FY 2006 DEC Brownfield Assessment Request Program

Contaminated Sites Program – Brownfield Team

Phase I / Phase II Environmental Site Assessment Millennium Square Development

Final Report

ALASKA Department of Environmental Conservation

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June 2006

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EXECUTIVE SUMMARY

OASIS Environmental, Inc., performed a Phase I / Phase II Environmental Site Assessment (ESA) at the Millennium Square Development site on behalf of Alaska Department of Environmental Conservation and City of Kenai. The Phase I ESA included reviews of site characteristics, previous environmental investigations, site records, database searches, interviews, and conducting a site reconnaissance. The Phase I ESA identified two recognized environmental conditions at the site: presence of bis(2-ethylhexyl) phthalate above the groundwater cleanup level in a monitoring well sampled in 2000, and the presence of buried debris in at least five locations on the property. Phase II ESA activities included sampling three monitoring wells at the site to determine current groundwater conditions. The analytical results of the groundwater samples showed that no organic analytes are present above laboratory reporting limits. Inorganic analysis of total metals found arsenic and lead to exceed groundwater cleanup levels, but the comparable dissolved arsenic and lead analytical results did not exceed groundwater cleanup levels. Therefore, the exceedances for arsenic and lead are attributed to suspended solids in the well water. The combined Phase I / II ESA found that buried debris in at least five locations is the only remaining recognized environmental condition at the site. It is the opinion of OASIS Environmental, Inc., that this condition is a manageable issue that should not prohibit the potential for future development, but may influence where or how development occurs.

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ATTACHMENTS

Acronyms and Abbreviations

° F	Degrees Fahrenheit
ACM	Asbestos-containing material
ASTM	American Society of Testing and Materials
CS	Contaminated sites
DEC	Department of Environmental Conservation
DRO	Diesel-range organics
EPA	Environmental Protection Agency
ESA	Environmental site assessment
FAA	Federal Aviation Administration
GCLs	Groundwater cleanup levels
GRO	Gasoline range organics
LUST	Leaking underground storage tank
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
OASIS	OASIS Environmental, Inc.
PAHs	Polycyclic aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
RCRA	Resource Conservation and Recovery Act
RPD	Relative percent difference
RRO	Residual range organics
SCLs	Soil cleanup levels
SVOCs	Semivolatile organic compounds
THM	Toxic hazardous materials
UST	Underground storage tank
VOCs	Volatile organic compounds

1.0 INTRODUCTION

1.1 Purpose

This document presents the results of a Phase I / Phase II Environmental Site Assessment (ESA) conducted by OASIS Environmental, Inc. (OASIS) at the request of Alaska Department of Environmental Conservation (DEC) for the City of Kenai. OASIS performed this ESA in conformance with the American Society for Testing and Materials (ASTM) E 1527-05 guidance document *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and E 1903-97 guidance document *Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

The purpose of this ESA is to identify *recognized environmental conditions* and evaluate the likelihood that the Millennium Square Development property (hereafter "the site") has been impacted with hazardous materials or petroleum products from past or current activities conducted on or near the site.

ASTM E 1527-05 defines the term *recognized environmental condition* as the presence or likely presence of any hazardous substances or petroleum products on a property under circumstances that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. A recognized environmental condition may include the presence or likely presence of hazardous substances or petroleum products under conditions in compliance with laws. Recognized environmental conditions do not include *de minimus* conditions which do not present a material risk of harm to public health or the environment and which generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies (ASTM 2005).

This report includes a review of publicly available regulatory records, databases, and aerial photographs; interviews with persons knowledgeable about the property's use and history; and a site reconnaissance conducted by an OASIS representative.

1.2 Significant Assumptions

Environmental assessments provide information regarding the environmental condition of a particular property or facility. This report is a professional opinion and judgment, dependent upon information obtained during the course of performance of the services.

Environmental conditions may exist at the site that cannot be identified only by visual observation. Where the scope of services is limited to observations made during site reconnaissance, interviews, and/or review of readily available reports and literature, any conclusions and/or recommendations are necessarily based in part on information supplied by others, the accuracy or sufficiency of which may not be independently reviewed by OASIS.

No investigation is thorough enough to exclude the presence of hazardous substances, petroleum products, or contamination resulting from spills of these products at a given site. Therefore, if no hazardous substances or materials or petroleum products are identified during the assessment, such a finding should not be construed as a guarantee of the absence of such materials or contamination due to such materials on the property, but rather should only be considered the results of services performed within the scope, limitations, and cost of the work performed.

1.3 Limitations and Exceptions

Any opinions and/or recommendations presented apply to site conditions existing at the time of performance of services. OASIS is unable to report on or accurately predict events that may impact the site following performance of the described services, whether occurring naturally or caused by external forces. OASIS assumes no responsibility for conditions that OASIS is not authorized to investigate, or conditions generally recognized as environmentally unacceptable at the time services are performed. OASIS is not responsible for changes in applicable environmental standards, practices or regulations following performance of services.

1.4 Special Terms and Conditions

The ESA activities were conducted in accordance with ASTM guidelines (E 1527-05), practices and procedures generally accepted in the consulting engineering field. Our professional judgment to assess the potential for contamination is based on limited data; no other warranty is given or implied by this report.

1.5 User Reliance

This document was prepared for the sole use of DEC and the City of Kenai, their affiliates, entities, lenders and their employees, agents, and contractors. No other party should rely on the information contained herein without prior written consent of OASIS, DEC, and the City of Kenai.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

Millennium Square Development is composed of three tracts known as Tract C (a.k.a the Daubenspeck Tract), Federal Aviation Administration (FAA) Tract, and FAA Football Field. The site is located in Kenai, Alaska (see Figure 1 in Attachment 1) and is bounded by Bridge Access Road, Frontage Road, Spur View Drive, and the Kenai River (see Figure 2). The legal description of the site is:

- Section 5 NE 1/4, Township 5 North, Range 11 West, Seward Meridian
- Tract C: Lot 2, Kenai Peninsula Borough Parcel Book 47, Plat No. 56
  FAA Tract: Lot 5, Kenai Peninsula Borough Parcel Book 47, Plat No. 58
  FAA Football Field: Lot 7, Kenai Peninsula Borough Parcel Book 47, Plat No. 58
- Latitude: 60.555 North; Longitude: 151.238 West
  Coordinate location from center of property

The site as a whole comprises 21.43 acres with Tract C, FAA Tract, and FAA Football Field containing 15.16 acres, 3.22 acres, and 3.05 acres, respectively. The site is located in a light-density, mixed commercial-residential area.

2.2 Environmental Setting

This section presents brief summaries of the climate, geology, soils, surface water hydrology, and demographics in the vicinity of the site.

Climate

Kenai is located in the transitional Arctic climatic zone. Climatic data for Kenai include the following average data (WRCC 2006):

- Daily Maximum Temperature: 42.2 degrees Fahrenheit (°F)
- Daily Minimum Temperature: 25.8°F
- Annual Precipitation: 19.12 inches
- Annual Snowfall: 61.2 inches

Soils

Surface soils near the site are of glacio-fluvial origin. Well-drained soil areas consist of surface organic material over silty loam, and poorly drained soils usually consist of a single or complex sequence of surface layers of moss and underlying peats. Soils are generally 2 to 10 feet thick. Permafrost is generally not present (E&E 1993).

Surface soils are underlain by unconsolidated glacio-fluvial, lacustrine, and marine deposits. Interbedded sands and gravels from glacio-fluvial deposits are often 10 to 80 feet thick. Lacustrine deposits consist of fine sand and silt and are from 10 to 20 feet thick. Marine deposits consist of silts and clayey silts and can be 10 to 100 feet thick (E&E 1993).

Hydrology

Surface drainage patterns are not clearly defined at the site, although it is presumed that any surface flow would flow southward toward the Kenai River. Most water is expected to infiltrate surface soils and reach groundwater. A previous study has documented that groundwater is located approximately 25 feet below ground surface and flows south to the river. A seep is present along the bluff in the location of the site (American 2001). Although the City of Kenai

operates a municipal water supply, at least 19 private wells are located within one mile of the site. The nearest is located approximately one-quarter mile from the site.

Demographics

Individuals do not reside or work at the site. The nearest residents are those of the Kenai Senior Center, located across Spur View Drive on the west side of the site. Businesses are located northwest of the site across Frontage Road and the Dragnet Cannery is located at the bottom of the bluff to the southeast of the site.

2.3 Site Ownership

The Millennium Square Development property originally was part of the Kenai FAA Station. The FAA Station included 29.77 acres that were withdrawn for the Civil Aviation Authority, the predecessor to the FAA, in 1941, and the 15.16 acres of Tract C, which the FAA leased in 1954. The FAA Tract and FAA Football Field comprised 6.27 acres of the 29.77-acre withdrawal.

In 1978, the FAA released 26.43 acres to the City of Kenai, which included the FAA Football Field, leaving only the FAA Tract under ownership of the federal government. Sometime around 1978, the FAA also ended its lease on Tract C, and the owner, H.A. Daubenspeck, deeded the property to the City of Kenai. On May 6, 2004, the FAA Tract transferred to the City of Kenai, which completed transfer of all property related to the Kenai FAA Station to the City of Kenai (LaShot 2006).

2.4 Site History and Current Use

The 29.77-acre Kenai FAA Station operated from 1941 to 2000. The station served a variety of functions, but one of its main purposes was to serve as a center for emergency operations if communications systems in Anchorage failed. The facility included housing, offices, and shops.

Records from 1972 indicate that the site contained at least 17 buildings, two foundations of former buildings, six 515-gallon fuel tanks, one 11,000-gallon fuel tank, and seven transformers (E&E 1993). Figure 3 shows the location of many of these improvements. The last remaining structures were removed in 2000, although regulatory oversight of cleanup operations continued for a few years (Bristol 2004).

The FAA Tract and FAA Football Field are zoned *General Commercial*, while Tract C is zoned *Suburban Residential*. Municipal sewer and water connections currently are available to the FAA Tract. Currently, the FAA Football Field is used for soccer fields, and at the time of reconnaissance, the northern portion of the FAA Tract was being cleared for use as a soccer field. The southern portion of the FAA Tract and Tract C are unused fields.

The City of Kenai is in the planning stage to determine how the site should be developed for future benefit to the community. Proposed uses include a convention center, private tourist-related businesses, marketplace for shops and offices, senior housing, health care facilities, park lands, medium-density housing, and a cultural site for Native American history.

2.5 Adjoining Property Uses

Several developed properties surround the large and irregular-shaped site. The Kenai Senior Center is located west and southwest of the FAA Tract across Spur View Road. Various professional and service businesses are located northwest and north of the FAA Football Field across Spur View Road and Frontage Road. Bridge Access Road, a major highway in the area, runs along the northeast and east side of the site. Development on the other side of Bridge Access Road is limited to Alaska Industrial Hardware. A residence is located on the east side of Tract C through a swath of spruce trees. Lastly, the Dragnet Cannery is located to the

southeast of Tract C. The cannery is at the bottom of a bluff, approximately 50 feet less in elevation than the southeast corner of Tract C. Figure 2 shows the location of these properties on a recent aerial photograph.

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3.0 PHASE I ASSESSMENT

3.1 Previous Investigations

A series of investigations beginning in 1993 have examined the environmental impact of former operations at the Kenai FAA facility on the Millennium Square Development site. These investigations have resulted in four DEC-regulated contaminated sites related to the site: Buildings 20, 300, 600, and Tract C (identified as the Daubenspeck Property in DEC database records). Figure 3 shows the locations of these sites. All sites were listed because of petroleum contaminated soil related to an underground storage tank (UST). The USTs have been removed and contaminated soil that was associated with the USTs has been remediated. The three buildings received closure in 2001 or 2002, while Tract C remains a DEC-listed contaminated site because remediation of stockpiled soil at an off-site location has not been completed. Table 1 at the end of this subsection presents a brief summary of the investigations and documentation of environmental site history. The following list highlights pertinent findings of the former investigations.

- *Environmental Compliance Investigation Report*, December 1993 (E&E) – This FAA investigation was an initial preliminary assessment/site investigation. At the time of the investigation in 1993, the FAA still owned and operated the "Quarters Site" on the 3.34-acre FAA Tract. The investigation identified potential environmental impacts related to existing and former improvements at the site, including the following buildings on the FAA Tract:
    - Building 20 – An emergency operations center and office with a 500-gallon heating oil UST, containerized toxic hazardous material (THM), suspect asbestos-containing material (ACM), and an ion-source tub labeled as containing radioactive material.
    - Building 417 – Office space that contained suspect ACM.
    - Building 300 – Metals shop and electronics room with an inactive well, a floor drain, THM and suspect ACM, and an area of stained soil reported to be approximately 48 square feet located on the south side of the building.
    - Building 210 – Storage building that contained 55-gallon drums of antifreeze and oil, roofing tar, and gasoline.
    - Building 600 – Engine generator building with a 500-galllon diesel UST, stained soil around the fill pipe for the UST, and various THM and suspect ACM.
    - Building 400 – Former transmitter/receiver building with only a foundation and 13 creosote posts remaining.

  During the investigation, four soil samples were collected: One from the floor drain in Building 300, two from the area of stained soil at Building 300, and one from the area near the fill pipe of the UST at Building 600. The sample from the floor drain had a lead concentration of 1,400 milligrams per kilogram (mg/kg) and an arsenic concentration of 78 mg/kg. One of the samples from the stained soil had diesel range organic (DRO) concentration of 1,000 mg/kg. The sample from UST fill pipe area had a DRO concentration of 1,300 mg/kg. Figure 3 shows the analytical results of the 1993 investigation.

- *Environmental Due Diligence Audit*, May 1996 (Bristol) – This FAA investigation was a Phase I ESA performed on the 3.34-acre FAA Tract. The site reconnaissance noted staining on the floor of Building 300 and in the fractures of the Building 300 concrete ramp, which were not identified during the 1993 Environmental Compliance Investigation.
- *Daubenspeck Property Follow-up Investigation*, February 1996 (DSC) – This FAA investigation consisted of interviews with individuals knowledgeable of site history related to Tract C. These accounts are included in Section 3.4.
- *Site Cleanup and Investigation Report*, October 1996 (ENSR) – This Army Corps of Engineers investigation consisted of a cleanup of Shop Building 300. A soil boring was advanced through the floor drain and five samples were collected. The shallowest sample (1.5 feet below ground surface) had concentrations of arsenic and lead at 104 mg/kg and 1,430 mg/kg, respectively. A second soil boring was drilled in a location hydraulically downgradient of the floor drain and about 25 feet from the other boring. Five soil samples were collected from similar depths. No analyte was detected above the DEC Method Two soil cleanup levels (SCLs) in these samples. One cubic yard of soil was removed from the stained area and three confirmation soil samples were collected from the base of excavation about two feet below ground surface. All three samples had DRO concentrations above the DEC Method 2 SCL for migration to groundwater. Elevated levels of lead previously detected in the stained soil were determined to be related lead-based paint on Building 300 and not a result of the stained soil.
- Tank Removal, October 1997 – This FAA investigation included the removal of the 500-gallon UST from Building 600 along with the stained soil around the fill pipe. In addition, the UST at Building 20 was also removed and contaminated soil was treated. A report of these activities was not available.
- *Underground Storage Tank Removal and Site Assessment Report*, March 2001 (American) – This City of Kenai investigation details the removal of Quonset huts 201 and 203 and a 1,000-gallon UST from Tract C. The UST excavation resulted in a 12-cubic yard stockpile of petroleum-impacted soils, which remains stockpiled at the City of Kenai Maintenance Shop. Ten areas were identified as having significant anomalies and test pits were dug in these areas with a backhoe (see Figure 4). The list below shows the findings of the ten pits:
    - TP-1 – Galvanized steel pipes; radio frequency print-outs; copper pipe; plastic debris. Field screening did not indicate the presence of contamination.
    - TP-2 – Wire; scrap metal including galvanized sheet metal; two fuel filters; pieces of a Quonset hut. A sample of green paint from the galvanized sheet metal contained 16,700 mg/kg (1.67%) of lead.
    - TP-3 – Wire; wood debris; burned material; hundreds of three-inch tiles containing 40-45% asbestos; airport landing mat.
    - TP-4 – No debris encountered.
    - TP-5 – Military fuel drum that was partially crushed and empty; 12-volt battery; 12-cylinder rotary engine; wood debris; aluminum airplane fuselage; empty 55-gallon drum. Field screening did not indicate the presence of contamination.
    - TP-6 – Bricks.
    - TP-7 – No debris encountered.
    - TP-8 - No debris encountered.
    - TP-9 – No debris encountered.

- TP-10 – No debris encountered.

After the geophysical investigation, three monitoring wells were installed (see Figure 4). During drilling, one soil sample was collected from each well at the groundwater interface. The samples were analyzed for DRO, residual range organics (RRO), volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, and polychlorinated biphenyls (PCBs). No analytes were detected above the DEC Method 2 SCLs in all soil samples. A groundwater sample also was collected from each monitoring well and analyzed for DRO, RRO, VOCs, SVOCs, pesticides, PCBs, and Resource Conservation and Recovery Act (RCRA) metals. Bis(2-ethylhexyl) phthalate, a common constituent of gasoline and plastics, was detected in the downgradient well (MW-3) above the DEC groundwater cleanup level (GCL). Arsenic was detected above the DEC GCL in the same well at a concentration of 0.0978 mg/L; however, the groundwater samples were not filtered and therefore metal concentrations are likely biased high from suspended sediment in the sample matrix. Finally, a groundwater seep sample was collected from the bluff over the Kenai River. The sample was analyzed for the same parameters as the monitoring well samples; no analytes were detected above the DEC GCLs.

- *Follow-on Release Investigation Report*, May 2003 (CH2M Hill) – This FAA investigation included information on the 1999 demolition of Buildings 300 and 600. In addition, two areas of soil with DRO concentrations above the DEC Method Two SCLs were excavated in 2001. 350 cubic yards were removed from the west side of Building 600 and 70 cubic yards were removed from the northeast side of Building 600. One sidewall and multiple floor samples from the excavation had DRO concentrations above the DEC Method Two SCL. The confirmation samples from the excavation of the 70 cubic yards were all less than 10 mg/kg for DRO, well below the DEC Method Two SCL. Based on the DRO concentrations in the excavation for the 350-cubic yard removal, DEC denied a request for "no further action." As a result of this denial, three additional soil borings were drilled and sampled in the area of the 350-cubic yard removal. The DRO concentrations in soil samples from all three borings were well below the DEC Method Two SCL. One of the borings was converted to a monitoring well and the resulting groundwater sample for DRO was non-detect.
- DEC granted "No Further Action" notices for Building 20 in January 2002, and Buildings 300 and 600 in December 2003.
- During the fall of 2005, the City of Kenai sampled the 12 cubic yard stockpile located at the City's Maintenance Shop. The stockpile is remaining from the 1,000-gallon UST removal on Tract C. Based on analytical results, the soil meets threshold concentrations for disposal at the Soldtona Landfill. Disposal is pending administrative approval within the City of Kenai (Campbell 2006).

These investigations appear to have adequately assessed the sites associated with the Millennium Square Development property. Multiple existing and potential sources of contamination have been identified, investigated, and remediated to the satisfaction of DEC. Future development of the property may encounter buried solid waste or debris related to former operations of the Kenai FAA Station; however, based on the environmental data gathered to date, the solid waste and debris does not appear to cause widespread subsurface contamination that would require extensive cleanup or limit potential use of the property.

Table 1. Summary of Environmental Investigations

Report	Client and Contractor	Related Tract or DEC Contaminated Site	Synopsis
Environmental Compliance Inspection Report, Dec 1993	FAA Ecology and Environment, Inc	FAA Tract	Initial environmental investigation of former operations and facilities at Kenai FAA Station. Identified future DEC-listed contaminated sites.
Environmental Due Diligence Audit, May 1996	FAA Bristol Environmental Services Corp	FAA Tract	Phase I ESA at Kenai FAA Station.
Daubenspeck Property Follow-Up Investigation, Feb 1996	FAA Document Services Company	Tract C	Interviews with knowledgeable people regarding former activities on Tract C.
Site Cleanup and Investigation Report, Oct 1996	USACE ENSR	Building 300 on FAA Tract	Investigation and removal of contaminated soil at Building 300.
Tank Removal (no report available), 1997	FAA Unknown	Buildings 20 and 600 on FAA Tract	Removal of a UST at each building and excavation of contaminated soil
Underground Storage Tank Removal and Site Assessment, May 2001	City of Kenai American Environmental	Tract C	Removal of two buildings and a UST with associated contaminated soil. Included an electromagnetic survey to determine locations of buried debris. Ten test pits were excavated to examine identified debris. Three monitoring wells were installed.
Follow-on Release Investigation Report, May 2003	FAA CH2MHill	Buildings 300 and 600 on FAA Tract	Summarizes 1999 demolition of Buildings 300 and 600, and removal of two areas of soil contamination around Building 600.
No Further Action Notice, January 2002	Not Applicable	Building 20 on FAA Tract	DEC granted no further action for Building 20 in January 2002.
No Further Action Notices, December 2003	Not Applicable	Buildings 300 and 600 on FAA Tract	DEC granted no further action for Buildings 300 and 600 in December 2003.
No Further Action Notice Pending	Not Applicable	Tract C	No further action notice from DEC pending treatment of 12 cubic yards of contaminated soil stockpiled at City of Kenai's Maintenance Shop.

3.2 Records Review

OASIS reviewed aerial photographs from 1967, 1978, and 1981 for this ESA. The 1967 aerial shows the most development of any of the photographs. In fact, more buildings are present in this photograph than are on record in 1972 (E&E 1993). The most noteworthy items are the presence of the 11,000-gallon tank on Tract C, significant debris located adjacent to Tract C near the cannery, and the absence of nearly any development around the site except for the cannery. Figure 5 shows the 1967 aerial photograph.

The 1978 and 1981 aerial photographs are nearly identical. The differences with the 1967 aerial include less housing units, Quonset huts, and buildings. The FAA Tract is also completely fenced, the ball fields are visible, and the 11,000-gallon tank on Tract C is not present in the 1978 and 1981 aerial photographs. Figure 6 shows the 1981 aerial photograph.

3.3 Database Review

Regulatory agency database information was obtained from an EDR Radius Map with GeoCheck® (Attachment 2), which maps and lists sites in federal, state, and local government

environmental databases with existing conditions or regulatory status that may have the potential to impact the site.

Record searches of 30 federal environmental databases identified no sites within various radius target limits. Record searches from the DEC Contaminated Sites (CS) database and Leaking Underground Storage Tank (LUST) database identified 11 sites within one mile of the Millennium Square Development site. The following information summarizes the 11 sites.

