



Alaska Department of Environmental Conservation

Reuse & Redevelopment Initiative

Brownfield Assessment



PROPERTY ASSESSMENT AND CLEANUP PLAN

Raspberry Strait Dump Site
Afognak Island, Alaska

Submitted to:
Department of Environmental Conservation
Brownfield Program



By:
SLR International Corp
April 2010

**PROPERTY ASSESSMENT AND CLEANUP PLAN
RASPBERRY STRAIT DUMP SITE
AFOGNAK ISLAND, ALASKA**

Prepared for

Alaska Department of Environmental Conservation
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This document has been prepared by SLR International Corp. The material and data in this report were prepared under the supervision and direction of the undersigned.

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ACRONYMS

AAC	Alaska Administrative Code
ANC	Afognak Native Corporation
ATV	all terrain vehicle
BTEX	benzene, toluene, ethylbenzene, and xylenes
CFR	Code of Federal Regulations
CSM	conceptual site model
cy	cubic yards
DBA	DEC Brownfield Assessment
DCCED	Alaska Department of Commerce, Community and Economic Development
DEC	Alaska Department of Environmental Conservation
DRO	diesel range organics
ESA	environmental site assessment
ETM	exposure tracking model
GRO	gasoline range organics
HAZWOPER	hazardous waste operation and response
HVOC	halogenated volatile organic compounds
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
Montauk	Montauk Environmental Engineering
NVA	Native Village of Afognak
PACP	Property Assessment and Cleanup Plan
PAH	polynuclear aromatic hydrocarbons
PCB	polychlorinated biphenyls
RCRA	Resource Conservation and Recovery Act
RRO	Residual range organics
SLR	SLR International Corp
TCLP	Toxicity Characteristic Leaching Procedure
TCE	trichloroethylene
VOC	volatile organic compound

EXECUTIVE SUMMARY

SLR International Corp (SLR) prepared this Property Assessment and Cleanup Plan (PACP) to the Alaska Department of Environmental Conservation (DEC) for the Raspberry Strait Dump Site on Afognak Island, Alaska. The Raspberry Strait Dump Site is located in Section 21, Township 25 South, Range 22 West, Seward Meridian, Alaska, and is referred to as the Site in this plan.

The objective of this PACP is to provide information aimed at advancing the property through the Brownfield process to beneficially reuse the Site. The Site, owned by the Afognak Native Corporation (ANC), was discovered during a routine patrol in March 2005. At that time, lead-acid batteries, oil filters, oil-soaked pads, apparent empty 55-gallon barrels, and 5-gallon pails used to contain petroleum products were observed.

Interested parties in this PACP include the ANC, the Native Village of Afognak (NVA), the Woody Island Tribal Council, and DEC. ANC would like the Site returned to its natural state as recreational/conservation land.

In order to reuse the Site, solid waste and contaminated soil, if encountered, should be removed. The remedial alternative of offsite shipment and disposal was chosen for soils excavated from the Raspberry Strait Dump Site to achieve the reuse objective in a manner acceptable to the landowner (ANC) and other interested stakeholders including NVA and the Woody Island Tribal Council. A cost estimate for guiding future funding requests was prepared for the preferred remedial alternative based on equipment and labor available near Afognak Island.

1. INTRODUCTION

In the spring of 2009, the Native Village of Afognak (NVA) submitted an Alaska Department of Environmental Conservation (DEC) Brownfield Assessment (DBA) request form to DEC to address contamination concerns at the Raspberry Strait Dump Site (the Site) on Afognak Island. The DBA request form is included as Appendix A. The Site is located approximately 1.5 miles east of the Village of Alaneva on Afognak Island (Figures 1 and 2) in Section 21, Township 25 South, and Range 22 West of the Seward Meridian. The property is an unpermitted dump site that encompasses approximately 7,500 square feet. The property is owned by the Afognak Native Corporation (ANC). The DBA request form identified hazardous substances that may pose an exposure and physical hazard to visitors and may be impacting a nearby stream and wetlands.

This Property Assessment and Cleanup Plan (PACP) was written by SLR International Corp (SLR) on behalf of DEC in response to the DBA request to conduct a property assessment and recommend cleanup actions with general cost estimates to enable sufficient and productive reuse of the property.

Funding for this work was provided by the U.S. Environmental Protection Agency (EPA) through DEC using a grant from the State Tribal Response Program. Funding for the cleanup of the Site might come from one of the following possible sources:

1.1 PURPOSE OF PROJECT

The purpose of this PACP is to provide background, regulatory, and remedial option information appropriate for advancing the Site through the Brownfield process to help the state and community redevelop and reuse the property. This environmental investigation of the Raspberry Strait Dump Site will identify any potential environmental hindrances that could limit the beneficial reuse of this Site.

Funding for this work was provided by the U.S. Environmental Protection Agency (EPA) through DEC using a grant from the State Tribal Response Program. Funding sources for cleanup of the Site that may be available for the community to apply for include the following:

- The EPA Brownfield competitive cleanup process in 2010 ;
- The Community Development Block Grant (CDBG) ; and
- Other grants available from the federal government .

1.2 SCOPE OF SERVICES SUMMARY

SLR completed the following tasks to develop this PACP.

1.2.1 TASK 1 – STAKEHOLDER SCOPING AND PLANNING MEETING

In October 2009, SLR participated in a stakeholder and planning teleconference with stakeholders in the project. Attendees included representatives from the NVA, the Woody Island Tribal Council, the ANC, DEC, and SLR. The purpose of the meeting was to define the project objectives and also identify the path through the Brownfield process to beneficially reuse the Site. SLR prepared a summary record of the meeting and provided it to DEC. A copy of this summary for the stakeholder meeting is included as Appendix B.

1.2.2 TASK 2 – PACP PREPARATION

This PACP, developed following SLR's site visit, is based on review of information gathered from the stakeholder meeting, DEC files, previous investigations conducted at the Site, communication with individuals familiar with the community and the Site, and observations made during the site visit. This plan includes a comprehensive summary of the existing site conditions and recommendations for property assessment and corrective actions to supply interested parties with a guideline document suitable for progressing the Raspberry Strait Dump Site through the remediation process.

1.3 OBJECTIVES

The objective of this PACP is to provide the following:

- A historical summary for the Raspberry Strait Dump Site including historical land use, environmental incidents, and assessment/response activities to date;
- A description of the proposed reuse of the property;
- A qualitative assessment of risk to human receptors from potential contamination at the Site;
- A summary of specific data gaps that are necessary to fill in order to fully evaluate cleanup requirements;
- A description of the steps necessary to make the property suitable to meet the reuse objectives; and
- A summary of practical remediation options for the Site including cost estimates.

2. AREA OVERVIEW AND INFORMATION

This section provides information about Afognak Island and the stakeholders and summarizes area involvement at the Site.

2.1 AREA GENERAL INFORMATION

2.1.1 LOCATION AND CLIMATE

The Raspberry Strait Dump Site lies at approximately 58 degrees, 0 minutes, 6 seconds north latitude and 152 degrees, 50 minutes, 38 seconds west longitude, relative to the North American Datum of 1983 (Figure 1). The Site is located on the southernmost tip of Afognak Island bordering Raspberry Strait, approximately 50 feet south of an unimproved trail connecting Back Bay with the Village of Aleneva and an ANC shareholder lease. The Site has no structures and encompasses an approximate area of 7,500 square feet.

Afognak Island is 43 miles from east to west and 23 miles from north to south and has a land area of 699.84 square mile, making it the 18th largest island in the United States. The coast is split by many long, narrow bays and the highest point is 2,546 feet above sea level. The United States Census of 1890 noted a series of settlements on Afognak Island along the beach line near the Alutiiq village of Ag'waneq (also called Afognak), including Rutkovsky village, inhabited by a group of retired employees of the Russian-American Company (DCCED, 2009).

Ag'waneq was abandoned after the 1964 Good Friday Earthquake devastated the island. The descendants of the Native inhabitants of the island are officially recognized as the Native Village of Afognak, most of who live in nearby Port Lions or Kodiak; the NVA is a federally recognized tribe.

Today, there are a few small logging camps and fishing lodges on the island, and a community of Russian Old Believers at Aleneva. The economy is based on subsistence and logging. Transportation is provided by float plane or boat from Kodiak to various areas around the island. The 2000 census reported a population of 169 persons (DCCED, 2009).

The Kodiak Archipelago is warmed by the Japanese current. The climate is similar to southeast Alaska, with less precipitation. January temperatures range from 14°F to 46°F. July temperatures vary from 39°F to 76°F. Average annual rainfall is 74 inches (DCCED, 2009).

2.1.2 AREA RESOURCES AND INFRASTRUCTURE

Afognak Island is inhabited by approximately 169 persons and relies heavily on subsistence harvests, which include fish, seal, walrus, beluga whale, brown bear, Roosevelt elk, Sitka black tail deer, and logging activities (DCCED, 2009).

There are no public facilities or services on the Island and electricity is provided by individual generators. There are no state-operated schools located on the island. Transportation is provided by boat or float plane from nearby Kodiak Island (DCCED, 2009).

2.2 AREA INVOLVEMENT

The following entities are considered stakeholders for the Site:

Afognak Native Corporation – The ANC is an Alaska Native Corporation formed under a settlement between Congress and Alaska’s indigenous peoples in 1971 under the Alaska Native Claims Settlement Act (ANCSA). Native corporation shareholders were those Alaska Natives who were alive on December 18, 1971, and proved their lineage to the respective region and village. Congress termed Native corporation enrollees as “shareholders” although being a “shareholder” is truly more comparable to a tribal membership — it is a lifetime enrollment that cannot be bought or sold. Most Natives are enrolled in both a regional and village corporation. The ANC was organized in 1977 through the merger of two ANCSA village corporations: Port Lions Native Corporation and Natives of Afognak, Inc. ANC is governed by a nine-member board of directors. All board members are Native shareholders and are elected by their fellow shareholders, serving three-year staggered terms (ANC, 2010).

Native Village of Afognak – The NVA is a federally recognized tribe and the people of NVA are the descendants of the original Alutiiq inhabitants of the village of Ag’waneq, which was located on the island of Afognak. Members of NVA inhabited the ancestral village of Ag’waneq until the Great Earthquake and Tsunami of 1964. Today, many of the NVA members live and work in the city of Kodiak and in Port Lions, as well as in Anchorage and the Lower 48. A tribal council of seven members, elected by its membership, is the official governing body. The council meets regularly to exercise the functions of self-governance, to manage and protect cultural resources, to manage and protect land resources, to reinvigorate Alutiiq identity and social structure, and to heal divisions among the Alutiiq people. The Tribal Council has seven seats, each with three-year terms (NVA, 2010). The NVA is the entity responsible for the application to DBA on behalf of ANC.

Woody Island Tribal Council – The Woody Island Tribal Council is the governing body for Leisnoi Village, a federally recognized tribe. The Woody Island Tribal Council is a current State and Tribal Response Program grantee. Since 2004, the Woody Island Tribal Council has received assistance to establish a Brownfield’s Response Program. The program has successfully inventoried several areas of concern in four main formerly used defense sites located on Leisnoi, Inc. property. Through the Native American Lands Environmental

Mitigation Program and the Native American Environmental Tracking System, the Woody Island Tribal Council has managed information about these sites and listed them as potential Brownfield sites. Beginning in 2008, The Woody Island Tribal Council has offered their experience as a regional resource for the Kodiak Archipelago. The Woody Island Tribal Council seeks to be a collaborative response program assisting local tribal governments (Woody Island Tribal Council, 2010).

Alaska Department of Environmental Conservation – DEC’s Reuse and Redevelopment Program targets specific assessment and cleanup projects on behalf of state agencies. The program uses its DBA request process to identify appropriate projects and gather information to make a determination for eligibility.

2.2.1 AREA CONCERNS

Area concerns identified in the 2009 DBA application and interview include:

- The close proximity of the Site to a stream and wetlands where contaminants may be transported;
- Debris on the Site may be a physical hazard and an exposure threat to visitors;
- Risk to humans through subsistence activities (i.e., hunting and fishing); and,
- The proximity to the tribal shareholder lodge (more than 1 mile from the Site) increases potential for people to come in contact with the Raspberry Strait Dump Site.

2.2.2 STAKEHOLDER MEETING SUMMARY

In October 2009, a stakeholder and planning teleconference was held and included attendees from the NVA, Woody Island Tribal Council, ANC, DEC, and SLR. The purpose of the meeting was to define the project objectives; gather information from the stakeholders about Site conditions, history, and planned future uses; describe SLR’s planned Site visit and schedule; describe the Brownfield process to make the Site suitable for beneficial reuse. SLR prepared a summary record of the meeting and provided it to the stakeholders and DEC. A copy of this summary is included as Appendix B.

2.2.3 PROPOSED SITE DEVELOPMENT AND LAND USE

The proposed use for the Site is to make it suitable for beneficial reuse as recreational/conservation land.

2.2.4 INTERVIEWS AND AREA INPUT

During SLR’s site visit in October 2009, interviews were conducted with individuals knowledgeable about current and historic conditions of the property and other information necessary to prepare this PACP. Interviews were conducted with Andy Christofferson, a patrol officer for ANC, and Howard Valley, the General Manager of Lands for ANC.

Roxanne Salcido, the Environmental Coordinator for NVA and Mike Patterson the Environmental and Natural Resources Director for the Woody Island Tribal Council, were both present during the Site visit and interview with Andy Christofferson. These interviews are summarized below to provide the pertinent information gathered.

Andy Christofferson - Andy Christofferson, a patrol officer for ANC, provided a tour of the Raspberry Straight Dump Site and the surrounding areas during the 2009 SLR site visit. He has been familiar with the site since a March 2005 patrol of the area when he discovered the unpermitted dump site. In addition, he provided information regarding the Site as described below.

Mr. Christofferson stated that he had travelled along the trail leading to the Site prior to the patrol when the Site was discovered. He indicated that one of the concerns is risks to humans that may jeopardize subsistence activities like hunting and fishing. He also mentioned that the road leading to the dump site is not approved for travel with motorized vehicles (i.e., all terrain vehicles [ATVs]), except for by ANC or those who have authorized permission to do so by ANC, but he noted recent ATV tracks during routine patrol of ANC lands on Afognak Island.

Mr. Christofferson indicated there is no desire to have the Site turned into a permitted dump, and the other two people present (Roxanne Salcido of NVA and Mike Patterson of the Woody Island Tribal Council) agreed. Mr. Christofferson stated that the area surrounding the Site had been used for logging. He stated that the adjacent lands contain a private hunting lodge to the north, ANC land to the east, private land (Native allotments) to the south, and the Village of Aleneva to the west. Mr. Christofferson had no knowledge of current or past storage of hazardous petroleum materials, current or past regulatory actions, or past releases or other environmental concerns.

Mr. Christofferson, Ms. Salcido, and Mr. Patterson indicated that they had visited the Site in the spring of 2009, and it appeared that very little dumping had occurred between then and the time of SLR's site visit; new refuse was limited to diapers and beer cans in a small area near the clearing.

Howard Valley - Howard Valley is the General Manager of Lands for ANC. Mr. Valley became familiar with the site in 2005 when it was discovered by Mr. Christofferson. He described the current land use as recreational/hunting. Mr. Valley had no information pertaining to past usage of the Site other than a dump site and logging that occurred in the area.

Mr. Valley indicated three possible routes that may have been used to dump debris at the Site. He also mentioned a nearby logging road that could be used for access to the dump site. Mr. Valley is unaware of any current or past regulatory actions or past releases of hazardous petroleum products. Mr. Valley would like to see the refuse removed from the Site; he, along with members of the ANC board, has no desire to have the Site become a permitted dump site.

Mr. Valley stated that ANC acquired the land the dump site is on from the Bureau of Land Management (BLM) under Interim Conveyance Number 060 on June 20, 1977. Mr. Valley's main concerns regarding the Site are: 1) contamination on Site may result in it being a registered dump; 2) aesthetics; and 3) he wants to see all dumping activities cease at the Site. Mr. Valley indicated that a nearby timber company (Evergreen) may have equipment that is large enough and may be available if timber operations are slow. Also, Mr. Valley stated that equipment is available at Kodiak Rental Center. Mr. Valley was curious about whether it is feasible to recycle some of the refuse from the Site rather than dispose of it in a landfill.

3. PROPERTY/SITE OVERVIEW

This section provides a historical overview of the Raspberry Strait Dump Site including the historical and current use of the property and its geologic setting. It also summarizes the records review conducted for this work. Additional information regarding the Site can be found in the Phase I Environmental Site Assessment (ESA) by SLR, which is included as Appendix F.

3.1 OVERVIEW OF SITE PROPERTY

The Raspberry Strait Dump Site is located approximately 1.5 miles east of the Village of Alaneva on Afognak Island in Section 21, Township 25 South, and Range 22 West of the Seward Meridian. The Site is an unpermitted dump site that encompasses approximately 7,500 square feet located on land owned by the ANC. Access to the Site is via ATV trail, and travel on ATV trails on land owned by ANC is restricted. No structures are present on the Site.

ANC acquired the land the Site is on June 20, 1977, by Interim Conveyance Number 060 (Appendix A to SLR's Phase I ESA [Appendix F]) as part of the ANCSA. The dump site was discovered during a patrol of ANC lands in 2005; prior to this, the land had not been patrolled. A limited removal action was conducted by the community of Alaneva in 2006 when approximately one-third of the refuse in the central deposit was removed from the Site (Montauk, 2006). The ANC, NVA, and Woody Island Tribal Council personnel who participated in the Site visit stated that very little dumping activities have occurred since that time.

Logging activities occurred in the area from the 1940s through the mid-1970s. Currently, a private lodge is located approximately 0.75 miles north of the Site. ANC land is to the east, private land is to the south, and the community of Alaneva is to the west, approximately 1.5 miles from the Site.

3.2 GEOLOGIC SETTING

According to the combined Phase I and Phase II ESA (Montauk, 2005), the subsurface conditions at the Site generally consist of sandy humus and sandy organic gravel with discontinuous layers of volcanic ash. Ground water was not encountered; but based on nearby Danger Bay, ground water is anticipated to be shallow (Montauk, 2005). The depth to ground water is variable across the Site; ground water is present at the surface at the lowest part of the Site. Surface topography is likely indicative of the direction of the ground water flow; which, if true, would be to the south-south east. No ground water monitoring data was available for this assessment. The Site and the surrounding area are sloped and the Site is

heavily vegetated; a stream runs along the east side and a wetland is downslope of the main refuse pile.

3.3 PROPERTY USE

3.3.1 HISTORICAL USE

The area surrounding the dump site was used for at least two timber harvesting operations from 1944 through 1976, and according to the combined Phase I and Phase II ESA (Montauk, 2005), no evidence was discovered that suggests timber harvesting operations share any responsibility for, or were in any way contributory to, the dump site.

Two aerial photos were examined as part of the Phase I ESA (Appendix F); one from 1974 and one from 2004. The photos are very similar and show that where the dump site is now located a small clearing is located along an access road or trail. The surrounding area is covered in tundra with some trees. Refuse is not visible in either photograph.

3.4 CURRENT USE

The Raspberry Strait Dump Site is currently not used, but is the location of an unpermitted dump site. The area surrounding the Site is used for recreation.

3.5 OWNERSHIP INFORMATION

Currently, the land on which the Raspberry Strait Dump Site is located is owned by ANC. ANC acquired the land the Site is on June 20, 1977 by Interim Conveyance Number 060 (Appendix A to SLR's Phase I ESA [Appendix F]) as part of the ANCSA. At the time of the acquisition, ANC was unaware of any unpermitted dumping activities.

3.6 RECORDS REVIEW

Records reviewed to prepare this PACP included the combined Phase I and II ESA conducted by Montauk Environmental Engineering in 2005 (Montauk, 2005), Addendum No. 1 (Montauk, 2006), and photographs of the 2006 Alaneva cleanup provided by ANC (photos from this effort are provided as an Appendix A to SLR's Phase I ESA [Appendix F]).

4. SITE RECONNAISSANCE

In October 2009, an SLR employee traveled to Afognak Island to assess the current condition of the Raspberry Strait Dump Site, interview individuals familiar with the property, and evaluate potential remedial strategies. Interviews conducted during the site visit are presented in Section 2.2.4. Evaluation of the property's current condition is discussed below. Photographic and written documentation of the site visit are included in Appendix C and D, respectively. Additional information regarding the Site can be found in the Phase I ESA by SLR included as Appendix F.

4.1 METHODOLOGY

To assess the conditions of the Site, SLR traversed the property to inspect for surface staining or other visual signs of contamination and to document the type and extent of refuse on the Site. The area surrounding the dump site was also visually inspected. No samples were collected during the site visit. Visual and olfactory observations were used to assess the condition of the dump site.

4.2 OBSERVATIONS

An SLR representative visited the Site on October 15, 2009; the representative was also in Kodiak on October 14 and 16 to conduct interviews and obtain information pertinent to this PACP. During SLR's visit, interviews were conducted with people that have information regarding the Site and a guided tour of the Site was conducted. Access to the Site requires approval from ANC and transportation via boat and ATVs. Historical data were gathered and numbers and contacts to prepare cost estimates were provided to SLR personnel. Observations and items found at the dump site were noted and recorded in the field logbook (Appendix D). These items included: several freezers, one lead-acid battery, ATV parts and tires, aerosol canisters, paint cans, fuel containers, at least 14 apparent empty 55-gallon barrels, engines, oil containers, and electrical equipment.

4.3 SITE SAMPLING

No sampling was conducted as part of this project.

5. ENVIRONMENTAL REVIEW AND SUMMARY OF FINDINGS

This section summarizes previous environmental reviews conducted at the property. It also provides a summary of the findings of this PACP.

5.1 HISTORICAL ENVIRONMENTAL REVIEW

In 2005, Montauk conducted a combined Phase I and Phase II ESA (Montauk, 2005), which included the collection of soil samples. These samples and results as described by Montauk (2005) are presented below.

Three soil analytical samples were collected at the Site in 2005 (Figure 3). These samples were described as one surface soil sample (collected east of the main refuse pile), one “background” sample (collected from undisturbed native soil near the roadway), and one sample from the center of the refuse pile at the finished depth of the exploratory trench (Figure 3). Although the exploratory trench was advanced to a final depth of 8 feet below the top of refuse pile, it was stated that the trench was advanced until the underlying, native soil surface was reached (Montauk, 2005). Each of these three samples and the corresponding analytical results are discussed below.

One surface soil analytical sample was collected on the east side of the main refuse pile, directly beneath a bag of battery parts. The sample was analyzed for the eight Resource and Recovery Act (RCRA) metals. Cadmium, mercury, and selenium were not detected. Barium and chromium were detected, but at concentrations (107 milligrams per kilogram [mg/kg] and 11.8 mg/kg, respectively) below the respective DEC Method Two soil cleanup levels. Arsenic, lead, and selenium were detected at concentrations of 11.4 mg/kg, 17,100 mg/kg, and 26.0 mg/kg, respectively, above the respective DEC Method Two soil cleanup levels of 3.7 mg/kg, 400 mg/kg, and 3.4 mg/kg (Montauk, 2005).

The “background” sample was collected from undisturbed native soil near the roadway; it is assumed that this sample was collected from the surface soil interval. This sample was analyzed for diesel range organics (DRO), residual range organics (RRO), and RCRA metals. DRO and RRO were detected, but at concentrations (213 mg/kg and 603 mg/kg, respectively) below their respective cleanup levels. Cadmium, selenium, and silver were not detected. Barium, chromium, lead, and mercury were detected but at concentrations less than their respective cleanup levels. Arsenic, detected at a concentration of 7.82 mg/kg, was the only RCRA metal detected above DEC Method Two soil cleanup levels in the background sample. Montauk’s evaluation of this data suggested the background sample captured analytes either from a discrete spill or from a spill associated with the Site and is not representative of background concentrations (Montauk, 2005).

The analytical sample collected from native soil exposed at the bottom of the exploratory trench was analyzed for gasoline range organics (GRO); DRO; RRO; benzene, toluene, ethylbenzene, and xylenes (BTEX); RCRA metals; polychlorinated biphenyls (PCBs); halogenated volatile organic compounds (HVOCs); and polynuclear aromatic hydrocarbons (PAHs). GRO, BTEX, mercury, selenium, silver, PCBs, and HVOCs were not detected. DRO and RRO were detected, but at concentrations (70.9 mg/kg and 170 mg/kg, respectively) below DEC Method Two soil cleanup levels. RCRA metals barium, cadmium, chromium, and lead were also detected but at concentrations less than their respective cleanup levels. Arsenic, detected at a concentration of 5.26 mg/kg, was the only RCRA metal detected above DEC Method Two soil cleanup levels. One PAH, pyrene, was detected at a concentration of 0.0166 mg/kg, significantly below the DEC Method Two cleanup level of 1,000 mg/kg (Montauk, 2005).

Arsenic, lead, and selenium were detected in soil samples collected from the Site in 2005 at concentrations above DEC Method Two soil cleanup levels. These three metals are naturally occurring. The detected concentrations of arsenic at the Site were compared to regional concentrations by SLR. The comparison showed that arsenic concentrations are slightly above regional concentrations, which are generally elevated in Alaskan soils. The mean arsenic concentration at the Site of 7.8 mg/kg is slightly more than the mean background concentration for Alaska soils of 6.7 mg/kg (Gough et al, 1988) however; it is not likely that arsenic would be released in large quantities from dumping at the Site. The maximum detected concentration of lead (17,100 mg/kg) was significantly above the DEC Method Two soil cleanup level (400 mg/kg) and was collected from soil beneath a bag containing battery parts; at this concentration, the lead concentration is directly attributed to dumping at the Site. No regional concentrations are available for selenium; therefore, it is unknown how Site concentrations compare to regional concentrations for this metal.

One surface water sample was collected from the wetland south of the refuse pile at the Site in 2005. The sample was analyzed for GRO, DRO, RRO, BTEX, RCRA metals, PCBs, HVOCs, and PAHs. Barium, chromium, and lead were detected at concentrations of 0.0390 milligrams per liter (mg/L), 0.00137 mg/L, and 0.00347 mg/L, respectively. The barium and chromium concentrations are more than 50 times less than DEC surface water drinking water cleanup levels for surface water (18 AAC 70). No DEC surface water drinking water cleanup level exists for lead in surface water; the lead concentration was therefore compared to the DEC ground water cleanup level of 0.015 mg/L found in Title 18 of the Alaska Administrative Code (AAC), Chapter 75 (18 AAC 75), Table C. The lead concentration detected in surface water is approximately four times less than the DEC ground water cleanup level.

5.2 POTENTIAL SOURCE AREAS

Obvious source areas on the property include refuse that contains hazardous materials (i.e., lead-acid batteries, apparent empty 55-gallon barrels, freezers, paint cans, fuel containers, and electrical equipment) that have the potential to leak and impact the surrounding soil. The ground directly beneath refuse has been documented to contain petroleum hydrocarbons (DRO, RRO, and pyrene) and metals (arsenic, lead, and selenium) attributable to the refuse

on Site (Montauk, 2005). In addition, during the 2005 combined Phase I and II ESA, Montauk observed soil staining; no soil staining was observed during SLR's site visit in 2009.

5.3 KNOWN OR PERCEIVED DATA GAPS

The primary data gap at the Site is the extent of soil contamination. Two soil samples from within the perimeter of the Site were collected in 2005 (Figure 3), but the extent of soil contaminated with metals above DEC Method Two soil cleanup levels is unknown, and there is a potential for petroleum-contaminated soil to exist at the Site based on the refuse observed. Due to the nature of the site, DRO and RRO concentrations may be skewed by biogenic interference.

In addition, better background data would be helpful to determine if metals at the Site are anthropogenic or biogenic.

5.4 CONCEPTUAL SITE MODEL

SLR developed a conceptual site model (CSM) to qualitatively assess the ways in which potential human receptors may be exposed to contamination as a result of activities at the property. The CSM is based on the available data for the Site collected by Montauk (2005) and observations made during SLR's site visit in 2009. The following describes the potential exposure scenarios for current and future receptors. The CSM is included as Appendix E of this report.

The CSM identified the following potentially complete exposure pathways:

- Incidental soil ingestion,
- Dermal absorption of contaminants from soil (insignificant),
- Ingestion of ground water (unlikely),
- Inhalation of outdoor air (insignificant),
- Ingestion of surface water, and
- Ingestion of wild foods.

A discussion of these exposure pathways is described below and the complete CSM is provided in Appendix E.

5.4.1 POTENTIALLY COMPLETE EXPOSURE PATHWAYS

The direct contact exposure pathway via incidental soil ingestion is considered potentially complete because contaminants have been detected in soil between 0 and 15 feet bgs, and the Site may be used by human receptors.

The dermal absorption of contaminants from soil exposure pathway is considered potentially complete because pyrene, a PAH compound, was detected at the Site; PAHs have the potential to permeate the skin. However, based on the concentration of pyrene detected, the pathway is considered insignificant.

The ingestion of ground water exposure pathway is considered potentially complete because contaminants have the potential to migrate to ground water, and the future use of ground water at the Site as drinking water has not been eliminated by DEC per 18 AAC 75.350. However exposure via this pathway extremely unlikely. The depth to ground water is variable across the Site; ground water is present at the surface at the lowest part of the Site. No ground water monitoring data was available for this assessment. One well is registered on Afognak Island; the well was drilled in November 2007 at the ANC Camp, which is located approximately 14.3 miles from the Site. Based on the drilling logs, the lithology in this area consists of silty gravel from 2 feet to 5 feet bgs and is underlain by bedrock (shale). The borehole was advanced to a total depth of 366 feet bgs, with water encountered between 320 feet and 340 feet bgs. The well is cased from 0 to 345 feet and is open to a depth of 366 feet. The well is artesian. No other wells are known to exist on Afognak Island.

The inhalation of outdoor air exposure pathway is considered potentially complete because of the presence of volatile contaminants (DRO and pyrene) in soil between 0 and 15 feet bgs and the potential use of the property by human receptors. However, based on the concentrations of pyrene and DRO detected, this pathway is considered insignificant.

The ingestion of surface water pathway is considered potentially complete because of the potential for the overland migration of contaminants from the Site to surface water. Surface water exists on the Site in the form of ponded water and marshy conditions on the south side of the central, high volume refuse deposit. A small stream flowing almost north to south is located just beyond the eastern edge of the Raspberry Strait Dump Site.

The ingestion of wild foods exposure pathway is considered potentially complete because of contamination present in the top 6 feet of soil, where it is available for uptake, and the proximity of the Site to potential hunting and gathering areas. In addition, pyrene, arsenic, cadmium, and lead, which are compounds that have the potential to bioaccumulate, were detected at the Site.

5.4.2 INCOMPLETE EXPOSURE PATHWAYS

The inhalation of indoor air pathway is not considered complete because no buildings are located on the Site or within 100 horizontal or vertical feet of the Site, nor are any buildings reasonably expected to be placed on the Site. Afognak Island is zoned as conservation land and ANC (the property owner) would like the Site restored as conservation land. As such, no development plans exist for the Site.

The dermal exposure to contaminants in ground water and surface water pathways, and the inhalation of volatile compounds in household water pathway, do not require further evaluation, and thus, are considered incomplete, because DEC water quality standards are

applied as cleanup levels at the Site. In addition, no households are located on or near the Site.

The inhalation of fugitive dust exposure pathway requires additional consideration at sites where chromium has been detected, because although DEC soil ingestion cleanup levels applied at the Site are generally protective of this pathway, this is not the case for chromium. Chromium was not considered a contaminant of potential concern in soil at the Site and thus, this pathway is considered incomplete.

The direct contact with sediment pathway is not considered complete because DEC soil ingestion cleanup levels, which are applied at the Site, are assumed to be protective of this pathway. In addition, sediment is not considered an exposure media and no known activities that result in direct contact with sediment are undertaken at the Site.

5.5 CURRENT AND FUTURE RECEPTORS

The Raspberry Strait Dump Site is an unpermitted dump site located on land owned by ANC. Access to ANC land is restricted to ANC patrol officers, ANC shareholders, and individuals who have obtained a permit from ANC. The proposed future re-use objective for the Site is as recreational/conservation land. Afognak Island is a popular hunting destination, and ANC grants access to its land to those individuals who have obtained a permit. Based on the proposed future re-use objectives for the Site, the following human receptors are considered to be potentially exposed to site contaminants:

- Construction workers involved in Site restoration (future);
- Site visitors, trespassers, or recreational users (current and future); and,
- Subsistence harvesters and consumers (current and future).

5.6 CLEANUP CRITERIA

This section describes the cleanup criteria that currently apply to the property. However, based on the future use of the property, Site specific cleanup levels may be developed in the future as determined by the risk of exposure to human health and the environment.

5.6.1 SOIL CLEANUP LEVELS

DEC soil cleanup levels specified in 18 AAC 75, *Oil and Other Hazardous Substances Pollution Control*, Tables B1 and B2, for Method Two, in over 40-inch zone (DEC, 2008) are applicable for the Site. The most stringent of the direct contact, i.e., outdoor inhalation, or migration to ground water soil cleanup levels, whichever is less, is used; the soil cleanup levels for compounds of potential interest are listed below.

- DRO, 250 mg/kg (migration to ground water)
- RRO, 10,000 mg/kg (ingestion)

- Arsenic, 3.7 mg/kg (direct contact)
- Barium, 1,100 mg/kg (migration to ground water)
- Cadmium, 5.0 mg/kg (migration to ground water)
- Chromium, 25 mg/kg (migration to ground water)
- Lead, 400 mg/kg (direct contact)
- Mercury, 1.4 mg/kg (migration to ground water)
- Selenium, 3.4 mg/kg (migration to ground water)
- Silver, 11.2 mg/kg (migration to ground water)

Cleanup levels for individual PAHs are not presented here due to the large number of compounds quantified, but the same source and method is used to determine appropriate cleanup levels for compounds that are detected.

Metals concentrations should also be evaluated relative to regional concentrations (Gough, et. al., 1988). Regional concentrations may exceed DEC Method Two soil cleanup levels. In addition, metals should be evaluated against RCRA regulatory limits specified in the Code of Federal Regulations Title 40 Section 261.24 (40 CFR 261.24) to determine whether soil will be characterized as hazardous waste. If soil concentrations exceed these RCRA criteria, analysis using TCLP may be required. RCRA criteria are discussed further in Section 5.5.4.

5.6.2 GROUND WATER CLEANUP LEVELS

DEC ground water cleanup levels, as specified in 18 AAC 75.345, Table C (DEC, 2008), are applicable to the Site. The ground water cleanup levels for the compounds of interest are listed below.

- DRO, 1.5 mg/L
- GRO, 300 mg/kg (migration to ground water)
- Benzene, 0.025 mg/kg (migration to ground water)
- Toluene, 6.5 mg/kg (migration to ground water)
- Ethylbenzene, 6.9 mg/kg (migration to ground water)
- Xylenes (total), 63 mg/kg (outdoor inhalation, migration to ground water)
- RRO, 1.1 mg/L
- Arsenic, 0.010 mg/L
- Barium, 2.0 mg/L
- Cadmium, 0.005 mg/L
- Chromium, 0.10 mg/L

- Lead, 0.015 mg/L
- Mercury, 0.002 mg/L
- Selenium, 0.05 mg/L
- Silver, 0.10 mg/L

Cleanup levels for individual PAHs are not presented here due to the large number of compounds quantified, but the same source will be used to determine appropriate cleanup levels for these compounds.

5.6.3 SURFACE WATER QUALITY CRITERIA

DEC surface water cleanup levels, as specified in 18 AAC 70, *Water Quality Standards* (DEC, 2009), are applicable to the Site. The surface water cleanup levels for the compounds of interest are listed below.

- Arsenic, 0.010 mg/L
- Barium, 2.0 mg/L
- Cadmium, 0.005 mg/L
- Chromium, 0.100 mg/L
- Mercury, 0.002 mg/L
- Selenium, 0.050 mg/L
- TAH, 0.010 mg/L
- TAqH, 0.015 mg/L

For compounds that no surface water cleanup level exists, concentrations in surface water samples should be compared to ground water cleanup levels.

5.6.4 OTHER REGULATED CLEANUP CRITERIA

All material to be disposed off the Site will be inventoried prior to the handling of the waste. Based on the presence of metals in onsite soils, prior to shipping soil offsite for disposal, metals concentrations using TCLP will need to be evaluated to determine if the soil will be characterized as hazardous or non-hazardous waste to allow for proper handling. RCRA characteristic waste concentrations for leachable metals are presented below.

- Arsenic, 5.0 mg/L
- Barium, 100.0 mg/L
- Cadmium, 1.0 mg/L
- Chromium, 5.0 mg/L
- Lead, 5.0 mg/L

- Mercury, 0.2 mg/L
- Selenium, 1.0 mg/L
- Silver, 5.0 mg/L

There is the potential for polychlorinated biphenol- and asbestos-containing material at the Site. Although not expected based on the nature of refuse observed, if these are encountered, special handling and cleanup criteria will apply.

For non-hazardous, non-regulated waste material, the acquisition of a DEC solid waste permit is not required. Material including, but not limited to, cement, rebar, crushed glass, brick, and mortar are usually not regulated.

5.7 GENERAL ENVIRONMENTAL OVERVIEW

Based on the CSM provided as Appendix E of this PACP, the documented contaminant levels in soil at this Site, and the planned land reuse objective (recreational/conservation land), remedial action is necessary. The presence of metals in surface soil and surface water pose a risk to human receptors through incidental soil ingestion, ingestion of surface water, and ingestion of wild foods. All other potentially complete pathways were determined to be insignificant or unlikely to result in exposure based on Site conditions and proposed usage.

6. RECOMMENDED ACTIONS

The following sections summarize the actions recommended to reuse the land at the Raspberry Strait Dump Site as recreational/conservation land.

6.1 ENVIRONMENTAL ACTIONS

SLR recommends the following environmental actions to allow the ANC to reuse the land at the Raspberry Strait Dump Site: 1) solid waste removal, 2) limited surface and subsurface soil analysis, and 3) excavation and disposal of contaminated soil. These actions are described in detail below and involve the removal of all refuse at the Site, as well as the excavation of impacted soils that might be present related to unpermitted dumping at the Site. Because of the proposed future reuse of the Site as recreational/conservation land, the land owners have no desire for refuse or debris to remain or be disposed of on the Site.

In addition, SLR recommends installing temporary ground water monitoring points to determine if ground water has been impacted by unpermitted dumping at the Site. SLR recommends installing three ground water monitoring points – one in the main refuse area and two in the downgradient direction (one close to the stream and one in the wetlands area). Ground water samples should be collected from these wells and submitted for laboratory analysis for concentrations of contaminants identified in Section 5.5.2. Installation and sampling of temporary ground water monitoring points is recommended during the solid waste removal (Section 6.2) and targeted surface and subsurface soil investigation (Section 6.3) phase of Site cleanup when an environmental consultant is already recommended to be on the Site.

6.2 SOLID WASTE REMOVAL

Debris located in and around the Raspberry Strait Dump Site may be negatively impacting the surrounding environment. This material includes, but is not limited to, the items described below. It is recommended that debris be removed from the Raspberry Strait Dump Site. Prior to the removal of any of the debris listed below, it is recommended that the location of potentially hazardous debris be marked with swing ties and a handheld global positioning system receiver to assist in a targeted surface and subsurface soil investigation and contaminated soil excavation. An environmental consultant will be onsite to assist with the solid waste disposal and also to perform the targeted surface and subsurface soil investigation activities described in Section 6.3.

- Washers and dryers;
- Seven or more freezers;

- One lead-acid battery;
- ATV parts and tires;
- Aerosol cans;
- Paint cans;
- Fuel containers;
- At least 14 apparent empty 55-gallon barrels;
- Boat engines;
- Electrical equipment;
- Oil containers; and,
- Household refuse including but not limited to aluminum cans, glass bottles, plastic containers, paper products, diapers, buckets, coolers, and mattresses.

All activities for the removal of materials off the Site will be conducted according to all applicable state and federal regulations.

6.3 TARGETED SURFACE AND SUBSURFACE SOIL INVESTIGATION

In order to ensure that a contaminated soil excavation is completed in the most efficient manner possible, it is recommended that a targeted surface and subsurface soil investigation be performed to confirm the contaminants of concern and contaminant distribution. It is proposed that this work be conducted by digging test pits with a backhoe, or alternatively, by using a hand auger with extensions capable of advancing to 10 feet bgs. This is not proposed as a full site characterization, but rather, a targeted investigation to be used to minimize the amount of soil removed and confirm the presence or absence of contaminants that may not be detected using field screening methods (i.e., total petroleum hydrocarbons using PetroFlag[®] and volatile hydrocarbons using the heated headspace method with a photoionization detector). This work is proposed to occur during the solid waste removal phase of Site cleanup when an environmental consultant is already recommended to be on the Site.

It is recommended that a utility clearance be performed prior to any subsurface activities.

6.4 CONTAMINATED SOIL EXCAVATION

No stained soil was noted at the Site during SLR's site visit in 2009. A 2005 investigation indicated the presence of DRO, RRO, arsenic, lead, selenium, and pyrene in Site soils. Concentrations of DRO, RRO, and pyrene were below applicable DEC Method Two soil cleanup levels. However, arsenic, lead, and selenium were detected at concentrations above DEC Method Two soil cleanup levels at 11.4 mg/kg, 17,100 mg/kg, and 26.0 mg/kg, respectively. Arsenic concentrations at the Site are slightly above the regional level;

however, it is unlikely that arsenic would have been released in large quantities at the Site; thus, it is not considered a contaminant of potential concern.

Although the total in-place volume of future proposed excavation area(s) cannot be determined without subsurface investigation, the following information should provide a proposed plan for removal of impacted soil once the targeted surface and subsurface investigation activities, described in the preceding section, are completed. Since the primary contaminants (metals) are not detected by field screening, the data collected during the target surface and subsurface investigation, described above, will be used to guide the lateral extent of excavation. For areas where petroleum hydrocarbon contamination is suspected, field screening samples should be collected to guide the lateral extent of the excavation. Once all known contaminated soil has been excavated, confirmation samples should be collected from excavation sidewalls and floor.

Because of the expense of excavating soil at this Site, every effort should be made to minimize the amount of soil removed. For estimating purposes only, it is assumed that 25 cubic yards (cy) of metals-impacted soil and 25 cy of petroleum hydrocarbon-impacted soil are present at the Site. The costs for removing less or more soil than this would have to be evaluated on a line-item basis, as there is not a linear relationship between volume of impacted soil and cost. In addition, if either the petroleum hydrocarbon or metals contamination can be demonstrated to not pose unacceptable risks to human health and the environment, the costs for site cleanup would decreased substantially as the cleanup effort may be modified to include only removal of solid waste to a nearby permitted landfill on Kodiak.

It is also assumed that no PCB-impacted soil is present at the Site. If present, these soils will require special handling and will need to be shipped off Site for disposal at an approved facility.

6.5 SOIL MANAGEMENT ALTERNATIVES

The results of the evaluation of the selected soil remedial actions are presented in Table 1. The following alternatives were considered for the management of contaminated soil.

- **Passive Biopile Construction** – In this option, excavated soils are mixed with clean soil, placed on a treatment area, and covered. Aeration is provided passively through perforated pipe extending into the pile. Fertilizer may be added to soils in the pile to enhance microbial activity. The pile is covered and a leachate collection sump is included to manage water if the cover is damaged. The pile is left until the soils meet specified cleanup levels for land spreading or beneficial reuse. This option would require that soils be stored at or near the Site, which is not an acceptable option to the property owner. In addition, this method is only appropriate for petroleum hydrocarbon-impacted soils, and metals-impacted soils.
- **Road Base Encapsulation** – This alternative method would only apply to Raspberry Strait if road bed is constructed to provide zero net infiltration, the road is located in an area that meets the requirements of 18 AAC 75.360(11)(G), and with the

concurrence of the community. No roads exist on Afognak Island, and therefore, this option is not viable at the Site.

- **Daily Landfill Cover** – Under this option, contaminated soils could be used for landfill cover. This option requires permission from DEC’s Solid Waste Program, and typically is contingent on pre-treatment of soil prior to use as landfill cover. This alternative is a common form of beneficial reuse of contaminated soil, is less expensive than many other options at remote sites, and effectively manages risks associated with contaminated soil. For the Raspberry Strait Dump Site, this is not a feasible alternative because there is no landfill on Afognak Island and metal-contaminated soil requires special handling. Acceptance for disposal at, or use as landfill cover at, the nearest permitted landfill on Kodiak Island may be possible but would likely require regulatory negotiation for disposal of hazardous material originating from off-site, and is not considered further in this PACP.
- **Landfarming** – This method includes spreading the contaminated soil into a 1-foot-thick layer. The soil is tilled monthly during the summer months using a roto-tiller. Tilling aerates the soils to promote aerobic degradation of contaminants in the soil. The addition of fertilizer is also used to promote biological activity. Initial landfarm characterization samples are collected to document contaminant levels at the time of placement. Characterization samples are collected on an annual basis to determine when cleanup goals are met. The DEC Solid Waste Program will specify the cleanup requirements prior to using landfarmed soils as daily landfill cover. This option would require that soils be stored at or near the Site, which is not an acceptable option to the property owner. In addition, this alternative, while feasible for petroleum hydrocarbon-impacted soil, would not work for metal-impacted soil.
- **Thermal Remediation** – Thermal remediation of contaminated soil is generally expensive at remote locations both to ship in treatment equipment and for the fuel required. It also requires disposal of the treated soil and is not effective for treating metals. It is not considered a feasible option for the Raspberry Strait Dump Site.
- **Shipment Off Site for Treatment or Disposal** – This option is employed if soils cannot be reasonably treated on Site and is most feasible when inexpensive transportation is available. If soils are determined to be hazardous, or no appropriate area exists for onsite treatment, it may have to be containerized and transported to a facility for treatment or disposal. In these instances, treatment typically involves disposal in a permitted landfill.

6.6 PREFERRED ALTERNATIVE

The matrix for remedial option selection is presented in Table 1. The alternatives are ranked according to the five parameters of environmental protection, regulatory compliance, effectiveness, implementability, and cost. Remediation options with the best overall rating are compared for use at a particular site.

The preferred alternative for contaminated soils at the Raspberry Strait Dump Site is offsite shipment and disposal. This alternative, was selected primarily because of the absence of alternative disposal locations on the Island.

6.7 LONG-TERM SOIL TREATMENT LOCATIONS

There are no acceptable locations for long-term soil treatment identified at or near the Site.

6.8 SHIPMENT OFF SITE FOR TREATMENT OR DISPOSAL

Shipment off Site for treatment or disposal requires management of the excavated soils in lined super sacks for transport to a treatment or disposal facility. The excavated soils would be shipped via an ocean-going barge, operated by Northland Services or other operator, to a port in Anchorage or Seattle with road access to a soil disposal or recycling operation. Costs for this option have been prepared and are included as Appendix G.

This option may require temporary stockpiling of soils after removal from the Raspberry Strait Dump Site. Soil stockpiles or soil storage in super sacks, if needed, will be managed in accordance with 18 AAC 78.274.

6.9 SOURCE OF BACKFILL MATERIAL

It is recommended that rather than backfilling any excavations, the area be re-graded and re-vegetated instead.

6.10 WATER MANAGEMENT OPTIONS

If ground water is encountered, excavations will not be dewatered. Excavation will not proceed below the static water level if water is encountered.

6.11 EQUIPMENT AND LABOR REQUIREMENTS

The equipment required to implement the preferred alternative will need to be transported to Afognak Island via landing craft and travel on ATV trails, thus limiting the size of equipment that can be used for the removal action. As such, the following equipment will be required: a small excavator or backhoe capable of reaching at least 8 feet in depth and ATVs with trailers. Several laborers will be required to complete the work. All laborers will need to be capable of driving ATVs.

6.12 AVAILABLE RESOURCES

This section describes the equipment currently available in the Afognak area. As a cost control, site remediation should be timed with other large construction activities on Afognak Island, if possible, in order to take advantage of resource leveraging opportunities. A nearby

logging operation may have heavy equipment that could be utilized, and rental equipment is available at Kodiak Rental.

6.12.1 EQUIPMENT

A nearby logging operation may have heavy equipment that could be utilized, and rental equipment is available at Kodiak Rental.

6.12.2 LABOR

Several persons associated with NVA have 40-hour hazardous waste operation and response (HAZWOPER) training; it is unknown whether they will require an 8-hour refresher class prior to being eligible to work on a contaminated site. In addition, HAZWOPER-trained individuals are available in Kodiak.

6.12.3 RESOURCE LEVERAGING OPPORTUNITIES

There are no known upcoming projects on Afognak Island. Timber operations are ongoing at nearby Danger Bay and utilize heavy equipment; however, unless timber operations are slow, this equipment will be unavailable.

6.12.4 PERSONNEL QUALIFICATIONS

Personnel working on the field component of this project must be trained to the HAZWOPER standard per the Occupational Safety and Health Administration requirement in 29 CFR 1910.120. Equipment operators must be able to verify their training and experience to operate equipment required for this project.

7. CONCLUSIONS

In order to allow the ANC to restore the Site to its natural state as recreational/conservation land, it is recommended that all refuse be removed from the Site. In addition, soil containing contaminants at concentrations above DEC Method Two soil cleanup levels and RCRA characteristic hazardous waste concentrations should be excavated. Because of the remote location of the Site and the type of contamination expected, careful oversight and field screening during the excavation should be done to minimize the volume of contaminated soil generated. The preliminary cost estimate for the removal action that includes removal of all solid waste from the site is \$572,019. The cost of this project is heavily dependant upon the amount of contaminated soil removed; thus, a targeted soil investigation is recommended. If either the petroleum hydrocarbon or metals contamination can be demonstrated to not pose unacceptable risks to human health and the environment, the costs for site cleanup would decreased substantially as the cleanup effort may be modified to include only removal of solid waste to a nearby permitted landfill on Kodiak. All cleanup activities could be conducted in a single field season. The project will rely on consultant assistance for documentation and reporting to DEC.

8. REFERENCES

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LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

The purpose of an environmental assessment is to reasonably evaluate the potential for or actual impact of past practices on a given site area. In performing an environmental assessment, it is understood that a balance must be struck between a reasonable inquiry into the environmental issues and an exhaustive analysis of each conceivable issue of potential concern. The following paragraphs discuss the assumptions and parameters under which such an opinion is rendered.

