



Alaska Department of Environmental Conservation

Reuse & Redevelopment Initiative

Brownfield Assessment



Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

Submitted to:
Department of Environmental Conservation
Reuse and Redevelopment Program

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ACRONYMS AND ABBREVIATIONS

ANCSA	Alaska Native Claims Settlement Act
ATV	All Terrain Vehicle
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
COC	Contaminant of Concern
CSM	Conceptual Site Model
DEC	Alaska Department of Environmental Conservation
DRO	Diesel range organics
ERNS	Emergency Response Notification System
°F	Degrees Fahrenheit
LUST	Leaking Underground Storage Tank
NTP	Notice to Proceed
NVE	Native Village of Eyak
PACP	Property Assessment and Cleanup Plan
RCRA	Resource Conservation and Recovery Act
ROM	Rough Order of Magnitude
RRO	Residual range organics
SPAR	Division of Spill Prevention and Response
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage, and Disposal
UST	Underground Storage Tank

PROPERTY ASSESSMENT AND CLEANUP PLAN
MILE 13-14 COPPER RIVER HIGHWAY
CORDOVA, ALASKA

1.0 INTRODUCTION

This report presents the results of Shannon & Wilson, Inc.'s (Shannon & Wilson) property assessment and cleanup planning (PACP) activities conducted at the Eyak Corporation Sites along the Copper River Highway Miles 13 and 14 (Property).

1.1 Purpose and Objectives

The purpose of the project was to identify potential environmental concerns that could pose a threat to human health or the environment and limit the beneficial reuse of the Property. Project objectives included documenting potential and observed environmental concerns, evaluating the impact to reuse and redevelopment posed by the potential sources, and developing recommendations and cost estimate for actions necessary to make the Property suitable for reuse.

1.2 Scope of Services

The work conducted for this project consisted of conducting records review and interviews, visually evaluating the Property for environmental concerns, developing a conceptual site model, and preparing this PACP document. The work was performed for the Alaska Department of Environmental Conservation (DEC) Division of Spill Prevention and Response (SPAR) under Term Contract 18-8036-03. Authorization to proceed with the PACP efforts was provided by the DEC in the form of Notice to Proceed (NTP) 18-8036-03-021, dated July 21, 2014.

2.0 COMMUNITY OVERVIEW

2.1 Community General Information

Cordova, Alaska, is a home rule city in Prince William Sound in the Gulf of Alaska. The 2013 population of Cordova was estimated by the State of Alaska to be 2,302. Historically, the area has been home to Alutiiq and Eyak Natives. In 1887 two canneries were operating in the area and soon expanded to multiple other fisheries. In 1902, the Katalla oilfield was discovered approximately 47 miles southeast of Cordova. The city of Cordova was formed in 1909 and became the railroad terminus and shipping port for the copper ore from the Kennecott Mine in 1911. The Katalla oil field closed in 1933 due to fire and the Kennecott Mine operated until 1938. The U.S. Navy had stations at Point Whiteshed and Mile 14 Copper River Highway from approximately 1917 to 1930. Fishing has been the economic base of the community since the early 1940's. Areas outside of Cordova, including the Property, were logged from approximately 1987 to 1994.

2.1.1 Location, Climate, Geological Setting

Cordova is located at the southeastern end of Prince William Sound, about 150 air miles southeast of Anchorage. The Property is located approximately 13 miles southeast of Cordova at Miles 13-14 Copper River Highway and extends to Miles 17-18 Copper River Highway. The project site is the Eyak Corporation lands near the Cordova Airport. The majority of the Property is located on the north side of the highway. Based on the US Geological Survey Cordova C-4 and B-4 Quadrangle maps included as Figure 1, the Property is located in Sections 8, 9, 16, 17, 20, 21, and 27 through 34, Township 15 South, and Sections 1 through 7 and 13 through 15, Township 16 South, Range 1 West, Copper River Meridian, Alaska.

The climate in Cordova is classified as maritime and is characterized by cloudiness, frequent fog, and moderate, maritime temperatures. Cordova has an average annual temperature of 42 Fahrenheit (°F). The average December temperature is 17.5 °F and the average June temperature is 63.4 °F. Cordova receives 103.8 inches of total precipitation yearly, including 106 inches of snow.

The geology of the Cordova area consists of Holocene-aged unconsolidated and undifferentiated surficial deposits overlying deep bedrock. These deposits are up to 180 meters thick in places and are predominantly non-glacial stream and glacial outwash deposits consisting of well-sorted stratified gravel and sand. Other laterally discontinuous units may include marine terrace and swamp sediments. Terrace deposits are less well sorted than the alluvial units. The region is tectonically active and faults bound and bisect the primarily Cretaceous-aged Chugach Coastal Mountain Range terrane and Tertiary-aged Prince William terrane. Superimposed on a Tertiary basement are glacially-derived, Holocene-aged, unconsolidated deposits from the numerous active glaciers that typically occupy mountain valleys. Because of the active faulting in the area, bedrock outcrops are common and often have substantial relief above the unconsolidated glacial and deltaic sediments. Bedrock exposure increases inland as the foreland transitions into the Chugach Mountains.

Hydrology is highly influenced by precipitation and runoff from local rivers and streams. Surface water drains from the Chugach Mountains to the north and flow southward towards the Gulf of Alaska. Numerous surface water bodies, including a portion of Sheridan Glacier, Scott River, and Glacier River, are present within the Property boundaries. Groundwater depths at the Mile 17 Landfill, located in the Property boundary, are between 8 and 18 feet below ground surface. The City of Cordova's water system source is from surface water including Crater Lake, Heney Creek Dam and Meals Reservoir, Murcheson Falls, and Orca catchment. Eyak Lake is used as a secondary source. None of the surface water sources used for municipal drinking water is located on the Property. The nearest surface water used for public water is Eyak Lake located 4.7 miles northwest of the Property.

2.1.2 Community Infrastructure and Resources

Cordova is a Home Rule City in the Valdez-Cordova Census area with a large fishing industry. Cordova is served by two elementary schools and one high school. One local medical clinic provides health care services. The Merle K (Mudhole) Smith Airport is located outside of Cordova at Mile 14 of the Copper River Highway, south of the Property.

Based on information in the State of Alaska Community and Regional Affairs database, homes and buildings in Cordova are serviced by the City's Water Treatment and Distribution System, which draws its water from surface water bodies as described above. Homes and businesses in the Cordova have piped sewer service, operated by the City. Cordova Electric Cooperative, Inc. serves Cordova with electricity provided via hydropower or diesel generators. The City of Cordova provides refuse collection service and operates the community's Class II landfill (Mile 17 Landfill), which is within the Property boundary.

2.2 Community Involvement

2.2.1 Stakeholder Meeting Summary

A telephonic meeting was held on August 19, 2014 with DEC representatives Josh Barsis and Melinda Brunner; Native Village of Eyak (NVE) representative Ivy Patton; Eyak Corporation representative Angela Reilly; and Shannon & Wilson representatives Shayla Marshall and Laura Coulson. Topics discussed included scope and project objectives, anticipated land uses, Property boundary determination, and project schedule. The shareholders identified that the primary concern with the area is illegal dumping. Their hope is that the area will be cleaned up for subsistence use.

2.2.2 Community Concerns, Proposed Reuse, and Funding

According to the DEC Brownfield Assessment Request Form submitted by NVE, illegal dumping has occurred on the Property including vehicles and appliances. NVE states that the presence and extent of contamination and number of illegal dump sites is unknown due to heavy wooded areas and overgrown roads. The area is reportedly used by teenagers and young adults to have parties and "be destructive" and people from the community have been using the Property to avoid dump fees at the Mile 17 Landfill for many years. In addition, the area has been previously logged and there are numerous old logging roads throughout the Property, and there is reportedly evidence of old military sites including abandoned bunkers. The intended reuse is to re-establish the area as a subsistence resource. The Property is used for trapping and hunting and contains wild berry bushes. At this time Shannon & Wilson is not aware of funding being sought by NVE or the Eyak Corporation for the cleanup of the Property.

2.2.3 Interviews

Mr. Bob Ladd, former employee of Eyak Corporation (1993 through 2001), was interviewed regarding the Property on October 2, 2014. Mr. Ladd participated in a cleanup after the logging company (Sherstone, Inc.) vacated the Property. According to Mr. Ladd, the cleanup consisted of closing the logging roads and removal of logging-related dump sites. Mr. Ladd stated that the logging roads were closed according to the State Forest Practices Act which required all log bridges were removed. Logs were left alongside these roads. Metal culverts and roads that were present prior to the logging industry were left in place. Debris such as household trash and burned cars found along these roads were removed.

Mr. Ladd stated that he was also involved in the Cabin Lake Road shop site cleanup efforts (See Figure 3, Site 021). This site was the location of Sherstone, Inc.'s mechanic shop and log staging area. According to Mr. Ladd, an area of approximately 100 square feet was excavated, 70 to 100 55-gallon drums were removed, and several engines were properly disposed. Mr. Ladd stated that several of the drums "broke" during the removal process and the contaminated soil associated with this was placed in bioremediation cells and later land spread on logging roads nearby. For more details on the Cabin Lake Road cleanup efforts see Section 5.1.

Mr. Ladd stated that he was not aware of cleanup activities on the Property after 2000. Mr. Ladd also stated that he did not observe contamination of soil or groundwater while closing these logging roads other than the Cabin Lake Road shop site. He indicated that the dump sites that exist on the Property are recent (within the last 13 years) and all the contamination/dumped materials from the logging era had been removed. Mr. Ladd also indicated that the military use areas were not on the Property.

Mr. Mark King, vice president of the Eyak Tribal Council, was also interviewed on October 2, 2014. Mr. King stated that most of the dump sites on the Property are recent and consist of refrigerators and other items that the city dump charges extra for. Mr. King also stated that gravel pits were present on the Property prior to logging. He indicated that overgrown military bunkers are present on the Property and are occasionally discovered by hunters. Note, Shannon & Wilson did not encounter the referenced military bunkers during the site visit. Mr. King indicated that silver salmon are present in the waterways south of the Copper River Highway at Mile 14 and that salmon important for subsistence purposes.

3.0 SITE OVERVIEW

The project site is the Eyak Corporation lands at Mile 13 and 14, Copper River Highway near the Cordova Airport. The Property use, ownership information, and records review are described below.

3.1 Property Use

3.1.1 Historical Use

The Property has been used for subsistence practices. The Cabin Lake Road portion of the Property was used for logging from approximately 1987 to 1994 by the Eyak Corporation contractor Sherstone, Inc. This operation included a mechanical shop and log staging area along Cabin Lake Road.

South of the Copper River Highway at Mile 14 was the location of the Mile 14 Naval Radio Station, operated by U.S. Navy from 1917 to 1930. This site was not included in this assessment. According to Mr. King, remains of other military activities are present on the Property; however these were not located during our 2014 site visit (see Section 2.2.3).

3.1.2 Current Use

The Property is currently used for subsistence purposes, including berry picking and hunting, and unauthorized solid waste dumping. Several areas near the Dump Road (See Figure 5) have been clear cut to create moose habitat. Portions of the Property are leased to Eyak Corporation Stakeholders and were not included in this assessment. Several active gravel pits and the Mile 17 Landfill are present on the Property and are also not included in this assessment, at the request of NVE.

3.2 Ownership Information

The Property is currently owned by the Eyak Corporation. The Eyak Corporation acquired the Property in segments in accordance with the Alaska Native Claims Settlement Act (ANCSA) since 1971. The records reviewed to summarize property use and ownership history were located at the Eyak Corporation office in Cordova. No ownership documents were located at the Eyak Corporation office or in the Alaska Department of Natural Resources Recorder's Office database.

3.3 Records Review

3.3.1 Agency Database

Federal and state database records were researched for pertinent information regarding the environmental condition of the Property. The Property was not on the EPA's National Priorities List, Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database, Emergency Response Notification System (ERNS), or the RCRA handler list.

The ADEC's Registered Underground Storage Tank (UST), Leaking Underground Storage Tank (LUST), and Contaminated Sites databases were reviewed. Five registered UST sites, three LUST sites, and 23 contaminated sites were identified within 1.0 mile of the

Property. Information regarding the UST sites is summarized in Table 1, the LUST sites are summarized in Table 2, and the contaminated sites are summarized in Table 3.

The closest UST and LUST site is the ADOT&PF Cordova Maintenance Station, as shown on Figure 2, located adjacent southwest of the Property. According to the ADEC database, a 3,000-gallon gasoline UST was reported removed in the late 1980s; and a 3,000-gallon diesel UST, 1,000-gallon used oil UST, and pump island were removed in 1997. Approximately 35 cubic yards of diesel range organics (DRO) contaminated soil was removed and stockpiled, while approximately 50 cubic yards of DRO-impacted soil were returned to the excavation. Test pit soil samples collected in 2003 to characterize the former locations of the USTs did not contain contaminant concentrations greater than the ADEC cleanup levels. In the summer of 2005 a 20,000-gallon partially buried tanker car containing used oil was decommissioned and removed. Approximately 500 cubic yards of soil were removed during the excavation and landspread at the Locke Salvage yard. Groundwater was encountered at 10 feet below ground surface during the excavation. The site was issued a cleanup complete determination in 2009. The remaining UST sites are located greater than 1,800 feet from the Property.

Of the 23 contaminated sites within 1 mile of the Property, one site is the project, two sites are located within the Property boundary, and two sites are located adjacent southwest. The locations of the nearest sites are shown on Figure 2. The following is a synopsis of the contaminated sites within and adjacent to the Property.

The Copper River Highway Mile 13-14 Areas of Concern is a Brownfields database entry for this project. According to the database, there are multiple areas of concern including military bunkers, caches of unmarked 55-gallon drums, used batteries, appliances, and building materials.

The Cabin Lake Shop contaminated site is within the Property boundary and is identified as Site 021 on Figure 2. Further details of this site are included in Section 3.3.2.

The Eyak NALEMP Mile 14 Naval Radio Station site is located within the Property boundary and is listed as an active contaminated site. Further details of this site are included in Section 3.3.2.

The ADOT&PF Cordova Locke Salvage Yard and ADOT&PF Cordova Maintenance Station are both located adjacent southwest of the Property. The ADOT&PF Cordova Locke Salvage Yard was used as a mink farm in the early 1920s and as a workers camp for the Copper River and Northwest Railroad in the early 1930s. In the mid-1960s, Jim Locke occupied the parcel and used it as a salvage yard for more than 30 years. The site contained salvaged vehicles, outboard motors, buildings, trailers, drums, tanks, and batteries. Between 2000 and 2001 batteries; transformers; drums and various containers containing oil, grease, tar, paint, roof coating, methyl ethyl ketone peroxide, and polychlorinated biphenyl containing oil; and steel were removed from the site and transported outside of Cordova for disposal. Soil and groundwater samples were collected from across the site; benzene (groundwater and soil), DRO

(soil), and 4-chloroaniline (soil) were identified as contaminants of concern through the investigation. The site was granted a cleanup complete with institutional controls status in 2006. Institutional controls included periodic groundwater and surface water monitoring and periodic sampling of the landspread soil.