- Tesoro Northstore 206 – This site, located approximately one-quarter mile to the west, had petroleum-contaminated soil discovered around USTs in 1997. Contaminated soil was excavated and treated. Groundwater contamination was not detected above the DEC GCLs. During installation of new USTs in 2005, additional contaminated soil was discovered and treated. DEC has granted conditional closure and will finalize the finding pending receipt of a revised closure report.
- Spruce Haven Estates – This site, located a little more than one-quarter mile to the west, had 156 tons of diesel contaminated soils removed and treated in 1993. The site is listed as "closed" in the DEC CS database.
- Aviation Insurance of Alaska – This site, located nearly one-half mile to the north, had soil contamination related to an overfill occurrence of an aviation fuel tank. Thirty cubic yards of soil was removed. DEC issued a "No Further Action" determination in 1997.
- Alyeska Sales and Service – This site, located nearly one-half mile to the northwest, had 120 cubic yards of petroleum-contaminated soil excavated and treated in 2000 as a result of leaks from USTs. DEC issued a "No Further Action" determination in 2004.
- Kenai Elementary School – This site, located nearly one-half mile to the west, had petroleum-contaminated soil excavated and treated in 1989; however, known contamination still exists under the building foundation. DEC issued a "No Further Remedial Action Planned" determination in 1993 with an institutional control that additional remediation is necessary if the foundation is disturbed.
- Dowell Schlumberger – This site, located one-half mile to the north, has impacted soil and groundwater from petroleum constituents and chlorinated organic compounds. The site has active remedial operations and long-term monitoring.
- Halliburton Services Trading Bay Road – This site, located more than one-half mile to the north, has contaminated soil and groundwater from previous spills of petroleum products and hydrochloric acid. The contaminated soil remains buried and an institutional control has been issued for the property. A long-term monitoring plan is used to track groundwater contamination.
- Kenai Packers (Pacific Star Seafoods) – This site, located nearly three-quarter mile to the southeast, had 500 cubic yards excavated and treated in the mid-1990s as a result of releases from UST. Groundwater contamination and seepage to the Kenai River was observed. DEC issued a "No Further Action" determination in 1998.
- City of Kenai Maintenance Yard - This site, located nearly three-quarter mile to the north, has soil and groundwater contamination from petroleum products and volatile organic compounds. Nearby Ryan Creek also has been impacted, and site soils have low levels of polychlorinated biphenyls. Monitoring is on-going and corrective action is being planned.
- Kenny Carver Drilling – This site, located nearly three-quarter mile to the north and adjacent to the City of Kenai Maintenance Yard, has experienced small spills and its

groundwater is impacted by the adjacent maintenance yard. DEC approved site closure in 1998.

- Alaska Oil Sales (Kenai Bulk Plant) – This site, located approximately three-quarter mile to the southeast, has soil and groundwater contamination from various fuel spills. An estimated 800-1,200 cubic yards of impacted soil is present. A corrective action is scheduled for development in 2006.

In addition to the sites discussed above, numerous other sites are located in the area, but a lack of sufficient location information did not allow adequate mapping from the database. OASIS investigated the location of the sites during the site reconnaissance and identified three that are within one mile of the site. The following contains summary information for the site:

- G&M Chevron – This site is located more than one-quarter mile west of the site adjacent to the Tesoro Northstore 206. During tank removals in 1991, petroleum contaminated soil was discovered. Approximately 400 cubic yards of soil was excavated and disposed. The site was re-developed as another gasoline station, and DEC closed the file on the old site in 2004.
- Rodger's Tesoro Station – This site is located more than one-half mile west of the site. Petroleum contaminated soil was discovered during UST closure. DEC closed the site in 2001.
- Tesoro Northstore 202 – This site is located nearly one-half mile north of the site. Petroleum contamination was discovered during UST upgrades in 1994. Site cleanup was completed in 1999. A restaurant now operates at the site.

Based on either the extent of contamination or distance from the Millennium Square Development site, none of the 14 sites identified above appears likely to have any impact on the site. The DEC UST database identifies the Holiday gas station at the eastern corner of Kenai Spur Highway and Bridge Access Road as having active USTs. This gas station is located approximately 1,000 feet north of the site and presumably in a position that is hydrogeologically upgradient of the site. If this station were to have a release from its tanks, the release could potentially impact groundwater beneath the Millennium Square Development site. However, at this time, there is no reason to suspect that a release has occurred.

3.4 Interviews

OASIS spoke with Mr. Jack LaShot, the City of Kenai Public Works Manager, on February 13, 2006 and February 16, 2006. Mr. LaShot expressed that while numerous previous investigations have been performed for various portions of the site, no report exists that summarizes the actions and findings for all three tracts. Mr. LaShot also stated that the Millennium Square Development site is an important project for the City of Kenai because of the site's central location in Kenai. His desire is for this assessment to serve as a tool in initiating the planning and public process for future development activities.

The *Daubenspeck Property Follow-up Investigation* from February 1996 consisted of interviews with individuals knowledgeable of site history related to Tract C. The following detail the individuals and their accounts:

- Robert Roper – Mr. Roper said that Mr. Joe Lee and he purchased four of six FAA houses on a surplus sale. Mr. Roper took possession of one and Mr. Lee took the other three. Mr. Roper also said that he dug up a UST next to the house he purchased and sold the tank. Mr. Roper said he believes Mr. Lee may have left the tanks in the ground for the houses he purchased.

- Joe Lee – Mr. Lee purchased three of six FAA homes from Tract C in 1982. The homes were built on piers and located at the south end of the property adjacent to the bluff. Each house used a 300-gallon UST for heating oil. Mr. Lee removed two of the three USTs.
- Mr. Jordan – Mr. Jordan said that all buildings at the site were heated with fuel oil. Some of the buildings had USTs, while some had gravity fed 55-gallon drums of fuel. Mr. Jordan knows that one flatbed truck and at least one jeep vehicle are buried at the site. He said that all the homes' sewage lines were connected to a crib system that discharged to the river. At least 100 batteries are buried at the site. Empty 55-gallon drums of DDT were buried at the site. The DDT was used to aerially spray the site for approximately two years, but was discontinued because the substance was supposedly ruining paint on vehicles.
- Ed Billiet – Mr. Billiet was the Section Field Office Manager for the Kenai Field Office of the FAA. He stated that although public perception was that the FAA had an underground bunker at the site, no bunker exists at the site.
- Robert Fairchild – Mr. Fairchild was characterized as a de facto historian for the site. He worked for the FAA in Kenai from 1969 until 1994. He stated that no bunker ever existed at the site. He said that some barrels were buried at the site, but most debris and refuse were taken to a landfill.
- George Muoio – Mr. Muoio was a mechanic at the site beginning in 1964. Mr. Muoio stated that Tract C was used as dump for many years before there was a city landfill. The FAA had their own bulldozer, which they used to dig holes and bury debris on Tract C. There were three concrete crib sewage systems at the site, but they were all filled in. Lastly, Mr. Muoio said that they dumped waste oil and fuel mostly in areas where debris was buried on the Daubenspeck property.

3.5 Site Reconnaissance

An OASIS representative conducted a site reconnaissance on April 12, 2006. John Carnahan of DEC and Jack LaShot of City of Kenai also were present during the reconnaissance. Attachment 3 contains photographs of the site reconnaissance.

Observations included:

- The absence of improvements on the FAA Tract and Tract C.
- The FAA Football Field had two soccer fields located in its boundaries.
- The FAA Tract had recently been cleared. Mr. LaShot stated that this area would be used for temporary soccer fields.
- The three monitoring wells installed during the *Underground Storage Tank Removal and Site Assessment* were identified on Tract C.
- Two mounded areas located on Tract C. These areas were part of the geophysical investigation related to the *Underground Storage Tank Removal and Site Assessment*, for which no significant environmental conditions were observed, so it is assumed that the mounds likely were made in the last ten years during the closure and demolition of the FAA facility.
- The elevation difference between Tract C and the Dragnet Cannery eliminates any potential hydraulic connection from the Dragnet Cannery to Tract C.

- The community value of the Millennium Square Development site as numerous citizens enjoyed the view across the mouth of the Kenai River from the site.

4.0 PHASE II ASSESSMENT

Based on the findings of the Phase I ESA, three monitoring wells at the Millennium Square Development site were sampled as part of the Phase II ESA. Figure 4 shows the location of the monitoring wells. This section presents the results of the monitoring well sampling and includes a quality assurance review of the data.

4.1 Sampling

Following the Phase II ESA Work Plan (OASIS 2006a) for the Millennium Square Development Site, OASIS sampled monitoring wells MW-1, MW-2, MW-3 on May 18, 2006. The wells were sampled by purging three well volumes using dedicated polyethylene bailers and monitoring pH, temperature, and conductivity for stabilization. Samples were collected for the following analyses:

- VOCs by Environmental Protection Agency (EPA) Method 8260B;
- Gasoline range organics (GRO) by Alaska Method AK-101;
- DRO by Alaska Method AK-102;
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C; and
- Total and dissolved RCRA Metals by EPA Methods 6020/7470A.

Samples for VOCs and GRO were collected first. Dissolved RCRA metals samples were filtered in the field by passing well water through a 0.45 micron filter.

4.2 Analytical Results

No organic constituents (VOCs, GRO, DRO, PAHs) were detected in any of the three monitoring wells. The RCRA metals cadmium, mercury, selenium, and silver also were not detected in any of the monitoring wells in total or dissolved form. Table 2 presents the analytical results for the total and dissolved RCRA metals that were detected in the three monitoring wells. Attachment 4 contains the laboratory analytical report for the well samples.

The duplicate sample for well MW-1 had a concentration of 56 micrograms per liter (µg/L) for total arsenic, which exceeds the GCL of 50 µg/L, but the primary sample's total arsenic concentration was 40 µg/L. The total lead results from all three wells exceeded the GCL of 15 µg/L. The range of the total lead results was 24 to 36 µg/L. The corresponding results for dissolved lead in the three wells are all below the GCL.

The total lead results were compared to the results from the 2001 investigation when the wells were installed. For the 2001 investigation, the laboratory reporting limit for total lead (66.7 µg/L) was greater than any of the concentrations detected in the recent round of sampling. Therefore, it is difficult to determine if there has been any meaningful change in the data. Given the difference between the results for total and dissolved lead (and the other detected metals), it is known that suspended solids are causing greater concentrations for all total metals samples. When these suspended solids are filtered out, the analytical results are mostly below laboratory reporting limits and well below the GCLs.

4.3 Quality Assurance Review

The analytical results for all field, laboratory quality assurance, and quality control samples were evaluated. The data was reviewed to determine the integrity of the reported analytical results and ensure they met data quality objectives. The guidelines for data review are outlined in the Quality Assurance Project Plan (OASIS 2006b).

For this project, OASIS made a single shipment of samples to On-Site Environmental, Inc., on May 19, 2006. The laboratory received the shipment with interior cooler temperatures within the range of 2.0º to 6.0º Celsius. All of the samples collected were analyzed within acceptable holding times resulting in 100% completeness.

One trip blank was submitted for analysis of VOCs. No VOCs were detected in the trip blank.

Surrogate recoveries were within acceptable recovery ranges for all organic analyses except for DRO. In general, surrogate recoveries for DRO were in the 60% to low 70% range. These results likely indicate that actual laboratory reporting limits are greater than indicated on the laboratory report. However, given that all DRO results were non-detect, that laboratory reporting limits (0.25 to 0.27 mg/L) are well below the GCL of 1.5 mg/L, and that no other organic constituents were detected in the monitoring wells, it is assumed that the non-detect results for DRO reflect actual conditions.

A duplicate sample (06MSD004GW) from monitoring well MW-1 was collected during field activities. All organic analyses of the duplicate sample were non-detect like the primary sample (06MSD001GW). For the RCRA metals results, relative percent differences (RPD) for the duplicate pair were 33%, 46%, 69%, and 18% for arsenic, barium, chromium, and lead, respectively. The high RPDs for barium and chromium are insignificant because the analytical results are well below the GCLs. The arsenic and lead RPDs are within limits established for the project.

Laboratory control samples and duplicates, and matrix spike and matrix spike duplicate samples were within acceptable limits for all analytical methods except DRO which had low recoveries for spike analyses. These low recoveries are similar to the issue of low surrogate recoveries for DRO, and the corresponding DRO analytical results have not been altered or flagged.

Method blank samples were analyzed in the laboratory with each batch of samples to evaluate instrument and systematic laboratory preparation contamination. Method blanks did not contain any analytes at concentrations above their respective reporting limits.

Table 2. Groundwater Analytical Results
Millennium Square Development Site

		RCRA Metals (µg/L)							
		Arsenic		Barium		Chromium		Lead	
Monitoring Well	Sample Number	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
MW-1	06MSD01GW	40	ND (3.0)	200	ND (25)	16	ND (10)	**30**	ND (1.0)
	06MSD04GW	**56**	ND (3.0)	320	ND (25)	33	ND (10)	**36**	1.5
MW-2	06MSD02GW	19	ND (3.0)	170	ND (25)	12	ND (10)	**27**	ND (1.0)
MW-3	06MSD03GW	39	ND (3.0)	270	ND (25)	29	ND (10)	**24**	ND (1.0)
DEC Groundwater Cleanup Level		50		2000		100		15	

Notes: Bold values indicate concentrations above ADEC Groundwater Cleanup Levels (18 AAC 75).
Value in parantheses is the laboratory reporting limit.

Key:
DEC = Department of Environmental Conservation
µg/L = micrograms per liter
ND = not detected above the reporting limit shown in parentheses
RCRA = Resource Conservation and Recovery Act

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5.0 FINDINGS AND CONCLUSIONS

OASIS conducted this Phase I / Phase II ESA at the Millennium Square Development site in Kenai, Alaska, for DEC and the City of Kenai in accordance with ASTM's E 1527-05 guidance document *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* and E 1903-97 guidance document *Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*. The ESA encompassed a review of historical and regulatory records, interviews with persons familiar with the area, reconnaissance of the site and the surrounding area, sampling of three existing monitoring wells, and preparation of this report.

A series of environmental investigations occurred at the site beginning in 1993. These investigations identified hazardous materials inside former buildings, USTs, contaminated soil, and buried debris. These conditions have been mitigated by demolition and disposal of all buildings and their contents, removal of USTs, and excavation and treatment of contaminated soil; however, at completion of Phase I activities, the following recognized environmental conditions remained at the Millennium Square Development site:

- The presence of bis(2-ethylhexyl) phthalate above the DEC GCL in a sample collected from monitoring well MW-3 in 2000.
- The presence of buried debris in at least five locations on Tract C (see Figure 4). Some of the more noteworthy debris includes lead-based paint on building siding, asbestos containing material, 12-volt battery, and a 12-cylinder rotary engine.

Based on these findings, OASIS sampled the three remaining monitoring wells at the site for petroleum hydrocarbons, VOCs, PAHs, and RCRA metals to determine if any organic parameters were present and if metals concentrations had changed since 2001. The analytical results of the groundwater samples showed that no organic compounds are present at detectable concentrations in the wells, and that dissolved metals concentrations are mostly below laboratory reporting limits and definitely less than GCLs. Total arsenic and lead were detected above GCLs, but because dissolved concentrations were below GCLs, these exceedances are attributed to suspended sediment in the wells.

Based on previous findings and the current groundwater samples, the buried debris does not appear to be a contributing factor to uncontrolled contamination. Field screening performed in test pits in 2000 did not detect volatile compounds. The contents of the debris are known to contain elevated levels of lead and asbestos, but these contaminants are immobile as long as the debris remains buried. Depending on the type and location of future development at the site, the buried debris may need to be managed to meet required engineering standards for structural support; however, these issues will have to be decided in the future based on geotechnical studies of planned development.

A review of other regulated contaminated sites in the area does not identify any existing site that has realistic potential to impact the Millennium Square Development site. There is a gas station located approximately 1,000 feet north of the site, and if a release were to occur from that facility, then it is possible that contamination could migrate in the groundwater to the site. Interviews conducted for a 1996 report detail accounts of buried waste on Tract C. Many buried items were discovered during the geophysical study in 2000, but as discussed in the previous paragraph, the observed debris does not appear to pose an immediate environmental threat.

It is the opinion of OASIS that buried debris on Tract C is the only remaining recognized environmental condition at the Millennium Square Development site, based on assessments

and corrective action to date that have been reviewed and approved by DEC. This condition should be a manageable issue for most any type of future development, although the definition of manageable may range from “no action” to excavation and removal of debris in order to meet applicable engineering constraints associated with construction. Whether debris is excavated is highly dependent on the type and location of planned development. The pertinent finding of this ESA is that from a perspective of environmental contamination buried debris should not *prohibit* the potential for development at the Millennium Square Development site, but may *influence* the selection of appropriate building sites.

6.0 REFERENCES

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ATTACHMENT 1

FIGURES

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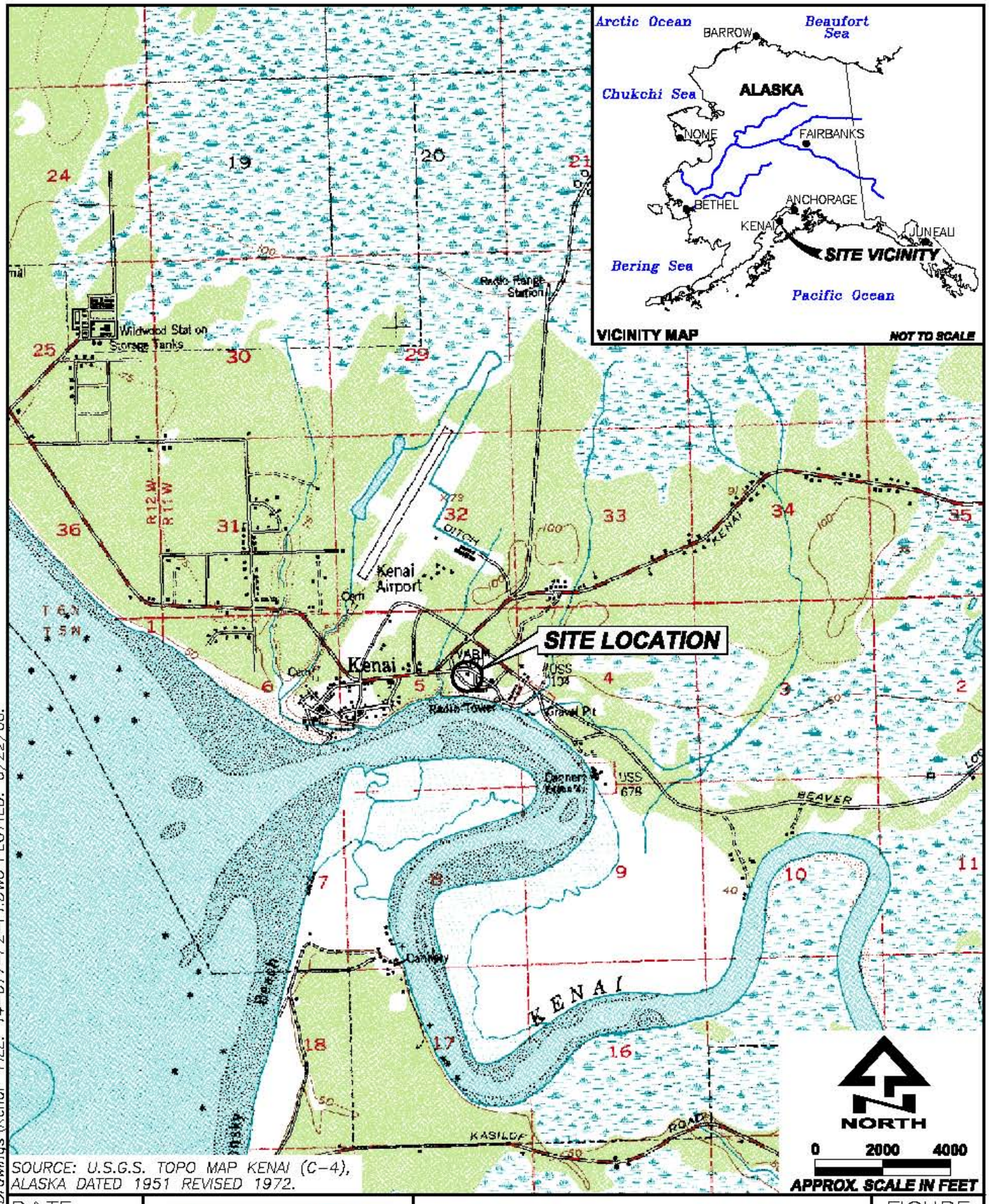


SOURCE: U.S.G.S. TOPO MAP KENAI (C-4), ALASKA DATED 1951 REVISED 1972.

PATH: V:\Project Drawings\Kenai FILE: 14-077-P2-F1.DWG PLOTTED: 6/22/06.

