direct Landfill	12/3/2012	12/28/2012	12/28/2012	21,560
LBP Solids	8/21/2012	Haz	2	DM85	pounds	500	N/A	N/A	USE29381	004376114FLE	1a	202836	CMCU205324	US Ecology Idaho, Inc.	Macroencapsulation in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	500
LBP Solids	8/21/2012	Haz	3	DM85	pounds	500	N/A	N/A	USE29381	004376114FLE	1a	202836	CMCU205324	US Ecology Idaho, Inc.	Macroencapsulation in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	500
LBP Solids	8/21/2012	Haz	4	DM55	pounds	500	N/A	N/A	USE29381	004376114FLE	1a	202836	CMCU205324	US Ecology Idaho, Inc.	Macroencapsulation in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	500
LBP Solids	8/21/2012	Haz	7	DM55	pounds	500	N/A	N/A	USE29381	004376114FLE	1a	202836	CMCU205324	US Ecology Idaho, Inc.	Macroencapsulation in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	500
LBP Wood Debris	8/21/2012	Haz	12a	yd^3 bag	pounds	700	N/A	N/A	15418	004376114FLE	1b	202836	CMCU205324	US Ecology Idaho, Inc.	Macroencapsulation in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	700
LBP Wood Debris	8/21/2012	Haz	12b	yd^3 bag	pounds	700	N/A	N/A	15418	004376114FLE	1b	202836	CMCU205324	US Ecology Idaho, Inc.	Macroencapsulation in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	700
Burner Ash	8/21/2012	Haz	15a	yd^3 bag	pounds	1,375	N/A	N/A	USE29380	004376114FLE	1c	202836	CMCU205324	US Ecology Idaho, Inc.	Stabilization in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	1,375
Burner Ash	8/21/2012	Haz	15b	yd^3 bag	pounds	1,375	N/A	N/A	USE29380	004376114FLE	1c	202836	CMCU205324	US Ecology Idaho, Inc.	Stabilization in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	1,375
Burner Ash	8/21/2012	Haz	15c	yd^3 bag	pounds	1,375	N/A	N/A	USE29380	004376114FLE	1c	202836	CMCU205324	US Ecology Idaho, Inc.	Stabilization in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	1,375
Burner Ash	8/21/2012	Haz	15d	yd^3 bag	pounds	1,375	N/A	N/A	USE29380	004376114FLE	1c	202836	CMCU205324	US Ecology Idaho, Inc.	Stabilization in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	1,375
Broken Lead Acid Batteries	8/21/2012	Haz	8	DM55	pounds	200	N/A	N/A	USE28412	004376114FLE	1d	202836	CMCU205324	US Ecology Idaho, Inc.	Macroencapsulation in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	200
PCB Ballasts	9/10/2012	TSCA	14	DF05	pounds	22	N/A	N/A	USE15593	004376114FLE	2a	202836	CMCU205324	US Ecology Idaho, Inc.	Direct Landfill in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	22
ACM	8/21/2012	Non-Haz	13	yd^3 bag	pounds	500	N/A	N/A	23762	004376114FLE	2b	202836	CMCU205324	US Ecology Idaho, Inc.	Direct Landfill in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	500
Grease	8/21/2012	Non-Haz	1	DM55	pounds	150	N/A	N/A	USE29382	004376114FLE	2c	202836	CMCU205324	US Ecology Idaho, Inc.	Direct Landfill in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	150
Dish Detergent	8/21/2012	Haz	11	DM55	pounds	200	N/A	N/A	USE29383	004376114FLE	2d	202836	CMCU205324	US Ecology Idaho, Inc.	Deactivation in Subtitle C Landfill	12/14/2012	1/12/2013	1/12/2013	200

Bristol
ENVIRONMENTAL
REMEDIATION SERVICES, LLC

111 W. 16th Avenue, Third Floor
Anchorage, AK 99501-5169
phone (907) 563-0013
fax (907) 563-6713
www.bristol-companies.com

February 12, 21013

EPA Region 10
1200 6th Avenue, Suite 900
Seattle, WA 98101

RE: Native Village of Northeast Cape (EPA ID# AKR000203687)
45-Day Exception Reporting

To Whom It May Concern,

On September 24, 2012, Bristol Environmental Remediation Services LLC (Bristol) submitted a waste shipment on behalf of the Native Village of Savoonga for the Native Village of Northeast Cape site located at the Northeast Cape of St. Lawrence Island, Alaska. Uniform Hazardous Waste Manifest No. 004376114FLE (see attached) was offered to the marine carrier, Northland Services, Inc., for transportation from the site to the Port of Seattle.