The ADOT&PF Cordova Maintenance Station, located adjacent southwest, is an active contaminated site. Oil, solvents, and other unknown contaminants were dumped into a shop sump and released into a drainfield. Groundwater samples and soil samples from the landfarmed soil (Locke Salvage Yard site) are periodically collected. In 2014 the groundwater samples were below cleanup levels and the site's five monitoring wells were decommissioned. The 100 cubic yards of landfarmed soil contained DRO concentrations greater than cleanup levels in 2014.

3.3.2 File Review

The files for the two contaminated sites located within the Property boundary were reviewed. A summary of the Cabin Lake Shop site and Eyak NALEMP Mile 14 Naval Radio Station site is included below.

The Cabin Lake Shop contaminated site is within the Property boundary and is identified as Site 021 on Figure 2. Petroleum, metals, and chlorinated solvents were encountered on the Property and were a result of site practices during the logging operations and vehicle maintenance dating back to 1987. The ADEC database also notes buried vehicle batteries on the site. The site cleanup effort was initiated in 1995 and included removal of drums, tires, pallets, hoses, cable spools, abandoned vehicles, batteries, and other debris. Test pits were advanced at the former maintenance shop, near an old fuel tanker truck, a former fuel storage area, and an oil drum and battery storage area. Approximately 600 cubic yards of contaminated soil was removed from the former fuel storage area and approximately 1,340 cubic yards of contaminated soil was removed from the former tank truck area. DRO and lead-contaminated soils were landspread in 2001 and seeded. No confirmation soil samples were collected from the landspread soils and groundwater was not evaluated during the site cleanup activities. The ADEC granted a cleanup complete with institutional controls determination in July 2007; the institutional controls were removed in 2013.

The Eyak NALEMP Mile 14 Naval Radio Station site is located within the Property boundary and is listed as an active contaminated site. The Naval Radio Station was active between 1917 and 1930. Petroleum [residual range organics (RRO) and DRO], arsenic, chromium, and lead concentrations greater than the ADEC limits have been reported in soil and/or groundwater at the site and are believed to be a result of operation of the abandoned powerhouse building. A work plan detailing the soil remediation plans at the site was approved by the ADEC in November 2014. This site was not included in the assessment at the request of NVE.

3.3.3 Aerial Photograph

Aerial photographs from Quantum Spatial, Inc. were reviewed to evaluate prior land use in this area. The only available photograph of the area was from September 6, 2010 and is included as Figures 3 through 5 at various scales. The aerial photographs show locations of the local roads and selected sites observed during the site visit. These sites are labeled on the figures.

4.0 FIELD ACTIVITIES

4.1 Methodology

A site visit was conducted on September 29 through October 1, 2014, by a Shannon & Wilson field representative (Ms. Laura Coulson). Ms. Ivy Patton of NVE accompanied Shannon & Wilson's representative during the site visit. The site inspection was focused on observing materials and evidence of releases or potential releases of contaminants to the environment. The site visit was conducted using all terrain vehicles (ATVs) and access was limited to roads and paths accessible by ATV.

The observed dump sites and potential areas of concern were marked with a global positioning system (GPS) unit in the field and numbered beginning with Site 006. Sites 001 through 005 were used as markers to establish the Property boundary coordinates. The individual site locations are shown on Figure 2. The potential contaminant sources observed at each location are listed in Table 4.

4.2 Field Observations

The Property is largely located north of the Copper River Highway and extends to the mouth of the Sheridan Glacier (Photo 1). For the purposes of our assessment, the Property was divided into several subsections: the Cabin Lake Road area, the Sheridan Glacier Road area, the Dump Road area, and the Mile 14 site. Figures 3 through 5 are aerial photographs of each area. Site photographs are provided in Appendix A. Field notes from the site visit are included in Appendix B.

4.2.1 Cabin Lake Road

Cabin Lake Road extends north from the Copper River Highway in the west portion of the Property (See Figures 2 and 3). The area was largely forested with ATV trails leading off the main road. Many ATV trails were blocked with gravel piles placed during the post logging cleanup and/or overgrown. Several illegal dump sites were identified in this area, including sites 019 through 021 and 025. Along Cabin Lake Road is the location of Sherstone Inc.'s former machine shop and log staging area (Site 021). A cleared area was present at this location with minimal vegetation and was blocked off from the road by creosote logs (Photos 2 and 3). See Section 5.1 for additional details regarding this ADEC-listed contaminated site.

Northeast of the former Cabin Lake Road shop site is the “log pile” (Photo 3, Site 019). According to Ms. Patton, this is popular location for illegal dumping of animal carcasses. Several moose carcasses were observed during the site visit (Photo 5). Remnants of metal culverts, a refrigerator, and a stove were also observed in the Cabin Lake Road Area and are identified as Sites 020 and 025 (Photos 6 and 7). No evidence of leaks and/or spills associated with the Cabin Lake Road sites was observed.

There were several leased parcels located in this part of the Property, including Site 024. These were not evaluated per request by the Eyak Corporation.

4.2.2 Sheridan Glacier Road

Sheridan Glacier Road extends north from the Copper River Highway to the Forest Service Easement at Sheridan Glacier (Figures 2 and 4). Three illegal dump sites, Sites 017, 018, and 028 were identified near Sheridan Glacier Road. Site 018 contained a car and a dishwasher (Photo 8); Site 017 contained a freezer, batteries, and various other discarded items some of which were used for target practice (Photos 9 and 10); and Site 028 contained an empty 55-gallon drum in a partially flooded former gravel pit (Photo 11). No evidence of leaks and/or spills associated with the Sheridan Glacier Road sites was observed.

Several gravel pits are present on this portion of the Property. Site 026 appeared to be an active gravel pit and refueling area and Site 027 appeared to be used for vehicle storage. These sites were not included in this assessment at the request of the NVE.

4.2.3 Dump Road

The Dump Road extends northeast from the Copper River Highway to the Cordova Mile 17 Landfill (See Figures 2 and 5). The Dump Road area is largely forested with clear cut areas to create additional moose habitat (Photo 12). ATV trails run throughout the area, starting from the Copper River Highway and the Dump Road (Photo 13). Eleven illegal dump sites were identified in the vicinity of the Dump Road (Sites 006 through 016). These sites contained abandoned vehicles, freezers, empty drums, household trash, scrap metal, and burn piles (Photos 14 through 26). Debris was used for target practice at two of these sites (Sites 010 and 013). Household trash was observed throughout the area. Burn piles and scrap metal were observed along Boulder Alley at Sites 010 and 011 (Photos 22 and 24). Stained soil was observed at Site 010 (Photo 23). A part of a rusted car and a burn pile were found along John Gorsch Road at Sites 015 and 016 (Photos 25 and 26).

4.2.4 Mile 14 Site

The Mile 14 Site currently contains two connexes for storing NVE equipment and the ruins of a military building. Per NVE’s request this portion of the Property was not evaluated as part of this scope.

5.0 ENVIRONMENTAL REVIEW

The environmental review includes a discussion of the identified and potential source areas, data gaps, conceptual site model, proposed cleanup criteria, and a summary of the findings.

5.1 Identified and Potential Source Areas

Based on our 2014 site visit, there are potential source area(s) within the Property boundaries. These areas are listed in Table 4 and shown on Figure 2. Table 5 lists potential contaminants of concern (COC) associated with each source identified. The COCs include fuels, solvents, refrigerants, solvents, polychlorinated biphenyls, asbestos, polycyclic aromatic hydrocarbons, dioxins, and metals including lead and mercury. The actual presence of each COC cannot be verified from the qualitative data collected for this project. The only area where notable staining was observed was located at Site 010; however, there may be evidence of a release upon removal of the debris, or the COC may not be visibly apparent on the surface.

There are two ADEC contaminated sites (Cabin Lake Shop and Eyak NALEMP Mile 14 Naval Radio Station) and one active landfill located within the Property boundary. The Cabin Lake site has been issued a cleanup complete status, although no confirmation soil samples have been collected from the landspread soils and the groundwater was not evaluated during the site characterization activities. Therefore, the Cabin Lake Shop site is a potential source area. The Eyak NALEMP Mile 14 Naval Radio site is an active contaminated site with documented RRO, DRO, and metal contamination. The site has not undergone cleanup as of this report date, therefore identified contamination is within the confines of the Property boundary. The Mile 17 Landfill is an active landfill, and could be a potential source area if the landfill is not properly managed (e.g. covered, unacceptable waste streams are deposited in the landfill).

5.2 Data Gaps

The following data gaps were identified during this assessment:

- Analytical soil and water samples were not collected as part of this assessment. Therefore, there is no definitive evidence regarding the presence or absence of contamination on the Property.
- Notable staining was observed at Site 010. The extent of contamination associated with the release is unknown.
- Several empty drums were observed during the site visit. It is unknown if these drums were originally full and, if so, the contents of each drum.
- Former military use has been reported; however no evidence of bunkers or military uses were observed during our 2014 site visit.

- The ADEC database states that there are caches of unmarked 55-gallon drums and used batteries on the Property; these were not observed during our site visit.
- Contaminated soil was previously landspread at the Cabin Lake Shop contaminated site. No post-treatment confirmation samples have been collected from the site.
- No groundwater samples were collected from the Cabin Lake Shop site.
- The Eyak NALEMP Mile 14 Naval Radio site is an active contaminated site with upcoming proposed cleanup plans. While this site has been excluded from this assessment, at the request of NVE, samples have not been collected to determine the extent of contamination at the site and whether the contamination extends off the ADEC contaminated site.
- The Mile 17 Landfill is an active landfill within the Project boundary. While this site has been excluded from this assessment, it is unknown if contamination extends outside the landfill boundaries.
- Numerous stakeholder in-holdings and gravel pits were identified within the Property boundary, but were not evaluated in this assessment at the request of the NVE. It is unknown whether contamination from these areas may impact the Property.

5.3 Conceptual Site Model

A conceptual site model (CSM) was prepared to identify potential exposure pathways associated with identified and potential contaminants at the project site. The CSM was developed using the DEC's 2010 Policy Guidance on Developing Conceptual Site Models, and the results are presented in the CSM Graphic and the Scoping Form included in Appendix C. Discussions of the potential exposure pathways for each impacted medium are provided below. The potential COCs include fuels, solvents, refrigerants, solvents, polychlorinated biphenyls, asbestos, polycyclic aromatic hydrocarbons, dioxins, and metals including lead and mercury as identified in Table 5. The narrative includes descriptions of site-specific considerations that increase or decrease the viability of each pathway at this site.

Soil

Incidental ingestion and dermal absorption of contaminants of impacted soil are potentially complete exposure pathways for site visitors, trespassers, recreational users, and subsistence harvesters and consumers. There is potential for surface soil contamination from the debris at the observed dump sites as identified in Table 5. While staining was only noted at Site 010 during the site visit, there is the potential that there are other releases upon removal of the debris or release to the subsurface that are not visible in the surface soil. However, due to the limited volume of debris and the spatial distribution of the sites, the contamination, if any, caused by these areas is not likely widespread.

Groundwater

ADEC guidance stipulates that ingestion of groundwater be considered a potentially complete exposure pathway unless a groundwater use determination is conducted in accordance with 18 AAC 75.350, and that determination finds that the groundwater is not “currently of reasonable expected future source of drinking water.” The drinking water source for Cordova is from surface water bodies, none of which are located on the Property. The intended use of the Property is for subsistence purposes only; no residential or commercial structures are planned to be constructed. Therefore, the groundwater exposure pathway is considered incomplete at this time.

Air

Inhalation of outdoor air is considered potentially complete exposure pathway because the various burn piles observed throughout the Property has the potential to release dioxin and other unknown contaminants into the air.

Surface Water

Surface water ingestion is considered a potentially complete exposure pathway because of the unknown potential for contamination and the presence of numerous surface water bodies across the Property, including Glacier Creek. It is not known if the surface water on the Property is used for consumption, but the Property is used for subsistence harvesting and recreational use.

Other

The potential for airborne dioxin and other unknown contaminants from burn piles to settle on plants in the vicinity suggest that biota is a potential receptor. Trespassers, recreational users, or subsistence harvesters could harvest the plants, or wild game could consume the plants, and subsequently be harvested.

5.4 Cleanup Criteria

No analytical samples were collected as a part of this scope. If contamination were to be identified, the soil and groundwater cleanup levels would likely be the Method 2 cleanup levels for the Over 40 Inch Zone as identified in 18 AAC 75.341 and 18 AAC 75.345. The surface water standards would be in accordance with 18 AAC 70. Note, if metals, dioxins, or solvents are also identified, the contamination may be also subject to EPA cleanup levels under Resource Conservation and Recovery Act (RCRA) and Toxic Substances Control Act (TSCA).

5.5 Summary of Findings

Multiple illegal dump sites potentially containing potentially hazardous materials were identified throughout the Property. Items such as refrigerators, freezers, vehicles, and batteries could potentially leak or have already leaked hazardous materials onto the ground surface. No analytical samples were collected during this assessment, therefore contamination has not been

confirmed at the site. Multiple exposure pathways are potentially complete and additional investigations after the removal of the debris may be necessary to facilitate further evaluation.

6.0 RECOMMENDED ACTIONS AND OPINIONS

6.1 Reuse and Redevelopment Considerations

We understand NVE would like to re-vitalize the Property for continued subsistence uses. Based on our observations and research, there is no known contamination on the Property (excluding the areas omitted from the scope by NVE). Moreover, our visual assessment (e.g., presence of stains, stressed vegetation, indicators of leaks) suggests the potential is low for unknown contamination to be present at levels that would significantly impact subsistence uses. In context of state contaminated sites regulations, the Property may therefore be usable for the intended purposes without remedial action. It is emphasized however that data gaps exist and analytical samples of the soil, groundwater, or surface waters were not collected for this study. There is a potential that contamination is present that could impact to trespassers, recreational users, and subsistence harvesters who may consume the fish, game, and plants that may uptake the contaminants. In addition, the presence of the debris is aesthetically undesirable and may encourage future unauthorized dumping on the Property. Continued dumping practices will likely increase the potential of an environmental impact either through direct placement of regulated materials and/or deterioration of containers that may contain such materials.