DATE	JUNE 2006
CHKD	B.J.M.
DRAWN	C.E.H.
PROJ. NO	14-077

oasis
ENVIRONMENTAL
825 W. 8TH AVENUE, SUITE 200
ANCHORAGE, ALASKA 99501

SITE LOCATION MAP

PHASE I/II ESA
MILLENNIUM SQUARE DEVELOPMENT
Kenai, Alaska

FIGURE

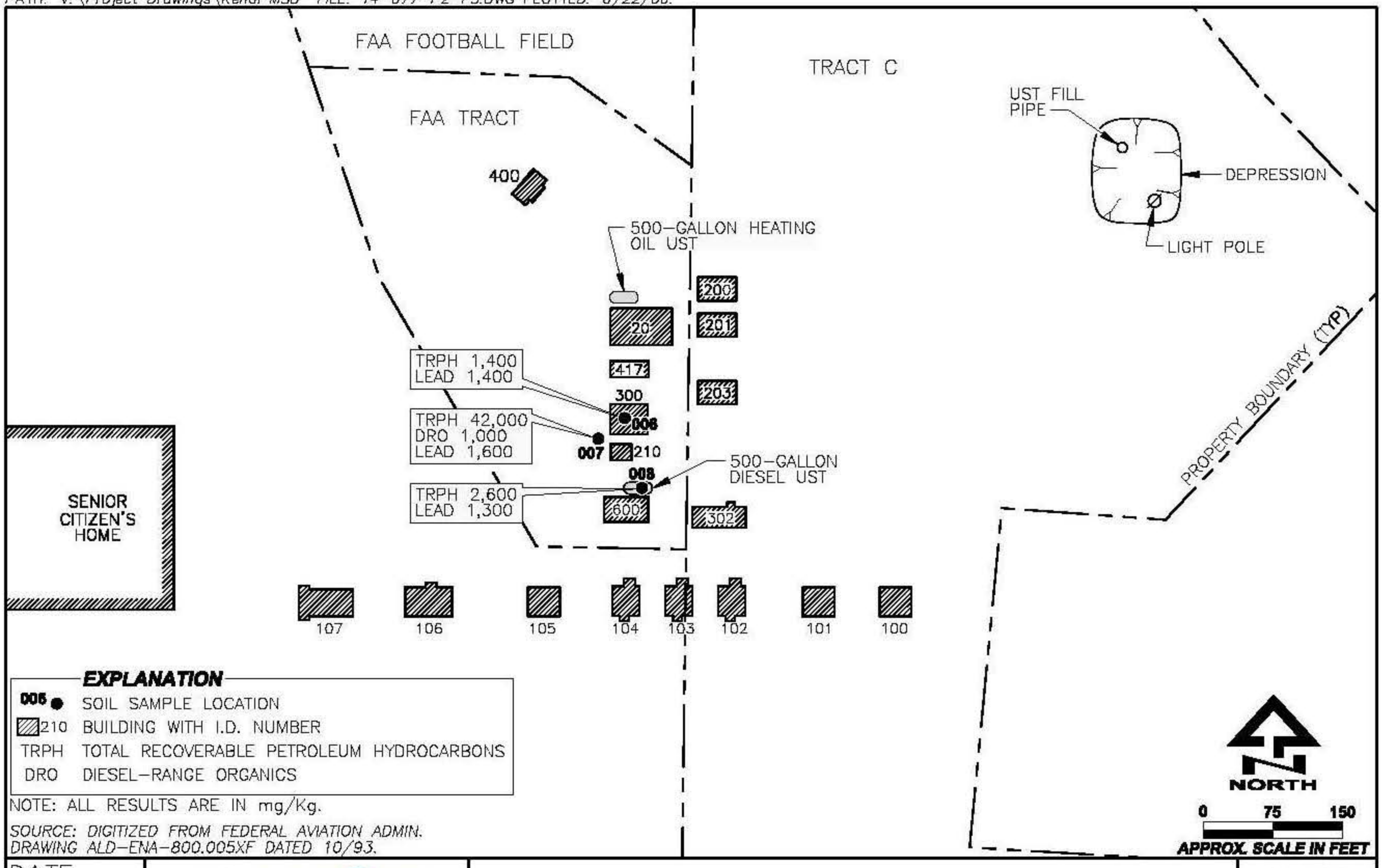
1

SOURCE: AERIAL PHOTOGRAPH KENAI – SOLDOTNA ROLL No. 2006, EXP No. CF0020 DATED 5/22/06 PROVIDED BY AEROMAP INC.

PATH: V:\Project Drawings\Kenai FILE: 14-077-P2-F2.DWG PLOTTED: 6/22/06.

DATE JUNE 2006 CHKD B.J.M. DRAWN C.E.H. PROJ. NO 14-077	oasis ENVIRONMENTAL 825 W. 8TH AVENUE, SUITE 200 ANCHORAGE, ALASKA 99501	**SITE PLAN** PHASE I/II ESA MILLENNIUM SQUARE DEVELOPMENT Kenai, Alaska	FIGURE **2**

PATH: V:\Project Drawings\Kenai MSD FILE: 14-077-P2-F3.DWG PLOTTED: 6/22/06.



EXPLANATION

005 ●	SOIL SAMPLE LOCATION
210	BUILDING WITH I.D. NUMBER
TRPH	TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
DRO	DIESEL-RANGE ORGANICS

NOTE: ALL RESULTS ARE IN mg/Kg.

SOURCE: DIGITIZED FROM FEDERAL AVIATION ADMIN. DRAWING ALD-ENA-800.005XF DATED 10/93.

DATE	JUNE 2006
CHKD	B.J.M.
DRAWN	C.E.H.
PROJ. NO	14-077

ENVIRONMENTAL
825 W. 8TH AVENUE, SUITE 200
ANCHORAGE, ALASKA 99501

FORMER IMPROVEMENTS

PHASE I/II ESA
MILLENNIUM SQUARE DEVELOPMENT
Kenai, ALASKA

FIGURE

3

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DATE JUNE 2006 CHKD B.J.M. DRAWN C.E.H. PROJ. NO 14-077	oasis ENVIRONMENTAL 825 W. 8TH AVENUE, SUITE 200 ANCHORAGE, ALASKA 99501	**LOCATION AND CONTENTS OF TEST PITS** PHASE I/II ESA MILLENNIUM SQUARE DEVELOPMENT Kenai, Alaska	FIGURE **4**

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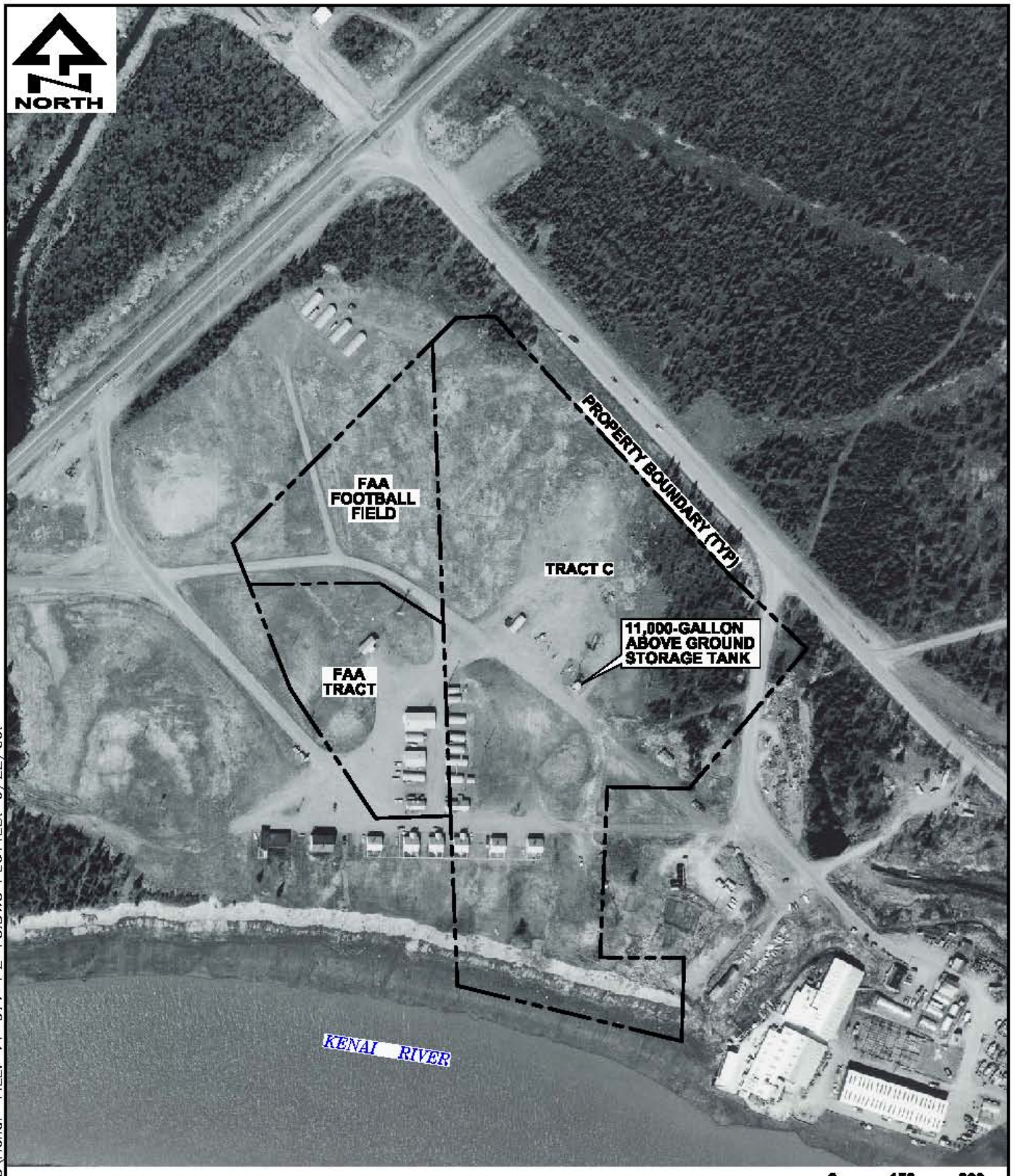
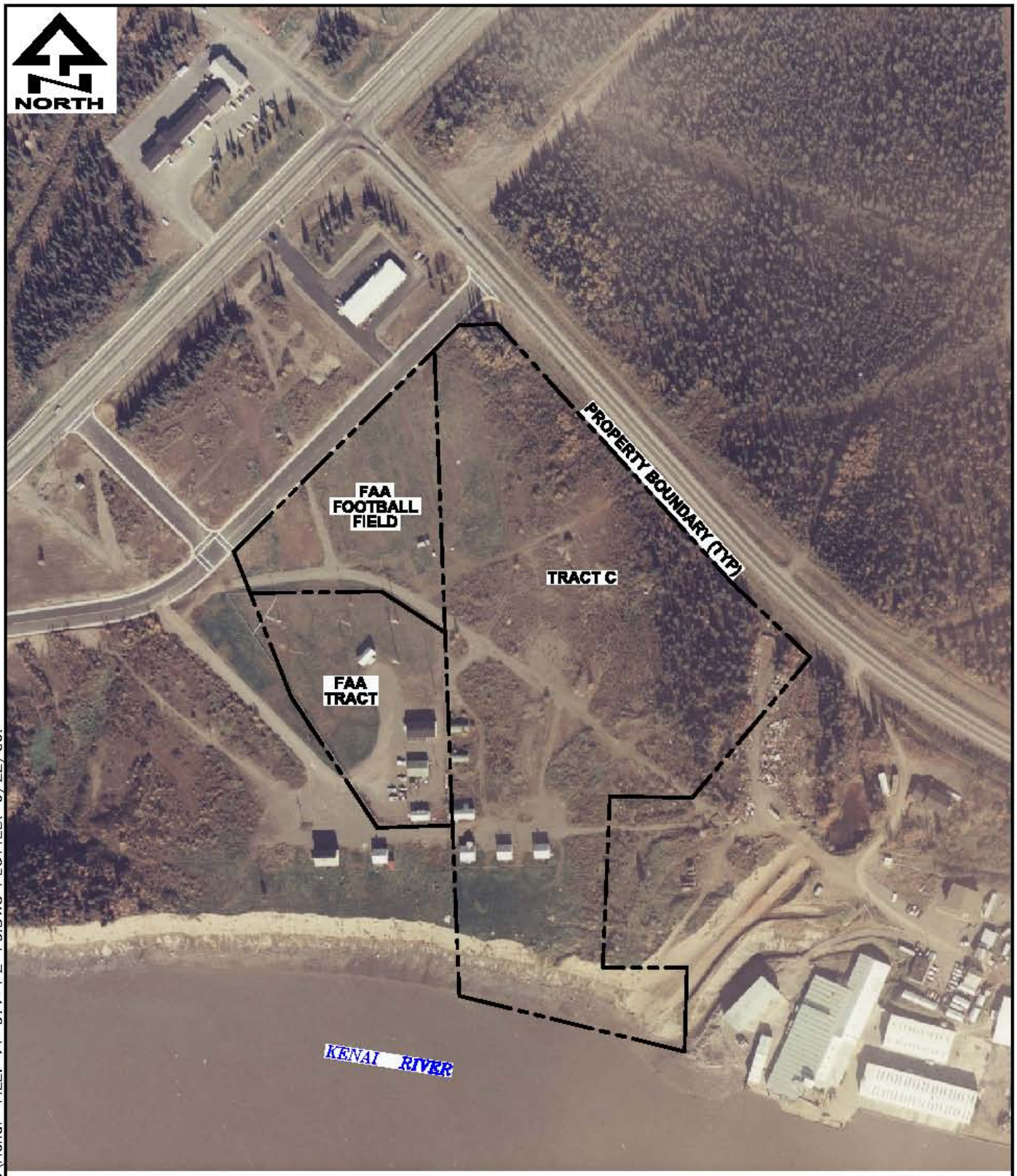


SOURCE: AERIAL PHOTOGRAPH KENAI ROLL No. 81COE212
EXP No. 96X2 DATED 9/25/81 PROVIDED BY AEROMAP INC.

0 150 300
APPROX. SCALE IN FEET

DATE JUNE2006 CHKD B.J.M. DRAWN C.E.H. PROJ. NO 14-077	oasis ENVIRONMENTAL 825 W. 8TH AVENUE, SUITE 200 ANCHORAGE, ALASKA 99501	**1967 AERIAL PHOTOGRAPH** PHASE I/II ESA MILLENNIUM SQUARE DEVELOPMENT Kenai, Alaska	FIGURE **5**

PATH: V:\Project Drawings\Kenai FILE: 14-077-P2-F5.DWG PLOTTED: 6/22/06.



SOURCE: AERIAL PHOTOGRAPH KENAI ROLL No. 81COE212
EXP No. 96X2 DATED 9/25/81 PROVIDED BY AEROMAP INC.

0 150 300
APPROX. SCALE IN FEET

PATH: V:\Project Drawings\Kenai FILE: 14-077-P2-F6.DWG PLOTTED: 6/22/06.

DATE	JUNE 2006
CHKD	B.J.M.
DRAWN	C.E.H.
PROJ. NO	14-077

oasis
ENVIRONMENTAL
825 W. 8TH AVENUE, SUITE 200
ANCHORAGE, ALASKA 99501

1981 AERIAL PHOTOGRAPH

PHASE I/II ESA
MILLENNIUM SQUARE DEVELOPMENT
Kenai, Alaska

FIGURE
6

ATTACHMENT 2

EDR REPORT

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The EDR Radius Map™ Report

Millennium Square Development
Bridge Access Road
Kenai, AK 99611

Inquiry Number: 1650161.7s

April 06, 2006

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

BRIDGE ACCESS ROAD
KENAI, AK 99611

COORDINATES

Latitude (North):	60.554700 - 60° 33' 16.9''
Longitude (West):	151.239500 - 151° 14' 22.2''
Universal Tranverse Mercator:	Zone 5
UTM X (Meters):	596544.1
UTM Y (Meters):	6714276.0
Elevation:	75 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	N/A
Source:	USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL National Priority List
Proposed NPL Proposed National Priority List Sites
Delisted NPL National Priority List Deletions
NPL RECOVERY Federal Superfund Liens
CERCLIS Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP CERCLIS No Further Remedial Action Planned
CORRACTS Corrective Action Report
RCRA-TSDF Resource Conservation and Recovery Act Information
RCRA-LQG Resource Conservation and Recovery Act Information

EXECUTIVE SUMMARY

RCRA-SQG Resource Conservation and Recovery Act Information
ERNS Emergency Response Notification System
HMIRS Hazardous Materials Information Reporting System
US ENG CONTROLS Engineering Controls Sites List
US INST CONTROL Sites with Institutional Controls
DOD Department of Defense Sites
FUDS Formerly Used Defense Sites
US BROWNFIELDS A Listing of Brownfields Sites
CONSENT Superfund (CERCLA) Consent Decrees
ROD Records Of Decision
UMTRA Uranium Mill Tailings Sites
ODI Open Dump Inventory
TRIS Toxic Chemical Release Inventory System
TSCA Toxic Substances Control Act
FTTS FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS Section 7 Tracking Systems
PADS PCB Activity Database System
MLTS Material Licensing Tracking System
MINES Mines Master Index File
FINDS Facility Index System/Facility Registry System
RAATS RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

SWF/LF Solid Waste Facilities
AST Regulated Aboveground Storage Tanks
AK Spills Spills Database
DRYCLEANERS Drycleaner Facility Listing
BROWNFIELDS Identified and/or Proposed Brownfields Sites
CDL Illegal Drug Manufacturing Sites

TRIBAL RECORDS

INDIAN RESERV Indian Reservations
INDIAN LUST Leaking Underground Storage Tanks on Indian Land
INDIAN UST Underground Storage Tanks on Indian Land

EDR PROPRIETARY RECORDS

Manufactured Gas Plants EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations EDR Proprietary Historic Gas Stations
EDR Historical Cleaners EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STATE AND LOCAL RECORDS

SHWS: State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with where cleanup will be paid for by potentially responsible parties.

A review of the SHWS list, as provided by EDR, and dated 12/21/2005 has revealed that there are 9 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
DAUBENSPECK PROPERTY	170 BRIDGE ACCESS AT FR	0 - 1/8 E	A2	6
KENAI ELEMENTARY SCHOOL	***705 FRONTAGE ROAD***	***1/4 - 1/2 W***	***7***	***12***
DOWELL SCHLUMBERGER - KENAI	220 TRADING BAY ROAD	1/2 - 1 NNW	8	15
HALLIBURTON SERVICES TRADING B	***240 TRADING BAY ROAD***	***1/2 - 1 N***	***9***	***16***
CITY OF KENAI MAINTENANCE YARD	332 AIRPORT WAY	1/2 - 1 N	11	21
KENNY CARVER DRILLING	340 AIRPORT WAY	1/2 - 1 N	12	22

Lower Elevation	Address	Dist / Dir	Map ID	Page
SPRUCE HAVEN ESTATES SUBD. LOT	46909 SPRUCE HAVEN STRE	1/4 - 1/2 WSW	4	10
KENAI PACKERS -PACIFIC STAR SE	***520 BRIDGE ACCESS ROAD;***	***1/2 - 1 ESE***	***10***	***19***
ALASKA OIL SALES KENAI BULK PL	608 BRIDGE ACCESS ROAD	1/2 - 1 ESE	13	24

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Pollution Control & Ecology's LUST Notice Information.

A review of the LUST list, as provided by EDR, and dated 12/13/2005 has revealed that there are 3 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
TESORO NORTHSTORE 206	***11120 SPUR HWY***	***1/4 - 1/2 W***	***3***	***8***
AVIATION INSURANCE OF AK-HANGE	***130 GRANITE PT - LOT 1***	***1/4 - 1/2 NNE***	***5***	***11***

Lower Elevation	Address	Dist / Dir	Map ID	Page
ALYESKA SALES & SERVICE	200 WILLOW STREET SOUTH	1/4 - 1/2 WNW	6	12

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Pollution Control & Ecology's RST Owner & Facilities database.

A review of the UST list, as provided by EDR, and dated 12/13/2005 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CITY OF KENAI	170 BRIDGE ACCESS RD	0 - 1/8 E	A1	6

EXECUTIVE SUMMARY

INST CONTROL: Contaminated sites that have institutional controls.

A review of the Inst Control list, as provided by EDR, and dated 12/20/2005 has revealed that there is 1 Inst Control site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
KENAI ELEMENTARY SCHOOL	*705 FRONTAGE ROAD*	*1/4 - 1/2 W*	*7*	*12*

VCP: The Alaska Cleanup Program Inventory database.

A review of the VCP list, as provided by EDR, and dated 12/21/2005 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

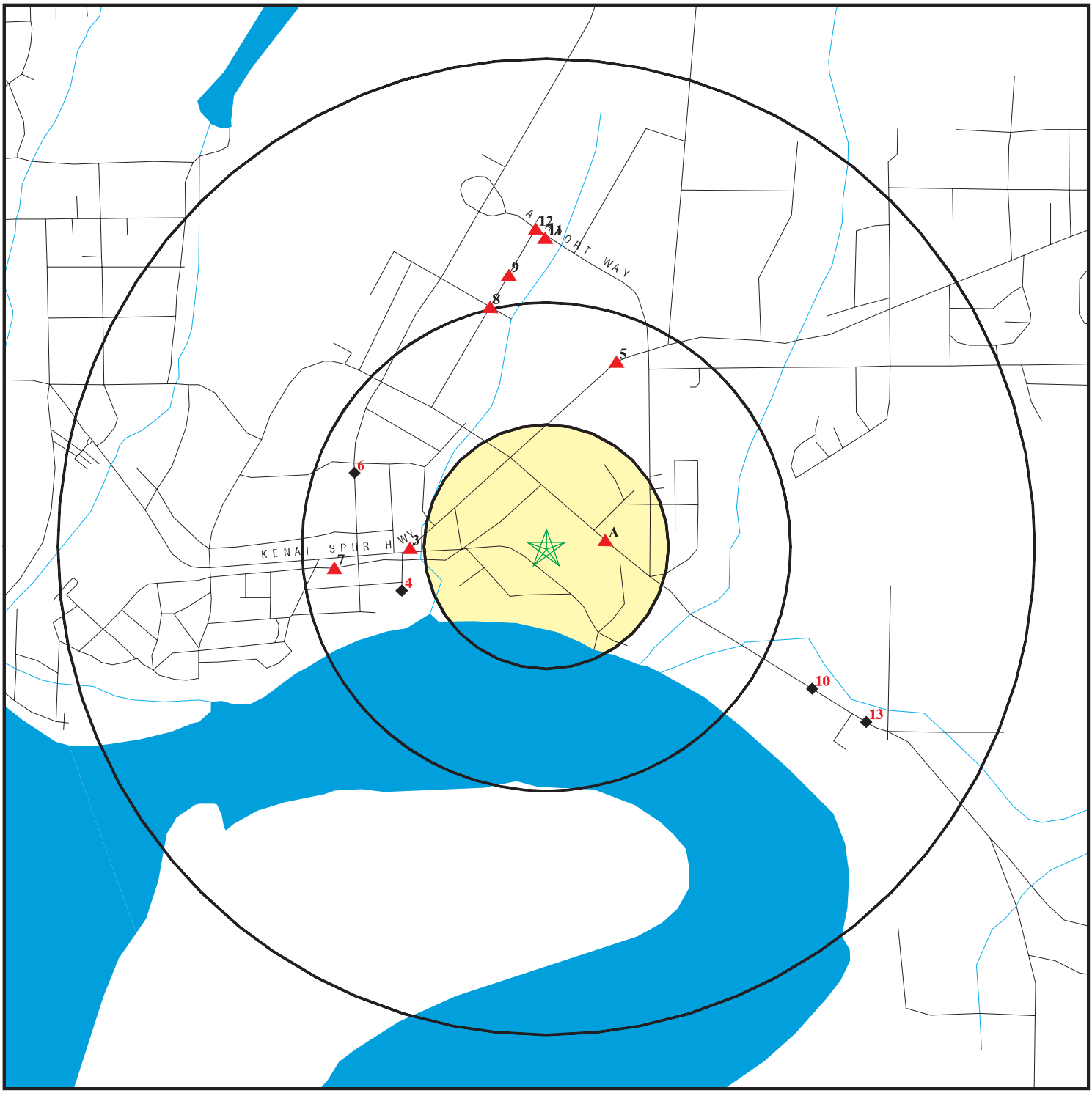
Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
TESORO NORTHSTORE 206	*11120 SPUR HWY*	*1/4 - 1/2 W*	*3*	*8*