This letter is to inform you that due to the logistics of marine transport from western Alaska, the generator did not receive a copy of the TSDF-signed manifest within 45-days of the waste shipment date. Bristol was aware of the location of the waste shipment throughout the transportation process.

We have since received a copy of the signed-off manifest from the TSDF. The TSDF (US Ecology Idaho, Inc.) signed the manifest on December 14, 2012. The final signed-off copy of the manifest was received by Bristol on January 12, 2013.

Please contact me if you have any questions.

Respectfully,

Tyler G. Ellingboe

Tyler Ellingboe
Project Manager/Sr. Waste Specialist

Cc: Robert Annogiyuk, Native Village of Savoonga NALEMP Project Manager

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 1212131402ΔΔ Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: AKR000203687
2. Page 1 of 2
3. Emergency Response Phone: 1-800-424-9300
4. Manifest Tracking Number: 004376114 FLE

5. Generator's Name and Mailing Address: Native Village of NE Cape
c/o Savoonga IRA Council
P.O. Box 120, Savoonga, AK 99769
Generator's Phone: 907-984-6414

Generator's Site Address (if different than mailing address):
Native Village of Northeast Cape
57 miles ESE of Savoonga, Kitnagak Bay
Savoonga, AK 99769

6. Transporter 1 Company Name: Northland Services, Inc.
U.S. EPA ID Number: WAD981773005

7. Transporter 2 Company Name: Emerald Services, Inc.
U.S. EPA ID Number: WAD058364647

8. Designated Facility Name and Site Address:
US Ecology Idaho, Inc.
20400 Lemley Road
Grand View, ID 83624
Facility's Phone: 208-834-2275
U.S. EPA ID Number: IDD073114654

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
RQ	1. UN3077, Waste environmentally hazardous substances solid, n.o.s. (lead, carbon tetrachloride) 9, PGIII (D008), ERG#171	004 ~~005~~	DM	2000	P	D008 D019
RQ	2. UN3077, Waste environmentally hazardous substances, solid, n.o.s. (lead), 9, PGIII, (D008), ERG#171	002	BA	1400	P	D008
RQ	3. UN3077, Waste environmentally hazardous substances, solid, n.o.s. (lead), 9, PGIII (D008), ERG#171	004	BA	5500	P	D008
RQ	4. UN3077, Waste environmentally hazardous substances, solid, n.o.s. (lead, arsenic), 9, PGIII, (D004) ERG#171	001	DM	200	P	D004 D008

14. Special Handling Instructions and Additional Information
a) USE29381 LBP Solid
b) 15418 LBP Wood debris
c) USE29380 Burner ash
d) USE28412 Broken batteries
Please mail original manifest and CD to: Bristol Environmental Remediation Services, LLC, Attn: Tyler Ellingboe, 111 W. 16th Ave., Third Floor, Anchorage, AK 9950[illegible]

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Tyler Ellingboe On Behalf Of Savoonga IRA Council
Signature: Tyler S. Ellingboe
Month Day Year: 09 22 12

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: MICHAEL DAWSON
Signature: Michael Dawson
Month Day Year: 9 24 12

Transporter 2 Printed/Typed Name: Tim Simon
Signature: [signature]
Month Day Year: 12 10 12

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. H132 3. H132 4. H132

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Donna Pullen
Signature: Donna Pullen
Month Day Year: 12 14 12

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 1213 14028 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: AKR000203687

22. Page: 2 of 2

23. Manifest Tracking Number: 004376114 FLE

24. Generator's Name: Native Village of Northeast Cape

25. Transporter 3 Company Name: Steve Forler Trucking — U.S. EPA ID Number: WAR000001263

26. Transporter ______ Company Name — U.S. EPA ID Number:

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
RQ	UN3432, Polychlorinated biphenyls, Solid, 9, PGII, (PCB), marine pollutant, ERG#171	001	DF	10	K	TSCA		
RQ	NA2212, Asbestos, 9, PGIII, (Asbestos), ERG#171	001	BA	500	P			
	Material not regulated by D.O.T.	001	DM	150	P			
RQ	UN1479, Waste oxidizing solid, n.o.s. (sodium hypochlorite, sodium hydroxide), PGII, (D001), ERG#140	001 ~~003~~	Dm ~~DF~~	200	P	D001		