6.2 Site Characterization Recommendations

Data gaps identified at the Property are described in Section 5.2. While some of the data gaps are a result of areas requested by NVE to not be included as part of the Property evaluation, the effect of those sources if contamination extends onto other areas of the Property remains unknown. In addition, debris remains on the Property and no analytical samples have been collected. Staining was observed at one site and there may be further indication of a release upon removal of the debris. Additional information may necessary to confirm the presence and/or magnitude of the contamination associated with these data gaps, including sampling the staining at Site 010 and sampling the potential staining revealed during debris removal.

6.3 Remedial Action Recommendations

The presumed remedy for this site is removal and disposal of the debris. “Junk” vehicles may be disposed of at the landfill provided fluids have been drained and hazardous materials including the batteries, radiator, and air conditioner have been removed. These materials are collected by the landfill, but are transported to an Outside disposal facility. The need and scope of the remedial action would be defined based on the results of additional site characterization, including characterization of the staining at Site 010.

6.4 Rough Order of Magnitude Cost Estimate

A rough order of magnitude (ROM) cost estimate was developed to address the debris disposal and characterization sampling at the various source areas on the Property and is included as Table 6. The estimated total ROM costs for debris disposal and characterization sampling is approximately \$57,000. John Wilson from Wilson Construction in Cordova estimated that removal of the materials observed during the September 2014 site visit would cost approximately \$12,000. This assumes using a loader and dump truck for three to four days, removal hazardous material from vehicles prior to transport, and transporting the material to the Mile 17 landfill. The cost for disposal using the 2014 City of Cordova Landfill Fee Schedule is approximately \$1,900. Costs for additional removal associated with additional debris that may be disposed after Shannon & Wilson's 2014 site visit is not included. Note that if the landfill is unable to accept the quantity and type of debris on the Property, the material would require barging which would incur significant additional expense.

The ROM cost estimate also includes costs to characterize the various locations where potential contaminant sources were identified during Shannon & Wilson's 2014 site visit. Costs for surface soil and surface water sampling are included and are approximately \$31,000, however we have not included costs to delineate the extent of contamination or evaluate subsurface conditions. A 25 percent contingency is included in the ROM costs. In addition, costs for additional remedial action, including removal of the stained material observed at Site 010 are not included.

7.0 CONCLUSIONS

Multiple contaminated sites and areas of unauthorized dumping are within the Property boundary and have the potential to release substances to the surface soil and/or surface water. No analytical samples were collected during this assessment, therefore contamination has not been confirmed at the site. Our CSM identified complete or potentially complete exposure pathways, and further investigation may be warranted to address data gaps, depending on the risk tolerance of the site user. We recommend removing and disposing the discarded materials at the local landfill, and collecting characterization samples to determine if contamination associated with these materials is present. Note, leaving the site conditions as-is is not a viable option to the stakeholders, as the continued presence of debris is believed to encourage further illegal dumping and/or future releases to the environment.

8.0 PERSONNEL QUALIFICATIONS

This PACP was prepared by Ms. Laura Coulson under the direct supervision of Ms. Shayla Marshall, and Mr. Matthew Hemry, P.E. Ms. Coulson, an Environmental Chemist, received a B.A. in Chemistry from Whitman College in 2012. A Project Manager, Ms. Marshall received a B.S. in Environmental Studies from Concordia College in 2002, and a M.S. in Environmental Science from Alaska Pacific University in 2004. Mr. Hemry, Vice President, received a B.S. in Engineering Sciences from Dartmouth College in 1990 and a M.S. in Environmental Engineering

from Duke University in 1992. These individuals have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Property, and they have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. Shannon & Wilson declares that, to the best of our professional knowledge and belief, Ms. Marshall and Mr. Hemry meet the definition of "Environmental Professional" as defined in 40 CFR 312.10.

9.0 CLOSURE/LIMITATIONS

This report was prepared for the exclusive use of our clients and their representatives in the study of this site. The findings we have presented within this report are based on the limited research and field observations that we conducted. Our observations were limited to areas that were readily accessible by ATV, and no analytical samples were collected. Therefore, our findings should not be construed as definite conclusions regarding the site's environmental condition and other undocumented source(s) may be present. As a result, our limited research and observations can only provide you with our professional judgment as to the environmental characteristics of this site, and in no way guarantees that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. The data presented in this report should be considered representative of the time of our site assessment. Changes in site conditions can occur with time, due to natural forces or human activity. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations may need to be revised. Shannon & Wilson has prepared the attachments in Appendix D, "Important Information About Your Geotechnical/Environmental Report," to assist you and others in understanding the use and limitations of our reports.

Copies of documents that may be relied upon by our client are limited to the printed copies (also known as hard copies) that are signed or sealed by Shannon & Wilson with a wet, blue ink signature. Files provided in electronic media format are furnished solely for the convenience of the client. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, or you question the authenticity of the report please contact the undersigned.

We appreciate this opportunity to perform these services. Please call Matt Hemry, P.E. or the undersigned at (907) 561-2120 with questions or comments concerning the contents of this report.

SHANNON & WILSON, INC.



Laura Coulson
Environmental Chemist



Shayla Marshall
Principal Scientist

TABLE 1
REGISTERED UNDERGROUND STORAGE TANKS WITHIN A 1.0 MILE RADIUS

Facility Name	Facility ID	Street Address	Owner Name	Tank ID	Tank Status	Tank Capacity (gallons)	Tank Contents	Approximate Distance from the Property
ADOTPF - Cordova Maintenance Station	217	P.O. Box 551	ADOT&PF	1	Tank Removed from Ground	3,000	Diesel	Adjacent southwest
				2	Tank Removed from Ground	3,000	Gasoline	
				3	Tank Removed from Ground	1,000	Diesel	
Cordova Airporter	3427	201 Industry Road	Joy Rawlins	1	Tank Removed from Ground	1,000	Gasoline	1,800 feet southwest
				2	Tank Removed from Ground	500	Diesel	
FAA Cordova	1287	Cordova Airport	Federal Aviation Administration	1	Permanently Out of Use	1,000	Gasoline	1,800 feet southwest
FAA Cordova	1308	Cordova Airport	Federal Aviation Administration	1	Tank Removed from Ground	500	Diesel	1,800 feet southwest
				2	Currently in Use	1,000	Gasoline	
				3	Currently in Use	1,000	Diesel	
				4	Permanently Out of Use	1,000	Gasoline	
Lot 7 Block 103 - 13	1719	Cordova Airport	Stephen Barnes	1	Tank Removed from Ground	300	Heating Oil	1,800 feet southwest

TABLE 2
LEAKING UNDERGROUND STORAGE TANK SITES WITHIN A 1.0 MILE RADIUS

Facility Name	Street Address	Status	Office File ID*	Approximate Distance from the Property
ADOT&PF - Cordova Maintenance Station	Mi 10 Copper River Highway	Cleanup Complete	2215.26.003	Adjacent southwest
Cordova Airpporter	201 Industrial Road	Cleanup Complete	2215.26.005	1,800 feet southwest
USCG Cordova AVSUFAC	16 miles east of Cordova	Cleanup Complete - Institutional Controls	2215.26.004	2,300 feet south

* The Office File ID is the DEC file number.

TABLE 3
CONTAMINATED SITES WITHIN A 1.0 MILE RADIUS

Facility Name and Street Address	Office File ID~	Status/Priority	Problem, as listed by DEC*	Approximate Distance from the Property
Copper River Highway Mile 13-14 Areas of Concern Multiple Areas Near Copper River Highway Mile 13-14 and Sheridan Glacier Road Intersection	2215.57.001	Informational	Multiple areas of concern between mile 13 and 14 Copper River Highway are littered with military bunkers, caches of unmarked 55 gallon drums, used batteries, appliances, and building materials. The Eyak Corporation and The Native Village of Eyak submitted a DEC Brownfield Assessment and Cleanup (DBAC) request in 2013 to assess and cleanup contamination at the site; the applicants are concerned that subsistence resources gathered in the target area could be harmful to the residents. Contamination at the site has not been confirmed.	On Property
Cabin Lake Shop Site Mile 1.3 Cabin Lake Road ~10 Miles East of Cordova	2215.38.003	Cleanup Complete	Petroleum, metals and chlorinated solvent contamination resulting from the improper fuel and waste storage practices during logging operations and vehicle maintenance dating back to 1987. Buried vehicle batteries. Sherstone, Inc. was a wholly owned subsidiary of Eyak Corporation. Contaminated soils were stockpiled, but have been landspread and seeded.	On Property (Site 021)
Eyak NALEMP Mile 14 Naval Radio Station Mile 14 Copper River Highway	2215.38.029	Active	The Mile 14 Naval Radio Station is located at Mile 14 of the Copper River Highway, which used to be the Copper River and Northwestern Railroad. The station was active from 1917-1930. Asbestos and petroleum hydrocarbon hazards are strongly suspected from the shell of the large powerhouse building, and the numerous drums and stressed vegetation evident. The site is in the Sheridan River Floodplain (flooded in 2006), so contaminants may easily find their way into this salmon-filled river and the famous Copper River Flats. Thus, there is a risk to fish and wildlife which the Native Village of Eyak so heavily depends on for subsistence. DRO exceeded ADEC regulatory limits in water at one sample station, and approached it at another near the abandoned power house. RRO were also detected in water above limits at two sample stations. The lead limit was approached at one station. The DRO limit in soil was exceeded at one sample station. Soil samples exceeded arsenic and chromium limits at three stations there, and lead was exceeded at one. The above results indicate the need for further investigation of this site for hazardous chemicals.	On Property

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TABLE 3
CONTAMINATED SITES WITHIN A 1.0 MILE RADIUS

Facility Name and Street Address	Office File ID~	Status/Priority	Problem, as listed by DEC*	Approximate Distance from the Property
ADOT&PF Cordova Locke Salvage Yard Mile 1 Cabin Lake Road	2215.38.020	Cleanup Complete - Institutional Controls	Mr. Locke was living on DOT property; has an estimated 2 acres of vehicles for salvage, piles of batteries, WWII drums, and various other items. Approximately 14 acres of ADOT&PF property has been used as a salvage yard for more than 30 years. There are no residents. Mr. Locke has passed away. Needs Site Assessment. Landowner is DOT/Airport Leasing, 2301 Peger Road, Fairbanks, AK 99709. Last staff assigned was D. Pikul. Interim action conducted to extract, contain, characterize, consolidate, and stage drums and other containers. Site access restricted through the use of a "junk" vehicle placed across the site entrance. EPA ID AKSFN1002218; EPA site name Alaska DOT & PF Cordova Locke Salvage Yard.	Adjacent southwest
ADOT&PF Cordova Maintenance Station Mile 13 Copper River Highway	2215.38.023	Active	Oil, solvents and other unknown contaminants dumped into shop sump which ends up in a drainfield for an undetermined amount of years. Estimates of amount of contaminants dumped is approximately 10,000 gallons. 6/17/90 site discovery by ADEC.	Adjacent southwest
USCG Cordova AVSUPFAC USGC Aviation Support Facility Hangar Building 16 Miles East of Cordova	2215.26.004	Cleanup Complete - Institutional Controls	During excavation soil samples were above the cleanup level Category A. 31 cubic yards of petroleum impacted soil was removed & Stockpiled on-site.	2,300 feet south
USCG - AVSUPFAC Hangar Cordova	No File Number	Cleanup Complete	Contaminated soils excavated and stockpiled on site. Coast Guard is making arrangements to bring a soil thermal treatment unit to Cordova, and plan to use this method to treat this stockpile. Last staff assigned was Lawn.	2,300 feet south
USCG Cordova Barracks	2215.38.022	Cleanup Complete	800 gallon fuel oil spill happened 7/90, near well. Spill occurred near well. Drinking water suspected to be contaminated. Spill was due to leaking lines from tank to building. Last staff assigned was Lawn.	2,300 feet south
USCG - Aviation Support Facility Mile 13 Copper River Highway	No File Number	Cleanup Complete	Last staff assigned was Kriebler.	2,300 feet south

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TABLE 3
CONTAMINATED SITES WITHIN A 1.0 MILE RADIUS

Facility Name and Street Address	Office File ID~	Status/Priority	Problem, as listed by DEC*	Approximate Distance from the Property
FAA Cordova Shop Site Bldg. 304 Mile 13 Copper River Highway	2215.38.001	Cleanup Complete - Institutional Controls	The Shop Site is located north of the Copper River Highway along the road that passes through the quarters facility. There are a waste storage area, cistern, pumphouse, concrete pad, transformer, and a waste drum storage area at this site. Waste oil was stored in four or five 55-gallon drums near the southeast corner of the shop building for approximately 10 years. A pumphouse (Building 607) south of the shop contains a groundwater well and pump equipment. This well is approximately 30 feet deep. It serves facilities on the north side of the Copper River Highway. Six sumps were also believed to be situated west of Building 304. Sumps 1 and 2, constructed of buried, perforated, 55-gallon drums, were removed in 1995. Four additional sumps were suspected to be present. Upon excavation, a buried drum was found at Sump 3; no drums or dry wells were encountered at the remaining three locations. The sumps were abandoned by installing a plumber's plug at either end and filling it with non-shrink grout at the sump end. Approximately 75 cubic yards of contaminated soil was excavated from the sump areas and thermally remediated in 1997. In 1994, three ASTs were addressed at the Shop Building #304. AST 35-E-1 was a 500-gallon, welded-steel tank north of the shop on a wooden frame used to store heating oil. Petroleum stains were evident on the ground surface at the former tank location. The probable sources of the staining include overfills and spills during fuel delivery. Approximately 1/8 cubic yards of potentially contaminated soil was excavated. A 1,000-gallon, welded-steel AST was formerly located west of the shop on a wooden frame. The tank was removed in 1994. On October 14, 1994, evidence was noted of a fuel release northwest of the shop which was associated with the 1,000-gallon AST. However, results of the field-screening and laboratory sample analyses at the former location of the 1,000-gallon AST did not indicate a fuel release. A 500-gallon AST temporarily stored northwest of the shop was removed before 1994. Field-screening sample results at the former AST location did not indicate a fuel release. In 1996, residual contamination at Drum Storage Area was DRO and RRO from composite samples of the floor and wall at 1,300 mg/kg and 2,400 mg/kg respectively. The remaining residual contamination is at least 5 feet above the estimated groundwater level. Residual contamination at Sumps 7 and 8 had DRO measured from the floor of the pit at 1,600 mg/kg (7' bgs). Pipe extending southward from Sumps 7 and 8 is PVC of unknown length and destination. The depth of the pipe is approximately 5' bgs...	2,600 feet south