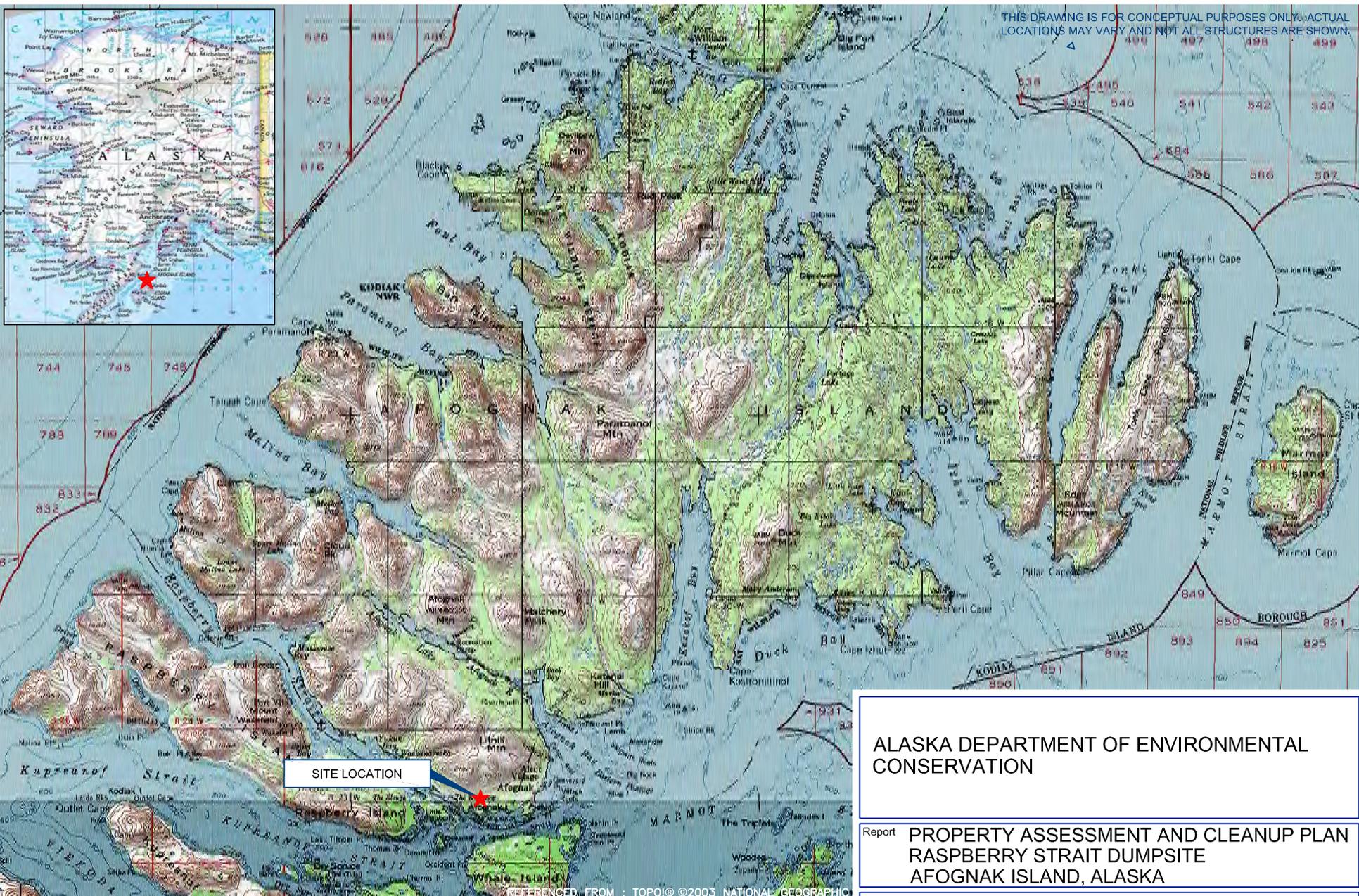
No investigation is thorough enough to exclude the presence of hazardous materials at a given site. If hazardous conditions have not been identified during the assessment, such a finding should not therefore be construed as a guarantee of the absence of such materials on the site, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

Environmental conditions may exist at the site that cannot be identified by visual observation. Where subsurface work was performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations.

Except where there is express concern of our client, or where specific environmental contaminants have been previously reported by others, naturally occurring toxic substances, potential environmental contaminants inside buildings, or contaminant concentrations that are not of current environmental concern may not be reflected in this document.

FIGURES

THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. ACTUAL LOCATIONS MAY VARY AND NOT ALL STRUCTURES ARE SHOWN.



ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Report **PROPERTY ASSESSMENT AND CLEANUP PLAN
RASPBERRY STRAIT DUMPSITE
AFOGNAK ISLAND, ALASKA**

Drawing **SITE LOCATION MAP**

Date November 19, 2009

Scale 1" = 6 miles

Fig. No.

File Name RASPBERRY

Project No. 005.0065.09020

1

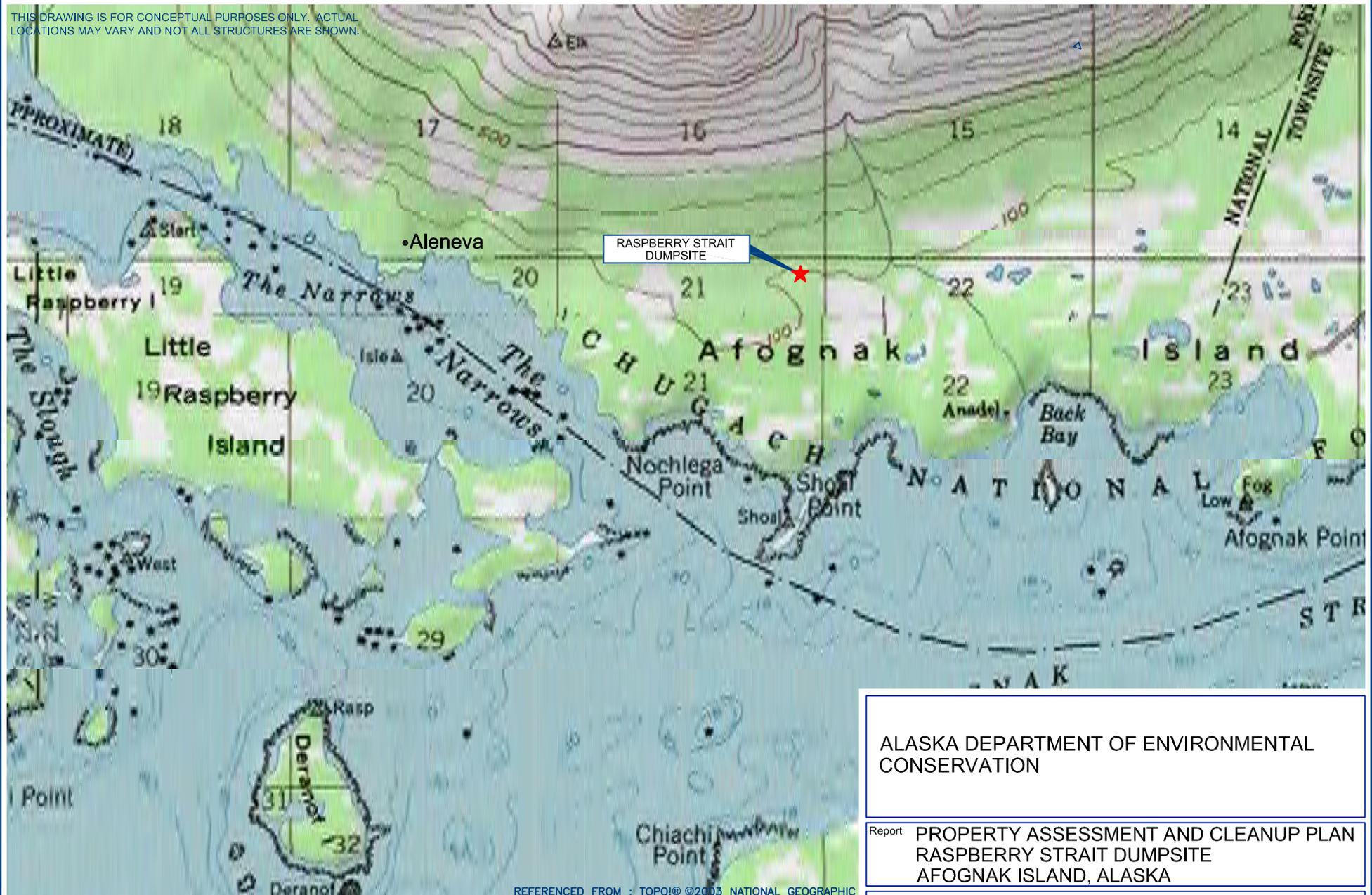


SCALE: 1" = 6mi
WHEN PLOTTED AT 8.5 x 11 PAGE SIZE



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ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Report PROPERTY ASSESSMENT AND CLEANUP PLAN
RASPBERRY STRAIT DUMPSITE
AFOGNAK ISLAND, ALASKA

Drawing SITE VICINITY MAP

Date November 19, 2009

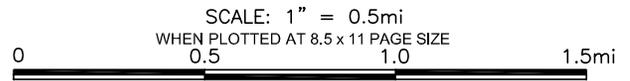
Scale 1" = 0.5 mile

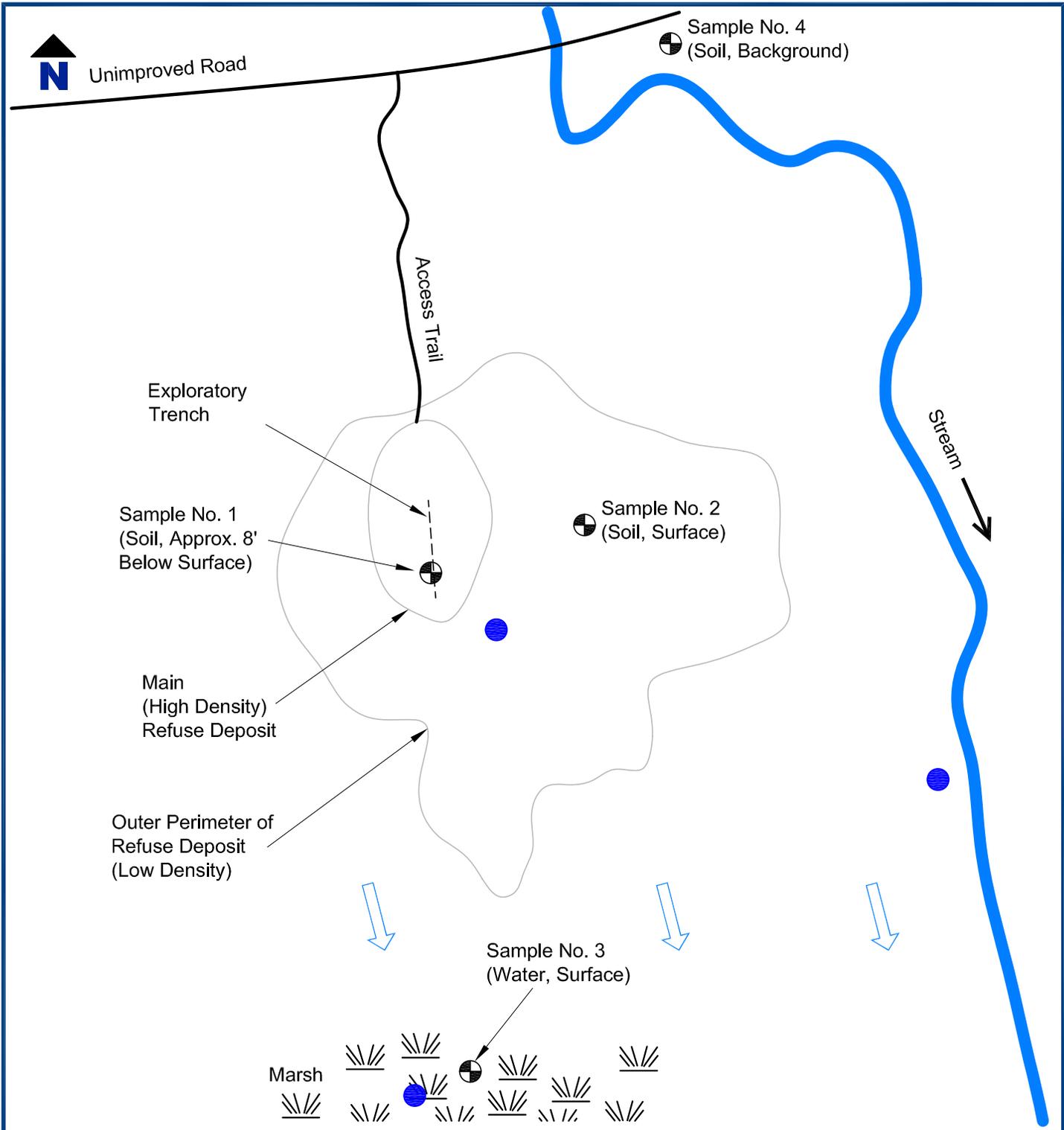
Fig. No.

File Name RASPBERRY

Project No. 005.0065.09020

2





Legend

- 2005 SOIL SAMPLE
- PROPOSED WELL POINT LOCATION
- APPROXIMATE GROUND WATER FLOW DIRECTION

SCALE: 1" = 30 Feet
WHEN PLOTTED AT 8.5 x 11 PAGE SIZE

0 30' 60' 90'

THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. ACTUAL LOCATIONS MAY VARY AND NOT ALL STRUCTURES ARE SHOWN.



ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Report PROPERTY ASSESSMENT AND CLEANUP PLAN
RASPBERRY STRAIT DUMPSITE
AFOGNAK ISLAND, ALASKA

Drawing SITE PLAN

Date December 30, 2009
Scale 1" = 30 Feet

Project No. 005.0065.09020

Fig. No. 3

TABLE

**Table 1
Evaluation of Remedial Alternatives for Soil**

ALTERNATIVE	ENVIRONMENTAL PROTECTION	REGULATORY COMPLIANCE	EFFECTIVENESS	IMPLEMENT-ABILITY	COST	OVERALL RATING
No Action	Poor	Fair	Poor	Excellent	Good; Site ground water monitoring required	Fair
Passive Biopile Construction	Good	Good	Fair	Poor; stakeholders would not support biopile on or near the Site	Good	Fair
Road Base Encapsulation	Good	Good	Good	Poor; no roads on Afognak Island	Fair	Fair
Daily Landfill Cover	Fair	Fair	Fair	Poor, there is no landfill on Afognak Island	Good	Fair
Landfarming	Fair	Fair	Fair	Poor; stakeholders would not support a landfarm on or near the Site	Good	Fair
Thermal Remediation	Good	Good	Good	Poor for metals-contaminated soils; Good for petroleum-contaminated soil	Poor; extremely high cost for small projects	Fair
Offsite Shipment and Disposal	Good	Good	Good	Good for non-petroleum hydrocarbon-impacted soils	Poor; extremely high cost for small projects	Good

APPENDIX A

DEC BROWNFIELD ASSESSMENT REQUEST FORM – 2009

DEC BROWNFIELDS ASSESSMENT REQUEST FORM – 2009

Please check the appropriate box for each question at the top of this page, and then answer questions 1–5 by inserting text in the blank area under each question, using as much space as you need. The deadline for receipt of requests is March 3, 2009.

Eligibility Determination—General Questions:

Is the applicant in any way responsible for the potential contamination at the site, or related to those who may be responsible?

Yes No

Is the site federally owned?

Yes No

Has the site or facility received funding for remediation from the Leaking Underground Storage Tank (LUST) Trust Fund?

Yes No Unknown

If you answered “yes” to any of the above questions, we recommend that you please call DEC to discuss the specifics of your eligibility determination.

To the best of your knowledge, is the *owner* of the property in question:

Private City/Public State Native Corp Tribal Unknown

Known or suspected contaminant(s) (check one):

Hazardous Substances Petroleum Only Hazardous Substances and Petroleum

Is this site currently listed on DEC's *contaminated sites* database?

Yes No Unknown

If yes, please list the project name, if known:

1. Applicant/Owner

- a) **Applicant** - Provide the name and address of the organization applying for a DBA, the name of the contact person, email, telephone, and fax numbers.

Native Village of Afognak 115 Mill Bay Road, Suite 201 Kodiak, AK 99615

Contact: Roxanne Salcido, Environmental Coordinator Phone: 907-486-6357 Fax: 907-486-6529

Email: Roxanne@afognak.org

If Applicant is IGAP staff, please provide name of EPA project officer: *Katherine Brown*

- b) **Project Team** - Because no one person can be responsible for all aspects of a brownfield project, we request that you form a *project team* to ensure continued action beyond this DBA. Attach a letter from each team member acknowledging their support and willingness to participate. (Team members may include: city or village government representatives, tribal council representatives, environmental managers, elders or other community leaders, and other interested parties.)

Roxanne Salcido, Native Village of Afognak; Lisa Hupp, Woody Island Tribe (See attached- letters from each team member)

- c) **Property Owner** - The owner of the property must allow DEC access to the site. If the applicant is different from the owner, include written consent for access from the owner. (*Note: the applicant must be able to secure access for DEC and its contractors to conduct the assessment.*)

The land owner is Afognak Native Corporation. (See attached- Letter of Consent for DEC Access)

2. Site Information

- a) **Historical Site Use** - Describe, to the best of your ability, the previous known uses of the site, when the different activities occurred, and any historic or cultural significance of the property. Identify when and how the site became or may have become contaminated, with what substance(s), and where the contamination is likely to be found.

Prior use of the site was a source for at least two timber operations from 1944-1976. According to a site assessment done in 2005, no evidence was discovered during an examination of the refuse itself suggests the timber harvesting operations share any responsibility for dumping. In the site assessment report, the earliest evidence was found in ca. 2000, by an aerial photo. (See attached- "Site Background", excerpts from the Montauk Site Assessment done in 2005). For the list of contaminants, see page "6" of "Site Background".

- b) **Current Site Condition and Use** - Provide the common name of the site, address, approximate acreage, zoning, and types of buildings. Please attach a site map or aerial photograph showing the site's location in the community, adjacent land use, and areas of known or suspected contamination. Identify approximate property boundaries.

The common name is the Raspberry Strait Dumpsite. The dumpsite is located within Section 21, Tract 25 South, Range 22 West of the Seward Meridian. The site is located on the southernmost tip of Afognak Island bordering Raspberry Strait, approximately 50 feet south of an unimproved trail connecting Back Bay with the Russian settlement of Aleneva. (See attached- "Afognak Dumpsite Aerial Photo").

- c) **Prior Environmental Assessment Activities** - Please describe any prior site assessment or cleanup activities at the site and briefly state what you know about the findings of that work. Attach the summary or conclusion sections of the reports if available. If reports are not available, provide the consultant, client, approximate date of the study, and any other pertinent information.

Montauk Environmental Engineering did an environmental site assessment in September 2005. They also did an addendum report in 2006. (See attached- "Conclusion Afognak")

3. Environmental Concerns

- a) **Reason for Concern** - What is the reason for concern by the community, and what do you hope to gain by our involvement? Is there specific information that you are seeking? Please discuss community concerns in general, and identify any specific problems if possible.

We are concerned about the dumpsite because the site is close to a stream and wetlands, where contaminants may be leaking. We are also concerned because many items are both an exposure threat and physical hazard to visitors; tribal shareholder lodge nearby increases likely visitors.

- b) **Proposed Project Need** - Describe to the best of your ability what your project team believes are the needed assessment activities, and what result you would like to see from this project. Indicate any constraints as to when this work must be completed (e.g., to meet construction timeline, property transaction pending, etc.).

We believe the project need is a current updated assessment of the situation. We would like to find out if it qualifies for Brownfield clean-up funding. The Native Village of Afognak has a task in our IGAP work plan that says we need a site assessment of the dump to be done in Quarter 3 (July, August, September). A recommendation for removal methods and reuse potential would be useful to continue remediation planning.

4. Community Planning and Reuse Goals

- a) **Other Community Plans or Projects** - It is helpful to know if other state or federal agencies are planning work in your community. List any community *plans* that may exist or are in development, such as: economic development plans, hazard mitigation plans, or erosion studies. Describe any other community *projects* that may be scheduled or pending, such as: water and sewer construction, a new landfill, road or airport construction, a new school or addition, fuel-storage tank farms, new housing, or other facilities.

None are known at this time.

- b) **Reuse or Redevelopment Plans** - Does the community have well defined plans for how they would like to reuse this site if it were not for the real or perceived environmental problems? Is this site affecting the use of adjacent properties, subsistence habitat, or other resources? Do reuse plans include the incorporation of greenspace or sustainable, green building practices? If so, please describe.

We would like to return the land to its natural state. It is adjacent to a tribal traditional subsistence use area.

5. Public Involvement

- a) **Public Benefit** - Briefly discuss how your proposed reuse or redevelopment plans for the property will provide a benefit to the public. Why is this important to your community? (Things to consider: creation of jobs, preservation of historically or culturally significant property, preservation of subsistence habitat, reuse or recycling of materials, cost savings to the community, or increased property values.)

Cleaning up this dump is important to the community because it will return the site to its natural state, allow habitat to increase in the area, and take away the danger of hazardous materials that might be entering the surrounding waters. Removal of most of the waste may be done by contracting tribal members, creating employment opportunities. Shareholder property value will increase and the corporation will demonstrate stewardship and care of the land.

- b) **Community Support** - Is the community strongly supportive of this project? Please identify other organizations in your community with whom you are coordinating on this reuse or redevelopment project. (Providing names and phone numbers of contacts is helpful here, and include resolutions or letters of support as applicable.)

The following people are strongly supportive of this project:

Lisa Hupp, Environmental Coordinator for Woody Island Tribe (907-486-2821)

Howard Valley, General Manager of Lands for Afognak Native Corporation (907-486-6014)

- c) **Community Resources** - Our assessment often requires local assistance with site visits, lodging, excavation equipment, and transportation. Describe local resources that are available for this project. Does the community have financial or other resources to supplement this DBA or for other phases of the project, such as equipment, in-kind services, or funding for cleanup or new construction? Can this DBA be used to leverage other funding or services for the project?

There is a possibility, however, resources are unknown at this time, research will need to be done. Potential in-kind services may include skiff transport of DEC personnel to the site.

The selection of a site for a DBA in no way implies that DEC is accepting liability for any contamination that may exist at the site, nor is DEC responsible for any necessary cleanup of hazardous substances that may be found at the site. Liability for contamination on a property is specifically addressed in Alaska Statute (AS) 46.03.822, which outlines those who are liable for the release of a hazardous substance. The general liability categories include: (1) those with an ownership interest in the property; (2) those in control of the substance at the time of the release; or (3) those who arrange for disposal or transport of the substance.

Submit Completed Forms by March 3, 2009, to:

By email: Sonja.Benson@alaska.gov or
By fax: (907) 451-2155 c/o Sonja Benson

Or by regular mail:

DEC Brownfield Assessments
c/o Sonja Benson
Department of Environmental Conservation
610 University Avenue
Fairbanks, Alaska 99709

If you have questions, call Sonja Benson at (907) 451-2156, Deborah Williams at (907) 451-5174, or John Carnahan at (907) 451-2166.

4.0 Conclusions and Recommendations

Chemical data indicate the presence of metals contamination at concentrations above ADEC cleanup levels. The full extent of contamination is unknown, and can best be assessed after the refuse has been removed.

Various items at the dump site pose clear and demonstrable threats to the environmental health of the site. Many items have the potential to pose a suite of exposure threats to site visitors. The dump site also poses physical and biological threats to site visitors, and is an obvious eyesore. The Property Owner may face fines levied by regulatory agencies because the dump is improperly sited, is uncontrolled, contains items which are prohibited from landfilling, and because the dump is a non-ADEC-permitted landfill.

Because of the dump's close proximity to a wetland and because the dump contains items such as batteries and petroleum products, the refuse must be sorted and removed from the present location. Sorting should separate hazardous, prohibited items (batteries and petroleum-associated materials such as absorbent pads, used oil filters and engine parts) from common household refuse. Prohibited items must be disposed in accordance with State of Alaska and Federal laws and regulations. Based upon our evaluation of the dump mass, soil exposed during the removal process should be assessed for the presence of metals and petroleum-product contamination. Attention should be paid during the removal action to the presence of as-yet-unrevealed potentially hazardous or regulated materials such as asbestos containing materials, pressurized containers, solvents and Lead-based paints.

The most likely options for disposal of the vast bulk of the items (common household trash) are on-site disposal through an ADEC-permitted household waste landfill permit (made in accordance with 18 AAC 60, the Solid Waste Regulations), or hauling the refuse to the Kodiak Island Borough (KIB) landfill in Kodiak. Items such as batteries will have to be containerized and shipped to an out-of-state facility. The KIB may accept small amounts of paints, solvents and petroleum-product refuse.

Montauk Environmental Engineering

2903 W. 78th. Avenue
Anchorage, Alaska 99502
Tel: 907.243.4431
rendova@alaska.net

Afognak Native Corporation
215 Mission Rd. Ste. 212
Kodiak, AK 99615

27 June 2006

Attention: Mr. Howard Valley, General Manager of Lands

Reference: Montauk E/E. *Combined Phase I and II Environmental Site Assessment:
Raspberry Strait Dump Site, Afognak Alaska.* September 2005.

Subject: Addendum No. 1

Dear Mr. Valley:

The following addendum addresses new field data collected at the site, communication with the State of Alaska Department of Environmental Conservation and corrections to the September '05 report.

Please call me (907.243.4431) if you have any questions or comments.

Sincerely,

(Signed)

Clifford J. Elsmann

1. Site Revisit: The Raspberry Strait dump site was revisited on 20 June 2006 for the purpose of assessing the nature and extent of a removal action that was performed by residents of the Alaneva community in late May of 2006.

There remain two distinct debris formations at the site: The central, high-volume deposit and, surrounding it, a much larger, thinner layer of scattered debris. The volumes of debris in these two areas are approximately equal.

Approximately one third of the dump's central deposit was removed by the Alaneva effort. The low-concentration deposit surrounding the central deposit appeared untouched. See the Site Plan on page 4 and the photographs on pages 5-8.

Hazardous and potentially hazardous materials (batteries and petroleum-product containers, respectively) are still present at the dump. Hazardous materials must be removed before either creating a non-active on-site landfill or disposing the trash in another landfill.

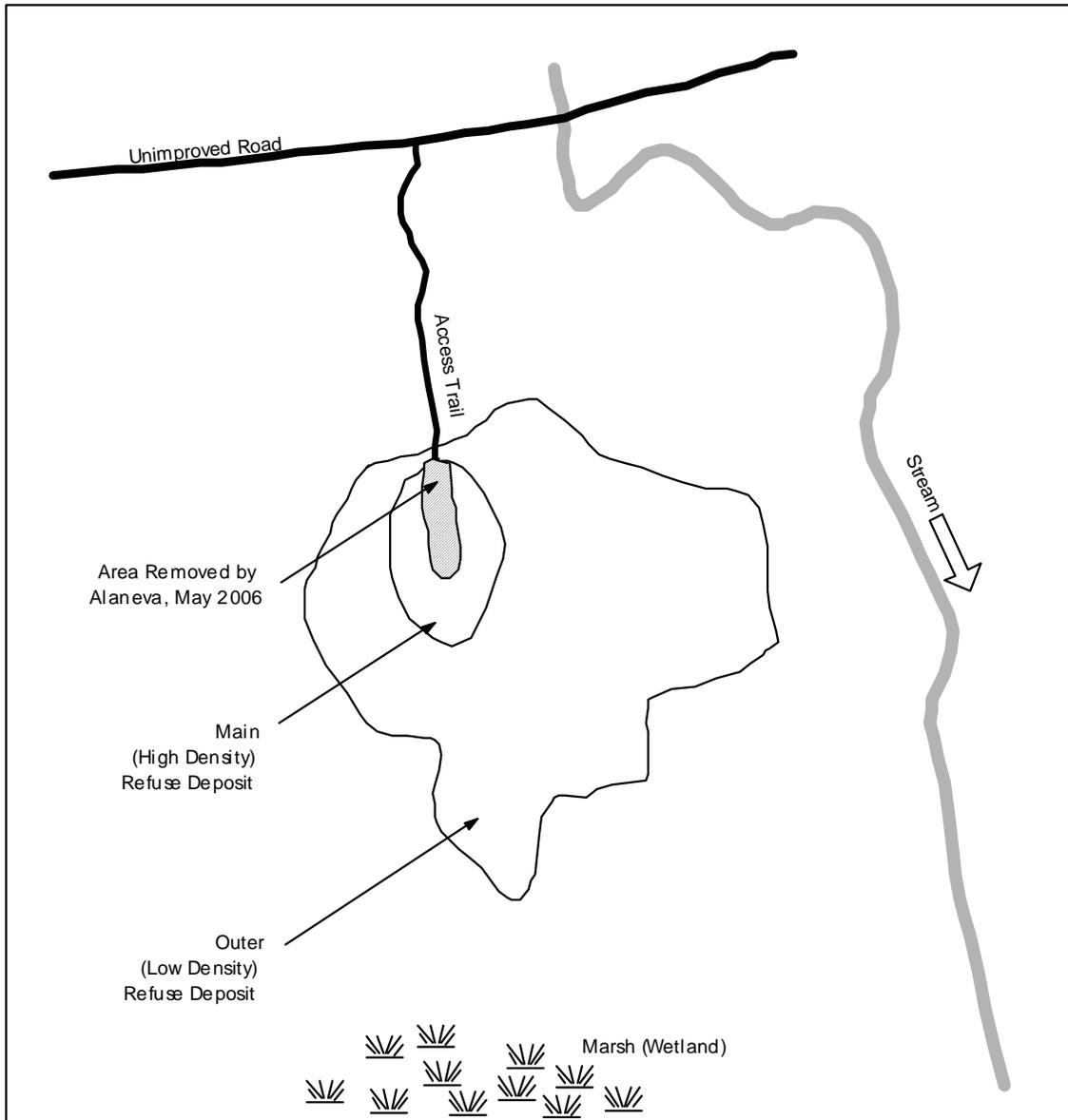
2. Conversation With ADEC Solid Waste: I spoke with Mr. Bob Blankenburg (ADEC Solid Waste, Anch. 269.7690) on 12 June about the potential for creating a non-active landfill at the site. Mr. Blankenburg was receptive to the concept, and opined that closure-in-place would be viable, providing the adjoining (downgradient) wetland is not impacted during the construction process. It would be necessary to comply with the relatively straight-forward closure standards in 18 AAC 60.390. The general work steps would involve presenting a closure plan to the ADEC for review, removing hazardous materials, capping the deposit with soil, surveying and recording the landfill, and documenting those activities in a report submitted to the ADEC.

The ADEC Solid Waste Division are aware of scores of non-regulated (illegal) dump sites spread over the State of Alaska. It is doubtful State resources would be spent on an enforcement action given that the ANC is in the process of addressing the problems at the site; i.e., it is reasonable to expect the nature of the ADEC's involvement with the cleanup process to be more facilitative rather than adversarial.

3. Corrections to the September 2005 Report

- Page 2, §1.3.3: Replace paragraph with: "The surface estate was conveyed to Afognak Native Corporation under IC060 on June 20, 1977 and is recorded in the Kodiak Recording District in Book 37 Pages 478 to 483. The subsurface estate was conveyed to Koniag, Inc. under IC061 on June 20, 1977."
- Page 2, §1.3.4: Amend the third sentence of the paragraph to read: "A separate shareholder property (the Flerchinger property) is leased from the ANC, and is located approximately three quarters of a mile southwest of the site."

4. Conclusions: The volume of debris remaining at the site has been conservatively estimated at just over 500 cubic yards. The average weight of a cubic yard of general debris is estimated to be approximately 1,500 pounds. Again, whether the debris is removed or landfilled in place, the hazardous material must be segregated and disposed separately from non-hazardous debris. Potentially-hazardous materials (e.g., petroleum-product containers) must be assessed to determine their status. The potential interests of Koniag, Inc., the owner of the property's subsurface rights, must be addressed prior to any landfilling action.



Raspberry Strait Dump Site ESA: Addendum 1	
Raspberry Strait Dump Site Afognak, Alaska	
<i>N.B: This drawing is presented solely for informational purposes in support of this report, and is to be used for no other purpose.</i>	
Site Plan	Drawn by CJE



Looking ~south at the northern edge of the dump site from the end of the access trail.







Looking ~northwest at batteries (and battery parts contained within the white woven plastic feed bag at lower left) deposited just west of the main deposit.

2.0 Historical Use

2.1 Prior Use: The general area of the refuse site was a source for at least two timber harvesting operations from 1944 through 1976. No evidence was discovered during an examination of the refuse itself that suggests timber harvesting operations share any responsibility for or were in any way contributory to, the dump site.

No other activities, commercial or private, were discovered or suspected. The extent of timber growth observed is consistent with the chronology of timber harvesting.

2.2 Interviews and Document Reviews: The following information was used to determine past use of the property:

2.2.1 Interview With ANC Lands Manager Howard Valley, 19 September 2005: Mr. Valley was a source of ownership and land use information.

2.2.2 Interview With ANC Forester David Nesheim, 19 September 2005: Mr. Nesheim was a source for information on land use and local timber practices.

2.2.3: Interviews With ANC Security Officers Kewan and Christofferson, 9 May 2005: Officers Kewan and Christofferson discovered the dump site during a routine patrol of ANC property on 9 March 2005, and reported their findings to ANC Management the same day. The Officers documented discarded batteries, oil filters, oil-soaked absorbent pads, 55-gallon drums, 5-gallon pails used to contain petroleum products, and forensic information related to refuse. See the photographs in the Appendix. See also the discussion of forensic data, Section 3.4.

2.2.4: Aerial Photographs: One aerial photograph from ca. 2000 was reviewed. It depicts the dump site in its present location and approximate area. No other aerial photographs were available, including from within the Aeromap, Inc. collection.

2.2.5 Alaska Department of Environmental Conservation (ADEC) Contaminated Sites and Leaking Underground Storage Tanks (LUST) Databases, 16 September 2005: No past or present adverse environmental conditions have been reported in association with the property or immediately surrounding properties. No sites within a five mile radius of the property are listed as "active" with the ADEC. See Table III.

2.2.6 United States Environmental Protection Agency (EPA) Region 10 Database, 16 September 2005: No past or present CERCLA, RCRA (Resource Conservation and Recovery Act) or other EPA-listed condition is reported in association with the property's past or present use or within a five mile radius of the property. See Table III.

3.0 Present Use and Conditions

3.1 Site Inspections: A site inspection was conducted by Clifford Elsmann of Montauk E/E and representatives of the ANC on 29 April 2005. ANC Security Officers revisited the site on 2 May 2005. Chemical and other data were collected by Elsmann on 22 August 2005 while accompanied by representatives of the ANC and an equipment operator.

During the 22 August assessment, a 580B backhoe was used to advance an exploratory trench through the densest and deepest portion of the refuse pile until the underlying, original soil surface was reached. The trench was approximately fifteen feet long, eight feet wide at the surface to two feet wide at depth, and from between one and eight feet deep. See Section 3.2 for a discussion of chemical data methodologies and results. See Section 3.3 for a discussion of observed potential forensic data.

The following is a tabulation of potential environmental concerns which were assessed during the inspection of the site and surroundings, and measured in assessment samples.

Table I: Catalog of Site Conditions and Concerns

Potential Concern or Condition	Observed, Not Observed; Measured, Not Measured	Comments
Hazardous substances and petroleum products in connection with current use.	Observed	Oily absorbent pads, used oil filters, outboard engines, engine parts, abandoned petroleum-product drums and pails.
Hazardous substances in site soil.	Measured	Arsenic, Lead and Selenium were measured at concentrations exceeding cleanup standards. Barium, Cadmium, Chromium, Silver, DRO, RRO and pyrene measured in concentration below cleanup standards.
Hazardous substances in site surface water.	Measured	Barium, Chromium and Lead were measured at concentrations below groundwater cleanup standards.
UST fill or vent pipes	Not observed	
Odors	Observed	Odors of products of decomposition.
Pools of Liquid	Not observed	
Drums or other abandoned items or trash	Observed	Batteries, household solvents and cleaners, petroleum-product drums and containers, oil-soaked absorbent pads, used oil filters, common household trash, engine, machine and appliance parts.
Unidentified substance containers	Observed	
Electrical or hydraulic equipment known or suspected to contain polychlorinated biphenyls (PCBs)	Not observed	
Drains and sumps	Not observed	
Pits, ponds or lagoons	Not observed	
Stained soil	Observed	Stained soil observed in association with batteries. Source of sample 02
Stressed vegetation	Not observed	
Solid waste	Observed	
Waste water	Not observed	
Wells	Not observed	
Septic systems	Not observed	
Asbestos-containing building materials	Not Observed	The potential for ACM cannot be fully assessed except by examining all dump materials, most feasibly during cleanup of the dump.
Lead-based paint	Not Observed	The potential for Lead-based paint cannot be fully assessed except by examining all dump materials, most feasibly during cleanup of the dump.
Wetlands	Observed	The property meets the definition of a wetland.

3.2 Chemical Data

3.2.1 Data Collection Methodologies: Soil and water chemical data were collected, handled, transported, analyzed and reported in accordance with the procedures codified in 18 AAC 78. Analytical data are tabulated in Table II. Results are discussed in Section 3.2.2. Raw laboratory data are included in the Appendix.

- Soil sample 01 was collected from the finished depth of the exploratory trench at the approximate center of the refuse pile. Sample 01 was analyzed for gasoline range organics (GRO), benzene, toluene, ethylbenzene and total xylenes (BTEX), diesel and residual range organics (DRO-RRO), polychlorinated biphenyls (PCB), polynuclear aromatics (PAH), halogenated volatile organics (HVO) and the metals Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
- Soil sample 02 was collected just east of the main refuse pile from beneath a woven plastic bag of battery components. Sample 02 was analyzed for the metals Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
- Water sample 03 was collected from ponded water in the wetlands approximately 90 feet south of the refuse pile center point. Sample 03 was analyzed for gasoline range organics (GRO), benzene, toluene, ethylbenzene and total xylenes (BTEX), diesel and residual range organics (DRO-RRO), polychlorinated biphenyls (PCB), polynuclear aromatics (PAH), halogenated volatile organics (HVO) and the metals Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
- Soil sample 04 was collected as a background, baseline sample from undisturbed native soil near the roadway. Sample 04 was analyzed for diesel range organics (DRO) and the metals Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
- Samples 05 and 06 are AK101 Test Method water and soil (respectively) trip blanks collected for quality control purposes.

Table II: Chemical Data

Sample Number	Matrix and Location	Analyte/ Test Method	Result	ADEC Limit
01	Soil sample from center of refuse pile at finished depth of exploratory trench	BTEX / 8021b	ND	
		GRO / AK101	ND	
		DRO / AK102	70.9 mg/kg	230 mg/kg
		RRO / AK103	170 mg/kg	9,700 mg/kg
		Arsenic / EPA 6020	5.26 mg/kg	1.8 mg/kg
		Barium / EPA 6020	27.4 mg/kg	982 mg/kg
		Cadmium / EPA 6020	1.53 mg/kg	4.5 mg/kg
		Chromium / EPA 6020	14.9 mg/kg	23 mg/kg
		Lead / EPA 6020	42.1 mg/kg	400 mg/kg
		Mercury / EPA 7471A	ND	
		Selenium / EPA 6020	ND	
		Silver / EPA 6020	ND	
		PCB / EPA 8082	ND	
		HVO / 8260B	ND	
PAH	0.0166 mg/kg (pyrene)	1,400 mg/kg		

- ADEC State of Alaska Department of Environmental Conservation
- AK ADEC test method
- BTEX Benzene, toluene, ethylbenzene and total xylenes
- DRO Diesel range organics
- EPA United States Environmental Protection Agency
- GRO Gasoline range organics
- HVO Halogenated volatile organics -or- volatile organic compounds
- mg/kg Milligrams per kilogram, also expressed as parts-per-million
- ND Not detected (less than the method reporting limit)
- PAH Polynuclear aromatic hydrocarbons
- PCB Polychlorinated biphenyls
- RRO Residual range organics

Table II: Chemical Data, Cont.

Sample Number	Matrix and Location	Analyte/ Test Method	Result	ADEC Limit
02	Surface soil sample from east side of main refuse pile, collected from beneath bag of battery parts	Arsenic / EPA 6020	11.4 mg/kg	1.8 mg/kg
		Barium / EPA 6020	107 mg/kg	982 mg/kg
		Cadmium / EPA 6020	ND	
		Chromium / EPA 6020	11.8 mg/kg	23 mg/kg
		Lead / EPA 6020	17,100 mg/kg	400 mg/kg
		Mercury / EPA 7471A	ND	
		Selenium / EPA 6020	26.0 mg/kg	3 mg/kg
		Silver / EPA 6020	ND	

- ADEC State of Alaska Department of Environmental Conservation
- AK ADEC test method
- BTEX Benzene, toluene, ethylbenzene and total xylenes
- DRO Diesel range organics
- EPA United States Environmental Protection Agency
- GRO Gasoline range organics
- HVO Halogenated volatile organics -or- volatile organic compounds
- mg/kg Milligrams per kilogram, also expressed as parts-per-million
- ND Not detected (less than the method reporting limit)
- PAH Polynuclear aromatic hydrocarbons
- PCB Polychlorinated biphenyls
- RRO Residual range organics

Table II: Chemical Data, Cont.

Sample Number	Matrix and Location	Analyte/ Test Method	Result	ADEC Limit
03	Surface water from wetland south of refuse pile	BTEX / 8021b	ND	
		GRO / AK101	ND	
		DRO / AK102	ND	
		RRO / AK103	ND	
		Arsenic / EPA 6020	ND	
		Barium / EPA 6020	0.0390 mg/l	2.0 mg/l
		Cadmium / EPA 6020	ND	
		Chromium / EPA 6020	0.00137 mg/l	0.1 mg/l
		Lead / EPA 6020	0.00347 mg/l	0.015 mg/l
		Mercury / EPA 7471A	ND	
		Selenium / EPA 6020	ND	
		Silver / EPA 6020	ND	
		PCB / EPA 8082	ND	
		HVO / 8260B	ND	
PAH	ND			

- ADEC State of Alaska Department of Environmental Conservation
- AK ADEC test method
- BTEX Benzene, toluene, ethylbenzene and total xylenes
- DRO Diesel range organics
- EPA United States Environmental Protection Agency
- GRO Gasoline range organics
- HVO Halogenated volatile organics -or- volatile organic compounds
- mg/kg Milligrams per kilogram, also expressed as parts-per-million
- ND Not detected (less than the method reporting limit)
- PAH Polynuclear aromatic hydrocarbons
- PCB Polychlorinated biphenyls
- RRO Residual range organics

Table II: Chemical Data, Cont.

Sample Number	Matrix and Location	Analyte/ Test Method	Result	ADEC Limit
04	Soil background sample used to establish baseline	DRO / AK102	213 mg/kg	230 mg/kg
		RRO / AK103	603 mg/kg	9,700 mg/kg
		Arsenic / EPA 6020	7.82 mg/kg	1.8 mg/kg
		Barium / EPA 6020	45.8 mg/kg	982 mg/kg
		Cadmium / EPA 6020	ND	
		Chromium / EPA 6020	22.2 mg/kg	23 mg/kg
		Lead / EPA 6020	13.9 mg/kg	400 mg/kg
		Mercury / EPA 7471A	0.198 mg/kg	1.24 mg/kg
		Selenium / EPA 6020	ND	
		Silver / EPA 6020	ND	
05	Water trip blank	GRO/BTEX / AK101	ND	
06	Soil trip blank	GRO/BTEX / AK101	ND	

ADEC State of Alaska Department of Environmental Conservation
 AK ADEC test method
 BTEX Benzene, toluene, ethylbenzene and total xylenes
 DRO Diesel range organics
 EPA United States Environmental Protection Agency
 GRO Gasoline range organics
 HVO Halogenated volatile organics -or- volatile organic compounds
 mg/kg Milligrams per kilogram, also expressed as parts-per-million
 ND Not detected (less than the method reporting limit)
 PAH Polynuclear aromatic hydrocarbons
 PCB Polychlorinated biphenyls
 RRO Residual range organics



Woody Island Tribal Council

3248 Mill Bay Road
Kodiak, AK 99615

Gordon L. Pullar, Ph.D
President

March 4, 2009

Sonja L. Benson
Contaminated Sites Program
Alaska Department of Environmental Conservation
610 University Avenue
Fairbanks, Alaska 99709

Debbie Lukin
Vice-President

Dear Mrs. Benson:

Woody Island Tribal Council (WITC) acknowledges and supports the efforts of the Native Village of Afognak (NVA) in submitting a DEC Brownfields Assessment application; our staff is committed to offering assistance when possible through the scope of our Brownfields Response Program Grant. Lisa Hupp, environmental coordinator, is the WITC point of contact for NVA's application and related follow-up support if NVA's proposal is accepted.

Margaret Roberts
Secretary / Treasurer

Respectfully,

Maggie Rocheleau
Village Administrator

Andy Teuber, Jr.
Council Member

cc: Roxy Salcido, Native Village of Afognak

Jana Turvey
Council Member



Native Village of Afognak *To embrace, protect, develop, and enhance Alutiiq*

culture, protect our traditional use areas and encourage unity among the Alutiiq of the Kodiak Archipelago

March 31, 2009

Sonja Benson
Contaminated Sites Program
Alaska Department of Environmental Conservation
610 University Avenue
Fairbanks, AK 99709

Dear Mrs. Benson:

The Native Village of Afognak is strongly concerned about the dumpsite on Afognak Raspberry Straits. By being accepted for a DEC Brownfield Site Assessment, we will be able to know what kinds of contaminants currently exist at the site, and then move forward to apply for grants to clean it up.

If our proposal is accepted, Roxy Salcido, NVA's Environmental Coordinator, will be the main contact for the project.

Melissa Borton

Tribal Administrator

Afognak



Afognak Native Corporation

215 Mission Road, Suite 212

Kodiak, Alaska 99615

(800) 770-6014 • (907) 486-6014

Fax (907) 486-2514

March 4, 2009

Roxy Salcido
Native Village of Afognak
115 Mill Bay Road, Suite 201
Kodiak, AK 99615

RE: Consent to Access ANC Land

Dear Roxy,

This letter serves as a letter of consent for NVA to access ANC property, to access the Raspberry Dumpsite, as you deem necessary. This consent extends to any related parties or individuals who may be accompanying NVA personnel.

Sincerely,

Howard W. Valley
General Manager of Lands

APPENDIX B

STAKEHOLDER MEETING MINUTES



Meeting Summary

Date: October 1, 2009, 1:00 P.M. to 1:30 P.M.

Re: Raspberry Strait Property Assessment and Cleanup Plan Stakeholder Meeting

Attendees: Roxanne Salcido, Native Village of Afognak
Mike Patterson, Woody Island Tribal Council
Howard Valley, Afognak Native Corporation
Deborah Williams, Brownfield Project Manager, Alaska Department of Environmental Conservation (DEC)
Sonja Benson, Brownfield Project Manager, DEC
Michael Rieser, Program Director, SLR
Christina Bentz, Field Geologist, SLR

Meeting Opening:

The planning meeting was opened with brief introductions from each of the meeting attendees. Ms. Benson then spoke briefly about the EPA-funded Brownfield, reuse and development, program and how the focus of the Brownfields program is safe reuse of properties with environmental concerns. Ms. Benson spoke of the grant funds available for private site assessment through the State Tribal Response Program (STRP) through the EPA and that this would be the mechanism for funding this project. Ms. Benson also mentioned that the Woody Island Tribal Council is a partner as a Tribal Response Program. Ms. Benson indicated that the state does not have money for cleanup but that this project would be mostly about planning which would allow for them to apply for an EPA cleanup grant. Ms. Benson stated that the Afognak Native Corporation would be eligible for the cleanup grant.

A project briefing was then given by Mr. Rieser from SLR.

SLR Project Summary:

Mr. Rieser explained the objectives of SLR to accomplish the project and the PACP process. The project includes a review of the available documents, aerial photographs, a site visit, and updating the existing Phase I assessment done in 2005. Mr. Rieser continued and indicated that the site visit would include: visiting the site, photo documenting current conditions, collection information to assess the options for the site (removal to an existing landfill or establishing a more permanent landfill at the existing site), and look into locally available labor and equipment. Mr. Rieser stated

that SLR was looking at the week of October 19 or October 26 to conduct the site visit. The visit would not include collecting additional samples as this was done during a previous site assessment. Rather, this visit would be to produce an updated ASTM Phase I to allow for application to EPA for additional funding, and preparation of a cost estimate for one or more remedial options and a corresponding cleanup plan to determine the funding needed to cleanup the site.

It was determined that the proposed dates would work for both Ms. Salcido and Mr. Valley and that coordination of the site visit would be through Ms. Salcido. The Alutiiq Pride will be available for the site visit and lodging was recommended at the Best Western in Kodiak.

Further discussion of the EPA cleanup grant and application process was discussed. The closing date for the current cycle is October 16 and Ms. Benson indicated that they could apply for the grant for this site next year. It was also discussed that EPA offers training sessions once the grant period opens and that Ms. Salcido and Mr. Valley could get information forwarded to them regarding this.

Mr. Rieser inquired if there were any key dates SLR should focus on for the air photo review. Mr. Valley indicated that timber operations started in the mid-1940s and ended in 1975. Mr. Valley also indicated that the road to this area was not established before 1960 and that there was some site activity in 1991.

Meeting Closing:

Ms. Williams concluded the meeting by thanking the attendees, and requested to SLR prepare the meeting notes. Ms. Williams said that she would distribution the minutes once prepared.

APPENDIX C
PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG



Photograph 1:
ATV trail leading to Raspberry Strait Dumpsite (October 2009).



Photograph 2:
Fifty-five gallon drums, freezers, and other refuse in the central deposit (October 2009).



Photograph 3:
Profile of the central deposit area; shows sloping terrain (October 2009).



Photograph 4:
Refuge in the central deposit (October 2009).



Photograph 5:

Low-volume scattered refuse; this area is along an old logging road along the west side of the Site that has started to become overgrown (October 2009).



Photograph 6:

Wetland area near base of the central high-volume refuse deposit (October 2009).



Photograph 7:

Low-volume scattered refuse; in some areas the tundra is starting to grown over scattered refuse (October 2009).

APPENDIX D

FIELD NOTES

Raspberry Strait Dumpsite



"Rite in the Rain"®

ALL-WEATHER

JOURNAL

No. 391

005.0065.09020

² Wednesday October 14, 2009 C. Bentz

1200 Head to airport for flight to Kodiak
(scheduled departure = 1335)

1300 Checked in + waiting; review
documents related to trip

1455 Arrive in Kodiak; pick up car +
get bags → town to meet Roxanne

1525 Go to Native Village of Afognak
office

- project was given to NVA so they
could apply for grant \$

- get phone #s

Kodiak Island Borough www.kib.co.kodiak.ak.us

- Property Location / Ownership
Information 486-9353

- Solid Waste / Environmental
Specialist 486-9348

Threshold Recycling 486-6551

Kodiak Island Borough

- Landfill 486-9345

- Will get list of 40hr. trained persons

- priority for recycle

- shipping - Horizon

- Lazy Bay - landing craft ⁴⁸⁶⁻⁴⁰⁴¹ equipment,
Shipping

- Cape Douglas - landing craft ⁴⁸⁶⁻⁶⁸⁷⁰ Afognak/Kodiak

- Threshold Recycling ^{(Dygg Peterson) 350-7315 (cell)} may ship free of

C. Bentz 10/14/09

10/14/09

C. Bentz ³

Charge to Anchorage for recycling
1615 call M. Rieser w/update; meet
here @ 0815 tomorrow

1630 done for now; will review site
documents + setup site visit checklist
later today.