32. Special Handling Instructions and Additional Information

1. USE15593 PCB Ballasts; ASD: 9/10/12
2. 23762 ACM
3. USE29382 Grease
4. USE29383 Dish Detergent

GENERATOR

33. Transporter 3 Acknowledgment of Receipt of Materials
Printed/Typed Name: Mike Padget — Signature: [signature] — Month 12 Day 13 Year 12

34. Transporter ______ Acknowledgment of Receipt of Materials
Printed/Typed Name — Signature — Month | Day | Year

TRANSPORTER

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

H132	H132	H132	H132

DESIGNATED FACILITY

APPENDIX G

Conceptual Site Mode

-Human Health Conceptual Site Model Scoping Form

-Human Health Conceptual Site Model Graphic Form

-Ecological Conceptual Site Model Scoping Form

Print Form

Human Health Conceptual Site Model
Scoping Form

Site Name: Native Village of Northeast Cape, St. Lawrence Island, Alaska

File Number:

Completed by: Tyler Ellingboe, Bristol Project Manager

Introduction
The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

General Instructions: Follow the italicized instructions in each section below.

1. General Information:

Sources *(check potential sources at the site)*

- ☐ USTs
- ☒ ASTs
- ☐ Dispensers/fuel loading racks
- ☒ Drums
- ☒ Vehicles
- ☐ Landfills
- ☐ Transformers
- ☐ Other:

Release Mechanisms *(check potential release mechanisms at the site)*

- ☒ Spills
- ☒ Leaks
- ☒ Direct discharge
- ☒ Burning
- ☐ Other:

Impacted Media *(check potentially-impacted media at the site)*

- ☒ Surface soil (0-2 feet bgs*)
- ☒ Subsurface soil (>2 feet bgs)
- ☐ Air
- ☒ Sediment
- ☒ Groundwater
- ☒ Surface water
- ☐ Biota
- ☐ Other:

Receptors *(check receptors that could be affected by contamination at the site)*

- ☒ Residents (adult or child)
- ☐ Commercial or industrial worker
- ☒ Construction worker
- ☒ Subsistence harvester (i.e. gathers wild foods)
- ☒ Subsistence consumer (i.e. eats wild foods)
- ☒ Site visitor
- ☐ Trespasser
- ☐ Recreational user
- ☐ Farmer
- ☐ Other:

* bgs - below ground surface

2. **Exposure Pathways:** *(The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)*

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site-specific basis.) ☒

If the box is checked, label this pathway complete: Complete

Comments:

A review of soil sample results indicate concentrations of DRO/RRO, benzo[a]pyrene, and PCB-1254, and PCB-1260 at concentrations above established cleanup levels. In addition, the metals arsenic, cadmium, lead, and chromium were also detected above cleanup levels.

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

DRO was detected in soil samples above the site-specific cleanup level of 9,200 mg/kg. DRO is listed in Appendix B as a volatile compound of concern which has the potential to permeate the skin.

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, or are contaminants expected to migrate to groundwater in the future? ☐

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the ground-water is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350. ☐

If both boxes are checked, label this pathway complete: Incomplete

Comments:

Although some soil thawing takes place during the short summer months, underlaying permafrost and frozen soil make the potential ingestion of groundwater at the site unlikely. The Native Village of Northeast Cape is located in a tidal area on the Bering Sea coast, so ingestion of groundwater does not appear to be a current or future exposure pathway.

2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future? ☒

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities). ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

Site surface water bodies are not currently being used as drinking water sources; however, could potentially be used as drinking water sources in the future.

3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods? ☒

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)? ☐

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.) ☐

If all of the boxes are checked, label this pathway complete: Incomplete

Comments:

Contaminants present at the site above established cleanup levels are not known to pose a bioaccumulation risk.

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Are the contaminants in soil volatile (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

With the possible exception of DRO present exceeding established site cleanup levels, inhalation of outdoor air appears to be an unlikely exposure pathway. Persistent winds at the site make the inhalation of contaminants in outdoor air unlikely.

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminted soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures) ☒

Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

A review of soil sampling results indicate one detection of DRO in surface soil within 30-feet of a current site structure (residence).