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TABLE 3
CONTAMINATED SITES WITHIN A 1.0 MILE RADIUS

Facility Name and Street Address	Office File ID~	Status/Priority	Problem, as listed by DEC*	Approximate Distance from the Property
FAA Cordova Shop Site Bldg. 304 Mile 13 Copper River Highway (Continued)	2215.38.001	Cleanup Complete - Institutional Controls	...Additional investigation is recommended to determine the final discharge point and potential for downstream contamination. It is suspected that the pipe leads to a leach field. In 1996, based on confirmational sampling results, the sump areas to the west of Building 304 and the area north of the concrete pad have been restored to below action levels and do not require further action. Metals concentration results were consistently near background levels and do not warrant action. In July 1997, additional soil was excavated and confirmatory soil and groundwater samples were collected from the two areas: The Drum Storage Area and the former location of Sumps 7 and 8. Confirmation soil samples collected from both areas showed either non-detect or low levels of DRO. The highest level of DRO was 24 mg/kg	2,600 feet south
FAA Cordova MASLR Facility Cordova Airport Mile 13 Copper River Highway	2215.38.012	Cleanup Complete - Institutional Controls	122 gallon diesel spill and subsequent excavation to 3' appears to have removed most of the contaminated soil above acceptable levels. No detectable levels of contamination down gradient. Excavated soils were treated and disposed of in the 1994 Cordova Roads project. Need to complete cleanup of soils under the transformer pad and building when they are decommissioned	2,600 feet south
FAA Cordova FLQ Bldg. 100 Cordova Airport Mile 13 Copper River Highway	2215.38.001	Cleanup Complete	A 500-gallon heating oil tank was removed and approximately 12 cubic yards of impacted soil were excavated. Five confirmation soil samples were collected from the walls of the excavation. One sample collected from the south wall at approximately 3.5' bgs was 570 mg/kg. Water was present at about 4'bgs. Four GW probes were installed and were non-detectable for BTEX. One of the GW samples was analyzed for GRO and DRO and was non-detectable. In 1997, approximately 8 cubic yards of contaminated soil was excavated. Four confirmation soil samples were collected for BTEX and DRO analysis. All BTEX analyses were non-detectable. All soil samples were below ADEC cleanup levels for DRO. Last staff assigned was Williams.	2,600 feet south
FAA Cordova FLQ Bldg. 105 Cordova Airport Mile 13 Copper River Highway	2215.38.001	Cleanup Complete	One 500-gallon heating oil UST was removed in 1994. Approximately 16 cubic yards of potentially clean soil was excavated as part of the UST removal. Confirmatory soil samples indicated DRO soil concentrations (maximum 130 mg/kg) on north and east sides of excavation. Last staff assigned was Williams.	2,600 feet south

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TABLE 3
CONTAMINATED SITES WITHIN A 1.0 MILE RADIUS

Facility Name and Street Address	Office File ID~	Status/Priority	Problem, as listed by DEC*	Approximate Distance from the Property
FAA Cordova FLQ Bldg. 104 Cordova Airport Mile 13 Copper River Highway	2215.38.001	Cleanup Complete - Institutional Controls	A 500-gallon heating oil UST near the southwest corner of Building #104 was removed in 1994. Approximately 26 cubic yards of potentially contaminated soil was excavated. Three of five confirmatory soil samples had DRO hits of 6,700 mg/kg (west side of excavation), 18,000 mg/kg (south side of excavation) and 7,500 mg/kg (south side of excavation). A sheen was observed on the groundwater. During the Release Investigation, 22 soil samples were collected and analyzed for DRO from seven test pits. Two locations indicated DRO contamination at 2,100 ppm and 2,900 ppm SW of the former UST location. Groundwater samples were collected and analyzed for BTEX in six probes and for DRO in two of the six probes. Benzene was detected at 6.8 ppb (SW of the former UST (duplicate was non-detectable)). DRO samples were 32 ppm and 9.6 ppm. In 1997, a series of 10 test pits with varying orientations were dug to establish the limits of the contamination. Approximately 667 cubic yards of contaminated soil were removed from this site. Groundwater was present at 6'bgs. One groundwater probe was installed at the site (GP6) and a GW sample was collected and non-detectable for benzene, toluene (4 ppb), ethylbenzene (29 ppb), and xylenes (78 ppb). The probe was installed hydraulically downgradient (south). The confirmation soil samples indicated 1,300 ppm (6' bgs) and 1,700 ppm (6.5' bgs) in the soil.	2,600 feet south
FAA Cordova Warehouse #203 Cordova Airport Mile 13 Copper River Highway	2215.38.001	Cleanup Complete	One 500-gallon heating oil UST was removed in 1994. Approximately 56 cubic yards of potentially contaminated soil was excavated. Two of the six confirmation soil samples contained 430 mg/kg (5' bgs) and 370 mg/kg (5' bgs) DRO. Both of these samples were located adjacent to the building. A sheen was observed on the groundwater. Groundwater samples were collected and analyzed for BTEX in four probes and for DRO in one of the four probes. All groundwater samples were non-detectable. Last staff assigned was Williams.	2,600 feet south

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Facility Name and Street Address	Office File ID~	Status/Priority	Problem, as listed by DEC*	Approximate Distance from the Property
FAA Cordova COMSERFAC Lot Cordova Airport Mile 13 Copper River Highway	2215.38.001	Cleanup Complete - Institutional Controls	In 1994, a 500-gallon weld-steel heating oil tank on the NE side of the community services facility (COMSERFAC) building (building 302) was removed. The tank was approximately 2 feet aboveground on a wood-frame foundation. Some petroleum stains were observed on the ground surface in the vicinity of the tank. The probable sources of the staining are overfills and spills during fuel delivery. Approximately 18 cubic yards of potentially cont. soil was excavated. Water with a sheen was observed in the excavation at a depth of approximately 4 feet. Seven confirmatory soil samples were collected from the excavation. DRO concentrations of 1,400 mg/kg and 730 mg/kg were found in two of the samples. Groundwater samples were collected and analyzed for BTEX in six probes and for DRO in one of the six probes. All BTEX compounds were below MCLs. The DRO sample was reported at 5.2 mg/L. In 1997, one groundwater probe was installed approximately 30-feet west of the former AST location. The groundwater probe was constructed of 1-inch-diameter black iron pipe, in a 7-foot section with a pointed brass drive tip. The assembly was driven 7 feet bgs with a portable electric jackhammer. After the pipe was driven to the desired depth, rebar was inserted into the pipe and the drive tip was pushed downward and off the pipe to allow water to enter. Teflon tubing connected to a peristaltic pump was used to collect a water sample from the probe. The sample was non-detectable for DRO and BTEX. No further excavation was possible based on potential for structural encroachment of building foundation.	2,600 feet south
FAA Cordova Localizer Facility Cordova Airport West End of Runway	2215.38.001	Cleanup Complete	In 1994, the 250-gallon AST (diesel fuel) was removed from its concrete cradle. Petroleum stains were observed at the west end of the tank location beneath the drain penetration. Approximately 0.8 cubic yards of potentially contaminated soil was excavated. Two soil samples (0.5' and 1.5' bgs) were collected at the west end of the excavation, and one sample was collected at 0.5' bgs from the east end of the excavation. All samples were analyzed for DRO. One sample at the 0.5' depth from the west end of the excavation contained 420 mg/kg DRO but the deeper sample at the 1.5' depth (west end) and the sample on the east end were non-detectable. Last staff assigned was Williams.	2,600 feet south

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Facility Name and Street Address	Office File ID~	Status/Priority	Problem, as listed by DEC*	Approximate Distance from the Property
FAA Cordova Water House Bldg. 601 Cordova Airport Mile 13 Copper River Highway	2215.38.001	Cleanup Complete	One 500-gallon heating oil AST was removed and replaced in 1994. Approximately 18 cubic yards of potentially contaminated soil was excavated beneath the AST. One of the six confirmatory soil samples contained concentrations of DRO at 5,200 mg/kg (beneath the tank – 5' bgs). A sheen was observed on the water in the excavation. Groundwater samples were collected and analyzed for BTEX in four probes and for DRO in one of the four probes. All BTEX results were reported as below MCLs. DRO was reported at 0.3 mg/L in the one sample. In 1997, soil excavation occurred down to 10' bgs (just below the groundwater table-9.3' bgs). Approximately 5.5 cubic yards of contaminated soil was removed. Three confirmatory soil samples were collected from the bottom of the excavation and analyzed for DRO, RRO and BTEX. One of the samples had 110 ppm DRO. The rest of the samples were non-detect for all the other constituents. Last staff assigned was Williams.	2,600 feet south
FAA Cordova Vehicle Fuel Pump Area Cordova Airport Mile 13 Copper River Highway	2215.38.001	Cleanup Complete	One unleaded (and possibly leaded) UST and pump house was removed in 1994. Approximately 43 cubic yards of potentially contaminated soil was excavated. The UST was approximately 10 feet northwest of the pump house. Eight confirmation soil samples were collected from the limits of the excavation and from beneath the dispenser location. The soil samples were analyzed for DRO, GRO, BTEX and lead. All soil samples results were below ADEC Cleanup levels. Groundwater samples were collected and analyzed for BTEX and GRO from four probes; lead and DRO samples were analyzed from one of the probes. GRO and DRO were non-detectable, and BTEX compounds were reported as below MCLs; however, the lead result (0.21 mg/L) (GP-27) did exceed the MCL (0.015 mg/L). In 1997, four groundwater probes were installed approximately 30', 75', 90', and 100' hydraulically downgradient (south) of the Former Vehicle Fuel Pump Area and sampled for lead only. Samples results from the groundwater probe indicated levels of 17, 24, 63 and 75 ug/L lead.	2,600 feet south

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TABLE 3
CONTAMINATED SITES WITHIN A 1.0 MILE RADIUS

Facility Name and Street Address	Office File ID~	Status/Priority	Problem, as listed by DEC*	Approximate Distance from the Property
FAA Cordova Station NDB ~Mile 15 Copper River Highway ~2 Miles ESE of Airport	2215.38.001	Cleanup Complete	UST 35-C-1, a 500 gallon diesel fuel tank, supplied fuel to the Non Directional Beacon (NDB) emergency generator. The fuel tank was disconnected from the generator in December of 1989. In January 1990, a channel of the nearby river, the Sheridan Glacier River, apparently flooded the tank and flushed approximately 200 gallons of diesel fuel into the surrounding area. A release investigation was conducted in 1995. Two groundwater samples were collected. One was analyzed for diesel range organics (DRO) and benzene, toluene, ethylbenzene and xylenes (BTEX) with sample results of 300 mg/L DRO and 13 mg/L benzene. Site is leased from the Forest Service.	2,600 feet south
FAA Cordova Carpenter's Bldg. 606 Cordova Airport Mile 13 Copper River Highway	2215.38.001	Cleanup Complete	The Carpenter's Shop is located in the west-central area of the quarters facility. A 500-gallon heating oil AST is on the south side of the building. Maintenance supplies, including paints and turpentine, were observed inside the shop. A floor drain was also noted. The floor drain in Building 606 was abandoned and sealed on July 19, 1996. The sludge in the floor drain of Building 606 was sampled and analyzed for GRO, DRO, RRO, VOCs, SVOCs, metals and PCBs. GRO was not detected in the sludge sample, but DRO and RRO were detected at concentrations of 860 mg/kg and 2,100 mg/kg, respectively. In addition, several SVOC parameters were detected at elevated levels. No VOCs were detected. These results suggest that middle and heavy distillates were disposed of in this drain, but lighter distillates like VOCs and BTEX compounds were not disposed of. Metals were detected in the sludge at 2 to 200 times background. Aroclor 1254 and Aroclor 1260, two PCB compounds, were detected at 4,100 ug/kg and 220 ug/kg, respectively.	2,600 feet south
FAA Cordova Flight Service Station Building 400 Cordova Airport	2215.38.001	Cleanup Complete	A 1,000-gallon regulated gasoline UST and a 1,500-gallon heating oil UST were removed in 1994. Soil contamination was found and excavated.	2,600 feet south
FAA - Cordova - Former Behicle Fuel Pump Area Cordova Airport	2215.38.001	Active	Farnell use to be staff assigned. Incomplete file. Missing: EventID, Reckey, FacID, LedgerCode, RegionID. Spill #: 93-2-4-01-054-1 (NDB Facility) and 93-2-4-01-054-01 (FAA Housing).	2,600 feet south

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TABLE 4
SUMMARY OF AREAS OF CONCERN WITHIN PROPERTY BOUNDARY

Area of Concern	Site*	Date Observed	Coordinates	Potential Contaminant Source	Photos
Dump Road	006	9/29/2014	N 60.48233°, W 145.33493°	grill, oven, car, lawnmower, tires, metal, empty 55-gal drum, household trash	14
Dump Road	007	9/29/2014	N 60.48126°, W 145.32669°	2 chest freezers, moose habitat area	15
Dump Road	008	9/29/2014	N 60.48646°, W 145.32933°	washing machine	16
Dump Road	009	9/29/2014	N 60.48737°, W145.32828°	engine, washing machine, empty 55-gallon drum, rusted car and camper	17 and 18
Dump Road	010	9/29/2014	N 60.47131°, W 145.36180°	metal+, burned soil, empty 55 gal drum	22 and 23
Dump Road	011	9/29/2014	N 60.47606°, W 145.35699°	metal, bicycle parts, potential burn pile	24
Dump Road	012	9/29/2014	N 60.48447°, W 145.34024°	freezer	19
Dump Road	013	9/29/2014	N 60.48936°, W 145.32852°	rusted vehicle+	20
Dump Road	014	9/29/2014	N 60.48881°, W 145.32901°	truck without engine, jet ski	21
Dump Road	015	9/30/2014	N 60.48356°, W 145.37598°	part of a rusted car	25
Dump Road	016	9/30/2014	N 60.48657°, W 145.37321°	burn pile	26
Dump Road	-	-	-	Mile 17 Landfill Household waste	-
Sheridan Glacier Road	017	9/30/2014	N 60.48700°, W 145.41512°	rusted couch, mattress, freezer+, washing machine+, two batteries+	9 and 10
Sheridan Glacier Road	018	9/30/2014	N 60.50958°, W 145.41757°	car, dishwasher	8
Cabin Lake Road	019	9/30/2014	N 60.51701°, W 145.44327°	log pile area, moose carcasses	4 and 5
Cabin Lake Road	020	9/30/2014	N 60.52024°, W 145.44698°	rusted culverts	6
Cabin Lake Road	021	9/30/2014	N 60.51143°, W 145.46494°	Former Cabin Lake Road shop site DEC Contaminated Site #2215.38.003 Cleanup Complete Status vehicle maintenance, oil and fuel storage, battery storage	2 and 3
Cabin Lake Road	022^	9/30/2014	N 60.50090°, W 145.47488°	airplane, cars, drums	-
Cabin Lake Road	023^	9/30/2014	N 60.50195°, W 145.46074°	old gravel pit/dump site, trash and scrap metal	-
Cabin Lake Road	024~	10/1/2014	N 60.50793°, W 145.44718°	building materials, leased parcel	-
Cabin Lake Road	025	10/1/2014	N 60.51081°, W 145.4389°	refrigerator and stove	7
Sheridan Glacier Road	026~	10/1/2014	N 60.50254°, W 145.41898°	Active gravel pit	-
Sheridan Glacier Road	027~	10/1/2014	N 60.49923°, W 145.42219°	gravel pit/equipment storage	-
Sheridan Glacier Road	028	10/1/2014	N 60.49547°, W 145.42067°	flooded portion of gravel pit, drum	11
South of Copper River Highway	-	-	-	Eyak NALEMP Mile 14 Site DEC Contaminated Site #2215.38.029 Active Site Abandoned powerhouse building	-