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
KENAI GAS FIELD PAD 41-18	SHWS
OLD KEENER PROPERTY	SHWS
KENAI GAS FIELD PAD 14-6	SHWS
DOYLE'S FUEL SERVICE	SHWS
KENAI LANDFILL - OLD	SHWS, Inst Control
SCHLUMBERGER WIRELINE SERVICES	SHWS
HALLIBURTON SERVICES MP15.5 SPUR H	SHWS
TESORO COOK INLET BLUFF SPILL	SHWS
FAA KENAI STATION EOF BUILDING 600	SHWS
USDOI FWS SWANSON RIVER OIL FIELD	CERC-NFRAP
KENAI, CY OF, OLD CITY DUMP	CERC-NFRAP
UNOCAL CHEMICALS DIV	PADS, RCRA-LQG, TRIS, RAATS, CORRACTS, CERC-NFRAP
ARNESS PROPERTY	CERC-NFRAP
NORTH ROAD TESORO	LUST
MCLANE AND ASSOCIATES	LUST
ADOT&PF NORTH KENAI MAINTENANCE FA	LUST
USF&WS - KENAI AIRPORT	LUST
G & M CHEVRON	LUST
CARLSON ENTERPRISES	UST
COOK INLET MOTORS	UST
DRAGNET FISHERIES INC	RCRA-SQG, FINDS
NALCO EXXON ENERGY CHEMICALS LP	RCRA-SQG, FINDS
GREAT WESTERN CHEMICAL CO KENAI	RCRA-SQG, FINDS
R & K INDUSTRIAL	RCRA-SQG, FINDS
EPPERHEIMER PAINTING	RCRA-SQG, FINDS
R & K IND TEMP THREAD CLEAN SITE	RCRA-SQG, FINDS
TESORO ALASKA CO NIKISKI TERMINAL	RCRA-SQG, FINDS
SCHLUMBERGER WELL SVCS	RCRA-SQG, FINDS
EQUIPMENT ENGINEERING N KENAI	RCRA-SQG, FINDS
HALLIBURTON ENERGY SVCS CEMENTING	RCRA-SQG, FINDS
ADEC NALCO CHEMICAL CO WHSE	RCRA-SQG, FINDS
ARCO ALASKA INC KENAI	RCRA-SQG, FINDS
UNION OIL CO OF CA KENAI	RCRA-SQG, FINDS
ALASKA ENVIRONMENTAL INDUSTRIES IN	RCRA-SQG, FINDS
A P I UNOCAL	RCRA-SQG, FINDS
ARCTIC PIPE INSPECTION INC	RCRA-SQG, FINDS
BAKER PERFORMANCE CHEMICALS	RCRA-SQG, FINDS
MAGNA CORP KENAI	RCRA-SQG, FINDS
VECO KENAI FACILITY	RCRA-SQG, FINDS
BAKER HUGHES INTEQ KENAI WHSE	RCRA-SQG
CHUGACH ELECTRIC ASSN BERNICE LK P	PADS, RCRA-SQG, FINDS
UNOCAL GRANITE POINT TANK FARM	RCRA-SQG, FINDS
TESORO KENAI NORTH ROAD	RCRA-SQG, FINDS

OVERVIEW MAP - 1650161.7s



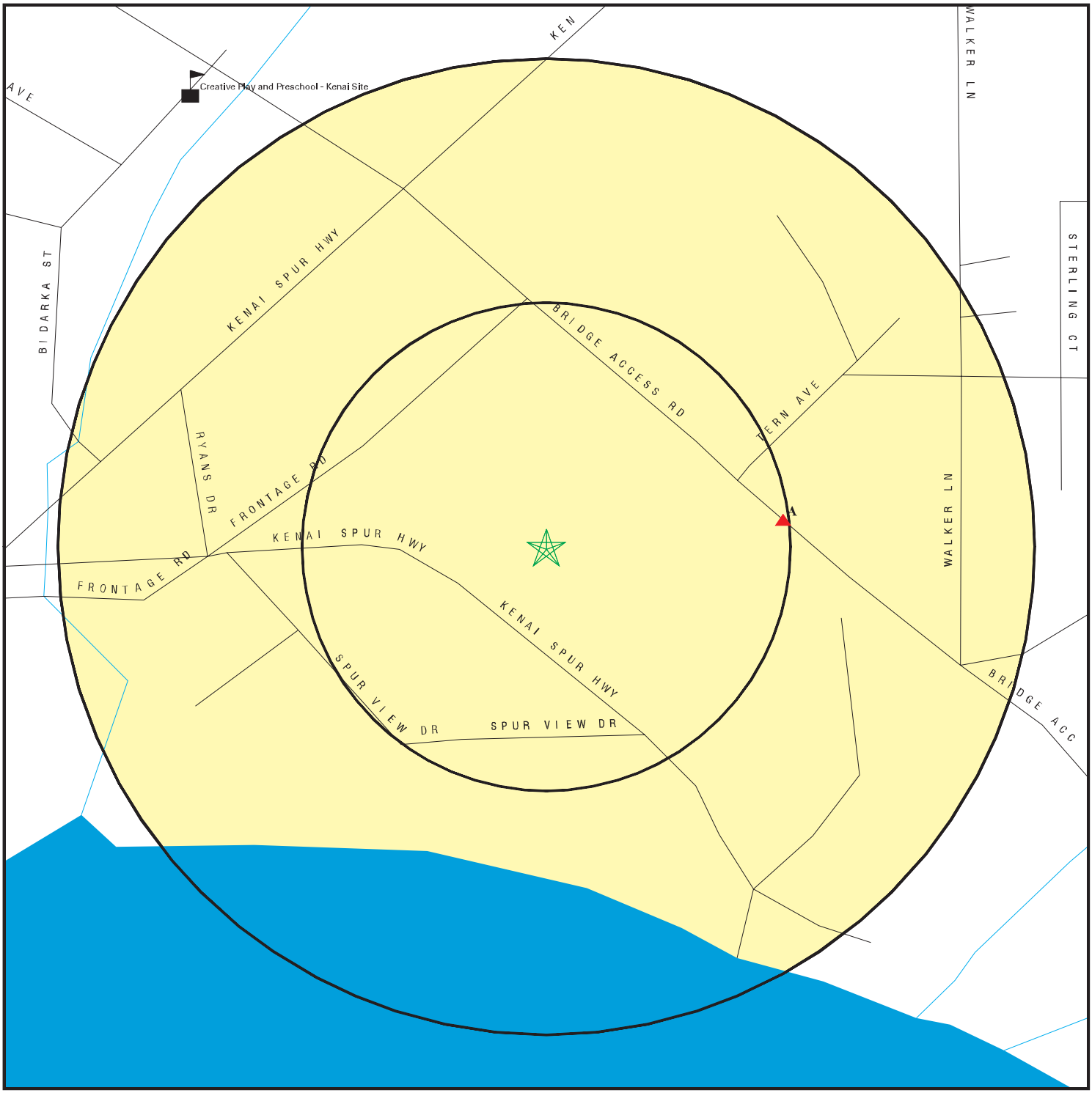
0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Millennium Square Development	CLIENT:	Oasis Environmental
ADDRESS:	Bridge Access Road Kenai AK 99611	CONTACT:	Ben Martich
		INQUIRY #:	1650161.7s
LAT/LONG:	60.5547 / 151.2395	DATE:	April 06, 2006

DETAIL MAP - 1650161.7s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Millennium Square Development	CLIENT: Oasis Environmental
ADDRESS: Bridge Access Road Kenai AK 99611	CONTACT: Ben Martich INQUIRY #: 1650161.7s
LAT/LONG: 60.5547 / 151.2395	DATE: April 06, 2006

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL RECOVERY		TP	NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.500	0	0	0	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
STATE AND LOCAL RECORDS								
State Haz. Waste		1.000	1	0	2	6	NR	9
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	3	NR	NR	3
UST		0.250	1	0	NR	NR	NR	1
AST		0.250	0	0	NR	NR	NR	0
AK Spills		TP	NR	NR	NR	NR	NR	0
Inst Control		0.500	0	0	1	NR	NR	1
VCP		0.500	0	0	1	NR	NR	1
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
BROWNFIELDS		0.500	0	0	0	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
East
< 1/8
644 ft.

Relative:
Higher

Actual:
80 ft.

CITY OF KENAI **UST** **U003952102**
170 BRIDGE ACCESS RD **N/A**
KENAI, AK

Site 1 of 2 in cluster A

UST:

Facility ID:	3377
Facility Type:	Commercial
Ownere ID:	243
Owner Name:	City Of Kenai
Owner Address:	210 Fidalgo AVE
Owner City,State Zip:	Kenai,AK 99611
Tank ID:	Not reported
Tank Status:	Not reported
Tack Capacity:	Not reported
Tank Product:	Not reported
Installed Date:	Not reported
Regulated Tank:	Yes

A2
East
< 1/8
644 ft.

Relative:
Higher

Actual:
80 ft.

DAUBENSPECK PROPERTY **SHWS** **S105627092**
170 BRIDGE ACCESS AT FRONTAGE ROAD/TERN AVE **N/A**
KENAI, AK 99611

Site 2 of 2 in cluster A

SHWS:

FS Facility Site ID:	67877
Hazard Id:	3335
Latitude:	60.555
Longitude:	-151.24
Date Lat Lon Collected:	Not reported
Horizontal Accuracy:	Not reported
Horizontal Accuracy Unit ID:	Not reported
Horizontal Description Code:	Not reported
Horizontal Source Code:	Not reported
Horizontal Datum Code:	3
Horizontal Method Code:	I2
Vertical Method Code:	Not reported
Vertical Datum Code:	Not reported
Vetical Accuracy:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Federal Identifier:	Not reported
Flag Mobile:	0
Description:	2000230113601
Near:	No
Country:	USA
Region DEC:	Not reported
State Senate District:	E
State Representative District:	09
Point Line Area Code:	P
Meridian Code:	S
Range:	011
Range Direction Code:	W
Township:	005
Township Direction:	N
Section:	5
Subdivision:	Not reported
Block:	Not reported

DAUBENSPECK PROPERTY (Continued) **S105627092**

Log:	Not reported
Comment:	KPB Parcel number 04705602, Township 5N, Range 11W, Section 5 Tract C Daubenspeck Property Subdi
Date Created:	11/14/2005 11:11:41 AM
Hydrologic Unit:	Not reported
Vertical Measure:	Not reported
Quadrangle Id:	1239
Flag Parent:	Not reported
Fs Election District ID:	129
Xref Location Id:	3335
Generic Name:	Property, Vacant
Description:	Daubenspeck Property
Latitude:	60.555
Longitude:	-151.24
Date Collected:	Not reported
Haccuracy:	Not reported
Haccuracy Unit Id:	Not reported
Description Code:	Not reported
Hdatum Code:	3
Hmethod Code:	I2
Hsource Code:	Not reported
Vertical Measure:	Not reported
Vaccuracy:	Not reported
Vdatum Code:	Not reported
Vmethod Code:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Comment:	Not reported
Near:	No

DEC File #:	2320.38.002	Spilldate:	5/15/2000
Region:	23	Categorycode:	Responsible Party Lead
Rp Contact Id:	249	Rp Programcode:	RP Willing and Able
Staff Id:	83	Statuscode:	Active
Analyte1:	164	Analyte2 Id:	105
Analyte3 Id:	0		
Analyte Id:	Not reported	Analyte Name:	Not reported
Alternate Name:	Not reported	Class:	Not reported
Casrefnbr:	Not reported	CS Action Level:	Not reported

Drinking Water MCL:	Not reported
Affiliate Contact ID:	Not reported
Affiliate Address ID:	Not reported
Contact:	Not reported
Contact Telephone:	Not reported
Staff ID:	Not reported
Staff User Name:	Not reported
Staff Last Name:	Not reported
Staff Phone:	Not reported
Staff Extention:	Not reported
Staff Fax:	Not reported
Staff Email:	Not reported
Staff Administrator:	Not reported
Staff Sectionmanager:	Not reported
Staff Inactive:	Not reported
Staff Affiliation:	Not reported
Problem Comment:	Removal of a 1,000-gallon unregulated UST, discovery of contamination, and collection of soil samples. Work plan for remediation of 12 cubic yards of contaminated soil required. Soil remediation to be completed in 2002 so as not to exceed 2 year limit on long-term soil stockpiling.

DAUBENSPECK PROPERTY (Continued) **S105627092**

Comment: Not reported

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3 **TESORO NORTHSTORE 206** **RCRA-SQG** **1001195076**
West **11120 SPUR HWY** **LUST** **AKR000002436**
1/4-1/2 **KENAI, AK 99611** **UST**
1472 ft. **VCP**

Relative:
Equal

Actual:
75 ft.

RCRAInfo:
Owner: TESORO NORTHSTORE
(907) 563-2711
EPA ID: AKR000002436
Contact: SCOTT ROSIN
(907) 776-3597
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

LUST:
Facility ID: 523
Record Key: 1994230021301
Owner: Tesoro Alaska Company
Facility Status: Closed
Release Date: 08/01/94

Facility ID: 523
Record Key: 1997230003501
Owner: Tesoro Alaska Company
Facility Status: NFRAP
Release Date: 09/08/97

VCP:
Rec Key: Not reported
DEC File Number: Not reported
Secondary Facility Address: Not reported
Facility Status: Streamlined Cleanup Program
Event ID: 1249
Location: 11120 Kenai Spur Highway
Status Code: NFRAP
Action Code: Not reported
Action Comments: Not reported
Comments: Not reported

UST:
Facility ID: 523
Facility Type: Gas Station
Ownere ID: 9263
Owner Name: Tesoro Alaska Company
Owner Address: 3450 S 344th Way, Suite 100
Owner City,State Zip: Auburn,WA 98001
Tank ID: 1
Tank Status: Currently in Use
Tack Capacity: 10000
Tank Product: Gasoline
Installed Date: 10/6/1986
Regulated Tank: Yes

TESORO NORTHSTORE 206 (Continued) **1001195076**

Facility ID:	523
Facility Type:	Gas Station
Ownere ID:	9263
Owner Name:	Tesoro Alaska Company
Owner Address:	3450 S 344th Way, Suite 100
Owner City,State Zip:	Auburn,WA 98001
Tank ID:	2
Tank Status:	Currently in Use
Tack Capacity:	10000
Tank Product:	Gasoline
Installed Date:	10/6/1986
Regulated Tank:	Yes

Facility ID:	523
Facility Type:	Gas Station
Ownere ID:	9263
Owner Name:	Tesoro Alaska Company
Owner Address:	3450 S 344th Way, Suite 100
Owner City,State Zip:	Auburn,WA 98001
Tank ID:	3
Tank Status:	Currently in Use
Tack Capacity:	8000
Tank Product:	Gasoline
Installed Date:	10/6/1986
Regulated Tank:	Yes

Facility ID:	523
Facility Type:	Gas Station
Ownere ID:	9263
Owner Name:	Tesoro Alaska Company
Owner Address:	3450 S 344th Way, Suite 100
Owner City,State Zip:	Auburn,WA 98001
Tank ID:	4
Tank Status:	Currently in Use
Tack Capacity:	8000
Tank Product:	Diesel
Installed Date:	10/6/1986
Regulated Tank:	Yes

Facility ID:	523
Facility Type:	Gas Station
Ownere ID:	9263
Owner Name:	Tesoro Alaska Company
Owner Address:	3450 S 344th Way, Suite 100
Owner City,State Zip:	Auburn,WA 98001
Tank ID:	5
Tank Status:	Permanently Out of Use
Tack Capacity:	1000
Tank Product:	Used Oil
Installed Date:	10/6/1986
Regulated Tank:	Yes

4
WSW
1/4-1/2
1632 ft.

SPRUCE HAVEN ESTATES SUBD. LOT 7
46909 SPRUCE HAVEN STREET
KENAI, AK 99611

SHWS

S104893349
N/A

Relative:
Lower

Actual:
64 ft.

SHWS:

FS Facility Site ID:	65554
Hazard Id:	1012
Latitude:	60.66
Longitude:	-151.311944
Date Lat Lon Collected:	Not reported
Horizontal Accuracy:	100
Horizontal Accuracy Unit ID:	4
Horizontal Description Code:	Not reported
Horizontal Source Code:	Not reported
Horizontal Datum Code:	3
Horizontal Method Code:	I2
Vertical Method Code:	Not reported
Vertical Datum Code:	Not reported
Vetical Accuracy:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Federal Identifier:	Not reported
Flag Mobile:	0
Description:	1990230912706
Near:	No
Country:	USA
Region DEC:	Not reported
State Senate District:	E
State Representative District:	09
Point Line Area Code:	P
Meridian Code:	S
Range:	012
Range Direction Code:	W
Township:	007
Township Direction:	N
Section:	36
Subdivision:	Not reported
Block:	Not reported
Log:	Not reported
Comment:	KPB Parcel number 01524003, Township 7N, Range 12W, Section 36, Tract 7 Spruce Haven Estates Subd
Date Created:	11/14/2005 11:10:59 AM
Hydrologic Unit:	Not reported
Vertical Measure:	Not reported
Quadrangle Id:	1239
Flag Parent:	Not reported
Fs Election District ID:	129
Xref Location Id:	1012
Generic Name:	Residence
Description:	Spruce Haven Estates Subd. Lot 7
Latitude:	60.66
Longitude:	-151.311944
Date Collected:	Not reported
Haccuracy:	100
Haccuracy Unit Id:	4
Description Code:	Not reported
Hdatum Code:	3
Hmethod Code:	I2
Hsource Code:	Not reported

SPRUCE HAVEN ESTATES SUBD. LOT 7 (Continued) **S104893349**

Vertical Measure:	Not reported
Vaccuracy:	Not reported
Vdatum Code:	Not reported
Vmethod Code:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Comment:	Not reported
Near:	No

DEC File #:	2320.38.044	Spilldate:	5/7/1990
Region:	23	Categorycode:	Unknown
Rp Contact Id:	1214	Rp Programcode:	RP Not Identified
Staff Id:	181	Statuscode:	Closed
Analyte1:	0	Analyte2 Id:	0
Analyte3 Id:	0		
Analyte Id:	Not reported	Analyte Name:	Not reported
Alternate Name:	Not reported	Class:	Not reported
Casrefnbr:	Not reported	CS Action Level:	Not reported

Drinking Water MCL:	Not reported
Affiliate Contact ID:	1012
Affiliate Address ID:	1189
Contact:	Not reported
Contact Telephone:	9074557225
Staff ID:	Not reported
Staff User Name:	Not reported
Staff Last Name:	Not reported
Staff Phone:	Not reported
Staff Extention:	Not reported
Staff Fax:	Not reported
Staff Email:	Not reported
Staff Administrator:	Not reported
Staff Sectionmanager:	Not reported
Staff Inactive:	Not reported
Staff Affiliation:	Not reported
Problem Comment:	There is no evidence of a creosote pit. There is a large stain on the driveway left from a truck parked over winter that leaked diesel from the fuel tank. See staff actions, this problem statement is.
Comment:	Spruce Haven Estates TR7 Formerly assigned to Marcorelle Last staff assigned was Folley.

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5 **AVIATION INSURANCE OF AK-HANGER** **LUST U003139941**
NNE **130 GRANITE PT - LOT 1 BLK 4** **UST N/A**
1/4-1/2 **KENAI, AK 99611**
2142 ft.

Relative:
Higher

Actual:
97 ft.

LUST:

Facility ID:	1694
Record Key:	1990230025002
Owner:	Aviation Insurance Of Alaska Inc
Facility Status:	Closed
Release Date:	09/07/90

UST:

Facility ID:	1694
Facility Type:	Aircraft Owner
Ownere ID:	328
Owner Name:	Aviation Insurance Of Alaska Inc
Owner Address:	10543 Spur HWY

AVIATION INSURANCE OF AK-HANGER (Continued) **U003139941**

Owner City,State Zip:	Kenai,AK 99611
Tank ID:	3
Tank Status:	Permanently Out of Use
Tack Capacity:	500
Tank Product:	Gasoline
Installed Date:	5/6/1984
Regulated Tank:	Yes

Facility ID:	1694
Facility Type:	Aircraft Owner
Ownere ID:	328
Owner Name:	Aviation Insurance Of Alaska Inc
Owner Address:	10543 Spur HWY
Owner City,State Zip:	Kenai,AK 99611
Tank ID:	1
Tank Status:	Permanently Out of Use
Tack Capacity:	2000
Tank Product:	Gasoline
Installed Date:	5/6/1984
Regulated Tank:	Yes

Facility ID:	1694
Facility Type:	Aircraft Owner
Ownere ID:	328
Owner Name:	Aviation Insurance Of Alaska Inc
Owner Address:	10543 Spur HWY
Owner City,State Zip:	Kenai,AK 99611
Tank ID:	2
Tank Status:	Permanently Out of Use
Tack Capacity:	1000
Tank Product:	Gasoline
Installed Date:	5/6/1984
Regulated Tank:	Yes

---

6 **ALYESKA SALES & SERVICE** **LUST** **S106424926**
WNW **200 WILLOW STREET SOUTH** **N/A**
1/4-1/2 **KENAI, AK 99611**
2221 ft.

Relative: **Lower**

Actual: **72 ft.**

LUST:

Facility ID:	1609
Record Key:	2000230016501
Owner:	Alyeska Sales & Service
Facility Status:	Closed
Release Date:	05/17/04

---

7 **KENAI ELEMENTARY SCHOOL** **SHWS** **S104893353**
West **705 FRONTAGE ROAD** **Inst Control** **N/A**
1/4-1/2 **KENAI, AK 99611**
2300 ft.