End of notes for 10/14/09

C. Bentz 10/14/09

⁴
Oct. 15, 2009

C. Bentz

0715 continue document review
in preparation for site visit

Site Visit Participants =

- Roxanne Salcido - Native Village of Afognak, Environmental Coordinator
- Andy Christofferson - Afognak Native Corporation, Boat Captain and Patrol for ANC
- Mike Patterson - Woody Island Tribal Council, Environment and Natural Resources Director
- Christina Bentz - SLR International Corp, Project Geologist

0810 head to NVA office to meet

Boxy

0815 head to Near Island Boat Harbor

0832 depart harbor on Alutiq
Pride

1003 arrive at beach

1026 arrive at dump site

put up signs this spring; only recent
activity = beer bottles + cans

water near site is not anyone's drinking
water - discharges to cove, which is
used for subsistence fishing

C. Bentz 10/15/09

5

10/15/09

C. Bentz

Items in dump -

Washer/dryer

freezer → at least 7

battery

ATV parts + tires

aerosol cans

buckets

coolers

cans

paint cans

fuel containers

drums → at least 14

household trash → majority

boat motors → at least 2

rusty cans

aluminum cans (lots)

plastic containers

glass bottles

electrical equipment

oil bottles

mattresses

C. Bentz 10/15/09

6

10/15/09

C. Bentz

access trail

clearing

old trail (logging road)

scattered debris

main area

marshy area w/
standing water

ponded water

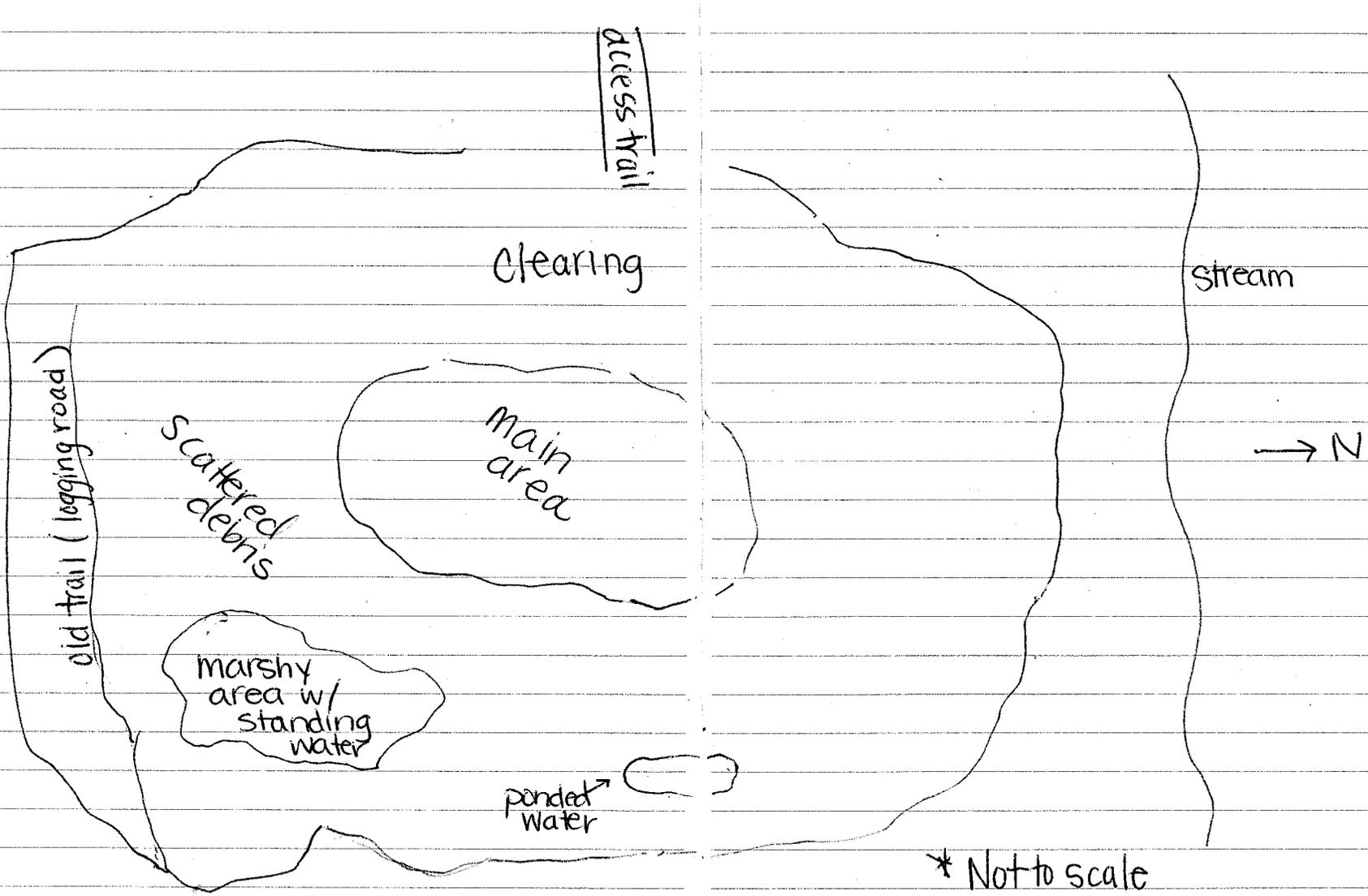
10/15/09

C. Bentz

stream

→ N

* Not to scale



⁸
10/15/09

C. Bentz

discovered in 2005 - was actively being used upon discovery; believed it was used by logging companies; think comm. moved ~5 trailer loads removed; Community not open to outsiders → recommended we don't go there; no staining observed during site walk; most of the debris is on the surface and not expected to be buried; berries present at the dumpsite and downstream; big concern is human risk through subsistence activities (i.e. hunting + fishing); road/trail on Afognak is not supposed to have ATVs, but unauthorized use occurs; receptors would include trespassers + site visitors; the three persons on site visit (Roxy, Mike, and Andy) all indicated that there is no desire to have the site turned into a permitted dump; additional info = lodge nearby is on private property and we did not have authorization to access; Russian community near to site does not

C. Bentz 10/15/09

10/15/09

⁹
C. Bentz

welcome outsiders and it has taken 3 years for ANC to get them to talk to them - it was indicated that they would not talk to me while onsite interviewed Andy Christofferson as the Key property manager for the Phase I Andy is employed by the Afognak Native Corporation as a Patrol Officer. — He has been familiar with the site since he discovered it during a patrol of ANC land in 2005. He indicated that the property is currently used as an unpermitted dump site. Past use was logging. ^{CB 10/15/09} Adjacent land use is a lodge to the north, native land to the east, private land to the south, + the Russian community to the west. Andy had no knowledge of current or past use or storage of haz. / petroleum material, current or past regulatory action, past releases or other environmental

C. Bentz 10/15/09

10/15/09

C. Bentz

info. As for the required questions, Andy answered no to all 3.

When asked if dump was observed prior patrols it was stated ^{on} that 2005 was the first time he had gone up that trail. He also indicated that aside from the beer cans closest to the trail no new material appeared to be placed here after 2006 cleanup.

1139 depart dump site on ATVs

1209 back on boat; start heading to Kodiak via Port Lions (to drop off ATVs)

1421 back @ Small boat harbor in Kodiak

1452 stop by ANC office to see if Howard is in - he is not

1500 at NVA office; coordinate plans for tomorrow with Roxy - will meet Howard @ 0900

1515 break

1630 call M. Rieser with update and work on paperwork.

C. Bentz 10/15/09

10/16/09

C. Bentz

0830 depart B+B for NVA office to meet Roxy

0850 meet Howard Valley @ ANC

conduct interview - consider Howard the user for Phase I site assessment to the required questions - Howard answered, NO to all 3. Howard has been familiar w/the site since its discovery in 2005. He described the current land use as recreation/hunting. He didn't know the past site usage aside from dumping - indicate that there are 3 locations where dumping may have occurred from (i.e. have access to site via road system).

He also indicated that there was a logging road. Current surrounding land use consists of a community, 5-acre leases, and a lodge. Past usage of surrounding areas include hunting and timber harvesting until the mid-70s. The only current/past hazardous/petroleum use, storage or disposal is the batteries

C. Bentz 10/16/09

Oct. 16, 2009

C. Bentz

and drums that have been dumped at the site. He is unaware of any current or past regulatory actions or past releases of haz./petroleum products. Other environmental info. consists of 2005/2006 environmental reports. As far as re-use objective Howard indicated that he would like to see material removed from the site + does not want to have a permitted dump site. He also stated that the ANC board is not interested in a permitted dump.

As the user, Howard indicated:

- no info. ^{CB 10/16/09} on liens on the property or knowledge of environmental
- no AULs
- no specialized knowledge / experience material to RESRECs

CB 10/16/09

CB 10/16/09

- indicated that question regarding purchase price / sale price is not applicable

- reason for wanting phase I is to find out what's there,

C. Bentz 10/16/09

Oct. 16, 2009

C. Bentz

What alternatives are available, and the cost to implement them

- data provided by user
 - = CD from Roxy w/ reports
 - = CD from Andy w/ photos from Russian cleanup in 2006
 - = land ownership map + land use conveyance from Howard

Howard indicated that NVA has all applicable documents. Stated land use permit required to access site or approval by ANC land office for thing like my site visit. Howard stated that ANC aquired the land which the site is located on from BLM under IC 060 on June 20, 1977. Howard's concern with site is - 1) astetics, 2) contamination on site may result in it being a registered dump, 3) want to discontinue all dumping activity @ the site. When asked about activity on Afognak, stated that there are ongoing timber options @ Danger

C. Bentz 10/16/09

Oct. 16, 2009

C. Bentz

Bay by ANC and Evergreen Timber. They have equipment that is large and may be available if timber operations are slow (not likely). Stated that equipment is available @ Kodiak Rental Center. List of HAZWOPER trained persons could be acquired from Katrina Nelson @ ANC. Howard was curious about the option to recycle + whether it would be cost effective. ANC will grant access to the site (including equipment) for cleanup. Do not think re-seeding is necessary. Howard also indicated that there was no else I should interview. As for local records, most likely source would be Kodiak Island Borough - indicated that the land is non-taxable and that all of Afognak Island is zoned conservation.

0928 depart ANC office +
return to NVA office to

C. Bentz 10/16/09

Oct. 16, 2009

C. Bentz

Summarize interview notes, review information gathered during site visit. Kodiak Rental center = 486-3662
1015 head to airport to check in for flight + return rental car
1233 arrive in Anchorage
1300 back at office

C. Bentz 10/16/09

APPENDIX E

CONCEPTUAL SITE MODEL

APPENDIX E RASPBERRY STRAIT DUMP SITE CONCEPTUAL SITE MODEL

This Conceptual Site Model (CSM) was developed to qualitatively assess the ways in which potential human receptors may be exposed to contaminants associated with the Raspberry Strait Dump Site (the Site). This CSM is based on information from Montauk Environmental Engineering's *Combined Phase I and Phase II Environmental Site Assessment* (2005) and Addendum No. 1 (2006) and information gathered during SLR's site visit in 2009.

The Raspberry Strait Dump Site is an unpermitted dump site located on land owned by the Afognak Native Corporation (ANC) on Afognak Island. Access to Afognak Island is limited to boat or small aircraft. Access to the Site is via all-terrain vehicle (ATV) trail, and travel on ATV trails on land owned by ANC is restricted.

This CSM was prepared in accordance with the Alaska Department of Environmental Conservation (DEC) *Draft Guidance on Developing Conceptual Site Models* (DEC, 2005) using the DEC Draft Human Health CSM Scoping Form. The DEC Draft Human Health CSM Diagram was used to summarize the results of the scoping form. The scoping form and diagram are presented as attachments to this CSM.

All soil cleanup levels referenced in this CSM are specified in Title 18 of the Alaska Administrative Code (AAC), Chapter 75 (18 AAC 75), *Oil and Other Hazardous Substances Pollution Control*, Tables B1 and B2, DEC Method Two, for either the over 40-inch zone or migration to ground water, whichever is less (DEC, 2008). All surface water cleanup levels referenced in this CSM are specified in 18 AAC 70, *Water Quality Standards*, as amended through September 19, 2009 (DEC, 2009).

F.1 Impacted Media

Impacted media at the Site are the environmental compartments into which a contaminant is directly released (DEC, 2005). All media are discussed in the subsequent sections with respect to whether they are impacted.

F.1.1 Surface and Subsurface Soil

Surface soil is defined as the interval from 0 to 2 feet below ground surface (bgs) and subsurface soil is defined as the interval from 2 feet to 15 feet bgs (DEC, 2005); soil below 15 feet bgs is not considered in this CSM because it is below the depth interval considered for direct contact by human receptors. A release or discharge associated with the activities at the Site (i.e., illegal dumping) would directly affect surface soil and therefore, for this CSM, surface soil is considered an impacted medium. However it is considered unlikely that a discharge or release associated with activities at the Site would directly impact subsurface soil; thus, subsurface soil is not considered an impacted medium for this CSM. Subsurface soil, however, will be considered as an exposure medium; exposure media are described in further detail in Section F.2.

Three soil analytical samples were collected at the Site in 2005. These samples were described as one surface soil sample (collected east of the main refuse pile), one “background” sample (collected from undisturbed native soil near the roadway), and one sample from the center of the refuse pile at the finished depth of the exploratory trench. Although the exploratory trench was advanced to a final depth of 8 feet below the top of refuse pile, it was stated that the trench was advanced until the underlying, original soil surface was reached; thus, the soil sample collected from the bottom of the trench is technically surface soil rather than subsurface soil and will be considered as such for the purposes of this CSM (Montauk, 2005). Each of these three samples and the corresponding analytical results are discussed below.

One surface soil analytical sample was collected on the east side of the main refuse pile, directly beneath a bag of battery parts. The sample was analyzed for the eight Resource Conservation and Recovery Act (RCRA) metals. Cadmium, mercury, and silver were not detected. Barium and chromium were detected, but at concentrations (107 milligrams per kilogram [mg/kg] and 11.8 mg/kg, respectively) below their respective DEC Method Two soil cleanup levels of 1,100 mg/kg and 25 mg/kg. Arsenic, lead, and selenium were detected at concentrations of 11.4 mg/kg, 17,100 mg/kg, and 26.0 mg/kg, respectively, all of which are above their respective DEC Method Two soil cleanup levels of 3.7 mg/kg, 400 mg/kg, and 3.4 mg/kg (Montauk, 2005).

One “background” sample was collected from undisturbed native soil near the roadway in 2005; it is assumed that this sample was collected from the surface soil interval. This sample was analyzed for diesel range organics (DRO), residual range organics (RRO), and RCRA metals. DRO and RRO were detected, but at concentrations (213 mg/kg and 603 mg/kg, respectively) below their respective cleanup levels of 250 mg/kg and 10,000 mg/kg. Cadmium, selenium, and silver were not detected. Barium, chromium, lead, and mercury were detected but at concentrations less than their respective cleanup levels. Arsenic, detected at a concentration of 7.82 mg/kg, was the only RCRA metal detected above DEC Method Two soil cleanup levels in the background sample. Evaluation of these data suggests the background sample captured analytes either from a discrete spill or from a spill associated with the Site and is not representative of background concentrations (Montauk, 2005).

One analytical sample was also collected from surface soil exposed at the bottom of the exploratory trench. This sample was analyzed for gasoline range organics (GRO); DRO; RRO; benzene, toluene, ethylbenzene, and xylenes (BTEX); RCRA metals; polychlorinated biphenyls (PCBs); halogenated volatile organic compounds (HVOCs); and polynuclear aromatic hydrocarbons (PAHs). GRO, BTEX, mercury, selenium, silver, PCBs, and HVOCs were not detected. DRO and RRO were detected, but at concentrations (70.9 mg/kg and 170 mg/kg, respectively) below DEC Method Two soil cleanup levels. The RCRA metals barium, cadmium, chromium, and lead were also detected but at concentrations less than their respective cleanup levels. Arsenic, detected at a concentration of 5.26 mg/kg, was the only RCRA metal detected above DEC Method Two soil cleanup levels. One PAH, pyrene, was detected at a concentration of 0.0166 mg/kg, well below the DEC Method Two soil cleanup level of 1,000 mg/kg (Montauk, 2005).

Arsenic, lead, and selenium were detected in soil samples collected from the Site in 2005 at concentrations above DEC Method Two soil cleanup levels. These three metals are naturally occurring in Alaska soils. The detected concentrations of arsenic at the Site were compared to

regional background concentrations. Results show that arsenic concentrations are slightly above background levels, which are generally elevated in Alaska soils relative to other locations in the United States. The mean arsenic concentration at the Site of 7.8 mg/kg is slightly more than the mean background concentration for Alaska soils of 6.7 mg/kg (Gough et al., 1988); however, it is not likely that arsenic would be released in large quantities from illegal dumping at the Site. The maximum detected concentration of lead (17,100 mg/kg) was much higher than the DEC Method Two soil cleanup level (400 mg/kg) and was collected from soil located beneath a bag containing battery parts; at this concentration, the lead concentration is directly attributed to illegal dumping at the Site. No regional background concentrations are available for selenium; therefore, it is unknown how Site concentrations compare to background concentrations for this metal.

F.1.2 Ground Water

Illegal dumping at the Site would have likely resulted in impact to surface soil rather than ground water; as such, ground water is not considered an impacted medium but will be considered as an exposure medium.

One well is registered on Afognak Island; the well was drilled in November 2007 at the ANC Camp, which is located approximately 14.3 miles from the Site. Based on the drilling logs, the lithology in this area consists of silty gravel from 2 feet to 5 feet bgs and is underlain by bedrock (shale). The borehole was advanced to a total depth of 366 feet bgs, with water encountered between 320 feet and 340 feet bgs. The well is cased from 0 to 345 feet and is open to a depth of 366 feet. The well is artesian. No other wells are known to exist on Afognak Island.

No ground water samples have been collected from the Site.

F.1.3 Surface Water

Illegal dumping at the Site would have likely resulted in impact to surface soil rather than surface water. For this CSM, surface water is not considered an impacted medium; however, surface water is an exposure medium based on the potential for overland migration of contaminants to surface water.

The nearest surface water body to the Site consists of ponded water and marshy conditions observed on the south side of the central, high volume refuse deposit in 2009. In addition, a small stream flowing almost north to south is located just beyond the eastern edge of the Raspberry Strait Dump Site. In the spring of 2005, the marsh area was unofficially inspected by the United States Army Corps of Engineers' wetland specialist, who concluded that the marsh falls within the description of "wetland" as defined in Title 33 of the Code of Federal Regulations, Part 328 (Montauk, 2005).

One surface water sample was collected from the wetland south of the refuse pile at the Site in 2005. The sample was analyzed for GRO, DRO, RRO, BTEX, RCRA metals, PCBs, HVOCs, and PAHs. Barium, chromium, and lead were the only analytes detected in surface water at concentrations of 0.0390 milligrams per liter (mg/L), 0.00137 mg/L, and 0.00347 mg/L, respectively. Barium and chromium concentrations are more than 50 times less than DEC surface water drinking water cleanup levels for surface water. No DEC surface water drinking water

cleanup level exists for lead in surface water; the lead concentration was, therefore, compared to the DEC ground water cleanup level of 0.015 mg/L found in 18 AAC 75, Table C. The lead concentration detected in surface water is approximately four times less than the DEC ground water cleanup level.

F.1.4 Sediment

A release at the Site would not directly affect sediments associated with nearby surface water for the same reasons as discussed above. Therefore, for this CSM, sediment is not considered an impacted medium.

No known sediment samples have been collected from the Site.

F.2 Transport Mechanisms and Exposure Media

Transport mechanisms are the pathways through which contaminants may move from impacted media to other exposure media. Exposure media are the media to which contaminants are released or transported that may result in exposure by human receptors to the contaminants. Six transport mechanisms were identified at the Site, all from soil, including:

- Direct release to soil,
- Migration or leaching to subsurface,
- Migration or leaching to ground water,
- Volatilization,
- Runoff or erosion, and
- Uptake by plants and animals.

Based on the impacted media and transport mechanisms, five exposure media (soil, ground water, air, surface water, and biota) are present.

Possible transport mechanisms and exposure media are depicted on the DEC Draft Human Health CSM Diagram included at the end of this CSM.

F.3 Exposure Pathways

Each potential exposure pathway was evaluated using the DEC Draft Human Health CSM Scoping Form. Based on this evaluation, six potentially complete exposure pathways were identified. These pathways include:

- Incidental soil ingestion,
- Dermal absorption of contaminants from soil,
- Ingestion of ground water,
- Inhalation of outdoor air,

- Ingestion of surface water, and
- Ingestion of wild foods.

A description of potentially complete and incomplete exposure pathways is provided in the following sections.

F.3.1 Potentially Complete Exposure Pathways

The direct contact exposure pathway via incidental soil ingestion is considered potentially complete because contaminants have been detected in soil between 0 and 15 feet bgs, and the Site may be used by human receptors.

The dermal absorption of contaminants from soil exposure pathway is considered potentially complete because pyrene, a PAH compound, was detected at the Site; PAHs have the potential to permeate the skin. However, the concentration of pyrene detected (0.0166 mg/kg) is less than one-tenth the most stringent DEC Method Two soil cleanup level (1,000 mg/kg); therefore, the pathway is considered insignificant.

The ingestion of ground water exposure pathway is considered potentially complete because contaminants have the potential to migrate to ground water, and the future use of ground water at the Site as drinking water has not been eliminated by DEC per 18 AAC 75.350. However the remote nature of the Site, the proposed use of the Site as recreational land, and a lack of potential receptors who would likely ingest ground water (see Section F.4) make exposure via this pathway extremely unlikely.

The inhalation of outdoor air exposure pathway is considered potentially complete because of the presence of volatile contaminants (DRO and pyrene) in soil between 0 and 15 feet bgs and the potential use of the property by human receptors. However, the concentration of pyrene detected (0.0166 mg/kg) is less than one-tenth the most stringent DEC Method Two soil cleanup level (1,000 mg/kg), and the maximum concentration of DRO detected (213 mg/kg) is less than one-tenth the DEC Method Two soil inhalation cleanup level (22,000 mg/kg). Based on these concentrations and the lack of other volatile contaminants, this pathway is considered insignificant.

The ingestion of surface water pathway is considered potentially complete because of the potential for the overland migration of contaminants from the Site to surface water. In addition, surface water at or near the Site may be used by recreational users and could result in incidental ingestion of surface water.

The ingestion of wild foods exposure pathway is considered potentially complete because of contamination present in the top 6 feet of soil, where it is available for uptake, and the proximity of the Site to potential hunting and gathering areas. In addition, pyrene, arsenic, cadmium, and lead, which are compounds that have the potential to bioaccumulate, were detected at the Site.

F.3.2 Incomplete Exposure Pathways

The remaining exposure pathways were concluded to be incomplete based on site data, features, or other pertinent information in accordance with the DEC Draft Human Health CSM Scoping Form. The incomplete pathways are discussed briefly in this section.

The inhalation of indoor air pathway is not considered complete because no buildings are located on the Site or within 100 horizontal or vertical feet of the Site, nor are any buildings reasonably expected to be placed on the Site. Afognak Island is zoned as conservation land and ANC (the property owner) would like the Site restored as conservation land. As such, no development plans exist for the Site.

The dermal exposure to contaminants in ground water and surface water pathways, and the inhalation of volatile compounds in household water pathway, do not require further evaluation, and thus, are considered incomplete, because DEC water quality standards are applied as cleanup levels at the Site. In addition, no households are located on or near the Site.

The inhalation of fugitive dust exposure pathway requires additional consideration at sites where chromium has been detected, because although DEC soil ingestion cleanup levels applied at the Site are generally protective of this pathway, this is not the case for chromium. Since chromium is a naturally occurring metal, the detected concentrations of chromium at the Site were compared to regional background concentrations. Results show that chromium concentrations at the Site are below background levels, which are generally elevated in Alaskan soils relative to other locations in the United States. The mean chromium concentration at the Site of 15.7 mg/kg is less than the mean background concentration for Alaska soils of 50 mg/kg (Gough et al., 1988). It is also not likely that chromium would be released in large quantities from illegal dumping at the Site. Therefore, chromium was not considered a contaminant of potential concern in soil at the Site; thus, this pathway is considered incomplete.

The direct contact with sediment pathway is not considered complete because DEC soil ingestion cleanup levels, which are applied at the Site, are assumed to be protective of this pathway. In addition, sediment is not considered an exposure media and no known activities that result in direct contact with sediment are undertaken at the Site.

F.4 Current and Future Receptors

The Raspberry Strait Dump Site is an unpermitted dump site located on land owned by ANC. Access to ANC land is restricted to ANC patrol officers, ANC shareholders, and individuals who have obtained a permit from ANC. The proposed future re-use objective for the Site is as recreational/conservation land. Afognak Island is a popular hunting destination, and ANC grants access to its land to those individuals who have obtained a permit. Based on the proposed future re-use objectives for the Site, the following human receptors are considered to be potentially exposed to site contaminants:

- Construction workers involved in Site restoration (future);
- Site visitors, trespassers, or recreational users (current and future); and,

- Subsistence harvesters and consumers (current and future).

F.5 References

Alaska Department of Environmental Conservation (DEC), 2005. Draft Guidance on Developing Conceptual Site Models. Alaska Department of Environmental Conservation, Division of Spill Prevention and Response. November 30.

DEC, 2008. Alaska Administrative Code (18 AAC 75), Oil and Other Hazardous Substances Pollution Control, as amended through October 9.

DEC, 2009. 18 AAC 70, Water Quality Standards, as amended through September 19.

Gough, L.P., Severson, R.C., and Shaklette, H.T., 1988. Element Concentrations in Soils and Other Surficial Materials of Alaska, U.S. Geological Survey Professional Paper 1458, United States Government Printing Office, Washington.

Montauk Environmental Engineering (Montauk), 2005. Combined Phase I and Phase II Environmental Site Assessment, Raspberry Strait Dump Site, Afognak, Alaska. September.

Montauk, 2006. Addendum No. 1 to the Combined Phase I and Phase II Environmental Site Assessment, Raspberry Strait Dump Site, Afognak, Alaska. June 27.

Human Health Conceptual Site Model Scoping Form

Site Name: Raspberry Strait Dump Site, Afognak Island
File Number: N/A
Completed by: SLR International Corp

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, a CSM graphic and text must be submitted with the site characterization work plan.

General Instructions: Follow the italicized instructions in each section below.

1. General Information:

Sources (*check potential sources at the site*)

- | | |
|--|---|
| <input type="checkbox"/> USTs | <input type="checkbox"/> Vehicles |
| <input type="checkbox"/> ASTs | <input checked="" type="checkbox"/> Landfills |
| <input type="checkbox"/> Dispensers/fuel loading racks | <input type="checkbox"/> Transformers |
| <input checked="" type="checkbox"/> Drums | <input checked="" type="checkbox"/> Other: <u>Batteries, Freezers, Household Refuse</u> |

Release Mechanisms (*check potential release mechanisms at the site*)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Spills | <input checked="" type="checkbox"/> Direct discharge |
| <input checked="" type="checkbox"/> Leaks | <input type="checkbox"/> Burning |
| | <input checked="" type="checkbox"/> Other: <u>Illegal Dumping</u> |

Impacted Media (*check potentially-impacted media at the site*)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Surface soil (0-2 feet bgs*) | <input type="checkbox"/> Groundwater |
| <input type="checkbox"/> Subsurface Soil (>2 feet bgs) | <input type="checkbox"/> Surface water |
| <input type="checkbox"/> Air | <input type="checkbox"/> Other: _____ |

Receptors (*check receptors that could be affected by contamination at the site*)

- | | |
|--|---|
| <input type="checkbox"/> Residents (adult or child) | <input checked="" type="checkbox"/> Site visitor |
| <input type="checkbox"/> Commercial or industrial worker | <input checked="" type="checkbox"/> Trespasser |
| <input checked="" type="checkbox"/> Construction worker | <input checked="" type="checkbox"/> Recreational user |
| <input checked="" type="checkbox"/> Subsistence harvester (i.e., gathers wild foods) | <input type="checkbox"/> Farmer |
| <input checked="" type="checkbox"/> Subsistence consumer (i.e., eats wild foods) | <input type="checkbox"/> 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

Is soil contaminated anywhere between 0 and 15 feet bgs?

Do people use the site or is there a chance they will use the site in the future?

If both boxes are checked, label this pathway complete: Complete

2 Dermal Absorption of Contaminants from Soil

Is soil contaminated anywhere between 0 and 15 feet bgs?

Do people use the site or is there a chance they will use the site in the future?

Can the soil contaminants permeate the skin? (Contaminants listed below, or within the groups listed below, should be evaluated for dermal absorption).

- | | |
|--------------------------------|-------------------|
| Arsenic | Lindane |
| Cadmium | PAHs |
| Chlordane | Pentachlorophenol |
| 2,4-dichlorophenoxyacetic acid | PCBs |
| Dioxins | SVOCs |
| DDT | |

If all of the boxes are checked, label this pathway complete: Complete

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 ADEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350.

If both the boxes are checked, label this pathway complete: Complete

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

3 Ingestion of Wild Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild food?

Do the site contaminants have the potential to bioaccumulate (*see Appendix A*)?

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. the top 6 feet of soil, in groundwater that **could be** connected to surface water, etc.)

If all of the boxes are checked, label this pathway complete: Complete

c) Inhalation

1 Inhalation of Outdoor Air

Is soil contaminated anywhere between 0 and 15 feet bgs?

Do people use the site or is there a chance they will use the site in the future?

Are the contaminants in soil volatile (*See Appendix B*)?

If all of the boxes are checked, label this pathway complete: Complete

2 Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be placed on the site in an area that could be affected by contaminant vapors? (i.e., within 100 feet, horizontally or vertically, of the contaminated soil or groundwater, or subject to “preferential pathways” that promote easy airflow, like utility conduits or rock fractures)

Are volatile compounds present in soil or groundwater (*See Appendix C*)?

If both boxes are checked, label this pathway complete: _____

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

Exposure from this pathway may need to be assessed only in cases where DEC water-quality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- Climate permits recreational use of waters for swimming,
- Climate permits exposure to groundwater during activities, such as construction, without protective clothing, or
- Groundwater or surface water is used for household purposes.

Check the box if further evaluation of this pathway is needed:

Comments:

No further evaluation is necessary since DEC water-quality standards are being applied as cleanup levels.

Inhalation of Volatile Compounds in Household Water

Exposure from this pathway may need to be assessed only in cases where DEC water-quality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- The contaminated water is used for household purposes such as showering, laundering, and dish washing, and
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix B)

Check the box if further evaluation of this pathway is needed:

Comments:

No further evaluation is necessary since DEC water-quality standards are being applied as cleanup levels. In addition, no households are located on or near the Site.

Inhalation of Fugitive Dust

Generally DEC soil ingestion cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway, although this is not true in the case of chromium. Examples of conditions that may warrant further investigation include:

- 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.
- Dust particles are less than 10 micrometers. This size can be inhaled and would be of concern for determining if this pathway is complete.

Check the box if further evaluation of this pathway is needed:

Comments:

Detected concentrations of chromium at the Site were compared to regional background concentrations. Results show that chromium concentrations are below background levels, which are generally elevated in Alaskan soils. The mean chromium concentration at the Site of 15.7 mg/kg is less than the mean background concentration for Alaska soils of 50 mg/kg. It is also not likely that chromium would be released in large quantities from illegal dumping at the Site. Therefore chromium was not considered a COPC in soil at this Site and this pathway does not require further evaluation and thus is considered incomplete.

Direct Contact with Sediment

This pathway involves people’s hands being exposed to sediment, such as during recreational or some types of subsistence activities. People then incidentally **ingest** sediment from normal hand-to-mouth activities. In addition, **dermal absorption of contaminants** may be of concern if people come in contact with sediment and the contaminants are able to permeate the skin (see dermal exposure to soil section). This type of exposure is rare but it should be investigated if:

- Climate permits recreational activities around sediment, and/or
- Community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

ADEC soil ingestion cleanup levels are protective of direct contact with sediment. If they are determined to be over-protective for sediment exposure at a particular site, other screening levels could be adopted or developed.

Check the box if further evaluation of this pathway is needed:

Comments:

No further evaluation is necessary because DEC soil ingestion cleanup levels, which are being applied at this Site, are assumed to also be protective of this pathway. In addition sediment is not considered an exposure media and no known activities that result in direct contact with sediment are undertaken at the Site.

4. Other Comments *(Provide other comments as necessary to support the information provided in this form.)*

APPENDIX A

BIOACCUMULATIVE COMPOUNDS

Table A-1: List of Compounds of Potential Concern for Bioaccumulation

Organic compounds are identified as bioaccumulative if they have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5. Inorganic compounds are identified as bioaccumulative if they are listed as such by EPA (2000). Those compounds in Table X of 18 AAC 75.345 that are bioaccumulative, based on the definition above, are listed below.

Aldrin	DDT	Lead
Arsenic	Dibenzo(a,h)anthracene	Mercury
Benzo(a)anthracene	Dieldrin	Methoxychlor
Benzo(a)pyrene	Dioxin	Nickel
Benzo(b)fluoranthene	Endrin	PCBs
Benzo(k)fluoranthene	Fluoranthene	
Cadmium	Heptachlor	Pyrene
Chlordane	Heptachlor epoxide	Selenium
Chrysene	Hexachlorobenzene	Silver
Copper	Hexachlorocyclopentadiene	Toxaphene
DDD	Indeno(1,2,3-c,d)pyrene	Zinc
DDE		

Because BCF values can relatively easily be measured or estimated, the BCF is frequently used to determine the potential for a chemical to bioaccumulate. A compound with a BCF greater than 1,000 is considered to bioaccumulate in tissue (EPA 2004b).

For inorganic compounds, the BCF approach has not been shown to be effective in estimating the compound's ability to bioaccumulate. Information available, either through scientific literature or site-specific data, regarding the bioaccumulative potential of an inorganic site contaminant should be used to determine if the pathway is complete.

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5 and inorganic compounds that are listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000). The BCF can also be estimated from a chemical's physical and chemical properties. A chemical's octanol-water partitioning coefficient (K_{ow}) along with defined regression equations can be used to estimate the BCF. EPA's Persistent, Bioaccumulative, and Toxic (PBT) Profiler (EPA 2004) can be used to estimate the BCF using the K_{ow} and linear regressions presented by Meylan et al. (1996). The PBT Profiler is located at <http://www.pbtprofiler.net/>. For compounds not found in the PBT Profiler, DEC recommends using a log K_{ow} greater than 3.5 to determine if a compound is bioaccumulative.

APPENDIX B

VOLATILE COMPOUNDS

Table B-1: List of Volatile Compounds of Potential Concern

Common volatile contaminants of concern at contaminated sites. A chemical is defined as volatile if the Henry's Law constant is 1×10^{-5} atm-m³/mol or greater and the molecular weight less than 200 g/mole (g/mole; EPA 2004a). Those compounds in Table X of 18 AAC 75.345 that are volatile, based on the definition above, are listed below.

Acenaphthene	1,4-dichlorobenzene	Pyrene
Acetone	1,1-dichloroethane	Styrene
Anthracene	1,2-dichloroethane	1,1,2,2-tetrachloroethane
Benzene	1,1-dichloroethylene	Tetrachloroethylene
Bis(2-chlorethyl)ether	Cis-1,2-dichloroethylene	Toluene
Bromodichloromethane	Trans-1,2-dichloroethylene	1,2,4-trichlorobenzene
Carbon disulfide	1,2-dichloropropane	1,1,1-trichloroethane
Carbon tetrachloride	1,3-dichloropropane	1,1,2-trichloroethane
Chlorobenzene	Ethylbenzene	Trichloroethylene
Chlorodibromomethane	Fluorene	Vinyl acetate
Chloroform	Methyl bromide	Vinyl chloride
2-chlorophenol	Methylene chloride	Xylenes
Cyanide	Naphthalene	GRO
1,2-dichlorobenzene	Nitrobenzene	DRO

APPENDIX C

COMPOUNDS OF CONCERN FOR VAPOR MIGRATION

Table C-1: List of Compounds of Potential Concern for the Vapor Migration

A chemical is considered sufficiently toxic if the vapor concentration of the pure component poses an incremental lifetime cancer risk greater than 10^{-6} or a non-cancer hazard index greater than 1. A chemical is considered sufficiently volatile if it's Henry's Law constant is 1×10^{-5} atm-m³/mol or greater.

Acenaphthene	Dibenzofuran	Hexachlorobenzene
Acetaldehyde	1,2-Dibromo-3-chloropropane	Hexachlorocyclopentadiene
Acetone	1,2-Dibromoethane (EDB)	Hexachloroethane
Acetonitrile	1,3-Dichlorobenzene	Hexane
Acetophenone	1,2-Dichlorobenzene	Hydrogen cyanide
Acrolein	1,4-Dichlorobenzene	Isobutanol
Acrylonitrile	2-Nitropropane	Mercury (elemental)
Aldrin	N-Nitroso-di-n-butylamine	Methacrylonitrile
alpha-HCH (alpha-BHC)	n-Propylbenzene	Methoxychlor
Benzaldehyde	o-Nitrotoluene	Methyl acetate
Benzene	o-Xylene	Methyl acrylate
Benzo(b)fluoranthene	p-Xylene	Methyl bromide
Benzylchloride	Pyrene	Methyl chloride chloromethane)
beta-Chloronaphthalene	sec-Butylbenzene	Methylcyclohexane
Biphenyl	Styrene	Methylene bromide
Bis(2-chloroethyl)ether	tert-Butylbenzene	Methylene chloride
Bis(2-chloroisopropyl)ether	1,1,1,2-Tetrachloroethane	Methylethylketone (2-butanone)
Bis(chloromethyl)ether	1,1,2,2-Tetrachloroethane	Methylisobutylketone
Bromodichloromethane	Tetrachloroethylene	Methylmethacrylate
Bromoform	Dichlorodifluoromethane	2-Methylnaphthalene
1,3-Butadiene	1,1-Dichloroethane	MTBE
Carbon disulfide	1,2-Dichloroethane	m-Xylene
Carbon tetrachloride	1,1-Dichloroethylene	Naphthalene
Chlordane	1,2-Dichloropropane	n-Butylbenzene
2-Chloro-1,3-butadiene (chloroprene)	1,3-Dichloropropene	Nitrobenzene
Chlorobenzene	Dieldrin	Toluene
1-Chlorobutane	Endosulfan	trans-1,2-Dichloroethylene
Chlorodibromomethane	Epichlorohydrin	1,1,2-Trichloro-1,2,2-trifluoroethane
Chlorodifluoromethane	Ethyl ether	1,2,4-Trichlorobenzene
Chloroethane (ethyl chloride)	Ethylacetate	1,1,2-Trichloroethane
Chloroform	Ethylbenzene	1,1,1-Trichloroethane
2-Chlorophenol	Ethylene oxide	Trichloroethylene
2-Chloropropane	Ethylmethacrylate	Trichlorofluoromethane
Chrysene	Fluorene	1,2,3-Trichloropropane
cis-1,2-Dichloroethylene	Furan	1,2,4-Trimethylbenzene
Crotonaldehyde (2-butenal)	Gamma-HCH (Lindane)	1,3,5-Trimethylbenzene
Cumene	Heptachlor	Vinyl acetate
DDE	Hexachloro-1,3-butadiene	Vinyl chloride (chloroethene)

Source: EPA 2002.

Guidance on Developing Conceptual Site Models
January 31, 2005

HUMAN HEALTH CONCEPTUAL SITE MODEL

Site: Raspberry Strait Dump Site
Afognak Island, Alaska

Completed By: SLR International Corp
 Date Completed: January 2010

Follow the directions below. Do not consider engineering or 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. Briefly list other mechanisms or reference the report for details.

(3)
 Check exposure media identified in (2).

(4)
 Check exposure pathways that are complete or need further evaluation. The pathways identified must agree with Sections 2 and 3 of the CSM Scoping Form.

(5)
 Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, or "C/F" for both current and future receptors.

Media	Transport Mechanisms	Exposure Media	Exposure Pathways	Current & Future Receptors							
				Residents (adults or children)	Commercial or industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other	
<input checked="" type="checkbox"/> Surface Soil (0-2 ft bgs)	<input checked="" type="checkbox"/> Direct release to surface soil <i>check soil</i>	<input checked="" type="checkbox"/> soil	<input checked="" type="checkbox"/> Incidental Soil Ingestion			C/F	F	C/F	C/F		
	<input checked="" type="checkbox"/> Migration or leaching to subsurface <i>check soil</i>		<input checked="" type="checkbox"/> Dermal Absorption of Contaminants from Soil			C/F	F	C/F	C/F		
	<input checked="" type="checkbox"/> Migration or leaching to groundwater <i>check groundwater</i>										
	<input checked="" type="checkbox"/> Volatilization <i>check air</i>										
	<input checked="" type="checkbox"/> Runoff or erosion <i>check surface water</i>										
	<input checked="" type="checkbox"/> Uptake by plants or animals <i>check biota</i>										
<input type="checkbox"/> Subsurface Soil (2-15 ft bgs)	<input type="checkbox"/> Direct release to subsurface soil <i>check soil</i>	<input checked="" type="checkbox"/> groundwater	<input checked="" type="checkbox"/> Ingestion of Groundwater								
	<input type="checkbox"/> Migration to groundwater <i>check groundwater</i>		<input type="checkbox"/> Dermal Absorption of Contaminants in Groundwater								
	<input type="checkbox"/> Volatilization <i>check air</i>		<input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water								
	<input type="checkbox"/> Other (list):										
<input type="checkbox"/> Ground-water	<input type="checkbox"/> Direct release to groundwater <i>check groundwater</i>	<input checked="" type="checkbox"/> air	<input checked="" type="checkbox"/> Inhalation of Outdoor Air			C/F	F	C/F	C/F		
	<input type="checkbox"/> Volatilization <i>check air</i>		<input type="checkbox"/> Inhalation of Indoor Air								
	<input type="checkbox"/> Flow to surface water body <i>check surface water</i>		<input type="checkbox"/> Inhalation of Fugitive Dust								
	<input type="checkbox"/> Flow to sediment <i>check sediment</i>										
	<input type="checkbox"/> Uptake by plants or animals <i>check biota</i>										
<input type="checkbox"/> Surface Water	<input type="checkbox"/> Direct release to surface water <i>check surface water</i>	<input checked="" type="checkbox"/> surface water	<input checked="" type="checkbox"/> Ingestion of Surface Water			C/F		C/F	C/F		
	<input type="checkbox"/> Volatilization <i>check air</i>		<input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water								
	<input type="checkbox"/> Sedimentation <i>check sediment</i>		<input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water								
	<input type="checkbox"/> Uptake by plants or animals <i>check biota</i>										
<input type="checkbox"/> Sediment	<input type="checkbox"/> Direct release to sediment <i>check sediment</i>	<input type="checkbox"/> sediment	<input type="checkbox"/> Direct Contact with Sediment								
	<input type="checkbox"/> Resuspension, runoff, or erosion <i>check surface water</i>		<input checked="" type="checkbox"/> biota	<input checked="" type="checkbox"/> Ingestion of Wild Foods			C/F		C/F	C/F	
	<input type="checkbox"/> Uptake by plants or animals <i>check biota</i>										

APPENDIX F

PHASE I ENVIRONMENTAL SITE ASSESSMENT



SLR INTERNATIONAL CORP
4601 Business Park Blvd., Suite K42
Anchorage, AK 99503

PHASE I SITE ASSESSMENT REPORT

RASPBERRY STRAIT DUMP SITE AFOGNAK ISLAND, ALASKA

Prepared for:

**Alaska Department of Environmental Conservation
Contaminated Sites Program
Division of Spill Prevention and Response
610 University Avenue
Fairbanks, Alaska 99709-3643**

Prepared by:

Christina Bentz
Project Geologist

Reviewed by:

Eugene T. Watson, P.G.
Principal Geologist

April 2010
Project # 005.0065.09020

SITE DESCRIPTION

SLR International Corp (SLR) has performed a Phase I Environmental Site Assessment (ESA) of the Raspberry Strait Dump Site (the “*Site*”). The *Site* is located approximately 1.5 miles east of the Village of Alaneva on Afognak Island (Figure 1 to the Property Assessment and Cleanup Plan [PACP]) in Section 21, Township 25 South, Range 22 West of the Seward Meridian. Afognak Island is 43 miles from east to west and 23 miles from north to south and encompasses a land area of 699.84 square miles, making it the 18th largest island in the United States. The coast is split by many long, narrow bays and the highest point is 2,546 feet above sea level. The United States Census of 1890 noted a series of settlements on Afognak Island along the beach line near the Alutiiq village of Ag’waneq (also called Afognak), including Rutkovsky village, inhabited by a group of retired employees of the Russian-American Company. Ag’waneq was abandoned after the 1964 Good Friday Earthquake devastated the island. The descendants of the Native inhabitants of the island are officially recognized as the Native Village of Afognak (NVA), most of who live in nearby Port Lions or Kodiak; the NVA is a federally recognized tribe (DCCED, 2009).

Today, there are a few small logging camps and fishing lodges on Afognak Island, and a community of Russian Old Believers at Aleneva. The economy is based on subsistence hunting and logging, and transportation is provided by float plane or boat from Kodiak to various areas around the island. The 2000 census reported a population of 169 persons on Afognak Island (DCCED, 2009).

The *Site* is a former unpermitted dump site that encompasses approximately 7,500 square feet located on land owned by the Afognak Native Corporation (ANC), as presented on Figure 2 in the PACP. Observed refuse at the *Site* includes freezers, one lead-acid battery, all-terrain vehicle (ATV) parts and tires, aerosol canisters, paint cans, fuel containers, at least 14 empty 55-gallon barrels, motors, oil containers, and electrical equipment. Refuse at the *Site* is present in two distinct formations; a central deposit consisting of a large amount of refuse in the central part of the *Site* and a larger area containing scattered refuse (Figure 3 in the PACP). In addition, wetlands are present on the lower portion of the *Site* and a small stream runs close to the eastern edge of the *Site*. Access to the *Site* is via an ATV trail, although travel on the ATV trails on land owned by ANC is restricted. No structures are present on the *Site*.

The *Site* was discovered during a patrol of ANC lands in 2005; prior to 2005, the land had not been patrolled. A limited removal action was reportedly conducted by the community of Aleneva in 2006, when approximately one-third of the refuse in the central deposit was removed from the *Site* (Montauk, 2006). It appears that very little dumping activities have occurred since that time.

Currently the surrounding property consists of a private hunting lodge approximately 0.75 miles north of the *Site*, ANC-owned land (zoned for conservation) to the east, private land (native allotments) to the south, and the community of Alaneva is located approximately 1.5 miles to the west.

REPORT SUMMARY

REPORT SECTION	REC ¹	HREC ²	DATA GAP	COMMENTS
Site Reconnaissance	Yes	No	No	Potentially hazardous substances and petroleum products were observed at the Site associated with illegal dumping activities that have occurred.
Surrounding Property Reconnaissance	No	No	No	None.
Environmental Records Review	No	No	No	None.
Historical Records Review	Yes	No	No	Samples collected by Montauk Environmental Engineering (Montauk) in 2005 indicated the presence of selenium and lead at concentrations above Alaska Department of Environmental Conservation (DEC) Method Two Soil Cleanup Levels and regional background concentrations.
Interviews	Yes	No	No	Interviews indicated that the Site has been the location of illegal dumping that has included batteries and possibly petroleum products.
User Information	Yes	No	No	Photographs and documents provided by the User indicated that the Site has been the location of illegal dumping that has included batteries and possibly petroleum products.

¹ Recognized Environmental Condition (REC)

² Historical Recognized Environmental Condition (HREC)

CONCLUSIONS

Recognized Environmental Conditions

SLR has performed a Phase I ESA of the Raspberry Strait Dump Site located on Afognak Island. The Phase I ESA was performed in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E 1527-05. Exceptions to, or deletions from, this practice are described in Section 5.0 of this report. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the *Site*, with the exception of the following:

- A former illegal dumping site, which includes hazardous materials and soil contamination, indicated by analytical sampling performed in 2005.

Historical Recognized Environmental Conditions

This assessment has revealed no *historical recognized environmental conditions* in connection with the *Site*.

ENVIRONMENTAL PROFESSIONAL STATEMENTS

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional*, as defined in Code of Federal Regulations (CFR) Title 40, Section 312.10;

And

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the *Site*. I have developed and performed the all appropriate inquiry in conformance with the standards and practices set forth in 40 CFR Part 312.

Environmental Professional:



EP's Name:

Eugene T. Watson, P.G.

EP's Title:

Principal

DATE:

April 2010

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Appendix E	Qualifications of Environmental Professionals

1.1 PROJECT INFORMATION

Client (“User”) Information:	Afognak Native Corporation 215 Mission Rd. Suite 212 Kodiak, Alaska 99615	Consultant Information:	SLR International Corp 4601 Business Park Blvd., Suite K42 Anchorage, AK 99503
	<u>Client Contact</u>		<u>Program Manager</u>
Name:	Howard Valley	Name:	Mike Rieser
Phone:	(907) 486-6014	Phone:	(970) 222-1112
E-mail:	howard@afognak.com	E-mail:	mrieser@slrcorp.com
Site Latitude / Longitude:	58° 0’6”(N) / 152° 50’38”(W) NAD 83	Inspection Date:	October 15, 2009
Site Information:	Raspberry Strait Dump Site Afognak Island Alaska	Interview Date:	October 2009
		Records Date:	November 2009
		Report Date:	April 2010
		Site Assessor:	Christina Bentz
		Senior Reviewer:	Gene Watson

1.2 OBJECTIVE

The objective of this Phase I Environmental Site Assessment (ESA) was to identify, to the extent feasible pursuant to the processes outlined in the scope of work, *recognized environmental conditions (RECs)*, or *historical recognized environmental conditions (HRECs)*, as defined by the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM Practice E 1527-05 (ASTM E1527), and other environmental concerns that were neither *RECs* or *HRECs* for the *Site*.

The ASTM Practice defines a *REC* as:

“...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicated an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis conditions* that generally do not present a material risk of

harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies...”

The ASTM Practice defines an *HREC* as:

“...an environmental condition, which in the past would have been considered a *REC*, but which may or may not be considered a *REC* currently. The final decision rests with the *environmental professional* and will be influenced by the current impact of the *HREC* on the *Site*. If a past release of any hazardous substances or petroleum products has occurred in connection with the property and has been remediated, with such remediation accepted by the responsible regulatory agency, this condition shall be considered an *HREC*...”

1.3 PURPOSE

This assessment is intended to provide the due diligence necessary to allow for the Afognak Native Corporation (ANC) and the Native Village of Afognak (NVA) to apply for federal funding to clean up the *Site*. This assessment constitutes all appropriate inquiry into the previous ownership and uses of the *Site*, consistent with good commercial or customary practice, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) at U.S. Code Title 42, Chapter 103, Subchapter I, Section 9601(35)(B).

1.4 SCOPE OF WORK, SIGNIFICANT ASSUMPTIONS, TERMS, AND CONDITIONS

The scope of work, significant assumptions, and terms and conditions applicable to this Phase I ESA are identified in the following documents:

- ASTM Standard Practice, E 1527-05.
- Statement of Limitations presented as Appendix D of this report.

1.5 RELIANCE

This report was prepared for the exclusive use of ANC, NVA, and the DEC. No other entity may rely on the information presented in the report without the express written consent of SLR International Corp (SLR). Any use of this Phase I ESA report constitutes acceptance of the terms and conditions under which it was prepared. SLR’s liability extends only to its client and not to any other parties who may obtain or use this report.

1.6 USER-PROVIDED INFORMATION

SLR requested the following information from the *User* of this Phase I ESA report:

USER-PROVIDED INFORMATION	FINDINGS
Information on environmental liens on the <i>Site</i> :	The <i>User</i> indicated that there are no environmental liens on the <i>Site</i> . An Environmental LienSearch™ was requested from Environmental Data Resources Inc. (EDR) in November 2009. No environmental liens were reported by EDR.
Information on <i>Site</i> activity and use limitations (AULs) :	The <i>User</i> indicated that there are no AULs on the <i>Site</i> . An Environmental LienSearch™ was requested from EDR in November 2009. No environmental AULs were reported by EDR.
Specialized knowledge or experience of the <i>User</i> that is material to <i>RECs</i> in connection with the <i>Site</i> :	The <i>User</i> has no specialized knowledge or experience regarding <i>RECs</i> at the <i>Site</i> .
Knowledge that <i>Site</i> purchase/sale price is significantly lower than market value:	This report was prepared for the purpose of helping the <i>User</i> prepare a property assessment and cleanup plan to ultimately clean up the <i>Site</i> and restore it to its natural state; there will not be a sale of real property.
Commonly known or reasonably ascertainable information about the <i>Site</i> material to <i>RECs</i> :	The <i>User</i> is not aware of commonly known or reasonable ascertainable information about <i>RECs</i> at the <i>Site</i> .
Reason why the <i>User</i> wants to have the Phase I ESA performed:	The <i>User</i> wanted the Phase I ESA performed to identify the current and past use of the <i>Site</i> and the potential environmental risk that may have resulted from such use.

1.7 PROVIDED DOCUMENTS

ANC and NVA provided SLR two CDs containing:

- 2005 Combined Phase I and Phase II Environmental Site Assessment Report (Montauk, 2005);
- Addendum No. 1 to the above-mentioned report (Montauk, 2006); and,
- Photographs documenting the 2006 cleanup effort by the Village of Alaneva.

Key findings from these documents are described below; copies of the complete documents are provided in Appendix A of this report. In addition, a copy of the Brownfield application was provided by DEC; a copy of this is provided as Appendix A in the Property Assessment and Cleanup Plan (PACP).

1.7.1 2005 Combined Phase I and Phase II Environmental Site Assessment Report

General observations were made about the *Site* and pertinent features. In addition, an exploratory trench was dug through the densest and deepest portion of the refuse pile. The trench indicated that the refuse extended to approximately 8 feet in depth in the central portion of the *Site* (see Figure 3 in the PACP). The following environmental concerns were observed during this assessment:

- Hazardous substances and petroleum products in connection with current use;
- Hazardous substances in *Site* soils;
- Hazardous substances in *Site* surface water;
- Odors;
- Drums or other abandoned items or trash; and
- Unidentified substance containers, stained soil, solid waste, and wetlands.

Analytical samples collected during this assessment are described in detail in Section 5.1 of the PACP and indicate the presence of metals at concentrations above DEC Method Two soil cleanup levels. Two RECs were identified during the combined Phase I and II ESA: 1) a non-permitted refuse dump, the observed contents of which include hazardous materials; and 2) arsenic, lead, and selenium soil contamination directly associated with dump materials.

1.7.2 Addendum No. 1 to the 2005 Combined Phase I and Phase II Environmental Site Assessment Report

The *Site* was re-visited by Montauk on June 20, 2006 to assess the nature and extent of the removal action performed by the residents of the Alaneva community in May 2006. Montauk (2006) observed the refuse remains in two debris formations at the *Site* and a central, high-volume deposit and, surrounding it, a much larger, thinner layer of scattered debris. The volume of debris in both areas is approximately equal. The May 2006 cleanup removed approximately one-third of the central deposit. The volume of refuse remaining at the *Site* was estimated at 500 cubic yards and estimated at approximately 1,500 pounds per cubic yard. Potentially hazardous substances were noted to remain on *Site*.

1.7.3 Photographs Documenting the 2006 Village of Alaneva Cleanup Effort

The photographs indicate that at least six ATV trailer loads of material were removed from the *Site* during the 2006 cleanup effort. Items removed included 55-gallon barrels, a couch, hoses, and household refuse.

2.0 RECORDS REVIEW

2.1 FEDERAL/STATE ENVIRONMENTAL RECORDS

A regulatory agency database search report was obtained from a third-party environmental database search firm. A complete copy of the database report, including the date the report was prepared, the date the information was last updated, and the definition of databases searched, is provided as Appendix C.

AGENCY LIST/DATABASE	SEARCH RADIUS	NUMBER OF LISTED SITES
Federal NPL	1.0 mile	0
Federal CERCLIS List	0.5 mile	0
Federal CERCLIS NFRAP	0.5 mile	0
Federal RCRA CORRACTS	1.0 mile	0
Federal RCRA Non-CORRACTS TSD	0.5 mile	0
Federal RCRA Generators	0.25 mile	0
Federal Institutional Control/Engineering Control Registry	0.5 mile	0
Federal ERNS	Site only	0
State and Tribal-Equivalent NPL	1.0 mile	0
State and Tribal – Hazardous Waste	0.5 mile	0
State and Tribal Solid Waste Facilities	0.5 mile	0
State and Tribal UST/AST Sites	0.25 mile	0
State and Tribal LUST Sites	0.5 mile	0
State and Tribal Institutional Control/Engineering Control Registry	0.5 mile	0
State and Tribal Voluntary Cleanup Sites	0.5 mile	0
State and Tribal Brownfields' Sites	0.5 mile	0

2.1.1 Listings for the *Site*

There were no listings for the *Site*.

2.1.2 Listings for Nearby Sites with Potential to Impact the Site

There were no listings for nearby sites presented in the environmental agency database search report.

2.2 LOCAL/REGIONAL ENVIRONMENTAL RECORDS

SLR contacted the following sources to request information pertaining to *Site* use and/or indicative of RECs in connection with the *Site*. The following information was requested, as appropriate, from these agencies:

- Local Brownfield lists,
- Local lists of landfills/solid waste disposal sites,
- Local lists of hazardous waste/contaminated sites,
- Local lists of registered storage tanks,
- Local land records (for activity and use limitations),
- Records of emergency release reports,
- Records of contaminated public wells, and
- Records of PCBs at the *Site*.

The *Site* is managed by agencies located on Kodiak Island. The agencies knowledgeable about the *Site* include ANC, NVA, and the Woody Island Tribal Council. Members of these agencies provided information regarding the *Site*; this information is described in Sections 1.6, 1.7, and 3.0 through 3.7 of this document.

2.3 HISTORICAL RECORDS

Obvious uses of the *Site* have been identified from the present, back to the first developed use, or 1940, whichever was earlier. Historical data were reviewed in five-year intervals, unless it was determined that the specific use appeared unchanged over a period longer than five years.

According to Howard Valley, General Manager of Lands for ANC, and Montauk (2006), ANC acquired the land on which the *Site* is located on June 20, 1977, by Interim Conveyance Number 060 (Appendix A) as part of the Alaska Native Claims Settlement Act of December 18, 1971. The dump site was discovered during a patrol of ANC lands in 2005; prior to 2005 the land had not been patrolled. Dumping activities may have begun during logging operations, although there is no direct evidence supporting this theory. A limited removal action was conducted by the community of Alaneva in 2006, at which time, approximately one-third of the refuse in the central deposit was removed from the *Site* (Montauk, 2006). It appears that very little dumping activities have occurred since that time.

Logging activities occurred in the area from the 1940s through the mid-1970s. Timber in the area surrounding the dump site was reportedly harvested twice from 1944 through 1976, and, according to the Phase I and Phase II ESA (Mauntack, 2005), no evidence was discovered that suggests timber harvesting operations share any responsibility for, or were in any way contributory to, the *Site*. No development or previous uses other than timber harvesting were conducted at the *Site*.

2.3.1 Recorded Land Title Records

DOCUMENT	DATE	DESCRIPTION
Interim Conveyance No. 060	06-20-1977	Land conveyance to ANC from Bureau of Land Management.

Source of information: Copy of Interim Conveyance No. 060 provided by ANC. Document is available in Appendix A.

2.3.2 Aerial Photographs

YEAR	SCALE	OBSERVATIONS, <i>SITE</i> , AND ADJOINING PROPERTIES
1974	1"=790'	The area where the <i>Site</i> is located shows a small clearing along an access road or trail with the surrounding area covered in tundra with some trees. No evidence of illegal dumping is visible in the photograph.
2004	Unknown	The area where the dump site is located shows an access road or trail with the surrounding area covered in tundra with some trees. No evidence of illegal dumping is visible in the photograph.

Source of aerial photographs: Aero-Metric, Inc. 2014 Merrill Field Drive, Anchorage, Alaska 99501. Aerial photographs are available as Appendix B.

2.3.3 City Directories

The *Site* is located in a remote area of central Alaska and is not included in a city directory.

2.3.4 Historical Fire Insurance Maps

YEAR	OCCUPANT OF <i>SITE</i> / ADJOINING PROPERTIES; HAZARDOUS MATERIAL STORAGE
2009	The <i>Site</i> is an unmapped property. No historical fire insurance maps exist for this area.

Name of maps and source: Environmental Data Resources Inc. Sanborn® Map report.

2.3.5 Historical Topographic Maps

YEAR	SCALE	OBSERVATIONS
1950	1:63,360'	The <i>Site</i> and surrounding area appears undeveloped.
1983	1:250,000'	The <i>Site</i> and surrounding area appears undeveloped.

Name of maps and source: Environmental Data Resources Inc. Historical Topographic Map report.

2.3.6 Other Historical Sources

No other sources of historical information were reviewed during this assessment.

2.4 PHYSICAL SETTING

PHYSICAL SETTING	INFORMATION
Topography	The <i>Site</i> is located at an elevation of approximately 116 feet above sea level. The regional topography slopes toward Raspberry Strait to the south and within approximately 1 mile to the north, the elevation is approximately 1,284 feet above sea level. The <i>Site</i> is located on sloping terrain with wetlands at the base; it is estimated that the elevation across the <i>Site</i> varies by 10 feet.
Soil/Bedrock Data	The dominant soil composition in the general area of the <i>Site</i> consists of a silt loam andic cryochtepts with moderate infiltration rates. The soils are well drained with intermediate water holding capacity. The depth to bedrock is greater than 40 inches; bedrock type was not specified.
Estimated Depth to Ground Water / Direction of Gradient	Depth to ground water is variable across the <i>Site</i> ; ground water is present at the surface at the lowest part of the <i>Site</i> . Surface topography is likely indicative of the direction of the ground water flow; which, if true, would be to the south-south east. No ground water monitoring data was available for this assessment.

Sources of this information: Environmental Data Resources Inc.

2.5 SITE AND SURROUNDING AREA RECONNAISSANCE

Access to the *Site* is restricted to persons who have a land-use permit issued by ANC. The *Site* is only accessible by trail and located on an island. SLR's site visit was coordinated by NVA and included persons from ANC (Andy Christofferson), NVA (Roxanne Salcido), and the Woody Island Tribal Council (Mike Patterson). The weather conditions at the time of the *Site* visit were light rain and approximately 40 degrees Fahrenheit.

2.6 METHODOLOGY

SLR utilized the following methodology to observe the *Site*:

- Traverse the outer *Site* boundary.
- Traverse across the *Site*.

2.7 RESTRICTIONS

RESTRICTION TYPE	COMMENTS
Weather-related restrictions:	None
Facility access restrictions:	The <i>Site</i> is heavily vegetated.
Client-related restrictions:	None

2.8 GENERAL DESCRIPTION

2.8.1 *Site* and Area Description

The *Site* is located approximately 1.5 miles east of the Village of Alaneva on Afognak Island (Figure 1 in the PACP) in Section 21, Township 25 South, Range 22 West of the Seward Meridian. Afognak Island is 43 miles from east to west, and 23 miles from north to south, and it encompasses a land area of 699.84 square miles, making it the 18th largest island in the United States. The coast is split by many long, narrow bays and the highest point is 2,546 feet above sea level. The United States Census of 1890 noted a series of settlements on Afognak Island along the beach line near the Alutiiq village of Ag'waneq (also called Afognak), including Rutkovsky village, inhabited by a group of retired employees of the Russian-American Company. Ag'waneq was abandoned after the 1964 Good Friday Earthquake devastated the island. The descendants of the Native inhabitants of the island are officially recognized as the Native Village of Afognak (NVA), most of who live in nearby Port Lions or Kodiak; the NVA is a federally recognized tribe (DCCED, 2009).

Today, there are a few small logging camps and fishing lodges on Afognak Island, and a community of Russian Old Believers at Aleneva. The economy is based on subsistence hunting and logging and transportation is provided by float plane or boat from Kodiak to various areas around the island. The 2000 census reported a population of 169 persons on Afognak Island (DCCED, 2009).

The *Site* is a former unpermitted dump site that encompasses approximately 7,500 square feet located on land owned by the Afognak Native Corporation (ANC) as presented on Figure 2 to the PACP. Observed refuse at the *Site* includes freezers, one lead-acid battery, ATV parts and tires, aerosol canisters, paint cans, fuel containers, at least 14 empty 55-gallon barrels, engines, oil containers, and electrical equipment. Refuse at the *Site* is present in two distinct formations; a central deposit consisting of a large amount of refuse in the central part of the *Site*, and a larger area containing scattered refuse (Figure 3 in the PACP). In addition, wetlands are present on the lower portion of the *Site* and a small stream runs close to the eastern edge of the *Site*. Access to the *Site* is via an ATV trail. Travel on the ATV trails on land owned by ANC is restricted. No structures are present on the *Site*.

The *Site* was discovered during a patrol of ANC lands in 2005; prior to 2005, the land had not been patrolled. A limited removal action was reportedly conducted by the community of Aleneva in 2006, when approximately one-third of the refuse in the central deposit was removed from the *Site* (Montauk, 2006). It appears that very little dumping activities have occurred since that time.

Currently the surrounding property consists of a private hunting lodge approximately 0.75 miles north of the *Site*, ANC-owned land (zoned for conservation) to the east, private land (native allotments), to the south, and the community of Alaneva is located approximately 1.5 miles to the west.

INFORMATION	FINDING
Estimated percent of Site location covered by buildings and/or pavement:	None of the <i>Site</i> was covered with buildings or pavement.
Observed evidence of past <i>Site</i> use(s):	Evidence of an old logging road was visible along the western edge of the <i>Site</i> . The major observation is that illegal dumping of household refuse and other items has occurred at the <i>Site</i> . The following potentially hazardous substances and petroleum products were observed on the <i>Site</i> : freezers, one lead-acid battery, ATV parts and tires, aerosol canisters, paint cans, fuel containers, at least 14 empty 55-gallon barrels, engines, oil containers, and electrical equipment.
Sewage disposal method (and age):	There is no sewage disposal at the <i>Site</i> .
Source of potable water:	There is no source of potable water at the <i>Site</i> .
Electric utility:	There is no electric utility at the <i>Site</i> .

2.9 EXTERIOR OBSERVATIONS

SLR made the following observations during the reconnaissance of the *Site*; no structures are present on the *Site*. Photographs of the *Site* are presented as Appendix C in the PACP.

Observation	Description
Roads or paths with no apparent outlet observed on the <i>Site</i> :	The pathway leading to the <i>Site</i> has no apparent outlet; it terminates in a small clearing where dumping has occurred. An old logging road, which is mostly grown over, exists on the western edge of the <i>Site</i> . The road had no observed outlet.
Onsite pits, ponds, or lagoons:	A small stream was located on the eastern edge of the <i>Site</i> . Ponded water and marshy conditions were observed on the south side of <i>Site</i> . According to the Montauk report (2005), the marsh area was unofficially inspected by the U.S. Army Corps of Engineers' wetland specialist, who concluded the marsh falls within the description of "wetland," as defined in the 33 CFR 328.
Stained soil or pavement:	None observed.
Stressed vegetation:	None observed.
Onsite solid waste disposal:	The <i>Site</i> has been used as a location of illegal dumping. The volume of material appears unchanged since 2006 when Mauntauk estimated a total of 500 cubic yards and estimated at approximately 1,500 pounds per cubic yard. The debris also still remains in two distinct formations at the <i>Site</i> : the central, high volume deposit and the surrounding thin layer of scattered debris, with the volume in each deposit approximately equal (Montauk, 2006).
Wastewater:	None observed.

Observation	Description
Stormwater:	Stormwater at the <i>Site</i> likely infiltrates or runs off into the adjacent stream or onsite wetlands.
Wells:	None observed.
Septic systems:	None observed.

2.10 INTERIOR OBSERVATIONS

There are no structures present on the *Site*.

2.11 HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS

SLR made the following visual and/or physical observations during the *Site* reconnaissance and/or identified the presence of the following during the interview or records review portions of the assessment:

OBSERVATION	DESCRIPTION
Hazardous substances and petroleum products on site during <i>Site</i> visit:	The following potentially hazardous substances and petroleum products were observed at the <i>Site</i> : freezers, one lead-acid battery, ATV parts and tires, aerosol canisters, paint cans, fuel containers, at least 14 apparently empty 55-gallon barrels, engines, oil containers, and electrical equipment.
Hazardous substances historically stored on site:	The only known hazardous substances at the <i>Site</i> are associated with illegal dumping activities.
Strong, pungent, or noxious odors:	None observed.
Pools of liquid:	None observed.
Unidentified substance containers:	None observed.
PCB-containing equipment:	Electrical equipment was observed at the <i>Site</i> ; electrical equipment could contain a small amount of PCBs. No other PCB-containing items were noted.

2.12 UNDERGROUND STORAGE TANKS/STRUCTURES

UST/STRUCTURE	OBSERVATIONS
Existing USTs:	None observed.
Former USTs:	None observed.
Other Underground Structures:	None observed.

2.13 ABOVEGROUND STORAGE TANKS

AST	OBSERVATIONS
Existing ASTs:	None observed.
Former ASTs:	None observed.

2.14 ADJOINING PROPERTIES

2.14.1 Current Uses of Adjoining Properties

North:	Private hunting lodge approximately 0.75 miles north of the <i>Site</i> .
East:	ANC-owned land, zoned for conservation.
South:	Private land (native allotments).
West:	Community of Aleneva approximately 1.5 miles west of the <i>Site</i> .

2.14.2 Observed Evidence of Past Uses of Adjoining Properties

North:	There is no evidence of past uses of the adjoining property.
South:	There is no evidence of past uses of the adjoining property.
East:	There is no evidence of past uses of the adjoining property.
West:	There is no evidence of past uses of the adjoining property.

2.14.3 Pits, Ponds, or Lagoons on Adjoining Properties

North:	None observed.
South:	None observed.
East:	A small stream is located east of the <i>Site</i> .
West:	None observed.

2.15 OBSERVED PHYSICAL SETTING

OBSERVED PHYSICAL SETTING	
Topography of the <i>Site</i> locations and surrounding area:	The <i>Site</i> is located at an elevation of approximately 116 feet above sea level. The regional topography slopes toward Raspberry Strait to the south and within approximately 1 mile to the north, the elevation is approximately 1,284 feet above sea level. The <i>Site</i> is located on sloping terrain with the main refuse deposit on a slope and wetlands at the base; it is estimated that the elevation across the <i>Site</i> varies by 10 feet.

3.0 INTERVIEWS

3.1 FINDINGS FROM INTERVIEW WITH USER

INTERVIEW QUESTIONS	FINDINGS
Name, Title, Telephone Years Familiar with <i>Site</i>	Howard Valley, General Manager of Lands for ANC, (907) 486-6014. Familiar with <i>Site</i> since discovered in March 2005.
Current Use of <i>Site</i> :	The <i>Site</i> is currently used for recreation and hunting.
Past Use(s) of <i>Site</i> :	The <i>Site</i> was previously used as an illegal dump. Mr. Valley indicated there are three places that have access to the <i>Site</i> via the trail system. Mr. Valley also stated there was a logging road in the area.
Current Use of Surrounding Properties:	The surrounding land consists of the community of Alaneva, five-acre leases, and a lodge.
Past Use(s) of Surrounding Properties:	Past usage of the surrounding properties consisted of timber harvesting, until the mid-1970s, and hunting.
Current or Past Hazardous / Petroleum Material Use, Storage, Disposal:	Mr. Valley noted there are drums and batteries present at the <i>Site</i> .
Current or Past Regulatory Action(s):	None.
Past Releases of Hazardous/Petroleum Materials on the Property:	None.
Other Environmental Information (Permits, etc.):	Phase I and II ESA and Addendum (Montauk, 2005, 2006).

3.2 FINDINGS FROM INTERVIEW WITH KEY PROPERTY MANAGER

INTERVIEW QUESTIONS	FINDINGS
Name, Title, Telephone Years Familiar with <i>Site</i>	Andy Christofferson, Patrol Officer for ANC, (907) 486-6014. Familiar with <i>Site</i> since discovered in March 2005.
Current Use of <i>Site</i> :	The <i>Site</i> contains an unpermitted dump of unknown origin.
Past Use(s) of <i>Site</i> :	The <i>Site</i> has previously been used for logging. No other previous uses were identified.
Current Use of Surrounding Properties:	To the north, there is a private lodge (approximately 0.75 mile from the <i>Site</i>). ANC land is to the east. Private land is to the south. The community of Alaneva is to the west, approximately 1.5 miles from the <i>Site</i> .

INTERVIEW QUESTIONS	FINDINGS
Past Use(s) of Surrounding Properties:	Logging.
Current or Past Hazardous / Petroleum Material Use, Storage, Disposal:	None.
Current or Past Regulatory Action(s):	None.
Past Releases of Hazardous/Petroleum Materials on the Property:	None.
Other Environmental Information (Permits, etc.):	None.

3.3 REQUIRED QUESTIONS

SLR interviewed the *User/Owner* and *Key Site Manager* regarding their awareness of any pending, threatened, or past incidences, as follows:

INTERVIEW QUESTIONS	OWNER	KEY SITE MANAGER	USER
Litigation relevant to hazardous substances or petroleum products in, on, or from the <i>Site</i> ?	No	No	No
Administrative proceedings relevant to hazardous substances or petroleum products in, on, or from <i>Site</i> ?	No	No	No
Notices from any governmental entity regarding possible violations of environmental laws or possible liability relating to hazardous substances?	No	No	No

3.4 FINDINGS FROM INTERVIEWS WITH MAJOR OCCUPANTS

There are no other major occupants at the *Site* besides the Afognak Native Corporation; therefore, no other occupants were interviewed.

3.5 FINDINGS FROM INTERVIEWS WITH PAST OWNERS AND OCCUPANTS

SLR attempted to interview past owners and occupants who are likely to have material information regarding the potential for contamination at the *Site*, to the extent that they have been identified, and that the information likely to be obtained is not duplicative of information already obtained from other sources.

No past owners or occupants were identified or interviewed.

3.6 FINDINGS FROM INTERVIEWS WITH NEIGHBORING OWNERS OR OCCUPANTS

Neighboring owners or occupants are only interviewed if the *Site* was abandoned and there was evidence of potential unauthorized use or uncontrolled access to the *Site*. While access to the *Site* is not controlled, property immediately adjacent to the *Site* is not occupied. Andy Christofferson requested that SLR not interview persons from the neighboring village of Alaneva due to a sensitive relationship ANC has with them. Interviewing the owners of the nearby hunting lodge would involve trespassing. Therefore, no neighboring owners or occupants were interviewed for this investigation.

3.7 FINDINGS FROM INTERVIEWS WITH OTHERS

Roxanne Salcido, Environmental Coordinator for NVA, and Mike Patterson, Environmental and Natural Resources Director for the Woody Island Tribal Council, were both present during the *Site* visit and interview with Andy Christofferson. Information gathered from these individuals is included in the applicable sections of this report.

4.0 SIGNIFICANT DATA GAPS

Data gaps are a lack of, or an inability to obtain, information required by the ASTM Practice E 1527-05, despite good-faith efforts by the environmental professional to gather such information. Data gaps may have resulted from incompleteness in any of the activities required in ASTM Practice E 1527-05, including, but not limited to, the *Site* reconnaissance, records review, or interviews. The presence of a data gap may or may not present a *REC* due to the possibility that a *REC* could be discovered if the missing information is obtained.

One data gap was identified during the performance of this assessment: no records were available for the *Site* for the period of time before 1950. This data gap was attempted to be filled through interviews. This data gap does not impact the conclusions of this report.

5.1 RECOGNIZED ENVIRONMENTAL CONDITIONS

5.1.1 Recognized Environmental Conditions

SLR has performed a Phase I ESA of the Raspberry Strait Dump Site located on Afognak Island. The *Site* has no structures and encompasses an approximate area of 7,500 square feet. The *Site* is on property owned by the ANC.

The Phase I was performed in conformance with the scope and limitations of ASTM Practice E 1527-05. Exceptions to, or deletions from, this practice are described in Section 5.0 of this report. This assessment has revealed no evidence of *RECs* in connection with the *Site*, with the exception of the following:

- A former unpermitted dumping site which includes hazardous materials and soil contamination indicated by analytical sampling performed in 2005.

5.1.2 Historical Recognized Environmental Conditions

This assessment has revealed no *HRECs* in connection with the *Site*.

USER-PROVIDED INFORMATION

COPY ACONCO. KOK

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INTERIM CONVEYANCE

Kodiak Recording District

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B & P**

WHEREAS

Natives of Afognak, Inc.

is entitled to a conveyance pursuant to sections 14(a) and 22(j) of the Alaska Native Claims Settlement Act of December 18, 1971, 85 Stat. 688, 703, 715; 43 U.S.C. 1613(a) and 1621(j), of the surface estate in the following described lands:

Seward Meridian, Alaska (Unsurveyed)

T. 23 S., R. 19 W. ← AFFECTED BY EXCHANGE WITH OUBINKIE

secs. 1 and 2 (fractional);
 secs. 3 to 8, inclusive;
 secs. 11 to 14, inclusive (fractional);
 secs. 17 to 22, inclusive;
 secs. 23 to 26, inclusive (fractional);
 secs. 27, 29 and 30;
 sec. 31 (fractional);
 sec. 32 (fractional), excluding Native allotment AA-7070 Parcel A;
 secs. 34 and 35;
 sec. 36 (fractional).

XXXXXX
XX XX
XX XX
XX XX
XX XX
XX XX
XX XX

T. 23 S., R. 20 W.

secs. 1, 2 and 3;
 sec. 4 (fractional);
 secs. 5, 6 and 7;
 secs. 8 and 9 (fractional);
 secs. 10, 11 and 12;
 secs. 14 and 15;
 secs. 16 and 17 (fractional);
 sec. 18;
 secs. 19, 20 and 21 (fractional);
 secs. 22, 25 and 27;
 secs. 28 to 33, inclusive (fractional);
 secs. 34 and 36.

XXXXXX
XXXXXX
XXXXXX
XXXXXX
XXXXXX
XXXXXX
XXXXXX

T. 23 S., R. 21 W.

secs. 4 and 5;
 secs. 8, 9 and 10;
 secs. 12 to 22, inclusive;
 secs. 24, 27 and 28;
 secs. 30, 31, 34 and 35.

XX
XX
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XX

T. 23 S., R. 22 W.

secs. 18 to 22, inclusive (fractional);
 sec. 26;
 sec. 27 (fractional);
 secs. 35 and 36.

XXXX
XX
XX

T. 23 S., R. 23 W.

secs. 13 and 14 (fractional);
 sec. 23 (fractional);
 secs. 26, 35 and 36.

XX
XX
XX
XX

T. 25 S., R. 21 W.

secs. 3 and 4 (fractional);
 secs. 6 and 7 (fractional), excluding Native allotment AA-7000;
 sec. 16 (fractional);
 sec. 18 (fractional), excluding U.S. Survey 454 Tract A;

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sec. 21 (fractional);
secs. 29, 30 and 32 (fractional).

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T. 25 S., R. 22 W.

sec. 1 (fractional), excluding Native allotments
AA-6220, AA-6221 and AA-7000;
secs. 2 to 11, inclusive;
sec. 12 (fractional), excluding Native allotments
AA-6220, AA-6221, AA-7000, AA-7079 Parcel B,
AA-8125, AA-8126, AA-8130 and AA-8131, and
U.S. Survey 454 Tract C;
sec. 13 (fractional), excluding Native allotments
AA-7071 Parcel A, AA-7079 Parcel B, AA-7471
Parcel B, AA-8127, AA-8129, AA-8131, AA-8132,
and U.S. Survey 909, U.S. Survey 454 Tracts A, B
and D, and U.S. Survey 3886;
sec. 14, excluding Native allotment AA-8129;
secs. 15 and 16;
secs. 17 to 22, inclusive (fractional);
sec. 23 (fractional), excluding Native allotment
AA-2530 Parcel A;
sec. 24 (fractional), excluding Native allotment
AA-2530 Parcels A and B;
secs. 25 to 34, inclusive (fractional);
secs. 35 and 36.

Aggregating approximately 69,291.92 acres.

NOW KNOW YE, that there is, therefore, granted by the UNITED STATES OF AMERICA, unto the above-named corporation the surface estate to the land above-described; TO HAVE AND TO HOLD the said lands with all the rights, privileges, immunities, and appurtenances, of whatsoever nature, thereunto belonging, unto the said corporation, its successors and assigns, forever;

EXCEPTING AND RESERVING TO THE UNITED STATES from the lands so granted:

1. A right-of-way thereon for ditches and canals constructed by the authority of the United States. Act of August 30, 1890, 26 Stat. 391; 43 U.S.C. 945;
2. A right-of-way thereon for the construction of railroads, telegraph and telephone lines, as prescribed and directed by the act of March 12, 1914, 38 Stat. 305; 43 U.S.C. 975(d);
3. The subsurface estate therein, and all rights, privileges, immunities and appurtenances, of whatsoever nature, accruing unto said estate pursuant to the Alaska Native Claims Settlement Act of December 18, 1971, 85 Stat. 688; 43 U.S.C. 1601-1624;
4. Pursuant to section 17(b) of the Alaska Native Claims Settlement Act of December 18, 1971 (85 Stat. 688, 708; 43 U.S.C. 1601, 1616), the following public easements referenced by easement identification number (EIN) on the easement map in case file AA-6645-EE are reserved to the United States and subject to further regulation thereby:
 - a. (EIN D9 1) An easement for a proposed access trail twenty-five (25) feet in width from the mouth of Malina Creek on Shelikof Bay then along the right bank of Malina Creek and the north shoreline of Malina and Upper Malina Lakes to its terminus with the Muskomee Bay and Afognak Lake trail (D9 4). The usage of roads and trails will be controlled by applicable State or Federal law or regulation.

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- b. (EIN D9 4) An easement for an existing access trail twenty-five (25) feet in width from Muskomee Bay, northeasterly to the junction of trail easements D9 22, S 2, and O 1. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- c. (EIN D9 5) A site easement in section 35, T. 23 S., R. 23 W., Seward Meridian at the head of Afognak Lake and junction of trail easements D9 22, S 2, D9 4 and O 1. The site is one (1) acre in size with an additional twenty-five (25) foot wide easement on the bed of the lake along the entire waterfront of the site. The site is for camping, staging, and vehicle use.
- d. (EIN D9 11) A site easement in section 10, T. 23 S., R. 20 W., Seward Meridian, adjacent to an unnamed lake. The site is one (1) acre in size with an additional twenty-five (25) foot wide easement on the bed of the lake along the entire waterfront of the site. The site is for camping, staging, and vehicle use.
- e. (EIN D9 22) An easement for a proposed access trail twenty-five (25) feet in width from site easement F 31 southerly through public lands to the junction of trail easements D9 4, S 2, and O 1 at Afognak Lake. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- f. (EIN D9 22a) An easement for a proposed access trail twenty-five (25) feet in width from site easement F 27a southwesterly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- g. (EIN F 20) An easement for a proposed access trail twenty-five (25) feet in width from proposed road easement F 22 east to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- h. (EIN F 21) An easement for a proposed access trail twenty-five (25) feet in width from proposed road easement F 22 south to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- i. (EIN F 22) An easement one hundred (100) feet in width for a proposed road beginning at the head of Kazakof Bay in section 33, T. 22 S., R. 20 W., Seward Meridian, and ending at Afognak Bay in section 29, T. 24 S., R. 21 W., Seward Meridian. The usage of roads and trails will be controlled by applicable State or Federal law or regulation. In the event the proposed road is not constructed, a trail easement twenty-five (25) feet in width is proposed for public use and access of the above described area.
- j. (EIN F 23) A one (1) acre site easement in sections 19 and/or 30, T. 23 S., R. 20 W., Seward Meridian, at Kazakof Bay. The site is for camping, staging, and vehicle use.
- k. (EIN F 23a) An easement for a proposed access trail twenty-five (25) feet in width beginning at the site easement F 23 and continuing westerly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.

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1. (EIN F 26) An easement for a proposed access trail twenty-five (25) feet in width from proposed road easement F 22 southerly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- m. (EIN F 27) An easement one hundred (100) feet in width for a proposed road from the Afognak Bay Road (F 22) to the south side of Malina Bay. The usage of roads and trails will be controlled by applicable State or Federal law or regulation. In the event the proposed road is not constructed, a trail easement twenty-five (25) feet in width is proposed for public use and access of the above described area.
- n. (EIN F 27a) A log transfer dock and public use easement in section 20, T. 23 S., R. 22 W., Seward Meridian, on the south side of Malina Bay. The easement is ten (10) acres in size and is used for camping, vehicle use, staging, and as a log transfer dock.
- o. (EIN F 28) An easement one hundred (100) feet in width for a proposed road from Malina Bay Road (F 27) southwesterly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation. In the event the proposed road is not constructed, a trail easement twenty-five (25) feet in width is proposed for public use and access of the above described area.
- p. (EIN F 31) A one (1) acre site easement in section 23, T. 23 S., R. 23 W., Seward Meridian at the head of Malka Bay. The site is for camping, staging, and vehicle use.
- q. (EIN F 33) An easement for a proposed access trail twenty-five (25) feet in width from road easement F 22 northwesterly through public lands to site easement D9 21 and continues southwesterly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- r. (EIN F 34) An easement for a proposed access trail twenty-five (25) feet in width from proposed road easement F 22 northwesterly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- s. (EIN F 35) An easement for a proposed access trail twenty-five (25) feet in width from Kitoi Bay westerly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- t. (EIN F 36) An easement for a proposed access trail twenty-five (25) feet in width from road easement F 38 easterly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- u. (EIN F 38) An easement one hundred (100) feet in width for an existing road from Kazakof Bay northeasterly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- v. (EIN F 38a) A log transfer dock and public use easement in section 33, T. 23 S., R. 20 W., Seward Meridian on the east side of Kazakof Bay. The easement is four and one-half (4½) acres in size and is used for camping, vehicle use, staging, and as a log transfer dock.

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- w. (EIN F 39) An easement one hundred (100) feet in width for a proposed road from road easement F 22 northwesterly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation. In the event the proposed road is not constructed, a trail easement twenty-five (25) feet in width is proposed for public use and access of the above described area.
- x. (EIN O 1) An easement for a proposed access trail twenty-five (25) feet in width from the Navy recreational camp on the north side of Afognak Lake to the junction of trail easements D9 22, S 2, and D9 4. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- y. (EIN O 4) An easement for a proposed access trail twenty-five (25) feet in width from site easement D9 11 easterly to Kazakof Bay Road (F 38). The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- z. (EIN O 6) A one (1) acre site easement in section 27, T. 23 S., R. 22 W., Seward Meridian at the head of Malina Bay. The site is for camping, staging, and vehicle use.
- aa. (EIN O 11) An easement for an existing access trail twenty-five (25) feet in width from Fox Bay to Marmot Bay. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- ab. (EIN P 1) A continuous linear easement twenty-five (25) feet in width upland of and parallel to the mean high tide line in order to provide access to and along the marine coastline and use of such shore for purposes such as beaching of watercraft or aircraft, travel along the shore, recreation, and other similar uses. Deviations from the waterline are permitted when specific conditions so require, i.e., impassable topography or waterfront obstruction. This easement is subject to the right of the owner of the servient estate to build upon such easement a facility for public or private purposes, such right to be exercised reasonably and without undue or unnecessary interference with or obstruction of the easement. When access along the marine coastline easement is to be obstructed, the owner of the servient estate will be obligated to convey to the United States an acceptable alternate access route, at no cost to the United States, prior to the creation of such obstruction.
- ac. (EIN P 11) The right of the United States to enter upon the lands herein granted for cadastral, geodetic, or other survey purposes is reserved together with the right to do all things necessary in connection therewith.
- ad. (EIN S 2) An easement for a proposed access trail twenty-five (25) feet in width from the junction of trail easements D9 4, D9 22, and O 1 southerly to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.
- ae. (EIN S 3) An easement for a proposed access trail twenty-five (25) feet in width near the northwest shore of Afognak Lake from trail easement O 1 to public lands. The usage of roads and trails will be controlled by applicable State or Federal law or regulation.

THE GRANT OF THE ABOVE-DESCRIBED LAND IS SUBJECT TO:

1. Issuance of a patent confirming the boundary description of the lands granted after approval and filing by the Bureau of Land Management of the official plat of survey covering such lands;

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2. Valid existing rights therein, ~~if any,~~ including but not limited to those created by any lease (including a lease issued under section 6(g) of the Alaska Statehood Act (72 Stat. 339, 341)), contract, permit, right-of-way, or easement and the right of the lessee, contractee, permittee, or grantee to the complete enjoyment of all rights, privileges and benefits thereby granted to him;
3. Requirements of section 14(c) of the Alaska Native Claims Settlement Act, 85 Stat. 688, 703; 43 U.S.C. 1613(c), that the grantee hereunder convey those portions, if any, of the land hereinabove granted, as are prescribed in said section;
4. Requirements of section 22(k) of the Alaska Native Claims Settlement Act, 85 Stat. 688, 703; 43 U.S.C. 1621(k), pertaining to any of the above-described lands that are located within the boundaries of a national forest: that (a) until December 18, 1976, the sale of any timber from such lands be subject to the same restrictions relating to the export of timber from the United States as are applicable to national forest lands in Alaska under rules and regulations of the Secretary of Agriculture; and that (b) until December 18, 1983, such lands shall be managed under the principle of sustained yield and under management practices for protection and enhancement of environmental quality no less stringent than such management practices on adjacent national forest lands; and
5. The terms and conditions of the agreement dated November 12, 1976 between the Secretary of the Interior, Koniag, Inc., Natives of Afognak, Inc., and other Koniag village corporations. A copy of the agreement is hereby attached to and made a part of this conveyance document.

IN WITNESS WHEREOF, the undersigned authorized officer of the Bureau of Land Management has, in the name of the United States, set his hand and caused the seal of the Bureau to be hereunto affixed on this twentieth day of June, 1977, in Anchorage, Alaska.

UNITED STATES OF AMERICA



W. E. Aremor
 Chief, Branch of Lands
 and Minerals Operations

Interim Conveyance No. 060

Date JUN 20 1977

Combined Phase I and II Environmental Site Assessment

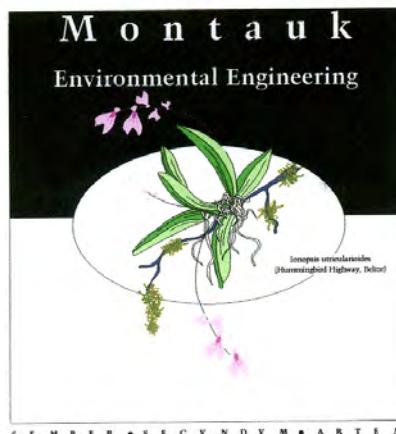
**Raspberry Strait Dump Site
Afognak, Alaska**

September 2005

Prepared for the Afognak Native Corporation

Prepared by

Montauk Environmental Engineering

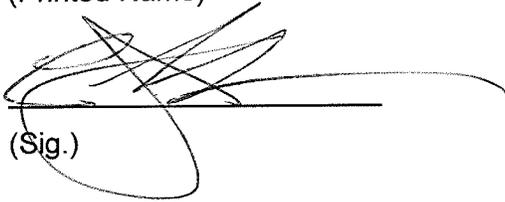


Certification

I Certify that except as specifically noted in this report, the procedures used to conduct this report are in conformance with the standards set forth in *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process - E 1527-00* (ASTM), *Standard Guide for Environmental Site Assessments: Phase II ESA Process - E 1903-00* (ASTM) and State of Alaska Administrative Codes 18 AAC 75/78, and that all information presented in this report is, to the best of my knowledge, accurate and complete.

Clifford J. Elsmann

(Printed Name)



(Sig.)

Environmental Scientist

(Title)

29 Sept. '05

(Date)

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Summary

This Combined Phase I and Phase II Environmental Site Assessment (ESA) has been performed in accordance with the ASTM International (formerly the American Society for Testing and Materials) Standard Practices *E 1527-00*, *E 1528-00* and *E-1903-00*. This ESA has been performed on that portion of the Afognak Native Corporation (ANC) property identified as the Raspberry Strait Dump Site ("The Site"). Evidence of recognized environmental conditions were observed and measured in connection with the site. These conditions are:

- A non-permitted refuse dump, the observed contents of which include hazardous materials;
- Arsenic, Lead and Selenium soil contamination directly associated with dump materials.

1.0 General Information

1.1 Assessment Purpose: The purpose of this Combined Phase I and II ESA is to identify, to the extent feasible pursuant to the processes prescribed in Section 1.2, recognized environmental conditions in connection with the property.

1.2 Methodology: This ESA was conducted and reported in accordance with ASTM International's *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, E 1527-00*, *Standard Practice for Environmental Site Assessments: Transaction Screening Process, E 1528-00* and *Standard Guide for Environmental Site Assessments: Phase II ESA Process - E 1903-00*, collectively termed "The Practice." The Practice defines good commercial and customary methods for conducting an ESA of a parcel of commercial real estate with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products.

As such, the Practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner defense to CERCLA liability; that is, the practices that constitute "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in 42 USC § 9601(35)(B).

The Phase II aspect of this ES has been conducted to confirm the presence of potential environmental impacts discovered during the Phase I ESA. In the case of this site, the presence of large amounts of debris has limited the investigative scope of the ESA. Soil and water samples were collected in accordance with State of Alaska Administrative Codes 18 AAC 75 and 78. Cleanup standards are those presented in 18 AAC 75.341, Tables B1 and B2, Method Two (using "Over 40 Inches of Precipitation" and "Migration to Groundwater" criteria) and Table C.

1.3 Property Information

1.3.1 Legal Description: The dump site is located within Section 21, Tract 25 South, Range 22 West of the Seward Meridian.

1.3.2 Location: The site is located on the southernmost tip of Afognak Island bordering Raspberry Strait, approximately 50 feet south of an unimproved trail connecting Back Bay with the Russian settlement of Aleneva and an ANC Shareholder Lease.

1.3.3 Ownership: The property was conveyed to the Koniag Region through the Alaska Native Claims Settlement Act of 1971 (ANCSA). The subsurface and surface properties were conveyed to the ANC in 1977 by the Koniag Region and the Bureau of Land Management (BLM), respectively.

1.3.4 Setting and Surrounding Property: The site is located on unimproved land owned by the ANC. The settlement of Aleneva is property purchased from an ANC shareholder in December of 1989, and is located approximately one and one-half miles west of the site. The ANC Shareholder (Flerchinger) property is leased from the ANC, and is located approximately three quarters of a mile southwest of the site. The site is well covered by a second-growth Sitka Spruce and Alder forest typical of the ecoregion.

1.3.5 Size: The dump site has a surface area of approximately 7,500 square feet.

1.3.6 Improvements: The dump site is situated alongside an unimproved trail. There are no other man-made site features.

1.3.7 Utilities: None.

1.3.8 Subsurface Conditions

- Soils: Observed soils were sandy humus and sandy, organic gravel with discontinuous layers of volcanic ash deposited by the 1912 Katmai Volcano eruption.
- Subsurface Water: Subsurface Water was not encountered. Based upon nearby (Danger Bay) observations, subsurface water is expected to be shallow and confined by fractured greywacke bedrock. Local subsurface water flow direction is expected to be from the north to south based upon surface topography. It is not known if subsurface water meets the definition of Groundwater as designated by the State of Alaska Department of Environmental Conservation (ADEC) in *Groundwater in the Unsaturated and Saturated Zones, Guidance No. SPAR 00-1* (ADEC. 8 Feb. 2000.)
- Surface Waters: A small stream that flows more-or-less north-to-south approaches to within approximately thirty feet of the eastern edge of the dump site. A marsh, fed in part by a tributary of this stream, is located approximately 50 feet south of the southern border of the dump site. In the Spring of 2005, the marsh was unofficially inspected by a United States Army Corps of Engineers Wetland Specialist who concluded the marsh falls within the description of a "Wetland" as defined in Code of Federal Regulations (CFR) 33 Part 328. Both surface waters qualify as potential receptors for contaminant migration sourced from the dump site.

2.0 Historical Use

2.1 Prior Use: The general area of the refuse site was a source for at least two timber harvesting operations from 1944 through 1976. No evidence was discovered during an examination of the refuse itself that suggests timber harvesting operations share any responsibility for or were in any way contributory to, the dump site.

No other activities, commercial or private, were discovered or suspected. The extend of timber growth observed is consistent with the chronology of timber harvesting.

2.2 Interviews and Document Reviews: The following information was used to determine past use of the property:

2.2.1 Interview With ANC Lands Manager Howard Valley, 19 September 2005: Mr. Valley was a source of ownership and land use information.

2.2.2 Interview With ANC Forester David Nesheim, 19 September 2005: Mr. Nesheim was a source for information on land use and local timber practices.

2.2.3: Interviews With ANC Security Officers Kewan and Christofferson, 9 May 2005: Officers Kewan and Christofferson discovered the dump site during a routine patrol of ANC property on 9 March 2005, and reported their findings to ANC Management the same day. The Officers documented discarded batteries, oil filters, oil-soaked absorbent pads, 55-gallon drums, 5-gallon pails used to contain petroleum products, and forensic information related to refuse. See the photographs in the Appendix. See also the discussion of forensic data, Section 3.4.

2.2.4: Aerial Photographs: One aerial photograph from ca. 2000 was reviewed. It depicts the dump site in its present location and approximate area. No other aerial photographs were available, including from within the Aeromap, Inc. collection.

2.2.5 Alaska Department of Environmental Conservation (ADEC) Contaminated Sites and Leaking Underground Storage Tanks (LUST) Databases, 16 September 2005: No past or present adverse environmental conditions have been reported in association with the property or immediately surrounding properties. No sites within a five mile radius of the property are listed as "active" with the ADEC. See Table III.

2.2.6 United States Environmental Protection Agency (EPA) Region 10 Database, 16 September 2005: No past or present CERCLA, RCRA (Resource Conservation and Recovery Act) or other EPA-listed condition is reported in association with the property's past or present use or within a five mile radius of the property. See Table III.

3.0 Present Use and Conditions

3.1 Site Inspections: A site inspection was conducted by Clifford Elsmann of Montauk E/E and representatives of the ANC on 29 April 2005. ANC Security Officers revisited the site on 2 May 2005. Chemical and other data were collected by Elsmann on 22 August 2005 while accompanied by representatives of the ANC and an equipment operator.

During the 22 August assessment, a 580B backhoe was used to advance an exploratory trench through the densest and deepest portion of the refuse pile until the underlying, original soil surface was reached. The trench was approximately fifteen feet long, eight feet wide at the surface to two feet wide at depth, and from between one and eight feet deep. See Section 3.2 for a discussion of chemical data methodologies and results. See Section 3.3 for a discussion of observed potential forensic data.

The following is a tabulation of potential environmental concerns which were assessed during the inspection of the site and surroundings, and measured in assessment samples.

Table I: Catalog of Site Conditions and Concerns

Potential Concern or Condition	Observed, Not Observed; Measured, Not Measured	Comments
Hazardous substances and petroleum products in connection with current use.	Observed	Oily absorbent pads, used oil filters, outboard engines, engine parts, abandoned petroleum-product drums and pails.
Hazardous substances in site soil.	Measured	Arsenic, Lead and Selenium were measured at concentrations exceeding cleanup standards. Barium, Cadmium, Chromium, Silver, DRO, RRO and pyrene measured in concentration below cleanup standards.
Hazardous substances in site surface water.	Measured	Barium, Chromium and Lead were measured at concentrations below groundwater cleanup standards.
UST fill or vent pipes	Not observed	
Odors	Observed	Odors of products of decomposition.
Pools of Liquid	Not observed	
Drums or other abandoned items or trash	Observed	Batteries, household solvents and cleaners, petroleum-product drums and containers, oil-soaked absorbent pads, used oil filters, common household trash, engine, machine and appliance parts.
Unidentified substance containers	Observed	
Electrical or hydraulic equipment known or suspected to contain polychlorinated biphenyls (PCBs)	Not observed	
Drains and sumps	Not observed	
Pits, ponds or lagoons	Not observed	
Stained soil	Observed	Stained soil observed in association with batteries. Source of sample 02
Stressed vegetation	Not observed	
Solid waste	Observed	
Waste water	Not observed	
Wells	Not observed	
Septic systems	Not observed	
Asbestos-containing building materials	Not Observed	The potential for ACM cannot be fully assessed except by examining all dump materials, most feasibly during cleanup of the dump.
Lead-based paint	Not Observed	The potential for Lead-based paint cannot be fully assessed except by examining all dump materials, most feasibly during cleanup of the dump.
Wetlands	Observed	The property meets the definition of a wetland.

3.2 Chemical Data

3.2.1 Data Collection Methodologies: Soil and water chemical data were collected, handled, transported, analyzed and reported in accordance with the procedures codified in 18 AAC 78. Analytical data are tabulated in Table II. Results are discussed in Section 3.2.2. Raw laboratory data are included in the Appendix.

- Soil sample 01 was collected from the finished depth of the exploratory trench at the approximate center of the refuse pile. Sample 01 was analyzed for gasoline range organics (GRO), benzene, toluene, ethylbenzene and total xylenes (BTEX), diesel and residual range organics (DRO-RRO), polychlorinated biphenyls (PCB), polynuclear aromatics (PAH), halogenated volatile organics (HVO) and the metals Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
- Soil sample 02 was collected just east of the main refuse pile from beneath a woven plastic bag of battery components. Sample 02 was analyzed for the metals Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
- Water sample 03 was collected from ponded water in the wetlands approximately 90 feet south of the refuse pile center point. Sample 03 was analyzed for gasoline range organics (GRO), benzene, toluene, ethylbenzene and total xylenes (BTEX), diesel and residual range organics (DRO-RRO), polychlorinated biphenyls (PCB), polynuclear aromatics (PAH), halogenated volatile organics (HVO) and the metals Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
- Soil sample 04 was collected as a background, baseline sample from undisturbed native soil near the roadway. Sample 04 was analyzed for diesel range organics (DRO) and the metals Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium and Silver.
- Samples 05 and 06 are AK101 Test Method water and soil (respectively) trip blanks collected for quality control purposes.

Table II: Chemical Data

Sample Number	Matrix and Location	Analyte/ Test Method	Result	ADEC Limit
01	Soil sample from center of refuse pile at finished depth of exploratory trench	BTEX / 8021b	ND	
		GRO / AK101	ND	
		DRO / AK102	70.9 mg/kg	230 mg/kg
		RRO / AK103	170 mg/kg	9,700 mg/kg
		Arsenic / EPA 6020	5.26 mg/kg	1.8 mg/kg
		Barium / EPA 6020	27.4 mg/kg	982 mg/kg
		Cadmium / EPA 6020	1.53 mg/kg	4.5 mg/kg
		Chromium / EPA 6020	14.9 mg/kg	23 mg/kg
		Lead / EPA 6020	42.1 mg/kg	400 mg/kg
		Mercury / EPA 7471A	ND	
		Selenium / EPA 6020	ND	
		Silver / EPA 6020	ND	
		PCB / EPA 8082	ND	
		HVO / 8260B	ND	
PAH	0.0166 mg/kg (pyrene)	1,400 mg/kg		

- ADEC State of Alaska Department of Environmental Conservation
- AK ADEC test method
- BTEX Benzene, toluene, ethylbenzene and total xylenes
- DRO Diesel range organics
- EPA United States Environmental Protection Agency
- GRO Gasoline range organics
- HVO Halogenated volatile organics -or- volatile organic compounds
- mg/kg Milligrams per kilogram, also expressed as parts-per-million
- ND Not detected (less than the method reporting limit)
- PAH Polynuclear aromatic hydrocarbons
- PCB Polychlorinated biphenyls
- RRO Residual range organics

Table II: Chemical Data, Cont.

Sample Number	Matrix and Location	Analyte/ Test Method	Result	ADEC Limit
02	Surface soil sample from east side of main refuse pile, collected from beneath bag of battery parts	Arsenic / EPA 6020	11.4 mg/kg	1.8 mg/kg
		Barium / EPA 6020	107 mg/kg	982 mg/kg
		Cadmium / EPA 6020	ND	
		Chromium / EPA 6020	11.8 mg/kg	23 mg/kg
		Lead / EPA 6020	17,100 mg/kg	400 mg/kg
		Mercury / EPA 7471A	ND	
		Selenium / EPA 6020	26.0 mg/kg	3 mg/kg
		Silver / EPA 6020	ND	

- ADEC State of Alaska Department of Environmental Conservation
- AK ADEC test method
- BTEX Benzene, toluene, ethylbenzene and total xylenes
- DRO Diesel range organics
- EPA United States Environmental Protection Agency
- GRO Gasoline range organics
- HVO Halogenated volatile organics -or- volatile organic compounds
- mg/kg Milligrams per kilogram, also expressed as parts-per-million
- ND Not detected (less than the method reporting limit)
- PAH Polynuclear aromatic hydrocarbons
- PCB Polychlorinated biphenyls
- RRO Residual range organics

Table II: Chemical Data, Cont.

Sample Number	Matrix and Location	Analyte/ Test Method	Result	ADEC Limit
03	Surface water from wetland south of refuse pile	BTEX / 8021b	ND	
		GRO / AK101	ND	
		DRO / AK102	ND	
		RRO / AK103	ND	
		Arsenic / EPA 6020	ND	
		Barium / EPA 6020	0.0390 mg/l	2.0 mg/l
		Cadmium / EPA 6020	ND	
		Chromium / EPA 6020	0.00137 mg/l	0.1 mg/l
		Lead / EPA 6020	0.00347 mg/l	0.015 mg/l
		Mercury / EPA 7471A	ND	
		Selenium / EPA 6020	ND	
		Silver / EPA 6020	ND	
		PCB / EPA 8082	ND	
		HVO / 8260B	ND	
PAH	ND			

- ADEC State of Alaska Department of Environmental Conservation
- AK ADEC test method
- BTEX Benzene, toluene, ethylbenzene and total xylenes
- DRO Diesel range organics
- EPA United States Environmental Protection Agency
- GRO Gasoline range organics
- HVO Halogenated volatile organics -or- volatile organic compounds
- mg/kg Milligrams per kilogram, also expressed as parts-per-million
- ND Not detected (less than the method reporting limit)
- PAH Polynuclear aromatic hydrocarbons
- PCB Polychlorinated biphenyls
- RRO Residual range organics

Table II: Chemical Data, Cont.

Sample Number	Matrix and Location	Analyte/ Test Method	Result	ADEC Limit
04	Soil background sample used to establish baseline	DRO / AK102	213 mg/kg	230 mg/kg
		RRO / AK103	603 mg/kg	9,700 mg/kg
		Arsenic / EPA 6020	7.82 mg/kg	1.8 mg/kg
		Barium / EPA 6020	45.8 mg/kg	982 mg/kg
		Cadmium / EPA 6020	ND	
		Chromium / EPA 6020	22.2 mg/kg	23 mg/kg
		Lead / EPA 6020	13.9 mg/kg	400 mg/kg
		Mercury / EPA 7471A	0.198 mg/kg	1.24 mg/kg
		Selenium / EPA 6020	ND	
		Silver / EPA 6020	ND	
05	Water trip blank	GRO/BTEX / AK101	ND	
06	Soil trip blank	GRO/BTEX / AK101	ND	

ADEC State of Alaska Department of Environmental Conservation
 AK ADEC test method
 BTEX Benzene, toluene, ethylbenzene and total xylenes
 DRO Diesel range organics
 EPA United States Environmental Protection Agency
 GRO Gasoline range organics
 HVO Halogenated volatile organics -or- volatile organic compounds
 mg/kg Milligrams per kilogram, also expressed as parts-per-million
 ND Not detected (less than the method reporting limit)
 PAH Polynuclear aromatic hydrocarbons
 PCB Polychlorinated biphenyls
 RRO Residual range organics

3.2.2 Data Results Discussion

- Soil sample 01 was collected from the finished depth of the exploratory trench at the approximate center of the refuse pile and analyzed for the full range of ADEC contaminants of concern (COC). Arsenic was detected in this sample at 5.26 mg/kg, but at a concentration consistent with background sample 04's result of 7.82 mg/kg. The ADEC cleanup level for Arsenic is 1.8 mg/kg.
- Soil sample 02 was collected just east of the main refuse pile from beneath a woven plastic bag of battery components and analyzed for eight metals. As with sample 01, Arsenic (11.4 mg/kg) and Barium (107 mg/kg) were detected at concentrations more-or-less consistent with background data, but the Barium concentration is less than the ADC limit of 982 mg/kg. Selenium was detected (26.0 mg/kg) at a concentration above the ADEC limit of 3 mg/kg. Selenium was not detected in background sample 04. Lead (17,100 mg/kg) was measured at a concentration significantly in excess of the ADEC residential limit of 400 mg/kg and also well in excess of the 13.9 mg/kg background level.
- Water sample 03 was collected from ponded water in the wetland that begins approximately 90 feet south of the refuse pile center point and analyzed for the full range of ADEC COC. Only Barium, Chromium and Lead were detected, all significantly below ADEC cleanup levels.
- Soil sample 04 was collected as a background, baseline sample from undisturbed native soil near the roadway and was analyzed for diesel and residual range organics, and metals. DRO (213 mg/kg) were detected at concentrations approaching the cleanup limit of 230 mg/kg. RRO (603 mg/kg) were detected at concentrations well below the 9,700 mg/kg cleanup limit. An examination of the chromatograph associated with AK102-103 analyses indicates perhaps as much as 20% of the DRO-RRO concentration can be attributed to plant (biogenic) oils; however, petroleum products are likely to account for at least 80% of the measured analytes. Arsenic (7.82 mg/kg) was detected at a concentration above the cleanup limit of 1.8 mg/kg. Barium (45.8 mg/kg) was detected at a concentration less than the cleanup limit of 982 mg/kg. Chromium (22.2 mg/kg) was detected at a

concentration approaching the cleanup limit of 23 mg/kg. Lead (13.9 mg/kg) was detected at a concentration well below the residential cleanup limit of 400 mg/kg. Mercury (0.198 mg/kg) was detected at a concentration well below the cleanup limit of 1.24 mg/kg; however, its very presence is curious, and considered along with the fuel results, strongly suggests the background sample captured analytes either from a discrete spill or from an occult spill associated with the dump. The possibilities of laboratory and sample collection errors have been explored and are considered to be unlikely.

- Samples 05 and 06 are AK101 Test Method water and soil (respectively) trip blanks collected for quality control purposes. No target analytes were detected in either sample.

3.4 Potential Forensic Data: Along with physical and chemical observations and measurements, data such as envelope and catalog mailing labels from the dump site were observed (and in most cases photographed) during the course of the investigations that connect refuse items with specific individuals. The Appendix contains representative photographs of these items. Due to the wet climate and agents of decay, paper items such as catalogs and letters, items most likely to include addressee information, were generally decayed to a point of illegibility; however, some items were recovered in readable condition, and it is reasonable to expect that other legible items remain undiscovered within the mass of the dump. All identifiable items were discovered at or near the surface of the dump, and are more-or-less contemporary.

Most observed common consumer items (such as might be purchased at a grocery store), even at the maximum depth of the refuse pile, were marked with bar codes. According to Barcoding Inc.'s website, bar coding was used in 33% of grocery items by 1984, and 66% of such items today. A conservative calculation would put the date of the dump's inception somewhere between 1984 and 2005, perhaps at the early to mid-1990s. Table III presents potential forensic data.

Table III: Potential Forensic Data

Description of Item	Addressee Information
Plastic Garbage Bag	Greg or Rosie Reutov (no address)
Catalog	Lazar I. Alazar(?) or Current Resident P.O. Box 1930 Kodiak, AK 99615-1930
Catalog	M.E. Flerchinger or Current Resident P.O. Box 53 Port Lions (sic), AK 99550-0053
Letter	(...)ANNA FLERCHINGER or Current Resident P.O Box 53 Port Lions (sic), AK 99550-00(...)
Catalog	Marion Flerchinger P.O. Box 90 Port Lions (sic), AK 99550-0090

3.5 Photographs: The Appendix contains photographs of the property and items of interest taken during the field reconnaissance.

4.0 Conclusions and Recommendations

Chemical data indicate the presence of metals contamination at concentrations above ADEC cleanup levels. The full extent of contamination is unknown, and can best be assessed after the refuse has been removed.

Various items at the dump site pose clear and demonstrable threats to the environmental health of the site. Many items have the potential to pose a suite of exposure threats to site visitors. The dump site also poses physical and biological threats to site visitors, and is an obvious eyesore. The Property Owner may face fines levied by regulatory agencies because the dump is improperly sited, is uncontrolled, contains items which are prohibited from landfilling, and because the dump is a non-ADEC-permitted landfill.

Because of the dump's close proximity to a wetland and because the dump contains items such as batteries and petroleum products, the refuse must be sorted and removed from the present location. Sorting should separate hazardous, prohibited items (batteries and petroleum-associated materials such as absorbent pads, used oil filters and engine parts) from common household refuse. Prohibited items must be disposed in accordance with State of Alaska and Federal laws and regulations. Based upon our evaluation of the dump mass, soil exposed during the removal process should be assessed for the presence of metals and petroleum-product contamination. Attention should be paid during the removal action to the presence of as-yet-unrevealed potentially hazardous or regulated materials such as asbestos containing materials, pressurized containers, solvents and Lead-based paints.

The most likely options for disposal of the vast bulk of the items (common household trash) are on-site disposal through an ADEC-permitted household waste landfill permit (made in accordance with 18 AAC 60, the Solid Waste Regulations), or hauling the refuse to the Kodiak Island Borough (KIB) landfill in Kodiak. Items such as batteries will have to be containerized and shipped to an out-of-state facility. The KIB may accept small amounts of paints, solvents and petroleum-product refuse.

5.0 Limitations

Montauk E/E has made every reasonable effort to obtain accurate data during the course of its investigation. These data are representative of the time the data were collected, and the purpose for which the data were collected. No investigation was made into the presence or absence of contaminants at the site, nor potential sources of contamination, other than those stated in this report. No warranty is made or implied for the use of this report as a guarantee of subsurface conditions.

6.0 References

Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process - E 1527-00. (ASTM International. July 2000.)

Standard Practice for Environmental Site Assessments: Transaction Screening Process - E 1528-00. (ASTM International. July 2000.)

Standard Guide for Environmental Site Assessments: Phase II ESA Process - E 1903-00 (ASTM International. July 2000.)

State of Alaska Administrative Code 18 AAC 60 Solid Waste Management. (State of Alaska. As amended through 8 August 2003.)

State of Alaska Administrative Code 18 AAC 75 Oil and Other Hazardous Substances Pollution Control. (State of Alaska. As amended through 26 May 2004.)

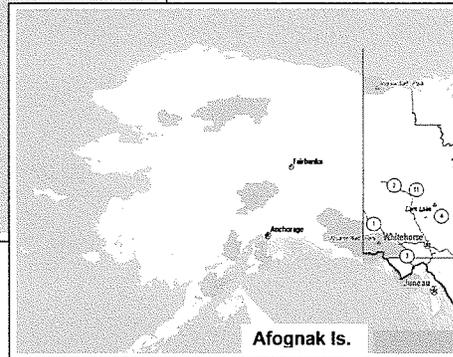
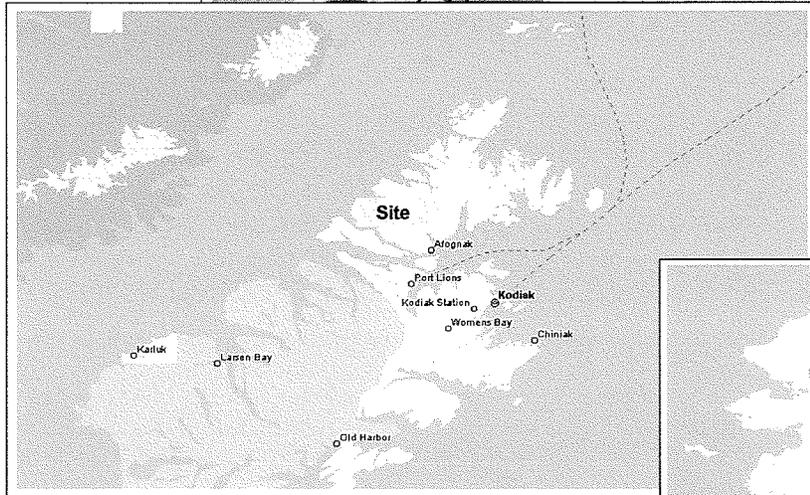
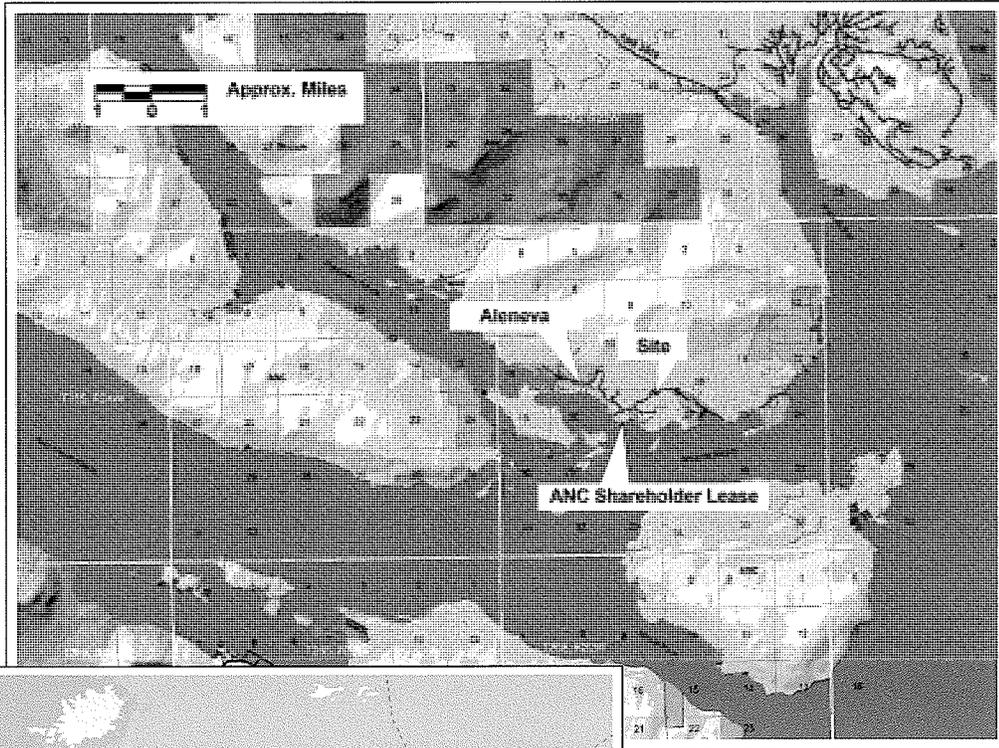
State of Alaska Administrative Code 18 AAC 78 Underground Storage Tanks. (State of Alaska. As amended through 30 January 2003.)

Appendix

Drawings

Photographs

Laboratory Data



Raspberry Strait Dump Site ESA

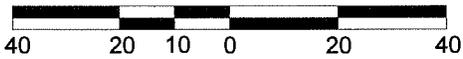
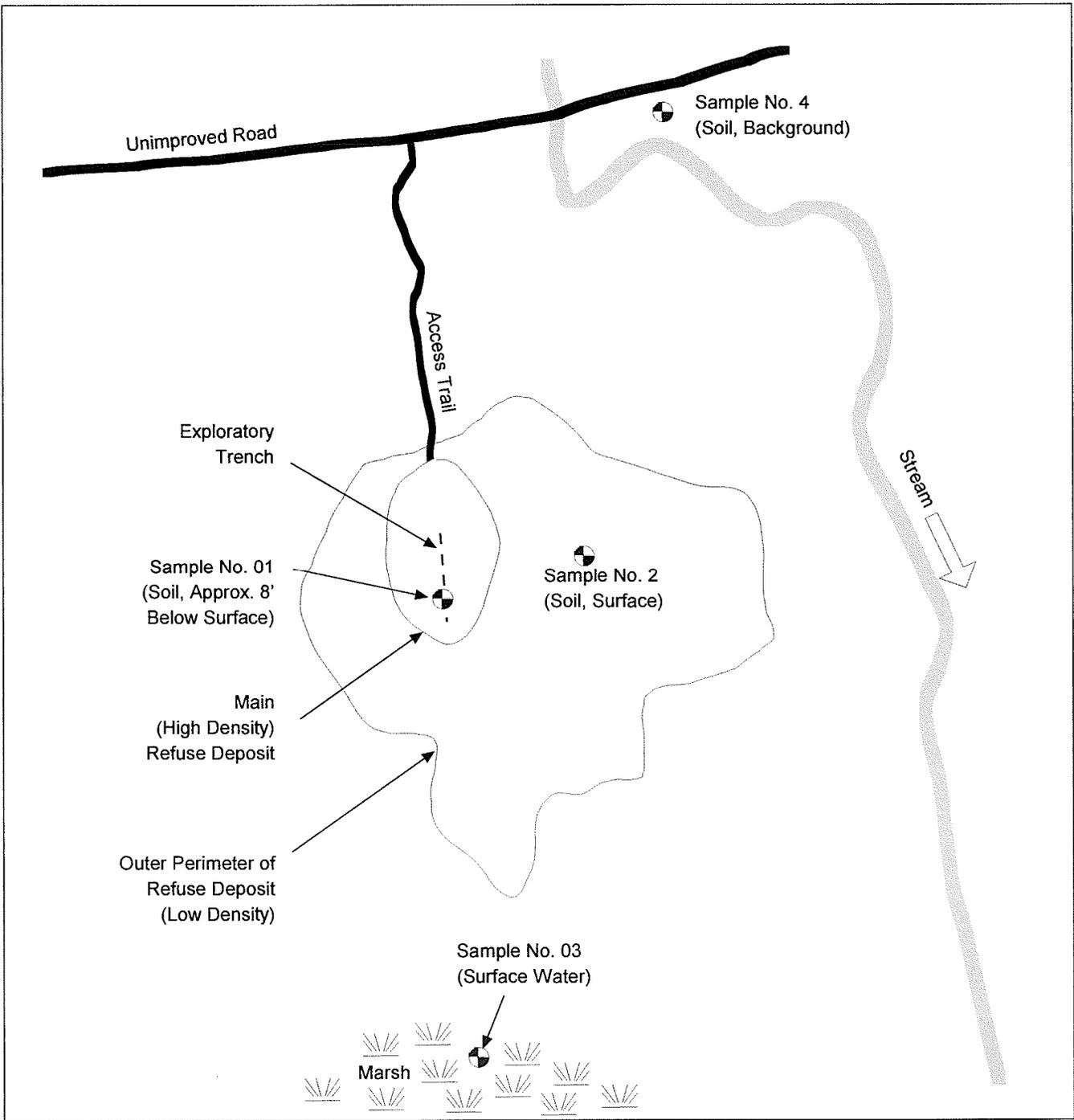
Raspberry Strait Dump Site
Afognak, Alaska

N.B: This drawing is presented solely for informational purposes in support of this report, and is to be used for no other purpose.

Location and Vicinity

Drawn by CJE





Raspberry Strait Dump Site ESA

Raspberry Strait Dump Site
Afognak, Alaska

N.B: This drawing is presented solely for informational purposes in support of this report, and is to be used for no other purpose.

Site Plan

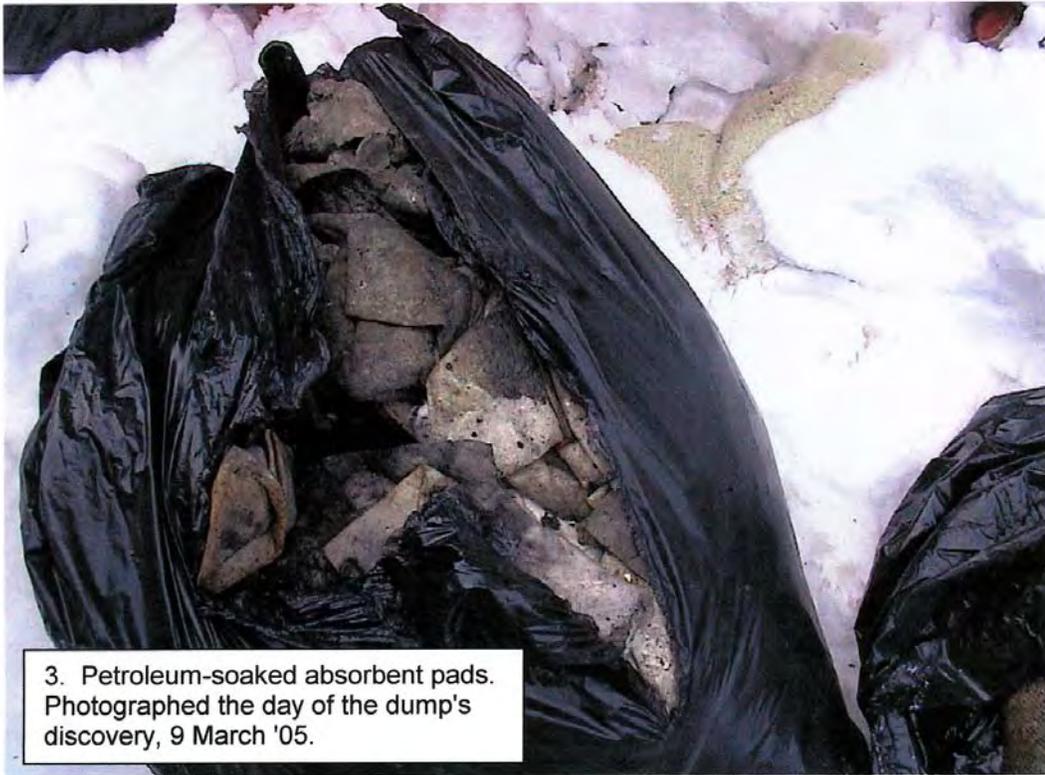
Drawn by CJE



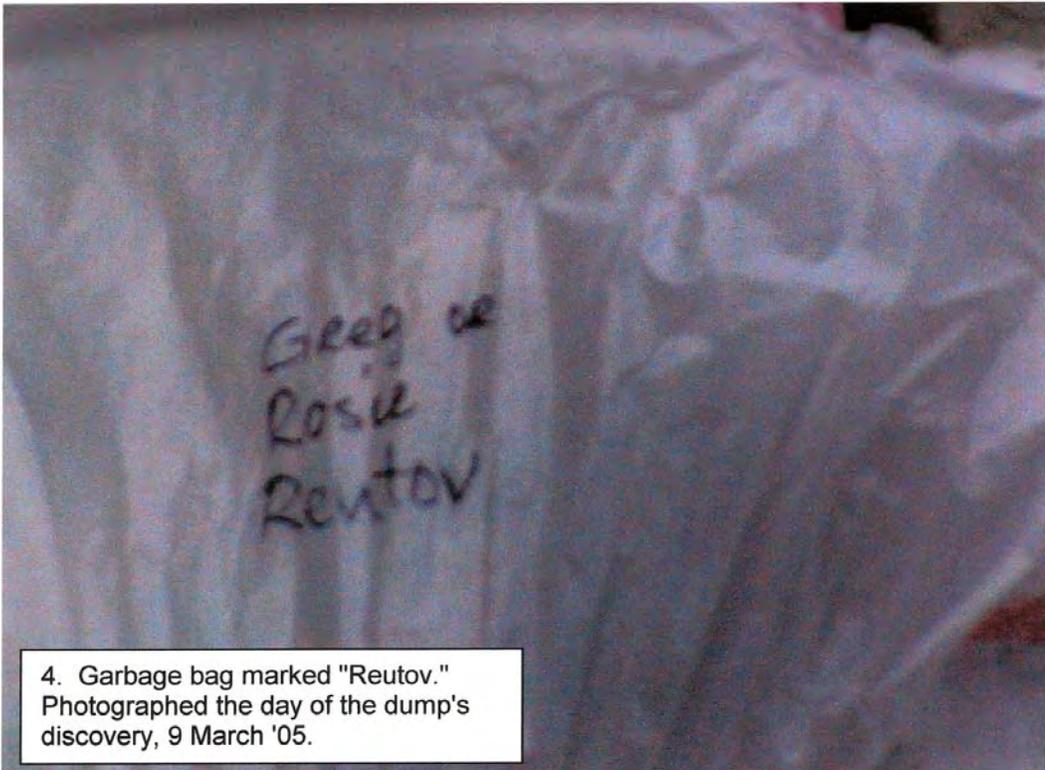
1. Looking south at entryway to dump site. April 2005.



2. Looking south at main mass of dump. August 2005.



3. Petroleum-soaked absorbent pads. Photographed the day of the dump's discovery, 9 March '05.



4. Garbage bag marked "Reutov." Photographed the day of the dump's discovery, 9 March '05.



5. Misc. petroleum-product containers. 29 April '05.



6. 5-gal. gasoline pails. 29 April '05.

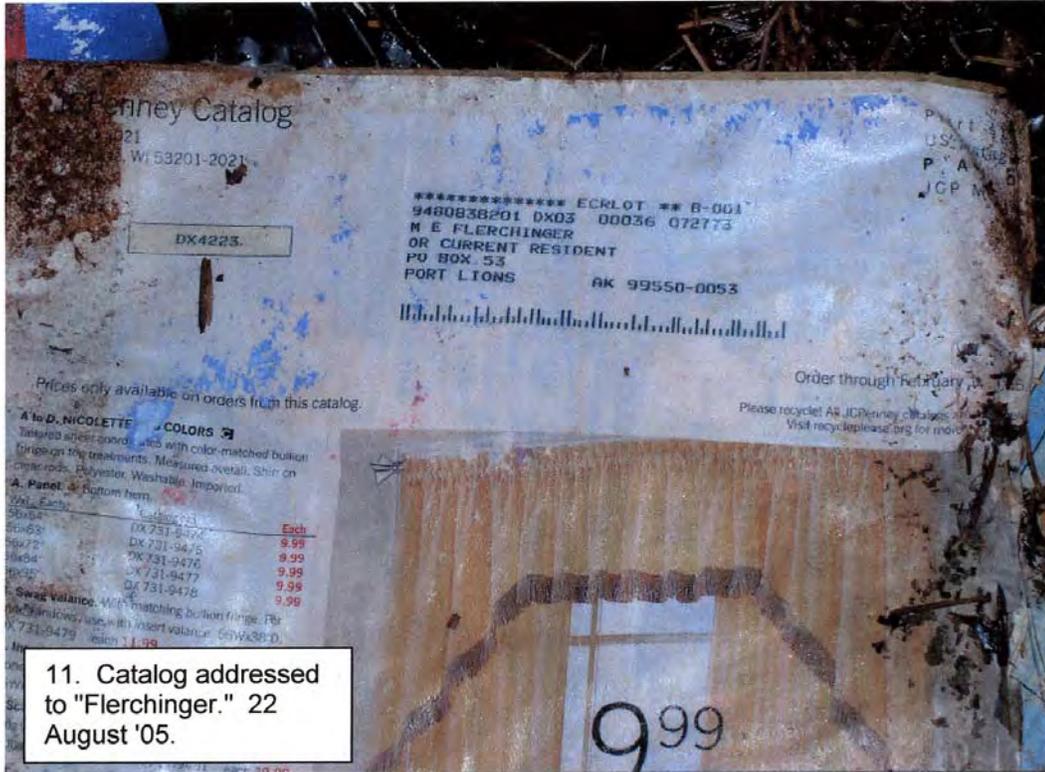


7. Damaged batteries.
29 April '05.



8. Large deposit of batteries
on east edge of debris pile.
29 April '05.

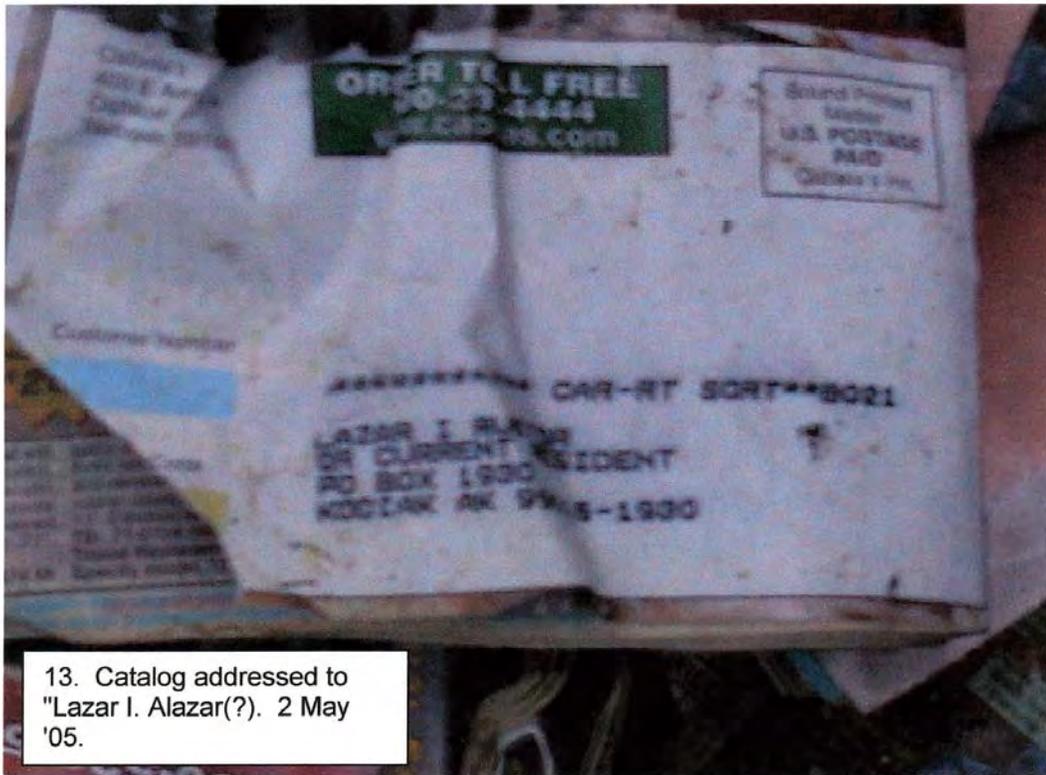




11. Catalog addressed to "Flerchinger." 22 August '05.



12. Enlargement of address label.



13. Catalog addressed to "Lazar I. Alazar(?). 2 May '05.



14. Sampling trowel and orange flag mark the location of soil sample 01 at the finished depth of the exploratory trench. 22 August '05.





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September 09, 2005

Cliff Elsmann
Montauk E/E
2903 West 78th Avenue
Anchorage, AK/USA 99502

RE: Afognak Dump Site Phase II ESA

Enclosed are the results of analyses for samples received by the laboratory on 08/25/05 13:30.
The following list is a summary of the NCA Work Orders contained in this report.
If you have any questions concerning this report, please feel free to contact me.

<u>Work</u>	<u>Project</u>	<u>ProjectNumber</u>
A5H0092	Afognak Dump Site Phase II ESA	[none]

Thank You,

Stephen Wilson, Laboratory Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Montauk E/E 2903 West 78th Avenue Anchorage, AK/USA 99502	Project Name: Afognak Dump Site Phase II ESA	<u>Report Created:</u> 09/09/05 16:44
	Project Number: [none]	
	Project Manager: Cliff Elsmann	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
01	A5H0092-01	Soil	08/22/05 12:10	08/25/05 13:30
02	A5H0092-02	Soil	08/22/05 17:00	08/25/05 13:30
03	A5H0092-03	Water	08/22/05 17:05	08/25/05 13:30
04	A5H0092-04	Soil	08/22/05 17:10	08/25/05 13:30
05 (trip blank)	A5H0092-05	Water	08/22/05 00:00	08/25/05 13:30
06 (trip blank)	A5H0092-06	Soil	08/22/05 00:00	08/25/05 13:30

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E	Project Name: Afognak Dump Site Phase II ESA	Report Created:
2903 West 78th Avenue	Project Number: [none]	09/09/05 16:44
Anchorage, AK/USA 99502	Project Manager: Cliff Elsmann	

Gasoline Range Organics (C6-C10) and BTEX per AK101
 North Creek Analytical - Alaska

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-01	Soil	01	Sampled: 08/22/05 12:10							
Gasoline Range Organics	AK101	ND	----	2.48	mg/kg dry	1x	5080097	08/26/05	08/27/05	19:17
Benzene	"	ND	----	0.00990	"	"	"	"	"	"
Toluene	"	ND	----	0.0248	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.0248	"	"	"	"	"	"
Xylenes (total)	"	ND	----	0.0371	"	"	"	"	"	"
<i>Surrogate(s): a,a,a-TFT (FID)</i>		<i>Recovery: 45.3%</i>		<i>Limits: 50 - 150 %</i>						<i>"</i>
<i>a,a,a-TFT (PID)</i>		<i>34.1%</i>		<i>47.4 - 142 %</i>						<i>"</i>

A5H0092-03	Water	03	Sampled: 08/22/05 17:05							
Gasoline Range Organics	AK101	ND	----	50.0	ug/l	1x	5090009	09/02/05	09/02/05	13:17
Benzene	"	ND	----	0.500	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.50	"	"	"	"	"	"
<i>Surrogate(s): a,a,a-TFT (FID)</i>		<i>Recovery: 104%</i>		<i>Limits: 50 - 150 %</i>						<i>"</i>
<i>a,a,a-TFT (PID)</i>		<i>81.2%</i>		<i>72.5 - 131 %</i>						<i>"</i>

A5H0092-05	Water	05 (trip blank)	Sampled: 08/22/05 00:00							
Gasoline Range Organics	AK101	ND	----	50.0	ug/l	1x	5090009	09/02/05	09/03/05	07:28
Benzene	"	ND	----	0.500	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.50	"	"	"	"	"	"
<i>Surrogate(s): a,a,a-TFT (FID)</i>		<i>Recovery: 103%</i>		<i>Limits: 50 - 150 %</i>						<i>"</i>
<i>a,a,a-TFT (PID)</i>		<i>79.2%</i>		<i>72.5 - 131 %</i>						<i>"</i>



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Montauk E/E	Project Name: Afognak Dump Site Phase II ESA	Report Created:
2903 West 78th Avenue	Project Number: [none]	09/09/05 16:44
Anchorage, AK/USA 99502	Project Manager: Cliff Elsmann	

Gasoline Range Organics (C6-C10) and BTEX per AK101

North Creek Analytical - Alaska

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

A5H0092-01	Soil	01	Sampled: 08/22/05 12:10							
Gasoline Range Organics	AK101	ND	----	2.48	mg/kg dry	1x	5080097	08/26/05	08/27/05	19:17
Benzene	"	ND	----	0.00990	"	"	"	"	"	"
Toluene	"	ND	----	0.0248	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.0248	"	"	"	"	"	"
Xylenes (total)	"	ND	----	0.0371	"	"	"	"	"	"
<i>Surrogate(s): a,a,a-TFT (FID)</i>		<i>Recovery: 45.3%</i>		<i>Limits: 50 - 150 %</i>						<i>"</i>
<i>a,a,a-TFT (PID)</i>		<i>34.1%</i>		<i>47.4 - 142 %</i>						<i>"</i>
										<i>A-01c</i>
										<i>A-01c</i>

A5H0092-03	Water	03	Sampled: 08/22/05 17:05							
Gasoline Range Organics	AK101	ND	----	50.0	ug/l	1x	5090009	09/02/05	09/02/05	13:17
Benzene	"	ND	----	0.500	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.50	"	"	"	"	"	"
<i>Surrogate(s): a,a,a-TFT (FID)</i>		<i>Recovery: 104%</i>		<i>Limits: 50 - 150 %</i>						<i>"</i>
<i>a,a,a-TFT (PID)</i>		<i>81.2%</i>		<i>72.5 - 131 %</i>						<i>"</i>

A5H0092-05	Water	05 (trip blank)	Sampled: 08/22/05 00:00							
Gasoline Range Organics	AK101	ND	----	50.0	ug/l	1x	5090009	09/02/05	09/03/05	07:28
Benzene	"	ND	----	0.500	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.50	"	"	"	"	"	"
<i>Surrogate(s): a,a,a-TFT (FID)</i>		<i>Recovery: 103%</i>		<i>Limits: 50 - 150 %</i>						<i>"</i>
<i>a,a,a-TFT (PID)</i>		<i>79.2%</i>		<i>72.5 - 131 %</i>						<i>"</i>

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E 2903 West 78th Avenue Anchorage, AK/USA 99502	Project Name: Afognak Dump Site Phase II ESA Project Number: [none] Project Manager: Cliff Elsmann	Report Created: 09/09/05 16:44
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Gasoline Range Organics (C6-C10) and BTEX per AK101
 North Creek Analytical - Alaska

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-06	Soil	06 (trip blank)								AK-01
Sampled: 08/22/05 00:00										
Gasoline Range Organics	AK101	ND	----	3.33	mg/kg wet	1x	5080097	08/26/05	08/27/05 17:37	
Benzene	"	ND	----	0.0133	"	"	"	"	"	"
Toluene	"	ND	----	0.0333	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.0333	"	"	"	"	"	"
Xylenes (total)	"	ND	----	0.0500	"	"	"	"	"	"
<i>Surrogate(s): a,a,a-TFT (FID)</i>		<i>Recovery: 101%</i>		<i>Limits: 50 - 150 %</i>						<i>"</i>
<i>a,a,a-TFT (PID)</i>		<i>77.5%</i>		<i>47.4 - 142 %</i>						<i>"</i>

North Creek Analytical - Alaska

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:

09/09/05 16:44

Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO

North Creek Analytical - Alaska

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-01	Soil	01	Sampled: 08/22/05 12:10							
Diesel Range Organics	AK102/103	70.9	----	37.3	mg/kg dry	1x	5090003	09/01/05	09/06/05 11:06	
Residual Range Organics	"	170	----	74.6	"	"	"	"	"	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 91.1%</i>		<i>Limits: 50 - 150 %</i>						
<i>Triacotane</i>		<i>88.3%</i>		<i>50 - 150 %</i>						
A5H0092-03	Water	03	Sampled: 08/22/05 17:05							
Diesel Range Organics	AK102/103	ND	----	0.417	mg/l	1x	5080100	08/28/05	08/31/05 14:48	
Residual Range Organics	"	ND	----	0.417	"	"	"	"	"	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 87.0%</i>		<i>Limits: 50 - 150 %</i>						
<i>Triacotane</i>		<i>87.7%</i>		<i>50 - 150 %</i>						
A5H0092-04	Soil	04	Sampled: 08/22/05 17:10							
Diesel Range Organics	AK102/103	213	----	35.1	mg/kg dry	1x	5080098	08/26/05	08/30/05 00:20	
Residual Range Organics	"	603	----	70.2	"	"	"	"	"	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery: 95.7%</i>		<i>Limits: 50 - 150 %</i>						
<i>Triacotane</i>		<i>97.8%</i>		<i>50 - 150 %</i>						

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E 2903 West 78th Avenue Anchorage, AK/USA 99502	Project Name: Afognak Dump Site Phase II ESA	<u>Report Created:</u> 09/09/05 16:44
	Project Number: [none]	
	Project Manager: Cliff Elsmann	

Physical Parameters by APHA/ASTM/EPA Methods

North Creek Analytical - Alaska

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-01	Soil	01	Sampled: 08/22/05 12:10							
Dry Weight	BSOPSPL003R0	55.8	----	1.00	%	1x	5080105	08/29/05	08/30/05	14:05
A5H0092-04	Soil	04	Sampled: 08/22/05 17:10							
Dry Weight	BSOPSPL003R0	54.4	----	1.00	%	1x	5080099	08/26/05	08/29/05	14:29

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:

09/09/05 16:44

Total Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-01	Soil	01	Sampled: 08/22/05 12:10							
Arsenic	EPA 6020	5.26	----	0.500	mg/kg dry	1x	5H30050	08/30/05	09/01/05	21:46
Barium	"	27.4	----	5.00	"	"	"	"	"	"
Cadmium	"	1.52	----	0.500	"	"	"	"	"	"
Chromium	"	14.9	----	0.500	"	"	"	"	"	"
Lead	"	42.1	----	0.500	"	"	"	"	"	"
Mercury	EPA 7471A	ND	----	0.0893	"	"	5H27004	08/27/05	08/27/05	12:38
Selenium	EPA 6020	ND	----	0.500	"	"	5H30050	08/30/05	09/01/05	21:46
Silver	"	ND	----	0.500	"	"	"	"	"	"
A5H0092-02	Soil	02	Sampled: 08/22/05 17:00							
Arsenic	EPA 6020	11.4	----	1.85	mg/kg dry	1x	5H30050	08/30/05	09/01/05	21:52
Barium	"	107	----	18.5	"	"	"	"	"	"
Cadmium	"	ND	----	1.85	"	"	"	"	"	"
Chromium	"	11.8	----	1.85	"	"	"	"	"	"
Mercury	EPA 7471A	ND	----	0.369	"	"	5H27004	08/27/05	08/27/05	12:45
Selenium	EPA 6020	26.0	----	1.85	"	"	5H30050	08/30/05	09/01/05	21:52
Silver	"	ND	----	1.85	"	"	"	"	"	"
A5H0092-02RE1	Soil	02	Sampled: 08/22/05 17:00							
Lead	EPA 6020	17100	----	92.3	mg/kg dry	50x	5H30050	08/30/05	09/07/05	15:18

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:

09/09/05 16:44

Total Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-03	Water	03	Sampled: 08/22/05 17:05							
Arsenic	EPA 6020	ND	----	0.00100	mg/l	1x	5H29059	08/29/05	09/01/05 02:18	
Barium	"	0.0390	----	0.0100	"	"	"	"	"	
Cadmium	"	ND	----	0.00100	"	"	"	"	"	
Chromium	"	0.00137	----	0.00100	"	"	"	"	"	
Lead	"	0.00347	----	0.00100	"	"	"	"	"	
Mercury	EPA 7470A	ND	----	0.000200	"	"	5I01047	09/01/05	09/02/05 13:32	
Selenium	EPA 6020	ND	----	0.00100	"	"	5H29059	08/29/05	09/01/05 02:18	
Silver	"	ND	----	0.00100	"	"	"	"	"	
A5H0092-04	Soil	04	Sampled: 08/22/05 17:10							
Arsenic	EPA 6020	7.82	----	0.500	mg/kg dry	1x	5H30050	08/30/05	09/01/05 22:09	
Barium	"	45.8	----	5.00	"	"	"	"	"	
Cadmium	"	ND	----	0.500	"	"	"	"	"	
Chromium	"	22.2	----	0.500	"	"	"	"	"	
Lead	"	13.9	----	0.500	"	"	"	"	"	
Mercury	EPA 7471A	0.198	----	0.100	"	"	5H27004	08/27/05	08/27/05 12:48	
Selenium	EPA 6020	ND	----	0.500	"	"	5H30050	08/30/05	09/01/05 22:09	
Silver	"	ND	----	0.500	"	"	"	"	"	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E	Project Name: Afognak Dump Site Phase II ESA	Report Created:
2903 West 78th Avenue	Project Number: [none]	09/09/05 16:44
Anchorage, AK/USA 99502	Project Manager: Cliff Elsmann	

Polychlorinated Biphenyls by EPA Method 8082

North Creek Analytical - Bothell

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-01	Soil	01	Sampled: 08/22/05 12:10							
Aroclor 1016	EPA 8082	ND	----	75.0	ug/kg dry	1x	5H31055	08/31/05	09/02/05 02:17	
Aroclor 1221	"	ND	----	150	"	"	"	"	"	
Aroclor 1232	"	ND	----	75.0	"	"	"	"	"	
Aroclor 1242	"	ND	----	75.0	"	"	"	"	"	
Aroclor 1248	"	ND	----	75.0	"	"	"	"	"	
Aroclor 1254	"	ND	----	75.0	"	"	"	"	"	
Aroclor 1260	"	ND	----	75.0	"	"	"	"	"	
Aroclor 1262	"	ND	----	75.0	"	"	"	"	"	
Aroclor 1268	"	ND	----	75.0	"	"	"	"	"	
Surrogate(s): TCX		Recovery: 96.9%		Limits: 39 - 139 %		"		"		
Decachlorobiphenyl		101%		33 - 163 %		"		"		

A5H0092-03	Water	03	Sampled: 08/22/05 17:05							
Aroclor 1016 [2C]	EPA 8082	ND	----	0.500	ug/l	1x	5H29006	08/29/05	09/02/05 14:54	
Aroclor 1221 [2C]	"	ND	----	0.500	"	"	"	"	"	
Aroclor 1232 [2C]	"	ND	----	0.500	"	"	"	"	"	
Aroclor 1242 [2C]	"	ND	----	0.500	"	"	"	"	"	
Aroclor 1248 [2C]	"	ND	----	0.500	"	"	"	"	"	
Aroclor 1254 [2C]	"	ND	----	0.500	"	"	"	"	"	
Aroclor 1260 [2C]	"	ND	----	0.500	"	"	"	"	"	
Aroclor 1262 [2C]	"	ND	----	0.500	"	"	"	"	"	
Aroclor 1268 [2C]	"	ND	----	0.500	"	"	"	"	"	
Surrogate(s): TCX [2C]		Recovery: 61.9%		Limits: 25 - 131 %		"		"		
Decachlorobiphenyl [2C]		60.8%		22 - 134 %		"		"		

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Montauk E/E

2903 West 78th Avenue
 Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:

09/09/05 16:44

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-01	Soil	01	Sampled: 08/22/05 12:10							
Acetone	EPA 8260B	ND	----	1.00	mg/kg dry	1x	5H31026	08/31/05	09/01/05 20:33	
Benzene	"	ND	----	0.100	"	"	"	"	"	
Bromobenzene	"	ND	----	0.100	"	"	"	"	"	
Bromochloromethane	"	ND	----	0.100	"	"	"	"	"	
Bromodichloromethane	"	ND	----	0.100	"	"	"	"	"	
Bromoform	"	ND	----	0.100	"	"	"	"	"	
Bromomethane	"	ND	----	0.100	"	"	"	"	"	
2-Butanone	"	ND	----	1.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	0.100	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	0.100	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	0.100	"	"	"	"	"	
Carbon disulfide	"	ND	----	0.100	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	0.100	"	"	"	"	"	
Chlorobenzene	"	ND	----	0.100	"	"	"	"	"	
Chloroethane	"	ND	----	0.100	"	"	"	"	"	
1-Chlorohexane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	0.100	"	"	"	"	"	
Chloromethane	"	ND	----	0.500	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	0.100	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	0.100	"	"	"	"	"	
Dibromochloromethane	"	ND	----	0.100	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.100	"	"	"	"	"	
Dibromomethane	"	ND	----	0.100	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	0.100	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	0.100	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	0.100	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	0.100	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	0.100	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.100	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	0.100	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	0.100	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	0.100	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	0.100	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	0.100	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	0.100	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	0.100	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	0.100	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	0.100	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.100	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	0.100	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	0.500	"	"	"	"	"	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E	Project Name: Afognak Dump Site Phase II ESA	Report Created:
2903 West 78th Avenue	Project Number: [none]	09/09/05 16:44
Anchorage, AK/USA 99502	Project Manager: Cliff Elsmann	

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-01	Soil	01	Sampled: 08/22/05 12:10							
n-Hexane	EPA 8260B	ND	----	0.500	mg/kg dry	1x	5H31026	08/31/05	09/01/05 20:33	
2-Hexanone	"	ND	----	1.00	"	"	"	"	"	"
Isopropylbenzene	"	ND	----	0.100	"	"	"	"	"	"
p-Isopropyltoluene	"	ND	----	0.100	"	"	"	"	"	"
4-Methyl-2-pentanone	"	ND	----	1.00	"	"	"	"	"	"
Methylene chloride	"	ND	----	1.00	"	"	"	"	"	"
Naphthalene	"	ND	----	0.100	"	"	"	"	"	"
n-Propylbenzene	"	ND	----	0.100	"	"	"	"	"	"
Styrene	"	ND	----	0.100	"	"	"	"	"	"
1,2,3-Trichlorobenzene	"	ND	----	0.100	"	"	"	"	"	"
1,2,4-Trichlorobenzene	"	ND	----	0.100	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	"	ND	----	0.100	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	"	ND	----	0.100	"	"	"	"	"	"
Tetrachloroethene	"	ND	----	0.100	"	"	"	"	"	"
Toluene	"	ND	----	0.100	"	"	"	"	"	"
1,1,1-Trichloroethane	"	ND	----	0.100	"	"	"	"	"	"
1,1,2-Trichloroethane	"	ND	----	0.100	"	"	"	"	"	"
Trichloroethene	"	ND	----	0.100	"	"	"	"	"	"
Trichlorofluoromethane	"	ND	----	0.100	"	"	"	"	"	"
1,2,3-Trichloropropane	"	ND	----	0.100	"	"	"	"	"	"
1,2,4-Trimethylbenzene	"	ND	----	0.100	"	"	"	"	"	"
1,3,5-Trimethylbenzene	"	ND	----	0.100	"	"	"	"	"	"
Vinyl chloride	"	ND	----	0.100	"	"	"	"	"	"
o-Xylene	"	ND	----	0.100	"	"	"	"	"	"
m,p-Xylene	"	ND	----	0.200	"	"	"	"	"	"
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 86.4%</i>		<i>Limits: 70 - 130 %</i>						
<i>Toluene-d8</i>		<i>95.9%</i>		<i>70 - 130 %</i>						
<i>4-BFB</i>		<i>84.4%</i>		<i>70 - 130 %</i>						

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:

09/09/05 16:44

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-03	Water	03	Sampled: 08/22/05 17:05							
Acetone	EPA 8260B	ND	----	20.0	ug/l	1x	5I01073	09/01/05	09/01/05 13:35	
Benzene	"	ND	----	1.00	"	"	"	"	"	
Bromobenzene	"	ND	----	1.00	"	"	"	"	"	
Bromochloromethane	"	ND	----	1.00	"	"	"	"	"	
Bromodichloromethane	"	ND	----	1.00	"	"	"	"	"	
Bromoform	"	ND	----	1.00	"	"	"	"	"	
Bromomethane	"	ND	----	2.00	"	"	"	"	"	
2-Butanone	"	ND	----	10.0	"	"	"	"	"	
n-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
Carbon disulfide	"	ND	----	1.00	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	1.00	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.00	"	"	"	"	"	
Chloroethane	"	ND	----	1.00	"	"	"	"	"	
1-Chlorohexane	"	ND	----	1.00	"	"	"	"	"	
Chloroform	"	ND	----	1.00	"	"	"	"	"	
Chloromethane	"	ND	----	5.00	"	"	"	"	"	
2-Chlorotoluene	"	ND	----	1.00	"	"	"	"	"	
4-Chlorotoluene	"	ND	----	1.00	"	"	"	"	"	
Dibromochloromethane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	----	5.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	1.00	"	"	"	"	"	
Dibromomethane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	----	1.00	"	"	"	"	"	
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	
1,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"	
1,3-Dichloropropane	"	ND	----	1.00	"	"	"	"	"	
2,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"	
1,1-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	
Hexachlorobutadiene	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	