* Sites 001 through 005 were initial Property boundary coordinates used in the field

+ Debris previously used for target practice

^ Observed in the field but not on Eyak Corporation Land

~ Site not included in assessment at the request of Eyak Corporation

TABLE 5
POTENTIAL CONTAMINATION SOURCES AND CONTAMINANTS OF CONCERN

Source Type	Location(s)	Potential Contaminant(s) of Concern
Abandoned Car / Vehicle / Airplane / Camper / Jetski / Lawnmower	006, 009, 013, 014, 015, 017, 022	fuel, used oil, lead, refrigerants, asbestos, PAHs, metals
Tires	006	PAHs
Scrap metal, culverts	006, 010, 011, 020, 023	metals, lead
55-gallon drum(s) (empty)	006, 009, 010, 022, 028	fuel, used oil, VOCs, PAHs, PCBs
Miscellaneous refuse	006, 023	metals
Freezer / Refrigerator	007, 012, 017, 025	refrigerants, mercury, lead, used oil, PCBs (if manufactured prior to 1979)
Washing machine	008, 009, 017	Mercury (if manufactured prior to 1972)
Dishwasher	018	Asbestos (if manufactured prior to mid-1970s)
Burn pile	010, 011, 016	dioxins, metals
Batteries	017, 021	lead
Cresote Logs	019	PAHs
Cabin Lake Road Contaminated Site	021	petroleum, metals, chlorinated solvents, lead (batteries)
Eyak NALEMP Mile 14 Site	-	petroleum, metals
Mile 17 Landfill	-	petroleum, solvents, metals
Equipment Storage	027	fuel, used oil, solvents, lead

VOCs = Volatile Organic Compounds

PAH = Polycyclic aromatic hydrocarbons

PCB = Polychlorinated biphenyls

TABLE 6
ROUGH ORDER OF MAGNITUDE COST ESTIMATE FOR SITE CLEANUP

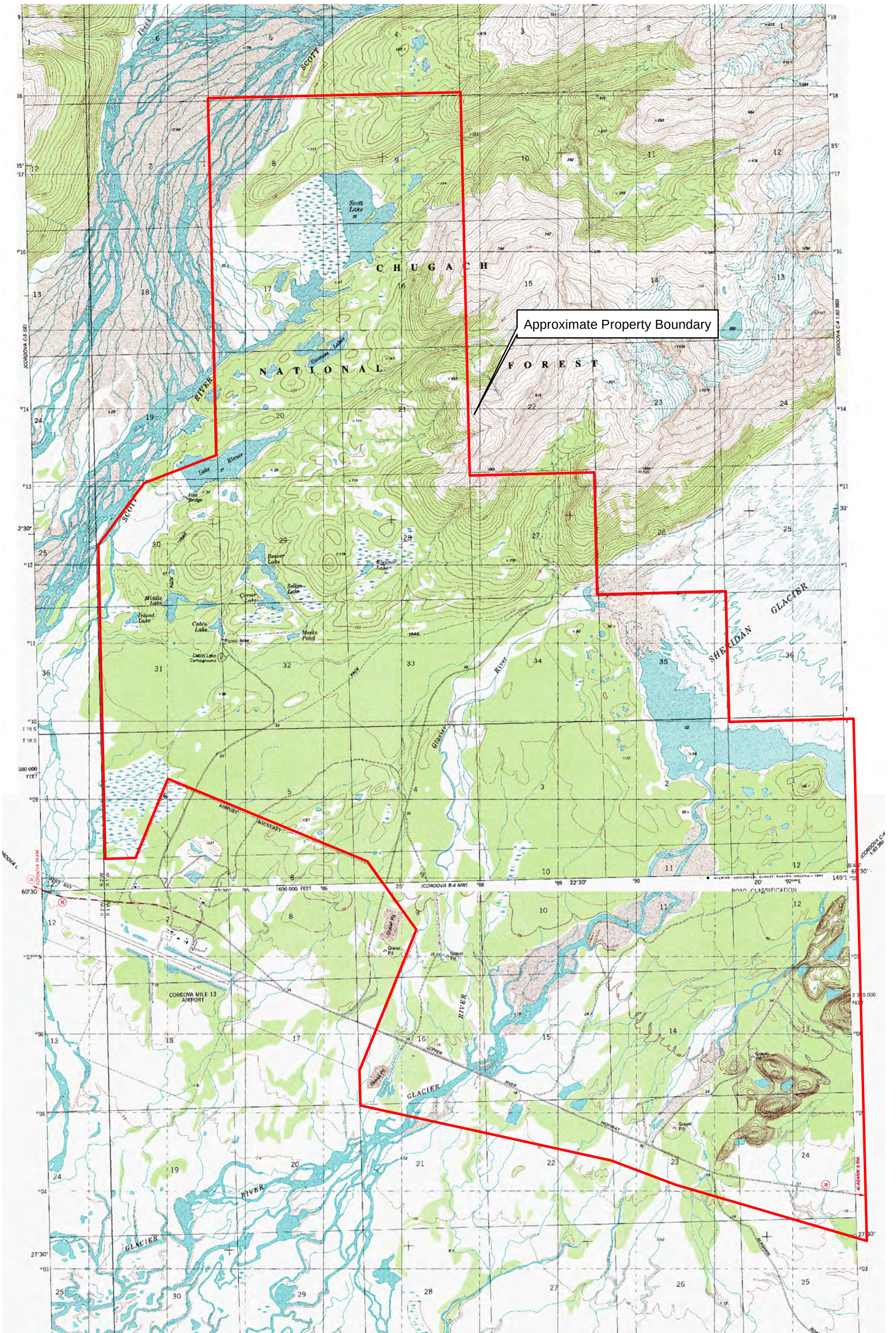
Item	Quantity ~	Unit Cost	Total Cost
<u>Landfill Disposal Costs*</u>			
Refrigerator/freezer	5	\$46.05 each	\$230
Vehicle^	5	\$209.00 each	\$1,045
Camper	1	\$173.00 each	\$173
Battery	7	\$11.50 each	\$81
Appliances	5	\$7.74 each	\$39
Scrap Metal	15 cubic yards	\$15.54 per cubic yard	\$233
General Refuse	15 cubic yards	\$5.44 per cubic yard	\$82
Estimated Cost for Disposal at Landfill:			\$1,882
Cost Estimate from Wilson Construction for Removal and Transport of Materials to Mile 17 Landfill (Labor and Equipment):			\$12,000
<u>Characterization Sampling ^</u>			
Vice President	10	\$210 per hour	\$1,680
Project Management	30	\$120 per hour	\$2,880
Environmental Staff	100	\$80 per hour	\$8,000
(Includes work plan development, mobilization, sampling, reporting)			
Flights to and from Cordova	1	\$500 each	\$500
Hotel	10	\$150 per night	\$1,500
Rental Car	10	\$100 per day	\$1,000
<u>Analysis</u>			
DRO/RRO Analysis	20	\$80 each	\$1,600
GRO/BTEX Analysis	20	\$80 each	\$1,600
VOC Analysis	20	\$180 each	\$3,600
PAH Analysis	15	\$185 each	\$2,775
PCB Analysis	10	\$85 each	\$850
RCRA Metal Analysis	20	\$155 each	\$3,100
Dioxin Analysis	5	\$450 each	\$2,250
Estimated Cost of Characterization Efforts:			\$31,335
Subtotal:			\$45,217
Contingency (25%)			\$11,304
Estimated Total Cost:			\$56,521

* Costs for landfill disposal taken from City of Cordova 2014 Fee Schedule

^ Note that the batteries, fuel, and other hazardous materials must be removed from the vehicle prior to disposal at the Landfill. Removal and disposal and are included in the Wilson Construction cost estimate

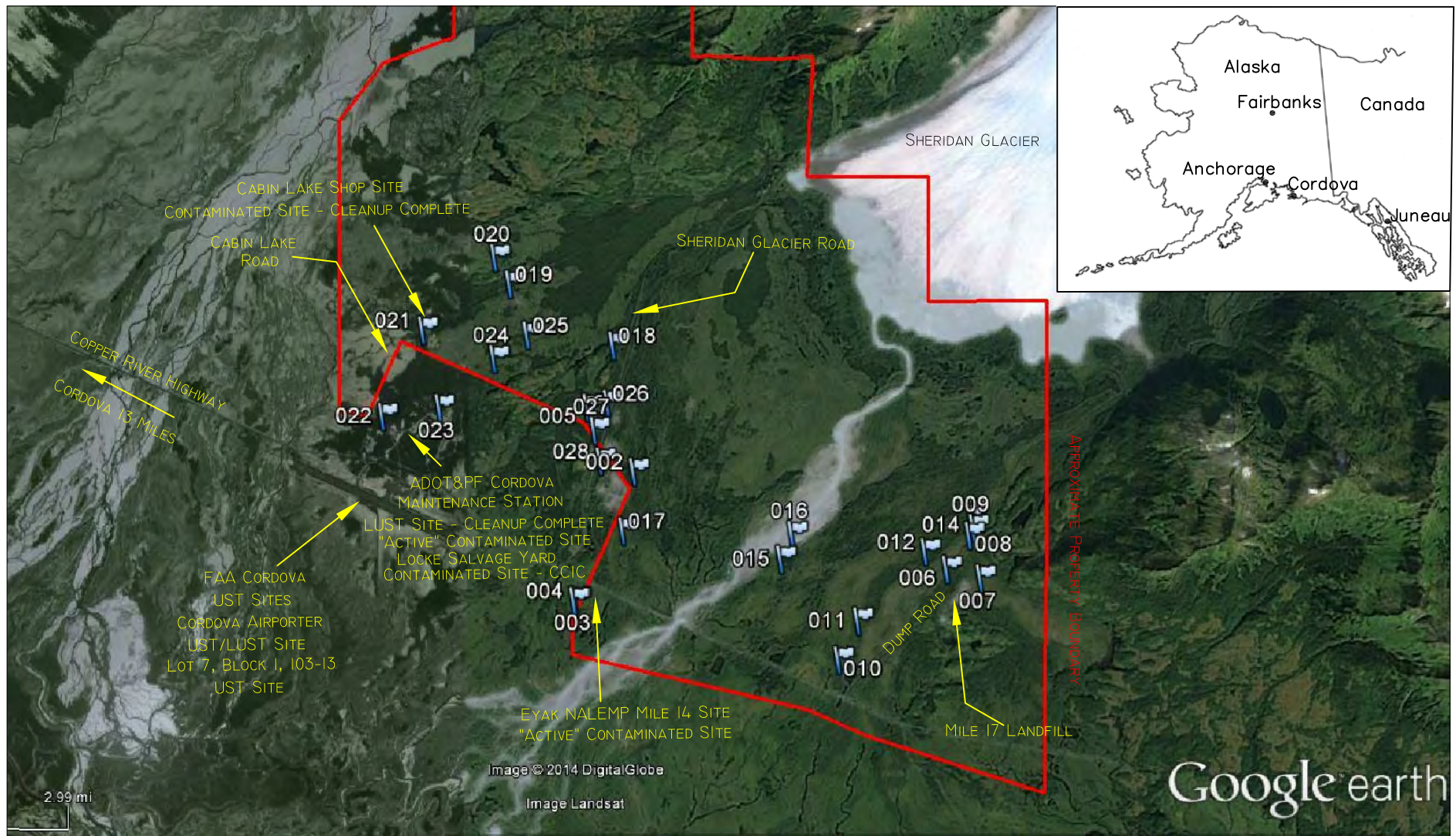
~ Quantities are estimates based on visual observations.

^ The cost estimate assumes only surface soil and/or surface water samples will be collected. Subsurface soil and/or groundwater samples are not included, and would have substantially higher cost due to the need to mobilize a drill rig, backhoe, and/or other equipment.