3. **Additional Exposure Pathways:** *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

Dermal Exposure to Contaminants in Groundwater and Surface Water

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

Due to the climate and nature of the site, dermal exposure of contaminants in groundwater and surface water does not appear to be an exposure pathway of concern. Only one contaminant PCB-1260 was detected in surface water samples at concentrations just above the ADEC-established cleanup level of 0.5 micrograms per liter with the highest concentration. Three surface water samples and one sample duplicate exhibited concentrations of PCB-1260 at or above the cleanup level. The highest detection of PCB-1260 in surface water was 1.0 micrograms per liter.

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

The three remaining cabins at the site due not have plumbing and inhalation of volatile compounds in tap water is not applicable.

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- o Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- o Dust particles are less than 10 micrometers (Particulate Matter - PM_{10}). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.
- o Chromium is present in soil that can be dispersed as dust particles of any size.

Generally, DEC direct contact soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because it is assumed most dust particles are incidentally ingested instead of inhaled to the lower lungs. The inhalation pathway only needs to be evaluated when very small dust particles are present (e.g., along a dirt roadway or where dusts are a nuisance). This is not true in the case of chromium. Site specific cleanup levels will need to be calculated in the event that inhalation of dust containing chromium is a complete pathway at a site.

Check the box if further evaluation of this pathway is needed: ☒

Comments:

The majority of the Native Village of Northeast Cape site is covered with a vegetative mat (tundra) making the inhalation of fugitive dust an unlikely exposure pathway. However, the inhalation of fugitive dust may occur currently or in the future to industrial or construction work workers if activities include the excavation of subsurface soils.

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- o Climate permits recreational activities around sediment.
- o The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

The nature and climate of the Native Village of Northeast Cape site and a review of sediment sampling results indicate that direct contact with sediment is an unlikely exposure pathway. One sediment sample collected from a small seasonal surface pond exhibited a concentration of lead (650 mg/kg) which is above the established site-specific sediment cleanup level of 530 mg/kg.

4. Other Comments *(Provide other comments as necessary to support the information provided in this form.)*

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Native Village of Northeast Cape
Northeast Cape, St. Lawrence Island, Alaska

Completed By: Tyler Ellingboe, Bristol Project Manager
Date Completed: December 28, 2012

***Instructions:* Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.**

(1) *Check the media that could be directly affected by the release.*

(2) *For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.*

(3) *Check all exposure media identified in (2).*

(4) *Check all pathways that could be complete. The pathways identified in this column **must** agree with Sections 2 and 3 of the Human Health CSM Scoping Form.*

(5) *Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.*

Media / Transport Mechanisms

Media	Transport Mechanisms	
☑ Surface Soil (0-2 ft bgs)	Direct release to surface soil	check soil
	✓ Migration to subsurface	check soil
	✓ Migration to groundwater	check groundwater
	✓ Volatilization	check air
	✓ Runoff or erosion	check surface water
	☐ Uptake by plants or animals	check biota
	☐ Other (list):______	
☑ Subsurface Soil (2-15 ft bgs)	Direct release to subsurface soil	check soil
	✓ Migration to groundwater	check groundwater
	✓ Volatilization	check air
	☐ Uptake by plants or animals	check biota
	☐ Other (list):______	
☑ Ground-water	Direct release to groundwater	check groundwater
	✓ Volatilization	check air
	✓ Flow to surface water body	check surface water
	✓ Flow to sediment	check sediment
	☐ Uptake by plants or animals	check biota
	☐ Other (list):______	
☑ Surface Water	Direct release to surface water	check surface water
	✓ Volatilization	check air
	✓ Sedimentation	check sediment
	☐ Uptake by plants or animals	check biota
	☐ Other (list):______	
☑ Sediment	Direct release to sediment	check sediment
	✓ Resuspension, runoff, or erosion	check surface water
	☐ Uptake by plants or animals	check biota
	☐ Other (list):______	