Relative: **Equal**

Actual: **75 ft.**

SHWS:

FS Facility Site ID:	65195
Hazard Id:	653
Latitude:	60.553889
Longitude:	-151.254444

KENAI ELEMENTARY SCHOOL (Continued) **S104893353**

Date Lat Lon Collected:	Not reported
Horizontal Accuracy:	100
Horizontal Accuracy Unit ID:	4
Horizontal Description Code:	Not reported
Horizontal Source Code:	Not reported
Horizontal Datum Code:	3
Horizontal Method Code:	I2
Vertical Method Code:	Not reported
Vertical Datum Code:	Not reported
Vetical Accuracy:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Federal Identifier:	Not reported
Flag Mobile:	0
Description:	1989230117002
Near:	No
Country:	USA
Region DEC:	Not reported
State Senate District:	E
State Representative District:	09
Point Line Area Code:	P
Meridian Code:	S
Range:	011
Range Direction Code:	W
Township:	005
Township Direction:	N
Section:	5
Subdivision:	Not reported
Block:	Not reported
Log:	Not reported
Comment:	KPB Parcel number 04711801, Township 5N, Range 11W, Section 5 East Addition Townsite of Kenai-US S
Date Created:	11/14/2005 11:10:50 AM
Hydrologic Unit:	Not reported
Vertical Measure:	Not reported
Quadrangle Id:	1239
Flag Parent:	Not reported
Fs Election District ID:	129
Xref Location Id:	653
Generic Name:	School, Elementary
Description:	Kenai Elementary School
Latitude:	60.553889
Longitude:	-151.254444
Date Collected:	Not reported
Haccuracy:	100
Haccuracy Unit Id:	4
Description Code:	Not reported
Hdatum Code:	3
Hmethod Code:	I2
Hsource Code:	Not reported
Vertical Measure:	Not reported
Vaccuracy:	Not reported
Vdatum Code:	Not reported
Vmethod Code:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Comment:	Not reported
Near:	No

KENAI ELEMENTARY SCHOOL (Continued) **S104893353**

DEC File #:	2320.38.036	Spilldate:	6/19/1989
Region:	23	Categorycode:	Responsible Party Lead
Rp Contact Id:	604	Rp Programcode:	RP Willing and Able
Staff Id:	83	Statuscode:	No Further Remedial Action Planned
Analyte1:	164	Analyte2 Id:	105
Analyte3 Id:	0		
Analyte Id:	Not reported	Analyte Name:	Not reported
Alternate Name:	Not reported	Class:	Not reported
Casrefnbr:	Not reported	CS Action Level:	Not reported

Drinking Water MCL:	Not reported
Affiliate Contact ID:	653
Affiliate Address ID:	765
Contact:	Not reported
Contact Telephone:	9072794702
Staff ID:	Not reported
Staff User Name:	Not reported
Staff Last Name:	Not reported
Staff Phone:	Not reported
Staff Extention:	Not reported
Staff Fax:	Not reported
Staff Email:	Not reported
Staff Administrator:	Not reported
Staff Sectionmanager:	Not reported
Staff Inactive:	Not reported
Staff Affiliation:	Not reported
Problem Comment:	Leaking underground storage tank discovered during diesel tank abandonment 6/19/89. Tanks and lines removed, soils excavated. Contaminated soils processed into asphalt.
Comment:	Interim report received from KPB. It appears that there is contamination under the school building that will need to be assessed and/or remediated in the future if the building is ever removed or substantially remodeled. Last staff assigned were English then Seagren.

AK INSTUTIONAL CONTROL:

Secondary Address:	Not reported
Rec Key:	1989230117002
DEC File Number:	2320.38.036
Status Code Description:	ICE
Priority:	Medium
Facility Location:	Not reported
Event ID:	No Further Remedial
Action Status:	Contamination above cleanup levels remains beneath foundation and needs to be addressed in the event the foundation in the area is disturbed in the future. "IC" status assigned.
Problem Statement:	Leaking underground storage tank discovered during diesel tank abandonment 6/19/89. Tanks and lines removed, soils excavated. Contaminated soils processed into asphalt.

8
NNW
1/2-1
2665 ft.

DOWELL SCHLUMBERGER - KENAI
220 TRADING BAY ROAD
KENAI, AK 99611

SHWS

S104893335
N/A

Relative:
Higher

Actual:
87 ft.

SHWS:

FS Facility Site ID:	66078
Hazard Id:	1536
Latitude:	60.562222
Longitude:	-151.2425
Date Lat Lon Collected:	Not reported
Horizontal Accuracy:	Not reported
Horizontal Accuracy Unit ID:	Not reported
Horizontal Description Code:	Not reported
Horizontal Source Code:	Not reported
Horizontal Datum Code:	3
Horizontal Method Code:	I2
Vertical Method Code:	Not reported
Vertical Datum Code:	Not reported
Vetical Accuracy:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Federal Identifier:	Not reported
Flag Mobile:	0
Description:	1992230932503
Near:	No
Country:	USA
Region DEC:	Not reported
State Senate District:	E
State Representative District:	09
Point Line Area Code:	P
Meridian Code:	S
Range:	011
Range Direction Code:	W
Township:	006
Township Direction:	N
Section:	32
Subdivision:	Not reported
Block:	Not reported
Log:	Not reported
Comment:	KPB Parcel numbers 04322026 and 04322027, Township 6N, Range 11W, Section 32 Cook Inlet Industrial
Date Created:	11/14/2005 11:11:08 AM
Hydrologic Unit:	Not reported
Vertical Measure:	Not reported
Quadrangle Id:	1239
Flag Parent:	Not reported
Fs Election District ID:	129
Xref Location Id:	1536
Generic Name:	Oilfield Service Company
Description:	Dowell Schlumberger - Kenai
Latitude:	60.562222
Longitude:	-151.2425
Date Collected:	Not reported
Haccuracy:	Not reported
Haccuracy Unit Id:	Not reported
Description Code:	Not reported
Hdatum Code:	3
Hmethod Code:	I2
Hsource Code:	Not reported

DOWELL SCHLUMBERGER - KENAI (Continued) **S104893335**

Vertical Measure:	Not reported
Vaccuracy:	Not reported
Vdatum Code:	Not reported
Vmethod Code:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Comment:	Not reported
Near:	No

DEC File #:	2320.38.014	Spilldate:	11/20/1992
Region:	23	Categorycode:	Responsible Party Lead
Rp Contact Id:	871	Rp Programcode:	RP Willing and Able
Staff Id:	52	Statuscode:	Active
Analyte1:	0	Analyte2 Id:	0
Analyte3 Id:	0		
Analyte Id:	Not reported	Analyte Name:	Not reported
Alternate Name:	Not reported	Class:	Not reported
Casrefnbr:	Not reported	CS Action Level:	Not reported

Drinking Water MCL:	Not reported
Affiliate Contact ID:	Not reported
Affiliate Address ID:	Not reported
Contact:	Not reported
Contact Telephone:	Not reported
Staff ID:	Not reported
Staff User Name:	Not reported
Staff Last Name:	Not reported
Staff Phone:	Not reported
Staff Extention:	Not reported
Staff Fax:	Not reported
Staff Email:	Not reported
Staff Administrator:	Not reported
Staff Sectionmanager:	Not reported
Staff Inactive:	Not reported
Staff Affiliation:	Not reported
Problem Comment:	Chlorinated and non-chlorinated solvents present in the soil and groundwater. During a company-wide policy of site assessments, contamination was discovered on-site and reported. Reporting individual believes source of spill(s) may have occurred previous to ADEC reporting requirements. Elevated halogenated volatile organics detected in the soils and groundwater. High levels of total petroleum hydrocarbons detected. Impact to drinking water supplies and extent of contamination unknown.
Comment:	Larry Glaser, Manager Environmental support in Tulsa, Oklahoma (918) 250-4200 reported. Tony Accardo will be contact in future. RCRA EPA ID#AKD000643502 Hazardous waste activity: generator 1 and transporter. Spillage attributed to past waste management practices. Previous ADEC staff; Tonkin. Last staff assigned were Seagren, Horwath, and Fritz.

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9 **HALLIBURTON SERVICES TRADING BAY RD** **SHWS S105755123**
North **240 TRADING BAY ROAD** **Inst Control N/A**
1/2-1 **KENAI, AK 99611**
2967 ft.

Relative: Higher

Actual: 92 ft.

SHWS:

FS Facility Site ID:	65556
Hazard Id:	1014
Latitude:	60.563333
Longitude:	-151.241389
Date Lat Lon Collected:	Not reported
Horizontal Accuracy:	100

HALLIBURTON SERVICES TRADING BAY RD (Continued) **S105755123**

Horizontal Accuracy Unit ID:	4
Horizontal Description Code:	Not reported
Horizontal Source Code:	Not reported
Horizontal Datum Code:	3
Horizontal Method Code:	I2
Vertical Method Code:	Not reported
Vertical Datum Code:	Not reported
Vetical Accuracy:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Federal Identifier:	Not reported
Flag Mobile:	0
Description:	1990230915501
Near:	No
Country:	USA
Region DEC:	Not reported
State Senate District:	E
State Representative District:	09
Point Line Area Code:	P
Meridian Code:	S
Range:	011
Range Direction Code:	W
Township:	006
Township Direction:	N
Section:	32
Subdivision:	Not reported
Block:	Not reported
Log:	Not reported
Comment:	KPB Parcel number 04322023, Township 6N, Range 11W, Section 32 Cook Inlet Industrial Air Park Subdiv
Date Created:	11/14/2005 11:10:59 AM
Hydrologic Unit:	Not reported
Vertical Measure:	Not reported
Quadrangle Id:	1239
Flag Parent:	Not reported
Fs Election District ID:	129
Xref Location Id:	1014
Generic Name:	Oilfield Service Company
Description:	Halliburton Services Trading Bay Rd
Latitude:	60.563333
Longitude:	-151.241389
Date Collected:	Not reported
Haccuracy:	100
Haccuracy Unit Id:	4
Description Code:	Not reported
Hdatum Code:	3
Hmethod Code:	I2
Hsource Code:	Not reported
Vertical Measure:	Not reported
Vaccuracy:	Not reported
Vdatum Code:	Not reported
Vmethod Code:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Comment:	Not reported
Near:	No

DEC File #:	2320.38.021	Spilldate:	6/4/1990
Region:	23	Categorycode:	Responsible Party Lead

HALLIBURTON SERVICES TRADING BAY RD (Continued) **S105755123**

Rp Contact Id:	1267	Rp Programcode:	RP Willing and Able
Staff Id:	83	Statuscode:	No Further Remedial Action Planned
Analyte1:	164	Analyte2 Id:	105
Analyte3 Id:	175		
Analyte Id:	Not reported	Analyte Name:	Not reported
Alternate Name:	Not reported	Class:	Not reported
Casrefnbr:	Not reported	CS Action Level:	Not reported

Drinking Water MCL: Not reported
Affiliate Contact ID: 1014
Affiliate Address ID: 1191
Contact: Ed Armstrong
Contact Telephone: 9074797014
Staff ID: Not reported
Staff User Name: Not reported
Staff Last Name: Not reported
Staff Phone: Not reported
Staff Extention: Not reported
Staff Fax: Not reported
Staff Email: Not reported
Staff Administrator: Not reported
Staff Sectionmanager: Not reported
Staff Inactive: Not reported
Staff Affiliation: Not reported
Problem Comment: 380 gallons 22 Baume' hydrochloric acid spilled on 12/5/89, reported 12/11/89. Storage tank is in bermed enclosure. While offloading to storage tank, weld leaked causing spill. Oily waste complaint 6/4/90. Soils excavated. Stockpiles moved offsite. Extent of remaining contamination unknown. Site assessments found contamination from several spills that happened during the operation of the Halliburton facility.
Comment: HCL spill on concrete pad was soaked up with sorbents, they neutralized what had spilled on ground to pH of 10. Halliburton Services contact: Mr. Jim Givens. Halliburton Services has moved operations from 240 Trading Bay Drive to Mile 16.2 NorthKenai Road. Mailing address for Joe Rouswell, Operations Supervisor, is P.O. Box 637, Kenai, Alaska 99611. His phone # is 907/776-8883. Off-site migration onto Lots 5 and 6, Block 4, Cook Inlet Industrial Air Park. Last staff assigned were Twidwell and Krogseng.

AK INSTUTIONAL CONTROL:
Secondary Address: and Airport Way, SE Cornr
Rec Key: 1990230915501
DEC File Number: 2320.38.021
Status Code Description: ICE
Priority: Medium
Facility Location: Not reported
Event ID: No Further Remedial
Action Status: Received copy of filed notice of Environmental contamination from the City of Kenai. Still need to receive the filed Notice for the adjacent Weaver Brothers property.
Problem Statement: 380 gallons 22 Baume' hydrochloric acid spilled on 12/5/89, reported 12/11/89. Storage tank is in bermed enclosure. While offloading to storage tank, weld leaked causing spill. Oily waste complaint 6/4/90. Soils excavated. Stockpiles moved offsite. Extent of remaining contamination unknown. Site assessments found contamination from several spills that happened during the operation of the Halliburton facility.

10 ESE 1/2-1 3259 ft.

KENAI PACKERS -PACIFIC STAR SEAFOOD
520 BRIDGE ACCESS ROAD;
KENAI, AK 99611

SHWS LUST

S105755126 N/A

Relative: Lower

Actual: 15 ft.

SHWS:

FS Facility Site ID:	66613
Hazard Id:	2071
Latitude:	60.553333
Longitude:	-151.238611
Date Lat Lon Collected:	Not reported
Horizontal Accuracy:	Not reported
Horizontal Accuracy Unit ID:	Not reported
Horizontal Description Code:	Not reported
Horizontal Source Code:	Not reported
Horizontal Datum Code:	3
Horizontal Method Code:	I2
Vertical Method Code:	Not reported
Vertical Datum Code:	Not reported
Vetical Accuracy:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Federal Identifier:	Not reported
Flag Mobile:	0
Description:	1994230129901
Near:	No
Country:	USA
Region DEC:	Not reported
State Senate District:	E
State Representative District:	09
Point Line Area Code:	P
Meridian Code:	S
Range:	011
Range Direction Code:	W
Township:	005
Township Direction:	N
Section:	5
Subdivision:	Not reported
Block:	Not reported
Log:	Not reported
Comment:	KPB Parcel number 04705601, Township 5N, Range 11W, Section 5 Tract B US Survey 192.
Date Created:	11/14/2005 11:11:18 AM
Hydrologic Unit:	Not reported
Vertical Measure:	Not reported
Quadrangle Id:	1239
Flag Parent:	Not reported
Fs Election District ID:	129
Xref Location Id:	2071
Generic Name:	Cannery
Description:	Kenai Packers-Russian Orthodox Chur
Latitude:	60.553333
Longitude:	-151.238611
Date Collected:	Not reported
Haccuracy:	Not reported
Haccuracy Unit Id:	Not reported
Description Code:	Not reported
Hdatum Code:	3
Hmethod Code:	I2
Hsource Code:	Not reported

KENAI PACKERS -PACIFIC STAR SEAFOOD (Continued) **S105755126**

Vertical Measure:	Not reported
Vaccuracy:	Not reported
Vdatum Code:	Not reported
Vmethod Code:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Comment:	Not reported
Near:	No

DEC File #:	2320.38.035	Spilldate:	10/26/1994
Region:	23	Categorycode:	Responsible Party Lead
Rp Contact Id:	796	Rp Programcode:	RP Willing and Able
Staff Id:	181	Statuscode:	Closed
Analyte1:	164	Analyte2 Id:	105
Analyte3 Id:	0		
Analyte Id:	Not reported	Analyte Name:	Not reported
Alternate Name:	Not reported	Class:	Not reported
Casrefnbr:	Not reported	CS Action Level:	Not reported

Drinking Water MCL:	Not reported
Affiliate Contact ID:	Not reported
Affiliate Address ID:	Not reported
Contact:	Not reported
Contact Telephone:	Not reported
Staff ID:	Not reported
Staff User Name:	Not reported
Staff Last Name:	Not reported
Staff Phone:	Not reported
Staff Extention:	Not reported
Staff Fax:	Not reported
Staff Email:	Not reported
Staff Administrator:	Not reported
Staff Sectionmanager:	Not reported
Staff Inactive:	Not reported
Staff Affiliation:	Not reported
Problem Comment:	Three above ground storage tanks, formerly used to fuel boilers at the adjacent fish processor, are located on the bluff above the processor. The tanks straddle the property line between the fish processor and property owned by the Kenai Russian Orthodox Church. The church wants the tanks removed and any contamination removed. Some minor contamination due to leaks and overfilling appears to be present under the tanks and under the outlets.
Comment:	Working with Mr. Dan Foley, President of Pacific Star Seafoods, Inc., to resolve the problem. The tanks have been relocated to the Pacific Star Seafood property, where they are temporarily stored. The remaining gas, diesel, and oil will be used atthe processor. Pacific Star is presently in the process of hiring a consultant to develop a remediation plan to cleanup the site. Last staff assigned was Seagren.

LUST:

Facility ID:	8
Record Key:	1992230014304
Owner:	Kenai Salmon Packing
Facility Status:	Closed
Release Date:	05/22/92

11
North
1/2-1
3342 ft.

CITY OF KENAI MAINTENANCE YARD
332 AIRPORT WAY
KENAI, AK 99611

SHWS **S105004467**
N/A

Relative:
Higher

Actual:
92 ft.

SHWS:

FS Facility Site ID:	66617
Hazard Id:	2075
Latitude:	60.564722
Longitude:	-151.241111
Date Lat Lon Collected:	Not reported
Horizontal Accuracy:	1609
Horizontal Accuracy Unit ID:	4
Horizontal Description Code:	Not reported
Horizontal Source Code:	Not reported
Horizontal Datum Code:	3
Horizontal Method Code:	A0
Vertical Method Code:	Not reported
Vertical Datum Code:	Not reported
Vetical Accuracy:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Federal Identifier:	Not reported
Flag Mobile:	0
Description:	1994230910102
Near:	No
Country:	USA
Region DEC:	Not reported
State Senate District:	E
State Representative District:	09
Point Line Area Code:	P
Meridian Code:	S
Range:	011
Range Direction Code:	W
Township:	006
Township Direction:	N
Section:	32
Subdivision:	Not reported
Block:	Not reported
Log:	Not reported
Comment:	KPB Parcel number 04336001, Township 6N, Range 11W, Section 32 Tract A FBO Subdivision.
Date Created:	11/14/2005 11:11:18 AM
Hydrologic Unit:	Not reported
Vertical Measure:	Not reported
Quadrangle Id:	1239
Flag Parent:	Not reported
Fs Election District ID:	129
Xref Location Id:	2075
Generic Name:	Maintenance Facility
Description:	City of Kenai Maintenance Yard
Latitude:	60.564722
Longitude:	-151.241111
Date Collected:	Not reported
Haccuracy:	1609
Haccuracy Unit Id:	4
Description Code:	Not reported
Hdatum Code:	3
Hmethod Code:	A0
Hsource Code:	Not reported

CITY OF KENAI MAINTENANCE YARD (Continued) **S105004467**

Vertical Measure:	Not reported
Vaccuracy:	Not reported
Vdatum Code:	Not reported
Vmethod Code:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Comment:	Not reported
Near:	No

DEC File #:	2320.38.027	Spilldate:	4/11/1994
Region:	23	Categorycode:	Responsible Party Lead
Rp Contact Id:	249	Rp Programcode:	RP Willing and Able
Staff Id:	83	Statuscode:	Active
Analyte1:	164	Analyte2 Id:	175
Analyte3 Id:	105		
Analyte Id:	Not reported	Analyte Name:	Not reported
Alternate Name:	Not reported	Class:	Not reported
Casrefnbr:	Not reported	CS Action Level:	Not reported

Drinking Water MCL:	Not reported
Affiliate Contact ID:	Not reported
Affiliate Address ID:	Not reported
Contact:	Not reported
Contact Telephone:	Not reported
Staff ID:	Not reported
Staff User Name:	Not reported
Staff Last Name:	Not reported
Staff Phone:	Not reported
Staff Extention:	Not reported
Staff Fax:	Not reported
Staff Email:	Not reported
Staff Administrator:	Not reported
Staff Sectionmanager:	Not reported
Staff Inactive:	Not reported
Staff Affiliation:	Not reported
Problem Comment:	Off-site migration of petroleum hydrocarbons was found on the adjoining property to the south from the Kenai Maintenance Yard. The extent of the contaminant migration hasn't been determined. DRO, GRO, RRO, BTEX, VOCs, and SVOCs contamination has been confirmed both on site and migrating off site. DRO, GRO, toluene, xylene and one SVOC contamination of the adjacent Ryan Creek water and sediments have been determined, further confirming off site migration of the contamination. Low level PCBcontamination has been found in on-site soils.
Comment:	City of Kenai was required to hire an environmental consultant to determine the extent of contamination. Deadline for submittal of the site assessment work plan is July 8, 1994. Last staff assigned was Twidwell.

12
North
1/2-1
3444 ft.

KENNY CARVER DRILLING **SHWS** **S104893332**
340 AIRPORT WAY **N/A**
KENAI, AK 99611

Relative: Higher

Actual: 91 ft.

SHWS:

FS Facility Site ID:	66376
Hazard Id:	1834
Latitude:	60.564444
Longitude:	-151.243333
Date Lat Lon Collected:	Not reported
Horizontal Accuracy:	1609
Horizontal Accuracy Unit ID:	4

KENNY CARVER DRILLING (Continued) **S104893332**

Horizontal Description Code:	Not reported
Horizontal Source Code:	Not reported
Horizontal Datum Code:	3
Horizontal Method Code:	I2
Vertical Method Code:	Not reported
Vertical Datum Code:	Not reported
Vetical Accuracy:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Federal Identifier:	Not reported
Flag Mobile:	0
Description:	1993230124202
Near:	No
Country:	USA
Region DEC:	Not reported
State Senate District:	E
State Representative District:	09
Point Line Area Code:	P
Meridian Code:	S
Range:	011
Range Direction Code:	W
Township:	006
Township Direction:	N
Section:	32
Subdivision:	Not reported
Block:	Not reported
Log:	Not reported
Comment:	KPB Parcel number 04322018, Township 6N, Range 11W, Section 32 Cook Inlet Industrial Air Park Subdiv
Date Created:	11/14/2005 11:11:14 AM
Hydrologic Unit:	Not reported
Vertical Measure:	Not reported
Quadrangle Id:	1239
Flag Parent:	Not reported
Fs Election District ID:	129
Xref Location Id:	1834
Generic Name:	Drilling Company
Description:	Kenny Carver Drilling
Latitude:	60.564444
Longitude:	-151.243333
Date Collected:	Not reported
Haccuracy:	1609
Haccuracy Unit Id:	4
Description Code:	Not reported
Hdatum Code:	3
Hmethod Code:	I2
Hsource Code:	Not reported
Vertical Measure:	Not reported
Vaccuracy:	Not reported
Vdatum Code:	Not reported
Vmethod Code:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Comment:	Not reported
Near:	No

DEC File #:	2320.38.038	Spilldate:	8/30/1993
Region:	23	Categorycode:	Responsible Party Lead
Rp Contact Id:	600	Rp Programcode:	RP Willing and Able

KENNY CARVER DRILLING (Continued) **S104893332**

Staff Id:	181	Statuscode:	Closed
Analyte1:	164	Analyte2 Id:	175
Analyte3 Id:	105		
Analyte Id:	Not reported	Analyte Name:	Not reported
Alternate Name:	Not reported	Class:	Not reported
Casrefnbr:	Not reported	CS Action Level:	Not reported

Drinking Water MCL:	Not reported
Affiliate Contact ID:	Not reported
Affiliate Address ID:	Not reported
Contact:	Not reported
Contact Telephone:	Not reported
Staff ID:	Not reported
Staff User Name:	Not reported
Staff Last Name:	Not reported
Staff Phone:	Not reported
Staff Extention:	Not reported
Staff Fax:	Not reported
Staff Email:	Not reported
Staff Administrator:	Not reported
Staff Sectionmanager:	Not reported
Staff Inactive:	Not reported
Staff Affiliation:	Not reported
Problem Comment:	Site assessment has disclosed several small spills around the building. On-site migration of diesel from the adjacent property from the north on the groundwater.
Comment:	The site adjacent to the north is owned by the city of Kenai and is the location of the city shop. The site used to be a fuel cache for the U.S. Military - the suspected GW contamination source. Lot 1, Block 5, Cook Inlet Industrial Airpark. Laststaff assigned were Twidwell, Krogseng, and Seagren.