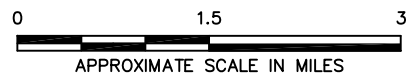
0 2,000 4,000 8,000 Feet



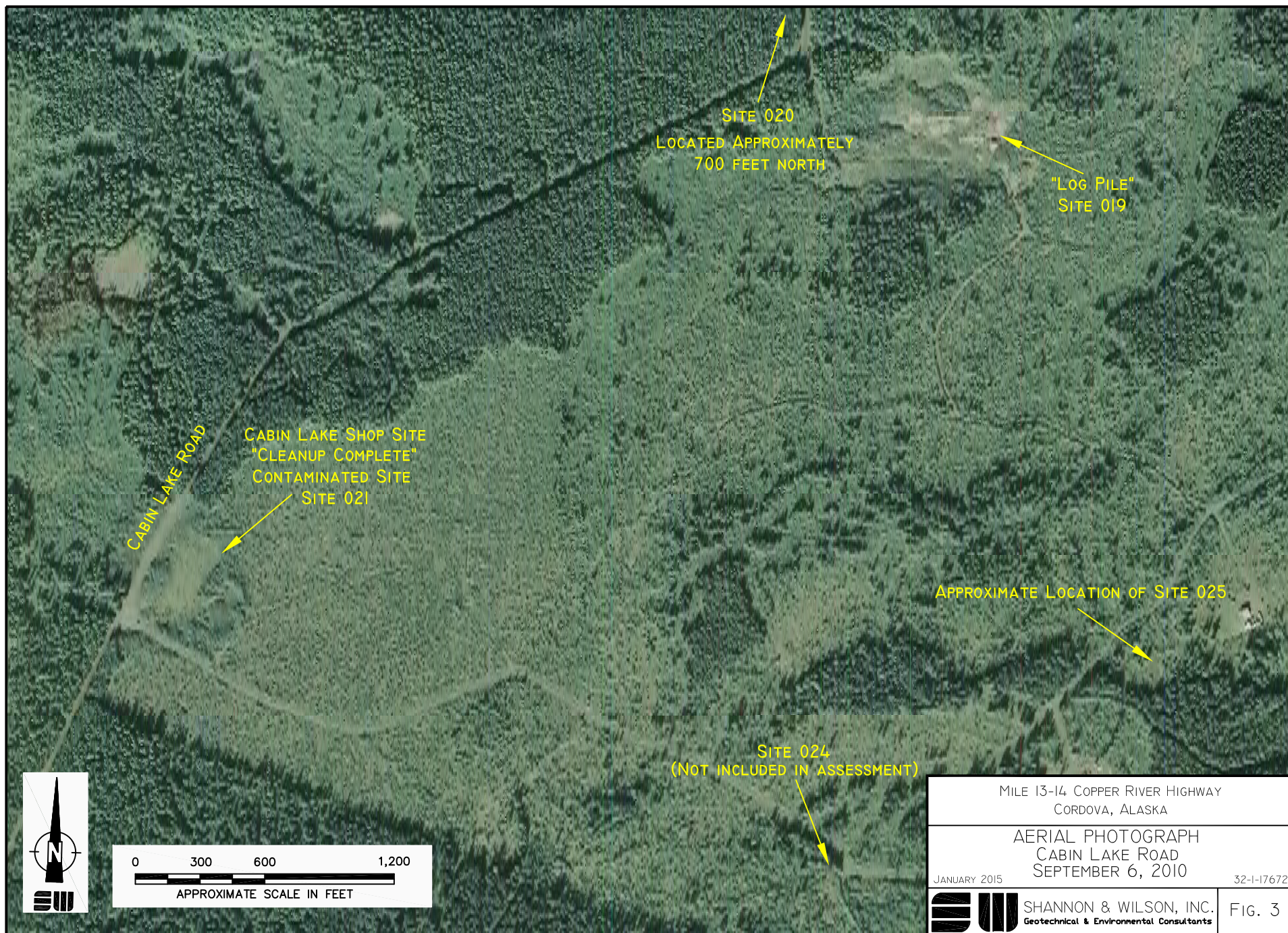


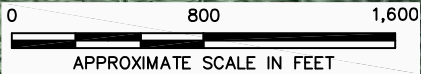
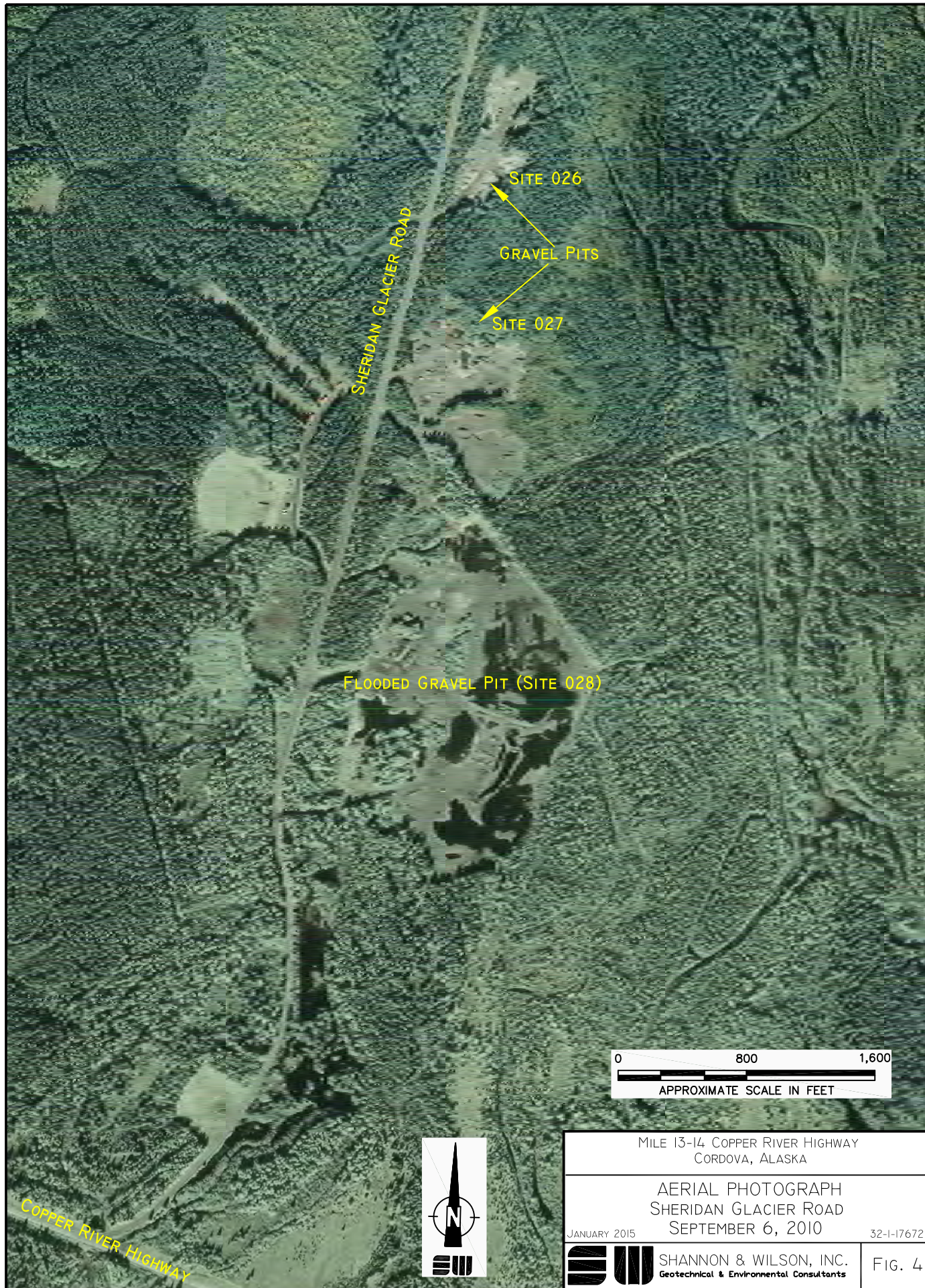
Map adapted from aerial imagery provided by Google Earth Pro(tm), reproduced with permission granted by Google Earth Mapping Services (2014)

Flags correspond with areas of concern identified during Shannon & Wilson's 2014 field activities (See Table 4). Note, Sites 001 through 005 were used as markers to establish Property boundaries and are not areas of concern.



PROPERTY ASSESSMENT AND CLEANUP PLAN MILE 13-14 COPPER RIVER HIGHWAY CORDOVA, ALASKA	
SITE PLAN	
JANUARY 2015	32-I-17672
 SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	FIG. 2





MILE 13-14 COPPER RIVER HIGHWAY
CORDOVA, ALASKA

AERIAL PHOTOGRAPH
SHERIDAN GLACIER ROAD
SEPTEMBER 6, 2010

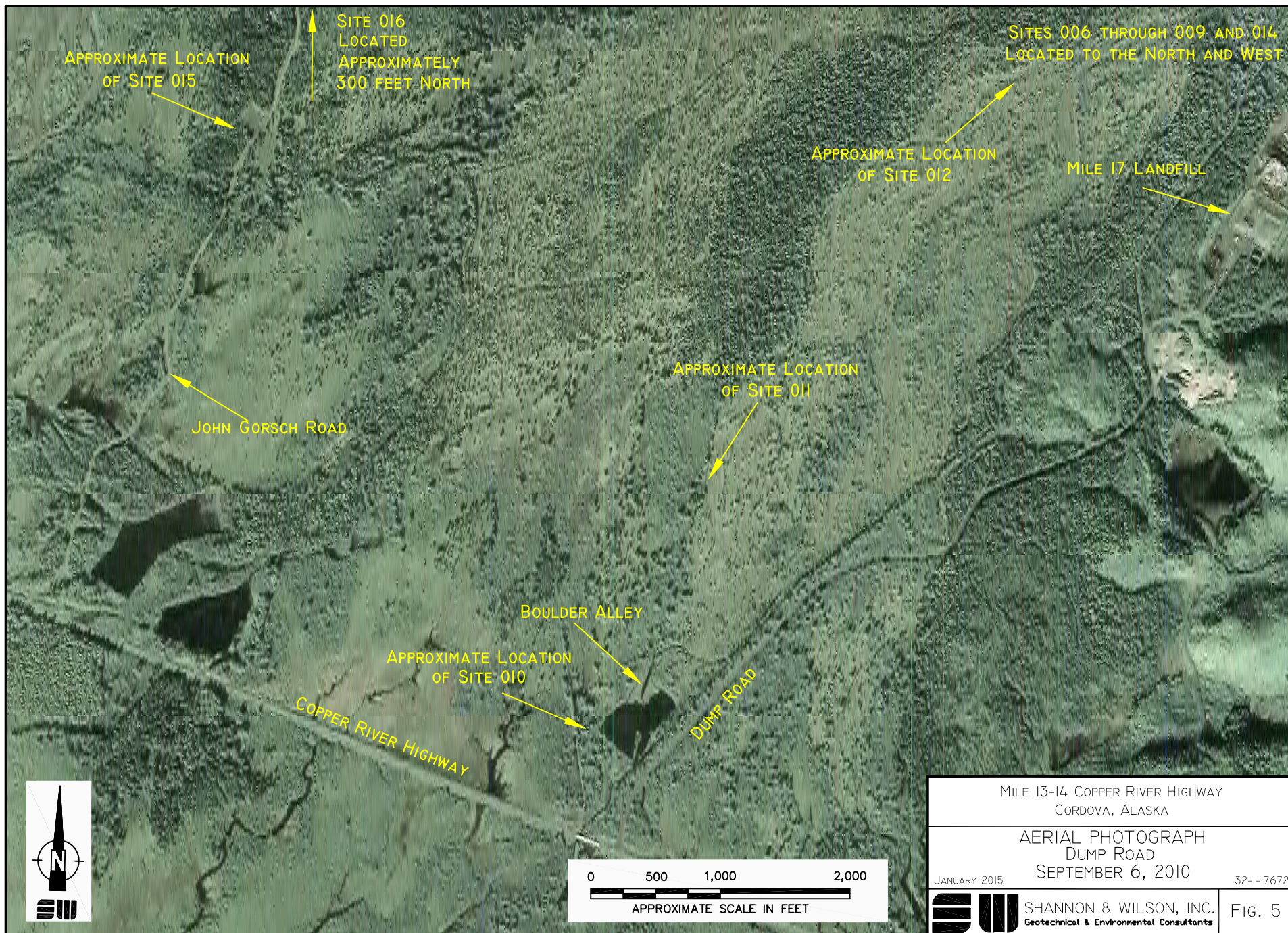
JANUARY 2015

32-I-17672



SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

FIG. 4



APPENDIX A
SITE PHOTOGRAPHS

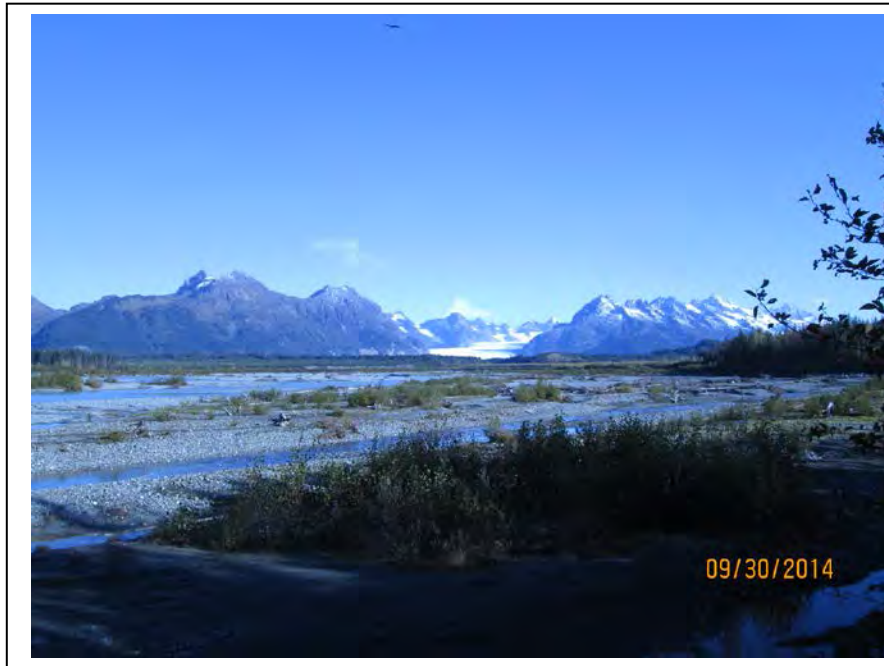


Photo 1: Center of the Property, looking north at Sheridan Glacier from the Copper River Highway. (September 30, 2014)



Photo 2: Former Cabin Lake Road shop site (Site 021), looking northeast. (September 30, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 1 AND 2

January 2015

32-1-17672



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A-1



Photo 3: Creosote-treated logs blocking off the former Cabin Lake Road shop site (Site 021), looking southwest. (September 30, 2014)



Photo 4: The "log pile" near Cabin Lake Road (Site 019), looking north. (September 30, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 3 AND 4

January 2015

32-1-17672



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A-2



Photo 5: Moose carcasses near the “log pile” (Site 019), looking east. (September 30, 2014)



Photo 6: Rusty culverts along Cabin Lake Road (020), looking northwest. (September 30, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 5 AND 6

January 2015

32-1-17672



SHANNON & WILSON, INC.
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A-3



Photo 7: Refrigerator and stove near Cabin Lake Road (Site 025), looking east. (October 1, 2014)



Photo 8: Rusty car near Sheridan Glacier Road (Site 018), looking southwest. (September 30, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 7 AND 8

January 2015

32-1-17672



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A-4



Photo 9: Washing machine and batteries near Sheridan Glacier Road (Site 017), looking northwest. (September 30, 2014)



Photo 10: Rusted couch near Sheridan Glacier Road, (Site 017), looking southwest. (September 30, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 9 AND 10