Exposure Media / Exposure Pathway/Route / Current & Future Receptors

Exposure Media	Exposure Pathway/Route	Residents (adults or children)	Commercial or industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☑ soil	✓ Incidental Soil Ingestion	C/F	C/F	C/F	C/F	C/F	C/F	
	✓ Dermal Absorption of Contaminants from Soil	C/F	C/F	C/F	C/F	C/F	C/F	
	✓ Inhalation of Fugitive Dust	C/F	C/F	C/F	C/F	C/F	C/F	
☑ groundwater	☐ Ingestion of Groundwater							
	☐ Dermal Absorption of Contaminants in Groundwater							
	☐ Inhalation of Volatile Compounds in Tap Water							
☑ air	✓ Inhalation of Outdoor Air	C/F	C/F	C/F	C/F	C/F	C/F	
	✓ Inhalation of Indoor Air	C/F	C/F	C/F	C/F	C/F	C/F	
	✓ Inhalation of Fugitive Dust	C/F	C/F	C/F	C/F	C/F	C/F	
☑ surface water	✓ Ingestion of Surface Water	C/F	C/F	C/F	C/F	C/F	C/F	
	☐ Dermal Absorption of Contaminants in Surface Water							
	☐ Inhalation of Volatile Compounds in Tap Water							
☑ sediment	✓ Direct Contact with Sediment	C/F	C/F	C/F	C/F	C/F	C/F	
☐ biota	☐ Ingestion of Wild or Farmed Foods							

Revised, 10/01/2010

Appendix C: Blank Ecoscoping Form

Site Name: Native Village of Northeast Cape, St. Lawrence Island, AK
Completed by: Tyler Ellingboe, Bristol Project Manager
Date: May 7, 2013

Instructions: Follow the italicized instructions in each section below. "Off-ramps," where the evaluation ends before completing all of the sections, can be taken when indicated by the instructions. Comment boxes should be used to help support your answers.

1. Direct Visual Impacts and Acute Toxicity

Are direct impacts that may result from the site contaminants evident, or is acute toxicity from high contaminant concentrations suspected? *Check the appropriate box.*

- ☐ Yes – *describe observations below and evaluate all of the remaining sections without taking any off-ramps.*
- ☒ No – *go to next section.*

Comments:

No visual impacts from contaminants are apparent.

2. Terrestrial and Aquatic Exposure Routes

Check each terrestrial and aquatic route that could occur at the site.

Terrestrial Exposure Routes

- ☐ Exposure to water-borne contaminants as a result of wading or swimming in contaminated waters or ingesting contaminated water
- ☐ Contaminant uptake in terrestrial plants whose roots are in contact with contaminated surface water
- ☐ Contaminant migration via saturated or unsaturated groundwater zones and discharge at upland "seep" locations (not associated with a wetland or water body)
- ☐ Contaminant uptake by terrestrial plants whose roots are in contact with soil moisture or groundwater present within the root zone (generally no more than 4 feet below ground surface
- ☒ Particulates deposited on plants directly or from rain splash
- ☒ Incidental ingestion and/or exposure while animals grub for food, burrow (up to 2 feet for small animals or 6 feet for large animals), or groom

- [ ] Inhalation of fugitive dust or vapors disturbed by foraging or burrowing activities
- [ ] Bioaccumulatives (other than PAHs, which bioaccumulate more readily in aquatic environments) taken up by soil invertebrates, which are in turn eaten by higher food chain organisms (see the Policy Guidance on Developing Conceptual Site Models)
- [ ] Other site-specific exposure pathways

Aquatic Exposure Routes

- [ ] Contaminated surface runoff migration to water bodies through swales, drainage ditches, or overland flow
- [ ] Aquatic receptors exposed through osmotic exchange, respiration, or ventilation of surface waters
- [ ] Contaminant migration via saturated or unsaturated groundwater zones and discharge at "seep" locations along banks or directly to surface water
- [ ] Deposition into sediments from upwelling of contaminated groundwater
- [x] Aquatic receptors may be exposed directly to contaminated sediments through foraging or burrowing, or indirectly exposed due to osmotic exchange, respiration, or ventilation of sediment pore water.
- [x] Aquatic plants rooted in contaminated sediments
- [ ] Bioaccumulatives (see the Policy Guidance on Developing Conceptual Site Models) taken up by sediment invertebrates, which are in turn eaten by higher food chain organisms
- [ ] Other site-specific exposure pathways

If any of the above boxes are checked go on to the next section. If none are checked, end the evaluation and check the box below.

- [ ] OFF-RAMP: NO FURTHER ECOLOGICAL EVALUATION NECESSARY

Comments:

PCBs have an affinity for soil/sediment and are not expected to go into solution easily. Saturated soils in the area should minimize fugitive dust issues. Underlying permafrost and frozen soil, present the majority of the year, make potential ingestion of groundwater unlikely.

3. Habitat

Check all that may apply. See Ecoscoping Guidance for additional help.