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13 **ALASKA OIL SALES KENAI BULK PLANT** **SHWS** **S106079062**
ESE **608 BRIDGE ACCESS ROAD** **N/A**
1/2-1 **KENAI, AK 99611**
3943 ft.

Relative:
Lower

Actual:
14 ft.

SHWS:

FS Facility Site ID:	68305
Hazard Id:	3763
Latitude:	60.552778
Longitude:	-151.227222
Date Lat Lon Collected:	Not reported
Horizontal Accuracy:	Not reported
Horizontal Accuracy Unit ID:	Not reported
Horizontal Description Code:	Not reported
Horizontal Source Code:	Not reported
Horizontal Datum Code:	2
Horizontal Method Code:	I2
Vertical Method Code:	Not reported
Vertical Datum Code:	Not reported
Vetical Accuracy:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Federal Identifier:	Not reported
Flag Mobile:	0
Description:	2001230125501
Near:	No
Country:	USA
Region DEC:	Not reported

ALASKA OIL SALES KENAI BULK PLANT (Continued) **S106079062**

State Senate District:	R
State Representative District:	36
Point Line Area Code:	P
Meridian Code:	S
Range:	011
Range Direction Code:	W
Township:	005
Township Direction:	N
Section:	4
Subdivision:	Not reported
Block:	Not reported
Log:	Not reported
Comment:	KPB Parcel #04901112, Township 5 North, Range 11 West, Section 4 Tract B US Survey 104 Amended. K
Date Created:	11/14/2005 11:11:48 AM
Hydrologic Unit:	Not reported
Vertical Measure:	Not reported
Quadrangle Id:	1239
Flag Parent:	Not reported
Fs Election District ID:	345
Xref Location Id:	3763
Generic Name:	Bulk Fuel Facility
Description:	Alaska Oil Sales Kenai Bulk Plant
Latitude:	60.552778
Longitude:	-151.227222
Date Collected:	Not reported
Haccuracy:	Not reported
Haccuracy Unit Id:	Not reported
Description Code:	Not reported
Hdatum Code:	2
Hmethod Code:	I2
Hsource Code:	Not reported
Vertical Measure:	Not reported
Vaccuracy:	Not reported
Vdatum Code:	Not reported
Vmethod Code:	Not reported
Source Scale Code:	Not reported
Verification Code:	Not reported
Comment:	Not reported
Near:	No

DEC File #:	2320.38.003	Spilldate:	9/12/2001
Region:	23	Categorycode:	Responsible Party Lead
Rp Contact Id:	206	Rp Programcode:	RP Willing and Able
Staff Id:	83	Statuscode:	Active
Analyte1:	164	Analyte2 Id:	175
Analyte3 Id:	0		
Analyte Id:	Not reported	Analyte Name:	Not reported
Alternate Name:	Not reported	Class:	Not reported
Casrefnbr:	Not reported	CS Action Level:	Not reported

Drinking Water MCL:	Not reported
Affiliate Contact ID:	Not reported
Affiliate Address ID:	Not reported
Contact:	Not reported
Contact Telephone:	Not reported
Staff ID:	Not reported
Staff User Name:	Not reported
Staff Last Name:	Not reported
Staff Phone:	Not reported

ALASKA OIL SALES KENAI BULK PLANT (Continued) **S106079062**

Staff Extention:	Not reported
Staff Fax:	Not reported
Staff Email:	Not reported
Staff Administrator:	Not reported
Staff Sectionmanager:	Not reported
Staff Inactive:	Not reported
Staff Affiliation:	Not reported
Problem Comment:	Petroleum contaminated soil was encountered at 27 of the 41 test holes; 22 of the 27 holes were advanced to groundwater during an assessment done in 2001 by Rozak Engineering. Surface contamination was visible at several pump and header locations.Quantity of contamination is estimated at 800 to 1200 cubic yards, with 30 to 40 percent of the contamination below the water table, with 90 to 95 percent of the soil contamination appears to be connected at groundwater.
Comment:	The primary source of this large plume is from discharges near several pumps and the unloading headers. Several releases also occurred within the impound dike and near the oil-water separator. Smaller isolated areas of contamination were located under the middle of the TTLR, at two pumps , and the former drum storage area. Does business as Petro Marine Services.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
KASILOF	U003139790	CARLSON ENTERPRISES	MILE 16.9 KENAI SPUR RD	99611	UST
KENAI	1001085242	DRAGNET FISHERIES INC	MI .25 MOUTH OF KENAI RIVER	99611	RCRA-SQG, FINDS
KENAI	S104893344	KENAI GAS FIELD PAD 41-18	MP 10.5 KALIFORNSKY BEACH	99611	SHWS
KENAI	S106166033	NORTH ROAD TESORO	MI. 15 N. KENAI RD.;		LUST
KENAI	1000175661	NALCO EXXON ENERGY CHEMICALS LP	MI 15.5 N KENAI RD	99611	RCRA-SQG, FINDS
KENAI	1000585943	GREAT WESTERN CHEMICAL CO KENAI	MI 17 KENAI SPUR HWY	99611	RCRA-SQG, FINDS
KENAI	1001022669	R & K INDUSTRIAL	MI 17.5 KENAI SPUR HWY	99611	RCRA-SQG, FINDS
KENAI	1004670188	EPPERHEIMER PAINTING	MI 20 SPUR HWY	99611	RCRA-SQG, FINDS
KENAI	1001022667	R & K IND TEMP THREAD CLEAN SITE	MI 20.5 KENAI SPUR HWY	99611	RCRA-SQG, FINDS
KENAI	1001814679	TESORO ALASKA CO NIKISKI TERMINAL	MI 21 KENAI SPUR HWY	99611	RCRA-SQG, FINDS
KENAI	1004670168	SCHLUMBERGER WELL SVCS	MI 22.5 KENAI SPUR HWY	99611	RCRA-SQG, FINDS
KENAI	1001085234	EQUIPMENT ENGINEERING N KENAI	MI 23 N KENAI RD	99611	RCRA-SQG, FINDS
KENAI	1001022659	HALLIBURTON ENERGY SVCS CEMENTING	MI 26.5 N KENAI RD	99611	RCRA-SQG, FINDS
KENAI	S106247584	MCLANE AND ASSOCIATES	MI. 3.5 KENAI SPUR HWY.;		LUST
KENAI	S107029252	OLD KEENER PROPERTY	35570 KALIFORNSKY BEACH R MILE	99611	SHWS
KENAI	S107504818	KENAI GAS FIELD PAD 14-6	KALIFORNSKY BEACH ROAD	99611	SHWS
KENAI	1000165937	ADEC NALCO CHEMICAL CO WHSE	KENAI SPUR RD 4 MI N	99611	RCRA-SQG, FINDS
KENAI	1000324052	ARCO ALASKA INC KENAI	KENAI SPUR RD 14.5 MI	99611	RCRA-SQG, FINDS
KENAI	1000337335	UNION OIL CO OF CA KENAI	KENAI SPUR RD	99611	RCRA-SQG, FINDS
KENAI	1000382662	ALASKA ENVIRONMENTAL INDUSTRIES IN	KENAI SPUR RD 3 MI N OF CY	99611	RCRA-SQG, FINDS
KENAI	1000817177	A P I UNOCAL	KENAI SPUR RD MI 18.5	99611	RCRA-SQG, FINDS
KENAI	1000817178	ARCTIC PIPE INSPECTION INC	KENAI SPUR RD MI 18.5 BLDG 2	99611	RCRA-SQG, FINDS
KENAI	1000885919	BAKER PERFORMANCE CHEMICALS	KENAI SPUR RD MI 25	99611	RCRA-SQG, FINDS
KENAI	1000306802	MAGNA CORP KENAI	KENAI SPUR RD RT 1	99611	RCRA-SQG, FINDS
KENAI	1000327451	VECO KENAI FACILITY	KENAI SPUR HWY MI 15.5	99611	RCRA-SQG, FINDS
KENAI	1001022677	BAKER HUGHES INTEQ KENAI WHSE	KENAI SPUR HWY MI 22.5	99611	RCRA-SQG
KENAI	1002838756	USDOI FWS SWANSON RIVER OIL FIELD	KENAI NAT WILDLIFE REFUGE	99611	CERC-NFRAP
KENAI	1003880119	KENAI, CY OF, OLD CITY DUMP	KENAI SPUR RD	99611	CERC-NFRAP
KENAI	1004433783	CHUGACH ELECTRIC ASSN BERNICE LK P	KENAI SPUR HWY MI 22.8	99611	PADS, RCRA-SQG, FINDS
KENAI	S104893362	DOYLE'S FUEL SERVICE	8847 KENAI SPUR HIGHWAY 605 CA	99611	SHWS
KENAI	S105755125	KENAI LANDFILL - OLD	13296 KENAI SPUR HIGHWAY	99611	SHWS, Inst Control
KENAI	S106899462	SCHLUMBERGER WIRELINE SERVICES	49420 KENAI SPUR HIGHWAY MILE	99611	SHWS
KENAI	S107029248	HALLIBURTON SERVICES MP15.5 SPUR H	42320 KENAI SPUR HIGHWAY MI. 1	99611	SHWS
KENAI	S107029250	TESORO COOK INLET BLUFF SPILL	48385 KENAI SPUR HIGHWAY MI. 2	99611	SHWS
KENAI	S106166032	ADOT&PF NORTH KENAI MAINTENANCE FA	NORTH KENAI 51150 ISLAND LAKE		LUST
KENAI	S106672756	USF&WS - KENAI AIRPORT	KENAI AIRPORT;		LUST
KENAI	1004433852	UNOCAL GRANITE POINT TANK FARM	33 ML NORTHWEST OF KENAI	99611	RCRA-SQG, FINDS
KENAI	S106196175	FAA KENAI STATION EOF BUILDING 600	225 SPUR VIEW DRIVE EAST OF SE	99611	SHWS
KENAI	S105246524	G & M CHEVRON	WILLOW / KENAI SPUR RD.; NW		LUST
NORTH KENAI	1000146612	TESORO KENAI NORTH ROAD	KENAI SPUR RD MI 4	99611	RCRA-SQG, FINDS
NORTH KENAI	1000167495	UNOCAL CHEMICALS DIV	KENAI SPUR HWY, MI 21	99611	PADS, RCRA-LQG, TRIS, RAATS, CORRACTS, CERC-NFRAP
NORTH KENAI	1003880132	ARNESS PROPERTY	KENAI SPUR RD, MI 29	99611	CERC-NFRAP

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
SOLDOTNA	U003140731	COOK INLET MOTORS	N KENAI RD	99611	UST

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/24/2006
Date Data Arrived at EDR: 03/01/2006
Date Made Active in Reports: 03/31/2006
Number of Days to Update: 30

Source: EPA
Telephone: N/A
Last EDR Contact: 03/01/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Date of Government Version: 02/24/2006
Date Data Arrived at EDR: 03/01/2006
Date Made Active in Reports: 03/31/2006
Number of Days to Update: 30

Source: EPA
Telephone: N/A
Last EDR Contact: 03/01/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/24/2006
Date Data Arrived at EDR: 03/01/2006
Date Made Active in Reports: 03/31/2006
Number of Days to Update: 30

Source: EPA
Telephone: N/A
Last EDR Contact: 03/01/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

NPL RECOVERY: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/24/2005
Date Data Arrived at EDR: 12/21/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 40

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 03/21/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/24/2005
Date Data Arrived at EDR: 12/21/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 40

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 03/21/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/29/2005
Date Data Arrived at EDR: 01/11/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 41

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/21/2006
Date Data Arrived at EDR: 03/01/2006
Date Made Active in Reports: 03/31/2006
Number of Days to Update: 30

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/01/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 40

Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Last EDR Contact: 01/12/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 01/16/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 36

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List
A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/02/2005
Date Data Arrived at EDR: 08/12/2005
Date Made Active in Reports: 10/06/2005
Number of Days to Update: 55

Source: Environmental Protection Agency
Telephone: 703-603-8867
Last EDR Contact: 03/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls
A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 01/10/2005
Date Data Arrived at EDR: 02/11/2005
Date Made Active in Reports: 04/06/2005
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 703-603-8867
Last EDR Contact: 03/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 01/19/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 33

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 11/29/2005
Date Data Arrived at EDR: 12/05/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/14/2004
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 04/25/2005
Number of Days to Update: 69

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/07/2005
Date Data Arrived at EDR: 01/06/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 46

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/05/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 11/04/2005
Date Data Arrived at EDR: 11/28/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 63

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 03/20/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 07/13/2005
Date Made Active in Reports: 08/17/2005
Number of Days to Update: 35

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 03/21/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/27/2004
Date Made Active in Reports: 05/21/2004
Number of Days to Update: 24

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/17/2006
Date Data Arrived at EDR: 01/24/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 34

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 03/20/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Date of Government Version: 01/17/2006
Date Data Arrived at EDR: 01/24/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 03/20/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 01/03/2005
Date Made Active in Reports: 01/25/2005
Number of Days to Update: 22

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Annually

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/27/2005
Date Data Arrived at EDR: 02/08/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 19

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 02/08/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 02/10/2006
Date Data Arrived at EDR: 02/16/2006
Date Made Active in Reports: 03/31/2006
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/08/2005
Date Data Arrived at EDR: 12/27/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 34

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/29/2006
Next Scheduled EDR Contact: 06/26/2006
Data Release Frequency: Semi-Annually

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 01/09/2006
Date Data Arrived at EDR: 01/16/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 36

Source: EPA
Telephone: N/A
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 06/17/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 48

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/17/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Biennially

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE AND LOCAL RECORDS

SHWS: Contaminated Sites Database

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 12/21/2005
Date Data Arrived at EDR: 12/27/2005
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 56

Source: Department of Environmental Conservation
Telephone: 907-269-7546
Last EDR Contact: 12/27/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Semi-Annually

SWF/LF: Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/07/2006
Date Data Arrived at EDR: 02/08/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 13

Source: Department of Environmental Conservation
Telephone: 907-269-7632
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Semi-Annually

LUST: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 12/13/2005
Date Data Arrived at EDR: 12/13/2005
Date Made Active in Reports: 01/20/2006
Number of Days to Update: 38

Source: Department of Environmental Conservation
Telephone: 907-465-5301
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Semi-Annually

UST: Underground Storage Tank Database

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 12/13/2005
Date Data Arrived at EDR: 12/13/2005
Date Made Active in Reports: 01/18/2006
Number of Days to Update: 36

Source: Department of Environmental Conservation
Telephone: 907-269-7504
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Semi-Annually

AST: Regulated Aboveground Storage Tanks

The list covers "regulated" facilities with storage capacities above 10,000 barrels (or 5,000 barrels of crude).

Date of Government Version: 01/05/2005
Date Data Arrived at EDR: 01/06/2005
Date Made Active in Reports: 02/02/2005
Number of Days to Update: 27

Source: Department of Environmental Conservation
Telephone: 907-465-5231
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Varies

SPILLS: Spills Database

Date of Government Version: 02/07/2006
Date Data Arrived at EDR: 02/07/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 14

Source: Department of Environmental Conservation
Telephone: 907-465-5242
Last EDR Contact: 01/30/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Semi-Annually

Inst Control: Contaminated Sites with Institutional Controls
Contaminated sites that have institutional controls.

Date of Government Version: 12/20/2005
Date Data Arrived at EDR: 12/21/2005
Date Made Active in Reports: 01/20/2006
Number of Days to Update: 30
Source: Department of Environmental Conservation
Telephone: 907-269-3063
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Semi-Annually

VCP: Voluntary Cleanup Program sites
Sites involved in the Voluntary Cleanup Program.

Date of Government Version: 12/21/2005
Date Data Arrived at EDR: 12/22/2005
Date Made Active in Reports: 01/20/2006
Number of Days to Update: 29
Source: Department of Environmental Conservation
Telephone: 907-451-2182
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Varies

DRYCLEANERS: Drycleaner Facility Listing
A listing of drycleaning facilities in Alaska.

Date of Government Version: 02/15/2006
Date Data Arrived at EDR: 02/16/2006
Date Made Active in Reports: 03/15/2006
Number of Days to Update: 27
Source: Department of Environmental Conservation
Telephone: 907-269-7577
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: No Update Planned

BROWNFIELDS: Identified and/or Proposed Brownfields Sites
Brownfield properties are defined by U.S Environmental Protection Agency (EPA) as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contamination." DEC is developing resources to assist eligible entities in Alaska in applying for EPA brownfields grants. The program also will provide technical assistance and perform some site assessments, The purpose of these assessments is to assist local redevelopment efforts on previously contaminated properties that are vacant or underused.

Date of Government Version: 11/22/2005
Date Data Arrived at EDR: 01/05/2006
Date Made Active in Reports: 01/20/2006
Number of Days to Update: 15
Source: Department of Environmental Conservation
Telephone: 907-451-2166
Last EDR Contact: 03/17/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Varies

CDL: Illegal Drug Manufacturing Sites
A list of properties that have been determined to be illegal drug manufacturing sites.

Date of Government Version: 11/29/2005
Date Data Arrived at EDR: 12/13/2005
Date Made Active in Reports: 01/20/2006
Number of Days to Update: 38
Source: Department of Environmental Conservation
Telephone: 907-269-7543
Last EDR Contact: 03/14/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Varies

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177
Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Semi-Annually

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/12/2006
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 19

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 02/20/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Varies

INDIAN UST: Underground Storage Tanks on Indian Land
Underground storage tanks on Indian Land.

Date of Government Version: 11/23/2005
Date Data Arrived at EDR: 01/06/2006
Date Made Active in Reports: 01/20/2006
Number of Days to Update: 14

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/05/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facilities Database
Source: Department of Education & Early Development
Telephone: 907-465-2800

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory Data
Source: Department of Fish & Game
Telephone: 907-465-4100

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

MILLENNIUM SQUARE DEVELOPMENT
BRIDGE ACCESS ROAD
KENAI, AK 99611

TARGET PROPERTY COORDINATES

Latitude (North):	60.55470 - 60° 33' 16.9''
Longitude (West):	151.2395 - 151° 14' 22.2''
Universal Tranverse Mercator:	Zone 5
UTM X (Meters):	596544.1
UTM Y (Meters):	6714276.0
Elevation:	75 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property:	N/A
Source:	USGS 7.5 min quad index

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

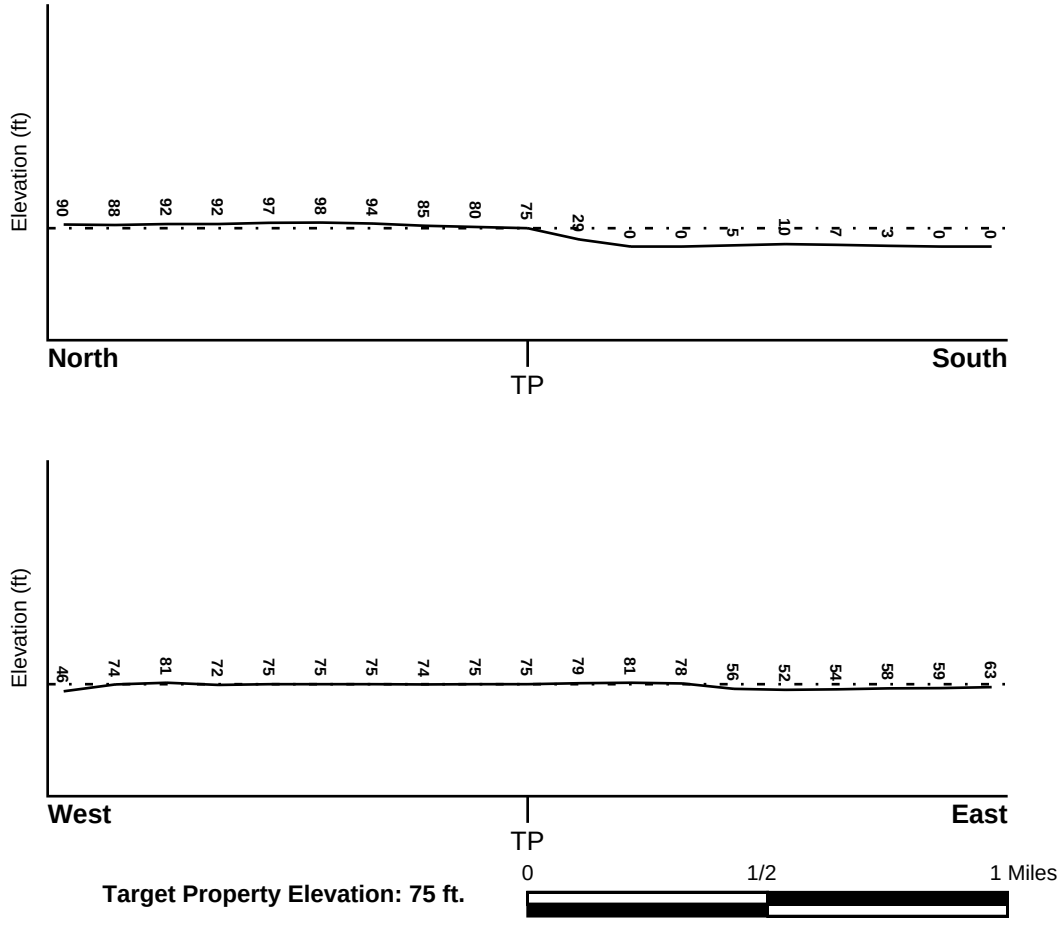
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 75 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
KENAI_PENINSULA, AK	Not Available

Flood Plain Panel at Target Property: Not Reported

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
Not Reported	N

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era: -
System: -
Series: -
Code: N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: ANDIC HAPLOCRYODS

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	3 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50
2	3 inches	18 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 5.10
3	18 inches	25 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 5.10
4	25 inches	60 inches	stratified	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Silty Gravel	Max: 20.00 Min: 6.00	Max: 6.50 Min: 6.10

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: peat
sandy loam
mucky - silt loam

Surficial Soil Types: peat
sandy loam
mucky - silt loam

Shallow Soil Types: loamy sand
stratified
fine sandy loam
loamy fine sand
mucky - silt loam

Deeper Soil Types: fibric material
very gravelly - sand
silt loam
sand
gravelly - sand
loamy sand

gravelly - coarse sand
gravelly - silty clay loam
weathered bedrock

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS2042968	0 - 1/8 Mile SSW
A2	USGS2042966	0 - 1/8 Mile SSW
A3	USGS2042967	0 - 1/8 Mile SSW
A4	USGS2042972	0 - 1/8 Mile WSW
5	USGS2042982	1/8 - 1/4 Mile ENE
6	USGS2043031	1/8 - 1/4 Mile NNW
7	USGS2043112	1/4 - 1/2 Mile SE
8	USGS2042981	1/4 - 1/2 Mile ENE
9	USGS2043030	1/4 - 1/2 Mile NE
10	USGS2042985	1/4 - 1/2 Mile WNW
B11	USGS2042953	1/4 - 1/2 Mile ESE
B12	USGS2042952	1/4 - 1/2 Mile ESE
13	USGS2042973	1/4 - 1/2 Mile West
14	USGS2042961	1/2 - 1 Mile West
15	USGS2042878	1/2 - 1 Mile WNW
16	USGS2042956	1/2 - 1 Mile West
17	USGS2043111	1/2 - 1 Mile ESE
18	USGS2043092	1/2 - 1 Mile ESE
19	USGS2043097	1/2 - 1 Mile ESE
20	USGS2042976	1/2 - 1 Mile West
C21	USGS2043077	1/2 - 1 Mile ESE
C22	USGS2043087	1/2 - 1 Mile ESE
C23	USGS2043088	1/2 - 1 Mile ESE
24	USGS2042886	1/2 - 1 Mile WNW
25	USGS2042933	1/2 - 1 Mile NE
D26	USGS2042788	1/2 - 1 Mile NW
D27	USGS2042787	1/2 - 1 Mile NW
D28	USGS2042786	1/2 - 1 Mile NW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

No PWS System Found

Note: PWS System location is not always the same as well location.

PHYSICAL SETTING SOURCE MAP - 1650161.7s

0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location

N

SITE NAME:	Millennium Square Development	CLIENT:	Oasis Environmental
ADDRESS:	Bridge Access Road Kenai AK 99611	CONTACT:	Ben Martich
		INQUIRY #:	1650161.7s
LAT/LONG:	60.5547 / 151.2395	DATE:	April 06, 2006

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
SSW
0 - 1/8 Mile
Lower

FED USGS **USGS2042968**

Agency cd:	USGS	Site no:	603316151141703
Site name:	SB00501105ADCB3 006		
Latitude:	603316		
Longitude:	1511417	Dec lat:	60.55387378
Dec lon:	-151.24028504	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWSENES05 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	78.00	Altitude method:	M
Altitude accuracy:	1	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	28.0	Hole depth:	28.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1966-11-07
Water quality data end date:	1966-11-07	Water quality data count:	1
Ground water data begin date:	1966-11-07	Ground water data end date:	1966-11-07
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1966-11-07	20.00	

A2
SSW
0 - 1/8 Mile
Lower

FED USGS **USGS2042966**

Agency cd:	USGS	Site no:	603316151141701
Site name:	SB00501105ADCB1 006		
Latitude:	603316		
Longitude:	1511417	Dec lat:	60.55387378
Dec lon:	-151.24028504	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWSENES05 T005N R011W S
Location map:	KENAI C-4	Map scale:	63360

Altitude:	75.00	Altitude method:	M
Altitude accuracy:	25	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	1943
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	187	Hole depth:	187
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1962-04-13	Ground water data end date:	1966-08-19
Ground water data count:	27		

Ground-water levels, Number of Measurements: 27

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1966-08-19	37.97		1966-07-14	36.70	
1966-06-02	33.89		1966-06-01	33.19	
1966-04-05	33.93		1966-02-08	34.03	
1965-12-15	35.42		1965-11-04	32.96	
1965-09-27	37.06		1965-08-25	33.93	
1965-07-28	32.87		1965-06-15	34.03	
1965-03-16	38.17		1965-01-27	37.10	
1964-11-11	36.28		1964-08-19	39.64	
1964-08-05	39.61		1964-07-12	43.05	
1964-06-22	44.08		1964-05-09	42.46	
1963-05-31	31.30		1962-12-04	30.76	
1962-09-11	30.51		1962-06-14	33.00	
1962-05-25	30.78		1962-04-30	31.37	
1962-04-13	30.85				

A3
SSW
0 - 1/8 Mile
Lower

FED USGS **USGS2042967**

Agency cd:	USGS	Site no:	603316151141702
Site name:	SB00501105ADCB2 006		
Latitude:	603316		
Longitude:	1511417	Dec lat:	60.55387378
Dec lon:	-151.24028504	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWSENES05 T005N R011W S
Location map:	KENAI C-4	Map scale:	63360
Altitude:	78.00	Altitude method:	M
Altitude accuracy:	25	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	19430101
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST

Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	28.0	Hole depth:	28.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1966-11-07
Water quality data end date:	1966-11-07	Water quality data count:	1
Ground water data begin date:	1962-06-14	Ground water data end date:	1971-06-15
Ground water data count:	29		

Ground-water levels, Number of Measurements: 29

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1971-06-15	25.35		1971-03-23	26.20	
1970-11-19	26.06		1970-10-28	26.14	
1970-09-04	26.08		1970-08-11	25.96	
1966-09-21	23.29		1966-08-19	23.00	
1966-07-14	23.06		1966-06-02	23.40	
1966-04-05	23.80		1966-02-08	23.32	
1965-12-15	22.07		1965-11-04	21.78	
1965-09-27	23.29		1965-08-25	23.23	
1965-07-28	23.15		1965-06-15	22.99	
1965-03-16	23.79		1965-01-27	25.44	
1964-11-11	23.78		1964-08-19	24.32	
1964-07-12	24.36		1964-06-22	24.52	
1964-05-09	24.09		1963-05-31	23.16	
1962-12-04	22.50		1962-09-11	21.95	
1962-06-14	21.46				

A4
WSW
0 - 1/8 Mile
Higher

FED USGS **USGS2042972**

Agency cd:	USGS	Site no:	603317151142101
Site name:	SB00501105ACDA1 007		
Latitude:	603317		
Longitude:	1511421	Dec lat:	60.55415156
Dec lon:	-151.24139618	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SESWNES05 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	78.00	Altitude method:	M
Altitude accuracy:	1	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	19620401
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	38.0	Hole depth:	38.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count:	0	Water quality data begin date:	1962-04-13
Water quality data end date:	1966-11-07	Water quality data count:	2
Ground water data begin date:	1962-04-01	Ground water data end date:	1962-04-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1962-04-01	22.00	

5
ENE **FED USGS** **USGS2042982**
1/8 - 1/4 Mile
Higher

Agency cd:	USGS	Site no:	603322151140201
Site name:	SB00501105ADAC1 009		
Latitude:	603322		
Longitude:	1511402	Dec lat:	60.55554054
Dec lon:	-151.23611837	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NESENES05 T005N R011W S
Location map:	KENAI C-4	Map scale:	63360
Altitude:	78.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19780804
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	111	Hole depth:	111
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1978-08-04	Ground water data end date:	1978-08-04
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1978-08-04	70.00	

6
NNW **FED USGS** **USGS2043031**
1/8 - 1/4 Mile
Higher

Agency cd:	USGS	Site no:	603331151142401
Site name:	SB00501105ABAD1 004		
Latitude:	603331		
Longitude:	1511424	Dec lat:	60.55804062
Dec lon:	-151.24222969	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NENWNES05 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	80.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	43.5	Hole depth:	43.5
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1966-08-26
Water quality data end date:	1966-08-26	Water quality data count:	2
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

7
SE
1/4 - 1/2 Mile
Lower

FED USGS **USGS2043112**

Agency cd:	USGS	Site no:	603309151135501
Site name:	SB00501105DAAA1		
Latitude:	603309		
Longitude:	1511355	Dec lat:	60.55192928
Dec lon:	-151.23417375	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NENESES05 T005N R011W S
Location map:	KENAI C-4	Map scale:	63360
Altitude:	Not Reported	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	Not Reported
Hydrologic:	19020302		
Topographic:	Hillside (slope)		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	Not Reported	Hole depth:	Not Reported
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

8
ENE **FED USGS** **USGS2042981**
1/4 - 1/2 Mile
Higher

Agency cd:	USGS	Site no:	603322151134601
Site name:	SB00501104BCBB1 006		
Latitude:	603322		
Longitude:	1511346	Dec lat:	60.55554056
Dec lon:	-151.23167386	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NWSWNWS04 T005N R011W S
Location map:	KENAI C-4SE KR05	Map scale:	25000
Altitude:	90.	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	1990
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	60.	Hole depth:	60.01
Source of depth data:	driller	Project number:	KENAIPVK
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1990-00-00	Ground water data end date:	1990-00-00
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1990	45	

9
NE **FED USGS** **USGS2043030**
1/4 - 1/2 Mile
Higher

Agency cd:	USGS	Site no:	603331151135001
Site name:	SB00501104BBBC1 003		
Latitude:	603331		
Longitude:	1511350	Dec lat:	60.55804066
Dec lon:	-151.23278509	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWSWSWS04 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	83.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	19540101
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	18.0	Hole depth:	18.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

10
WNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS2042985**

Agency cd:	USGS	Site no:	603324151145001
Site name:	SB00501105BDAA1 003		
Latitude:	603324		
Longitude:	1511450	Dec lat:	60.55609605
Dec lon:	-151.24945195	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NESENWS05 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	80.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	41.0	Hole depth:	41.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count:	0	Water quality data begin date:	1966-08-26
Water quality data end date:	1966-08-26	Water quality data count:	2
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

B11
ESE **FED USGS** **USGS2042953**
1/4 - 1/2 Mile
Lower

Agency cd:	USGS	Site no:	603312151133702
Site name:	SB00501104CBAB2 004		
Latitude:	603312		
Longitude:	1511337	Dec lat:	60.55276268
Dec lon:	-151.2291737	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NENWSWS04 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	25.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Stream channel		
Site type:	Ground-water other than Spring	Date construction:	19700101
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	59.0	Hole depth:	60.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1970-01-01	Ground water data end date:	1970-01-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1970-01-01	15.00	

B12
ESE **FED USGS** **USGS2042952**
1/4 - 1/2 Mile
Lower

Agency cd:	USGS	Site no:	603312151133701
Site name:	SB00501104CBAB1 004		
Latitude:	603312		
Longitude:	1511337	Dec lat:	60.55276268
Dec lon:	-151.2291737	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NENWSWS04 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	25.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Stream channel		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	62.0	Hole depth:	62.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

13
West
1/4 - 1/2 Mile
Higher

FED USGS **USGS2042973**

Agency cd:	USGS	Site no:	603317151150601
Site name:	SB00501105BDCA1 002		
Latitude:	603317		
Longitude:	1511506	Dec lat:	60.55415146
Dec lon:	-151.25389635	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWSENWS05 T005N R011W S
Location map:	NORTH KENAI 04 KBM	Map scale:	6000
Altitude:	78.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19530501
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	110	Hole depth:	115
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1968-01-16	Ground water data end date:	1968-01-16
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1968-01-16	79.50	

14
West
1/2 - 1 Mile
Higher

FED USGS **USGS2042961**

Agency cd:	USGS	Site no:	603315151151301
Site name:	SB00501105BCDD1 001		
Latitude:	603315		
Longitude:	1511513	Dec lat:	60.55359583
Dec lon:	-151.25584077	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SESWNWS05 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	80.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	19550901
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	170	Hole depth:	170
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1955-09-15
Water quality data end date:	1955-09-15	Water quality data count:	1
Ground water data begin date:	1955-09-01	Ground water data end date:	1955-09-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1955-09-01	29.00	

15
WNW
1/2 - 1 Mile
Lower

FED USGS **USGS2042878**

Agency cd:	USGS	Site no:	603334151150901
Site name:	SB00501105BABB1 005		
Latitude:	603334		
Longitude:	1511509	Dec lat:	60.55887389
Dec lon:	-151.25472989	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NWNENWS05 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	83.00	Altitude method:	M
Altitude accuracy:	2	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19620401
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	48.0	Hole depth:	48.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1966-09-06
Water quality data end date:	1966-09-06	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

16
West
1/2 - 1 Mile
Higher

FED USGS USGS2042956

Agency cd:	USGS	Site no:	603313151152201
Site name:	SB00501105BCCC1 008		
Latitude:	603313		
Longitude:	1511522	Dec lat:	60.55304018
Dec lon:	-151.25834075	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWSWNWS05 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	81.00	Altitude method:	M
Altitude accuracy:	1	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	19560101
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	186	Hole depth:	186
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count:	0	Water quality data begin date:	1960-00-00
Water quality data end date:	1960-00-00	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

17
ESE **FED USGS** **USGS2043111**
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	603309151130101
Site name:	SB00501104CAAA1 005		
Latitude:	603309		
Longitude:	1511301	Dec lat:	60.55192937
Dec lon:	-151.21917351	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NENESWS04 T005N R011W S
Location map:	KENAI C-4 KR05	Map scale:	63360
Altitude:	25.	Altitude method:	M
Altitude accuracy:	25	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19810522
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	90.	Hole depth:	90.
Source of depth data:	driller	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1981-05-22	Ground water data end date:	1981-05-22
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1981-05-22	10	

18
ESE **FED USGS** **USGS2043092**
1/2 - 1 Mile
Lower

Agency cd:	USGS	Site no:	603301151130501
Site name:	SB00501104CADA1 002		
Latitude:	603301		
Longitude:	1511305	Dec lat:	60.54970705
Dec lon:	-151.22028455	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SENESWS04 T005N R011W S
Location map:	SOLDOTNA 04 KBM	Map scale:	6000
Altitude:	35.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19651001
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	229	Hole depth:	229
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

19
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS2043097**

Agency cd:	USGS	Site no:	603303151125701
Site name:	SB00501104DBCB1 008		
Latitude:	603303		
Longitude:	1511257	Dec lat:	60.55026264
Dec lon:	-151.21806231	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWNWSES04 T005N R011W S
Location map:	KENAI C-4SE KR05	Map scale:	25000
Altitude:	25.	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19830712
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Confined single aquifer		
Aquifer:	QUATERNARY		
Well depth:	58.	Hole depth:	58.
Source of depth data:	driller	Project number:	KENAISLK
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1983-07-12	Ground water data end date:	1983-07-12
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1983-07-12	20	

20
West
1/2 - 1 Mile
Higher

FED USGS **USGS2042976**

Agency cd:	USGS	Site no:	603318151154301
Site name:	SB00501106ADDB1 001		
Latitude:	603316		
Longitude:	1511546	Dec lat:	60.55387338
Dec lon:	-151.26500746	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SESENES06 T005N R011W S
Location map:	NORTH KENAI 04 KBM	Map scale:	6000
Altitude:	79.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19550901
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	147	Hole depth:	147
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1955-09-27	Ground water data end date:	1955-09-27
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1955-09-27	66.03	

C21
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS2043077**

Agency cd:	USGS	Site no:	603258151125001
Site name:	SB00501104DCBA1 001		
Latitude:	603258		
Longitude:	1511250	Dec lat:	60.54887371
Dec lon:	-151.21611778	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NWSWSES04 T005N R011W S
Location map:	KENAI C-4	Map scale:	63360
Altitude:	35.00	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Stream channel		
Site type:	Ground-water other than Spring	Date construction:	19660101
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	70.0	Hole depth:	70.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1967-09-22
Water quality data end date:	1967-09-22	Water quality data count:	1
Ground water data begin date:	0000-00-00	Ground water data end date:	0000-00-00
Ground water data count:	0		

Ground-water levels, Number of Measurements: 0

C22
ESE
1/2 - 1 Mile
Lower

FED USGS USGS2043087

Agency cd:	USGS	Site no:	603300151124801
Site name:	SB00501104DBCD1 007		
Latitude:	603300		
Longitude:	1511248	Dec lat:	60.54942929
Dec lon:	-151.21556224	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWNWSES04 T005N R011W S
Location map:	KENAI C-4SE KR05	Map scale:	25000
Altitude:	33.	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19850312
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Test hole, not completed as a well		
Aquifer Type:	Unconfined single aquifer		
Aquifer:	QUATERNARY		
Well depth:	Not Reported	Hole depth:	11.
Source of depth data:	other reported	Project number:	KENAISLK
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1985-03-12	Ground water data end date:	1985-03-12
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1985-03-12	11	

C23
ESE
1/2 - 1 Mile
Lower

FED USGS **USGS2043088**

Agency cd:	USGS	Site no:	603300151124802
Site name:	SB00501104DBCD2 007		
Latitude:	603300		
Longitude:	1511248	Dec lat:	60.54942929
Dec lon:	-151.21556224	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWNWSES04 T005N R011W S
Location map:	KENAI C-4SE KR05	Map scale:	25000
Altitude:	33.	Altitude method:	M
Altitude accuracy:	10	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	19850317
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	72.	Hole depth:	72.
Source of depth data:	other reported	Project number:	KENAISLK
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1985-03-17	Ground water data end date:	1985-03-17
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1985-03-17	20	

24
WNW
1/2 - 1 Mile
Lower

FED USGS **USGS2042886**

Agency cd:	USGS	Site no:	603335151155201
Site name:	SB00501106AABA1 002		
Latitude:	603335		
Longitude:	1511552	Dec lat:	60.55915139
Dec lon:	-151.26667438	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NWNENES06 T005N R011W S
Location map:	NORTH KENAI 04 KBM	Map scale:	6000
Altitude:	76.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	65.0	Hole depth:	65.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

25
NE
1/2 - 1 Mile
Higher

FED USGS **USGS2042933**

Agency cd:	USGS	Site no:	603350151125201
Site name:	SB00601133CDAA1 005		
Latitude:	603350		
Longitude:	1511252	Dec lat:	60.5633187
Dec lon:	-151.21667394	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	NESESWS33 T006N R011W S
Location map:	KENAI C-4	Map scale:	63360
Altitude:	82.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Alluvial or marine terrace		
Site type:	Ground-water other than Spring	Date construction:	19660101
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	30.0	Hole depth:	30.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported

Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

D26
NW
1/2 - 1 Mile
Higher

FED USGS **USGS2042788**

Agency cd:	USGS	Site no:	603359151152103
Site name:	SB00601132CBCB3 001		
Latitude:	603359		
Longitude:	1511521	Dec lat:	60.56581859
Dec lon:	-151.25806354	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWNWSWS32 T006N R011W S
Location map:	KENAI C-4	Map scale:	63360
Altitude:	80.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	59.0	Hole depth:	59.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1967-02-01	Ground water data end date:	1967-02-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-02-01	12.00	

D27
NW
1/2 - 1 Mile
Higher

FED USGS **USGS2042787**

Agency cd:	USGS	Site no:	603359151152102
Site name:	SB00601132CBCB2 001		
Latitude:	603359		
Longitude:	1511521	Dec lat:	60.56581859
Dec lon:	-151.25806354	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWNWSWS32 T006N R011W S
Location map:	KENAI C-4	Map scale:	63360
Altitude:	80.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19670801
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	59.0	Hole depth:	59.0
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	0000-00-00
Water quality data end date:	0000-00-00	Water quality data count:	0
Ground water data begin date:	1967-08-01	Ground water data end date:	1967-08-01
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-08-01	13.00	

D28
NW
1/2 - 1 Mile
Higher

FED USGS **USGS2042786**

Agency cd:	USGS	Site no:	603359151152101
Site name:	SB00601132CBCB1 001		
Latitude:	603359		
Longitude:	1511521	Dec lat:	60.56581859
Dec lon:	-151.25806354	Coor meth:	M
Coor accr:	T	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	02
State:	02	County:	122
Country:	US	Land net:	SWNWSWS32 T006N R011W S
Location map:	KENAI C-4	Map scale:	63360
Altitude:	80.00	Altitude method:	M
Altitude accuracy:	5	Altitude datum:	NGVD29
Hydrologic:	19020302		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19670801
Date inventoried:	Not Reported	Mean greenwich time offset:	AKST

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	53.0	Hole depth:	63.4
Source of depth data:	Not Reported	Project number:	Not Reported
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1968-06-05
Water quality data end date:	1968-06-05	Water quality data count:	1
Ground water data begin date:	1967-11-08	Ground water data end date:	1967-11-08
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-11-08	14.33	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: AK Radon

Radon Test Results

City	Zip	Total Sites	<0.5 pCi/L	0.5-2.0	2.1-4.0	4.1-10	10-20	>20 pCi/L
Kenai	99611	18	2	9	5	1	1	0

Federal EPA Radon Zone for KENAI PENINSULA County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 99611

Number of sites tested: 9

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.700 pCi/L	89%	11%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	3.386 pCi/L	86%	14%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory Data
Source: Department of Fish & Game
Telephone: 907-465-4100

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

RADON

State Database: AK Radon
Source: University of Alaska Fairbanks
Telephone: 907-474-7201
Radon Information

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

STREET AND ADDRESS INFORMATION

ATTACHMENT 3

PHOTOGRAPHS

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Photographs
Millennium Square Development Phase I ESA

Photograph 1. Location of MW-3.

Photograph 2. View northwest across FAA Tract.

Photographs
Millennium Square Development Phase I ESA

Photograph 3. View north across the FAA Football Field.

Photograph 4. Location of MW-2.

Photographs
Millennium Square Development Phase I ESA

Photograph 5. Location of MW-1.

Photograph 6. View of Dragnet Cannery from bluff on Tract C.

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ATTACHMENT 4

LABORATORY ANALYTICAL REPORT

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OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 2, 2006

Ben Martich
Oasis Environmental, Inc.
825 W 8th Avenue, Suite 200
Anchorage, AK 99501

Re: Analytical Data for Project 14-077
Laboratory Reference No. 0605-139

Dear Ben:

Enclosed are the analytical results and associated quality control data for samples submitted on May 22, 2006.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

Case Narrative

Samples were collected on May 18, 2006 and received by the laboratory on May 22, 2006. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

DRO AK102 Analysis

The percent recoveries obtained for the Laboratory Fortified Blank (LFB), Matrix Spike (MS) and Matrix Spike duplicate (MSD) were in the range of 60-70%, which is lower than the control limits specified by the method (75-125%).
The samples effected (06-MSD-001gw, 06-MSD-002gw,06-MSD-003gw, and 06-MSD-004gw) are non-detect for Diesel Range Organics and there is no sample available to re-extract, therefore no further action was taken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

GRO by AK101

Date Extracted: 5-30-06
Date Analyzed: 5-30-06

Matrix: Water
Units: ug/L (ppb)

Lab ID:	05-139-01			05-139-02		
Client ID:	**06-MSD-001gw**			**06-MSD-002gw**		
	Result	Flags	PQL	**Result**	Flags	PQL
GRO (C6-C10)	**ND**		100	**ND**		100
Surrogate Recovery:						
Fluorobenzene	99%			98%		

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

GRO by AK101

Date Extracted: 5-30-06
Date Analyzed: 5-30-06

Matrix: Water
Units: ug/L (ppb)

Lab ID:	05-139-03			05-139-04		
Client ID:	**06-MSD-003gw**			**06-MSD-004gw**		
	Result	Flags	PQL	**Result**	Flags	PQL
GRO (C6-C10)	**ND**		100	**ND**		100
Surrogate Recovery:						
Fluorobenzene	100%			100%		

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

GRO by AK101
METHOD BLANK QUALITY CONTROL

Date Extracted: 5-30-06
Date Analyzed: 5-30-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0530W1

	Result	Flags	PQL
GRO (C6-C10)	**ND**		100

Surrogate Recovery:
Fluorobenzene 100%

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

GRO by AK101
MSB/MSD QUALITY CONTROL

Date Extracted: 5-30-06
Date Analyzed: 5-30-06

Matrix: Water
Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	05-139-02 **MS**	Percent Recovery	05-139-02 **MSD**	Percent Recovery	RPD
GRO (C6-C10)	**4.63**	**93**	**4.80**	**96**	4
Surrogate Recovery:					
Fluorobenzene	82%		82%		

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

GRO by AK101
LFB/LFBD QUALITY CONTROL

Date Extracted: 5-30-06
Date Analyzed: 5-30-06

Matrix: Water
Units: ug/L (ppb)

Spike Level: 5000 ppb

Lab ID:	SBG0530W1	Percent Recovery	SBGD0530W1	Percent Recovery	RPD
GRO (C6-C10)	**4750**	**95**	**4770**	**96**	0
Surrogate Recovery:					
Fluorobenzene	80%		79%		

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DRO AK102

Date Extracted: 5-25-06
Date Analyzed: 5-31-06

Matrix: Water
Units: mg/L (ppm)

Client ID:	**06-MSD-001gw**	**06-MSD-002gw**	**06-MSD-003gw**
Lab ID:	05-139-01	05-139-02	05-139-03
Diesel Range:	**ND**	**ND**	**ND**
PQL:	0.26	0.27	0.26
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	64%	72%	70%

Flags:

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DRO AK102

Date Extracted:	5-25-06
Date Analyzed:	5-31-06
Matrix:	Water
Units:	mg/L (ppm)
Client ID:	**06-MSD-004-gw**
Lab ID:	05-139-04
Diesel Range:	**ND**
PQL:	0.25
Identification:	---

Surrogate Recovery

o-Terphenyl:	68%

Flags:

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DRO AK102
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-25-06
Date Analyzed:	5-31-06
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0525W1
Diesel Range:	**ND**
PQL:	0.25
Identification:	---

Surrogate Recovery

o-Terphenyl:	84%

Flags:

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DRO AK102
MS/MSD QUALITY CONTROL

Date Extracted:	5-25-06	
Date Analyzed:	5-31-06	
Matrix:	Water	
Units:	mg/L (ppm)	
Spike Level:	1.00 ppm	
Lab ID:	05-139-02 MS	05-139-02 MSD
Diesel Range:	**0.732**	**0.645**
PQL:	0.26	0.25
Percent Recovery:	73	65
RPD:	13	
Surrogate Recovery		
o-Terphenyl:	78%	77%

Flags:

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DRO AK102
SPIKE BLANK QUALITY CONTROL

Date Extracted:	5-25-06
Date Analyzed:	5-31-06
Matrix:	Water
Units:	mg/L (ppm)
Spike Level:	1.00 ppm
Lab ID:	SB0525W1
Diesel Range:	**0.620**
PQL:	0.25
Percent Recovery:	62

Surrogate Recovery
o-Terphenyl: 87%

Flags:

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
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Date Extracted: 5-23-06
Date Analyzed: 5-23-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-01
Client ID: 06-MSD-001gw

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
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Lab ID: 05-139-01
Client ID: 06-MSD-001gw

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	89	70-123
Toluene, d8	97	70-119
4-Bromofluorobenzene	91	70-119

Date of Report: June 2, 2006
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Date Extracted: 5-23-06
Date Analyzed: 5-23-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-02
Client ID: 06-MSD-002gw

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: June 2, 2006
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Lab ID: 05-139-02
Client ID: 06-MSD-002gw

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	96	70-123
Toluene, d8	97	70-119
4-Bromofluorobenzene	93	70-119

Date of Report: June 2, 2006
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Date Extracted: 5-23-06
Date Analyzed: 5-23-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-03
Client ID: 06-MSD-003gw

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

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Lab ID: 05-139-03
Client ID: 06-MSD-003gw

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	90	70-123
Toluene, d8	98	70-119
4-Bromofluorobenzene	91	70-119

Date of Report: June 2, 2006
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Date Extracted: 5-23-06
Date Analyzed: 5-23-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-04
Client ID: 06-MSD-004gw

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

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Lab ID: 05-139-04
Client ID: 06-MSD-004gw

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	98	70-123
Toluene, d8	98	70-119
4-Bromofluorobenzene	93	70-119

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Date Extracted: 5-23-06
Date Analyzed: 5-23-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-05
Client ID: 06-MSD-005TB

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

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Lab ID: 05-139-05
Client ID: 06-MSD-005TB

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	91	70-123
Toluene, d8	97	70-119
4-Bromofluorobenzene	93	70-119

Date of Report: June 2, 2006
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METHOD BLANK QUALITY CONTROL
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Date Extracted: 5-23-06
Date Analyzed: 5-23-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0523W1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Acetone	ND		5.0
Iodomethane	ND		1.0
Carbon Disulfide	ND		0.20
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
Methyl t-Butyl Ether	ND		0.20
1,1-Dichloroethane	ND		0.20
Vinyl Acetate	ND		1.0
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
2-Butanone	ND		5.0
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
Benzene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
Methyl Isobutyl Ketone	ND		2.0
Toluene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: June 2, 2006
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VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL
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Lab ID: MB0523W1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
2-Hexanone	ND		2.0
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Ethylbenzene	ND		0.20
m,p-Xylene	ND		0.40
o-Xylene	ND		0.20
Styrene	ND		0.20
Bromoform	ND		1.0
Isopropylbenzene	ND		0.20
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
n-Propylbenzene	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3,5-Trimethylbenzene	ND		0.20
tert-Butylbenzene	ND		0.20
1,2,4-Trimethylbenzene	ND		0.20
sec-Butylbenzene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
p-Isopropyltoluene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
n-Butylbenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
Naphthalene	ND		1.0
1,2,3-Trichlorobenzene	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	85	70-123
Toluene, d8	97	70-119
4-Bromofluorobenzene	91	70-119

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
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VOLATILES by EPA 8260B
MS/MSD QUALITY CONTROL

Date Extracted: 5-23-06
Date Analyzed: 5-23-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-02

Compound	Sample Amount	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	ND	10.0	8.25	82	9.10	91	70-130	
Benzene	ND	10.0	9.61	96	10.5	105	71-128	
Trichloroethene	ND	10.0	8.82	88	9.74	97	76-124	
Toluene	ND	10.0	9.69	97	10.5	105	74-124	
Chlorobenzene	ND	10.0	9.20	92	10.1	101	72-118	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	10	17	
Benzene	9	13	
Trichloroethene	10	12	
Toluene	8	14	
Chlorobenzene	9	9	

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

PAHs by EPA 8270C/SIM

Date Extracted:	5-23-06
Date Analyzed:	5-24-06
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	05-139-01
Client ID:	**06-MSD-001gw**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.096
2-Methylnaphthalene	ND		0.096
1-Methylnaphthalene	ND		0.096
Acenaphthylene	ND		0.096
Acenaphthene	ND		0.096
Fluorene	ND		0.096
Phenanthrene	ND		0.096
Anthracene	ND		0.096
Fluoranthene	ND		0.096
Pyrene	ND		0.096
Benzo[a]anthracene	ND		0.0096
Chrysene	ND		0.0096
Benzo[b]fluoranthene	ND		0.0096
Benzo[k]fluoranthene	ND		0.0096
Benzo[a]pyrene	ND		0.0096
Indeno(1,2,3-c,d)pyrene	ND		0.0096
Dibenz[a,h]anthracene	ND		0.0096
Benzo[g,h,i]perylene	ND		0.0096

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	52	24 - 92
2-Fluorobiphenyl	66	25 - 89
Terphenyl-d14	81	39 - 92

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

PAHs by EPA 8270C/SIM

Date Extracted:	5-23-06
Date Analyzed:	5-24-06
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	05-139-02
Client ID:	**06-MSD-002gw**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.10
2-Methylnaphthalene	ND		0.10
1-Methylnaphthalene	ND		0.10
Acenaphthylene	ND		0.10
Acenaphthene	ND		0.10
Fluorene	ND		0.10
Phenanthrene	ND		0.10
Anthracene	ND		0.10
Fluoranthene	ND		0.10
Pyrene	ND		0.10
Benzo[a]anthracene	ND		0.010
Chrysene	ND		0.010
Benzo[b]fluoranthene	ND		0.010
Benzo[k]fluoranthene	ND		0.010
Benzo[a]pyrene	ND		0.010
Indeno(1,2,3-c,d)pyrene	ND		0.010
Dibenz[a,h]anthracene	ND		0.010
Benzo[g,h,i]perylene	ND		0.010

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	50	24 - 92
2-Fluorobiphenyl	63	25 - 89
Terphenyl-d14	74	39 - 92

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

PAHs by EPA 8270C/SIM

Date Extracted:	5-23-06
Date Analyzed:	5-24-06
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	05-139-03
Client ID:	**06-MSD-003gw**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.096
2-Methylnaphthalene	ND		0.096
1-Methylnaphthalene	ND		0.096
Acenaphthylene	ND		0.096
Acenaphthene	ND		0.096
Fluorene	ND		0.096
Phenanthrene	ND		0.096
Anthracene	ND		0.096
Fluoranthene	ND		0.096
Pyrene	ND		0.096
Benzo[a]anthracene	ND		0.0096
Chrysene	ND		0.0096
Benzo[b]fluoranthene	ND		0.0096
Benzo[k]fluoranthene	ND		0.0096
Benzo[a]pyrene	ND		0.0096
Indeno(1,2,3-c,d)pyrene	ND		0.0096
Dibenz[a,h]anthracene	ND		0.0096
Benzo[g,h,i]perylene	ND		0.0096

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	46	24 - 92
2-Fluorobiphenyl	58	25 - 89
Terphenyl-d14	70	39 - 92

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

PAHs by EPA 8270C/SIM

Date Extracted:	5-23-06
Date Analyzed:	5-24-06
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	05-139-04
Client ID:	**06-MSD-004gw**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.097
2-Methylnaphthalene	ND		0.097
1-Methylnaphthalene	ND		0.097
Acenaphthylene	ND		0.097
Acenaphthene	ND		0.097
Fluorene	ND		0.097
Phenanthrene	ND		0.097
Anthracene	ND		0.097
Fluoranthene	ND		0.097
Pyrene	ND		0.097
Benzo[a]anthracene	ND		0.0097
Chrysene	ND		0.0097
Benzo[b]fluoranthene	ND		0.0097
Benzo[k]fluoranthene	ND		0.0097
Benzo[a]pyrene	ND		0.0097
Indeno(1,2,3-c,d)pyrene	ND		0.0097
Dibenz[a,h]anthracene	ND		0.0097
Benzo[g,h,i]perylene	ND		0.0097

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	51	24 - 92
2-Fluorobiphenyl	63	25 - 89
Terphenyl-d14	77	39 - 92

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

PAHs by EPA 8270C/SIM
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-23-06
Date Analyzed:	5-24-06
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0523W1

Compound:	Results	Flags	PQL
Naphthalene	ND		0.10
2-Methylnaphthalene	ND		0.10
1-Methylnaphthalene	ND		0.10
Acenaphthylene	ND		0.10
Acenaphthene	ND		0.10
Fluorene	ND		0.10
Phenanthrene	ND		0.10
Anthracene	ND		0.10
Fluoranthene	ND		0.10
Pyrene	ND		0.10
Benzo[a]anthracene	ND		0.010
Chrysene	ND		0.010
Benzo[b]fluoranthene	ND		0.010
Benzo[k]fluoranthene	ND		0.010
Benzo[a]pyrene	ND		0.010
Indeno(1,2,3-c,d)pyrene	ND		0.010
Dibenz[a,h]anthracene	ND		0.010
Benzo[g,h,i]perylene	ND		0.010

Surrogate :	Percent Recovery	Control Limits
Nitrobenzene-d5	41	24 - 92
2-Fluorobiphenyl	51	25 - 89
Terphenyl-d14	69	39 - 92

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

PAHs by EPA 8270C/SIM
MS/MSD QUALITY CONTROL

Date Extracted: 5-23-06
Date Analyzed: 5-24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-02

Compound:	Sample Amount	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	Recovery Limits	Flags
Naphthalene	ND	0.493	0.233	47	0.259	52	43-76	
Acenaphthylene	ND	0.493	0.262	53	0.289	59	41-88	
Acenaphthene	ND	0.493	0.283	57	0.313	63	45-80	
Fluorene	ND	0.493	0.385	78	0.438	89	49-92	
Phenanthrene	ND	0.493	0.384	78	0.423	86	53-90	
Anthracene	ND	0.493	0.384	78	0.420	85	55-94	
Fluoranthene	ND	0.493	0.366	74	0.401	81	56-102	
Pyrene	ND	0.493	0.353	72	0.382	77	53-99	
Benzo[a]anthracene	ND	0.493	0.250	51	0.267	54	48-104	
Chrysene	ND	0.493	0.269	55	0.291	59	43-94	
Benzo[b]fluoranthene	ND	0.493	0.255	52	0.274	56	52-102	
Benzo[k]fluoranthene	ND	0.493	0.260	53	0.270	55	53-100	
Benzo[a]pyrene	ND	0.493	0.252	51	0.263	53	43-111	
Indeno(1,2,3-c,d)pyrene	ND	0.493	0.272	55	0.279	57	50-105	
Dibenz[a,h]anthracene	ND	0.493	0.273	55	0.285	58	49-96	
Benzo[g,h,i]perylene	ND	0.493	0.261	53	0.274	56	50-103	

	RPD	RPD Limit	Flags
Naphthalene	10	25	
Acenaphthylene	10	25	
Acenaphthene	10	25	
Fluorene	13	25	
Phenanthrene	10	25	
Anthracene	9	25	
Fluoranthene	9	25	
Pyrene	8	25	
Benzo[a]anthracene	7	25	
Chrysene	8	25	
Benzo[b]fluoranthene	7	25	
Benzo[k]fluoranthene	4	25	
Benzo[a]pyrene	4	25	
Indeno(1,2,3-c,d)pyrene	3	25	
Dibenz[a,h]anthracene	4	25	
Benzo[g,h,i]perylene	5	25	

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

TOTAL METALS
EPA 200.8/7470A

Date Extracted: 5-23&24-06
Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-01
Client ID: 06-MSD-001gw

Analyte	Method	Result	PQL
Arsenic	200.8	**40**	3.3
Barium	200.8	**200**	28
Cadmium	200.8	**ND**	4.4
Chromium	200.8	**16**	11
Lead	200.8	**30**	1.1
Mercury	7470A	**ND**	0.50
Selenium	200.8	**ND**	5.6
Silver	200.8	**ND**	11

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

TOTAL METALS
EPA 200.8/7470A

Date Extracted: 5-23&24-06
Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-02
Client ID: 06-MSD-002gw

Analyte	Method	Result	PQL
Arsenic	200.8	**19**	3.3
Barium	200.8	**170**	28
Cadmium	200.8	**ND**	4.4
Chromium	200.8	**12**	11
Lead	200.8	**27**	1.1
Mercury	7470A	**ND**	0.50
Selenium	200.8	**ND**	5.6
Silver	200.8	**ND**	11

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

TOTAL METALS
EPA 200.8/7470A

Date Extracted: 5-23&24-06
Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-03
Client ID: 06-MSD-003gw

Analyte	Method	Result	PQL
Arsenic	200.8	**39**	3.3
Barium	200.8	**270**	28
Cadmium	200.8	**ND**	4.4
Chromium	200.8	**29**	11
Lead	200.8	**24**	1.1
Mercury	7470A	**ND**	0.50
Selenium	200.8	**ND**	5.6
Silver	200.8	**ND**	11

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

TOTAL METALS
EPA 200.8/7470A

Date Extracted: 5-23&24-06
Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-04
Client ID: 06-MSD-004gw

Analyte	Method	Result	PQL
Arsenic	200.8	**56**	3.3
Barium	200.8	**320**	28
Cadmium	200.8	**ND**	4.4
Chromium	200.8	**33**	11
Lead	200.8	**36**	1.1
Mercury	7470A	**ND**	0.50
Selenium	200.8	**ND**	5.6
Silver	200.8	**ND**	11

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

TOTAL METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL

Date Extracted: 5-23&24-06
Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0523W1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.3
Barium	200.8	**ND**	28
Cadmium	200.8	**ND**	4.4
Chromium	200.8	**ND**	11
Lead	200.8	**ND**	1.1
Mercury	7470A	**ND**	0.50
Selenium	200.8	**ND**	5.6
Silver	200.8	**ND**	11

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

TOTAL METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL

Date Extracted: 5-23&24-06
Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**18.9**	**19.9**	5	3.3	
Barium	**166**	**172**	4	28	
Cadmium	**ND**	**ND**	NA	4.4	
Chromium	**11.9**	**12.3**	3	11	
Lead	**27.1**	**28.1**	4	1.1	
Mercury	**ND**	**ND**	NA	0.50	
Selenium	**ND**	**ND**	NA	5.6	
Silver	**ND**	**ND**	NA	11	

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

TOTAL METALS
EPA 200.8/7470A
MS/MSD QUALITY CONTROL

Date Extracted: 5-23&24-06
Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	110	**136**	107	**142**	111	4	
Barium	110	**287**	110	**295**	117	3	
Cadmium	110	**122**	111	**124**	113	2	
Chromium	110	**119**	98	**125**	102	4	
Lead	110	**149**	111	**152**	113	2	
Mercury	12.5	**12.1**	97	**10.0**	80	19	
Selenium	110	**113**	103	**121**	110	7	
Silver	110	**103**	94	**113**	103	9	

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DISSOLVED METALS
EPA 200.8/7470A

Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-01
Client ID: 06-MSD-001gw

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Mercury	7470A	**ND**	0.50
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DISSOLVED METALS
EPA 200.8/7470A

Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-02
Client ID: 06-MSD-002gw

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Mercury	7470A	**ND**	0.50
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DISSOLVED METALS
EPA 200.8/7470A

Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-03
Client ID: 06-MSD-003gw

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Mercury	7470A	**ND**	0.50
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DISSOLVED METALS
EPA 200.8/7470A

Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-04
Client ID: 06-MSD-004gw

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**1.5**	1.0
Mercury	7470A	**ND**	0.50
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DISSOLVED METALS
EPA 200.8/7470A
METHOD BLANK QUALITY CONTROL

Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0523D1&MB0524D1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Mercury	7470A	**ND**	0.50
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DISSOLVED METALS
EPA 200.8/7470A
DUPLICATE QUALITY CONTROL

Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	3.0	
Barium	**ND**	**ND**	NA	25	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	1.0	
Mercury	**ND**	**ND**	NA	0.50	
Selenium	**ND**	**ND**	NA	5.0	
Silver	**ND**	**ND**	NA	10	

Date of Report: June 2, 2006
Samples Submitted: May 22, 2006
Laboratory Reference: 0605-139
Project: 14-077

DISSOLVED METALS
EPA 200.8/7470A
MS/MSD QUALITY CONTROL

Date Analyzed: 5-23&24-06

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-139-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	250	**245**	98	**243**	97	1	
Barium	250	**256**	102	**261**	104	2	
Cadmium	250	**250**	100	**248**	99	1	
Chromium	250	**249**	100	**246**	98	1	
Lead	250	**245**	98	**250**	100	2	
Mercury	12.5	**12.3**	98	**12.3**	98	0	
Selenium	250	**243**	97	**241**	96	1	
Silver	250	**244**	98	**247**	99	1	

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

G - Insufficient sample quantity for duplicate analysis.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

O - Hydrocarbons indicative of diesel fuel are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a silica gel cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
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Chain of Custody

Company: OASIS Environmental, Inc.
Project Number: 14-077
Project Name: Millennium Square Development
Project Manager: Ben Martich
Sampled by: Claire Albertson / Haley Olthms

Turnaround Request (in working days)
(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☒ Standard (7 working days) (TPH analysis 5 working days)
- ☐ ________ (other)

Laboratory Number: 05-139

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	~~NWTPH-Gx/BTEX~~ GRO - AK 101	~~NWTPH-Dx~~ DRO - AK 102	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270C	PAHs by 8270C / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	~~TCLP Metals~~ RCRA Metals - Dissolved	HEM by 1664	VPH	EPH					% Moisture
1	06-MSD-001gw	5/18/06	2:15	W	12		X	X	X			X				X	X								
2	06-MSD-002gw	↓	12:35	W	~~24~~ [illegible]		X	X	X			X				X	X								
3	06-MSD-003gw	↓	3:30	W	12		X	X	X			X				X	X								
4	06-MSD-004gw	↓	2:30	W	12		X	X	X			X				X	X								
5	06-MSD-005TB	↓	—	W	3		~~X~~	~~X~~	X																

	Signature	Company	Date	Time
Relinquished by	Claire C. Albertson	OASIS Environmental	5/19/06	9:30
Received by	[signature]	OSE	5/22/06	1400
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:
Please perform MS/MSD analysis on 06-MSD-002gw

Chromatograms with final report ☐

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