January 2015

32-1-17672



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A-5

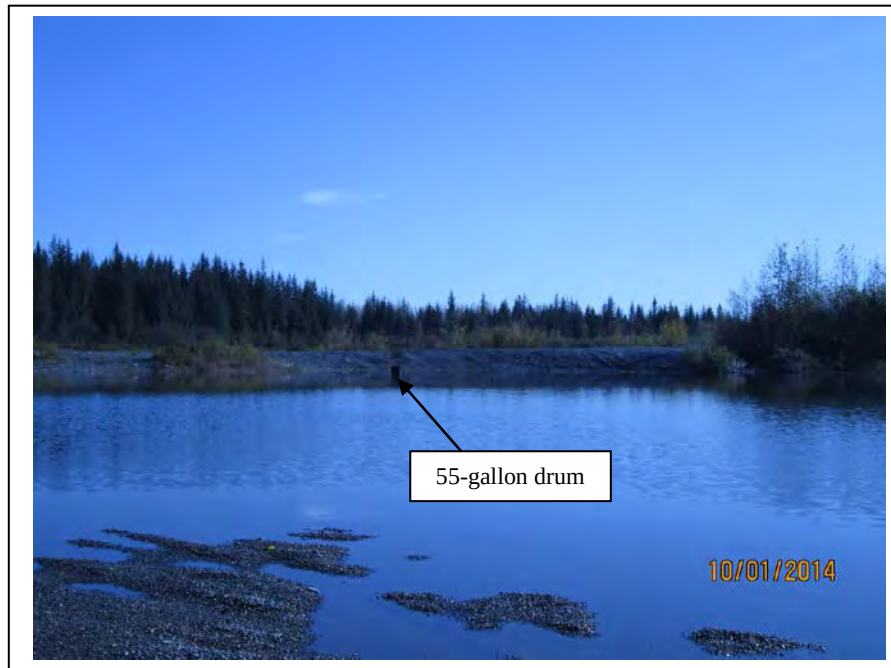


Photo 11: A 55-gallon drum in flooded gravel pit near Sheridan Glacier Road (Site 028), looking southeast. (October 1, 2014)



Photo 12: Clear cut area for moose habitat near the Dump Road, looking northwest. (September 29, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 11 AND 12

January 2015

32-1-17672



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A-6

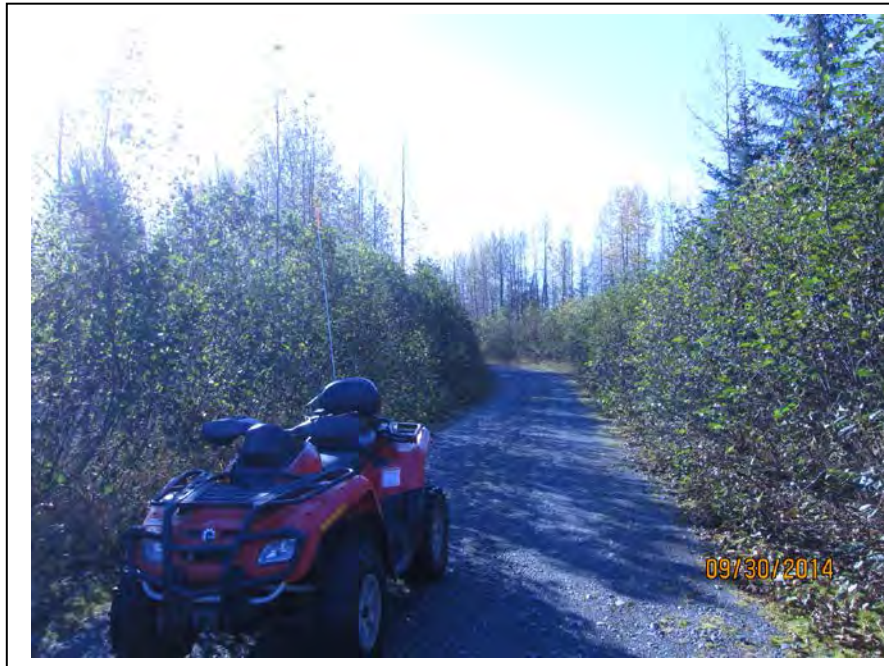


Photo 13: ATV trail near the Dump Road. (September 30, 2014)



Photo 14: Discarded car and other debris near the Dump Road (Site 006), looking northeast. (September 29, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 13 AND 14

January 2015

32-1-17672



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A-7



Photo 15: Discarded freezers in moose habitat area near the Dump Road (Site 007), looking south. (September 29, 2014)



Photo 16: Discarded washing machine near the Dump Road (Site 008). (September 29, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 15 AND 16

January 2015

32-1-17672



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A-8



Photo 17: Drum observed near the Dump Road (Site 009).
(September 29, 2014)



Photo 18: Rusted car and camper near the Dump Road (Site 009),
looking west. (September 29, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 17 AND 18

January 2015

32-1-17672



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A-9



Photo 19: Discarded freezer near the Dump Road (Site 012).
(September 29, 2014)



Photo 20: Rusted vehicle near the Dump Road (Site 013).
(September 29, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 19 AND 20

January 2015

32-1-17672



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A-10



Photo 21: Discarded truck near the Dump Road (Site 014), looking northeast. (September 29, 2014)



Photo 22: Scrap metal near Boulder Alley (Site 010), looking north. (September 29, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 21 AND 22

January 2015

32-1-17672



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A-11



Photo 23: Stained soil near Boulder Alley (Site 010), looking north. (September 29, 2014)



Photo 24: Scrap metal in burn pile along Boulder Alley (Site 011). (September 29, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 23 AND 24

January 2015

32-1-17672



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A-12



Photo 25: Part of a discarded vehicle along John Gorsch Road (Site 015), looking south. (September 30, 2014)



Photo 26: Scrap metal in burn pile along John Gorsch Road (Site 016), looking south. (September 30, 2014)

Property Assessment and Cleanup Plan
Mile 13-14 Copper River Highway
Cordova, Alaska

PHOTOS 25 AND 26

January 2015

32-1-17672



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A-13

APPENDIX B

FIELD NOTES

9/29/14

3217672

yes³

9:15 Irv picked me up from airport

meet ~~april~~ Matt John

2 Matt - Bear good & notes for village of Eyak

- Irv & I had meeting to discuss game plan:

- go to Forest Service to get maps

- intended reuse is substrate

need to make sure we stay on Eyak Corporation lands

unpack, get settled, attempted to get Forest Service maps

- 1300 meet Harris (another village of Eyak employee)

mentioned knowing someone who saw oil drums being buried on Eyak lands → ask to interview?

during logging in the area

- contact at Forest Service is unavailable

1400 leave office to head to site

[006] - Dump site 1; photo #1, 2 & 3

gill, oven, car, lawnmower
trees, metal, trash, empty drum

runway household trash along road

[007] 2 chest freezers, photo 4

in cleared area - for moose habitat

→ photo #5

[008] washing machine photo #6

Rite in the Rain.

9/29/14 32-17672 JEC
4 [009] engine, photo #7

washing machine #8
empty drum #9

2 vehicles - noted at across
road from - car & canoe
photos 10 & 11

[010] metal chunks ^{across from?} by pond
photo 12, 13, 14
burned steel soil 15

55 gal drum, noted, empty photo 16
- labeled as grease line, off in woods
to the west

[011] tire & metal
→ along road → N of pond, bits of
metal. ~~by side~~ by side photo 17

[012] freezer, noted photo 18

011 & 012 in ^{old} moose clear-cut area

[013] noted at car, photo 19

[014] truck w/ at engine

^{Jeff Smith} boat next to it photo 20 & 21
license plate ~~27~~ photo 27

insurance card - Geico Anna & Steve

Estes policy # 4164921506 photo 23

vehicle registration - Michael G Givers photo 24

6021 Kern Street, Walla Walla WA 99064

License 8005CK

JEC

9/29/14

32-17672 JEC 5

small bits of metal / trash visible along trails

clearcut areas are for moose habitat restoration

1830 done for the day

→ Matt - 1964 earthquake closed the

gash height from willows to bigger

trees - limiting the moose food

to increase the moose habitat the

large trees are clear cut in order

to make space for willows to grow

(lots of moose footprints visible), this is

done in conjunction w/ the Forest Service

→ Hamon said he knew of someone who

saw an excavator buying drums out on

Eyak lands, but by the time law

enforcement got out there everything

was gone, hole in the ground was

covered → ask to interview this person?

9/30/14 - restart photo numbers

800 at NVE office

900 leave for site @ 11:14. One of the

ATVs won't start

1000 on-site

JEC

Rite in the Rain

6 [9/30/14]

32-1-17672

JEC

[015] part of an old car photo #1
on west side of road, clonal, gravel
area, also a burn pile

[016] burn pile photo #4
(2 & 3) re of glacier
shot, metal bits, by glacier

[017] spread at dump site 8 & 9
rusty couch

materials 10

freezer #5

washing machine & 2 lead-acid batteries #6 & 7

photos 12 & 13 - road

photos of glacier

[018] car on side of rd, d. block
photo 14 & 15

[019] "Log pile" old logging area
mass carcasses photos 16 & 17

[020] rusted objects? photo 18

[021] buried drums? 19 & 20

[022] rusted car photo 21

boat in road (private?) photo 22 JEC

[9/30/14]

32-1-17672

JEC 7

[022] continued ~8 ~~at~~ rusted
& moss covered 55 gal drums
potentially empty? most have holes
airplane - rusted 24 (WWII? Argon)
drum & car 23

another 2 rusted drums 25 & 26

27 view from road

28 across the road, weird marks

[023] gravel pit / dump site? trash & scrap
metal photos 29 & 30

[0021] continued buried drum site?

photos 31, 32, 33, clonal area with
limited vegetation, logs blocking access
to road, ~~some~~ some scrap metal

1430 back at mile 14 site, another
4-wheeler overturned so we had to
stop early

1530 back at NVE site

1600 done for the day

JEC

Rite in the Rain

⁸ 10/1/14

32-117672 JLC

800 stn

GPS coordinates:

001 - 005 - boring? based on given map

006 - N 60.48233°, W 145.33493°

007 - N 60.4826°, W 145.32669°

008 - N 60.48646°, W 145.32933°

009 - N 60.48737°, W 145.32828°

010 - N 60.47131°, W 145.36180°

011 - N 60.47606°, W 145.35699°

012 - N 60.48447°, W 145.34024°

013 - N 60.48936°, W 145.32852°

014 - N 60.48881°, W 145.32901°

015 - N 60.48356°, W 145.37578°

016 - N 60.48657°, W 145.37321°

017 - N 60.48700°, W 145.41512°

018 - N 60.50958°, W 145.41757°

019 - N 60.51701°, W 145.44327°

020 - N 60.52024°, W 145.44618°

021 - N 60.51143°, W 145.46494°

022 - N 60.50090°, W 145.47488°

023 - N 60.50195°, W 145.46074°

JLC

10/1/14

32-117672 ⁹ JLC

800 at Eyak Corporation

gravel pits - currently operating

↳ Eyak Corporation owned
general contractors storing stuff at
there

- the "private" land is leased to

- shareholders for their use - 100 year
lease, they own stuff on their leased
property

- they not comfortable going onto
leased property

- files & maps are disorganized,
can't find a map or legal description of
the property

- Angela suggested contacting the State or
DNR @ Chugach Regional Corporation
about Eyak lands near Mi 14/15

- Angela also suggested that the airplane,
drums & old car had been there since the
military was here ~1940's

- logging happened ~25 years ago

JLC

Rite in the Rain

10/10/11/14

32-117672 JEC

024 building materials (wood)
possibly leased property

025 bridge/steer, photo 1

026 gravel pit plots 2, 3, 4, 5, 6, 7
drum, scrap wood, metal
drum under pressure 5
AST - H.C. odor, empty? volume, no label
8, 9,

10 metal structure - not entered

11 various equipment

12 2 containers, 2 drums

↳ handwritten label: Glenum 3000 NS 3/4" cut
2nd no label

2 drums unknown (Dele 400) label

13 tank, 14 surface storage

connex not entered

15 bucket, full Dele 400

16 potential local shift for gravel pit - try

17 equipment

↳ 4 wheeled tanks

18 equipment, sheet metal metal (19 leaking)

20 & 21 underground pits?

22 dumped fishing net pile, more heavy
equipment

10/11/14

32-117672 JEC

11

027 equipment storage, scrap metal
connex, stored building materials
bridge in woods

028 flooded part of a gravel pit
w/ drum (rusty) in partial cover

1400 back at Exch operation

1403 Convergence

Surveyed 3 parts

T15 & 16 S, Range 1 W

-asked Angela about leased property &
she said not to include

-call Shyla to update & ask for
other ideas

1630 quit for day

Mike
Rite in the Rain

12 ~~10/2/14~~ (10/2/14) 32-1-17672 YEC
800 start, talk to Ivy +
change flight to afternoon flight

Interviews with
Bob Ladd Mark King
continued on page 13

13 10/2/14 32-1-17672 YEC
Bob Ladd interview
1993 - 2001 Etak Corp.
- Maria Manager
- sent out road for cleanup in summer
- refry, routes, burnt cars
- cleanup after logging, 3 summers
+ closing out road practices
State Forest ~~Adm~~ Act
- log bridges + roads need to be
removed (water buried)
- except metal culverts + steel bridges
- log bridges have to be removed
- logs just put alongside road
- logging lands on Cabin Lake area
- pick up loggers garbage on the way
- roads have been there since before
logging along Sheridan road
- Cabin Lake ^{area} site - shop site + log
staging area, excavated 50-100 ft area
area w/ 75-100 barrels buried
- dispose of barrels properly
- several barrels busted open during process
- also removed old engines ^{environmental person}
- 1996 - 1999 game John Barnes ^{Barry Fairbanks}
- contaminated soil was bioremediation
cells + landspread ^{grown out}
spread on logging roads in area ^{that was in the past}