North Creek Analytical - Alaska

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Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**
 Project Number: [none]
 Project Manager: Cliff Elsmann

Report Created:
 09/09/05 16:44

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-03	Water	03	Sampled: 08/22/05 17:05							
n-Hexane	EPA 8260B	ND	----	2.00	ug/l	1x	5I01073	09/01/05	09/01/05	13:35
2-Hexanone	"	ND	----	10.0	"	"	"	"	"	"
Isopropylbenzene	"	ND	----	1.00	"	"	"	"	"	"
p-Isopropyltoluene	"	ND	----	1.00	"	"	"	"	"	"
4-Methyl-2-pentanone	"	ND	----	10.0	"	"	"	"	"	"
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	"
Naphthalene	"	ND	----	1.00	"	"	"	"	"	"
n-Propylbenzene	"	ND	----	1.00	"	"	"	"	"	"
Styrene	"	ND	----	1.00	"	"	"	"	"	"
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	"
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	"
1,1,1,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"	"
1,1,2,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"	"
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	"
Toluene	"	ND	----	1.00	"	"	"	"	"	"
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	"
1,1,2-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	"
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	"
Trichlorofluoromethane	"	ND	----	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	"	ND	----	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	"
Vinyl chloride	"	ND	----	1.00	"	"	"	"	"	"
o-Xylene	"	ND	----	1.00	"	"	"	"	"	"
m,p-Xylene	"	ND	----	2.00	"	"	"	"	"	"
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 100%</i>		<i>Limits: 70 - 130 %</i>						
<i>Toluene-d8</i>		<i>96.5%</i>		<i>70 - 130 %</i>						
<i>4-BFB</i>		<i>96.0%</i>		<i>70 - 130 %</i>						

North Creek Analytical - Alaska

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Montauk E/E 2903 West 78th Avenue Anchorage, AK/USA 99502	Project Name: Afognak Dump Site Phase II ESA	Report Created: 09/09/05 16:44
	Project Number: [none]	
	Project Manager: Cliff Elsmann	

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring
 North Creek Analytical - Bothell

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-01	Soil	01	Sampled: 08/22/05 12:10							
Acenaphthene	8270C-SIM	ND	----	0.0100	mg/kg dry	1x	5H29069	08/30/05	09/07/05	17:53
Acenaphthylene	"	ND	----	0.0100	"	"	"	"	"	"
Anthracene	"	ND	----	0.0100	"	"	"	"	"	"
Benzo (a) anthracene	"	ND	----	0.0100	"	"	"	"	"	"
Benzo (a) pyrene	"	ND	----	0.0100	"	"	"	"	"	"
Benzo (b) fluoranthene	"	ND	----	0.0100	"	"	"	"	"	"
Benzo (k) fluoranthene	"	ND	----	0.0100	"	"	"	"	"	"
Benzo (b & k) fluoranthene	"	ND	----	0.0200	"	"	"	"	"	"
Benzo (ghi) perylene	"	ND	----	0.0100	"	"	"	"	"	"
Chrysene	"	ND	----	0.0100	"	"	"	"	"	"
Dibenz (a,h) anthracene	"	ND	----	0.0100	"	"	"	"	"	"
Fluoranthene	"	ND	----	0.0100	"	"	"	"	"	"
Fluorene	"	ND	----	0.0100	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0100	"	"	"	"	"	"
1-Methylnaphthalene	"	ND	----	0.0100	"	"	"	"	"	"
2-Methylnaphthalene	"	ND	----	0.0100	"	"	"	"	"	"
Naphthalene	"	ND	----	0.0100	"	"	"	"	"	"
Phenanthrene	"	ND	----	0.0100	"	"	"	"	"	"
Pyrene	"	0.0166	----	0.0100	"	"	"	"	"	"

Surrogate(s): *p*-Terphenyl-d14

Recovery: 81.9%

Limits: 28 - 161 % "

"

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:

09/09/05 16:44

Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring

North Creek Analytical - Bothell

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-03	Water	03	Sampled: 08/22/05 17:05							
Acenaphthene	8270C-SIM	ND	----	0.100	ug/l	1x	5H29009	08/29/05	09/05/05 12:13	
Acenaphthylene	"	ND	----	0.100	"	"	"	"	"	
Anthracene	"	ND	----	0.100	"	"	"	"	"	
Benzo (a) anthracene	"	ND	----	0.100	"	"	"	"	"	
Benzo (a) pyrene	"	ND	----	0.100	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	----	0.100	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	----	0.100	"	"	"	"	"	X
Benzo (ghi) perylene	"	ND	----	0.100	"	"	"	"	"	
Chrysene	"	ND	----	0.100	"	"	"	"	"	
Dibenz (a,h) anthracene	"	ND	----	0.100	"	"	"	"	"	
Fluoranthene	"	ND	----	0.100	"	"	"	"	"	
Fluorene	"	ND	----	0.100	"	"	"	"	"	X
Indeno (1,2,3-cd) pyrene	"	ND	----	0.100	"	"	"	"	"	
1-Methylnaphthalene	"	ND	----	0.100	"	"	"	"	"	
2-Methylnaphthalene	"	ND	----	0.100	"	"	"	"	"	
Naphthalene	"	ND	----	0.100	"	"	"	"	"	
Phenanthrene	"	ND	----	0.100	"	"	"	"	"	
Pyrene	"	ND	----	0.100	"	"	"	"	"	

Surrogate(s): p-Terphenyl-d14

Recovery: 25.0%

Limits: 20 - 127 % "

"

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Project Name: **Afognak Dump Site Phase II ESA**
 Project Number: [none]
 Project Manager: Cliff Elsmann

Report Created:
 09/09/05 16:44

Physical Parameters by APHA/ASTM/EPA Methods

North Creek Analytical - Bothell

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
A5H0092-01	Soil	01	Sampled: 08/22/05 12:10							
Dry Weight	BSOPSPL003R0	52.2	-----	1.00	%	1x	5I02053	09/02/05	09/06/05 00:00	
A5H0092-02	Soil	02	Sampled: 08/22/05 17:00							
Dry Weight	BSOPSPL003R0	27.1	-----	1.00	%	1x	5I02053	09/02/05	09/06/05 00:00	
A5H0092-04	Soil	04	Sampled: 08/22/05 17:10							
Dry Weight	BSOPSPL003R0	56.0	-----	1.00	%	1x	5I02053	09/02/05	09/06/05 00:00	

North Creek Analytical - Alaska

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Project Name: **Afognak Dump Site Phase II ESA**
 Project Number: [none]
 Project Manager: Cliff Elsmann

Report Created:
 09/09/05 16:44

Gasoline Range Organics (C6-C10) and BTEX per AK101 - Laboratory Quality Control Results
 North Creek Analytical - Alaska

QC Batch: 5080097 Soil Preparation Method: AK101 Field Prep

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (5080097-BLK1)													Extracted: 08/26/05 13:56			
Gasoline Range Organics	AK101 GRO/BTEX	ND	---	3.33	mg/kg	1x	--	--	--	--	--	--	08/27/05 13:45			
Benzene	"	ND	---	0.0133	"	"	--	--	--	--	--	--	"			
Toluene	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"			
Ethylbenzene	"	ND	---	0.0333	"	"	--	--	--	--	--	--	"			
Xylenes (total)	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"			
Surrogate(s): a,a,a-TFT (FID)		Recovery:	103%	Limits: 50-150%		"							08/27/05 13:45			
a,a,a-TFT (PID)			77.5%	47.4-142%		"							"			
LCS (5080097-BS1)													Extracted: 08/26/05 13:56			
Gasoline Range Organics	AK101 GRO/BTEX	18.3	---	3.33	mg/kg	1x	--	22.0	83.2%	(60-120)	--	--	08/27/05 11:34			
Surrogate(s): a,a,a-TFT (FID)		Recovery:	109%	Limits: 50-150%		"							08/27/05 11:34			
LCS (5080097-BS2)													Extracted: 08/26/05 13:56			
Benzene	AK101 GRO/BTEX	0.664	---	0.0133	mg/kg	1x	--	0.796	83.4%	(80.6-145)	--	--	08/27/05 12:39			
Toluene	"	0.705	---	0.0333	"	"	--	0.792	89.0%	(71.7-125)	--	--	"			
Ethylbenzene	"	0.714	---	0.0333	"	"	--	0.804	88.8%	(71.2-127)	--	--	"			
Xylenes (total)	"	2.16	---	0.0500	"	"	--	2.36	91.5%	(79.2-126)	--	--	"			
Surrogate(s): a,a,a-TFT (PID)		Recovery:	84.6%	Limits: 47.4-142%		"							08/27/05 12:39			
LCS Dup (5080097-BSD1)													Extracted: 08/26/05 13:56			
Gasoline Range Organics	AK101 GRO/BTEX	18.0	---	3.33	mg/kg	1x	--	22.0	81.8%	(60-120)	1.65%	(20)	08/27/05 12:07			
Surrogate(s): a,a,a-TFT (FID)		Recovery:	105%	Limits: 50-150%		"							08/27/05 12:07			
LCS Dup (5080097-BSD2)													Extracted: 08/26/05 13:56			
Benzene	AK101 GRO/BTEX	0.686	---	0.0133	mg/kg	1x	--	0.796	86.2%	(80.6-145)	3.26%	(15.6)	08/29/05 10:18			
Toluene	"	0.709	---	0.0333	"	"	--	0.792	89.5%	(71.7-125)	0.566%	(14.8)	"			
Ethylbenzene	"	0.723	---	0.0333	"	"	--	0.804	89.9%	(71.2-127)	1.25%	(17.3)	"			
Xylenes (total)	"	2.18	---	0.0500	"	"	--	2.36	92.4%	(79.2-126)	0.922%	(15)	"			
Surrogate(s): a,a,a-TFT (PID)		Recovery:	90.8%	Limits: 47.4-142%		"							08/29/05 10:18			
Duplicate (5080097-DUP1)													QC Source: A5H0094-02		Extracted: 08/26/05 13:56	
Gasoline Range Organics	AK101 GRO/BTEX	ND	---	3.12	mg/kg dry	1.5x	ND	--	--	--	NR	(50)	08/28/05 01:23			
Surrogate(s): a,a,a-TFT (FID)		Recovery:	97.4%	Limits: 50-150%		"							08/28/05 01:23			

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
 Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:

09/09/05 16:44

Gasoline Range Organics (C6-C10) and BTEX per AK101 - Laboratory Quality Control Results

North Creek Analytical - Alaska

QC Batch: 5080097 Soil Preparation Method: AK101 Field Prep

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
Matrix Spike (5080097-MS1)				QC Source: A5H0094-02				Extracted: 08/26/05 13:56				
Benzene	AK101 GRO/BTEX	0.532	---	0.0125	mg/kg dry	1.5x	ND	0.648	82.1% (71.8-132)	-- --	08/28/05 01:56	
Toluene	"	0.550	---	0.0312	"	"	ND	0.644	85.4% (73.6-127)	-- --	"	
Ethylbenzene	"	0.559	---	0.0312	"	"	ND	0.654	85.5% (68.9-123)	-- --	"	
Xylenes (total)	"	1.72	---	0.0468	"	"	0.0124	1.92	88.9% (81.9-124)	-- --	"	
Surrogate(s): a,a,a-TFT (PID)		Recovery: 74.4%	Limits: 47.4-142%									08/28/05 01:56

Matrix Spike Dup (5080097-MSD1)				QC Source: A5H0094-02				Extracted: 08/26/05 13:56				
Benzene	AK101 GRO/BTEX	0.543	---	0.0125	mg/kg dry	1.5x	ND	0.648	83.8% (71.8-132)	2.05%(14.9)	08/28/05 02:29	
Toluene	"	0.564	---	0.0312	"	"	ND	0.644	87.6% (73.6-127)	2.51%(16.2)	"	
Ethylbenzene	"	0.572	---	0.0312	"	"	ND	0.654	87.5% (68.9-123)	2.30% (14)	"	
Xylenes (total)	"	1.74	---	0.0468	"	"	0.0124	1.92	90.0% (81.9-124)	1.16%(13.5)	"	
Surrogate(s): a,a,a-TFT (PID)		Recovery: 74.4%	Limits: 47.4-142%									08/28/05 02:29

QC Batch: 5090009 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
Blank (5090009-BLK1)				Extracted: 09/02/05 12:12								
Gasoline Range Organics	AK101 GRO/BTEX	ND	---	50.0	ug/l	1x	--	--	--	--	09/03/05 06:55	
Benzene	"	ND	---	0.500	"	"	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.50	"	"	--	--	--	--	"	
Surrogate(s): a,a,a-TFT (FID)		Recovery: 103%	Limits: 50-150%									09/03/05 06:55
a,a,a-TFT (PID)		78.6%	72.5-131%									"

LCS (5090009-BS1)				Extracted: 09/02/05 12:12								
Benzene	AK101 GRO/BTEX	17.7	---	0.500	ug/l	1x	--	19.9	88.9% (77.3-136)	-- --	09/03/05 05:49	
Toluene	"	18.3	---	0.500	"	"	--	19.8	92.4% (83.9-121)	-- --	"	
Ethylbenzene	"	18.2	---	0.500	"	"	--	20.1	90.5% (77.7-125)	-- --	"	
Xylenes (total)	"	56.3	---	1.50	"	"	--	59.1	95.3% (86-122)	-- --	"	
Surrogate(s): a,a,a-TFT (PID)		Recovery: 87.8%	Limits: 72.5-131%									09/03/05 05:49

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Montauk E/E

2903 West 78th Avenue
 Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:

09/09/05 16:44

Gasoline Range Organics (C6-C10) and BTEX per AK101 - Laboratory Quality Control Results

North Creek Analytical - Alaska

QC Batch: 5090009

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
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LCS (5090009-BS2)

Extracted: 09/02/05 12:12

Gasoline Range Organics	AK101 GRO/BTEX	503	---	50.0	ug/l	1x	--	550	91.5% (60-120)	--	09/03/05 06:22	
Surrogate(s): a,a,a-TFT (FID)		Recovery: 96.6%	Limits: 50-150%								09/03/05 06:22	

LCS Dup (5090009-BSD1)

Extracted: 09/02/05 12:12

Benzene	AK101 GRO/BTEX	17.3	---	0.500	ug/l	1x	--	19.9	86.9% (77.3-136)	2.29%(16.9)	09/03/05 13:23	
Toluene	"	17.9	---	0.500	"	"	--	19.8	90.4% (83.9-121)	2.21%(12.5)	"	
Ethylbenzene	"	17.8	---	0.500	"	"	--	20.1	88.6% (77.7-125)	2.22%(11.8)	"	
Xylenes (total)	"	55.4	---	1.50	"	"	--	59.1	93.7% (86-122)	1.61%(10.6)	"	
Surrogate(s): a,a,a-TFT (PID)		Recovery: 81.7%	Limits: 72.5-131%								09/03/05 13:23	

LCS Dup (5090009-BSD2)

Extracted: 09/02/05 12:12

Gasoline Range Organics	AK101 GRO/BTEX	503	---	50.0	ug/l	1x	--	550	91.5% (60-120)	0.00% (20)	09/03/05 13:56	
Surrogate(s): a,a,a-TFT (FID)		Recovery: 101%	Limits: 50-150%								09/03/05 13:56	

Duplicate (5090009-DUP1)

QC Source: A5H0096-07

Extracted: 09/02/05 12:12

Gasoline Range Organics	AK101 GRO/BTEX	182000	---	50000	ug/l	1000x	181000	--	--	--	0.551% (50)	09/03/05 09:33
Surrogate(s): a,a,a-TFT (FID)		Recovery: 108%	Limits: 50-150%		1x							09/03/05 09:33

Matrix Spike (5090009-MS1)

QC Source: A5H0092-03

Extracted: 09/02/05 12:12

Benzene	AK101 GRO/BTEX	17.3	---	0.500	ug/l	1x	ND	19.9	86.9% (62.1-143)	--	09/03/05 10:05	
Toluene	"	18.0	---	0.500	"	"	0.143	19.8	90.2% (68.5-133)	--	"	
Ethylbenzene	"	17.7	---	0.500	"	"	ND	20.1	88.1% (64.5-132)	--	"	
Xylenes (total)	"	54.5	---	1.50	"	"	0.391	59.1	91.6% (70.2-133)	--	"	
Surrogate(s): a,a,a-TFT (FID)		Recovery: 105%	Limits: 50-150%								09/03/05 10:05	
a,a,a-TFT (PID)		82.9%	72.5-131%								"	

Matrix Spike (5090009-MS2)

QC Source: A5I0007-13

Extracted: 09/02/05 12:12

Benzene	AK101 GRO/BTEX	16.8	---	0.500	ug/l	1x	ND	19.9	84.4% (62.1-143)	--	09/06/05 12:49	
Toluene	"	16.7	---	0.500	"	"	0.250	19.8	83.1% (68.5-133)	--	"	
Ethylbenzene	"	16.7	---	0.500	"	"	0.345	20.1	81.4% (64.5-132)	--	"	
Xylenes (total)	"	51.8	---	1.50	"	"	0.464	59.1	86.9% (70.2-133)	--	"	
Surrogate(s): a,a,a-TFT (PID)		Recovery: 63.5%	Limits: 72.5-131%								09/06/05 12:49	S-03

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Stephen Wilson, Laboratory Manager

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Montauk E/E	Project Name: Afognak Dump Site Phase II ESA	Report Created: 09/09/05 16:44
2903 West 78th Avenue	Project Number: [none]	
Anchorage, AK/USA 99502	Project Manager: Cliff Elsmann	

Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results
 North Creek Analytical - Alaska

QC Batch: 5080098 Soil Preparation Method: EPA 3545

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
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Blank (5080098-BLK1) Extracted: 08/26/05 13:55

Diesel Range Organics	AK102/103	ND	---	25.0	mg/kg	1x	--	--	--	--	--	--	08/29/05 18:20	
Residual Range Organics	"	ND	---	50.0	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	102%	Limits: 50-150%		"							08/29/05 18:20	
Triacontane			109%	50-150%		"							"	

LCS (5080098-BS1) Extracted: 08/26/05 13:55

Diesel Range Organics	AK102/103	124	---	25.0	mg/kg	1x	--	126	98.4%	(75-125)	--	--	08/29/05 18:53	
Residual Range Organics	"	120	---	50.0	"	"	--	125	96.0%	(60-120)	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	104%	Limits: 50-150%		"							08/29/05 18:53	
Triacontane			108%	50-150%		"							"	

LCS Dup (5080098-BSD1) Extracted: 08/26/05 13:55

Diesel Range Organics	AK102/103	124	---	25.0	mg/kg	1x	--	126	98.4%	(75-125)	0.00% (20)	--	08/29/05 19:25	
Residual Range Organics	"	119	---	50.0	"	"	--	125	95.2%	(60-120)	0.837%	"	"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	105%	Limits: 50-150%		"							08/29/05 19:25	
Triacontane			106%	50-150%		"							"	

Duplicate (5080098-DUP1) QC Source: A5H0090-01 Extracted: 08/26/05 13:55

Diesel Range Organics	AK102/103	ND	---	25.0	mg/kg dry	1x	ND	--	--	--	79.2% (50)	--	08/29/05 18:20	Q-06
Residual Range Organics	"	ND	---	50.0	"	"	ND	--	--	--	6.08%	"	"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	91.3%	Limits: 50-150%		"							08/29/05 18:20	
Triacontane			105%	50-150%		"							"	

Matrix Spike (5080098-MS1) QC Source: A5H0090-02 Extracted: 08/26/05 13:55

Diesel Range Organics	AK102/103	139	---	25.0	mg/kg dry	1x	19.0	131	91.6%	(75-125)	--	--	08/29/05 18:53	
Residual Range Organics	"	141	---	50.0	"	"	6.88	130	103%	(60-150)	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	100%	Limits: 50-150%		"							08/29/05 18:53	
Triacontane			103%	50-150%		"							"	

Matrix Spike Dup (5080098-MSD1) QC Source: A5H0090-02 Extracted: 08/26/05 13:55

Diesel Range Organics	AK102/103	146	---	25.0	mg/kg dry	1x	19.0	136	93.4%	(75-125)	4.91% (25)	--	08/29/05 19:25	
Residual Range Organics	"	149	---	50.0	"	"	6.88	135	105%	(60-150)	5.52%	"	"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	105%	Limits: 50-150%		"							08/29/05 19:25	
Triacontane			103%	50-150%		"							"	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E	Project Name: Afognak Dump Site Phase II ESA	Report Created: 09/09/05 16:44
2903 West 78th Avenue	Project Number: [none]	
Anchorage, AK/USA 99502	Project Manager: Cliff Elsmann	

Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results
 North Creek Analytical - Alaska

QC Batch: 5080100 Water Preparation Method: EPA 3510

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
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Blank (5080100-BLK1) Extracted: 08/28/05 13:39

Diesel Range Organics	AK102/103	ND	---	0.500	mg/l	1x	--	--	--	--	--	--	08/29/05 10:07	
Residual Range Organics	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery:</i>	<i>98.3%</i>	<i>Limits: 50-150%</i>		"							08/29/05 10:07	
<i>Triacotane</i>			<i>105%</i>	<i>50-150%</i>		"							"	

LCS (5080100-BS1) Extracted: 08/28/05 13:39

Diesel Range Organics	AK102/103	9.64	---	0.500	mg/l	1x	--	10.1	95.4%	(75-125)	--	--	08/29/05 10:39	
Residual Range Organics	"	9.10	---	0.500	"	"	--	10.0	91.0%	(60-120)	--	--	"	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery:</i>	<i>103%</i>	<i>Limits: 50-150%</i>		"							08/29/05 10:39	
<i>Triacotane</i>			<i>104%</i>	<i>50-150%</i>		"							"	

LCS Dup (5080100-BSD1) Extracted: 08/28/05 13:39

Diesel Range Organics	AK102/103	9.97	---	0.500	mg/l	1x	--	10.1	98.7%	(75-125)	3.37%	(20)	08/29/05 11:11	
Residual Range Organics	"	9.49	---	0.500	"	"	--	10.0	94.9%	(60-120)	4.20%	"	"	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery:</i>	<i>104%</i>	<i>Limits: 50-150%</i>		"							08/29/05 11:11	
<i>Triacotane</i>			<i>105%</i>	<i>50-150%</i>		"							"	

Duplicate (5080100-DUP1) QC Source: A5H0096-02 Extracted: 08/28/05 13:39

Diesel Range Organics	AK102/103	ND	---	0.400	mg/l	1x	ND	--	--	--	NR	(50)	08/30/05 16:21	
Residual Range Organics	"	0.445	---	0.400	"	"	ND	--	--	--	NR	"	"	
<i>Surrogate(s): 1-Chlorooctadecane</i>		<i>Recovery:</i>	<i>93.3%</i>	<i>Limits: 50-150%</i>		"							08/30/05 16:21	
<i>Triacotane</i>			<i>98.2%</i>	<i>50-150%</i>		"							"	

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Montauk E/E 2903 West 78th Avenue Anchorage, AK/USA 99502	Project Name: Afognak Dump Site Phase II ESA Project Number: [none] Project Manager: Cliff Elsmann	Report Created: 09/09/05 16:44
--	---	-----------------------------------

Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results
 North Creek Analytical - Alaska

QC Batch: 5090003 Soil Preparation Method: EPA 3545

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
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Blank (5090003-BLK1) Extracted: 09/01/05 12:54

Diesel Range Organics	AK102/103	ND	---	25.0	mg/kg	1x	--	--	--	--	--	--	09/02/05 12:04	
Residual Range Organics	"	ND	---	50.0	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	106%	Limits: 50-150%		"							09/02/05 12:04	
Triacotane			108%	50-150%		"							"	

LCS (5090003-BS1) Extracted: 09/01/05 12:54

Diesel Range Organics	AK102/103	131	---	25.0	mg/kg	1x	--	126	104%	(75-125)	--	--	09/02/05 12:36	
Residual Range Organics	"	125	---	50.0	"	"	--	125	100%	(60-120)	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	112%	Limits: 50-150%		"							09/02/05 12:36	
Triacotane			108%	50-150%		"							"	

LCS Dup (5090003-BSD1) Extracted: 09/01/05 12:54

Diesel Range Organics	AK102/103	129	---	25.0	mg/kg	1x	--	126	102%	(75-125)	1.54%	(20)	09/02/05 13:09	
Residual Range Organics	"	123	---	50.0	"	"	--	125	98.4%	(60-120)	1.61%	"	"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	110%	Limits: 50-150%		"							09/02/05 13:09	
Triacotane			106%	50-150%		"							"	

Duplicate (5090003-DUP1) QC Source: A510003-01 Extracted: 09/01/05 12:54

Diesel Range Organics	AK102/103	933	---	250	mg/kg dry	10x	929	--	--	--	0.430%	(50)	09/07/05 13:48	
Residual Range Organics	"	3790	---	500	"	"	3810	--	--	--	0.526%	"	"	
Surrogate(s): 1-Chlorooctadecane		Recovery:	70.9%	Limits: 50-150%		"							09/07/05 13:48	
Triacotane			97.7%	50-150%		"							"	

Matrix Spike (5090003-MS1) QC Source: A510003-02 Extracted: 09/01/05 12:54

Diesel Range Organics	AK102/103	1080	---	250	mg/kg dry	10x	965	132	87.1%	(75-125)	--	--	09/02/05 12:36	Q-03
Residual Range Organics	"	4030	---	500	"	"	3580	131	>300%	(60-150)	--	--	"	Q-03
Surrogate(s): 1-Chlorooctadecane		Recovery:	67.0%	Limits: 50-150%		"							09/02/05 12:36	
Triacotane			99.2%	50-150%		"							"	

Matrix Spike Dup (5090003-MSD1) QC Source: A510003-02 Extracted: 09/01/05 12:54

Diesel Range Organics	AK102/103	1150	---	250	mg/kg dry	10x	965	125	148%	(75-125)	6.28%	(25)	09/02/05 13:09	Q-03
Residual Range Organics	"	4170	---	500	"	"	3580	124	>300%	(60-150)	3.41%	"	"	Q-03
Surrogate(s): 1-Chlorooctadecane		Recovery:	75.3%	Limits: 50-150%		"							09/02/05 13:09	
Triacotane			103%	50-150%		"							"	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E 2903 West 78th Avenue Anchorage, AK/USA 99502	Project Name: Afognak Dump Site Phase II ESA Project Number: [none] Project Manager: Cliff Elsmann	Report Created: 09/09/05 16:44
--	---	-----------------------------------

Physical Parameters by APHA/ASTM/EPA Methods - Laboratory Quality Control Results
North Creek Analytical - Alaska

QC Batch: 5080099 Soil Preparation Method: General Preparation

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
Duplicate (5080099-DUP1)			QC Source: A5H0090-01				Extracted: 08/26/05 16:55					
Dry Weight	BSOPSP003R0 7	99.6	---	1.00	%	1x	100	--	--	--	0.401% (25)	08/29/05 14:29

QC Batch: 5080105 Soil Preparation Method: General Preparation

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
Duplicate (5080105-DUP1)			QC Source: A5H0092-01				Extracted: 08/29/05 16:32					
Dry Weight	BSOPSP003R0 7	52.7	---	1.00	%	1x	55.8	--	--	--	5.71% (25)	08/30/05 14:05

North Creek Analytical - Alaska

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Montauk E/E	Project Name: Afognak Dump Site Phase II ESA	Report Created:
2903 West 78th Avenue	Project Number: [none]	09/09/05 16:44
Anchorage, AK/USA 99502	Project Manager: Cliff Elsmann	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results

North Creek Analytical - Bothell

QC Batch: 5H27004	Soil Preparation Method: EPA 7471A
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes			
Blank (5H27004-BLK1)												Extracted: 08/27/05 10:31					
Mercury	EPA 7471A	ND	---	0.100	mg/kg	1x	--	--	--	--	--	--	08/27/05 11:48				
LCS (5H27004-BS1)												Extracted: 08/27/05 10:31					
Mercury	EPA 7471A	0.526	---	0.100	mg/kg	1x	--	0.500	105%	(80-120)	--	--	08/27/05 11:50				
LCS Dup (5H27004-BSD1)												Extracted: 08/27/05 10:31					
Mercury	EPA 7471A	0.541	---	0.100	mg/kg	1x	--	0.500	108%	(80-120)	2.81%	(20)	08/27/05 11:52				
Matrix Spike (5H27004-MS1)												QC Source: B5H0584-09			Extracted: 08/27/05 10:31		
Mercury	EPA 7471A	0.736	---	0.100	mg/kg dry	1x	0.148	0.522	113%	(70-130)	--	--	08/27/05 11:55				
Matrix Spike Dup (5H27004-MSD1)												QC Source: B5H0584-09			Extracted: 08/27/05 10:31		
Mercury	EPA 7471A	0.719	---	0.100	mg/kg dry	1x	0.148	0.522	109%	(70-130)	2.34%	(30)	08/27/05 11:57				

QC Batch: 5H29059	Water Preparation Method: EPA 3020A
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5H29059-BLK1)												Extracted: 08/29/05 14:06		
Lead	EPA 6020	ND	---	0.00100	mg/l	1x	--	--	--	--	--	--	08/31/05 23:37	
Barium	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.00100	"	"	--	--	--	--	--	--	"	
LCS (5H29059-BS1)												Extracted: 08/29/05 14:06		
Barium	EPA 6020	0.0772	---	0.0100	mg/l	1x	--	0.0800	96.5%	(80-120)	--	--	08/31/05 23:42	
Arsenic	"	0.0738	---	0.00100	"	"	--	"	92.2%	"	--	--	"	
Cadmium	"	0.0759	---	0.00100	"	"	--	"	94.9%	"	--	--	"	
Selenium	"	0.0762	---	0.00100	"	"	--	"	95.2%	"	--	--	"	
Chromium	"	0.0764	---	0.00100	"	"	--	"	95.5%	"	--	--	"	
Lead	"	0.0764	---	0.00100	"	"	--	"	95.5%	"	--	--	"	
Silver	"	0.0755	---	0.00100	"	"	--	"	94.4%	"	--	--	"	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**
 Project Number: [none]
 Project Manager: Cliff Elsmann

Report Created:
 09/09/05 16:44

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
North Creek Analytical - Bothell

QC Batch: 5H29059 **Water Preparation Method: EPA 3020A**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

LCS Dup (5H29059-BSD1)

Extracted: 08/29/05 14:06

Cadmium	EPA 6020	0.0722	---	0.00100	mg/l	1x	--	0.0800	90.2%	(80-120)	5.00%	(20)	08/31/05 23:48	
Barium	"	0.0733	---	0.0100	"	"	--	"	91.6%	"	5.18%	"	"	
Lead	"	0.0735	---	0.00100	"	"	--	"	91.9%	"	3.87%	"	"	
Chromium	"	0.0733	---	0.00100	"	"	--	"	91.6%	"	4.14%	"	"	
Arsenic	"	0.0713	---	0.00100	"	"	--	"	89.1%	"	3.45%	"	"	
Selenium	"	0.0730	---	0.00100	"	"	--	"	91.2%	"	4.29%	"	"	
Silver	"	0.0720	---	0.00100	"	"	--	"	90.0%	"	4.75%	"	"	

Matrix Spike (5H29059-MS1)

QC Source: B5H0526-03

Extracted: 08/29/05 14:06

Arsenic	EPA 6020	0.0903	---	0.00100	mg/l	1x	0.0200	0.0800	87.9%	(75-125)	--	--	09/01/05 00:00	
Lead	"	0.0749	---	0.00100	"	"	0.00239	"	90.6%	(76-125)	--	--	"	
Barium	"	0.117	---	0.0100	"	"	0.0490	"	85.0%	(70-129)	--	--	"	
Silver	"	0.0710	---	0.00100	"	"	ND	"	88.8%	(25-138)	--	--	"	
Selenium	"	0.0722	---	0.00100	"	"	0.000490	"	89.6%	(77-120)	--	--	"	
Chromium	"	0.0769	---	0.00100	"	"	0.00545	"	89.3%	(75-125)	--	--	"	
Cadmium	"	0.0717	---	0.00100	"	"	ND	"	89.6%	"	--	--	"	

Matrix Spike Dup (5H29059-MSD1)

QC Source: B5H0526-03

Extracted: 08/29/05 14:06

Barium	EPA 6020	0.127	---	0.0100	mg/l	1x	0.0490	0.0800	97.5%	(70-129)	8.20%	(20)	09/01/05 00:05	
Arsenic	"	0.0973	---	0.00100	"	"	0.0200	"	96.6%	(75-125)	7.46%	"	"	
Selenium	"	0.0763	---	0.00100	"	"	0.000490	"	94.8%	(77-120)	5.52%	"	"	
Cadmium	"	0.0752	---	0.00100	"	"	ND	"	94.0%	(75-125)	4.77%	"	"	
Lead	"	0.0799	---	0.00100	"	"	0.00239	"	96.9%	(76-125)	6.46%	"	"	
Chromium	"	0.0821	---	0.00100	"	"	0.00545	"	95.8%	(75-125)	6.54%	"	"	
Silver	"	0.0750	---	0.00100	"	"	ND	"	93.8%	(25-138)	5.48%	(50)	"	

Post Spike (5H29059-PS1)

QC Source: B5H0526-03

Extracted: 08/29/05 14:06

Cadmium	EPA 6020	0.0952	---		ug/ml	1x	ND	0.100	95.2%	(75-125)	--	--	08/31/05 23:54	
Chromium	"	0.103	---		"	"	0.00545	"	97.6%	"	--	--	"	
Silver	"	0.0931	---		"	"	ND	"	93.1%	"	--	--	"	
Selenium	"	0.0965	---		"	"	0.000490	"	96.0%	"	--	--	"	
Arsenic	"	0.120	---		"	"	0.0200	"	100%	"	--	--	"	
Barium	"	0.148	---		"	"	0.0490	"	99.0%	"	--	--	"	
Lead	"	0.100	---		"	"	0.00239	"	97.6%	"	--	--	"	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E	Project Name: Afognak Dump Site Phase II ESA	Report Created:
2903 West 78th Avenue	Project Number: [none]	09/09/05 16:44
Anchorage, AK/USA 99502	Project Manager: Cliff Elsmann	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 North Creek Analytical - Bothell

QC Batch: 5H30050 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5H30050-BLK1)													Extracted: 08/30/05 12:42	
Chromium	EPA 6020	ND	---	0.500	mg/kg	1x	--	--	--	--	--	--	09/01/05 19:23	
Silver	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Barium	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
LCS (5H30050-BS1)													Extracted: 08/30/05 12:42	
Lead	EPA 6020	39.0	---	0.500	mg/kg	1x	--	40.0	97.5%	(80-120)	--	--	09/01/05 19:51	
Cadmium	"	39.5	---	0.500	"	"	--	"	98.8%	"	--	--	"	
Barium	"	39.5	---	5.00	"	"	--	"	98.8%	"	--	--	"	
Chromium	"	39.8	---	0.500	"	"	--	"	99.5%	"	--	--	"	
Arsenic	"	39.8	---	0.500	"	"	--	"	99.5%	"	--	--	"	
Selenium	"	40.2	---	0.500	"	"	--	"	100%	"	--	--	"	
Silver	"	39.6	---	0.500	"	"	--	"	99.0%	"	--	--	"	
LCS Dup (5H30050-BSD1)													Extracted: 08/30/05 12:42	
Chromium	EPA 6020	38.2	---	0.500	mg/kg	1x	--	39.2	97.4%	(80-120)	4.10%	(20)	09/01/05 19:57	
Selenium	"	38.5	---	0.500	"	"	--	"	98.2%	"	4.32%	"	"	
Lead	"	37.7	---	0.500	"	"	--	"	96.2%	"	3.39%	"	"	
Silver	"	38.2	---	0.500	"	"	--	"	97.4%	"	3.60%	"	"	
Cadmium	"	38.2	---	0.500	"	"	--	"	97.4%	"	3.35%	"	"	
Barium	"	38.2	---	5.00	"	"	--	"	97.4%	"	3.35%	"	"	
Arsenic	"	38.3	---	0.500	"	"	--	"	97.7%	"	3.84%	"	"	
Matrix Spike (5H30050-MS1)													QC Source: B5H0649-01 Extracted: 08/30/05 12:42	
Chromium	EPA 6020	54.9	---	0.500	mg/kg dry	1x	15.1	43.4	91.7%	(29-127)	--	--	09/01/05 20:09	
Cadmium	"	43.5	---	0.500	"	"	3.47	"	92.2%	(78-125)	--	--	"	
Lead	"	102	---	0.500	"	"	51.6	"	116%	(29-162)	--	--	"	
Selenium	"	40.2	---	0.500	"	"	0.845	"	90.7%	(65-121)	--	--	"	
Arsenic	"	50.2	---	0.500	"	"	12.0	"	88.0%	(57-125)	--	--	"	
Silver	"	38.2	---	0.500	"	"	0.181	"	87.6%	(56-124)	--	--	"	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:
09/09/05 16:44

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results

North Creek Analytical - Bothell

QC Batch: 5H30050 Soil Preparation Method: EPA 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Matrix Spike (5H30050-MS2)			QC Source: B5H0649-01RE1				Extracted: 08/30/05 12:42								
Barium	EPA 6020	284	---	10.0	mg/kg dry	2x	264	43.4	46.1%	(20-160)	--	--	09/02/05 13:16		
Matrix Spike Dup (5H30050-MSD1)			QC Source: B5H0649-01				Extracted: 08/30/05 12:42								
Arsenic	EPA 6020	49.3	---	0.500	mg/kg dry	1x	12.0	42.6	87.6%	(57-125)	1.81%	(30)	09/01/05 20:14		
Selenium	"	39.0	---	0.500	"	"	0.845	"	89.6%	(65-121)	3.03%	"	"		
Chromium	"	54.3	---	0.500	"	"	15.1	"	92.0%	(29-127)	1.10%	"	"		
Lead	"	89.5	---	0.500	"	"	51.6	"	89.0%	(29-162)	13.1%	"	"		
Cadmium	"	42.2	---	0.500	"	"	3.47	"	90.9%	(78-125)	3.03%	"	"		
Silver	"	37.9	---	0.500	"	"	0.181	"	88.5%	(56-124)	0.788%	(50)	"		
Matrix Spike Dup (5H30050-MSD2)			QC Source: B5H0649-01RE1				Extracted: 08/30/05 12:42								
Barium	EPA 6020	355	---	10.0	mg/kg dry	2x	264	42.6	214%	(20-160)	22.2%	(30)	09/02/05 13:22	Q-03	
Post Spike (5H30050-PS1)			QC Source: B5H0649-01				Extracted: 08/30/05 12:42								
Silver	EPA 6020	0.0948	---		ug/ml	1x	0.000311	0.100	94.5%	(75-125)	--	--	09/01/05 20:03		
Selenium	"	0.101	---		"	"	0.00145	"	99.6%	"	--	--	"		
Lead	"	0.186	---		"	"	0.0886	"	97.4%	"	--	--	"		
Arsenic	"	0.124	---		"	"	0.0206	"	103%	"	--	--	"		
Cadmium	"	0.104	---		"	"	0.00596	"	98.0%	"	--	--	"		
Chromium	"	0.125	---		"	"	0.0259	"	99.1%	"	--	--	"		
Post Spike (5H30050-PS2)			QC Source: B5H0649-01RE1				Extracted: 08/30/05 12:42								
Barium	EPA 6020	0.0538	---		ug/ml	2x	0.453	0.100	NR	(75-125)	--	--	09/02/05 13:27	Q-03	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E 2903 West 78th Avenue Anchorage, AK/USA 99502	Project Name:	Afognak Dump Site Phase II ESA	Report Created: 09/09/05 16:44
	Project Number:	[none]	
	Project Manager:	Cliff Elsmann	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
North Creek Analytical - Bothell

QC Batch: 5I01047 Water Preparation Method: EPA 7470A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
Blank (5I01047-BLK1)							Extracted: 09/01/05 11:07					
Mercury	EPA 7470A	ND	---	0.000200	mg/l	1x	--	--	--	--	09/02/05 13:18	
LCS (5I01047-BS1)							Extracted: 09/01/05 11:07					
Mercury	EPA 7470A	0.00504	---	0.000200	mg/l	1x	--	0.00500	101% (80-120)	--	09/02/05 13:20	
LCS Dup (5I01047-BSD1)							Extracted: 09/01/05 11:07					
Mercury	EPA 7470A	0.00519	---	0.000200	mg/l	1x	--	0.00500	104% (80-120)	2.93% (20)	09/02/05 13:23	
Matrix Spike (5I01047-MS1)				QC Source: B5H0740-01			Extracted: 09/01/05 11:07					
Mercury	EPA 7470A	0.00511	---	0.000200	mg/l	1x	ND	0.00500	102% (70-130)	--	09/02/05 13:25	
Matrix Spike Dup (5I01047-MSD1)				QC Source: B5H0740-01			Extracted: 09/01/05 11:07					
Mercury	EPA 7470A	0.00500	---	0.000200	mg/l	1x	ND	0.00500	100% (70-130)	2.18% (20)	09/02/05 13:27	

North Creek Analytical - Alaska

 Stephen Wilson, Laboratory Manager

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Montauk E/E 2903 West 78th Avenue Anchorage, AK/USA 99502	Project Name: Afognak Dump Site Phase II ESA Project Number: [none] Project Manager: Cliff Elsmann	Report Created: 09/09/05 16:44
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Polychlorinated Biphenyls by EPA Method 8082 - Laboratory Quality Control Results
 North Creek Analytical - Bothell

QC Batch: 5H29006 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5H29006-BLK2)												Extracted: 08/29/05 07:37		
Aroclor 1016 [2C]	EPA 8082	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	09/02/05 13:59	
Aroclor 1221 [2C]	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Aroclor 1232 [2C]	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Aroclor 1242 [2C]	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Aroclor 1248 [2C]	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Aroclor 1254 [2C]	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Aroclor 1260 [2C]	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Aroclor 1262 [2C]	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Aroclor 1268 [2C]	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Surrogate(s): TCX [2C]		Recovery:	73.0%	Limits: 25-131%		"							09/02/05 13:59	
Decachlorobiphenyl [2C]			78.5%	22-134%		"							"	
LCS (5H29006-BS2)												Extracted: 08/29/05 07:37		
Aroclor 1016 [2C]	EPA 8082	2.38	---	0.500	ug/l	1x	--	2.50	95.2%	(44-134)	--	--	09/02/05 14:18	
Aroclor 1260 [2C]	"	2.35	---	0.500	"	"	--	"	94.0%	(57-125)	--	--	"	
Surrogate(s): TCX [2C]		Recovery:	81.5%	Limits: 25-131%		"							09/02/05 14:18	
Decachlorobiphenyl [2C]			71.0%	22-134%		"							"	
LCS Dup (5H29006-BSD2)												Extracted: 08/29/05 07:37		
Aroclor 1016 [2C]	EPA 8082	2.23	---	0.500	ug/l	1x	--	2.50	89.2%	(44-134)	6.51%	(30)	09/02/05 14:36	
Aroclor 1260 [2C]	"	2.38	---	0.500	"	"	--	"	95.2%	(57-125)	1.27%	"	"	
Surrogate(s): TCX [2C]		Recovery:	83.5%	Limits: 25-131%		"							09/02/05 14:36	
Decachlorobiphenyl [2C]			90.0%	22-134%		"							"	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E	Project Name: Afognak Dump Site Phase II ESA	Report Created:
2903 West 78th Avenue	Project Number: [none]	09/09/05 16:44
Anchorage, AK/USA 99502	Project Manager: Cliff Elsmann	

Polychlorinated Biphenyls by EPA Method 8082 - Laboratory Quality Control Results
 North Creek Analytical - Bothell

QC Batch: 5H31055 Soil Preparation Method: EPA 3550B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5H31055-BLK1)													Extracted: 08/31/05 14:07	
Aroclor 1016	EPA 8082	ND	---	25.0	ug/kg	1x	--	--	--	--	--	--	09/01/05 07:24	
Aroclor 1221	"	ND	---	50.0	"	"	--	--	--	--	--	--	"	
Aroclor 1232	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1242	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1248	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1254	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1260	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1262	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
Aroclor 1268	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	

Surrogate(s): TCX Recovery: 97.6% Limits: 39-139% " 09/01/05 07:24
 Decachlorobiphenyl 103% 33-163% " "

LCS (5H31055-BS1)

Extracted: 08/31/05 14:07

Aroclor 1016	EPA 8082	86.8	---	25.0	ug/kg	1x	--	83.3	104%	(54-125)	--	--	09/01/05 07:42	
Aroclor 1260	"	85.1	---	25.0	"	"	--	"	102%	(58-128)	--	--	"	

Surrogate(s): TCX Recovery: 99.3% Limits: 39-139% " 09/01/05 07:42
 Decachlorobiphenyl 101% 33-163% " "

LCS Dup (5H31055-BSD1)

Extracted: 08/31/05 14:07

Aroclor 1016	EPA 8082	83.7	---	25.0	ug/kg	1x	--	83.3	100%	(54-125)	3.64% (30)		09/01/05 08:00	
Aroclor 1260	"	85.8	---	25.0	"	"	--	"	103%	(58-128)	0.819%	"	"	

Surrogate(s): TCX Recovery: 99.0% Limits: 39-139% " 09/01/05 08:00
 Decachlorobiphenyl 106% 33-163% " "

Matrix Spike (5H31055-MS1)

QC Source: BSH0727-13

Extracted: 08/31/05 14:07

Aroclor 1016	EPA 8082	97.3	---	25.0	ug/kg dry	1x	ND	90.1	108%	(47-134)	--	--	09/01/05 22:38	
Aroclor 1260	"	110	---	25.0	"	"	ND	"	122%	(22-171)	--	--	"	

Surrogate(s): TCX Recovery: 98.2% Limits: 39-139% " 09/01/05 22:38
 Decachlorobiphenyl 107% 33-163% " "

Matrix Spike Dup (5H31055-MSD1)

QC Source: BSH0727-13

Extracted: 08/31/05 14:07

Aroclor 1016	EPA 8082	102	---	25.0	ug/kg dry	1x	ND	90.1	113%	(47-134)	4.72% (35)		09/01/05 22:56	
Aroclor 1260	"	117	---	25.0	"	"	ND	"	130%	(22-171)	6.17%	"	"	

Surrogate(s): TCX Recovery: 99.6% Limits: 39-139% " 09/01/05 22:56
 Decachlorobiphenyl 109% 33-163% " "

North Creek Analytical - Alaska

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Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
 Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:

09/09/05 16:44

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

North Creek Analytical - Bothell

QC Batch: 5H31026

Soil Preparation Method: EPA 5030B [MeOH]

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
										Extracted: 08/31/05 09:53		A-01a		
Blank (5H31026-BLK1)														
Acetone	EPA 8260B	ND	---	1.00	mg/kg	1x	--	--	--	--	--	--	08/31/05 16:37	
Benzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1-Chlorohexane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Hexachlorobutadiene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E 2903 West 78th Avenue Anchorage, AK/USA 99502	Project Name: Afognak Dump Site Phase II ESA Project Number: [none] Project Manager: Cliff Elsmann	Report Created: 09/09/05 16:44
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Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 North Creek Analytical - Bothell

QC Batch: 5H31026 Soil Preparation Method: EPA 5030B [MeOH]

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	----------------	----------------	----------	-------

Blank (5H31026-BLK1)											Extracted: 08/31/05 09:53	A-01a
Methyl tert-butyl ether	EPA 8260B	ND	---	0.500	mg/kg	1x	--	--	--	--	08/31/05 16:37	
n-Hexane	"	ND	---	0.500	"	"	--	--	--	--	"	
2-Hexanone	"	ND	---	1.00	"	"	--	--	--	--	"	
Isopropylbenzene	"	ND	---	0.100	"	"	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	0.100	"	"	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	1.00	"	"	--	--	--	--	"	
Methylene chloride	"	ND	---	1.00	"	"	--	--	--	--	"	
Naphthalene	"	ND	---	0.100	"	"	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.100	"	"	--	--	--	--	"	
Styrene	"	ND	---	0.100	"	"	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	"	
1,1,1,2,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.100	"	"	--	--	--	--	"	
Toluene	"	ND	---	0.100	"	"	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	"	
Trichloroethene	"	ND	---	0.100	"	"	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	0.100	"	"	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	0.100	"	"	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	"	
Vinyl chloride	"	ND	---	0.100	"	"	--	--	--	--	"	
o-Xylene	"	ND	---	0.100	"	"	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.200	"	"	--	--	--	--	"	

Surrogate(s): 1,2-DCA-d4	Recovery: 119%	Limits: 70-130%	"	08/31/05 16:37
Toluene-d8	110%	70-130%	"	"
4-BFB	109%	70-130%	"	"

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:
09/09/05 16:44

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

North Creek Analytical - Bothell

QC Batch: 5H31026 Soil Preparation Method: EPA 5030B [MeOH]

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5H31026-BLK2)										Extracted: 08/31/05 09:53			A-01b	
Acetone	EPA 8260B	ND	---	1.00	mg/kg	1x	--	--	--	--	--	--	09/01/05 14:14	
Benzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1-Chlorohexane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Hexachlorobutadiene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E 2903 West 78th Avenue Anchorage, AK/USA 99502	Project Name: Afognak Dump Site Phase II ESA Project Number: [none] Project Manager: Cliff Elsmann	Report Created: 09/09/05 16:44
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Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 North Creek Analytical - Bothell

QC Batch: 5H31026 Soil Preparation Method: EPA 5030B [MeOH]

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5H31026-BLK2)													A-01b	
													Extracted: 08/31/05 09:53	
Methyl tert-butyl ether	EPA 8260B	ND	---	0.500	mg/kg	1x	--	--	--	--	--	--	09/01/05 14:14	
n-Hexane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,1,2,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	

Surrogate(s): 1,2-DCA-d4	Recovery: 104%	Limits: 70-130%	"	09/01/05 14:14
Toluene-d8	120%	70-130%	"	"
4-BFB	110%	70-130%	"	"

North Creek Analytical - Alaska

 Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:
09/09/05 16:44

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

North Creek Analytical - Bothell

QC Batch: 5H31026

Soil Preparation Method: EPA 5030B [MeOH]

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
Blank (5H31026-BLK3)											Extracted: 08/25/05 09:53	A-01
Acetone	EPA 8260B	ND	---	1.00	mg/kg	1x	--	--	--	--	09/01/05 17:40	
Benzene	"	ND	---	0.100	"	"	--	--	--	--		
Bromobenzene	"	ND	---	0.100	"	"	--	--	--	--		
Bromochloromethane	"	ND	---	0.100	"	"	--	--	--	--		
Bromodichloromethane	"	ND	---	0.100	"	"	--	--	--	--		
Bromoform	"	ND	---	0.100	"	"	--	--	--	--		
Bromomethane	"	ND	---	0.100	"	"	--	--	--	--		
2-Butanone	"	ND	---	1.00	"	"	--	--	--	--		
n-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--		
sec-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--		
tert-Butylbenzene	"	ND	---	0.100	"	"	--	--	--	--		
Carbon disulfide	"	ND	---	0.100	"	"	--	--	--	--		
Carbon tetrachloride	"	ND	---	0.100	"	"	--	--	--	--		
Chlorobenzene	"	ND	---	0.100	"	"	--	--	--	--		
Chloroethane	"	ND	---	0.100	"	"	--	--	--	--		
1-Chlorohexane	"	ND	---	1.00	"	"	--	--	--	--		
Chloroform	"	ND	---	0.100	"	"	--	--	--	--		
Chloromethane	"	ND	---	0.500	"	"	--	--	--	--		
2-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--		
4-Chlorotoluene	"	ND	---	0.100	"	"	--	--	--	--		
Dibromochloromethane	"	ND	---	0.100	"	"	--	--	--	--		
1,2-Dibromo-3-chloropropane	"	ND	---	0.500	"	"	--	--	--	--		
1,2-Dibromoethane	"	ND	---	0.100	"	"	--	--	--	--		
Dibromomethane	"	ND	---	0.100	"	"	--	--	--	--		
1,2-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--		
1,3-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--		
1,4-Dichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--		
Dichlorodifluoromethane	"	ND	---	0.100	"	"	--	--	--	--		
1,1-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--		
1,2-Dichloroethane	"	ND	---	0.100	"	"	--	--	--	--		
1,1-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--		
cis-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--		
trans-1,2-Dichloroethene	"	ND	---	0.100	"	"	--	--	--	--		
1,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--		
1,3-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--		
2,2-Dichloropropane	"	ND	---	0.100	"	"	--	--	--	--		
1,1-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--		
cis-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--		
trans-1,3-Dichloropropene	"	ND	---	0.100	"	"	--	--	--	--		
Ethylbenzene	"	ND	---	0.100	"	"	--	--	--	--		
Hexachlorobutadiene	"	ND	---	0.100	"	"	--	--	--	--		

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E	Project Name: Afognak Dump Site Phase II ESA	Report Created:
2903 West 78th Avenue	Project Number: [none]	09/09/05 16:44
Anchorage, AK/USA 99502	Project Manager: Cliff Elsmann	

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 North Creek Analytical - Bothell

QC Batch: 5H31026 Soil Preparation Method: EPA 5030B [MeOH]

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5H31026-BLK3)													A-01	
													Extracted: 08/25/05 09:53	
Methyl tert-butyl ether	EPA 8260B	ND	---	0.500	mg/kg	1x	--	--	--	--	--	--	09/01/05 17:40	
n-Hexane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	

Surrogate(s): 1,2-DCA-d4	Recovery: 100%	Limits: 70-130%	"	09/01/05 17:40
Toluene-d8	124%	70-130%	"	"
4-BFB	111%	70-130%	"	"

North Creek Analytical - Alaska

 Stephen Wilson, Laboratory Manager

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Montauk E/E
 2903 West 78th Avenue
 Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**
 Project Number: [none]
 Project Manager: Cliff Elsmann

Report Created:
 09/09/05 16:44

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 North Creek Analytical - Bothell

QC Batch: 5H31026 Soil Preparation Method: EPA 5030B [MeOH]

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (5H31026-BS1)														
													Extracted: 08/31/05 09:53	
Benzene	EPA 8260B	3.99	---	0.100	mg/kg	1x	--	4.00	99.8%	(75-130)	--	--	08/31/05 14:42	
Chlorobenzene	"	4.18	---	0.100	"	"	--	"	104%	(77-124)	--	--	"	
1-Chlorohexane	"	4.20	---	1.00	"	"	--	"	105%	(0-200)	--	--	"	
1,1-Dichloroethene	"	3.01	---	0.100	"	"	--	"	75.2%	(74-133)	--	--	"	
Methyl tert-butyl ether	"	4.22	---	0.500	"	"	--	"	106%	(70-140)	--	--	"	
Toluene	"	3.95	---	0.100	"	"	--	"	98.8%	(75-124)	--	--	"	
Trichloroethene	"	3.98	---	0.100	"	"	--	"	99.5%	(78-128)	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>99.5%</i>	<i>Limits:</i>	<i>70-130%</i>	<i>"</i>							<i>08/31/05 14:42</i>	
<i>Toluene-d8</i>			<i>102%</i>		<i>70-130%</i>	<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>99.8%</i>		<i>70-130%</i>	<i>"</i>							<i>"</i>	

LCS Dup (5H31026-BSD1)														
													Extracted: 08/31/05 09:53	
Benzene	EPA 8260B	3.97	---	0.100	mg/kg	1x	--	4.00	99.2%	(75-130)	0.503% (20)		08/31/05 15:11	
Chlorobenzene	"	4.12	---	0.100	"	"	--	"	103%	(77-124)	1.45%	"	"	
1-Chlorohexane	"	4.12	---	1.00	"	"	--	"	103%	(0-200)	1.92% (200)	"	"	
1,1-Dichloroethene	"	4.11	---	0.100	"	"	--	"	103%	(74-133)	30.9% (20)	"	"	X
Methyl tert-butyl ether	"	4.49	---	0.500	"	"	--	"	112%	(70-140)	6.20%	"	"	
Toluene	"	3.78	---	0.100	"	"	--	"	94.5%	(75-124)	4.40%	"	"	
Trichloroethene	"	4.11	---	0.100	"	"	--	"	103%	(78-128)	3.21%	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>111%</i>	<i>Limits:</i>	<i>70-130%</i>	<i>"</i>							<i>08/31/05 15:11</i>	
<i>Toluene-d8</i>			<i>99.5%</i>		<i>70-130%</i>	<i>"</i>							<i>"</i>	
<i>4-BFB</i>			<i>100%</i>		<i>70-130%</i>	<i>"</i>							<i>"</i>	

North Creek Analytical - Alaska

Stephen Wilson, Laboratory Manager

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Montauk E/E

2903 West 78th Avenue
Anchorage, AK/USA 99502

Project Name: **Afognak Dump Site Phase II ESA**

Project Number: [none]

Project Manager: Cliff Elsmann

Report Created:
09/09/05 16:44

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

North Creek Analytical - Bothell

QC Batch: 5I01073

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
Blank (5I01073-BLK1)												
Extracted: 09/01/05 09:49												
Acetone	EPA 8260B	ND	---	20.0	ug/l	1x	--	--	--	--	09/01/05 12:42	
Benzene	"	ND	---	1.00	"	"	--	--	--	--		
Bromobenzene	"	ND	---	1.00	"	"	--	--	--	--		
Bromochloromethane	"	ND	---	1.00	"	"	--	--	--	--		
Bromodichloromethane	"	ND	---	1.00	"	"	--	--	--	--		
Bromoform	"	ND	---	1.00	"	"	--	--	--	--		
Bromomethane	"	ND	---	2.00	"	"	--	--	--	--		
2-Butanone	"	ND	---	10.0	"	"	--	--	--	--		
n-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--		
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--		
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--		
Carbon disulfide	"	ND	---	1.00	"	"	--	--	--	--		
Carbon tetrachloride	"	ND	---	1.00	"	"	--	--	--	--		
Chlorobenzene	"	ND	---	1.00	"	"	--	--	--	--		
Chloroethane	"	ND	---	1.00	"	"	--	--	--	--		
1-Chlorohexane	"	ND	---	1.00	"	"	--	--	--	--		
Chloroform	"	ND	---	1.00	"	"	--	--	--	--		
Chloromethane	"	ND	---	5.00	"	"	--	--	--	--		
2-Chlorotoluene	"	ND	---	1.00	"	"	--	--	--	--		
4-Chlorotoluene	"	ND	---	1.00	"	"	--	--	--	--		
Dibromochloromethane	"	ND	---	1.00	"	"	--	--	--	--		
1,2-Dibromo-3-chloropropane	"	ND	---	5.00	"	"	--	--	--	--		
1,2-Dibromoethane	"	ND	---	1.00	"	"	--	--	--	--		
Dibromomethane	"	ND	---	1.00	"	"	--	--	--	--		
1,2-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--		
1,3-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--		
1,4-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--		
Dichlorodifluoromethane	"	ND	---	1.00	"	"	--	--	--	--		
1,1-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--		
1,2-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--		
1,1-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--		
cis-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--		
trans-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--		
1,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--		
1,3-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--		
2,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--		
1,1-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--		
cis-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--		
trans-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--		
Ethylbenzene	"	ND	---	1.00	"	"	--	--	--	--		
Hexachlorobutadiene	"	ND	---	1.00	"	"	--	--	--	--		

North Creek Analytical - Alaska

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Stephen Wilson, Laboratory Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Montauk Environmental Engineering

2903 W. 78th. Avenue
Anchorage, Alaska 99502
Tel: 907.243.4431
rendova@alaska.net

Afognak Native Corporation
215 Mission Rd. Ste. 212
Kodiak, AK 99615

27 June 2006

Attention: Mr. Howard Valley, General Manager of Lands

Reference: Montauk E/E. *Combined Phase I and II Environmental Site Assessment:
Raspberry Strait Dump Site, Afognak Alaska.* September 2005.

Subject: Addendum No. 1

Dear Mr. Valley:

The following addendum addresses new field data collected at the site, communication with the State of Alaska Department of Environmental Conservation and corrections to the September '05 report.

Please call me (907.243.4431) if you have any questions or comments.

Sincerely,

(Signed)

Clifford J. Elsmann

1. Site Revisit: The Raspberry Strait dump site was revisited on 20 June 2006 for the purpose of assessing the nature and extent of a removal action that was performed by residents of the Alaneva community in late May of 2006.

There remain two distinct debris formations at the site: The central, high-volume deposit and, surrounding it, a much larger, thinner layer of scattered debris. The volumes of debris in these two areas are approximately equal.

Approximately one third of the dump's central deposit was removed by the Alaneva effort. The low-concentration deposit surrounding the central deposit appeared untouched. See the Site Plan on page 4 and the photographs on pages 5-8.

Hazardous and potentially hazardous materials (batteries and petroleum-product containers, respectively) are still present at the dump. Hazardous materials must be removed before either creating a non-active on-site landfill or disposing the trash in another landfill.

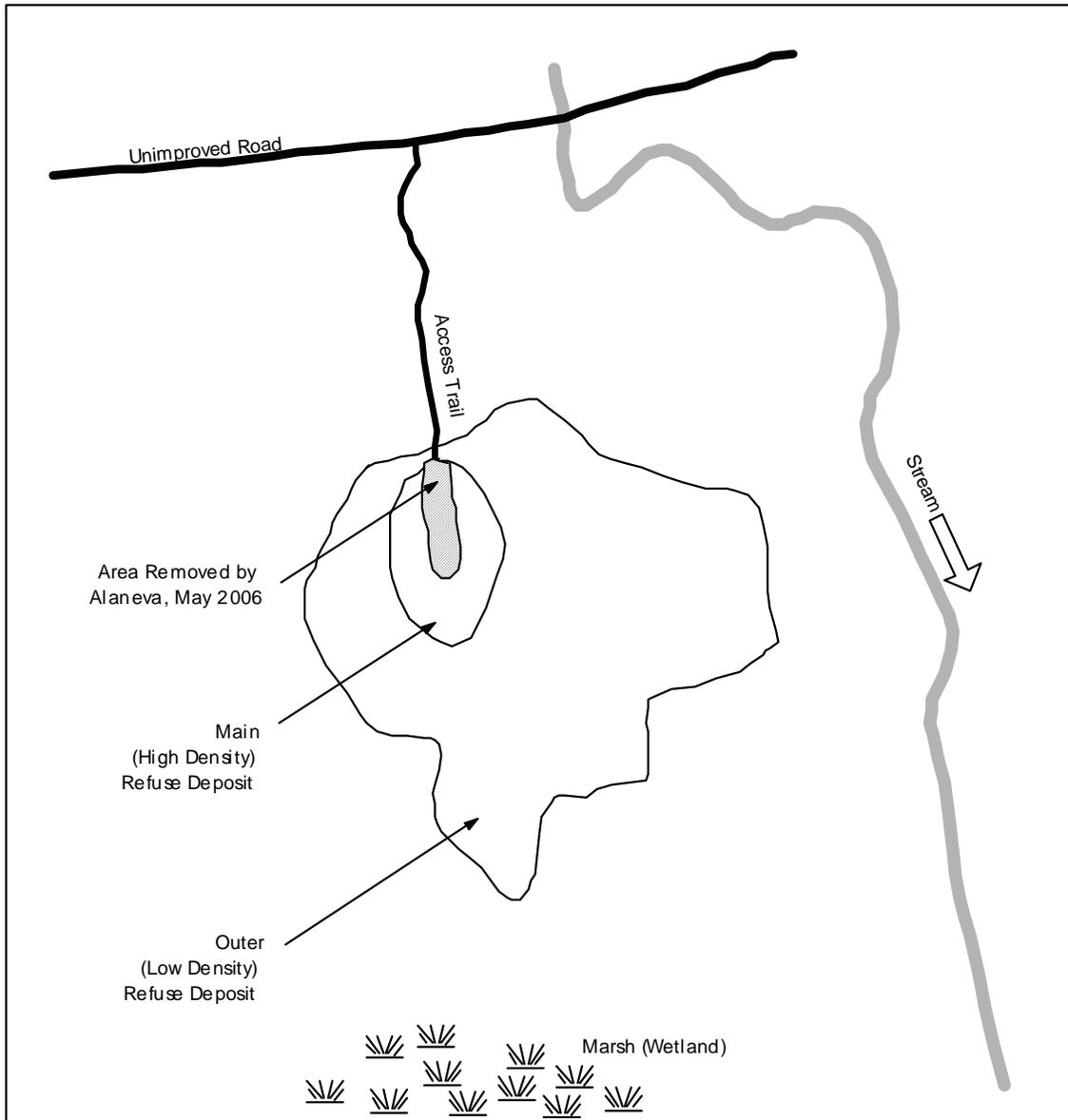
2. Conversation With ADEC Solid Waste: I spoke with Mr. Bob Blankenburg (ADEC Solid Waste, Anch. 269.7690) on 12 June about the potential for creating a non-active landfill at the site. Mr. Blankenburg was receptive to the concept, and opined that closure-in-place would be viable, providing the adjoining (downgradient) wetland is not impacted during the construction process. It would be necessary to comply with the relatively straight-forward closure standards in 18 AAC 60.390. The general work steps would involve presenting a closure plan to the ADEC for review, removing hazardous materials, capping the deposit with soil, surveying and recording the landfill, and documenting those activities in a report submitted to the ADEC.

The ADEC Solid Waste Division are aware of scores of non-regulated (illegal) dump sites spread over the State of Alaska. It is doubtful State resources would be spent on an enforcement action given that the ANC is in the process of addressing the problems at the site; i.e., it is reasonable to expect the nature of the ADEC's involvement with the cleanup process to be more facilitative rather than adversarial.

3. Corrections to the September 2005 Report

- Page 2, §1.3.3: Replace paragraph with: "The surface estate was conveyed to Afognak Native Corporation under IC060 on June 20, 1977 and is recorded in the Kodiak Recording District in Book 37 Pages 478 to 483. The subsurface estate was conveyed to Koniag, Inc. under IC061 on June 20, 1977."
- Page 2, §1.3.4: Amend the third sentence of the paragraph to read: "A separate shareholder property (the Flerchinger property) is leased from the ANC, and is located approximately three quarters of a mile southwest of the site."

4. Conclusions: The volume of debris remaining at the site has been conservatively estimated at just over 500 cubic yards. The average weight of a cubic yard of general debris is estimated to be approximately 1,500 pounds. Again, whether the debris is removed or landfilled in place, the hazardous material must be segregated and disposed separately from non-hazardous debris. Potentially-hazardous materials (e.g., petroleum-product containers) must be assessed to determine their status. The potential interests of Koniag, Inc., the owner of the property's subsurface rights, must be addressed prior to any landfilling action.



Raspberry Strait Dump Site ESA: Addendum 1	
Raspberry Strait Dump Site Afognak, Alaska	
<i>N.B: This drawing is presented solely for informational purposes in support of this report, and is to be used for no other purpose.</i>	
Site Plan	Drawn by CJE



Looking ~south at the northern edge of the dump site from the end of the access trail.





Looking ~southeast at the large-area low-volume debris field.



Looking ~northwest at batteries (and battery parts contained within the white woven plastic feed bag at lower left) deposited just west of the main deposit.



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (00).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (01).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (02).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (03).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (04).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (05).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (06).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (07).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (08).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (09).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (10).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (11).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (12).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (13).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (14).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (15).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
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Cleanup Fred Reutov-George
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Cleanup Fred Reutov-George
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Cleanup Fred Reutov-George
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Cleanup Fred Reutov-George
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Cleanup Fred Reutov-George
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Cleanup Fred Reutov-George
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Cleanup Fred Reutov-George
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Cleanup Fred Reutov-George
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Cleanup Fred Reutov-George
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05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (27).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (28).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (29).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (30).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (31).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (32).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (33).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (34).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (35).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (36).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (37).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (38).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (39).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (40).jpg



05--30-2006 Russian Dump
Cleanup Fred Reutov-George
Reu (41).jpg

AERIAL PHOTOGRAPHS



Approximate Location of Dumpsite



**ENVIRONMENTAL REGULATORY AGENCY
DATABASE REPORT**

Raspberry Strait Dumpsite

Winter Trail

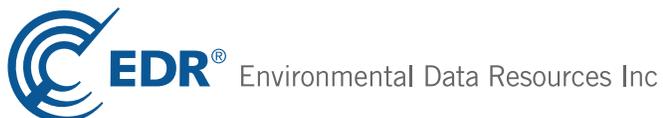
Kodiak, AK 99615

Inquiry Number: 2636640.2s

November 23, 2009

The EDR Radius Map™ Report with GeoCheck®

Prepared using the EDR FieldCheck® System



440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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 with any questions or comments.

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EXECUTIVE SUMMARY

A search of the environmental records was conducted by Environmental Data Resources, Inc. (EDR). SLR ALASKA used the EDR FieldCheck System to review and/or revise the results of this search, based on independent data verification by SLR ALASKA. The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

WINTER TRAIL
KODIAK, AK 99615

COORDINATES

Latitude (North):	58.001700 - 58° 0' 6.1"
Longitude (West):	152.843900 - 152° 50' 38.0"
Universal Transverse Mercator:	Zone 5
UTM X (Meters):	509226.8
UTM Y (Meters):	6428699.5
Elevation:	116 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	N/A
Source:	USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No sites were identified in following databases.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL.....	National Priority List
Proposed NPL.....	Proposed National Priority List Sites
NPL LIENS.....	Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL.....	National Priority List Deletions
-------------------	----------------------------------

Federal CERCLIS list

CERCLIS.....	Comprehensive Environmental Response, Compensation, and Liability Information System
--------------	--

EXECUTIVE SUMMARY

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Transporters, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators

RCRA-SQG..... RCRA - Small Quantity Generators

RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List

US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SHWS..... Contaminated Sites Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Facilities

State and tribal leaking storage tank lists

LUST..... Leaking Underground Storage Tank Database

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

UST..... Underground Storage Tank Database

AST..... Regulated Aboveground Storage Tanks

INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

ENG CONTROLS..... Engineering Controls Site Listing

INST CONTROL..... Contaminated Sites with Institutional Controls

State and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program sites

EXECUTIVE SUMMARY

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Identified and/or Proposed Brownfields Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI..... Open Dump Inventory

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs

CDL..... Illegal Drug Manufacturing Sites

US HIST CDL..... National Clandestine Laboratory Register

Local Land Records

LIENS 2..... CERCLA Lien Information

LUCIS..... Land Use Control Information System

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

SPILLS..... Spills Database

Other Ascertainable Records

RCRA-NonGen..... RCRA - Non Generators

DOT OPS..... Incident and Accident Data

DOD..... Department of Defense Sites

FUDS..... Formerly Used Defense Sites

CONSENT..... Superfund (CERCLA) Consent Decrees

ROD..... Records Of Decision

UMTRA..... Uranium Mill Tailings Sites

MINES..... Mines Master Index File

TRIS..... Toxic Chemical Release Inventory System

TSCA..... Toxic Substances Control Act

FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing

SSTS..... Section 7 Tracking Systems

ICIS..... Integrated Compliance Information System

PADS..... PCB Activity Database System

MLTS..... Material Licensing Tracking System

RADINFO..... Radiation Information Database

EXECUTIVE SUMMARY

FINDS.....	Facility Index System/Facility Registry System
RAATS.....	RCRA Administrative Action Tracking System
DRYCLEANERS.....	Drycleaner Facility Listing
NPDES.....	Wastewater Discharge Permit Listing
AIRS.....	AIRS Facility Listing
INDIAN RESERV.....	Indian Reservations
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
COAL ASH.....	Coal Ash Disposal Sites
PCB TRANSFORMER.....	PCB Transformer Registration Database

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

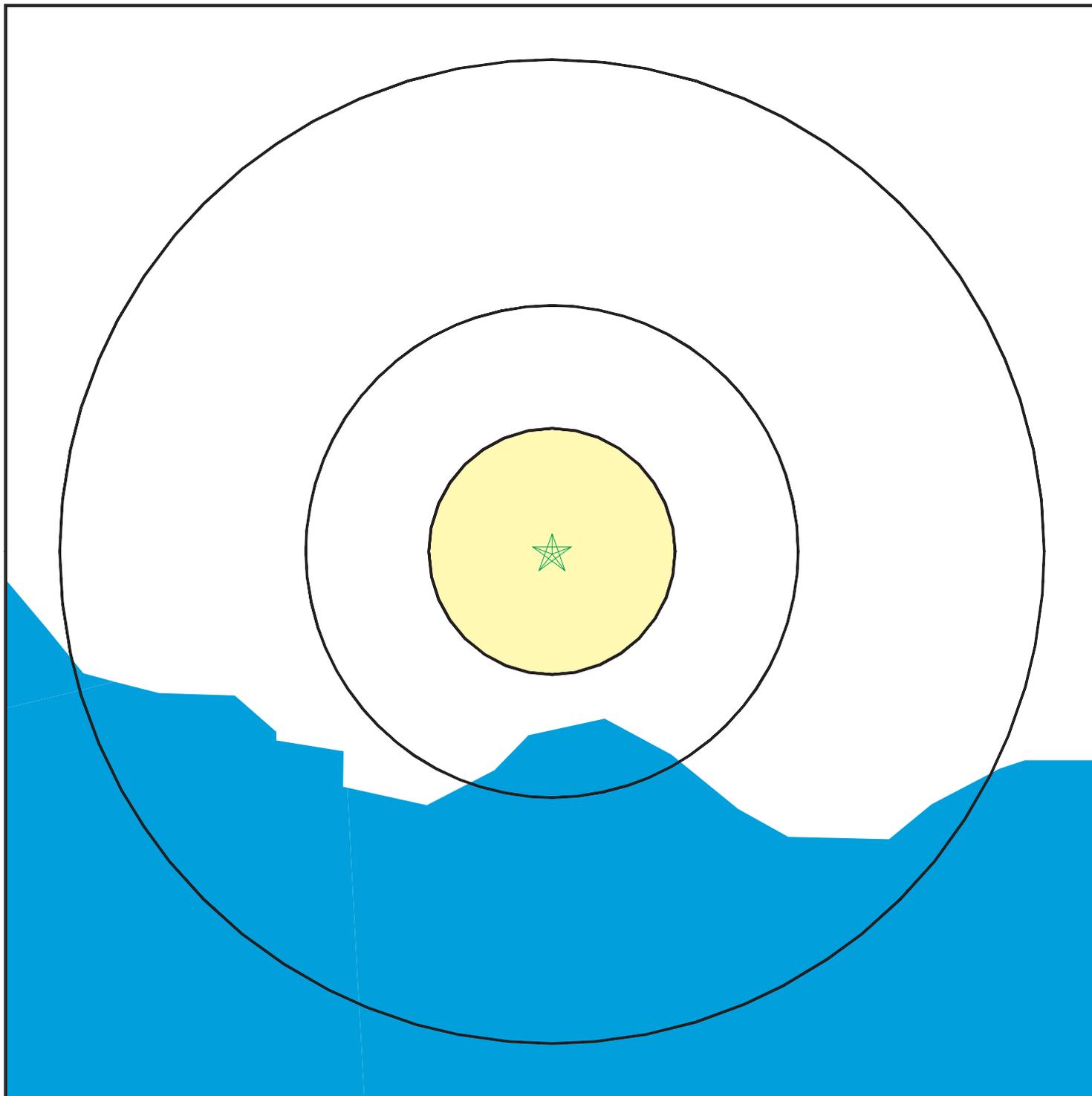
Due to poor or inadequate address information, the following sites were not mapped:

<u>Site Name</u>	<u>Database(s)</u>
USCG LORAN C STATION - SITKINAK	SHWS
KODIAK - CAPE CHINIAK TRACKING STAT	SHWS, INST CONTROL
USCG KODIAK NARROW CAPE LORAN STATION	SHWS
FORT ABERCROMBIE	SHWS
FAA KODIAK AIRPORT	SHWS
USFWS - KODIAK NWR AIRPLANE HANGAR	SHWS
USCG KODIAK BUNKER 150	SHWS, SPILLS
ADOT&PF AIRPORT MAINTENANCE SHOP-KODIAK	SHWS
VACANT LAND 110 BARTEL AVENUE	SHWS
ISLAND HOPPERS-KODIAK	SHWS
USCG SUPPORT CENTER	SHWS, UST, SPILLS
USCG KODIAK SITE 19 HANGAR 1	SHWS
USCG-KODIAK CGES GAS STATION	SHWS
KODIAK ELECTRIC ASSOC. WAREHOUSE	SHWS
ADOT&PF KODIAK AIRPORT APRON DRUMS	SHWS
KODIAK, CITY OF-PEARSON COVE LIFT STAITON #4	SHWS
KODIAK Y INTERSECTION	SHWS
BRECHAN STORAGE YARD	SHWS
KEN HATFIELD RESIDENCE	SHWS
TERROR LAKE HYDROELECTRIC PLANT-93	SHWS
PENINSULA AIRWAYS - KODIAK AIRPORT	SHWS, INST CONTROL
USCG-KODIAK T-40	SHWS, INST CONTROL
USR - BRUHN POINT	SHWS
KODIAK - BRUHN POINT LANDFILL	SHWS
PILLAR MOUNTAIN RRS OT01	SHWS, INST CONTROL
KODIAK - BUSKIN BEACH	SHWS
KODIAK - BELLS FLATS	SHWS
ALASKA AIRLINES - KODIAK	SHWS
HERTZ CAR AND TRUCK RENTAL - KODIAK	SHWS
MARKAIR - KODIAK (LUST)	SHWS, INST CONTROL
KODIAK, CITY OF-KODIAK PUBLIC AIRPORT	SHWS
ADOT&PF SREB - KODIAK	SHWS
USCG KODIAK SITE 09 AVGAS TANK FARM	SHWS
USCG AIRPORT STAGING AREA	SHWS, INST CONTROL
USCG LAKE LOUISE DRIVE RELEASE	SHWS
USFWS - KODIAK NWR LILLY LAKE FLOAT PLANE STALL	SHWS
KODIAK - LONG ISLAND (FT. TIDBALL)	SHWS, INST CONTROL
MARKAIR - KODIAK (CS)	SHWS, INST CONTROL
FIR TERRACE APARTMENTS	SHWS
KODIAK, CITY OF-PILLAR CREEK PUMP STATION	SHWS
KODIAK CITY OF-DOG BAY HARBOR USED OIL	SHWS
KODIAK, CITY OF-PIER II	SHWS, INST CONTROL
ADOTPF KODIAK MAINTENANCE FACILITY	SHWS
BAYSIDE GAS	SHWS
UNION TIRE AND BRAKE-KODIAK	SHWS
SPEEDEE KRAFT-BELLS FLATS	SHWS, INST CONTROL
BELLS FLATS WELBORN/STRATTON DRUMS	SHWS
USCG-KODIAK BUILDING N2-WW TREATMENT PLANT TANK N2	SHWS, INST CONTROL
ST. PAUL (SMALL BOAT) HARBOR	SHWS
AFOGNAK KONCOR LOGGING CAMP	SHWS, INST CONTROL
ADFG - KODIAK AIRPORT	SHWS
RESIDENCE - 1117 STELLER WAY HHOT	SHWS, INST CONTROL

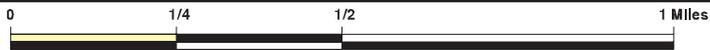
EXECUTIVE SUMMARY

TERROR LAKE HYDROELECTRIC PLANT-91	SHWS
KODIAK HIGH SCHOOL HHOT	SHWS
AT&T ALASCOM KODIAK EARTH STATION 1	SHWS
USCG-KODIAK R-4 & R-5	SHWS
USCG-KODIAK S36	SHWS
USCG-KODIAK BUILDING N1 PUBLIC WORKS GARAGE TANK P	SHWS
USCG-KODIAK BUILDING 12-T-P30 UST	SHWS
FAA KODIAK TOWER	SHWS
KRAFTS DEPT. STORE/SM. BOAT HARBOR	SHWS
FAA - WOODY ISLAND NAVIGATIONAL FACILITY	SHWS
FAA WOODY ISLAND	SHWS
FAA WOODY ISLAND BLDG. 400	SHWS
KODIAK CY OF ISLAND BOROUGH LANDFILL	CERC-NFRAP, RCRA-CESQG, FINDS
KODIAK, CITY OF-PILLAR CREEK PUMP STATION	SWF/LF, LUST
ANDREW AIRWAYS	LUST, UST
PENINSULA AIRWAYS - KODIAK AIRPORT	LUST
ADFG - KODIAK AIRPORT	LUST
SPEEDEE KRAFT - RUSSIAN CR CTR	UST
USFWS - KODIAK NATIONAL WILDLIFE REFUGE	UST
PEN AIR KODIAK	UST
HANGAR OF UYAK AIR SERVICE, INC.	UST
ALASKA AIRLINES KODIAK	RCRA-NonGen, FINDS

OVERVIEW MAP - 2636640.2s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- ☒ National Priority List Sites
- ☒ Dept. Defense Sites



☒ Indian Reservations BIA

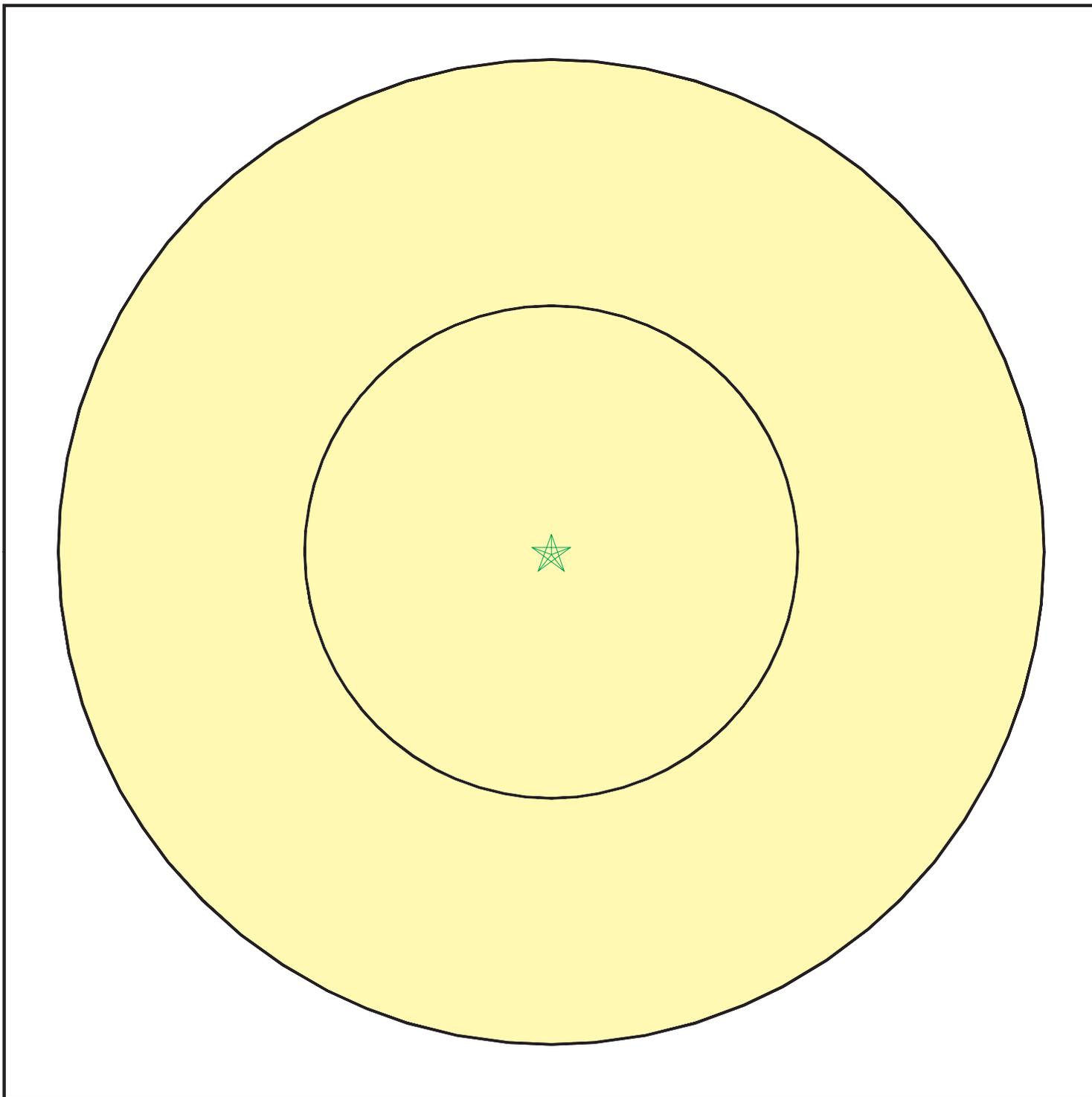


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Raspberry Strait Dumpsite
 ADDRESS: Winter Trail
 Kodiak AK 99615
 LAT/LONG: 58.0017 / 152.8439

CLIENT: SLR Alaska
 CONTACT: Christina Bentz
 INQUIRY #: 2636640.2s
 DATE: November 23, 2009 5:45 pm

DETAIL MAP - 2636640.2s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites



 Indian Reservations BIA



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Raspberry Strait Dumpsite
 ADDRESS: Winter Trail
 Kodiak AK 99615
 LAT/LONG: 58.0017 / 152.8439

CLIENT: SLR Alaska
 CONTACT: Christina Bentz
 INQUIRY #: 2636640.2s
 DATE: November 23, 2009 5:45 pm

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL		1.000	0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
CERCLIS		0.500	0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site List</i>								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS		1.000	0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS		TP	NR	NR	NR	NR	NR	0
<i>State- and tribal - equivalent CERCLIS</i>								
SHWS		1.000	0	0	0	0	NR	0
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF		0.500	0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
<i>State and tribal registered storage tank lists</i>								
UST		0.250	0	0	NR	NR	NR	0
AST		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN UST		0.250	0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
ENG CONTROLS		0.500	0	0	0	NR	NR	0
INST CONTROL		0.500	0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
VCP		0.500	0	0	0	NR	NR	0
INDIAN VCP		0.500	0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI		0.500	0	0	0	NR	NR	0
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
SPILLS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
AIRS		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
COAL ASH		0.500	0	0	0	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants		1.000	0	0	0	0	NR	0
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NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NO SITES FOUND

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
AKHIOK	S107028649	USCG LORAN C STATION - SITKINAK	SITKINAK ISLAND	99615	SHWS
CHINIAK	S107028770	KODIAK - CAPE CHINIAK TRACKING STAT	CAPE CHINIAK	99615	INST CONTROL, SHWS
KODIAK	S109255153	USCG KODIAK NARROW CAPE LORAN STATION	MI 42 PASAGSHAK RD	99615	SHWS
KODIAK	S106899471	FORT ABERCROMBIE	FT. ABERCROMBIE STATE PK.	99615	SHWS
KODIAK	S105159419	FAA KODIAK AIRPORT	AIR TRAFFIC CONTROL TOWER	99615	SHWS
KODIAK	S109255816	USFWS - KODIAK NWR AIRPLANE HANGAR	AIRPLANE HANGAR; KODIAK NWR	99615	SHWS
KODIAK	S105547543	USCG KODIAK BUNKER 150	ANTON LARSON ROAD	99615	SPILLS, SHWS
KODIAK	S108414083	ADOT&PF AIRPORT MAINTENANCE SHOP-KODIAK	1500 ANTON LARSEN ROAD	99615	SHWS
KODIAK	S109911919	VACANT LAND 110 BARTEL AVENUE	110 BARTEL AVENUE	99615	SHWS
KODIAK	S109255491	ISLAND HOPPERS-KODIAK	P.O. BOX 890;	99615	SHWS
KODIAK	U003331378	USCG SUPPORT CENTER	BOX 195025	99615	UST, SPILLS, SHWS
KODIAK	S104893518	USCG KODIAK SITE 19 HANGAR 1	CAPE SPENCER STREET	99615	SHWS
KODIAK	S109256475	USCG-KODIAK CGES GAS STATION	CGES GAS STATION, USCG BASE, AVE.B - KODIAK	99615	SHWS
KODIAK	S109255650	KODIAK ELECTRIC ASSOC. WAREHOUSE	1713 CHICHENOFF RD.;	99615	SHWS
KODIAK	U004115413	SPEEDEE KRAFT - RUSSIAN CR CTR	CHINIAK HWY & S RUSSIAN CREEK RD BELLSFLATS	99615	UST
KODIAK	S105755141	ADOT&PF KODIAK AIRPORT APRON DRUMS	US COAST GUARD AIRPORT	99615	SHWS
KODIAK	U003541064	ANDREW AIRWAYS	1522 DEVIL'S CREEK RD, KODIAK STATE AIRPORT	99615	LUST, UST
KODIAK	S109255629	KODIAK, CITY OF-PEARSON COVE LIFT STAITON #4	FATHER HERMAN ROAD	99615	SHWS
KODIAK	S106196181	KODIAK Y INTERSECTION	Y INTERSECTION	99615	SHWS
KODIAK	S106899469	BRECHAN STORAGE YARD	ISLAND LAKE ROAD /	99615	SHWS
KODIAK	S104893472	KEN HATFIELD RESIDENCE	1425 ISMALOV DRIVE	99615	SHWS
KODIAK	S109255512	TERROR LAKE HYDROELECTRIC PLANT-93	KIZHUYAK BAY;	99615	SHWS
KODIAK	U004116305	USFWS - KODIAK NATIONAL WILDLIFE REFUGE	KODIAK STATE AIRPORT-HANGAR SITE	99615	UST
KODIAK	S109261034	PENINSULA AIRWAYS - KODIAK AIRPORT	KODIAK STATE AIRPORT LOT 7, BLOCK 1600,	99615	LUST
KODIAK	U004115425	PEN AIR KODIAK	KODIAK STATE AIRPORT LOT 7, BLOCK 1600	99615	UST
KODIAK	S109254524	PENINSULA AIRWAYS - KODIAK AIRPORT	KODIAK STATE AIRPORT LOT 7, BLOCK 1600	99615	INST CONTROL, SHWS
KODIAK	U003541001	HANGAR OF UYAK AIR SERVICE, INC.	KODIAK STATE AIRPORT LOT 5, BLOCK 1600	99615	UST
KODIAK	S109254588	USCG-KODIAK T-40	KODIAK SC	99615	INST CONTROL, SHWS
KODIAK	S106802264	USR - BRUHN POINT	KODIAK ISLAND HIGHWAY	99615	SHWS
KODIAK	S104893527	KODIAK - BRUHN POINT LANDFILL	KODIAK ISLAND HIGHWAY	99615	SHWS
KODIAK	S109568533	PILLAR MOUNTAIN RRS OT01	KODIAK ISLAND	99615	INST CONTROL, SHWS
KODIAK	S109568111	KODIAK - BUSKIN BEACH	KODIAK ISLAND	99615	SHWS
KODIAK	S109568110	KODIAK - BELLS FLATS	KODIAK ISLAND	99615	SHWS
KODIAK	S109256495	ALASKA AIRLINES - KODIAK	KODIAK INTERNATIONAL TERMINAL BUILDING	99615	SHWS
KODIAK	S109255687	HERTZ CAR AND TRUCK RENTAL - KODIAK	KODIAK AIRPORT;	99615	SHWS
KODIAK	S109254730	MARKAIR - KODIAK (LUST)	KODIAK AIRPORT;	99615	INST CONTROL, SHWS
KODIAK	S109255602	KODIAK, CITY OF-KODIAK PUBLIC AIRPORT	KODIAK AIRPORT	99615	SHWS
KODIAK	S106247611	ADOT&PF SREB - KODIAK	KODIAK AIRPORT	99615	SHWS
KODIAK	S108236965	USCG KODIAK SITE 09 AVGAS TANK FARM	KODIAK	99615	SHWS
KODIAK	S108670405	USCG AIRPORT STAGING AREA	KODIAK	99615	INST CONTROL, SHWS
KODIAK	S107029292	USCG LAKE LOUISE DRIVE RELEASE	LAKE LOUISE DRIVE	99615	SHWS
KODIAK	S109255815	USFWS - KODIAK NWR LILLY LAKE FLOAT PLANE STALL	LILLY LAKE; KODIAK NWR	99615	SHWS

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
KODIAK	S107029332	KODIAK - LONG ISLAND (FT. TIDBALL)	LONG ISLAND	99615	INST CONTROL, SHWS
KODIAK	S105755142	MARKAIR - KODIAK (CS)	LOT 2B / 3B, BLOCK 1200	99615	INST CONTROL, SHWS
KODIAK	S109911926	FIR TERRACE APARTMENTS	2610 MILL BAY ROAD	99615	SHWS
KODIAK	S103377005	KODIAK, CITY OF-PILLAR CREEK PUMP STATION	MONASHKA BAY ROAD; ,	99615	SWF/LF, LUST
KODIAK	S109255822	KODIAK, CITY OF-PILLAR CREEK PUMP STATION	MONASHKA BAY ROAD;	99615	SHWS
KODIAK	1000165936	KODIAK CY OF ISLAND BOROUGH LANDFILL	1203 MONASHKA BAY HWY	99615	FINDS, CERC-NFRAP, RCRA-CESQC
KODIAK	S109255584	KODIAK CITY OF-DOG BAY HARBOR USED OIL	NEAR ISLAND	99615	SHWS
KODIAK	S109254789	KODIAK, CITY OF-PIER II	PORT FACILITIES	99615	INST CONTROL, SHWS
KODIAK	S109255536	ADOTPF KODIAK MAINTENANCE FACILITY	901 REZANOF	99615	SHWS
KODIAK	S109254981	BAYSIDE GAS	3833 REZANOF LANE	99615	SHWS
KODIAK	S109254952	UNION TIRE AND BRAKE-KODIAK	202 REZANOFF;	99615	SHWS
KODIAK	S109254615	SPEEDEE KRAFT-BELLS FLATS	11012 REZONOF DRIVE WEST	99615	INST CONTROL, SHWS
KODIAK	S107029289	BELLS FLATS WELBORN/STRATTON DRUMS	RUSSIAN CREEK SUBDIVISION	99615	SHWS
KODIAK	S109254751	USCG-KODIAK BUILDING N2-WW TREATMENT PLANT TANK N2	SEWAGE TREATMENT PLANT BLDG. N2 USCG ISC BASE-KODI	99615	INST CONTROL, SHWS
KODIAK	S107029291	ST. PAUL (SMALL BOAT) HARBOR	SHELIKOF STREET AND	99615	SHWS
KODIAK	S105004475	AFOGNAK KONCOR LOGGING CAMP	EAST SHORE OF KAZAKOF BAY	99615	INST CONTROL, SHWS
KODIAK	1000904389	ALASKA AIRLINES KODIAK	STATE ARPRT RD	99615	FINDS, RCRA-NonGen
KODIAK	S109261008	ADFG - KODIAK AIRPORT	STATE AIRPORT, KODIAK,	99615	LUST
KODIAK	S109256549	ADFG - KODIAK AIRPORT	STATE AIRPORT, KODIAK	99615	SHWS
KODIAK	S106802263	RESIDENCE - 1117 STELLER WAY HHOT	1117 STELLER WAY	99615	INST CONTROL, SHWS
KODIAK	S109255678	TERROR LAKE HYDROELECTRIC PLANT-91	TERRO LAKE	99615	SHWS
KODIAK	S109093927	KODIAK HIGH SCHOOL HHOT	722 UPPER MILL BAY ROAD	99615	SHWS
KODIAK	S105755143	AT&T ALASCOM KODIAK EARTH STATION 1	121 UPPER MILL BAY ROAD	99615	SHWS
KODIAK	S109256027	USCG-KODIAK R-4 & R-5	USCG SC	99615	SHWS
KODIAK	S109256093	USCG-KODIAK S36	USCG SC	99615	SHWS
KODIAK	S109255925	USCG-KODIAK BUILDING N1 PUBLIC WORKS GARAGE TANK P	USCG ISC PUBLIC WORKS GARAGE, BLDG N1, USCG BASE	99615	SHWS
KODIAK	S109255571	USCG-KODIAK BUILDING 12-T-P30 UST	USCG ISC - KODIAK BUILDING 12-T-P30	99615	SHWS
KODIAK	S105246525	FAA KODIAK TOWER	USCG BASE, KODIAK	99615	SHWS
KODIAK	S107029288	KRAFTS DEPT. STORE/SM. BOAT HARBOR	WALDOS CENTER	99615	SHWS
KODIAK	S109255027	FAA - WOODY ISLAND NAVIGATIONAL FACILITY	WOODY ISLAND NEAR KODIAK;	99615	SHWS
KODIAK	S105159418	FAA WOODY ISLAND	WOODY ISLAND	99615	SHWS
KODIAK	S109568356	FAA WOODY ISLAND BLDG. 400	SE WOODY ISLAND	99615	SHWS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/01/2009	Source: EPA
Date Data Arrived at EDR: 10/14/2009	Telephone: N/A
Date Made Active in Reports: 11/09/2009	Last EDR Contact: 11/13/2009
Number of Days to Update: 26	Next Scheduled EDR Contact: 01/25/2010
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/01/2009	Source: EPA
Date Data Arrived at EDR: 10/14/2009	Telephone: N/A
Date Made Active in Reports: 11/09/2009	Last EDR Contact: 11/13/2009
Number of Days to Update: 26	Next Scheduled EDR Contact: 01/25/2010
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 08/17/2009
Number of Days to Update: 56	Next Scheduled EDR Contact: 11/16/2009
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/01/2009	Source: EPA
Date Data Arrived at EDR: 10/14/2009	Telephone: N/A
Date Made Active in Reports: 11/09/2009	Last EDR Contact: 11/13/2009
Number of Days to Update: 26	Next Scheduled EDR Contact: 01/25/2010
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 06/30/2009	Source: EPA
Date Data Arrived at EDR: 08/11/2009	Telephone: 703-412-9810
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 11/23/2009
Number of Days to Update: 41	Next Scheduled EDR Contact: 01/11/2010
	Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 06/23/2009	Source: EPA
Date Data Arrived at EDR: 09/02/2009	Telephone: 703-412-9810
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 09/09/2009
Number of Days to Update: 19	Next Scheduled EDR Contact: 12/14/2009
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/15/2009	Source: EPA
Date Data Arrived at EDR: 09/22/2009	Telephone: 800-424-9346
Date Made Active in Reports: 11/09/2009	Last EDR Contact: 11/16/2009
Number of Days to Update: 48	Next Scheduled EDR Contact: 03/01/2010
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 11/18/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 11/18/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 11/18/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: (206) 553-1200
Last EDR Contact: 11/18/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/01/2009
Date Data Arrived at EDR: 10/09/2009
Date Made Active in Reports: 11/09/2009
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/01/2009
Date Data Arrived at EDR: 10/09/2009
Date Made Active in Reports: 11/09/2009
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 08/31/2009
Date Data Arrived at EDR: 09/17/2009
Date Made Active in Reports: 11/09/2009
Number of Days to Update: 53

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/06/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Contaminated Sites Database

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 10/05/2009
Date Data Arrived at EDR: 10/06/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 16

Source: Department of Environmental Conservation
Telephone: 907-451-2143
Last EDR Contact: 11/20/2009
Next Scheduled EDR Contact: 03/08/2010
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 10/05/2009
Date Data Arrived at EDR: 10/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 907-269-7632
Last EDR Contact: 10/07/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 09/09/2009
Date Data Arrived at EDR: 09/09/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 9

Source: Department of Environmental Conservation
Telephone: 907-465-5301
Last EDR Contact: 09/09/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/24/2009	Source: EPA Region 8
Date Data Arrived at EDR: 09/10/2009	Telephone: 303-312-6271
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 42	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/24/2009	Source: EPA Region 7
Date Data Arrived at EDR: 05/20/2009	Telephone: 913-551-7003
Date Made Active in Reports: 06/17/2009	Last EDR Contact: 11/04/2009
Number of Days to Update: 28	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009	Source: EPA Region 1
Date Data Arrived at EDR: 02/19/2009	Telephone: 617-918-1313
Date Made Active in Reports: 03/16/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 25	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 08/20/2009	Source: EPA Region 10
Date Data Arrived at EDR: 08/21/2009	Telephone: 206-553-2857
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 31	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 08/21/2009	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/06/2009	Telephone: 415-972-3372
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 16	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Quarterly

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/20/2009	Source: EPA Region 4
Date Data Arrived at EDR: 08/26/2009	Telephone: 404-562-8677
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 57	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 08/24/2009	Source: EPA Region 6
Date Data Arrived at EDR: 08/26/2009	Telephone: 214-665-6597
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 26	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal registered storage tank lists

UST: Underground Storage Tank Database

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 09/09/2009	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 09/09/2009	Telephone: 907-269-7504
Date Made Active in Reports: 09/22/2009	Last EDR Contact: 09/09/2009
Number of Days to Update: 13	Next Scheduled EDR Contact: 12/07/2009
	Data Release Frequency: Semi-Annually

AST: Regulated Aboveground Storage Tanks

The list covers "regulated" facilities with storage capacities above 10,000 barrels (or 5,000 barrels of crude).

Date of Government Version: 01/05/2005	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 01/06/2005	Telephone: 907-465-5231
Date Made Active in Reports: 02/02/2005	Last EDR Contact: 09/18/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/21/2009
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/24/2009	Source: EPA Region 8
Date Data Arrived at EDR: 09/10/2009	Telephone: 303-312-6137
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 42	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009	Source: EPA, Region 1
Date Data Arrived at EDR: 02/19/2009	Telephone: 617-918-1313
Date Made Active in Reports: 03/16/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 25	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 08/20/2009	Source: EPA Region 10
Date Data Arrived at EDR: 08/21/2009	Telephone: 206-553-2857
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 31	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Quarterly

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/20/2009	Source: EPA Region 4
Date Data Arrived at EDR: 08/26/2009	Telephone: 404-562-9424
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 57	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 09/08/2008	Source: EPA Region 5
Date Data Arrived at EDR: 09/19/2008	Telephone: 312-886-6136
Date Made Active in Reports: 10/16/2008	Last EDR Contact: 10/22/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/16/2009
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 08/24/2009	Source: EPA Region 6
Date Data Arrived at EDR: 08/26/2009	Telephone: 214-665-7591
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 26	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2008	Source: EPA Region 7
Date Data Arrived at EDR: 12/30/2008	Telephone: 913-551-7003
Date Made Active in Reports: 03/16/2009	Last EDR Contact: 11/04/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/21/2009	Source: EPA Region 9
Date Data Arrived at EDR: 08/26/2009	Telephone: 415-972-3368
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 10/30/2009
Number of Days to Update: 57	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Quarterly

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Site Listing

A listing of sites with engineering controls in place included in the Contaminated Sites.

Date of Government Version: 10/05/2009	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 10/06/2009	Telephone: 907-451-2143
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 11/20/2009
Number of Days to Update: 16	Next Scheduled EDR Contact: 03/08/2010
	Data Release Frequency: Quarterly

Inst Control: Contaminated Sites with Institutional Controls

Contaminated sites that have institutional controls.

Date of Government Version: 10/05/2009	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 10/06/2009	Telephone: 907-451-2143
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 11/20/2009
Number of Days to Update: 16	Next Scheduled EDR Contact: 03/08/2010
	Data Release Frequency: Semi-Annually

State and tribal voluntary cleanup sites

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008	Source: EPA, Region 1
Date Data Arrived at EDR: 04/22/2008	Telephone: 617-918-1102
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 10/05/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 01/18/2010
	Data Release Frequency: Varies

VCP: Voluntary Cleanup Program sites

Sites involved in the Voluntary Cleanup Program.

Date of Government Version: 09/16/2009	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 09/17/2009	Telephone: 907-451-2143
Date Made Active in Reports: 09/22/2009	Last EDR Contact: 09/17/2009
Number of Days to Update: 5	Next Scheduled EDR Contact: 12/21/2009
	Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Identified and/or Proposed Brownfields Sites

Brownfield properties are defined by U.S Environmental Protection Agency (EPA) as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contamination." DEC is developing resources to assist eligible entities in Alaska in applying for EPA brownfields grants. The program also will provide technical assistance and perform some site assessments. The purpose of these assessments is to assist local redevelopment efforts on previously contaminated properties that are vacant or underused.

Date of Government Version: 10/05/2009	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 10/06/2009	Telephone: 907-451-2166
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 11/20/2009
Number of Days to Update: 16	Next Scheduled EDR Contact: 03/08/2010
	Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 07/01/2009	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/11/2009	Telephone: 202-566-2777
Date Made Active in Reports: 11/09/2009	Last EDR Contact: 11/04/2009
Number of Days to Update: 59	Next Scheduled EDR Contact: 01/11/2010
	Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009	Source: EPA, Region 9
Date Data Arrived at EDR: 05/07/2009	Telephone: 415-972-3336
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 09/23/2009
Number of Days to Update: 137	Next Scheduled EDR Contact: 12/21/2009
	Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 11/09/2009
Number of Days to Update: 52	Next Scheduled EDR Contact: 02/22/2010
	Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/01/2009
Date Data Arrived at EDR: 06/22/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 91

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/26/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Quarterly

CDL: Illegal Drug Manufacturing Sites

A list of properties that have been determined to be illegal drug manufacturing sites.

Date of Government Version: 09/11/2009
Date Data Arrived at EDR: 09/11/2009
Date Made Active in Reports: 09/22/2009
Number of Days to Update: 11

Source: Department of Environmental Conservation
Telephone: 907-269-7543
Last EDR Contact: 09/11/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 08/18/2009
Date Data Arrived at EDR: 08/21/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/02/2009
Next Scheduled EDR Contact: 02/15/2010
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/20/2009
Next Scheduled EDR Contact: 03/08/2010
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 10/05/2009
Date Data Arrived at EDR: 10/05/2009
Date Made Active in Reports: 11/09/2009
Number of Days to Update: 35

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SPILLS: Spills Database

Oil and hazardous substance releases to be reported to the Department of Environmental Conservation.

Date of Government Version: 10/09/2009	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 10/13/2009	Telephone: 907-465-5242
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 10/09/2009
Number of Days to Update: 9	Next Scheduled EDR Contact: 01/25/2010
	Data Release Frequency: Semi-Annually

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 11/12/2008	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/18/2008	Telephone: (206) 553-1200
Date Made Active in Reports: 03/16/2009	Last EDR Contact: 11/18/2009
Number of Days to Update: 118	Next Scheduled EDR Contact: 01/18/2010
	Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2008	Source: Department of Transportation, Office of Pipeline Safety
Date Data Arrived at EDR: 05/28/2008	Telephone: 202-366-4595
Date Made Active in Reports: 08/08/2008	Last EDR Contact: 11/10/2009
Number of Days to Update: 72	Next Scheduled EDR Contact: 02/22/2010
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 703-692-8801
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/23/2009
Number of Days to Update: 62	Next Scheduled EDR Contact: 02/01/2010
	Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2007	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 09/05/2008	Telephone: 202-528-4285
Date Made Active in Reports: 09/23/2008	Last EDR Contact: 09/30/2009
Number of Days to Update: 18	Next Scheduled EDR Contact: 12/28/2009
	Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 08/03/2009	Source: Department of Justice, Consent Decree Library
Date Data Arrived at EDR: 10/27/2009	Telephone: Varies
Date Made Active in Reports: 11/09/2009	Last EDR Contact: 10/06/2009
Number of Days to Update: 13	Next Scheduled EDR Contact: 01/18/2010
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/01/2009	Source: EPA
Date Data Arrived at EDR: 09/22/2009	Telephone: 703-416-0223
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 09/22/2009
Number of Days to Update: 30	Next Scheduled EDR Contact: 12/28/2009
	Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 01/05/2009	Source: Department of Energy
Date Data Arrived at EDR: 05/07/2009	Telephone: 505-845-0011
Date Made Active in Reports: 05/08/2009	Last EDR Contact: 09/14/2009
Number of Days to Update: 1	Next Scheduled EDR Contact: 12/14/2009
	Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/07/2009	Source: Department of Labor, Mine Safety and Health Administration
Date Data Arrived at EDR: 09/18/2009	Telephone: 303-231-5959
Date Made Active in Reports: 11/09/2009	Last EDR Contact: 09/18/2009
Number of Days to Update: 52	Next Scheduled EDR Contact: 12/21/2009
	Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2007	Source: EPA
Date Data Arrived at EDR: 04/09/2009	Telephone: 202-566-0250
Date Made Active in Reports: 06/17/2009	Last EDR Contact: 09/14/2009
Number of Days to Update: 69	Next Scheduled EDR Contact: 12/14/2009
	Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002	Source: EPA
Date Data Arrived at EDR: 04/14/2006	Telephone: 202-260-5521
Date Made Active in Reports: 05/30/2006	Last EDR Contact: 10/07/2009
Number of Days to Update: 46	Next Scheduled EDR Contact: 01/11/2010
	Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 09/10/2009
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/14/2009
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 09/10/2009
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/14/2009
	Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2007	Source: EPA
Date Data Arrived at EDR: 05/19/2009	Telephone: 202-564-4203
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 11/02/2009
Number of Days to Update: 125	Next Scheduled EDR Contact: 02/15/2010
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 08/21/2009	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/27/2009	Telephone: 202-564-5088
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 09/28/2009
Number of Days to Update: 56	Next Scheduled EDR Contact: 01/11/2010
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 05/27/2009	Source: EPA
Date Data Arrived at EDR: 08/05/2009	Telephone: 202-566-0500
Date Made Active in Reports: 09/29/2009	Last EDR Contact: 10/21/2009
Number of Days to Update: 55	Next Scheduled EDR Contact: 02/01/2010
	Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/06/2009	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 07/13/2009	Telephone: 301-415-7169
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 09/21/2009
Number of Days to Update: 70	Next Scheduled EDR Contact: 12/28/2009
	Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/28/2009	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/28/2009	Telephone: 202-343-9775
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 10/16/2009
Number of Days to Update: 55	Next Scheduled EDR Contact: 01/25/2010
	Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/23/2009	Source: EPA
Date Data Arrived at EDR: 07/28/2009	Telephone: (206) 553-1200
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 09/18/2009
Number of Days to Update: 55	Next Scheduled EDR Contact: 12/28/2009
	Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 05/22/2009
Number of Days to Update: 92

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/20/2009
Next Scheduled EDR Contact: 03/05/2010
Data Release Frequency: Biennially

DRYCLEANERS: Drycleaner Facility Listing A listing of drycleaning facilities in Alaska.

Date of Government Version: 02/15/2006
Date Data Arrived at EDR: 02/16/2006
Date Made Active in Reports: 03/15/2006
Number of Days to Update: 27

Source: Department of Environmental Conservation
Telephone: 907-269-7577
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: No Update Planned

NPDES: Wastewater Discharge Permit Listing A listing of permitted wastewater facilities.

Date of Government Version: 11/24/2006
Date Data Arrived at EDR: 11/27/2006
Date Made Active in Reports: 12/21/2006
Number of Days to Update: 24

Source: Department of Environmental Conservation
Telephone: 907-465-5480
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Varies

AIRS: AIRS Facility Listing A listing of permitted airs facilities.

Date of Government Version: 10/21/2009
Date Data Arrived at EDR: 10/22/2009
Date Made Active in Reports: 11/09/2009
Number of Days to Update: 18

Source: Department of Environmental Conservation
Telephone: 907-451-2103
Last EDR Contact: 10/19/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/23/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 09/09/2009
Date Data Arrived at EDR: 09/09/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/09/2009
Next Scheduled EDR Contact: 02/08/2010
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/23/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: N/A

COAL ASH: Coal Ash Disposal Sites

A listing of coal ash disposal site locations.

Date of Government Version: 10/05/2009
Date Data Arrived at EDR: 10/06/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 16

Source: Department of Environmental Conservation
Telephone: 907-451-2135
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/13/2009
Next Scheduled EDR Contact: 02/15/2010
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/28/2009
Date Data Arrived at EDR: 08/27/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 25

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 11/10/2009
Next Scheduled EDR Contact: 02/22/2010
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: PennWell Corporation

Telephone: (800) 823-6277

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facilities Database

Source: Department of Education & Early Development

Telephone: 907-465-2800

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory Data

Source: Department of Fish & Game

Telephone: 907-465-4100

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

RASPBERRY STRAIT DUMPSITE
WINTER TRAIL
KODIAK, AK 99615

TARGET PROPERTY COORDINATES

Latitude (North):	58.00170 - 58° 0' 6.1"
Longitude (West):	152.8439 - 152° 50' 38.0"
Universal Tranverse Mercator:	Zone 5
UTM X (Meters):	509226.8
UTM Y (Meters):	6428699.5
Elevation:	116 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property:	N/A
Source:	USGS 7.5 min quad index

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

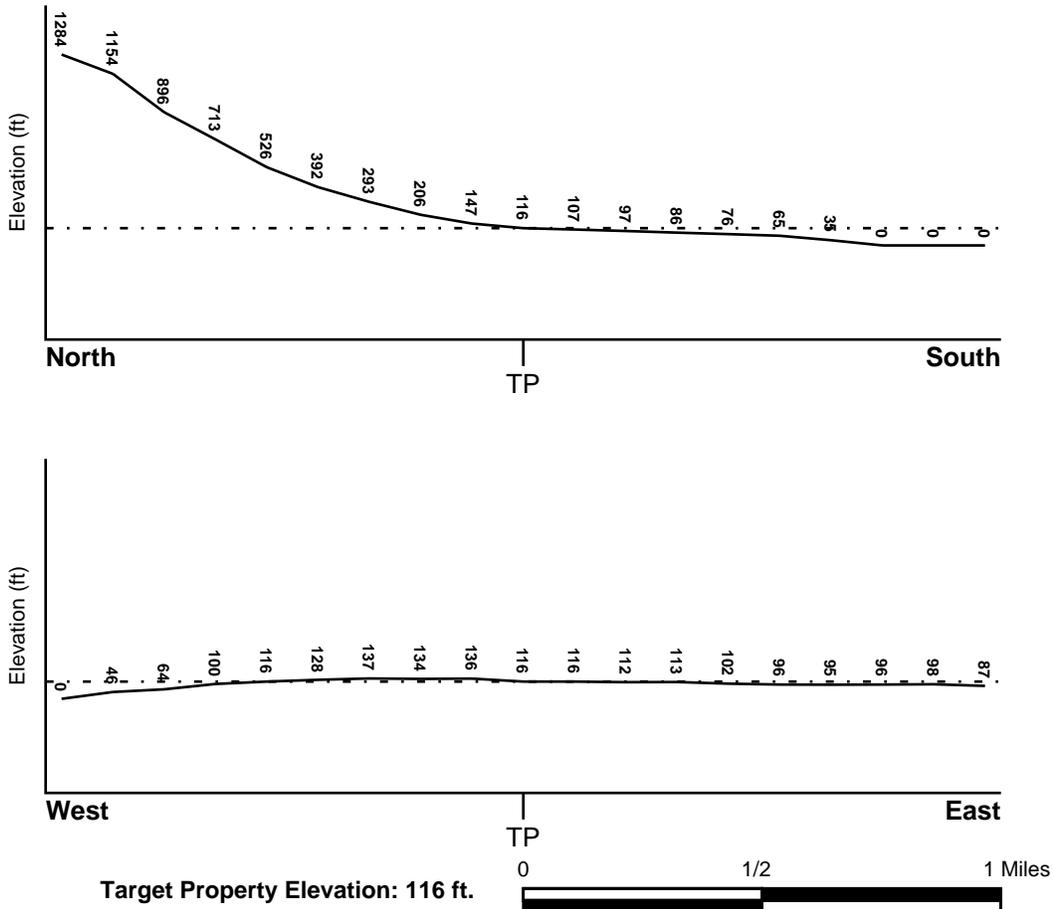
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Target Property County</u>	<u>FEMA Flood Electronic Data</u>
KODIAK_ISLAND, AK	Not Available

Flood Plain Panel at Target Property: Not Reported

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
Not Reported	N

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era: -
System: -
Series: -
Code: N/A (decoded above as Era, System & Series)

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: ANDIC CRYOCHTEPTS

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 40 inches

Depth to Bedrock Max: > 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	6 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
2	6 inches	11 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 5.50 Min: 4.50
3	11 inches	23 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Elastic silt.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
4	23 inches	42 inches	very stony - sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel.	Max: 6.00 Min: 2.00	Max: 5.50 Min: 4.50
5	42 inches	46 inches	weathered bedrock	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: No Other Soil Types

Surficial Soil Types: No Other Soil Types

Shallow Soil Types: silt loam

Deeper Soil Types: No Other Soil Types

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile

FEDERAL USGS WELL INFORMATION

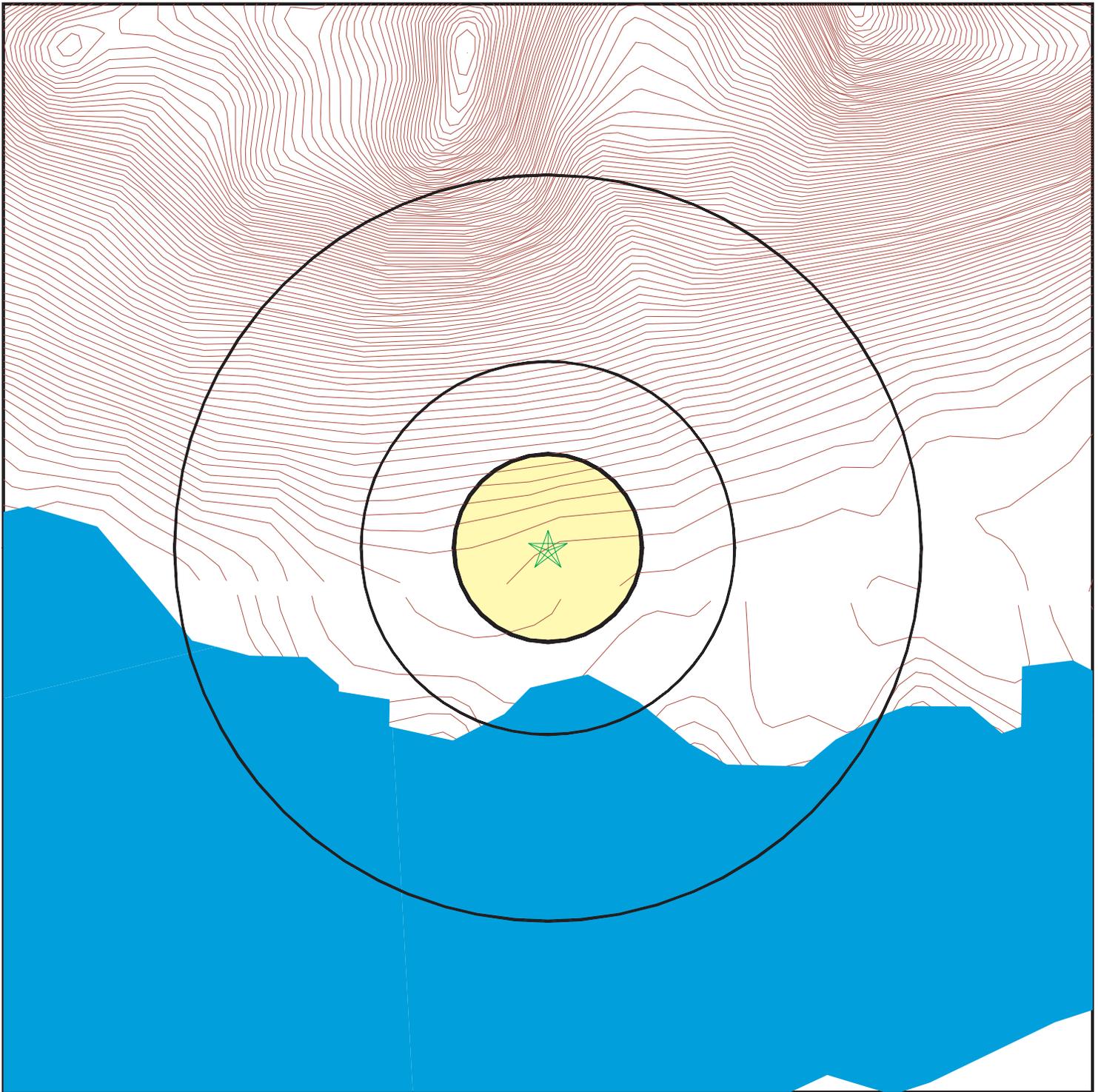
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

PHYSICAL SETTING SOURCE MAP - 2636640.2s



-  County Boundary
-  Major Roads
-  Contour Lines
-  Earthquake epicenter, Richter 5 or greater
-  Water Wells
-  Public Water Supply Wells
-  Cluster of Multiple Icons



-  Groundwater Flow Direction
-  Indeterminate Groundwater Flow at Location
-  Groundwater Flow Varies at Location



SITE NAME: Raspberry Strait Dumpsite
 ADDRESS: Winter Trail
 Kodiak AK 99615
 LAT/LONG: 58.0017 / 152.8439

CLIENT: SLR Alaska
 CONTACT: Christina Bentz
 INQUIRY #: 2636640.2s
 DATE: November 23, 2009 5:45 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: AK Radon

Radon Test Results

City	Zip	Total Sites	<0.5 pCi/L	0.5-2.0	2.1-4.0	4.1-10	10-20	>20 pCi/L
Kodiak	99615	27	21	5	1	0	0	0
Akhiok	99615	5	4	0	0	0	0	0

Federal EPA Radon Zone for KODIAK ISLAND County: 3

- Note: Zone 1 indoor average level > 4 pCi/L.
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 99615

Number of sites tested: 17

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.135 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.790 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory Data

Source: Department of Fish & Game

Telephone: 907-465-4100

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

State Database: AK Radon

Source: University of Alaska Fairbanks

Telephone: 907-474-7201

Radon Information

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

STREET AND ADDRESS INFORMATION

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Raspberry Strait Dumpsite

Winter Trail

Kodiak, AK 99615

Inquiry Number: 2636640.3

November 11, 2009

Certified Sanborn® Map Report

Certified Sanborn® Map Report

11/11/09

Site Name:

Raspberry Strait Dumpsite
Winter Trail
Kodiak, AK 99615

Client Name:

SLR Alaska
4601 Business Park Blvd
Anchorage, AK 99503



EDR Inquiry # 2636640.3

Contact: Christina Bentz

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by SLR Alaska were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: Raspberry Strait Dumpsite
Address: Winter Trail
City, State, Zip: Kodiak, AK 99615
Cross Street:
P.O. # 005.0065.09020
Project: Raspberry Strai
Certification # 8F15-46D7-BFC1



Sanborn® Library search results
Certification # 8F15-46D7-BFC1

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- Library of Congress
- University Publications of America
- EDR Private Collection

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Raspberry Strait Dumpsite

Winter Trail

Kodiak, AK 99615

Inquiry Number: 2669170.1

January 06, 2010

The EDR Historical Topographic Map Report

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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Historical Topographic Map



<p>N</p>	TARGET QUAD	SITE NAME:	SLR Alaska
	NAME: Kodiak (D-3), AK	Raspberry Strait Dumpsite	CONTACT: Christina Bentz
	MAP YEAR: 1950	ADDRESS: Winter Trail Kodiak, AK 99615	INQUIRY#: 2669170.1
	SERIES: 15	LAT/LONG: 58.0017 / 152.843	RESEARCH DATE: 01/06/2010
	SCALE: 1:63,360		

Historical Topographic Map



<p>N</p>	TARGET QUAD	SITE NAME:	Raspberry Strait Dumpsite	CLIENT:	SLR Alaska	
	NAME:	Kodiak, AK	ADDRESS:	Winter Trail	CONTACT:	Christina Bentz
	MAP YEAR:	1983		Kodiak, AK 99615	INQUIRY#:	2669170.1
	REVISED FROM:	1952	LAT/LONG:	58.0017 / 152.843	RESEARCH DATE:	01/06/2010
	SERIES:	60				
	SCALE:	1:250,000				

Historical Topographic Map



<p>N</p>	ADJOINING QUAD	SITE NAME:	SLR Alaska
	NAME: Afognak (A-3), AK	Dumpsite	CONTACT: Christina Bentz
	MAP YEAR: 1954	ADDRESS: Winter Trail Kodiak, AK 99615	INQUIRY#: 2669170.1
	SERIES: 15	LAT/LONG: 58.0017 / 152.843	RESEARCH DATE: 01/06/2010
	SCALE: 1:63,360		

STATEMENT OF LIMITATIONS

STATEMENT OF LIMITATIONS

The conclusions presented in this report are professional opinions based on data described in this report. These opinions have been arrived at in accordance with currently accepted environmental industry standards and practices applicable to the work described in this report. The opinions presented are subject to the following inherent limitations:

1. This report was prepared for the exclusive use of the entity referenced in Section 1.6. No other entity may rely on the information presented in the report without the expressed written consent of SLR.
 2. This Phase I ESA report is subject to the terms and conditions in the SLR proposal referenced in Section 1.4 and in the contract between SLR and its client under which the work was performed. Any use of the Phase I report constitutes acceptance of the limits of SLR's liability specified in the contract. SLR's liability extends only to its client and not to any other parties who may obtain the Phase I report.
 3. SLR derived the data in this report primarily from visual inspections, examination of records in the public domain, and interviews with individuals having information about the *Site*. The passage of time, manifestation of latent conditions, or occurrence of future events may require further study at the *Site*, analysis of the data, and reevaluation of the findings, observations, and conclusions in the report.
 4. The data reported and the findings, observations, and conclusions expressed in the report are limited by the scope of work. The scope of work is presented in Section 1.4 and was agreed to by the client.
 5. SLR's Phase I ESA reports present professional opinions and findings of a scientific and technical nature. The report shall not be construed to offer legal opinion or representations as to the requirements of, nor compliance with, environmental laws, rules, regulations, or policies of federal, state, or local governmental agencies.
 6. The conclusions presented in this report are professional opinions based on data described in this report. They are intended only for the purpose, *Site* location, and project indicated. This report is not a definitive study of contamination at the *Site* and should not be interpreted as such. An evaluation of subsurface soil and groundwater conditions was not performed as part of this investigation, unless indicated in Section 1.4. No sampling or chemical analyses of structural materials or other media was completed as part of this study unless explicitly stated in Section 1.4.
 7. This report is based, in part, on unverified information supplied to SLR by third-party sources. While efforts have been made to substantiate this third-party information, SLR cannot guarantee its completeness or accuracy.
-

**QUALIFICATIONS OF ENVIRONMENTAL
PROFESSIONALS**

Eugene T. Watson, P. Geo. (VA)

Principal Financial & Professional Services

Biography

Mr. Watson has over 29 years of professional experience in the petroleum and environmental consulting fields. His environmental experience has focused primarily on providing due diligence services to the legal and corporate sectors. This has included site assessment, contamination assessment, cost estimating, and site remediation for commercial, industrial and utility properties. Mr. Watson manages SLR's Timberland Specialty Group. This group provides due diligence and assessment services to the Timberland and Forest Products Sectors, including contamination assessment and compliance services. Mr. Watson has assisted several Fortune 100 companies in their site acquisition programs involving hundreds of facilities throughout North America, and in Europe, South America and Southeast Asia. His areas of responsibility have included project planning, cost estimating, budgeting, contract compliance, and technical review of environmental assessment projects. Mr. Watson has authored and coauthored Phase I and Phase II Environmental Site Assessments (ESAs) involving thousands of real estate transactions, as well as performed peer reviews of similar work performed by other consultants. He has also prepared site characterization reports, Corrective Action Plans (CAPs), and remediation designs for leaking underground storage tanks (LUSTs) and other sources of subsurface contamination. Mr. Watson is also actively involved in the development of standards for the industry through his membership on the ASTM E50 Committee and the 1527 and 2247 Task Groups, which produced the ASTM Phase I Practices, as well as other real estate transactional assessment guidelines. Mr. Watson has given numerous presentations at environmental seminars and training sessions, addressing such topics as Environmental Due Diligence, UST Management, Lender Liability, and Corporate Management of Environmental Liability. In addition, Mr. Watson has performed surveys for asbestos-containing materials (ACM), developed management plans, and prepared specifications for ACM abatement. He has also lectured at the Medical College of Virginia EPA-accredited Asbestos Training Series.

Career Experience

- Managed and performed timberland and sawmill due diligence projects throughout the U.S. on behalf of both sellers and buyers. Having been actively involved on the ASTM committee that produced the E 1527-05 and 2247-08 standard practices, Mr. Watson has also performed peer reviews of due diligence reports prepared by other consultants for compliance to the ASTM and AAI protocol.
- Conducted environmental due diligence on corporate acquisitions in the U.S., Europe and Southeast Asia, and also provided environmental compliance services to acquired operations.
- Managed several national programs of Phase I and II ESAs for commercial and light industrial properties throughout the U.S. that involved hundreds of properties per year. Responsible for coordinating services from a large number of SLR offices in the US and Europe in order to produce a consistent work product for facilities throughout the world.
- Provided underground storage tank services, including management compliance issues, tank removal and disposal, closure reports, and soil and groundwater contamination investigations and mitigation.
- Conducted compliance audits for light industrial facilities, including review of hazard communication procedures, status of required permitting, and development of baseline assessments for future monitoring.
- Developed and implemented a personnel monitoring protocol for construction workers in a potentially hazardous environment of naturally occurring asbestos.



EDUCATION

- B.A. Environmental Sciences, University of Virginia, 1977
- M. Sc. Geological Engineering, University of Missouri, 1980

MAIN SPECIALTY

- M&A Environmental Due Diligence/Timberland Acquisition and Divestiture/Environmental Compliance Management

AREAS OF EXPERTISE

- Corporate M&A and Timberland Due Diligence
- Environmental Regulatory Compliance Management
- Due Diligence/Environmental Expenditure Analysis
- Environmental Approvals/Permitting
- Contaminant Assessment
- Mitigation/Remediation Design
- Baseline Environmental Studies

RELEVANT INDUSTRY EXPERIENCE

- Commercial Real Estate
- Industrial M&A
- Timberland and Forest Products
- Automotive & Transportation
- Retail Commercial
- Oil & Gas



Eugene T. Watson, P. Geo. (VA)

Principal Financial & Professional Services

- Provided project administration, including the preparation of specifications and bid documents, for the abatement of asbestos in an occupied, 12-story office building.

Project Experience (continued)

- Responsible for all aspects of the development and operation of a regional environmental consulting and contracting firm. Services provided included removal and closure of USTs, testing and disposal of hazardous wastes, application for state reimbursement of UST cleanup costs, and site characterization studies of contaminated UST sites.
- Vice President and General Manager of an environmental and engineering consulting company that provided a broad range of environmental and geotechnical services, including UST management, M&A due diligence, and contaminated site mitigation and closure.
- Vice President of Engineering and Production for an oil and gas exploration and production company, responsible for all engineering and production matters involved in the production of oil and gas from fields in Pennsylvania and Virginia.
- Served as Senior Geological Engineer for an international oil and gas company, performing geological assessments of known petroleum producing areas with the objective of developing additional reserves and increasing existing production.

Ms. Bentz has over 6 years of experience as a geologist in the environmental consulting field with over 5 years in Alaska. In the office, Ms. Bentz has been involved in the preparation of work plans, technical reports, conceptual site models, property assessment and cleanup plans, phase I site assessments, exploration and monitoring well logs, and other related documents. In the field, Ms. Bentz has acted as a site manager, site safety and health officer, geologist, and lead sampler on several projects. In addition, Ms. Bentz has experience overseeing subcontractors, working as a rig geologist, collecting soil, sediment, and ground water samples, and acting as a quality control/quality assurance representative. Ms. Bentz has provided support for projects for the government and private sector clients including: Alaska Department of Environmental Conservation, Alyeska Pipeline Services Company, British Petroleum, Northern Dynasty Mines, The Pebble Partnership, U.S. Army Engineering District, Alaska, the U.S. Air Force Center for Environmental Excellence, and the U.S. Coast Guard,. Ms. Bentz has primarily been involved with the planning and implementation of environmental baseline studies, site investigations, and remediation projects across the State of Alaska.

SELECTED PROJECT EXPERIENCE

- Ms. Bentz has been involved in several site assessments and site visits for the State of Alaska Department of Environmental Conservation. As part of these, Ms. Bentz has coordinated worked closely with members of villages across the state to develop cleanup plans to assist communities in moving through the Brownfield process.
- Ms. Bentz has written more than twenty Conceptual Site Models (CSMs) for sites across the state of Alaska in accordance with State of Alaska Department of Environmental Conservation regulations. These CSMs involve a complete review of site specific conditions, historical operations, and sampling results to assess risks to human receptors.
- Project lead for routine monitoring and testing of a Westbay multilevel ground water monitoring well. Ms. Bentz performs monthly profiles, manages data, and has been involved with pumping tests. In addition, Ms. Bentz coordinates directly with the client.
- Ms. Bentz has provided support for hydrogeologic testing including observing core to determine the locations of water-bearing zones, set-up and administering pumping tests, managing and reviewing data from twenty-one transducers, communicating results and testing status to key project and client personnel.
- Project lead for a complex helicopter-portable drilling program in Iliamna, Alaska. Ms. Bentz oversaw the drilling and installation of piezometers and monitoring wells in 2007 and 2008. Her role included logistics planning and coordination, sampling and logging cuttings collected via ODEX air and mud rotary drilling, conducting flow tests, transmission of information, and coordination with project personnel on a daily basis. As the onsite geologist, Ms. Bentz, was also responsible for ensuring compliance with permits and protection of the environment.
- Ms. Bentz provides expertise in the area of boring log and monitoring well completion log creation, editing, and management using gINT. Ms. Bentz has created and modified templates to meet project and client needs as well as developed innovative ways for

entering data in the field. Ms. Bentz has completed over 200 logs using gINT and has trained others in the use of the program.

- Preparation of a comprehensive report of spills and contaminated sites at pump stations along the Trans-Alaska Pipeline to assess potential environmental liabilities. This project included extensive research of existing information to compile text, lists, and corresponding figures presenting relevant information. This report is an invaluable tool to our client.
- Conducted site assessments including work plan preparation; drilling oversight; lithologic descriptions; field screening; well development; soil and ground water sampling; and reporting activities for the State of Alaska Department of Environmental Conservation. Ms. Bentz has been involved in multiple projects of this nature for this specific client.
- Managed the subsurface investigation of a 3,200 barrel crude oil spill. Ms. Bentz directed the installation of trenches and excavations to delineate the vertical and lateral extent of contamination. Ms. Bentz was responsible for coordinating personnel and equipment and designed the sampling plan. The site investigation identified the area of impact and will be used to develop a corrective action plan.
- Provided management and technical support for the preparation, execution, and technical reporting for an investigation/remedial action in Yakutat, Alaska. Under Ms. Bentz's leadership, the Yakutat project was completed successfully ahead of schedule, under budget, accident free, and with excellent client satisfaction.
- Provided management and technical support for a treatability study based in Kodiak, Alaska. On this project, Ms. Bentz took an active roll in field work, preparing and reviewing technical reports, conducting cost estimates, preparation of requests for proposals, and coordination of field work. In addition, Ms. Bentz was responsible for managing a \$1.2 million dollar budget, schedule, overseeing the execution of work done by others, and communicating directly with the client. Under Ms. Bentz's leadership, deliverables were submitted to the client on schedule, work was being completed within the allocated budget, and client perception and satisfaction improved.
- Offered technical support to multiple projects in the form of preparation and revision of technical reports, planning and procurement activities, document reviews, coordination with clients and regulators, and field support (rig geologist overseeing drilling, lead sampler and assistant sampler performing soil, sediment, and groundwater development and sampling, and onsite training of personnel in sampling, shipping, and proper documentation procedures).

EDUCATION

M.S., Geology, The University of Michigan, Ann Arbor, Michigan, 2003

B.S., Geosciences, Pacific Lutheran University, Tacoma, Washington, 2001

APPENDIX G

COST ESTIMATE SPREADSHEETS

Cost Estimate for FY 2010 Work April 2010 - Raspberry Strait Dumpsite, Afognak Island, Alaska

1. Direct Labor	Clerical	Drafting	Environmental Scientist	Project Manager	Project Director	Total		Comments / Backup
	\$55.00	\$90.00	\$90.00	\$100.00	\$130.00	Hours	Cost	
Task 1 - Remedial Work Plan Preparation	6	24	60	16	4	110	\$10,010.00	40 hours for plan prep plus one site visit of one 12-hour day (including coordination with Village representatives) and 8 hours travel (round trip)
Task 2 - Solid Waste Removal and Targeted Surface and Subsurface Soil Investigation		8	80	16	4	108	\$10,040.00	Assumes 12 hours for consultant to mobilize for field work and coordinate with stakeholders and equipment operators. Consultant will perform targeted surface and subsurface soil investigation during debris removal. Assumes consultant will be onsite for 1 day at the beginning of the debris removal and 4 days at the end. This task includes 8 hours for round trip travel from Anchorage to Kodiak per trip.
Task 3A - Excavation of Contaminated Soils, Loading Super Sacks, and Staging Super Sacks on Beach			68	4	2	74	\$6,780.00	Assumes an ATV with 1,600 pound utility trailer. One hour turn time for each load from excavation of contaminated soil will be the rate-limiting step. Assumes 10-hour days with 2-hours of travel to/from Afognak Island; a total of 12 trips per day per ATV. Total 10-hour operating day of hauling and excavation. One contingency day added for equipment maintenance. Excavation floor sampling/mapping will take place during excavation. Assumes Super Sacks can be staged at the beach for future pick up by landing craft. This task includes 8 hours for round trip travel from Anchorage to Kodiak per trip.
Task 3B - Backfilling Excavations (50 cubic yards)			32	4	2	38	\$3,540.00	Assumes an ATV with 1,600 pound utility trailer. One hour turn time for each load of backfill from beach will be the rate-limiting step. Assumes 10-hour days with 2-hours of travel to/from Afognak Island; a total of 12 trips per day per ATV. Total 10-hour operating day of hauling and backfilling. One contingency day added for equipment maintenance. This task includes 8 hours for round trip travel from Anchorage to Kodiak per trip.
Task 3C - Shipping and Disposal of Contaminated Soil			8	4	8		\$2,160.00	
Task 4 - Reporting	12	24	72	24	8	140	\$12,740.00	Final report summarizing debris and contaminated soil removal and excavation confirmation sample results.
Total Hours	18	56	320	68	28	490		
Labor Cost	\$990	\$5,040	\$28,800	\$6,800	\$3,640		Labor Cost Total \$45,270	

Task 1 - Remedial Work Plan Preparation	No. of Units	Unit	Cost Per Unit	Subtotal	Comments
Phone/FAX	1	estimate	\$50	\$50	
Reproduction	1	estimate	\$250	\$250	
Per Diem	2	estimate	\$65	\$130	
Lodging	2	estimate	\$170	\$340	
Consultant RT Airfare, Anchorage to Kodiak	1	each	\$370	\$370	Frontier Alaska from Anchorage to Kodiak
Transportation to/from Kodiak to Afognak Island	1	each	\$1,200	\$1,200	Day rate quoted from Fish & Chips Charters
				Subtotal Task 1 (ODC)	\$1,140
				Subtotal Task 1 (Labor)	\$10,010
				Task 1 - Total Costs	\$11,150

Cost Estimate for FY 2010 Work April 2010 - Raspberry Strait Dumpsite, Afognak Island, Alaska

Task 2 - Solid Waste Removal and Targeted Surface and Subsurface Soil Investigation	No. of Units	Unit	Cost Per Unit	Subtotal	Comments
Consultant RT Airfare, Anchorage to Kodiak	2	each	\$370	\$740	Frontier Alaska from Anchorage to Kodiak
ATV	2	each	\$7,624	\$15,248	Alaska Mining and Diving quote on CanAm Outlander 400 XT Model - January 2010
ATV Trailer	2	each	\$1,599	\$3,198	Alaska Mining and Diving quote on 1600 pound utility trailer - January 2010
ATV and Trailer Delivery to Whittier	1	each	\$1,000	\$1,000	Assumed rate
ATV and Trailer Shipping	2	each way	\$300	\$600	Assumes transportation from Whittier to Kodiak on Alaska Marine Highway system unaccompanied for 2 ATVs and trailers
ATV Fuel	300	gallons	\$5	\$1,500	Assumes 10 gallons per day per ATV
Transportation of Equipment, Supplies, Etc. from Kodiak to Afognak Island	1	day	\$6,000	\$6,000	Based on rate quote from Lazy Bay (January 2010); Assumes day rate. If shipment can be coordinated with another trip, cost would be lower.
Track-mounted Excavator	14	12-hr days	\$240	\$3,360	Kodiak Rental Center quote - January 2010; Includes 2 additional days for transportation
Track-mounted Excavator	17	12-hr days	\$240	\$4,080	Kodiak Rental Center quote - January 2010; Includes 2 additional days for transportation
Equipment Fuel	900	gallons	\$5	\$4,500	Assumes 3 gallons per hour of equipment use
Equipment Operator #1 (Onsite)	180	Hour	\$52	\$9,385	Assumes 15 days for loading of non-hazardous debris into Super Sacks onsite. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Equipment Operator #2 (Beach)	180	Hour	\$52	\$9,385	Assumes 15 days for staging Super Sacks at beach and loading onto landing craft. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Laborer #1 (ATV driver)	180	Hour	\$43	\$7,819	Assumes 15 days for transporting Super Sacks of refuse from Site to beach. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Laborer #2 (ATV driver)	180	Hour	\$43	\$7,819	Assumes 15 days for transporting Super Sacks of refuse from Site to beach. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Laborer #3 (Assist Excavator Operator - Onsite)	180	Hour	\$43	\$7,819	Assumes 15 days for loading of non-hazardous debris into Super Sacks onsite. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Laborer #4 (Assist Excavator Operator - Beach)	180	Hour	\$43	\$7,819	Assume 15 days for staging Super Sacks at beach. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Laborer #5 (Collect and Load Scattered Refuse)	84	Hour	\$43	\$3,649	Assume one week for collection and loading non-hazardous debris into Super Sacks onsite. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Laborer #6 (Collect and Load Scattered Refuse)	84	Hour	\$43	\$3,649	Assume one week for collection and loading non-hazardous debris into Super Sacks onsite. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Lined Supersacks	500	each	\$60	\$30,000	Super Sacks will be used for consolidating refuse to facilitate transportation of waste; Assumes 1 cubic yard per Super Sack
Landing Craft Transportation of Refuse from Afognak Island to Kodiak Island	7	day	\$7,000	\$49,000	Based on rate quoted by Cape Douglas (January 2010) with maximum capacity of 120 tons per trip; Assumes day rate with one tide suitable for loading/unloading per day.
Barge Transport to Seattle (Refuse)	25	container	\$4,210	\$105,250	Northland Services Quote - January 2010; Assumes Northland will load containers from landing craft and containers will hold 30,000 pounds of refuse.
Landfill Disposal (Refuse)	25	container	\$1,800	\$45,000	PSC quote - March 2010; Includes transportation from Seattle to Landfill
Drum Sample Analysis - Method 1311 TCLP for SW-846 Method 8260 for Volatiles	4	samples	\$265	\$1,060	One sample per drum with contents plus one duplicate sample; Assume 3 drums have contents.
Drum Sample Analysis - Method 1311 TCLP for SW-846 Method 8270 for Semi volatiles	4	sample	\$305	\$1,220	One sample per drum with contents plus one duplicate sample; Assume 3 drums have contents.
Drum Sample Analysis - Method 1311 TCLP for SW-846 Method 6020 for Metals	4	sample	\$245	\$980	One sample per drum with contents plus one duplicate sample; Assume 3 drums have contents.
Soil Sample Analysis - DRO/RRO AK101/AK102	22	samples	\$85	\$1,870	Samples and duplicates needed to characterize the extent of POL-impacted soil.
Soil Sample Analysis - RCRA Metals	22	samples	\$155	\$3,410	Samples and duplicates needed to characterize the extent of metals-impacted soil.
Water Sample Analysis (New Monitoring Well) - DRO/RRO AK102/AK103	4	samples	\$85	\$340	Monitoring Well Water Sample
Water Sample Analysis (New Monitoring Well) - RCRA metals	4	samples	\$155	\$620	Monitoring Well Water Sample
Water Sample Analysis (New Monitoring Well) - PAHs EPA 8270 SIM	4	samples	\$185	\$740	Monitoring Well Water Sample
Water Sample Analysis (New Monitoring Well) - VOC SW 8260B	4	sample	\$185	\$740	Monitoring Well Water Sample
Water Trip Blank Analysis (New Monitoring Well) - VOC SW 8260B	1	trip blank	\$92.50	\$93	Monitoring Well Water Sample Travel Blank
Gasoline powered auger rental (Includes extra shipping time)	2	week	\$300	\$600	Based on Rate from TTT Environmental
Well Points for up to 15 foot depth	3	each	\$200	\$600	Based on Rate from TTT Environmental
Transportation of Consultant Equip/Materials to Kodiak	1	estimate	\$2,000	\$2,000	
Lodging in Kodiak	7	man-day	\$170	\$1,190	
Meals	7	man-day	\$65	\$455	Estimated daily cost for food and meals.
Transportation between Kodiak and Afognak	17	days	\$1,200	\$20,400	Fish and Chips Charters; Based on transport in AM and PM for 6 persons; Additional trips will require payment for fuel
PID Rental	7	days	\$50	\$350	
Digital Camera	7	days	\$10	\$70	
PPE	109	days	\$20	\$2,180	
Subtotal Task 2 (ODC)				\$365,739	
Subtotal Task 2 (Labor)				\$10,040	
Task 2 - Total Costs				\$375,779	

Cost Estimate for FY 2010 Work April 2010 - Raspberry Strait Dumpsite, Afognak Island, Alaska

Task 3A - Excavation of Contaminated Soils, Loading Super Sacks, and Staging Super Sacks on Beach	No. of Units	Unit	Cost Per Unit	Subtotal	Comments
Track-mounted Excavator	7	12-hr days	\$240	\$1,680	Kodiak Rental Center quote - January 2010; Assume already at Afognak Island per earlier work
Track-mounted Excavator	7	12-hr days	\$240	\$1,680	Kodiak Rental Center quote - January 2010; Assume already at Afognak Island per earlier work
Equipment Fuel	300	gallons	\$5	\$1,500	Assumes 3 gallons per hour of equipment use
ATV Fuel	100	gallons	\$5	\$500	Assumes 10 gallons per day per ATV
Equipment Operator #1 (Onsite)	60	Hour	\$52	\$3,128	Assumes 5 days for excavation and loading soils onto ATVs at Site. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Equipment Operator #2 (Beach)	60	Hour	\$52	\$3,128	Assumes 5 days for staging Super Sacks of soil at beach and loading onto landing craft. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Laborer #1 (ATV driver)	60	Hour	\$43	\$2,606	Assumes 5 days for transporting Super Sacks of soil from Site to beach. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate include Fringe Costs.
Laborer #2 (ATV driver)	60	Hour	\$43	\$2,606	Assumes 5 days for transporting Super Sacks of soil from Site to beach. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate include Fringe Costs.
Laborer #3 (Assist Excavator Operator - Onsite)	60	Hour	\$43	\$2,606	Assumes 5 days for loading of contaminated soil into Super Sacks onsite. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate include Fringe Costs.
Laborer #4 (Assist Excavator Operator - Beach)	60	Hour	\$43	\$2,606	Assume 5 days for staging Super Sacks at beach. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Soil Sample Analysis (Floor Characterization) - DRO/RRO AK102/AK103	5	samples	\$85	\$425	Needed to characterize excavation floor levels, assumes two POL-impacted soil excavations planned to be 225 square feet each. This will require two samples per excavation (two for first 250 square feet). Total samples is 4, plus 1 for QC. Thus, per UST procedures manual, sample requirements will be 5 based on estimated excavation limits.
Soil Sample Analysis (Floor Characterization) - RCRA metals	5	sample	\$155	\$775	Needed to characterize excavation floor levels, assumes two metal-impacted soil excavations planned to be 225 square feet each. This will require two samples per excavation (two for first 250 square feet). Total samples is 4, plus 1 for QC. Thus, per UST procedures manual, sample requirements will be 5 based on estimated excavation limits.
Soil Sample Analysis (Sidewall Characterization) - DRO/RRO AK102/AK103	7	samples	\$85	\$595	Sidewall characterization based on one sample per 20 linear feet with 10% QC duplicate frequency.
Soil Sample Analysis (Sidewall Characterization) - RCRA metals	7	sample	\$155	\$1,085	As above for excavation sidewall.
Soil Sample Analysis (Sidewall and Floor) PAH SIM SW 8270	3	sample	\$185	\$555	PAH analysis on selected sidewall and floor samples exhibiting highest screening results.
Soil Sample Analysis (Sidewall and Floor) VOC 8260B	3	sample	\$185	\$555	VOC analysis on selected sidewall and floor samples exhibiting highest screening results or areas indicative of solvent or gasoline use.
Soil Sample Analysis (Sidewall and Floor) VOC Travel Blanks	1	trip blank	\$92	\$92	Trip blanks for VOC analyses.
20-mil HDPE Liner Material for staging Super Sacks	2000	sq ft	\$0.35	\$700	Polar Supply quote 5/19/2009 with 1000 square feet for Site and 1000 square feet for beach
Lined Supersacks	100	each	\$60	\$6,000	Super Sacks will be used for contaminated soil to facilitate transportation of waste; due to weight limits on ATV trailers, Super Sacks will only be filled half full.
Transportation of Equip/Materials to Kodiak	1	estimate	\$2,000	\$2,000	
Lodging	3	days	\$100	\$300	
Meals	3	days	\$65	\$195	
Transportation between Kodiak and Afognak	5	days	\$1,200	\$6,000	Fish and Chips Charters; Based on transport in AM and PM for 6 persons; Additional trips will require payment for fuel
PPE	32	days	\$20	\$640	
Digital Camera	2	days	\$10	\$20	
PID Rental	2	days	\$50	\$100	
Consultant RT Airfare, Anchorage to Kodiak	1	each	\$370	\$370	Frontier Alaska from Anchorage to Kodiak
Subtotal Task 3A (ODC)				\$42,449	
Subtotal Task 3A (Labor)				\$6,780	
Task 3A - Total Costs				\$49,229	
Task 3B - Backfilling Excavations (50 cubic yards)					
Track-mounted Excavator	7	12-hr days	\$240	\$1,680	Kodiak Rental Center quote - January 2010; Assumes 2 extra days for transportation
Track-mounted Excavator	7	12-hr days	\$240	\$1,680	Kodiak Rental Center quote - January 2010; Assumes 2 extra days for transportation
Equipment Fuel	300	gallons	\$5	\$1,500	Assumes 3 gallons per hour of equipment use
ATV Fuel	100	gallons	\$5	\$500	Assumes 10 gallons per day of ATV use
Equipment Operator #1 (Onsite)	60	Hour	\$52	\$3,128	Assumes 5 days for receiving backfill and backfilling excavations onsite. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate include Fringe Costs.
Equipment Operator #2 (Beach)	60	Hour	\$52	\$3,128	Assumes 5 days for unloading backfill from landing craft and loading onto ATVs. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs.
Laborer #1 (ATV driver)	60	Hour	\$43	\$2,606	Assumes 5 days for transporting Super Sacks of backfill from beach to Site. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate include Fringe Costs.
Laborer #2 (ATV driver)	60	Hour	\$43	\$2,606	Assumes 5 days for transporting Super Sacks of backfill from beach to Site. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate include Fringe Costs.
Laborer #3 (Assist Excavator Operator - Onsite)	60	Hour	\$43	\$2,606	Assumes 5 days for unloading Super Sacks of backfill onsite. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fringe Costs
Laborer #4 (Assist Excavator Operator - Beach)	60	Hour	\$43	\$2,606	Assume 5 days for loading Super Sacks onto ATV trailers at beach. Davis Bacon wage rates for Group I Operator and Group I Laborer. Rate includes Fring Costs.
Purchase of small plate compactor and shipping with liner material	1	estimate	\$2,500	\$2,500	16" by 21" plate compactor is \$1,995 at CMI in Fairbanks May 2009
Lodging	2	day	\$170	\$340	
Meals	2	day	\$65	\$130	
Transportation between Kodiak and Afognak	5	days	\$1,200	\$6,000	Fish and Chips Charters; Based on transport in AM and PM for 6 persons; Additional trips will require payment for fuel
PPE	30	day	\$20	\$600	
Digital Camera	2	day	\$10	\$20	
Transportation of Equipment, Supplies, Etc. from Afognak Island to Kodiak	1	day	\$6,000	\$6,000	Based on rate quote from Lazy Bay (January 2010); Assumes day rate. If shipment can be coordinated with another trip, cost would be lower.
Subtotal Task 3B (ODC)				\$35,952	
Subtotal Task 3B (Labor)				\$3,540	
Task 3B - Total Costs				\$39,492	

Cost Estimate for FY 2010 Work April 2010 - Raspberry Strait Dumpsite, Afognak Island, Alaska

Task 3C - Shipping and Disposal of Contaminated Soil	No. of Units	Unit	Cost Per Unit	Subtotal	Comments
Barge Transport to Seattle (Contaminated Soil)	4	container	\$5,504	\$22,016	Northland Services Quote - January 2010; Assumes Northland will load containers from landing craft and containers will hold 40,000 pounds of soil.
Landfill Disposal (Contaminated Soil)	4	each	\$1,800	\$7,200	PSC quote - March 2010; Includes transportation from Seattle to Landfill
				Subtotal Task 3C (ODC)	\$29,216
				Subtotal Task 3C (Labor)	\$2,160
				Task 3C - Total Costs	\$31,376
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Task 4 - Reporting	No. of Units	Unit	Cost Per Unit	Subtotal	
Phone/FAX	1	estimate	\$50	\$50	
Reproduction - B&W	1000	each	\$0.10	\$100	
Reproduction - Color	100	each	\$1	\$100	
				Subtotal Task 4 (ODC)	\$250
				Subtotal Task 4 (Labor)	\$12,740
				Task 4 - Total Costs	\$12,990
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				Total, Labor	\$45,270
				Total, Other Direct Costs	\$474,746
				10% Contingency	\$52,002
TOTAL PROJECT COST (Raspberry Strait Dumpsite Cleanup)					\$572,019