- [ ] Habitat that could be affected by the contamination supports valued species (i.e., species that are regulated, used for subsistence, have ceremonial importance, have commercial value, or provide recreational opportunity)
- [ ] Critical habitat or anadromous stream in an area that could be affected by the contamination
- [x] Habitat that is important to the region that could be affected by the contamination

☐ Contamination is in a park, preserve, or wildlife refuge

If any of the above boxes are checked go on to the next scoping factor. If none are checked, end the evaluation and check the box below.

☐ OFF-RAMP: NO FURTHER ECOLOGICAL EVALUATION NECESSARY

Comments:

There are no known threatened or endangered species within the vicinity of the site. The relatively small footprint of the site should present little or no impact to the island's caribou herd. Contamination present could impact the Native Village of Savoonga's goal to re-populate the area.

4. Contaminant Quantity

Check all that may apply. See Ecoscoping Guidance for additional help.

☐ Endangered-, threatened-, or species of special concern are present

☒ The aquatic environment is or could be affected

☒ Non-petroleum contaminants may be present, or the total area of petroleum-contaminated surface soil exceeds one-half acre

If any of the above boxes are checked go on to the next scoping factor. If none are checked, end the evaluation and check the box below.

☐ OFF-RAMP: NO FURTHER ECOLOGICAL EVALUATION NECESSARY

Comments:

Diesel-range and residual-range organics, polynuclear aromatic hydrocarbons, cadmium, lead, and PCBs have been deteced in surface soil above established cleanup levels. Cadmium and lead have been detected in sediment above cleanup levels. PCBs have been detected in surface water above the ADEC cleanup level.

5. Toxicity Determination

Check all that apply.

☐ Bioaccumulative chemicals are present (see Policy Guidance on Developing Conceptual Site Models)

☒ Contaminants exceed benchmark levels (see the Ecological Benchmark Tool in RAIS, available at: http://rais.ornl.gov/tools/eco_search.php)

If either box is checked complete a detailed Ecological Conceptual Site Model (see DEC's Conceptual Site Model Guidance) and submit it with the form to you DEC Project Manager.

If neither box is checked, check the box below and submit this form to your DEC Project Manager.

☐ OFF-RAMP: NO FURTHER ECOLOGICAL EVALUATION NECESSARY

Comments:

Contaminants present at the site above established cleanup levels are not known to pose a bioaccumulation risk. Additional site investigation activities are planned for the site.

APPENDIX H

Training Certificate

ENVIRONMENTAL
MANAGEMENT
INCORPORATED

Certificate of Training

T - 9116 - 7317
Certificate Number

This is to certify that

Lesa Nelson

has satisfactorily completed 40 hours

of

Hazardous Waste Operations & Emergency Response - 40 Hours

In compliance with 29 CFR 1910.120

Class Start Date: 7/26/2004 *Class End Date: 7/30/2004*

	7/30/2004	*7/30/2005*	*Stuart M. Jacques*
Dennis Bromley	*Exam Date*	*Cert. Exp. Date*	*Director*

Environmental Management Inc. 206 E. Fireweed Lane Suite 201, Anchorage Alaska 99503 907-272-8852

CERTIFICATE OF TRAINING

THIS IS TO CERTIFY THAT

LESA E. NELSON

Has Successfully Completed and passed
the required testing for the

EPA/AHERA Building Inspector

To comply with the training requirements of

This course was accredited by the IDEM and is in compliance with
TSCA Title II and State of Indiana under 326 IAC 18-2

Class Start date: 10/26/11   Class End Date: 10/28/11

Saton Group, Inc
1310 E 66th Ave #2
Anchorage AK 99518
907-332-0456

Alan Caldwell, Training Instructor

10/28/11
Exam date

10/28/12
Expiration Date

Cert No: TBI 24-11-145

AIHS

alaska industrial hygiene services

CERTIFIES THAT ***LESA NELSON*** SUCCESSFULLY COMPLETED AN 8-HOUR HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE (HAZWOPER) ANNUAL REFRESHER TRAINING COURSE IN COMPLIANCE WITH 29 CFR 1910.120(e) ON FEBRUARY 23, 2012.

Darren D. Burks, CIH, CSP

02/23/13

Course Expiration Date

AIHS ● 8427 LAVIENTO DRIVE, SUITE 102 ● ANCHORAGE, AK 99515
PHONE: (907) 336-2447 ● E-MAIL: dburks@acsalaska.net