10/2/14

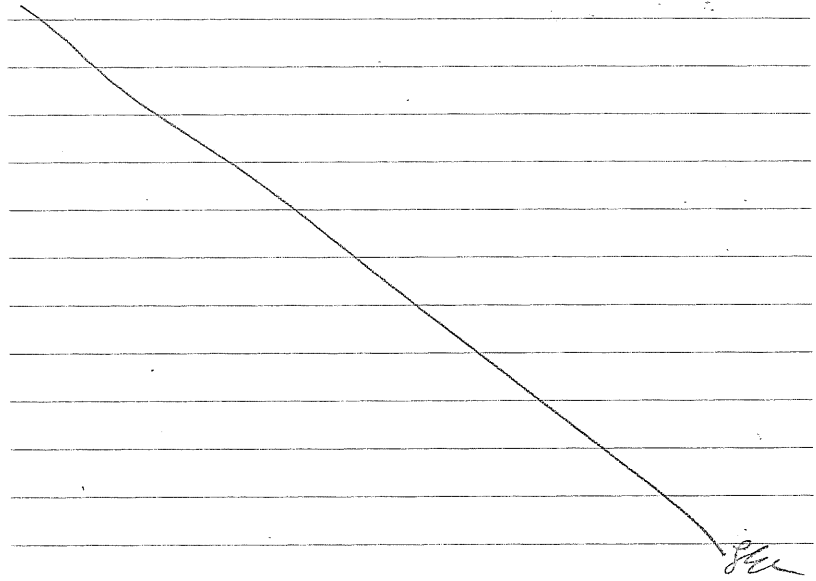
32-1-1672 YEC

- doing cleanup of roads for burnt cars
 - doesn't think Eyak corp has done anything in cleanup since 2000
 - new CEO - doesn't know if doing any land cleanup (start in 2000 - doesn't know)
 - same spot as
 - Sher store, logging contractor from SE
 - no pollution on log sites, but lots of trash
 - only site may not be cleaned up, shareholder land selection beyond landfill near closed up site (timber & barrels) b/c shareholder was still alive
 - only major issues are on shareholder land are lots - Nichols property
 - logging didn't generate dividends land wasn't used for anything
 - most military we spotted on Eyak land
 - wrecked plane is still land
 - Angela is only Eyak employee in land 13 years of local history since 2000
 - 2000 was last summer cleanup was done by Eyak corporation
- YEC

10/2/14

32-1-1672 YEC 15

- city charges for appliances
- whenever they found vehicles they recorded vin number, then people start removing vin number
- Forest service easements, border blurring it (John Gorn's Road), then before logging
- all logging roads are closed, limiting access
- only roads remained that were there before logging



Rite in the Rain

10/2/14

32-17672 YEC

Make King Interview

- live ~~near~~ at trial cond
- mostly recent dump sites
for stuff that the city chooses for
- gravel pits before logging
- military sites on caperton land
state? S. bunkers & corrugated steel
cabins & trails still there
- hidden bunkers on Eyak land, huts
Bird grown over ~~stuff~~ all the time
- dump isn't used, ~~state~~ ^{city} aeroselected
Eyak corp. land, surrounding land
is all Eyak
- behind dump is ~~the~~ a popular area
to dump stuff
- didn't know exactly where property line
was ^{by airport}
- state dumping on state land $\Rightarrow$ no more
silvers in this area?
- behind 14 mi, below road & gravel pit
silver salmon
- military stuff is buried in bunkers in
state land - used to be airplanes
- water at airport is contaminated?
- adjacent to S, state shop across from
coast guard $\rightarrow$ state/airport land is auto YEC

10/2/14

32-17672 YEC 17

burgly garages, print ons, drums, &
old cars

Dry says state area is really dirty
behind DOT shop & coast guard

- near cabin like road, Federal land has
foremost Best collection (first service)
- suggested talking to Mayor - Jim Gish

YEC
Rite in the Rain

APPENDIX C
CONCEPTUAL SITE MODEL

Appendix A - Human Health Conceptual Site Model Scoping Form and Standardized Graphic

Site Name: Eyak Corporation Sites, Mile 13-14 Copper River Highway

File Number: 32-1-17672

Completed by: Laura Coulson

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

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

1. General Information:

Sources (*check potential sources at the site*)

- | | |
|--|--|
| ☐ USTs | ☒ Vehicles |
| ☐ ASTs | ☐ Landfills |
| ☐ Dispensers/fuel loading racks | ☐ Transformers |
| ☒ Drums | ☒ Other: <input type="text" value="Illegal dump sites"/> |

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

- | | |
|--|--|
| ☒ Spills | ☐ Direct discharge |
| ☒ Leaks | ☒ Burning |
| | ☐ Other: <input type="text"/> |

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

- | | |
|--|--|
| ☒ Surface soil (0-2 feet bgs*) | ☐ Groundwater |
| ☐ Subsurface soil (>2 feet bgs) | ☒ Surface water |
| ☐ Air | ☐ Biota |
| ☐ Sediment | ☐ Other: <input type="text"/> |

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

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

2. Exposure Pathways: *(The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)*

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site-specific basis.) ☒

If the box is checked, label this pathway complete:

Complete

Comments:

There is potential for leaks/spills from car engines, refrigerators, and batteries on the Property. However, any spills are likely de minimis. No leaks and/or spills were observed during the 2014 site visit therefore the potential contamination is considered insignificant.

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)? ☒

If both boxes are checked, label this pathway complete:

Complete

Comments:

There is potential for dioxin from the burn piles to be present in the surface soil.

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, or are contaminants expected to migrate to groundwater in the future? ☐

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350. ☐

If both boxes are checked, label this pathway complete:

Incomplete

Comments:

2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future?



Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities).



If both boxes are checked, label this pathway complete:

Complete

Comments:

A drum was observed in a flooded gravel pit at Site 028 near Sheridan Glacier Road.

3. Ingestion of Wild and Farmed Foods

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



Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)?



Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.)



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

Complete

Comments:

There is potential for dioxin from the burn piles to be present on the plant material used for subsistence consumption.

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.)



Are the contaminants in soil volatile (see Appendix D in the guidance document)?



If both boxes are checked, label this pathway complete:

Complete

Comments:

There is potential for leaks/spills from car engines, refrigerators, and batteries on the Property. However, any spills are likely de minimis. No leaks and/or spills were observed during the 2014 site visit therefore the potential contamination is considered insignificant.

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminated soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures)

☐

Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)?

☐

If both boxes are checked, label this pathway complete:

Incomplete

Comments:

3. Additional Exposure Pathways: *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

Dermal Exposure to Contaminants in Groundwater and Surface Water

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- o Climate permits recreational use of waters for swimming.
- o Climate permits exposure to groundwater during activities, such as construction.
- o Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

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

☐

Comments:

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- o The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- o The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

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

☐

Comments:

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- o Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- o Dust particles are less than 10 micrometers (Particulate Matter - PM₁₀). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.
- o Chromium is present in soil that can be dispersed as dust particles of any size.

Generally, DEC direct contact soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because it is assumed most dust particles are incidentally ingested instead of inhaled to the lower lungs. The inhalation pathway only needs to be evaluated when very small dust particles are present (e.g., along a dirt roadway or where dusts are a nuisance). This is not true in the case of chromium. Site specific cleanup levels will need to be calculated in the event that inhalation of dust containing chromium is a complete pathway at a site.

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

☐

Comments:

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

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

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

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

☐

Comments:

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

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Eyak Corporation Site at Mile 13-14 Copper River Highway

Completed By: Laura Coulson

Date Completed: December 1, 2014

Instructions: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.

(1) Check the media that could be directly affected by the release.	(2) For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.
Media ☒ Surface Soil (0-2 ft bgs) ☐ Subsurface Soil (2-15 ft bgs) ☐ Ground-water ☒ Surface Water ☐ Sediment	Transport Mechanisms ☒ Direct release to surface soil <i>check soil</i> ☒ Migration to subsurface <i>check soil</i> ☐ Migration to groundwater <i>check groundwater</i> ☒ Volatilization <i>check air</i> ☒ Runoff or erosion <i>check surface water</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list): _____ ☐ Direct release to subsurface soil <i>check soil</i> ☐ Migration to groundwater <i>check groundwater</i> ☐ Volatilization <i>check air</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list): _____ ☐ Direct release to groundwater <i>check groundwater</i> ☐ Volatilization <i>check air</i> ☐ Flow to surface water body <i>check surface water</i> ☐ Flow to sediment <i>check sediment</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list): _____ ☒ Direct release to surface water <i>check surface water</i> ☒ Volatilization <i>check air</i> ☒ Sedimentation <i>check sediment</i> ☒ Uptake by plants or animals <i>check biota</i> ☐ Other (list): _____ ☐ Direct release to sediment <i>check sediment</i> ☐ Resuspension, runoff, or erosion <i>check surface water</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list): _____

(3) Check all exposure media identified in (2).	(4) Check all pathways that could be complete. The pathways identified in this column must agree with Sections 2 and 3 of the Human Health CSM Scoping Form.	(5) Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.																					
Exposure Media	Exposure Pathway/Route	Current & Future Receptors																					
☒ soil	☒ Incidental Soil Ingestion ☒ Dermal Absorption of Contaminants from Soil ☐ Inhalation of Fugitive Dust	<table border="1"> <tr> <th>Residents (adults or children)</th> <th>Commercial or Industrial workers</th> <th>Site visitors, trespassers, or recreational users</th> <th>Construction workers</th> <th>Farmers or subsistence harvesters</th> <th>Subsistence consumers</th> <th>Other</th> </tr> <tr> <td></td> <td></td> <td>C/F</td> <td>C/F</td> <td>C/F</td> <td>C/F</td> <td></td> </tr> <tr> <td></td> <td></td> <td>C/F</td> <td></td> <td>C/F</td> <td>C/F</td> <td></td> </tr> </table>	Residents (adults or children)	Commercial or Industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other			C/F	C/F	C/F	C/F				C/F		C/F	C/F	
Residents (adults or children)	Commercial or Industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other																	
		C/F	C/F	C/F	C/F																		
		C/F		C/F	C/F																		
☐ groundwater	☐ Ingestion of Groundwater ☐ Dermal Absorption of Contaminants in Groundwater ☐ Inhalation of Volatile Compounds in Tap Water	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>																					
☒ air	☒ Inhalation of Outdoor Air ☐ Inhalation of Indoor Air ☐ Inhalation of Fugitive Dust	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>C/F</td><td>C/F</td><td>C/F</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>					C/F	C/F	C/F														
				C/F	C/F	C/F																	
☒ surface water	☒ Ingestion of Surface Water ☒ Dermal Absorption of Contaminants in Surface Water ☐ Inhalation of Volatile Compounds in Tap Water	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>C/F</td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>C/F</td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>					C/F							C/F									
				C/F																			
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☒ sediment	☒ Direct Contact with Sediment	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>C/F</td><td>C/F</td><td>C/F</td></tr> </table>					C/F	C/F	C/F														
				C/F	C/F	C/F																	
☒ biota	☒ Ingestion of Wild or Farmed Foods	<table border="1"> <tr><td></td><td></td><td></td><td></td><td>C/F</td><td>C/F</td><td>C/F</td></tr> </table>					C/F	C/F	C/F														
				C/F	C/F	C/F																	

APPENDIX D

**IMPORTANT INFORMATION ABOUT YOUR
ENVIRONMENTAL SITE ASSESSMENT/EVALUATION REPORT**



Date: January 2015
To: ADEC
Re: PACP, Mile 13-14 Copper River Highway,
Cordova, Alaska

Important Information About Your Environmental Site Assessment/Evaluation Report

ENVIRONMENTAL SITE ASSESSMENTS/EVALUATIONS ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

This report was prepared to meet the needs you specified with respect to your specific site and your risk management preferences. Unless indicated otherwise, we prepared your report expressly for you and for the purposes you indicated. No one other than you should use this report for any purpose without first conferring with us. No one is authorized to use this report for any purpose other than that originally contemplated without our prior written consent.

The findings and conclusions documented in this site assessment/evaluation have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in this area. The conclusions presented are based on interpretation of information currently available to us and are made within the operational scope, budget, and schedule constraints of this project. No warranty, express or implied, is made.

OUR REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

Our environmental site assessment is based on several factors and may include (but not be limited to): reviewing public documents to chronicle site ownership for the past 30, 40, or more years; investigating the site's regulatory history to learn about permits granted or citations issued; determining prior uses of the site and those adjacent to it; reviewing available topographic and real estate maps, historical aerial photos, geologic information, and hydrologic data; reviewing readily available published information about surface and subsurface conditions; reviewing federal and state lists of known and potentially contaminated sites; evaluating the potential for naturally occurring hazards; and interviewing public officials, owners/operators, and/or adjacent owners with respect to local concerns and environmental conditions.

Except as noted within the text of the report, no sampling or quantitative laboratory testing was performed by us as part of this site assessment. Where such analyses were conducted by an outside laboratory, Shannon & Wilson relied upon the data provided and did not conduct an independent evaluation regarding the reliability of the data.

CONDITIONS CAN CHANGE.

Site conditions, both surface and subsurface, may be affected as a result of natural processes or human influence. An environmental site assessment/evaluation is based on conditions that existed at the time of the evaluation. Because so many aspects of a historical review rely on third party information, most consultants will refuse to certify (warrant) that a site is free of contaminants, as it is impossible to know with absolute certainty if such a condition exists. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas that showed no signs of contamination at the time they were studied.

Unless your consultant indicates otherwise, your report should not be construed to represent geotechnical subsurface conditions at or adjacent to the site and does not provide sufficient information for construction-related activities. Your report also should not be used following floods, earthquakes, or other acts of nature; if the size or configuration of the site is altered; if the location of the site is modified; or if there is a change of ownership and/or use of the property.

INCIDENTAL DAMAGE MAY OCCUR DURING SAMPLING ACTIVITIES.

Incidental damage to a facility may occur during sampling activities. Asbestos and lead-based paint sampling often require destructive sampling of pipe insulation, floor tile, walls, doors, ceiling tile, roofing, and other building materials. Shannon & Wilson does not provide for paint repair. Limited repair of asbestos sample locations are provided. However, Shannon & Wilson neither warrants repairs made by our field personnel, nor are we held liable for injuries or damages as a result of those repairs. If you desire a specific form of repair, such as those provided by a licensed roofing contractor, you need to request the specific repair at the time of the proposal. The owner is responsible for repair methods that are not specified in the proposal.

READ RESPONSIBILITY CLAUSES CAREFULLY.

Environmental site assessments/evaluations are less exact than other design disciplines because they are based extensively on judgment and opinion, and there may not have been any (or very limited) investigation of actual subsurface conditions. Wholly unwarranted claims have been lodged against consultants. To limit this exposure, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses may appear in this report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

Consultants cannot accept responsibility for problems that may develop if they are not consulted after factors considered in their reports have changed, or conditions at the site have changed. Therefore, it is incumbent upon you to notify your consultant of any factors that may have changed prior to submission of the final assessment/evaluation.

An assessment/evaluation of a site helps reduce your risk, but does not eliminate it. Even the most rigorous professional assessment may fail to identify all existing conditions.

ONE OF THE OBLIGATIONS OF YOUR CONSULTANT IS TO PROTECT THE SAFETY, HEALTH, PROPERTY, AND WELFARE OF THE PUBLIC.

If our environmental site assessment/evaluation discloses the existence of conditions that may endanger the safety, health, property, or welfare of the public, we may be obligated under rules of professional conduct, statutory law, or common law to notify you and others of these conditions.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland