# FORMER ALASKA PACKERS CANNERY
# SITE CHARACTERIZATION REPORT

September 30, 2008

Prepared for:

## Alaska Department of Environmental Conservation

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# ACRONYMS AND ABBREVIATIONS

ACM ..... Asbestos-containing materials
AST ..... Aboveground storage tank
bgs ..... Below ground surface
BTEX..... Benzene, toluene, ethylbenzene, and total xylenes
City ..... City of Pilot Point
COC ..... Contaminant of concern
CSM ..... Conceptual site model
ADEC ..... Alaska Department of Environmental Conservation
DRO ..... Diesel-range organics
EMI..... Environmental Management, Inc.
EPA..... US Environmental Protection Agency
GRO ..... Gasoline-range organics
Hart Crowser. Hart Crowser, Inc.
HBM ..... Hazardous building material
HUD ..... U.S. Department of Housing and Urban Development
LBP ..... Lead-based paint
mg/kg ..... Milligrams per kilogram
ND..... Not detected
OASIS ..... OASIS Environmental, Inc.
PAH..... Polycyclic aromatic hydrocarbon
Phase I ESA.. Phase I Environmental Site Assessment
PID ..... Photoionization detector
PLM..... Polarized light microscopy
ppm ..... Parts per million
ppmv ..... Parts per million, volumetric
QAPP ..... Quality Assurance Program Plan
RRO ..... Residual-range organics
XRF ..... X-Ray Fluorescence

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# EXECUTIVE SUMMARY

The Alaska Department of Environmental Conservation (ADEC) contracted OASIS Environmental, Inc. (OASIS) to conduct a site characterization at the former Alaska Packers Cannery located in Pilot Point, Alaska.

From May 19 to 22, 2008, 39 surface soil samples were collected at the site. Areas of exploration are listed below:

- The tank farm area
- North and adjacent to building F
- Between buildings F and H

Signs of surface staining were observed at these locations. Drums and buckets located during this effort contained both known and unknown liquids and solids.

Diesel-range organics (DRO), residual-range organics (RRO), benzene, and lead were detected in soil above their respective ADEC cleanup levels at multiple locations.

Several other areas at the site had various wastes including drums with waste oil, used batteries, and unknown chemicals. Some drums in varying stages of decay were observed next to a tidal lagoon. Discharges of oil were observed in several locations.

Environmental Management, Inc. (EMI) conducted asbestos-containing material (ACM) and lead-based paint (LBP) surveys. ACM was present in Buildings A, B, D, E, F, and H, and LBP was present in all buildings except Building I. Reuse or demolition of the site buildings would require a hazardous building materials cleanup action for asbestos and LBP. OASIS recommends that access to these buildings should be restricted to reduce exposure to ACM and LBP.

Based on the site observations and laboratory results, it appears that there are many sources of contamination present at the site. Due to the levels of petroleum and lead contaminants observed in soil, OASIS recommends the well at Building F that is used for ice making should be sampled on a regular basis for volatiles, semi-volatiles, and lead. In addition, surface water/sediment samples should be collected to assess exposure through those pathways. OASIS also recommends that drums of known and unknown chemicals should be characterized and removed from the site; used car batteries should also be disposed of; and leaking oily substances should be contained and cleaned up.

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# 1. INTRODUCTION

OASIS Environmental, Inc. (OASIS) has been contracted by the Alaska Department of Environmental Conservation (ADEC) to perform site characterization activities for the former Alaska Packers Cannery. The project was based on a Phase I survey conducted in Pilot Point by Hart Crowser, Inc. (Hart Crowser) (Hart Crowser 2007b). This work was performed under Term Contract No. 18-9028-13, Notice to Proceed No. 18-9028-13-44 (dated October 4, 2007).

This report presents background information, site observations, and field-screening and analytical results. Appendices include selected site photographs, field notes, and laboratory reports.

Work at the site was conducted in accordance with the site-specific work plan (OASIS 2008), a Quality Assurance Program Plan (QAPP) dated April 25, 2008, and 18 AAC 75 and 18 AAC 78. Fieldwork was conducted by ADEC-qualified workers as defined in 18 AAC 75.990(100) (ADEC 2006).

## 1.1. Project Objectives

The project objectives were as follows:

- Evaluate the extent of soil contaminant levels related to former fuel storage and stained soil areas at the subject property.
- Conduct a limited hazardous building material (HBM) survey to confirm the presence or absence of asbestos-containing materials (ACM) and lead-based paint (LBP) in the buildings on the subject property.
- Conduct field screening and soil sampling to assess impacts from LBP on the soil surrounding the buildings.
- Complete a human health and ecological conceptual site model (CSM) for the subject property.

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# 2. BACKGROUND

## 2.1. Site Description and Background

The former Alaska Packers Cannery (hereafter referred to as the subject property) is located on Cannery Road, along the coast of Ugashik Bay (Figure 1) in the Lake and Peninsula Borough. The subject property is bounded to the north and east by residential properties, to the south by undeveloped City of Pilot Point (City) property, and to the west by Ugashik Bay (Figure 1). Pilot Point receives about 15 inches of rainfall per annum.

The property was first developed by Charles Nelson as a saltery in 1892 on the shore of Ugashik Bay. He sold the property to the Alaska Packers Association in 1985. In 1898, these operations were consolidated by Alaska Packers at Survey 63. By 1918, the saltery had developed into a three-line cannery operation. In 1939, the estimated number of staff at the Pilot Point Cannery was 200. After World War II, the Pilot Point Cannery was operated as a fish camp/buying station until 1973 when the State of Alaska closed the Ugashik River to commercial fishing. The company closed the fish camp at Pilot Point in 1973 but continued to buy fish from a floating operation until the canneries were sold in 1982. Ownership of the cannery was transferred to the City approximately 15 years ago.

## 2.2. Past Site Uses/Operations

Based on information obtained from ADEC, the City, and historical aerial photographs, the site was undeveloped prior to construction of the cannery in the early 1900s. Aside from recent use for equipment storage, the properties have been used for a cannery operation since their development.

Specific past uses of the buildings on the subject property are listed below:

- Building A: Former bunkhouse;
- Building B: Former private residence, this building was not occupied at the time of the site visit;
- Building C: Former provision warehouse;
- Building D: Former web loft;
- Building E: Former mess hall and cook house;
- Building F: Former north main cannery building;
- Building G: Former dock;
- Building H: Former south main cannery building; and
- Building I: Small wood building, approximately 20-feet by 20-feet in size, that was not accessible at the time of the site visit and its previous use is unknown; and Building J: A wood frame building with metal siding, approximately 30-feet by 80-feet in size, possibly used for equipment maintenance and storage.

The following chronology lists past uses of the property since 1892:

- 1892: The subject property was developed and utilized as a saltery.
- 1895–1984: Alaska Packers Association/DMC Properties, Inc. used the subject property as a fish cannery.
- 1984–1985: Alagnak Associates used the subject property as a fish cannery.
- 1985–1992: Pilot Point Community Council utilized the subject property for equipment storage.
- 1992–Present: The City of Pilot Point acquired ownership of the subject property and used it for equipment storage.

## 2.3. Site Description and Current Site Uses/Operations

The project site consists of a level gravel lot with a large parking area and several vegetated areas. There are numerous buildings on the site (Figure 2). The main operations of the former cannery took place in four connected, warehouse-type buildings. Two of these buildings were destroyed in a windstorm approximately 10 years ago and have been removed. Currently the City utilizes the north cannery building (Building F) for heavy equipment storage. Pilot Point Electrical, the local electrical utility that is owned and operated by the City, utilizes the former provision warehouse (Building C) for storage. Auxiliary buildings on the site include the former mess hall, former provision warehouse, former web loft, former saltery, and former bunkhouses.

## 2.4. Previous Investigation Information and Recommendations

A Phase I Environmental Site Assessment (Phase I ESA) was conducted by Hart Crowser in May 2007 (Hart Crowser 2007a). The list below summarizes the conclusions and recommendations of that Phase I ESA:

- The Environmental Data Resources, Inc. (EDR) search of government and ADEC records indicated that limited soil contamination might exist on the subject property due to a 1992 release of Bunker "C" oil. **Recommendation**: Additional subsurface investigation of the area in the vicinity of the tank farm to determine the extent of this contamination.
- Evidence of leakage from the tanks in the tank farm was identified during the site visit. **Recommendation**: Placement of temporary containment near the source of these leaks and removal of all residual fluids from these tanks as soon as possible. Hart Crowser also recommended limited soil removal in the areas where these leaks have occurred.
- Given the age of the buildings on the subject property, it is likely that they contain ACM and LBP. **Recommendation**: Conducting a limited HBM survey to confirm the presence or absence of these materials. Surface soils in the vicinity of all buildings should be sampled for the presence of lead as part of this survey.
- Several areas of stained soil were noted on the subject property in the vicinity of 55-gallon drums. **Recommendation**: Sampling the surface soils in all noted stained

areas to determine the nature and extent of contamination from the leaking 55-gallon drums.

- Hydrocarbon stains on the concrete floors of several buildings were noted during the site visit. **Recommendation**: Sampling the soils under the flooring in areas where the petroleum products have obviously migrated down an expansion joint or crack in the concrete floor.

# 3. SITE CHARACTERIZATION ACTIVITIES

This section provides a description of the sampling event activities and a brief summary of site observations. Selected site photographs are provided in Appendix A, and field notes are included in Appendix B.

## 3.1. Tank Farm Area

The tank farm area is located between Buildings H and J. Seven aboveground storage tanks (ASTs) exist in this area and are enclosed by a 2- to 3.5-foot-high berm. Heavy hydrocarbon staining was observed within the entire bermed area. OASIS field personnel noticed that several holes exist at the bottom of the horizontally orientated tanks (ASTs 1, 2, 3, and 4) and that all the tanks appeared to be empty. Soils consisted of gravelly sand.

Photoionization detector (PID) screening samples were collected at 37 locations with concentrations ranging from 0.5 to 213 parts per million, volumetric (ppmv; Figure 3). All samples were taken from 3 to 5 inches below ground surface (bgs). Twenty confirmation samples, including two duplicates, were collected at locations with the highest PID readings for laboratory analysis. All confirmation samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX), gasoline-range organics (GRO), diesel-range organics (DRO), and residual-range organics (RRO); two samples were also analyzed for polycyclic aromatic hydrocarbons (PAHs). Confirmation sample locations are shown in Figure 4, and results are discussed in Section 5.1.1.

## 3.2. Stained Areas

Several areas of hydrocarbon staining were observed on the subject property. One area of hydrocarbon staining was observed adjacent to and north of Building F. OASIS field personnel observed two 5-gallon buckets of waste oil in this area. PID screening samples were taken at 11 locations to determine the horizontal extent of contamination (Figure 5). Concentrations ranged from 0.0 to 43.9 ppmv. Five confirmation samples and one duplicate sample were collected at locations with the highest PID readings for laboratory analysis. Soils in this area consisted of silty sand with some organics.

A second area of significant staining was located between Buildings F and H. Two 55-gallon drums and one 5-gallon bucket partially filled with waste oil were observed in the immediate vicinity of the stained soil. Nine PID screening samples were taken to determine horizontal extent of staining (Figure 6). Concentrations ranged from 0.0 to 7.2 ppmv. Five confirmation samples and one duplicate sample were collected for laboratory analysis from locations with the highest PID readings. Soils in this area also consisted of silty sand with some organics.

## 3.3. Asbestos/Lead-Based Paint Building Survey

The ACM sampling collection used at the Pilot Point buildings followed the Asbestos Hazard Emergency Response Act (AHERA) method as defined in 40 CFR 763.

Laboratory analysis of samples collected was completed by the IATL laboratory of Mt. Laurel, New Jersey. IATL is certified through the National Voluntary Laboratory Accreditation Program to perform asbestos analysis by polarized light microscopy (PLM) (Appendix C). Building materials containing 1% or greater asbestos content are considered to be ACM (Appendix C).

Accessible spaces within the buildings were surveyed. Representative bulk ACM samples were collected from 48 locations. ACM sample results from the laboratory are discussed in Section 5.1.3.

All ten buildings at the former Alaska Packers Cannery were surveyed for LBP. All accessible interior and exterior building components that appeared to have been painted were field-screened for presence of lead. Sampling was performed using a Niton 309 X-Ray Fluorescence (XRF) instrument. The Niton 309 is a nondestructive instrument that produces reliable (95% confidence) results on the presence of lead in paint. The Niton 309 instrument is approved by the US Environmental Protection Agency (EPA) and the U.S. Department of Housing and Urban Development (HUD) to determine if the paint is LBP or not without any other laboratory analysis. HUD and EPA define paint or other surface coatings as LBP if it contains the following:

- 1 milligram per square centimeter of lead
- 0.5 percent (5,000 parts per million [ppm]) lead by dry weight

In general, most of the paint was severely worn and deteriorated. Some of the areas had visible paint chips nearby, while other areas showed little evidence that the wood had ever been painted in the first place.

## 3.4. Soil Lead Sampling

Prior to collection of laboratory soil samples, Environmental Management, Inc. (EMI) used XRF in two ways to screen the soils around Buildings C, E, H, and J for excess lead. Initially, the buildings had a grid laid out next to the building to check for elevated lead areas. The grid was designed such that each XRF reading represented a maximum of 50 square feet. In addition, XRF tests were done in areas where LBP chips had accumulated. Building E had visible LBP paint chips on the ground and in the surrounding vegetation. Vegetation obstructed the visual assessment for paint chip accumulation outside Buildings A, C, D, H and J.

For the secondary screening, the area was divided into units with similar results. Each unit had at least five XRF readings to represent the average lead concentration in that area. Units with average concentrations below 300 ppm were not sampled for laboratory analysis. The soil surrounding the buildings was screened at regular intervals with the XRF instrument, and areas with the highest readings were selected for composite sampling. Four units emerged for laboratory sample collection.

Based on the XRF sampling results, OASIS collected soil samples near Buildings C, E, J, and H for total lead content. Two composite samples were collected from each unit with an average result greater than 300 ppm. The number of grab locations per sample

varied from three to ten depending on the variations in lead concentration. The environmental sampler used a separate disposal sampling spoon and a separate Ziploc baggie for the composite sample and its duplicate. Sub-samples for the primary sample were collected in a zigzag along a line parallel to building walls. The duplicate sample was collected from the mirror image of the zigzag pattern of the parent sample. Soil sample identification (ID) and location are summarized in the table below.

| Sample ID | Location of Sampling |
|---|---|
| C-01-01 | Two feet from Building C on north ¼ of west side, north side, and north ¾ of east side of building. |
| C-01-02 | Same as above. |
| E-01-01 | Three feet from Building E on north and east sides. |
| E-01-02 | Same as above. |
| E-02-01 | Three feet from Building E on south and west sides. |
| E-02-02 | Same as above. |
| H-01-01 | Three feet from Building H, inside corner near southwest corner of building. |
| H-01-02 | Same as above. |
| J-01-01 | Four feet from Building J, inside fuel cell berm on west wall. |
| J-01-02 | Same as above. |

Soils in areas sampled consisted of silty sand with some organics.

## 3.5. Other Areas of Concern

While performing the scoped activities for this project, OASIS observed other areas on the subject property that contained potentially hazardous substances. Photographs are provided in Appendix A, and field notes are provided in Appendix B.

- Several 55-gallon drums in varying stages of decay are located south of Building H in wetland area near a tidal lagoon.
- Waste oil and miscellaneous substance storage was found inside Building H. There is extensive staining on wood plank floor.
- Building H has discarded lead-acid battery storage.
- Three 55-gallon drums and discarded batteries are located on the far east side of the room inside Building H. Two of the drums are filled to the top and appear to contain waste oil. These drums are labeled “Water, Anti-freeze, Contaminated.” The third drum contains unknown contents.
- Adjacent to the two barrels containing anti-freeze are two wooden barrels and one wooden box filled with an unknown white substance. One of the wooden barrels is split and the unknown substance is spilling onto the floor.
- The boiler/furnace room at the far east side of Building H has 1 to 3 inches of oil on entire floor.
- Oily substances appear to be leaking from Building H onto the ground, possibly originating from similar substances within the building.

- The tundra/wetland area just south and adjacent to Building H contains 55-gallon drums with unknown volumes of unknown substances. One of the drums was labeled as containing a chlorite product. Several discarded and broken batteries were also observed in this area.

# 4. PRESENTATION AND EVALUATION OF RESULTS

This section provides the analytical results of the sampling event. The EMI report is provided in Appendix C, and laboratory data is provided in Appendix D.

## 4.1. Tank Farm Area

Twenty surface soil samples were taken within the tank farm area. Sample locations were based on high PID screening results (Table 1). Samples were collected from 3 to 5 inches bgs.

Hydrocarbon contamination was found in various areas of the tank farm. DRO exceeded the ADEC cleanup level of 250 mg/kg at nine locations (Figure 4). Exceeded concentrations ranged from 264 mg/kg in TF04SS to 110,000 mg/kg in TF12SS (Table 2). A duplicate sample taken at this location had a DRO concentration of 134,000 mg/kg. RRO exceeded the ADEC cleanup level of 11,000 mg/kg at three locations: TF07SS, TF12SS, and TF15SS. Concentrations at these locations were 57,000, 44,700, and 36,000 mg/kg, respectively. GRO was not detected above the cleanup level in the tank farm area. Benzene was detected above the ADEC cleanup level of 0.02 mg/kg at nine locations. Exceeded concentrations ranged from 0.153 mg/kg in TF13SS to 0.615 mg/kg in TF07SS. Toluene, ethylbenzene, and total xylenes were not detected above their respective cleanup levels. PAHs were analyzed in TF12SS and TF14SS (Table 2). At TF12SS, naphthalene, acenaphthene, fluorene, benzo(a)anthracene, and benzo(a)pyrene exceeded their respective ADEC cleanup levels (Table 2). At TF14SS, benzo(a)pyrene exceeded the ADEC cleanup level (Table 2).

## 4.2. Stained Areas

Ten surface soil samples were collected at the stained areas. Sample locations were based on high PID screening results. DRO exceeded the cleanup level at six locations. Concentrations ranged from not detected (ND) to 8,570 mg/kg at S101SS. RRO exceeded the cleanup level at five locations. Concentrations ranged from ND to 44,300 mg/kg at S101SS. GRO and BTEX were not detected in the stained areas. PAH was analyzed at S101SS, but none of the constituents exceeded their respective cleanup levels.

## 4.3. Building HBM

Based on EMI's asbestos survey, building materials in each building except C, G, I, and J were found to contain asbestos in amounts of 1% or greater by weight and are thus considered to be ACM. Table 3 shows estimated quantities of asbestos containing materials in the surveyed buildings (Appendix C).

Buildings A, B, and D contained the highest percentages of ACM (25% chrysotile) in grey transite panels. White pipe insulation and boiler jacket insulation in Buildings F and H also had high percentages of ACM (7%–9% and 6%–10%, respectively). Buildings A,

B, and D contain floor tiles with 3–7 percent chrysotile. Window glazing on Buildings E and H had the lowest percentage of ACM (2%–3% and 1%–2%, respectively).

A total of 384 LBP tests were performed at the Pilot Point cannery complex on a building-by-building basis. LBP was found in/on all the buildings except Building I. LBP was found most consistently on the exterior trim of the buildings (most notably on the exterior window and doorway frames). Some other surfaces that tested positive for LBP were the following: interior walls/ceilings, a staircase, exterior walls/siding, and soffits. EMI provided a table (Table 4) to show the estimated quantities of LBP in surveyed buildings (Appendix C).

## 4.4. Soil Lead Sampling

OASIS analyzed ten surface soil samples for lead content. Lead exceeded the ADEC cleanup level of 400 mg/kg at three locations: J-01-01, J-01-02, and H-01-01 (results shown in Table 2 and locations shown in Figure 7). Concentrations at these locations were 8,400, 2,400, and 420 mg/kg, respectively.

EMI concluded that significantly elevated soil lead levels were found around Buildings C, E, J, and H. Building E was almost entirely coated with LBP and had paint chips under the drip lines and windows. LBP soil samples were collected from the soils around these four buildings. A total of 83 tests were completed.

## 4.5. Data Quality Review

ADEC Laboratory Data Review Checklists for the two data packages generated by this work are included in Appendix D. Some estimated DRO and RRO results were flagged with a “JS” as estimated because of low surrogate recoveries due to dilution. Some PAH results were flagged as estimated with as “JB” due to method blank detections. All data are accepted for the purposes of this report.

# 5. CONCEPTUAL SITE MODEL

A human health CSM has been developed for the former Alaska Packers site using the procedure described by ADEC (ADEC 2005). The ADEC CSM graphical and scoping forms are presented in Appendix E. This section provides the rationale for the completion of the ADEC forms.

Soils in the site area generally consist of silty sands with some organics. In the area of the AST tanks farm, surface soils consist of gravelly sand; this appeared to be fill material and is likely underlain by the silty sands. Groundwater flow direction is assumed to be approximately east to west based on surface topography and the proximity of Ugashik Bay.

## 5.1. Contaminants of Concern

The contaminants of concern (COCs) at the site are BTEX, DRO, RRO, and lead. In addition, asbestos is present as an airborne hazard. GRO was detected but not above 1/10th of the most stringent cleanup level for the compound; therefore, it is not considered.

## 5.2. Exposure Pathways

Several potential exposure pathways are present at the site. The site investigation results show that hydrocarbon contamination is present in near-surface soil; the concentrations present suggest that subsurface soils are likely impacted also. While groundwater was not observed during excavation, the presence of a well on the site used for ice making at Building F confirms that groundwater is present at the site.

The incidental ingestion of soil pathway is complete for soil and the dermal absorption of contaminants from soil, surface water, and sediment pathway is complete. Persons visiting the site buildings are also at risk of exposure through inhalation of asbestos and incidental ingestion of LBP.

The ingestion of groundwater is complete by any persons using ice from the ice making operation. Surface water is present at the site, but it is unlikely that it would be used as a drinking water source, so the ingestion of surface water pathway is incomplete. The inhalation of fugitive dust pathway is complete as some of the COCs are at least semi-volatile.

If the site and surrounding area are used for hunting, fishing, or harvesting of wild food, and the COCs have the potential to bioaccumulate, the ingestion of wild foods pathway is complete.

## 5.3. Receptors

The site is not presently used except for ice making. Recreational users were observed at the site during the fieldwork phase of the project. Personnel going to the site to collect ice could be exposed to hazards at the site. Residents using the ice could be exposed through ingestion. Recreational and/or subsistence gathers at the site could potentially

be exposed to contaminants. Residents and site visitors (industrial or recreational) could be exposed to fugitive dust.

In the future scenario, the same pathways would be complete. If the site were refurbished or developed, future construction workers could be exposed as well.

# 6. FINDINGS AND CONCLUSIONS

This report summarizes the available data on the soil and HBM sampling at the former Alaska Packers Cannery. Petroleum impacts were identified at the former AST farm and stained soil areas.

## 6.1. Uncertainty of Volume of Contaminated Subsurface Soil

**Findings:** Due to cultural resource concerns, the field effort for this investigation was limited to only include sampling of shallow soils; however, the concentrations seen at and near the surface suggest that the contamination is present in subsurface soil beneath the tank farm and stained areas. The volume of contaminated subsurface soil is unknown. Figure 4 shows the inferred area of the tank farm with DRO levels above the ADEC cleanup level of 250 mg/kg. The inferred area is approximately 2,650 square feet. For each 10 feet of contamination below grade, almost 1,000 cubic yards of soil would need to be excavated.

**Recommendation:** In order to estimate the total volume of soil requiring excavation to meet ADEC cleanup levels, subsurface soil should be sampled to determine the vertical extent of the impacts.

## 6.2. Lead

**Findings:** At Building J, lead was present in soil above both ADEC residential and industrial action levels (400 and 1,000 mg/kg, respectively). At Building H, one of two samples was slightly above the residential cleanup level. As particulate lead (lead chips) is less mobile in the environment than petroleum, impacts are likely confined to the near surface.

**Recommendation:** Remove of lead contaminated soil at Building H by placing soil in an approved container and shipping to a disposal facility. Assuming that this site would be used as an industrial site, no further action may be needed at Building H.

## 6.3. Groundwater

**Findings:** Concentrations of petroleum and lead contaminants detected in the soils at the site are above migration to groundwater thresholds.

**Recommendations:** Groundwater in the well used for ice making at Building F should be sampled on a regular basis for volatiles, semi-volatiles, and lead. In addition, surface water/sediment samples should be collected to assess exposure through those pathways.

## 6.4. Hazardous Building Materials

**Findings:** Building materials in each building except C, G, I, and J were found to contain asbestos in amounts of 1% or greater by weight and are thus considered to be ACM. It is clear that the some of the friable ACM in the buildings could present a hazard for future workers and visitors to the facilities. Specifically, the deteriorated pipe insulation (white,

plastery/fibrous substance) still present in buildings H and F presents a significant asbestos hazard.

EMI concluded that significantly elevated soil lead levels were found around Buildings C, E, J, and H. Building E was almost entirely coated with LBP and had paint chips under the drip lines and windows. The asbestos and lead audit report completed by EMI is provided with this document in Appendix C.

**Recommendations:** At present, workers or site visitors entering Building F for ice making related activities or other buildings at the site could be exposed to ACM and lead. Workers' use of Building F for ice making-related activities should be minimized to the degree possible to minimize contact with HBM. Access to other buildings should be restricted to reduce exposure to ACM and LBP. Use of the site in general should be minimized to reduce exposures to contaminants.

Any reuse or demolition of the site buildings will require cleanup action for asbestos and lead. Specific recommendations for cleaning up ACM and LBP are outlined below.

**Asbestos:** Action to contain or remove some of the ACM materials must be undertaken prior to any demolition. It should be anticipated that the deterioration will continue and that in some locations ACM cleanup may take precedence over the initiation of any other activity in an area, until the hazard is abated and contained.

The Environmental Protection Agency (EPA)-regulated ACM includes all friable asbestos containing materials and non-friable Category I (floor tiles and roofing materials) and Category II (cement-asbestos panels and pipes) that are rendered friable during the course of removal or disposal. EPA must be notified prior to demolition and/or abatement of asbestos containing materials. Regulated friable ACM requires abatement prior to any demolition or construction project that poses a risk of disturbing it. Non-friable ACM will require controlled work practices and may require abatement prior to demolition. Disposal of ACM waste is only permitted at a landfill approved specifically for by the State of Alaska for ACM materials.

Note: Trained and properly protected abatement workers using appropriate engineering controls and work practices should be employed for all asbestos disturbance efforts while enclosing, abating or disturbing friable ACM. It is recommended that the abatement/renovation contractor be provided a copy of the EMI report in Appendix C, and that they be required to retain a competent person capable of recognizing hazardous materials during the abatement process. The asbestos-containing materials identified can be abated and disposed of at any ADEC-authorized asbestos landfill, but any separately identified hazardous materials, such as lead wastes, that are generated during the abatement/renovation efforts may have to be transported out of state for proper disposal. At this time, there are no EPA-permitted RCRA (hazardous waste) disposal sites in Alaska.

**Lead-Based Paint:** Proper care should be exercised when cutting, sanding, heating or grinding painted surfaces to minimize exposure to lead dust. Lead does not present a health hazard unless disturbed, which could generate an exposure route. Removal

procedures that generate an airborne source (inhalation) and possible ingestion source will result in a health risk and possible hazardous waste production. Such procedures require special precautions and compliance with relevant federal, state, and local regulations. Proper work procedures to minimize disturbance and dust generation must be implemented to protect workers and occupants. Although the expected waste stream to be generated from the demolition of an entire building is not expected to qualify as hazardous waste for lead concentrations, it would be advantageous to remove and segregate certain LBP-coated components (exterior windows/ frames, etc.) prior to demolition. Note: To ensure the protection of personnel and the environment, hazardous materials should be removed and disposed of as a separate waste stream from the general construction debris. Due to the remote location, a permit from ADEC can be obtained to dispose of the waste in a monofill cell. If LBP debris is included with the waste it should be tested following the Toxic Characteristic Leaching Procedure (TCLP) to confirm it is not Hazardous Waste. If it is Hazardous Waste then it will need to be disposed of following RCRA requirements.

## 6.5. Other Areas of Concern

**Findings:** Several areas at the site were observed having various wastes including drums with waste oil, used batteries, and unknown chemicals. Some drums in varying stages of decay were observed next to a tidal lagoon. Discharges of oil were observed in several locations. These areas are described in detail in Section 3.5.

**Recommendations:** Drums of known and unknown chemicals should be characterized and removed from the site. Used car batteries should also be disposed of. Leaking oily substances should be contained and cleaned up.

# 7. REFERENCES

Alaska Department of Environmental Conservation (ADEC), 2003. 18 AAC 78 *Underground Storage Tanks,* as amended through January 30, 2003.

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# TABLES

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TABLE 1
Surface Soil Screening Results
Pilot Point, Alaska

| Location | Sample ID | Date | PID Reading (ppmV) | Corresponding Analyical Sample ID |
|---|---|---|---|---|
| Stained Area Between Building F and H | F1-01 | 5/19/2008 | 7.2 | S101SS* |
| | F1-02 | 5/19/2008 | 3.6 | S102SS |
| | F1-03 | 5/19/2008 | 1.2 | S103SS |
| | F1-04 | 5/19/2008 | 1 | -- |
| | F1-05 | 5/19/2008 | 1.3 | S104SS |
| | F1-06 | 5/19/2008 | 1.2 | S105SS |
| | F1-07 | 5/19/2008 | 0 | -- |
| | F1-08 | 5/19/2008 | 0 | -- |
| | F1-09 | 5/19/2008 | 0.2 | -- |
| Stained Area North of Building F | F2-01 | 5/20/2008 | 1.1 | S201SS |
| | F2-02 | 5/20/2008 | 40.1 | S202SS |
| | F2-03 | 5/20/2008 | 13.1 | S203SS |
| | F2-04 | 5/20/2008 | 3 | S204SS |
| | F2-05 | 5/20/2008 | 1.6 | -- |
| | F2-06 | 5/20/2008 | 43.9 | S205SS* |
| | F2-07 | 5/20/2008 | 0.3 | -- |
| | F2-08 | 5/20/2008 | 0.2 | -- |
| | F2-09 | 5/20/2008 | 0 | -- |
| | F2-10 | 5/20/2008 | 0.3 | -- |
| | F2-11 | 5/20/2008 | 0.1 | -- |
| Tank Farm Area | TS-SS-01 | 5/20/2008 | 11.4 | -- |
| | TS-SS-02 | 5/20/2008 | 22.5 | TF01SS |
| | TS-SS-03 | 5/20/2008 | 14.2 | TF02SS |
| | TS-SS-04 | 5/20/2008 | 10.9 | -- |
| | TS-SS-05 | 5/20/2008 | 12.1 | TF03SS |
| | TS-SS-06 | 5/20/2008 | 26.1 | TF04SS |
| | TS-SS-07 | 5/20/2008 | 1.4 | TF05SS |
| | TS-SS-08 | 5/20/2008 | 19.7 | TF06SS |
| | TS-SS-09 | 5/20/2008 | 12.3 | -- |
| | TS-SS-10 | 5/20/2008 | 2.7 | -- |
| | TS-SS-11 | 5/20/2008 | 0.5 | -- |
| | TS-SS-12 | 5/20/2008 | 59 | TF07SS |
| | TS-SS-13 | 5/20/2008 | 2.6 | TF08SS |
| | TS-SS-14 | 5/20/2008 | 64.9 | TF09SS |
| | TS-SS-15 | 5/20/2008 | 4.8 | TF10SS |
| | TS-SS-16 | 5/20/2008 | 12.5 | -- |
| | TS-SS-17 | 5/20/2008 | 95 | TF11SS |
| | TS-SS-18 | 5/20/2008 | 3 | -- |
| | TS-SS-19 | 5/20/2008 | 1.5 | -- |
| | TS-SS-20 | 5/20/2008 | 125 | TF12SS* |
| | TS-SS-21 | 5/20/2008 | 12.6 | TF13SS |
| | TS-SS-22 | 5/20/2008 | 213 | TF14SS* |
| | TS-SS-23 | 5/20/2008 | 47 | TF15SS |
| | TS-SS-24 | 5/20/2008 | 57.1 | TF16SS |
| | TS-SS-25 | 5/20/2008 | 3.3 | -- |
| | TS-SS-26 | 5/20/2008 | 14.2 | -- |
| | TS-SS-27 | 5/20/2008 | 37.1 | -- |
| | TS-SS-28 | 5/20/2008 | 98.3 | TF17SS |
| | TS-SS-29 | 5/20/2008 | 1.4 | -- |
| | TS-SS-30 | 5/20/2008 | 9.8 | -- |
| | TS-SS-31 | 5/20/2008 | 27.7 | TF18SS |
| | TS-SS-32 | 5/20/2008 | 3.1 | -- |
| | TS-SS-33 | 5/20/2008 | 17.2 | -- |
| | TS-SS-34 | 5/20/2008 | 14.8 | -- |
| | TS-SS-35 | 5/20/2008 | 35 | TF19SS |
| | TS-SS-36 | 5/20/2008 | 10.1 | -- |
| | TS-SS-37 | 5/20/2008 | 52.4 | TF20SS |

**Notes:**

* Duplicate sample taken at this location

-- sample not taken at this location

ID = Identification

ppmV = parts per million, Volumetric

TABLE 2
Soil Analytical Results
Pilot Point, Alaska
(Page 1 of 3)

| Sample ID: | *Soil Screening Values* [1,2] | S101SS | Dup-2 | S102SS | S103SS | S104SS | S105SS | S201SS | S202SS | S203SS | S204SS | S205SS | Dup-1 | TF01SS | TF02SS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date Collected:** | | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 | 5/21/2008 |
| **ADEC Fuels (AK101, AK102, AK103; mg/kg)** | | | | | | | | | | | | | | | |
| Gasoline Range Organics | ***300*** | ND (2.72) | ND (2.96) | ND (2.29) | ND (3.17) | ND (2.97) | ND (2.90) | ND (2.79) | ND (1.77) | ND (2.78) | ND (2.69) | ND (2.68) | ND (2.74) | ND (3.45) | ND (3.56) |
| Diesel Range Organics | ***250*** | **8,570 JS** | **10300 JS** | **6,630 JS** | **3,840 JS** | **1,300 JS** | ND (207) | **594** | **2,430** | ND (21.1) | 31.8 | 34.1 | ND (21.6) | ND (22.3) | ND (21.8) |
| Residual Range Organics | ***11,000*** | **44,300 JS** | **57000 JS** | **35,600 JS** | **27,800 JS** | 9,120 JS | ND (50.8) | 2,290 | **11,500** | 84.4 | 165 | 134 | 67.0 | ND (55.6) | ND (54.4) |
| **BTEX (EPA 8021B)** | | | | | | | | | | | | | | | |
| Benzene | ***0.02*** | ND (0.0109) | ND (0.0118) | ND (0.0114) | ND (0.0127) | ND (0.0119) | ND (0.0116) | ND (0.0112) | ND (0.0102) | ND (0.0111) | ND (0.0108) | ND (0.0107) | ND (0.0109) | ND (0.0138) | ND (0.0143) |
| Toluene | ***5.4*** | ND (0.0136) | ND (0.0148) | ND (0.0143) | ND (0.0159) | ND (0.0148) | ND (0.0145) | ND (0.0140) | ND (0.0127) | ND (0.0139) | ND (0.0135) | ND (0.0134) | ND (0.0137) | ND (0.0172) | ND (0.0178) |
| Ethylbenzene | ***5.5*** | ND (0.0136) | ND (0.0148) | ND (0.0143) | ND (0.0159) | ND (0.0148) | ND (0.0145) | ND (0.0140) | ND (0.0127) | ND (0.0139) | ND (0.0135) | ND (0.0134) | ND (0.0137) | ND (0.0172) | ND (0.0178) |
| Total Xylenes | ***78*** | ND (0.0408) | ND (0.0444) | ND (0.0429) | ND (0.0476) | ND (0.0445) | ND (0.0435) | ND (0.0419) | ND (0.0382) | ND (0.0417) | ND (0.0404) | ND (0.0402) | ND (0.0411) | ND (0.0517) | ND (0.0535) |
| **PAH (EPA 8270SIM)** | | | | | | | | | | | | | | | |
| Naphthalene | ***120*** | ND (0.053) | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| 2-Methylnaphthalene | ***NA*** | 0.076 JB | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| 1-Methylnaphthalene | ***NA*** | 0.064 | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Acenaphthalene | ***NA*** | ND (0.053) | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Acenaphthene | ***210*** | ND (0.053) | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Fluorene | ***270*** | ND (0.053) | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Phenanthrene | ***NA*** | 0.055 | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Anthracene | ***4300*** | ND (0.053) | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Fluoranthrene | ***2100*** | 0.44 JB | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Pyrene | ***1500*** | 1.3 JB | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Benzo(a)anthracene | ***6*** | 0.24 | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Chrysene | ***620*** | 4 | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Benzo(a)pyrene | ***1*** | 0.93 | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ***11*** | 0.58 JB | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Dibenz(a,h)anthracene | ***1*** | ND (0.053) | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Benzo(g,h,i)perylene | ***NA*** | 0.22 JB | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Benzo(b)fluoranthene | ***11*** | 0.19 JB | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| Benzo(k)fluoranthene | ***110*** | 0.094 | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.005) | NA | NA | NA |
| **Metals** | | | | | | | | | | | | | | | |
| Lead | ***400*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**

[1] 18 AAC 75.341 Table B1, Method 2 Soil Cleanup Levels, under 40-inch rainfall zone, inhalation or ingestion criteria. Results above ADEC cleanup values are bolded.

[2] ADEC Calculated Cleanup Levels for Compounds without Tabular Values in Site Cleanup Rules - Tech Memo 01-007

ADEC = Alaska Department of Environmental Conservation

bgs = Below ground surface

BTEX = Benzene, toluene, ethylbenzene, total xylenes

ID = Identification

JB = Estimated Result. Analytes detected in method blank at less than the MDL but above the PQL.

JS = Result is estimated due to surrogate recoveries outside of method acceptance limits.

mg/kg = Milligrams per kilogram

NA = Not analyzed

ND = Not detected

PAH = Polynuclear aromatic hydrocarbon

TABLE 2
Soil Analytical Results
Pilot Point, Alaska
(Page 2 of 3)

| Sample ID: | *Soil Screening Values* [1,2] | TF03SS | TF04SS | TF05SS | TF06SS | TF07SS | TF08SS | TF09SS | TF10SS | TF11SS | TF12SS | TF13SS | TF14SS | TF15SS | TF16SS | TF17SS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date Collected:** | | **5/21/2008** | **5/21/2008** | **5/22/2008** | **5/23/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** |
| **ADEC Fuels (AK101, AK102, AK103; mg/kg)** | | | | | | | | | | | | | | | | |
| Gasoline Range Organics | ***300*** | ND (3.31) | ND (3.06) | ND (3.37) | ND (3.09) | 12.7 | 7.17 | 11.2 | 16.2 | 13.4 | ND (21.9) | 5.69 | 13.4 | 17.7 | 3.53 | 12.7 |
| Diesel Range Organics | ***250*** | 29.0 | **264** | ND (22.7) | ND (21.4) | **102000 JS** | 188 | **561** | **393** | **963** | **110000 JS** | **3160 JS** | **3990 JS** | **35100 JS** | ND (23.7) | 164 |
| Residual Range Organics | ***11,000*** | 155 | 1,440 | ND (56.8) | ND (53.4) | **57000 JS** | 564 | 1,560 | 1,060 | 2140 | **44700 JS** | 6470 JS | 7910 JS | **36000 JS** | ND (59.2) | 272 |
| **BTEX (EPA 8021B)** | | | | | | | | | | | | | | | | |
| Benzene | ***0.02*** | ND (0.0132) | ND (0.0122) | ND (0.0135) | ND (0.0124) | **0.615** | **0.253** | **0.3** | **0.519** | **0.491** | ND (0.0874) | **0.153** | **0.258** | **0.279** | ND (0.0119) | **0.252** |
| Toluene | ***5.4*** | ND (0.0166) | ND (0.0153) | ND (0.0168) | ND (0.0154) | 0.723 | 0.639 | 0.737 | 1.49 | 1.16 | 0.129 | 0.476 | 0.761 | 0.789 | ND (0.0148) | 0.977 |
| Ethylbenzene | ***5.5*** | ND (0.0166) | ND (0.0153) | ND (0.0168) | ND (0.0154) | 0.0765 | 0.0703 | 0.0801 | 0.159 | 0.13 | 0.304 | 0.0709 | 0.0915 | 0.284 | ND (0.0148) | 0.0783 |
| Total Xylenes | ***78*** | ND (0.0497) | ND (0.0459) | ND (0.0505) | ND (0.0463) | 0.568 | 0.562 | 0.721 | 1.48 | 1.07 | 3.37 | 0.516 | 0.693 | 2.31 | ND (0.0444) | 0.566 |
| **PAH (EPA 8270SIM)** | | | | | | | | | | | | | | | | |
| Naphthalene | ***120*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | **130** | NA | 0.88 | NA | NA | NA |
| 2-Methylnaphthalene | ***NA*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 870 | NA | 2.8 | NA | NA | NA |
| 1-Methylnaphthalene | ***NA*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 460 | NA | 1.7 | NA | NA | NA |
| Acenaphthalene | ***NA*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 11 | NA | ND (0.630) | NA | NA | NA |
| Acenaphthene | ***210*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 43 | NA | ND (0.630) | NA | NA | NA |
| Fluorene | ***270*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 68 | NA | ND (0.630) | NA | NA | NA |
| Phenanthrene | ***NA*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 130 | NA | 0.89 JB | NA | NA | NA |
| Anthracene | ***4300*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 27 | NA | ND (0.630) | NA | NA | NA |
| Fluoranthrene | ***2100*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 11 | NA | 0.83 JB | NA | NA | NA |
| Pyrene | ***1500*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 29 | NA | 1.3 JB | NA | NA | NA |
| Benzo(a)anthracene | ***6*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | **8.3** | NA | ND (0.630) | NA | NA | NA |
| Chrysene | ***620*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 19 | NA | 2.3 | NA | NA | NA |
| Benzo(a)pyrene | ***1*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | **4.1** | NA | **1.3** | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ***11*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 1.2 | NA | ND (0.630) | NA | NA | NA |
| Dibenz(a,h)anthracene | ***1*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 0.79 JB | NA | ND (0.630) | NA | NA | NA |
| Benzo(g,h,i)perylene | ***NA*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 2.2 | NA | 1 JB | NA | NA | NA |
| Benzo(b)fluoranthene | ***11*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | 3.7 | NA | 0.96 JB | NA | NA | NA |
| Benzo(k)fluoranthene | ***110*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | ND (0.560) | NA | ND (0.630) | NA | NA | NA |
| **Metals** | | | | | | | | | | | | | | | | |
| Lead | ***400*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**

[1] 18 AAC 75.341 Table B1, Method 2 Soil Cleanup Levels

[2] ADEC Calculated Cleanup Levels for Compounds witho

ADEC = Alaska Department of Environmental Conservatio

bgs = Below ground surface

BTEX = Benzene, toluene, ethylbenzene, total xylenes

ID = Identification

JB = Estimated Result. Analytes detected in method blank

JS = Result is estimated due to surrogate recoveries outsic

mg/kg = Milligrams per kilogram

NA = Not analyzed

ND = Not detected

PAH = Polynuclear aromatic hydrocarbon

TABLE 2
Soil Analytical Results
Pilot Point, Alaska


| Sample ID: | *Soil Screening Values* [1,2] | TF18SS | TF19SS | TF20SS | Dup-3 | Dup-4 | C-01-01 | C-01-02 | E-01-01 | E-01-02 | E-02-01 | E-02-02 | J-01-01 | J-01-02 | H-01-01 | H-01-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Date Collected:** | | **5/21/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** | **5/21/2008** | | | | | | | | | | |
| **ADEC Fuels (AK101, AK102, AK103; mg/kg)** | | | | | | | | | | | | | | | | |
| Gasoline Range Organics | ***300*** | ND (6.12) | ND (3.49) | ND (3.13) | ND (51.1) | 9.38 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Diesel Range Organics | ***250*** | ND (33.2) | ND (24.1) | ND (23.9) | **134000 JS** | **9000 JS** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Residual Range Organics | ***11,000*** | 101 | ND (60.2) | ND (59.8) | **62200 JS** | **17300 JS** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **BTEX (EPA 8021B)** | | | | | | | | | | | | | | | | |
| Benzene | ***0.02*** | ND (0.0245) | ND (0.0139) | ND (0.0125) | ND (0.205) | **0.124** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Toluene | ***5.4*** | ND (0.0306) | ND (0.0174) | ND (0.0157) | ND (0.256) | 0.36 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Ethylbenzene | ***5.5*** | ND (0.0306) | ND (0.0174) | ND (0.0157) | 0.363 | 0.0591 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Total Xylenes | ***78*** | ND (0.0918) | ND (0.0523) | ND (0.0470) | 4.04 | 0.366 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PAH (EPA 8270SIM)** | | | | | | | | | | | | | | | | |
| Naphthalene | ***120*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 2-Methylnaphthalene | ***NA*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 1-Methylnaphthalene | ***NA*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthalene | ***NA*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Acenaphthene | ***210*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluorene | ***270*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Phenanthrene | ***NA*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Anthracene | ***4300*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Fluoranthrene | ***2100*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Pyrene | ***1500*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)anthracene | ***6*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Chrysene | ***620*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(a)pyrene | ***1*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | ***11*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dibenz(a,h)anthracene | ***1*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(g,h,i)perylene | ***NA*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(b)fluoranthene | ***11*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Benzo(k)fluoranthene | ***110*** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Metals** | | | | | | | | | | | | | | | | |
| Lead | ***400*** | NA | NA | NA | NA | NA | 230 | 120 | 180 | 170 | 280 | 210 | **8400** | **2400** | **420** | 150 |

**Notes:**

[1] 18 AAC 75.341 Table B1, Method 2 Soil Cleanup Levels

[2] ADEC Calculated Cleanup Levels for Compounds witho

ADEC = Alaska Department of Environmental Conservatio

bgs = Below ground surface

BTEX = Benzene, toluene, ethylbenzene, total xylenes

ID = Identification

JB = Estimated Result. Analytes detected in method blank

JS = Result is estimated due to surrogate recoveries outsic

mg/kg = Milligrams per kilogram

NA = Not analyzed

ND = Not detected

PAH = Polynuclear aromatic hydrocarbon

TABLE 3
Estimated Quantities of Asbestos Containing Materials in Surveyed Buildings (EMI, May/June 2008)
Pilot Point, Alaska

| Asbestos-Containing Material | % Asbestos Content | Quantity Totals (Square Feet) |
|---|---|---|
| Bldg. A: Grey transite (CAB) panels on wash room walls | 25 % Chrysotile | 1,200 |
| Bldg. A: Vinyl Composite Floor Tile, 12”x12”, Light brown / pink. | 3-7% Chrysotile | 1,200 |
| Bldg. B: Grey transite (CAB) panel on living room wall. | 25% Chrysotile | 10 |
| Bldg. B: Grey & Beige Floor Tile – bedrooms & bathroom. | 3-5 % Chrysotile | 550 |
| Bldg. D: All floor tiles. | 5-6 % Chrysotile | 3,500 |
| Bldg. D: Grey transite (CAB) panels on bath-room walls | 25% Chrysotile | 900 |
| Bldg. E: White window glazing-front bldg. | 2 - 3 % Chrysotile | 150 |
| Bldg. F: White pipe insulation (TSI) | 7 - 9 % Chrysotile | 200 (linear feet) |
| Bldg. H: White/grey window glazing | 1 - 2 % Chrysotile | 200 |
| Bldg. H: White pipe insulation (TSI) and boiler jacket insulation | 6 - 10 % Chrysotile | 1,000 |

TABLE 4
Estimated Quantities of Lead-Based Paint in Surveyed Buildings (EMI May/June 2008)
Pilot Point, Alaska

| Components with Lead-Based Paint | Condition | Quantity Totals (Square Feet) |
|---|---|---|
| Bldg. A: Interior and exterior window systems; entire west entry room; some interior doors; lower wall in hallway. | Poor-severely deteriorated | 1,250 |
| Bldg. B: White exterior siding under the current unpainted siding; interior and exterior door and window systems; interior walls and ceilings; fireplaces; baseboards. | Poor-severely deteriorated | 3,500 |
| Bldg. C: Interior and exterior window and door systems; 2nd floor red/grey beams and posts; red/grey siding. | Poor-severely deteriorated | 1,300 |
| Bldg. D: Interior and exterior window systems; 2nd floor ceiling; grey paint 2nd floor hall; red/grey beams; yellow paint posts. | Poor-severely deteriorated | 5,000 |
| Bldg. E: Interior and exterior window systems; Blue/Lt. blue paint lower walls; white interior walls and ceiling; exterior corner boards. | Poor-severely deteriorated | 8,000 |
| Bldg. F: First floor-- door in shop; | Good-chipped and impacts | 120 |
| Bldg. G: Orange boom; red paint; beam; lower walls. | Poor-severely deteriorated | 620 |
| Bldg. H: Interior and exterior door systems; exterior siding east side. | Poor-severely deteriorated | 1,250 |
| Bldg. I: No LBP | Good-some water damage | Not Applicable |
| Bldg. J: (interior unpainted) LBP on exterior tan door systems; exterior siding east side. | Poor-severely deteriorated and weathered | 900 |

# FIGURES

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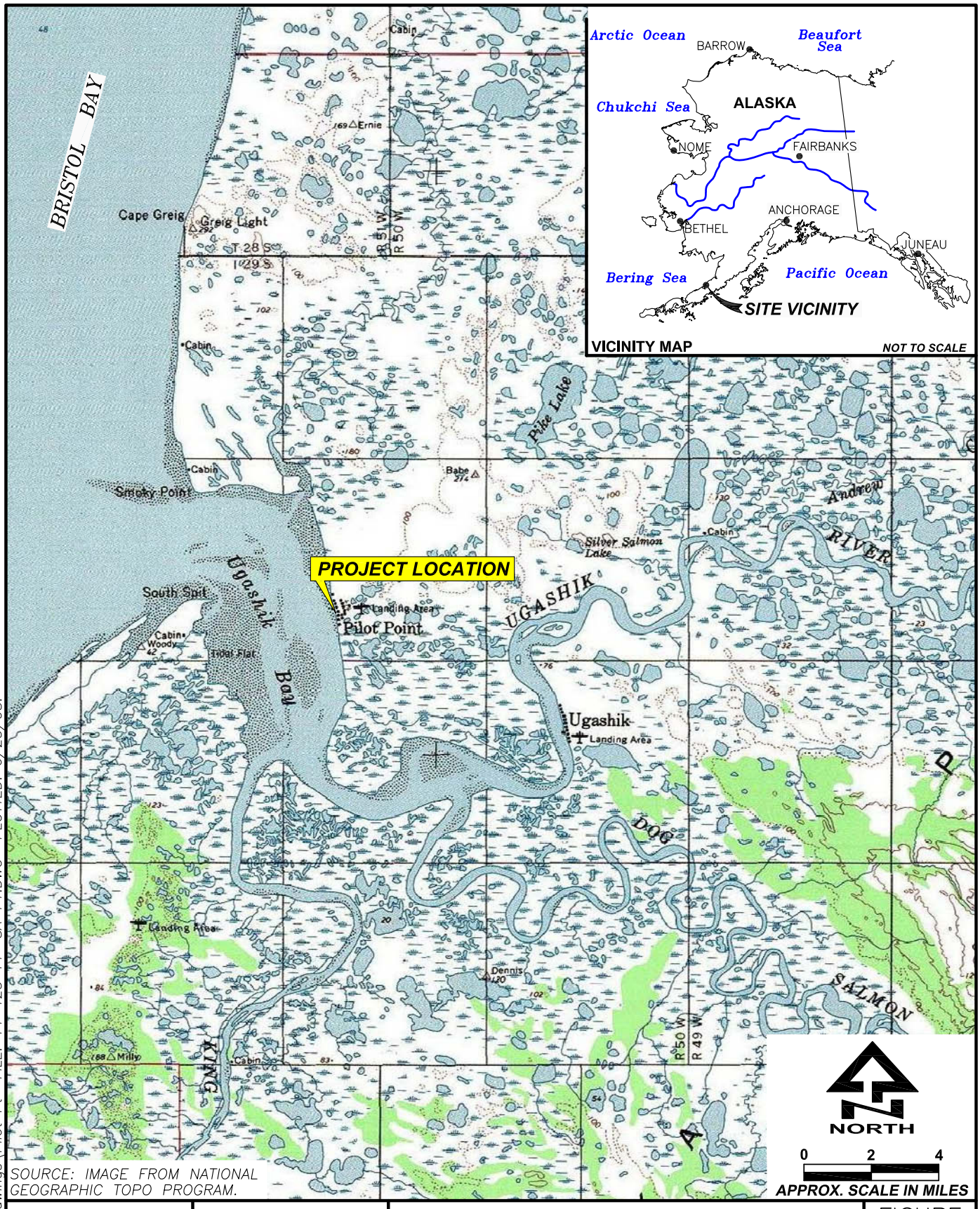


SOURCE: IMAGE FROM NATIONAL GEOGRAPHIC TOPO PROGRAM.

PATH: V:\Project Drawings\Pilot Pt FILE: 14-123-PP-SA-F1.DWG PLOTTED: 6/25/08.

oasis ENVIRONMENTAL

DATE: JUNE 2008
CHKD: N.R.M.
DRAWN: C.E.H
PROJ. No.: 14-123

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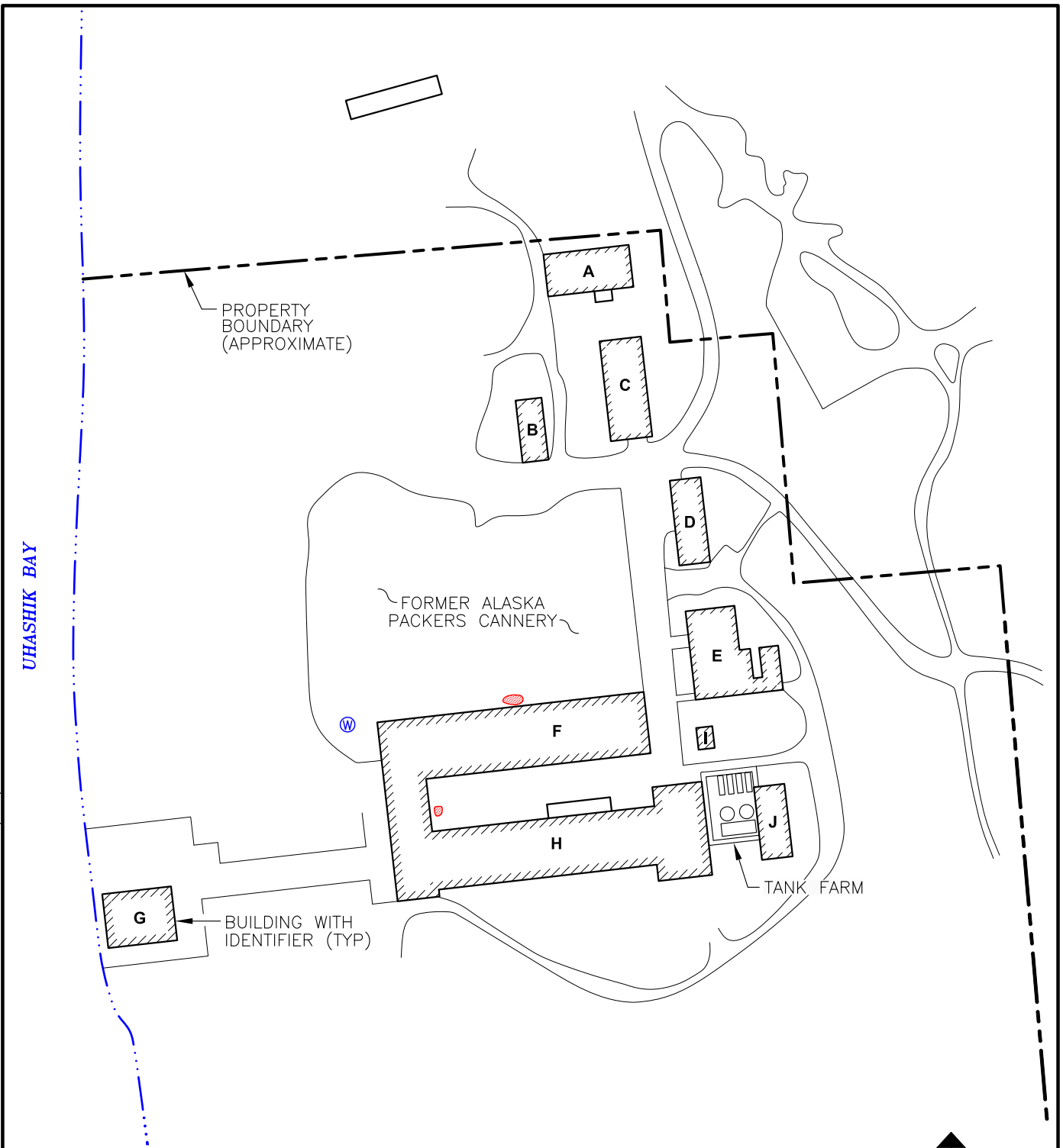
# SITE LOCATION MAP

SITE CHARACTERIZATION WORK PLAN
Pilot Point, Alaska

FIGURE

1




**EXPLANATION**

- Ⓦ WELLHEAD LOCATION
- A BUILDINGS WITH IDENTIFIER
- AREAS OF HYDROCARBON STAINING

*SOURCE: DIGITIZED FROM HART CROWSER CAD FILE SITE PLAN–WP.DWG DATED JUNE 2006.*

NORTH

0 75 150

**APPROX. SCALE IN FEET**

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PROJ. No.: 14–123

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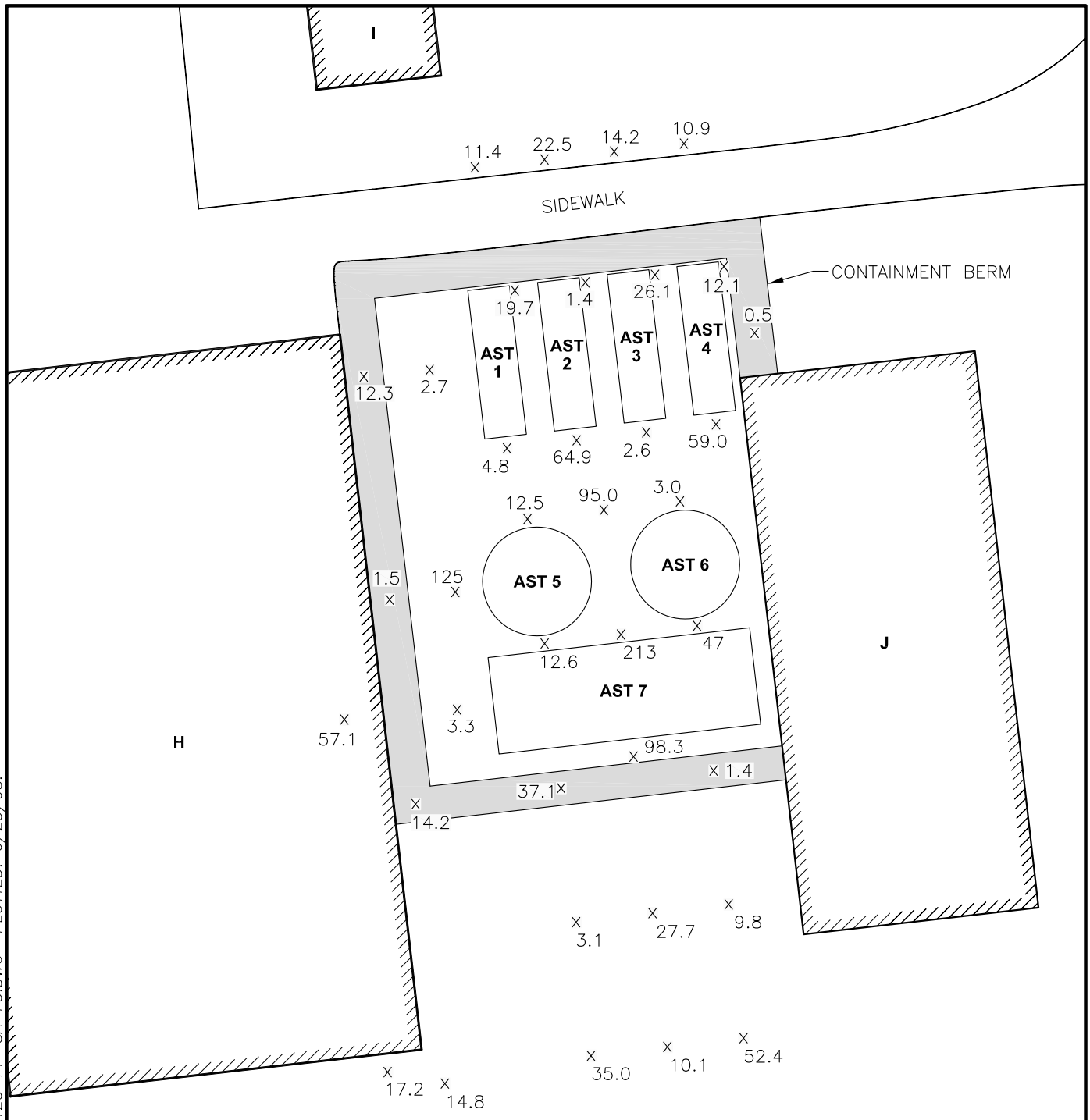
# SITE PLAN

SITE CHARACTERIZATION WORK PLAN
Pilot Point, Alaska

FIGURE

**2**

PATH: V:\Project Drawings\Pilot Pt FILE: 14–123–PP–SA–F2.DWG PLOTTED: 6/25/08.




**EXPLANATION**

H — BUILDINGS WITH IDENTIFIER

2.7 X — PHOTOIONIZATION DETECTOR (PID) READING (ppm)

SOURCE: DIGITIZED FROM HART CROWSER CAD FILE SITE PLAN–WP.DWG DATED JUNE 2006.

NORTH

0 10 20

APPROX. SCALE IN FEET

PATH: V:\Project Drawings\Pilot Pt FILE: 14–123–PP–SA–F3.DWG PLOTTED: 6/25/08.

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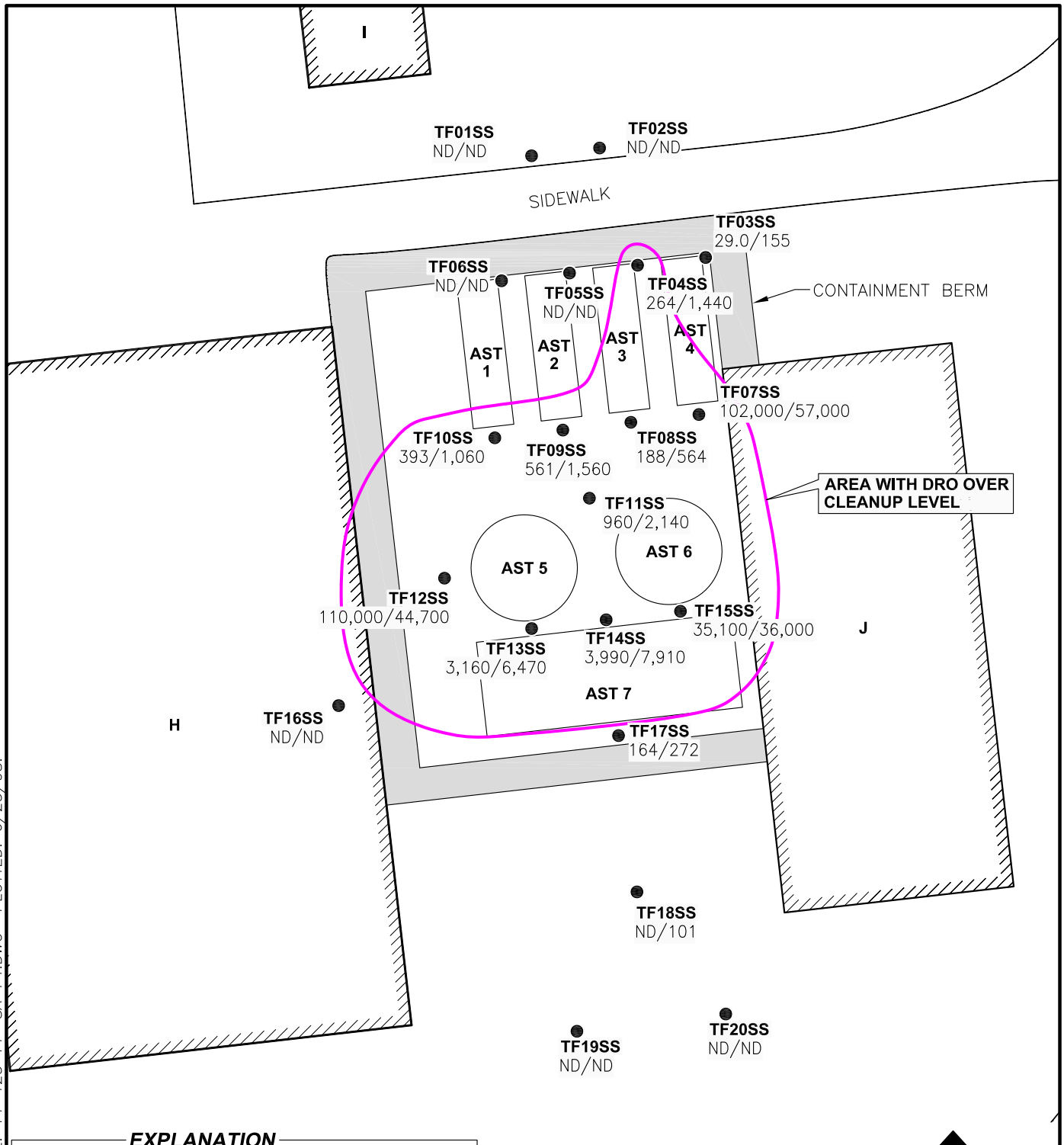
# TANK FARM FIELD SCREENING (PID) RESULTS

SITE CHARACTERIZATION WORK PLAN
Pilot Point, Alaska

FIGURE

3




***EXPLANATION***

H — BUILDINGS WITH IDENTIFIER

TF17SS ● — SOIL SAMPLE LOCATION

164/272 — RESIDUAL–RANGE ORGANICS (mg/kg)

DIESEL–RANGE ORGANICS (mg/kg)

*SOURCE: DIGITIZED FROM HART CROWSER CAD FILE SITE PLAN–WP.DWG DATED JUNE 2006.*

NORTH

0 10 20

***APPROX. SCALE IN FEET***

oasis ENVIRONMENTAL

DATE: JUNE 2008
CHKD: N.R.M.
DRAWN: C.E.H.
PROJ. No.: 14–123

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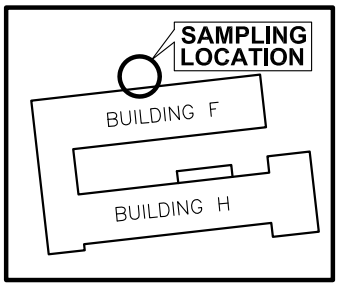
# TANK FARM SOIL SAMPLE LOCATIONS

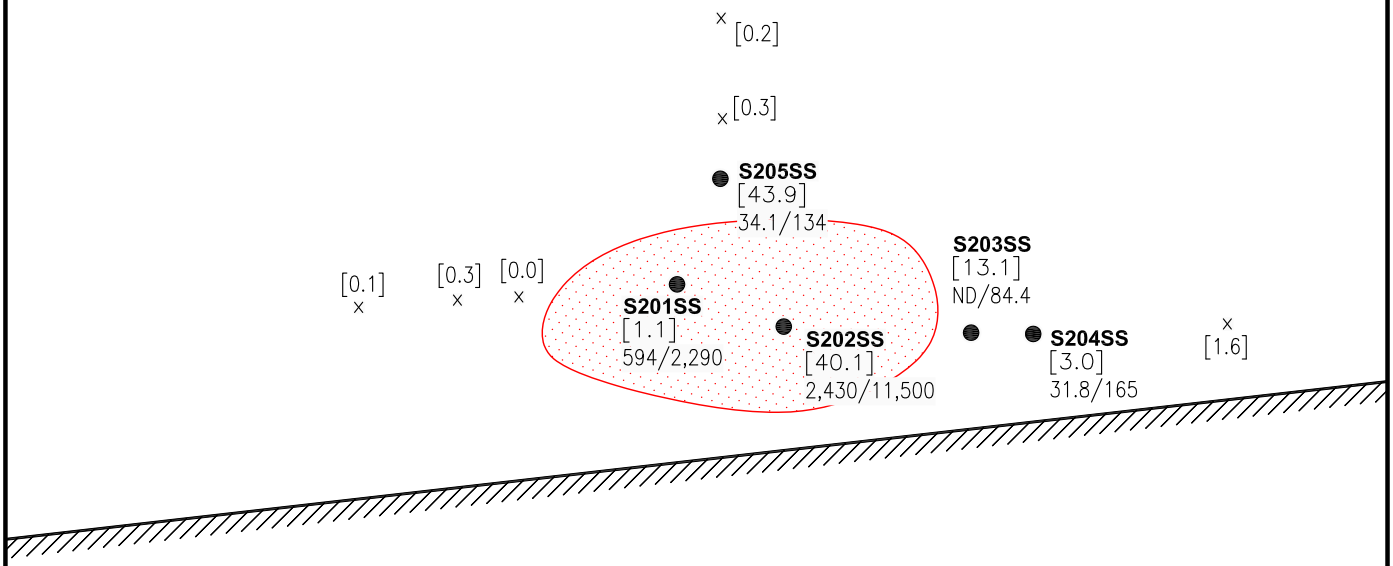
SITE CHARACTERIZATION WORK PLAN
Pilot Point, Alaska

FIGURE
4

*PATH: V:\Project Drawings\Pilot Pt FILE: 14–123–PP–SA–F4.DWG PLOTTED: 6/25/08.*




**INSET**
NOT TO SCALE




**BUILDING F**

***EXPLANATION***

| | |
|---|---|
| | AREAS OF HYDROCARBON STAINING |
| S204SS ● | SOIL SAMPLE LOCATION |
| [0.1] x | PHOTOIONIZATION DETECTOR (PID) READING (ppm) |
| 31.8/165 ← | RESIDUAL–RANGE ORGANICS (mg/kg) |
| | DIESEL–RANGE ORGANICS (mg/kg) |

*SOURCE: DIGITIZED FROM HART CROWSER CAD FILE SITE PLAN–WP.DWG DATED JUNE 2006.*

NORTH

0 5 10

***APPROX. SCALE IN FEET***

oasis ENVIRONMENTAL

DATE: JUNE 2008
CHKD: N.R.M.
DRAWN: C.E.H.
PROJ. No.: 14–123

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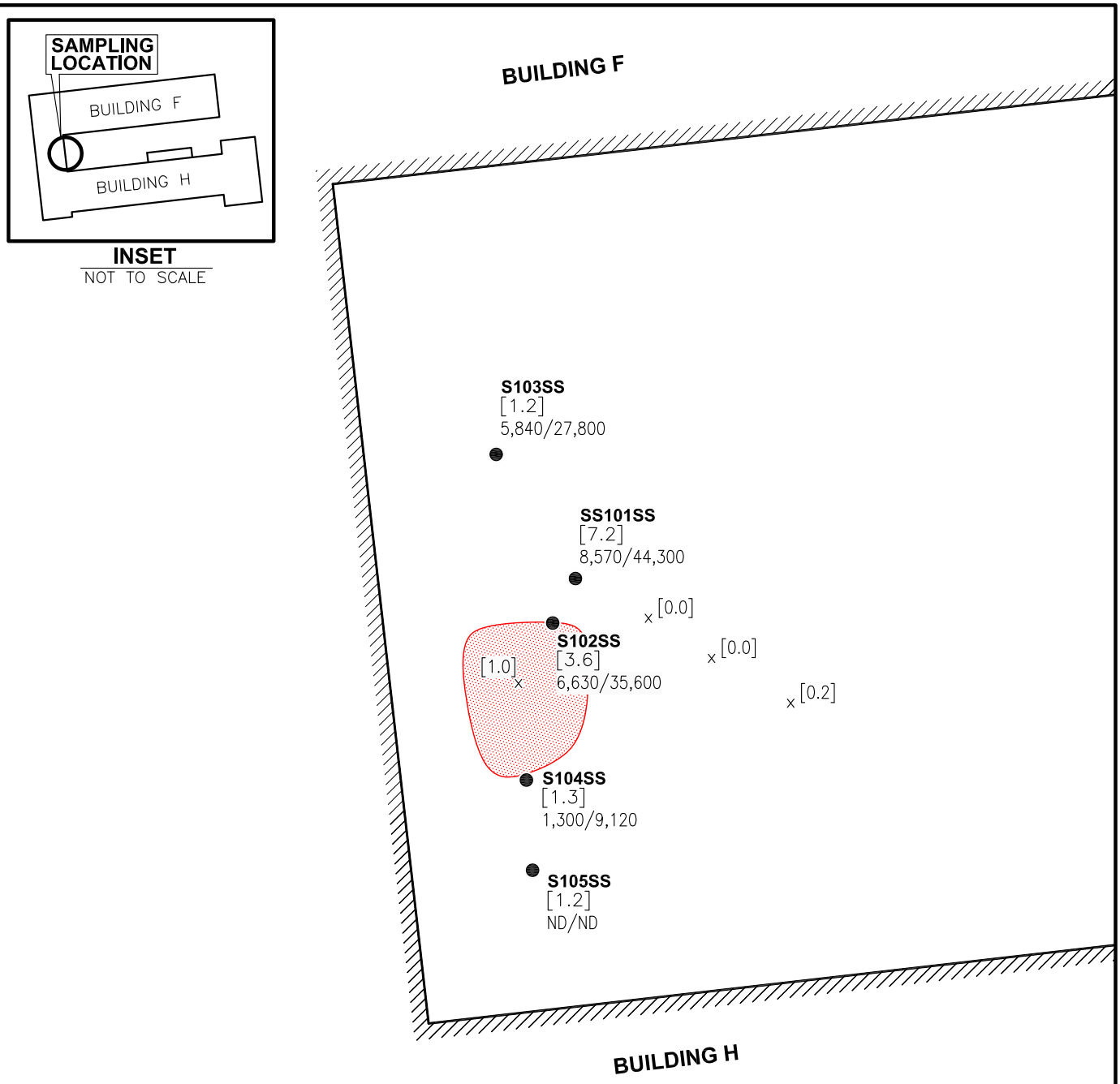
# BUILDING F (NORTH) FIELD SCREENING AND SOIL SAMPLE LOCATIONS

SITE CHARACTERIZATION WORK PLAN
Pilot Point, Alaska

FIGURE
**5**

PATH: V:\Project Drawings\Pilot Pt FILE: 14–123–PP–SA–F5.DWG PLOTTED: 6/25/08.




***EXPLANATION***

- AREAS OF HYDROCARBON STAINING
- **S101SS** — SOIL SAMPLE LOCATION
- [0.1] x — PHOTOIONIZATION DETECTOR (PID) READING (ppm)
- 1,300/9,120 — RESIDUAL–RANGE ORGANICS (mg/kg) / DIESEL–RANGE ORGANICS (mg/kg)

*SOURCE: DIGITIZED FROM HART CROWSER CAD FILE SITE PLAN–WP.DWG DATED JUNE 2006.*

NORTH

0 5 10

***APPROX. SCALE IN FEET***

oasis ENVIRONMENTAL

DATE: JUNE 2008
CHKD: N.R.M.
DRAWN: C.E.H.
PROJ. No.: 14–123

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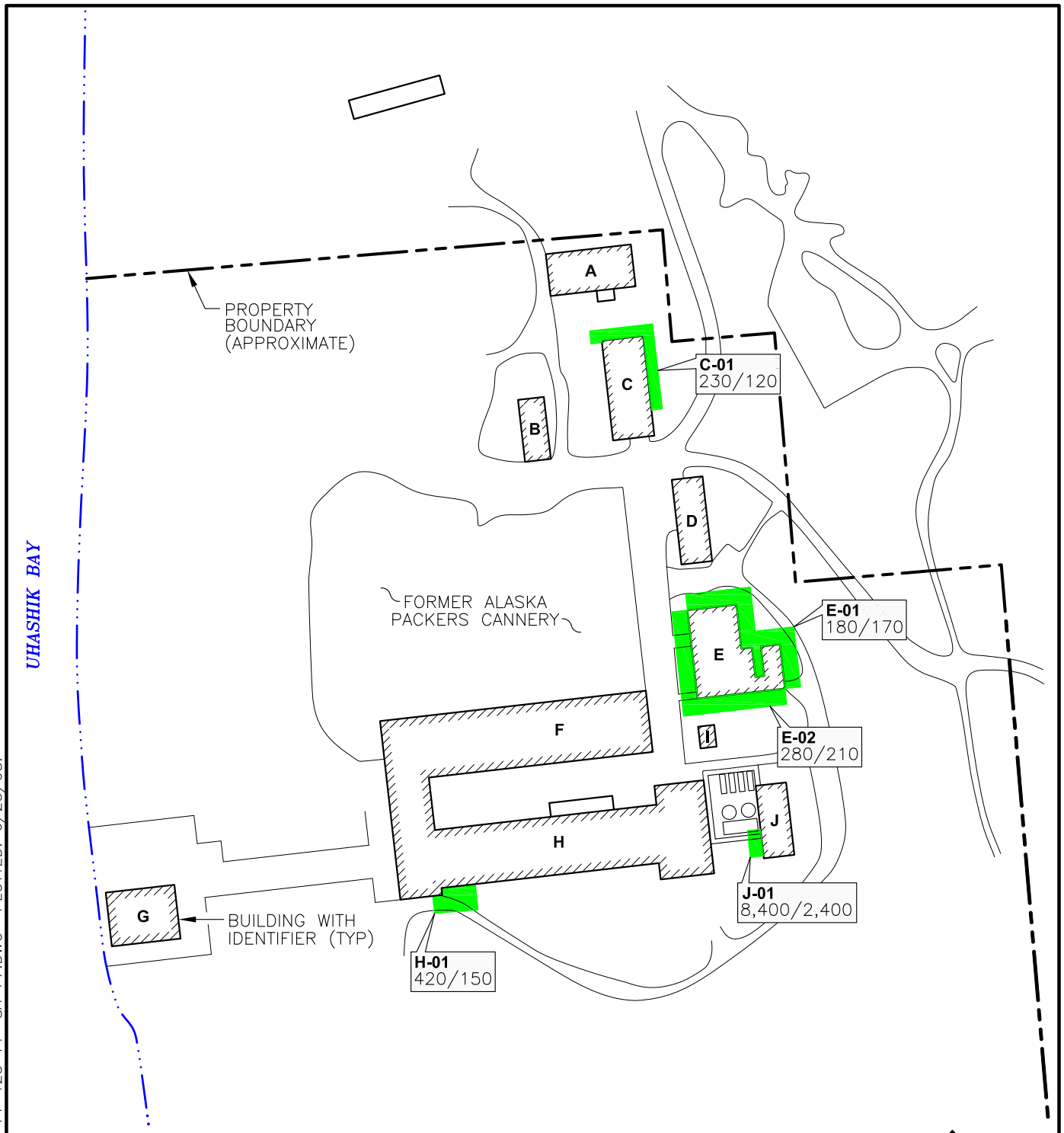
# BUILDING F (WEST) FIELD SCREENING AND SOIL SAMPLE LOCATIONS

SITE CHARACTERIZATION WORK PLAN
Pilot Point, Alaska

FIGURE

**6**

*PATH: V:\Project Drawings\Pilot Pt FILE: 14–123–PP–SA–F6.DWG PLOTTED: 6/25/08.*




**EXPLANATION**

- H — BUILDINGS WITH IDENTIFIER
- C-01 — AREA OF COMPOSITE SAMPLING
- 230/120 — DUPLICATE COMPOSITE SAMPLE RESULT (mg/kg)
- COMPOSITE SAMPLE RESULT (mg/kg)

NORTH

0 75 150

APPROX. SCALE IN FEET

*SOURCE: DIGITIZED FROM HART CROWSER CAD FILE SITE PLAN–WP.DWG DATED JUNE 2006.*

oasis ENVIRONMENTAL

DATE: JUNE 2008
CHKD: N.R.M.
DRAWN: C.E.H.
PROJ. No.: 14–123

825 W. 8th Ave., Anchorage, AK 99501, (907) 258–4880

# COMPOSITE LEAD SAMPLING LOCATIONS

SITE CHARACTERIZATION WORK PLAN
Pilot Point, Alaska

FIGURE 7

*PATH: V:\Project Drawings\Pilot Pt FILE: 14–123–PP–SA–F7.DWG PLOTTED: 6/25/08.*

# APPENDIX A

## Selected Photographs

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**PHOTOGRAPH 1. TWO 55-GALLON DRUMS AND ONE 5-GALLON BUCKET PARTIALLY FILLED WITH OIL LOCATED BETWEEN BUILDINGS F AND H. RED FLAGS SHOW LOCATIONS OF SOIL SAMPLES.**

**PHOTOGRAPH 2. TWO 5-GALLON BUCKETS FILLED WITH USED OIL LOCATED NEXT TO TRUCK BED TOOL BOX CONTAINING PARTIALLY FILLED AND EMPTY PAINT CANS. NORTH OF BUILDING F. RED FLAGS SHOW LOCATIONS OF SOIL SAMPLES.**

**PHOTOGRAPH 3. A RUPTURED AND EXPOSED UST LEAKED HEAVY OIL TO SURROUNDING AREAS. THIS LIVE BIRD WAS FOUND TRAPPED IN THE OIL.**

**PHOTOGRAPH 4. CLOSE-UP OF LIVE BIRD FOUND IN HEAVY OIL. SPECIES TYPE WAS NOT POSITIVELY IDENTIFIED.**

**PHOTOGRAPH 5. TANK FARM AREA LOOKING SOUTH AT ASTS 1, 2, 3, AND 4.**

**PHOTOGRAPH 6. WITHIN THE TANK FARM AREA BETWEEN ASTS 1, 2, 3, AND 4 ON THE NORTH SIDE (LEFT SIDE OF PICTURE) AND AST 6 ON THE SOUTH SIDE (RIGHT SIDE OF PICTURE). RED FLAGS SHOW LOCATIONS OF SOIL SAMPLES.**

**PHOTOGRAPH 7. SEVERAL 55-GALLON DRUMS IN VARYING STAGES OF DECAY SOUTH OF BUILDING H.**

**PHOTOGRAPH 8. WASTE OIL AND MISCELLANEOUS SUBSTANCE STORAGE INSIDE BUILDING H.**

**PHOTOGRAPH 9. DISCARDED BATTERY STORAGE IN BUILDING H.**


**PHOTOGRAPH 10. THREE 55-GALLON DRUMS INSIDE BUILDING H, TWO DRUMS ARE LABELED "WATER, ANTI-FREEZE, CONTAMINATED," AND ONE HAS UNKNOWN CONTENTS.**

**PHOTOGRAPH 11. TWO WOODEN BARRELS LOCATED INSIDE BUILDING H THAT CONTAIN UNKNOWN WHITE SUBSTANCE. ONE OF THE BARRELS IS SEVERELY DETERIORATING AND SPILLING THE WHITE SUBSTANCE ONTO THE FLOOR.**

**PHOTOGRAPH 12. OILY SUBSTANCES LEAKING FROM BUILDING H THAT PROBABLY ORIGINATED FROM WITHIN THE BUILDING.**


**PHOTOGRAPH 13. DRUM LABELED AS CONTAINING CHLORITE PRODUCTS LOCATED WITHIN THE WETLAND AREA SOUTH AND ADJACENT TO BUILDING H.**


**PHOTOGRAPH 14. DISCARDED BATTERY LOCATED ADJACENT TO BUILDING H.**

# APPENDIX B

## OASIS Field Notes

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C. Short, Z. Kirk

1

05-19-08 14-123 Pilot Point 50°F, Partly Cloudy.

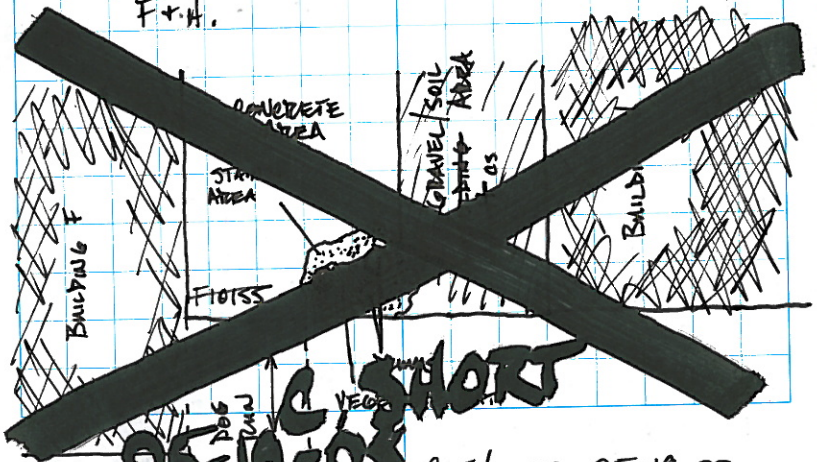
1300 – Arrive on site. Conduct site survey to locate areas of concern mentioned in work plan.

- Observed two stained areas adjacent to Buildings F + H.
- Observed tank farm area (tanks, piping, oil residue on ground)
- Discussed site logistics with EMI (Dow, Multi) + conducted safety Tailgate meeting.

1430 – Leave site to B+B.

1500 – Return to site.

- Begin assessing stained area around drums between Buildings F+H.



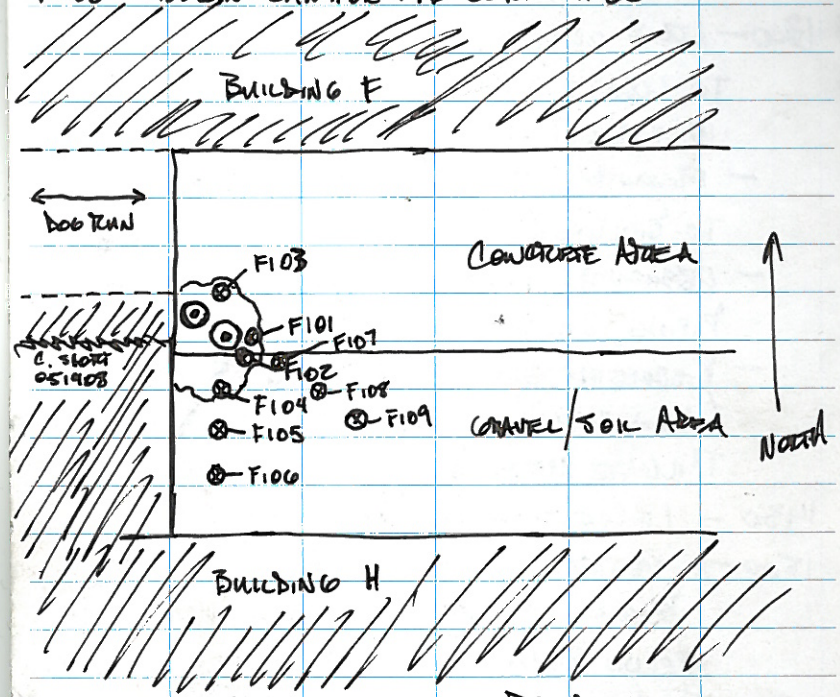

C. Short 05-19-08

C. Short 05-19-08

C. Short, Z. Kirk

05-19-08 14-123 Pilot Point

1530 – Begin sample PID screenings




| Time | ID | PID Reading |
|---|---|---|
| 1535 – | F101 | 7.2 |
| 1540 – | F102 | 3.6 |
| 1545 – | F103 | 1.2 |
| 1550 – | F104 | 1.0 |
| 1555 – | F105 | 1.3 |
| 1600 – | F106 | 1.2 |
| 1605 – | F107 | 0.0 |
| 1607 – | F108 | 0.0 |
| 1610 – | F109 | 0.2 |

C. Short 051908



05-19-08 14-123 Pilot Point

1700 – Leave site.

C. Short 05-19-08

05-20-08 14-123 Pilot Point

0845 – Arrive on site.
- Conduct safety meeting
- Dump PID screenings from previous day in stained area of F1.

0900 – Collect PID screenings in tank farm area. (See workplan Fig. #3)

Tank screenings

| PID ID | Time | PID Reading |
|---|---|---|
| TS-5504 | 0900 | 10.9 |
| TS-5503 | 0905 | 14.2 |
| " -5502 | 0907 | 22.5 |
| " 5501 | 0910 | 11.4 |
| " 5505 | 0915 | 12.1 |
| " 5506 | 0917 | 26.1 |
| " 5507 | 0920 | 1.4 |
| " 5508 | 0923 | 19.7 |
| " 5509 | 0925 | 12.3 |
| " 55 10 | 0928 | 2.7 |
| " 55 15 | 0935 | 4.8 |
| " 55 14 | 0940 | ~~15.3~~ 64.9 cs |
| " 55 13 | 0943 | 2.6 |
| 55 12 | 0950 | 59.0 |
| 55 11 | 0955 | 0.5 |

PID cal check – 110 ppm

C. Short 05-20-08

C. Short, Z. Kirk.

05-20-08 Pilot Point 14-123 58°F, cloudy

PID screenings cont.

TANK SCREENINGS

| PID ID | Time | PID Reading | |
|---|---|---|---|
| TS-SS18 | 1000 | 3.0 | |
| TS-SS17 | 1005 | ~~20.0~~ 95.0 | ★ |
| "-SS16 | 1010 | 12.5 | |
| "-SS20 | 1015 | 12.5 | ★/Pair/Dup |
| "-SS19 | 1020 | 1.5 | |
| -SS23 | 1025 | 47.0 | ★ |
| -SS22 | 1035 | 21.3 | ★/Pair/Dup |
| -SS24 | 1040 | 12.6 | ★ |
| TS-SS25 | 1045 | 3.3 | |
| " -SS24 | 1050 | 57.1 | ★ |
| " -SS26 | 1100 | 14.2 | |
| " -SS29 | 1105 | 1.4 | |
| " -SS28 | 1110 | 98.3 | ★ |
| " -SS27 | 1113 | 37.1 | |
| " -SS30 | 1115 | 9.8 | |
| " -SS31 | 1120 | 27.7 | ★ |
| " -SS32 | 1125 | 3.1 | |
| " -SS33 | 1130 | 17.2 | |
| TS-SS34 | 1133 | 14.8 | |
| -SS35 | 1135 | 35.0 | ★ |
| -SS36 | 1137 | 10.1 | |
| -SS37 | 1140 | 52.4 | ★ |

1200 - Break for lunch.

C. Short 05-20-08

C. Short, Z. Kirk



05-20-08 14-123 Pilot Point 55°F, cloudy

1300 - Return from lunch.

1310 - Begin screening samples from tank farm vicinity. (See results on previous pages 3 + 4)

1400 - Begin collecting screening samples from stained area adjacent to + north of Building F. (See Work Plan Fig. 2)

| PID ID | Time | PID Reading | |
|---|---|---|---|
| ★ FZ-01 | 1405 | 1.1 | |
| ★ FZ-02 | 1407 | 40.1 | |
| ★ FZ-03 | 1410 | 13.1 | |
| ★ FZ-04 | 1403 | 3.0 | |
| FZ-05 | 1405 | ~~2.8~~ 1.6 | |
| ★ FZ-06 | 1407 | ~~45.9~~ 43.9 | (Pair + Dup) |
| FZ-07 | 1410 | 0.3 | |
| FZ-08 | 1412 | 0.3 | |
| FZ-09 | 1415 | ~~2.1~~ 0.0 | |
| FZ-10 | 1418 | 0.3 | |
| FZ-11 | 1420 | 0.1 | |

1430 - Heat up samples for headspace PID readings.

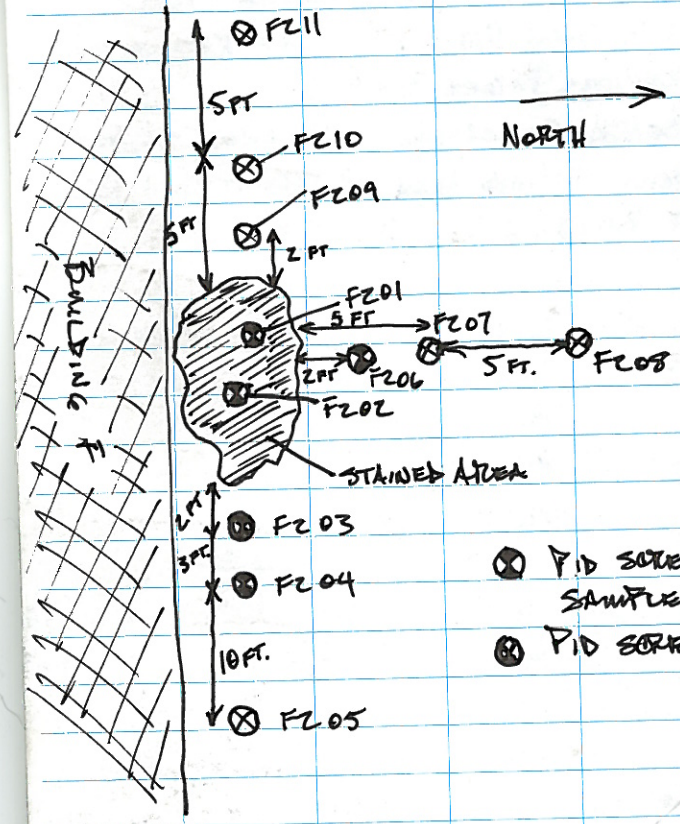
1435 - Check plan + inventory of sample jars.

C. Short 05-20-08

C. Short, Z. Kirk

05-20-08 Pilot Point 14-123 cont.

1445 - Create sketch of sample locations for stained area FZ.




1830 Return to the site

1845 Record soil sample locations with Trimble GPS unit.

1930 Leave site

C. Short 05-20-08



05-21-08 14-123 Pilot Point 45°F, cloudy, light rain.

0830 - Arrive on site
- Conduct safety meeting
- Prepare to sample stained area SZ (formerly FZ on PID ID's) North of + adjacent to Building F.
- According to PID screen samples, analytical samples will be taken from PID screenings FZ01, FZ02, FZ03, FZ04, + FZ06. (see previous page)

~~0845~~ 0900 Collect SZ01SS (formerly FZ01) for GRO/BTEX + DRO/RRO.

0910 - Collect SZ02SS (formerly FZ02) for GRO/BTEX + DRO/RRO.

0915 - Collect SZ03SS (former. FZ03) for GRO/BTEX + DRO/RRO.

0920 - Collect SZ04SS (former FZ04) for GRO/BTEX + DRO/RRO.

0923 - Collect SZ05SS (former FZ06) for GRO/BTEX + DRO/RRO + PAHs (8270)

0925 - Duplicate collected at SZ05SS.

0930 - Prepare to collect analytical samples @ stained soil area SZ (former F1) between buildings F+H.

C. Short 05-21-08

C. SHORT, Z. KIRK

05-21-08 14-123 PILOT POINT, (CONT)

| SAMPLE ID | SCREEN ID | TIME | ANALYTE |
|---|---|---|---|
| S10155 | F101 | 0935 | GRO/BTEX/DRO/RRO/PAH |
| S10255 | F102 | 0940 | GRO/BTEX/DRO/RRO |
| S10355 | F103 | 0945 | GRO/BTEX/DRO/RRO |
| S10455 | F105 | 0950 | " |
| S10555 | F106 | 0955 | " |
| DUP-02 (S10155) | | 0810 | " |

1010 PREPARE TO COLLECT ANALYTICAL SAMPLES AT TANK FARM AREA BETWEEN BUILDINGS H AND J (SEE WORKPLAN FIG. 3 FOR SAMPLE LOCATIONS)

| SAMPLE ID | SCREEN ID | TIME | ANALYSIS |
|---|---|---|---|
| TF01SS | TS-SS02 | 1030 | GRO/BTEX/DRO/RRO |
| TF02SS | TS-SS03 | 1035 | GRO/BTEX/DRO/RRO |
| TF03SS | TS-SS05 | 1040 | " |
| TF04SS | TS-SS06 | 1045 | " |
| TF05SS | TS-SS07 | 1050 | GRO/BTEX/DRO/RRO/MS/MSD |
| TF06SS | TS-SS08 | 1055 | GRO/BTEX/DRO/RRO |
| TF07SS | TS-SS12 | 1100 | " |
| TF08SS | TS-SS13 | 1105 | " |
| TF09SS | TS-SS14 | 1110 | " |
| TF10SS | TS-SS15 | 1115 | " |
| TF11SS | TS-SS17 | 1120 | " |

Z. KIRK 5.21.08



C. SHORT, Z. KERIK

5.21.08 14-123 PILOT POINT (CONT)

TANK FARM SAMPLE COLLECTION (CONT)

| SAMPLE ID | SCREEN ID | TIME | ANALYSIS |
|---|---|---|---|
| TF12SS | TS-SS20 | 1125 | GRO/RRO/DRO/BTEX/PAH |
| TF13SS | TS-SS21 | 1130 | GRO/BTEX/DRO/RRO |
| TF14SS | TS-SS22 | 1135 | GRO/BTEX/DRO/RRO/PAH |
| TF15SS | TS-SS23 | 1140 | GRO/BTEX/DRO/RRO |
| TF16SS | TS-SS24 | 1145 | " |
| TF17SS | TS-SS28 | 1150 | " |
| TF18SS | TS-SS31 | 1155 | " |
| TF19SS | TS-SS35 | 1200 | " |
| TF20SS | TS-SS37 | 1205 | " |
| DUP-03 | (TF12SS) | 0815 | " |
| DUP-04 | (TF14SS) | 0820 | " |

1230 - ASSISTED EMI PERSONNEL IN COLLECTION OF LEAD SOIL SAMPLES AROUND BUILDINGS C, E, J AND H.

1530 - RESUMED COLLECTING GPS READINGS OF SOIL SAMPLE LOCATIONS.
- COLLECTED PHOTOS OF SAMPLE LOCATIONS.

1730 - BREAK FOR DINNER

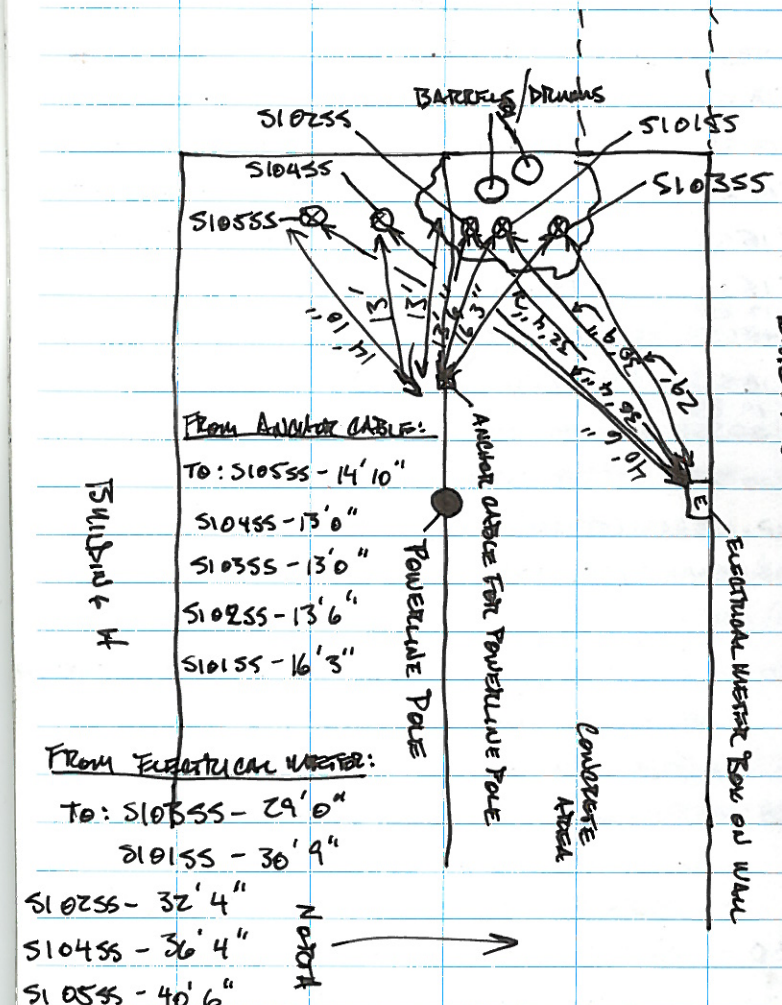
1830 - APPLIED TRACK ON SITE.
- SWING TIE S1 SOIL STAINING SAMPLE LOCATIONS.

C. SHORT 05/21/08

C. Short, Z. Kirk

05-21-08 14-123 Pilot Point

1855- Swing Tie S1 Sample Locations




From Anchor Cable:

To: S10555 - 14'10"

S10455 - 13'0"

S10355 - 13'0"

S10255 - 13'6"

S10155 - 16'3"

From Electrical Meter:

To: S10355 - 29'0"

S10155 - 30'9"

S10255 - 32'4"

S10455 - 36'4"

S10555 - 40'6"

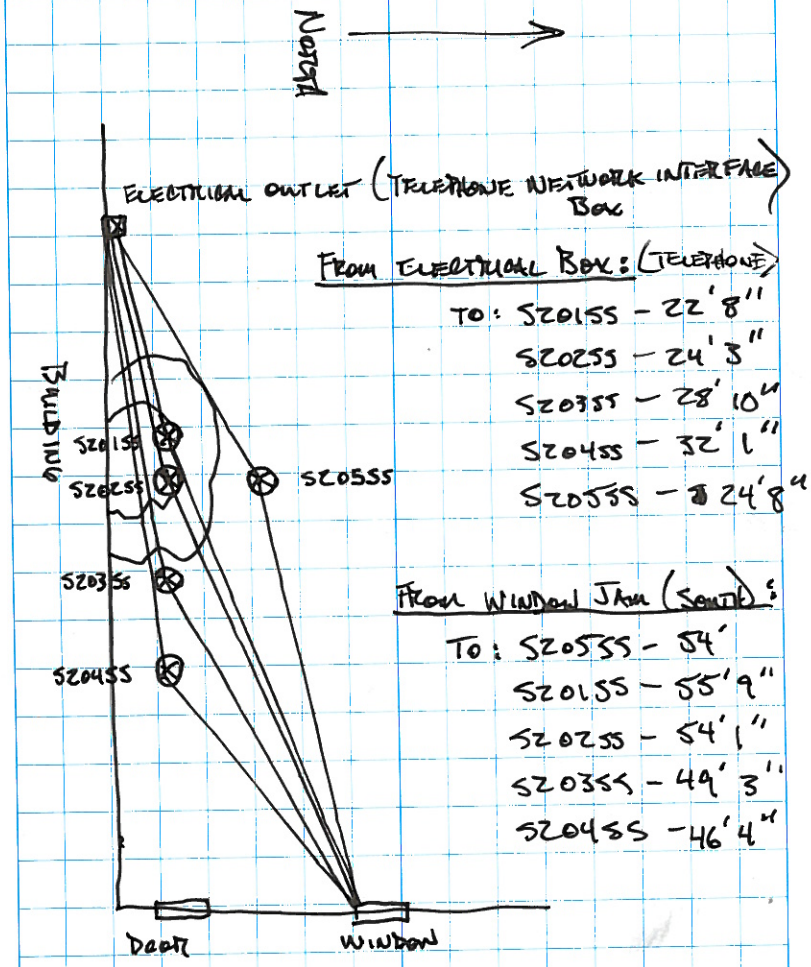
C. Short 05-21-08



C. Short, Z. Kirk

05-21-08 14-123 Pilot Point

1900- Swing Tie S2 Stained Soil Sample Locations.




From Electrical Box: (Telephone)

To: S20155 - 22'8"

S20255 - 24'3"

S20355 - 28'10"

S20455 - 32'1"

S20555 - 24'8"

From Window Jam (South):

To: S20555 - 54'

S20155 - 55'9"

S20255 - 54'1"

S20355 - 49'3"

S20455 - 46'4"

# APPENDIX C

## Lead and Asbestos Sampling, Pilot Point, AK, May/June 2008, EMI Report

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**REPORT**
**LEAD and ASBESTOS SAMPLING**
**PILOT POINT, AK**

MAY / JUNE 2008

## SUMMARY

This report summarizes the Lead-Based Paint/ACBM survey work performed by Environmental Management, Inc. (EMI) in May of 2008, at the old Pilot Point cannery complex in Pilot Point, AK. In addition to Lead-Based Paint and Asbestos inspections in the 10 existing buildings, EMI also performed lead analysis on the soils surrounding the buildings, using both XRF analysis and lab sampling to determine areas of highest risk due to elevated soil lead levels.

Representative samples were collected from the 10 buildings (A-J;) at the site. While lead paint and asbestos were found at several of the buildings, the greatest immediate hazard currently existing at this facility appears to be the existence of deteriorated/friable asbestos insulation (white) on the overhead piping in buildings F and H; also of possible concern are the increased lead levels in the soil surrounding several of the buildings.

## BACKGROUND

The property, a former packing/canning facility, consists of several buildings located in Pilot Point. The property description is Lots 2 and 3 of the U.S. Survey 63A and Alaska Tideland Survey 65 and Tract "A" of the subdivision of Lot 4 of U.S. Survey 63A and Alaska Tideland Survey 65, as shown and described on Plats 85-29 and 85-34 filed in the Kvichak Recording District, Third Judicial District, State of Alaska.

The owner of the property is:

City of Pilot Point
Box 430
Pilot Point, Alaska 99649

Commercial fish packing/processing operations have existed at this location for over 100 years. The cannery was turned over to the City of Pilot Point about fifteen years ago. In 2006-2007, DEC contracted with Hart Crowser to conduct a Phase I environmental site assessment and develop a workplan and quality assurance plan to address any necessary site characterization that was identified in the assessment. Limited soil contamination associated with releases from on-site tanks were discovered, as well as the suspected presence of lead-based paint and asbestos in the buildings.

## FIELD ACTIVITIES

On May 19-22, 2008, EMI--in association with Oasis Environmental--performed an asbestos and lead-based paint survey of the buildings at the site. EMI also performed lead analysis on the soils surrounding the buildings, using both XRF analysis and lab sampling

The lead-based paint/asbestos-containing material survey of the structures was performed in general accordance with 29 CFR 1926.1101 and 1926.62, which states that, before authorizing or allowing any construction, demolition, renovation, or remodeling, the owner or owner's agent, or employer, must notify contractors or other persons of the location and quantities of Asbestos Containing Material (ACM) within the work area and the employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter (50 $\mu g/m^3$) of air averaged over an 8-hour period.

The survey efforts at each building included an initial inspection/assessment of representative areas most likely to contain lead-based paint/asbestos and accessible for sampling safely with hand tools. Sketches were prepared, and work progressed on a building-by-building basis, covering buildings A-J on the attached drawings. The work was documented by notes and photographs.

**Asbestos-General:**

The sampling collection technique used at the Pilot Point buildings generally followed the Asbestos Hazard Emergency Response Act (AHERA) method as defined in 40 CFR 763. Laboratory analysis of samples collected was completed by IATL of Mt. Laurel, N.J., a laboratory certified through the National Voluntary Laboratory Accreditation Program to perform asbestos analysis by polarized light microscopy (PLM) according to EPA method 600/R/93/116 to determine the percent concentration by weight as required by the current OSHA standard. Building materials containing 1% or greater asbestos content are considered to be asbestos-containing materials (ACM).

Assorted bulk ACM samples were collected (total of 48 layers) for laboratory analysis during the assessment, and the results are included in Appendix A, and in Table 1, below.

**Asbestos Sampling and Results:**

The readily accessible spaces within the buildings were observed and surveyed and representative building material samples were collected, shipped, and analyzed by the IATL laboratory for asbestos content. ACM sampling results from the laboratory are provided in Appendix A.

Based on ***EMI's*** asbestos survey, building materials in each building except C, G, I and J were found to contain asbestos in amounts of 1% or greater by weight, and are thus considered being ACM.

## TABLE 1

### Estimated Quantities of Asbestos Containing Materials in Surveyed Buildings

| *Asbestos-Containing Material* | *% Asbestos Content* | *Quantity Totals* |
|---|---|---|
| Bldg. A: Grey transite (CAB) panels on wash room walls | **25% Chrysotile** | 1,200 SF |
| Bldg. A: Vinyl Composite Floor Tile, 12"x12", Light brown / pink. | **3-7% Chrysotile** | 1,200 SF |
| Bldg. B: Grey transite (CAB) panel on living room wall. | **25% Chrysotile** | 10 SF |
| Bldg. B: Grey & Beige Floor Tile – bedrooms & bathroom. | **3-5% Chrysotile** | 550 SF |
| Bldg. D: All floor tiles. | **5-6% Chrysotile** | 3,500 SF |
| Bldg. D: Grey transite (CAB) panels on bath-room walls | **25% Chrysotile** | 900 SF |
| Bldg. E: White window glazing-front bldg. | **2-3% Chrysotile** | 150 SF |
| Bldg. F: White pipe insulation (TSI) | **7-9% Chrysotile** | 200 Linear Feet |
| Bldg. H: White/grey window glazing | **1-2% Chrysotile** | 200 SF |
| Bldg. H: White pipe insulation (TSI) and boiler jacket insulation | **6-10% Chrysotile** | 1,000 SF |

As mentioned previously, ACM was found in all of the buildings except C, G, I and J.

**Lead-Based Paint-General:**

Lead-based paint (LBP) Sampling was performed using a Niton 309 X-Ray Fluorescence (XRF). The Niton 309 is a nondestructive instrument that produces reliable (95% confidence) results on the presence of lead in the paint. The Niton 309 instrument is

approved by the EPA and the U.S. Department of Housing and Urban Development (HUD) to determine if the paint is LBP or not without any other laboratory analysis. HUD and EPA define LBP as paint or other surface coatings that contains at least the following:

- 1 milligram per square centimeter of lead
- 0.5 percent (5,000 parts per million [ppm]) lead by dry weight

The x-ray fluorescence (XRF) instrument used for this survey was the NITON XL300 Series analyzer, serial number U254NR4359. The XRF analyzer was manufactured by Niton Corporation, headquartered at 74 Loomis Street, Bedford Massachusetts 01730. The applicable Performance Characteristic Sheet, which outlines the interpretation of the XRF readings, is on file at EMI's offices. The latest leak test for this XRF was performed in May, 2008. The XRF instrument emits X-rays; all appropriate radiation safety precautions were employed during XRF screening.

**Lead in Paint Testing of Buildings:**

All 10 buildings were included in the LBP portion of the HBM survey. All accessible interior and exterior building components that appeared to have been painted were field-screened for the presence of lead by an EPA-certified lead inspector using Niton 309 X-Ray Fluorescence (XRF) equipment. The XRF testing was representative of each paint type and color on the building and its components.

In each building, an initial walk-through inspection was performed, and a preliminary sketch made. All building components assessed were given a specific name such as door, door frame, window casing, upper trim, soffit, wall, et cetera. All room equivalents were given a specific name such as room 1, kitchen, bath 2, exterior, et cetera. All room equivalents were given a different name or a different number so they could be properly differentiated. Closets and smaller halls were included with the room equivalent they were associated with.

In general, most of the paint was severely worn and deteriorated. Some of the areas had visible paint chips nearby, while other areas showed little evidence that the wood had ever been painted in the first place. Table 2, below, lists the LBP found in the various buildings.

**TABLE 2**
**Estimated Quantities of Lead-Based Paint in Surveyed Buildings**

| ***Components with Lead-Based Paint*** | ***Condition*** | ***Quantity Totals*** |
|---|---|---|
| Bldg. A: Interior and exterior window systems; entire west entry room; some interior doors; lower wall in hallway. | **Poor-severely deteriorated** | 1,250sqft |

| | | |
|---|---|---|
| Bldg. B: White exterior siding under the current unpainted siding; interior and exterior door and window systems; interior walls and ceilings; fireplaces; baseboards. | **Poor-severely deteriorated** | 3,500sqft |
| Bldg. C: Interior and exterior window and door systems; 2nd floor red/grey beams and posts; red/grey siding. | **Poor-severely deteriorated** | 1,300sqft |
| Bldg. D: Interior and exterior window systems; 2nd floor ceiling; grey paint 2nd floor hall; red/grey beams; yellow paint posts. | **Poor-severely deteriorated** | 5,000sqft |
| Bldg. E: Interior and exterior window systems; Blue/Lt. blue paint lower walls; white interior walls and ceiling; exterior corner boards. | **Poor-severely deteriorated** | 8,000qft |
| Bldg. F: First floor-- door in shop; | **Good-chipped and impacts** | 120sqft |
| Bldg. G: Orange boom; red paint; beam; lower walls. | **Poor-severely deteriorated** | 620sqft |
| Bldg. H: Interior and exterior door systems; exterior siding east side. | **Poor-severely deteriorated** | 1,250sqft |
| Bldg. I: No LBP | **Good-some water damage** | Not Applicable |
| Bldg. J: (interior unpainted) LBP on exterior tan door systems; exterior siding east side. | **Poor-severely deteriorated and weathered** | 900sqft |

**Lead in Soil Testing of Building Perimeters:**

The XRF was used in two ways to screen the soils around the buildings (except buildings B and D, which had unpainted wood shingle siding) for excess lead. First, the buildings had an initial grid laid out next to the building to check for elevated lead areas. The grid was designed such that each XRF reading represented a maximum of 50 square feet. In addition, XRF tests were done in areas where LBP chips had accumulated. Building E had visible LBP paint chips on the ground and in the surrounding vegetation. Vegetation obstructed the visual assessment for paint chip accumulation out side buildings A, C, D, H and J. Following the initial screening, secondary screening was done to better delineate the areas with elevated lead readings. The following guidelines were used to help evaluate and segregate the elevated readings into various units:

- 400 ppm—18 AAC 75, DEC cleanup level for residential areas, and 24 CFR 35, HUD & EPA lead hazard level for soil in a child's play area.

- 1,000 ppm—18 AAC 75, cleanup level for commercial property.

- 2,000 ppm—24 CFR 35, HUD & EPA lead hazard level for bare soils (> 9 square feet) that are not in a child's play area.

- 5,000 ppm—24 CFR 35, HUD & EPA level that must be abated if it is part of a targeted housing area.

For the secondary screening, the overall area checked was divided into units with similar results. Each unit had at least five XRF readings to represent the average lead concentration in that area. Units with average concentrations below 300 ppm were not sampled for laboratory analysis. The soil surrounding the buildings was screened at regular intervals with the XRF instrument, and areas with the highest readings were selected for composite sampling by an environmental laboratory. A total of four units emerged for laboratory sample collection. Two composite samples were collected from each unit with an average result greater than 300 ppm. The number of grab locations per sample varied from three to ten depending on the variations in lead concentration. The environmental sampler used a separate disposal sampling spoon and a separate Ziploc baggie for the composite sample and its duplicate. The duplicate was collected simultaneously with the lead laboratory sample.

## CONCLUSIONS & RECOMMENDATIONS

**ACM:**

It is clear that the some of the friable ACM in the buildings could present a hazard for future workers and visitors to the facilities. Specifically, the deteriorated pipe insulation (white, plastery/fibrous substance) still present in buildings H and F presents a significant asbestos hazard. Action to contain or remove some of the ACM materials may be undertaken prior to any demolition. It should be anticipated that the deterioration will continue and that in some locations ACM cleanup may take precedence over the initiation of any other activity in an area, until the hazard was abated and contained.

The Environmental Protection Agency (EPA)-regulated ACM includes all friable asbestos-containing materials and non-friable Category I (floor tiles and roofing materials) and Category II (cement-asbestos panels and pipes) that are rendered friable during the course of removal or disposal. EPA must be notified prior to demolition and/or abatement of asbestos containing materials. Regulated friable ACM requires abatement prior to any demolition or construction project that poses a risk of disturbing it. Non-friable ACM will require controlled work practices and may require abatement prior to demolition. Disposal of ACM waste is only permitted at a landfill approved specifically for by the State of Alaska for ACM materials.

Note: Trained and properly protected abatement workers using appropriate engineering controls and work practices should be employed for all asbestos disturbance efforts while enclosing, abating or disturbing friable ACM. It is recommended that the abatement/renovation contractor be provided a copy of this report, and that they be required to retain a competent person capable of recognizing hazardous materials during the abatement process.

The asbestos-containing materials identified can be abated and disposed of at any ADEC-authorized asbestos landfill, but any separately identified hazardous materials, such as lead wastes, that are generated during the abatement/renovation efforts may have to be transported out of state for proper disposal. At this time. there are no EPA-permitted RCRA (hazardous waste) disposal sites in Alaska.

**Lead:**

A total of 384 tests were performed.with a NITON XL-309 XRF analyzer at the Pilot Point cannery complex on a building-by-building basis. Lead-Based Paint (LBP) was found in/on all the buildings except I. LBP was found most consistently on the exterior trim at the buildings (most notably on the exterior window and doorway frames). Some other surfaces that tested positive for LBP were the following: interior walls/ceilings, staircase, exterior walls/ siding and soffits. Lead in paint XRF results for the individual buildings are summarized in the Appendix.

In addition to lead-based paint on and in the buildings, significantly elevated soil lead levels were found around buildings C, E, J, and H. Building E was almost entirely coated with LBP, with paint chips noted under the drip lines and windows. LBP soil samples were collected from the soils around these four buildings. A total of 83 lead in soil tests were taken; the results are summarized in the Appendix.

EPA defines lead-based paint as paint with lead concentrations greater than 1 $mg/cm^2$ or 0.5% by weight, while OSHA worker protection standards are applicable whenever the presence of lead is detected. As can be seen from the XRF results printouts, some surfaces, while not qualifying as actual LBP, did contain some amount of lead. Proper care should be exercised when cutting, sanding, heating or grinding these surfaces to minimize exposure to lead dust.

Lead does not present a health hazard unless disturbed, which could generate an exposure route. Removal procedures that generate an airborne source (inhalation) and possible ingestion source will result in a health risk and possible hazardous waste production. Such procedures would require special precautions and compliance with relevant federal, state, and local regulations. Proper work procedures to minimize disturbance and dust generation should be implemented to protect workers and occupants.

Although the expected waste stream to be generated from the demolition of an entire building is not expected to qualify as hazardous waste for lead concentrations, it may still be advantageous to remove and segregate certain LBP-coated components (exterior windows/ frames, etc.) prior to demolition.

Note: To ensure the protection of personnel and the environment, hazardous materials should be removed and disposed of as a separate waste stream from the general construction debris. Due to the remote location, a permit from ADEC can be obtained to dispose of the waste in a monofill cell. If LBP debris is included with the waste it should be tested following the Toxic Characteristic Leaching Procedure (TCLP) to confirm it is not Hazardous Waste. If it is Hazardous Waste then it will need to be disposed of following RCRA requirements.

# APPENDIX D

## Laboratory Analytical Data

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# Laboratory Data Review Checklist

| | |
|---|---|
| Completed by: | Marty Hannah |
| Title: | Environmental Scientist |
| Date: | June 27, 2008 |
| CS Report Name: | 2008 Alaska PAckers Assessment Report |
| Report Date: | June 30, 2008 |
| Consultant Firm: | OASIS Environmental Inc. |
| Laboratory Name: | TestAmerica-Anchorage, AK |
| Laboratory Report Number: | ARE0067 |
| ADEC File Number: | |
| ADEC RecKey Number: | |

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   ☑ Yes ☐ No Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   ☐ Yes ☐ No Comments:

   Not applicable

2. Chain of Custody (COC)

   a. COC information completed, signed, and dated (including released/received by)?

   ☑ Yes ☐ No Comments:

b. Correct analyses requested?

☒ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☒ Yes ☐ No Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No Comments:

All samples were received in good condition.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☐ Yes ☒ No Comments:

No discrepancies were noted.

e. Data quality or usability affected? Explain.

Comments:

All samples were received in good quality.

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No Comments:

b. Discrepancies, errors or QC failures identified by the lab?

☐ Yes ☒ No Comments:

No discrepancies or errors were noted.

c. Were all corrective actions documented?

☐ Yes ☐ No Comments:

No corrective actions were required.

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

Comments:

5. Samples Results

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

☒ Yes ☐ No Comments:

b. All applicable holding times met?

☒ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No Comments:

Samples were collected and split on two different Chain of Custodys due to other TestAmerica labs (Tacoma) performing analyses which the Anchorage TestAmerica lab did not perform. The sample percent solids were transferred from the DRO analyses to the BTEX sample results from work order ARE0068 and were reported on a dry weight basis.

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

☐ Yes ☒ No Comments:

Three of the DRO sample PQLs were above site clean up due to high dilution for target analytes. The positive results are well above method two clean up levels.

e. Data quality or usability affected? Explain.

Comments:

6. QC Samples

a. Method Blank

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

☑ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☑ Yes ☐ No Comments:

iii. If above PQL, what samples are affected?

Comments:

Not applicable

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

☐ Yes ☐ No Comments:

Not applicable

v. Data quality or usability affected? Explain.

Comments:

Data quality objectives were met with regards to method blank results.

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

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

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

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

☐ Yes ☒ No Comments:

The BTEX MS/MSD recoveries were above acceptance limits even though the parent sample results were ND. LCS/LCSD results were well within acceptance limits.

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

Not applicable.

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

☐ Yes ☐ No Comments:

Not applicable

vii. Data quality or usability affected? Explain.
Comments:

Not applicable

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☒ Yes ☐ No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☐ Yes ☒ No Comments:

Samples Dup 2, Dup 3 and Dup 4 had DRO surrogate recoveries outside of acceptance limits. The samples were highly diluted due to a large presence of target analyte.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No Comments:

The sample results are flagged JS and are considered estimates.

iv. Data quality or usability affected? Explain.

Comments:

Due to the high concentrations in the DRO sample results the surrogate recoveries had low effect on data quality due to the high dilutions (100x) on the samples.

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

i. One trip blank reported per matrix, analysis and cooler?

☐ Yes ☒ No Comments:

ii. All results less than PQL?

☐ Yes ☐ No Comments:

Not applicable

iii. If above PQL, what samples are affected?

Comments:

Not applicable

iv. Data quality or usability affected? Explain.

Comments:

The data quality objective was not met with respect to trip blanks.

e. Field Duplicate

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

☒ Yes ☐ No Comments:

ii. Submitted blind to lab?

☒ Yes ☒ No Comments:

No, samples were called Dup-1 and Dup 2

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

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

Where $R_1$ = Sample Concentration
$R_2$ = Field Duplicate Concentration

☐ Yes ☒ No Comments:

Sample dup 1 and its parent sample were near the RRO PQL and had an RPD of 66%. No results were flagged due to the results being near the PQL. The second set of duplicates met RPD limits for DRO soils. All volatiles results were non-detect.

iv. Data quality or usability affected? Explain.

Comments:

No. All sample results are usable for project purposes with respect to field duplicates.

f. Decontamination or Equipment Blank (if applicable)

☐ Yes ☐ No ☒ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

Not applicable

ii. If above PQL, what samples are affected?

Comments:

Not applicable

iii. Data quality or usability affected? Explain.

Comments:

Not applicable

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☐ Yes ☐ No Comments:

Not applicable

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ANCHORAGE, AK 2000 W INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

Amended Report

June 13, 2008

Nino Muniz
Oasis Environmental, Inc.
825 W 8th Ave, ste 200
Anchorage, AK/USA 99501-4427

RE: Pilot Point

Enclosed are the results of analyses for samples received by the laboratory on 05/22/08 17:29. The following list is a summary of the Work Orders contained in this report, generated on 06/13/08 10:03.

If you have any questions concerning this report, please feel free to contact me.

| Work Order | Project | ProjectNumber |
|---|---|---|
| ARE0067 | Pilot Point | 14-123 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

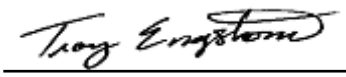
**Amended Report**

| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 10:03 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| S201SS | ARE0067-01 | Soil | 05/21/08 09:00 | 05/22/08 17:29 |
| S202SS | ARE0067-02 | Soil | 05/21/08 09:10 | 05/22/08 17:29 |
| S203SS | ARE0067-03 | Soil | 05/21/08 09:15 | 05/22/08 17:29 |
| S204SS | ARE0067-04 | Soil | 05/21/08 09:20 | 05/22/08 17:29 |
| S205SS | ARE0067-05 | Soil | 05/21/08 09:23 | 05/22/08 17:29 |
| Dup-01 | ARE0067-06 | Soil | 05/21/08 09:25 | 05/22/08 17:29 |
| S101SS | ARE0067-07 | Soil | 05/21/08 09:35 | 05/22/08 17:29 |
| S102SS | ARE0067-08 | Soil | 05/21/08 09:40 | 05/22/08 17:29 |
| S103SS | ARE0067-09 | Soil | 05/21/08 09:45 | 05/22/08 17:29 |
| S104SS | ARE0067-10 | Soil | 05/21/08 09:50 | 05/22/08 17:29 |
| S105SS | ARE0067-11 | Soil | 05/21/08 09:55 | 05/22/08 17:29 |
| Dup-02 | ARE0067-12 | Soil | 05/21/08 08:10 | 05/22/08 17:29 |
| TF01SS | ARE0067-13 | Soil | 05/21/08 10:30 | 05/22/08 17:29 |
| TF02SS | ARE0067-14 | Soil | 05/21/08 10:35 | 05/22/08 17:29 |
| TF03SS | ARE0067-15 | Soil | 05/21/08 10:40 | 05/22/08 17:29 |
| TF04SS | ARE0067-16 | Soil | 05/21/08 10:45 | 05/22/08 17:29 |
| TF05SS | ARE0067-17 | Soil | 05/21/08 10:50 | 05/22/08 17:29 |
| TF06SS | ARE0067-18 | Soil | 05/21/08 10:55 | 05/22/08 17:29 |
| TF07SS | ARE0067-19 | Soil | 05/21/08 11:00 | 05/22/08 17:29 |
| TF08SS | ARE0067-20 | Soil | 05/21/08 11:05 | 05/22/08 17:29 |
| TF09SS | ARE0067-21 | Soil | 05/21/08 11:10 | 05/22/08 17:29 |
| TF10SS | ARE0067-22 | Soil | 05/21/08 11:15 | 05/22/08 17:29 |
| TF11SS | ARE0067-23 | Soil | 05/21/08 11:20 | 05/22/08 17:29 |
| TF12SS | ARE0067-24 | Soil | 05/21/08 11:25 | 05/22/08 17:29 |
| TF13SS | ARE0067-25 | Soil | 05/21/08 11:30 | 05/22/08 17:29 |
| TF14SS | ARE0067-26 | Soil | 05/21/08 11:35 | 05/22/08 17:29 |
| TF15SS | ARE0067-27 | Soil | 05/21/08 11:40 | 05/22/08 17:29 |
| TF16SS | ARE0067-28 | Soil | 05/21/08 11:45 | 05/22/08 17:29 |
| TF17SS | ARE0067-29 | Soil | 05/21/08 11:50 | 05/22/08 17:29 |
| TF18SS | ARE0067-30 | Soil | 05/21/08 11:55 | 05/22/08 17:29 |
| TF19SS | ARE0067-31 | Soil | 05/21/08 12:00 | 05/22/08 17:29 |
| TF20SS | ARE0067-32 | Soil | 05/21/08 12:05 | 05/22/08 17:29 |
| Dup-03 | ARE0067-33 | Soil | 05/21/08 08:15 | 05/22/08 17:29 |
| Dup-04 | ARE0067-34 | Soil | 05/21/08 08:20 | 05/22/08 17:29 |

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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

**Amended Report**

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 10:03 |

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

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-06 (Dup-01)** | | **Soil** | | | | **Sampled: 05/21/08 09:25** | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 21.6 | mg/kg dry | 1x | 8050068 | 05/27/08 09:57 | 06/03/08 04:43 | JN | |
| **Residual Range Organics** | " | **67.0** | ----- | 54.0 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *100%* | | *50 - 150 %* | " | | | " | | |
| *Triacontane* | | | *96.9%* | | *50 - 150 %* | " | | | " | | |
| **ARE0067-12 (Dup-02)** | | **Soil** | | | | **Sampled: 05/21/08 08:10** | | | | | |
| **Diesel Range Organics** | AK102/103 | **10300** | ----- | 2110 | mg/kg dry | 100x | 8050068 | 05/27/08 09:57 | 06/03/08 15:34 | JN | **RL7** |
| **Residual Range Organics** | " | **57000** | ----- | 5270 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *184%* | | *50 - 150 %* | " | | | " | | ***Z3*** |
| *Triacontane* | | | *294%* | | *50 - 150 %* | " | | | " | | ***Z3*** |
| **ARE0067-33 (Dup-03)** | | **Soil** | | | | **Sampled: 05/21/08 08:15** | | | | | |
| **Diesel Range Organics** | AK102/103 | **134000** | ----- | 11400 | mg/kg dry | 100x | 8050077 | 05/30/08 09:15 | 06/03/08 16:06 | JN | **RL7** |
| **Residual Range Organics** | " | **62200** | ----- | 28600 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *4880%* | | *50 - 150 %* | " | | | " | | ***Z3, ZX*** |
| *Triacontane* | | | *3100%* | | *50 - 150 %* | " | | | " | | ***Z3, ZX*** |
| **ARE0067-34 (Dup-04)** | | **Soil** | | | | **Sampled: 05/21/08 08:20** | | | | | |
| **Diesel Range Organics** | AK102/103 | **9000** | ----- | 2920 | mg/kg dry | 100x | 8050077 | 05/30/08 09:15 | 06/03/08 16:37 | JN | **RL7** |
| **Residual Range Organics** | " | **17300** | ----- | 7290 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *157%* | | *50 - 150 %* | " | | | " | | ***Z3*** |
| *Triacontane* | | | *436%* | | *50 - 150 %* | " | | | " | | ***Z3*** |

TestAmerica Anchorage

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**Amended Report**

Troy J. Engstrom, Lab Director

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-01 (S201SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:00** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0112 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 05/31/08 16:41 | ds | |
| Toluene | " | ND | ----- | 0.0140 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0140 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0419 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.79 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *99.0%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *103%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *141%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.9%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-02 (S202SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:10** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0102 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 05/31/08 17:41 | ds | |
| Toluene | " | ND | ----- | 0.0127 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0127 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0382 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.55 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *100%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *97.8%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *128%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *94.2%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-03 (S203SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:15** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0111 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 05/31/08 18:15 | ds | |
| Toluene | " | ND | ----- | 0.0139 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0139 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0417 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.78 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *101%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *97.6%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *125%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.8%* | | *80 - 120 %* | " | | | " | | |

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Troy J. Engstrom, Lab Director

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ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

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|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-04 (S204SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:20** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0108 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 05/31/08 18:48 | ds | |
| Toluene | " | ND | ----- | 0.0135 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0135 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0404 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.69 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *101%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *97.2%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *129%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *94.8%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-05 (S205SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:23** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0107 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 05/31/08 19:21 | ds | |
| Toluene | " | ND | ----- | 0.0134 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0134 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0402 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.68 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *99.5%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *96.6%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *126%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.8%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-06 (Dup-01)** | | **Soil** | | | | **Sampled: 05/21/08 09:25** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0109 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 05/31/08 19:54 | ds | |
| Toluene | " | ND | ----- | 0.0137 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0137 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0411 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.74 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *99.4%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *97.6%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *129%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.6%* | | *80 - 120 %* | " | | | " | | |

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**Amended Report**

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|---|---|---|
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| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-07 (S101SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:35** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0109 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 05/31/08 20:28 | ds | |
| Toluene | " | ND | ----- | 0.0136 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0136 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0408 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.72 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *98.7%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *98.0%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *102%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.1%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-08 (S102SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:40** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0114 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 05/31/08 21:01 | ds | |
| Toluene | " | ND | ----- | 0.0143 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0143 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0429 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.86 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *100%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *98.0%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *104%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *94.1%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-09 (S103SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:45** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0127 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 05/31/08 21:35 | ds | |
| Toluene | " | ND | ----- | 0.0159 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0159 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0476 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 3.17 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *100%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *97.1%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *110%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *94.6%* | | *80 - 120 %* | " | | | " | | |

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CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-10 (S104SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:50** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0119 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 06/03/08 22:50 | ds | |
| Toluene | " | ND | ----- | 0.0148 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0148 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0445 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.97 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *114%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *83.8%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *124%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.2%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-11 (S105SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:55** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0116 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 06/01/08 00:54 | ds | |
| Toluene | " | ND | ----- | 0.0145 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0145 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0435 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.90 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *101%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *97.8%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *123%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.2%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-12 (Dup-02)** | | **Soil** | | | | **Sampled: 05/21/08 08:10** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0118 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 06/01/08 01:28 | ds | |
| Toluene | " | ND | ----- | 0.0148 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0148 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0444 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 2.96 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *101%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *104%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *101%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *94.6%* | | *80 - 120 %* | " | | | " | | |

TestAmerica Anchorage

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CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-13 (TF01SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:30** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0138 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 06/01/08 02:01 | ds | |
| Toluene | " | ND | ----- | 0.0172 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0172 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0517 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 3.45 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *104%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *101%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *122%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *94.4%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-14 (TF02SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:35** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0143 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 06/01/08 02:34 | ds | |
| Toluene | " | ND | ----- | 0.0178 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0178 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0535 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 3.56 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *102%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *96.6%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *125%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.4%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-15 (TF03SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:40** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0132 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 06/01/08 03:07 | ds | |
| Toluene | " | ND | ----- | 0.0166 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0166 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0497 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 3.31 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *102%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *97.4%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *121%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *92.4%* | | *80 - 120 %* | " | | | " | | |

TestAmerica Anchorage

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**Amended Report**

Troy J. Engstrom, Lab Director

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-16 (TF04SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:45** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0122 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 06/01/08 03:40 | ds | |
| Toluene | " | ND | ----- | 0.0153 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0153 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0459 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 3.06 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *102%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *96.7%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *124%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.0%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-17 (TF05SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:50** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0135 | mg/kg dry | 1.5x | 8050080 | 05/30/08 15:29 | 06/01/08 04:12 | ds | |
| Toluene | " | ND | ----- | 0.0168 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0168 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0505 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 3.37 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *102%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *96.7%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *127%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.0%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-18 (TF06SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:55** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0124 | mg/kg dry | 1.5x | 8060002 | 06/01/08 11:07 | 06/02/08 06:15 | ds | |
| Toluene | " | ND | ----- | 0.0154 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0154 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0463 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 3.09 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *99.6%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *97.8%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *120%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *91.5%* | | *80 - 120 %* | " | | | " | | |

TestAmerica Anchorage

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**Amended Report**

Troy J. Engstrom, Lab Director

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-19 (TF07SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:00** | | | | | |
| **Benzene** | EPA 8260B | **0.615** | ----- | 0.0179 | mg/kg dry | 1x | 8060002 | 06/01/08 11:07 | 06/02/08 06:48 | ds | |
| **Toluene** | " | **0.723** | ----- | 0.0224 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.0765** | ----- | 0.0224 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **0.568** | ----- | 0.0671 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **12.7** | ----- | 4.48 | " | " | " | " | " | ds | |
| *Surrogate(s):* *4-BFB* | | | *102%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *102%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *140%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.1%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-20 (TF08SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:05** | | | | | |
| **Benzene** | EPA 8260B | **0.253** | ----- | 0.0136 | mg/kg dry | 1x | 8060002 | 06/01/08 11:07 | 06/02/08 07:19 | ds | |
| **Toluene** | " | **0.639** | ----- | 0.0170 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.0703** | ----- | 0.0170 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **0.562** | ----- | 0.0510 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **7.17** | ----- | 3.40 | " | " | " | " | " | ds | |
| *Surrogate(s):* *4-BFB* | | | *103%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *96.8%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *105%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *91.6%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-21 (TF09SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:10** | | | | | |
| **Benzene** | EPA 8260B | **0.300** | ----- | 0.0178 | mg/kg dry | 0.751 x | 8060002 | 06/01/08 11:07 | 06/02/08 07:52 | ds | |
| **Toluene** | " | **0.737** | ----- | 0.0222 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.0801** | ----- | 0.0222 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **0.721** | ----- | 0.0667 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **11.2** | ----- | 4.45 | " | " | " | " | " | ds | |
| *Surrogate(s):* *4-BFB* | | | *101%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *96.5%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *102%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *91.2%* | | *80 - 120 %* | " | | | " | | |

TestAmerica Anchorage

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**Amended Report**

Troy J. Engstrom, Lab Director

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THE LEADER IN ENVIRONMENTAL TESTING

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ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-22 (TF10SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:15** | | | | | |
| **Benzene** | EPA 8260B | **0.519** | ----- | 0.0207 | mg/kg dry | 1x | 8060002 | 06/01/08 11:07 | 06/02/08 08:25 | ds | |
| **Toluene** | " | **1.49** | ----- | 0.0259 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.159** | ----- | 0.0259 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **1.48** | ----- | 0.0777 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **16.2** | ----- | 5.18 | " | " | " | " | " | ds | |
| *Surrogate(s):* *4-BFB* | | *102%* | | *80 - 120 %* | " | | | | " | | |
| *Dibromofluoromethane* | | *96.7%* | | *80 - 120 %* | " | | | | " | | |
| *a,a,a-TFT* | | *109%* | | *50 - 150 %* | " | | | | " | | |
| *Toluene-d8* | | *92.8%* | | *80 - 120 %* | " | | | | " | | |
| **ARE0067-23 (TF11SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:20** | | | | | |
| **Benzene** | EPA 8260B | **0.491** | ----- | 0.0221 | mg/kg dry | 1x | 8060002 | 06/01/08 11:07 | 06/02/08 08:57 | ds | |
| **Toluene** | " | **1.16** | ----- | 0.0277 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.130** | ----- | 0.0277 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **1.07** | ----- | 0.0830 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **13.4** | ----- | 5.53 | " | " | " | " | " | ds | |
| *Surrogate(s):* *4-BFB* | | *102%* | | *80 - 120 %* | " | | | | " | | |
| *Dibromofluoromethane* | | *96.4%* | | *80 - 120 %* | " | | | | " | | |
| *a,a,a-TFT* | | *92.1%* | | *50 - 150 %* | " | | | | " | | |
| *Toluene-d8* | | *91.3%* | | *80 - 120 %* | " | | | | " | | |
| **ARE0067-24 (TF12SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:25** | | | | | **RL7** |
| Benzene | EPA 8260B | ND | ----- | 0.0874 | mg/kg dry | 6.01x | 8060002 | 06/01/08 11:07 | 06/02/08 14:13 | ds | |
| **Toluene** | " | **0.129** | ----- | 0.109 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.304** | ----- | 0.109 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **3.37** | ----- | 0.328 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 21.9 | " | " | " | " | " | ds | |
| *Surrogate(s):* *4-BFB* | | *99.4%* | | *80 - 120 %* | " | | | | " | | |
| *Dibromofluoromethane* | | *98.1%* | | *80 - 120 %* | " | | | | " | | |
| *a,a,a-TFT* | | *66.9%* | | *50 - 150 %* | " | | | | " | | |
| *Toluene-d8* | | *100%* | | *80 - 120 %* | " | | | | " | | |

TestAmerica Anchorage

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**Amended Report**

Troy J. Engstrom, Lab Director

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ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-25 (TF13SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:30** | | | | | |
| **Benzene** | EPA 8260B | **0.153** | ----- | 0.0227 | mg/kg dry | 1x | 8060002 | 06/01/08 11:07 | 06/02/08 14:47 | ds | |
| **Toluene** | " | **0.476** | ----- | 0.0284 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.0709** | ----- | 0.0284 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **0.516** | ----- | 0.0851 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **5.69** | ----- | 5.67 | " | " | " | " | " | ds | |
| *Surrogate(s):* *4-BFB* | | | *102%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *93.0%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *104%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *98.5%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-26 (TF14SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:35** | | | | | |
| **Benzene** | EPA 8260B | **0.258** | ----- | 0.0189 | mg/kg dry | 1x | 8060002 | 06/01/08 11:07 | 06/02/08 15:20 | ds | |
| **Toluene** | " | **0.761** | ----- | 0.0236 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.0915** | ----- | 0.0236 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **0.693** | ----- | 0.0707 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **13.4** | ----- | 4.71 | " | " | " | " | " | ds | |
| *Surrogate(s):* *4-BFB* | | | *104%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *92.9%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *86.2%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *101%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-27 (TF15SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:40** | | | | | |
| **Benzene** | EPA 8260B | **0.279** | ----- | 0.0162 | mg/kg dry | 1x | 8060002 | 06/01/08 11:07 | 06/02/08 15:54 | ds | |
| **Toluene** | " | **0.789** | ----- | 0.0203 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.284** | ----- | 0.0203 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **2.31** | ----- | 0.0609 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **17.7** | ----- | 4.06 | " | " | " | " | " | ds | |
| *Surrogate(s):* *4-BFB* | | | *104%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *92.9%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *73.4%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *101%* | | *80 - 120 %* | " | | | " | | |

TestAmerica Anchorage

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**Amended Report**

Troy J. Engstrom, Lab Director

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ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-28 (TF16SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:45** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0119 | mg/kg dry | 1x | 8060002 | 06/01/08 11:07 | 06/02/08 16:27 | ds | |
| Toluene | " | ND | ----- | 0.0148 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0148 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0444 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **3.53** | ----- | 2.96 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *103%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *92.5%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *126%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *100%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-29 (TF17SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:50** | | | | | |
| **Benzene** | EPA 8260B | **0.252** | ----- | 0.0161 | mg/kg dry | 1x | 8060002 | 06/01/08 11:07 | 06/02/08 18:41 | ds | |
| **Toluene** | " | **0.977** | ----- | 0.0201 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.0783** | ----- | 0.0201 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **0.566** | ----- | 0.0603 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **12.7** | ----- | 4.02 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *102%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *92.8%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *91.7%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *100%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-30 (TF18SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:55** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0245 | mg/kg dry | 1x | 8060005 | 06/02/08 16:14 | 06/04/08 01:02 | ds | |
| Toluene | " | ND | ----- | 0.0306 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0306 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0918 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 6.12 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *114%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *83.8%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *144%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *92.7%* | | *80 - 120 %* | " | | | " | | |

TestAmerica Anchorage

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**Amended Report**

Troy J. Engstrom, Lab Director

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ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

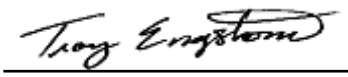
| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-31 (TF19SS)** | | **Soil** | | | | **Sampled: 05/21/08 12:00** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0139 | mg/kg dry | 1x | 8060005 | 06/02/08 16:14 | 06/04/08 01:35 | ds | |
| Toluene | " | ND | ----- | 0.0174 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0174 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0523 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 3.49 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *113%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *84.1%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *124%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *93.2%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-32 (TF20SS)** | | **Soil** | | | | **Sampled: 05/21/08 12:05** | | | | | |
| Benzene | EPA 8260B | ND | ----- | 0.0125 | mg/kg dry | 1x | 8060005 | 06/02/08 16:14 | 06/04/08 02:08 | ds | |
| Toluene | " | ND | ----- | 0.0157 | " | " | " | " | " | ds | |
| Ethylbenzene | " | ND | ----- | 0.0157 | " | " | " | " | " | ds | |
| Xylenes (total) | " | ND | ----- | 0.0470 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 3.13 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *113%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *83.1%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *125%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *92.8%* | | *80 - 120 %* | " | | | " | | |
| **ARE0067-33 (Dup-03)** | | **Soil** | | | | **Sampled: 05/21/08 08:15** | | | | | **RL3** |
| Benzene | EPA 8260B | ND | ----- | 0.205 | mg/kg dry | 15x | 8060005 | 06/02/08 16:14 | 06/04/08 02:40 | ds | |
| Toluene | " | ND | ----- | 0.256 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.363** | ----- | 0.256 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **4.04** | ----- | 0.767 | " | " | " | " | " | ds | |
| Gasoline Range Organics | " | ND | ----- | 51.1 | " | " | " | " | " | ds | |
| *Surrogate(s): 4-BFB* | | | *111%* | | *80 - 120 %* | " | | | " | | |
| *Dibromofluoromethane* | | | *84.6%* | | *80 - 120 %* | " | | | " | | |
| *a,a,a-TFT* | | | *110%* | | *50 - 150 %* | " | | | " | | |
| *Toluene-d8* | | | *92.8%* | | *80 - 120 %* | " | | | " | | |

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-34 (Dup-04)** | | **Soil** | | | **Sampled: 05/21/08 08:20** | | | | | | |
| **Benzene** | EPA 8260B | **0.124** | ----- | 0.0246 | mg/kg dry | 1x | 8060005 | 06/02/08 16:14 | 06/04/08 04:19 | ds | |
| **Toluene** | " | **0.360** | ----- | 0.0308 | " | " | " | " | " | ds | |
| **Ethylbenzene** | " | **0.0591** | ----- | 0.0308 | " | " | " | " | " | ds | |
| **Xylenes (total)** | " | **0.366** | ----- | 0.0923 | " | " | " | " | " | ds | |
| **Gasoline Range Organics** | " | **9.38** | ----- | 6.15 | " | " | " | " | " | ds | |
| *Surrogate(s):* *4-BFB* | | | *115%* | | *80 - 120 %* | " | | | | " | |
| *Dibromofluoromethane* | | | *86.8%* | | *80 - 120 %* | " | | | | " | |
| *a,a,a-TFT* | | | *94.7%* | | *50 - 150 %* | " | | | | " | |
| *Toluene-d8* | | | *93.6%* | | *80 - 120 %* | " | | | | " | |

TestAmerica Anchorage

Troy Engstrom

Troy J. Engstrom, Lab Director

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CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Physical Parameters by APHA/ASTM/EPA Methods

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-01 (S201SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:00** | | | | | |
| **Dry Weight** | TA-SOP | **87.3** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-02 (S202SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:10** | | | | | |
| **Dry Weight** | TA-SOP | **89.7** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-03 (S203SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:15** | | | | | |
| **Dry Weight** | TA-SOP | **93.4** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-04 (S204SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:20** | | | | | |
| **Dry Weight** | TA-SOP | **92.4** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-05 (S205SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:23** | | | | | |
| **Dry Weight** | TA-SOP | **93.8** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-06 (Dup-01)** | | **Soil** | | | | **Sampled: 05/21/08 09:25** | | | | | |
| **Dry Weight** | TA-SOP | **91.7** | ----- | 1.00 | % | 1x | 8050070 | 05/27/08 13:42 | 05/28/08 08:35 | DS | |
| **ARE0067-07 (S101SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:35** | | | | | |
| **Dry Weight** | TA-SOP | **93.1** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-08 (S102SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:40** | | | | | |
| **Dry Weight** | TA-SOP | **92.8** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-09 (S103SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:45** | | | | | |
| **Dry Weight** | TA-SOP | **91.2** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-10 (S104SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:50** | | | | | |
| **Dry Weight** | TA-SOP | **94.5** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-11 (S105SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:55** | | | | | |
| **Dry Weight** | TA-SOP | **93.1** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |

TestAmerica Anchorage

Troy Engstrom

Troy J. Engstrom, Lab Director

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**Amended Report**

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ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

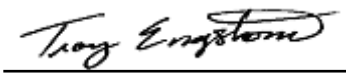
| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Physical Parameters by APHA/ASTM/EPA Methods

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-12 (Dup-02)** | | **Soil** | | | | **Sampled: 05/21/08 08:10** | | | | | |
| **Dry Weight** | TA-SOP | **92.7** | ----- | 1.00 | % | 1x | 8050070 | 05/27/08 13:42 | 05/28/08 08:35 | DS | |
| **ARE0067-13 (TF01SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:30** | | | | | |
| **Dry Weight** | TA-SOP | **85.1** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-14 (TF02SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:35** | | | | | |
| **Dry Weight** | TA-SOP | **84.4** | ----- | 1.00 | % | 1x | 8060047 | 06/12/08 13:54 | 06/12/08 14:06 | JPN | **A-01** |
| **ARE0067-15 (TF03SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:40** | | | | | |
| **Dry Weight** | TA-SOP | **89.2** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-16 (TF04SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:45** | | | | | |
| **Dry Weight** | TA-SOP | **90.9** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-17 (TF05SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:50** | | | | | |
| **Dry Weight** | TA-SOP | **87.0** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-18 (TF06SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:55** | | | | | |
| **Dry Weight** | TA-SOP | **89.1** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-19 (TF07SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:00** | | | | | |
| **Dry Weight** | TA-SOP | **79.7** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-20 (TF08SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:05** | | | | | |
| **Dry Weight** | TA-SOP | **87.6** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-21 (TF09SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:10** | | | | | |
| **Dry Weight** | TA-SOP | **67.5** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-22 (TF10SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:15** | | | | | |
| **Dry Weight** | TA-SOP | **72.0** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

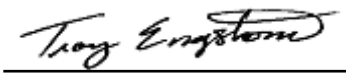
| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Physical Parameters by APHA/ASTM/EPA Methods

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-23 (TF11SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:20** | | | | | |
| **Dry Weight** | TA-SOP | **76.6** | ----- | 1.00 | % | 1x | 8060046 | 06/12/08 13:53 | 06/12/08 14:05 | JPN | **A-01** |
| **ARE0067-24 (TF12SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:25** | | | | | |
| **Dry Weight** | TA-SOP | **80.4** | ----- | 1.00 | % | 1x | 8060047 | 06/12/08 13:54 | 06/12/08 14:06 | JPN | **A-01** |
| **ARE0067-25 (TF13SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:30** | | | | | |
| **Dry Weight** | TA-SOP | **72.9** | ----- | 1.00 | % | 1x | 8060047 | 06/12/08 13:54 | 06/12/08 14:06 | JPN | **A-01** |
| **ARE0067-26 (TF14SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:35** | | | | | |
| **Dry Weight** | TA-SOP | **72.2** | ----- | 1.00 | % | 1x | 8060047 | 06/12/08 13:54 | 06/12/08 14:06 | JPN | **A-01** |
| **ARE0067-27 (TF15SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:40** | | | | | |
| **Dry Weight** | TA-SOP | **83.7** | ----- | 1.00 | % | 1x | 8060047 | 06/12/08 13:54 | 06/12/08 14:06 | JPN | **A-01** |
| **ARE0067-28 (TF16SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:45** | | | | | |
| **Dry Weight** | TA-SOP | **83.7** | ----- | 1.00 | % | 1x | 8060047 | 06/12/08 13:54 | 06/12/08 14:06 | JPN | **A-01** |
| **ARE0067-29 (TF17SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:50** | | | | | |
| **Dry Weight** | TA-SOP | **75.6** | ----- | 1.00 | % | 1x | 8060047 | 06/12/08 13:54 | 06/12/08 14:06 | JPN | **A-01** |
| **ARE0067-30 (TF18SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:55** | | | | | |
| **Dry Weight** | TA-SOP | **57.6** | ----- | 1.00 | % | 1x | 8060047 | 06/12/08 13:54 | 06/12/08 14:06 | JPN | **A-01** |
| **ARE0067-31 (TF19SS)** | | **Soil** | | | | **Sampled: 05/21/08 12:00** | | | | | |
| **Dry Weight** | TA-SOP | **78.6** | ----- | 1.00 | % | 1x | 8060047 | 06/12/08 13:54 | 06/12/08 14:06 | JPN | **A-01** |
| **ARE0067-32 (TF20SS)** | | **Soil** | | | | **Sampled: 05/21/08 12:05** | | | | | |
| **Dry Weight** | TA-SOP | **81.2** | ----- | 1.00 | % | 1x | 8060047 | 06/12/08 13:54 | 06/12/08 14:06 | JPN | **A-01** |
| **ARE0067-33 (Dup-03)** | | **Soil** | | | | **Sampled: 05/21/08 08:15** | | | | | |
| **Dry Weight** | TA-SOP | **82.8** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |

TestAmerica Anchorage



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|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point** | |
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| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 10:03 |

## Physical Parameters by APHA/ASTM/EPA Methods

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0067-34 (Dup-04)** | | **Soil** | | | | | **Sampled: 05/21/08 08:20** | | | | |
| **Dry Weight** | TA-SOP | **66.6** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |

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| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 10:03 |

## Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8050068** **Soil Preparation Method: EPA 3545**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (8050068-BLK1)** | | | | | | | **Extracted: 05/27/08 09:57** | | | | | | | |
| Diesel Range Organics | AK102/103 | ND | --- | 20.0 | mg/kg wet | 1x | -- | -- | -- | -- | -- | -- | 05/27/08 16:48 | |
| Residual Range Organics | " | ND | --- | 50.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 95.1%* | | | *Limits: 50-150%* | " | | | | | | | *05/27/08 16:48* | |
| *Triacontane* | | *88.4%* | | | *50-150%* | " | | | | | | | " | |
| **LCS (8050068-BS1)** | | | | | | | **Extracted: 05/27/08 09:57** | | | | | | | |
| Diesel Range Organics | AK102/103 | 127 | --- | 20.0 | mg/kg wet | 1x | -- | 128 | 99.8% | (75-125) | -- | -- | 05/27/08 17:20 | |
| Residual Range Organics | " | 122 | --- | 50.0 | " | " | -- | 129 | 94.5% | (60-120) | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 88.1%* | | | *Limits: 60-120%* | " | | | | | | | *05/27/08 17:20* | |
| *Triacontane* | | *90.8%* | | | *60-120%* | " | | | | | | | " | |
| **LCS Dup (8050068-BSD1)** | | | | | | | **Extracted: 05/27/08 09:57** | | | | | | | |
| Diesel Range Organics | AK102/103 | 126 | --- | 20.0 | mg/kg wet | 1x | -- | 128 | 98.7% | (75-125) | 1.06% | (20) | 05/27/08 17:54 | |
| Residual Range Organics | " | 120 | --- | 50.0 | " | " | -- | 129 | 93.2% | (60-120) | 1.38% | " | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 87.6%* | | | *Limits: 60-120%* | " | | | | | | | *05/27/08 17:54* | |
| *Triacontane* | | *88.7%* | | | *60-120%* | " | | | | | | | " | |
| **Duplicate (8050068-DUP1)** | | | | | | | **QC Source: ARE0054-08** **Extracted: 05/27/08 09:57** | | | | | | | |
| Diesel Range Organics | AK102/103 | ND | --- | 20.7 | mg/kg dry | 1x | 30.7 | -- | -- | -- | 54.4% | (20) | 05/27/08 18:27 | R2 |
| Residual Range Organics | " | ND | --- | 51.7 | " | " | 83.3 | -- | -- | -- | 57.2% | " | " | R2 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 89.5%* | | | *Limits: 50-150%* | " | | | | | | | *05/27/08 18:27* | |
| *Triacontane* | | *84.6%* | | | *50-150%* | " | | | | | | | " | |
| **Matrix Spike (8050068-MS1)** | | | | | | | **QC Source: ARE0054-08** **Extracted: 05/27/08 09:57** | | | | | | | |
| Diesel Range Organics | AK102/103 | 143 | --- | 20.2 | mg/kg dry | 1x | 30.7 | 129 | 87.2% | (75-125) | -- | -- | 05/27/08 19:00 | |
| Residual Range Organics | " | 148 | --- | 50.5 | " | " | 83.3 | 130 | 50.0% | (60-150) | -- | -- | " | M8 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 82.8%* | | | *Limits: 50-150%* | " | | | | | | | *05/27/08 19:00* | |
| *Triacontane* | | *102%* | | | *50-150%* | " | | | | | | | " | |
| **Matrix Spike Dup (8050068-MSD1)** | | | | | | | **QC Source: ARE0054-08** **Extracted: 05/27/08 09:57** | | | | | | | |
| Diesel Range Organics | AK102/103 | 151 | --- | 20.3 | mg/kg dry | 1x | 30.7 | 130 | 92.5% | (75-125) | 5.20% | (25) | 05/27/08 19:33 | |
| Residual Range Organics | " | 159 | --- | 50.8 | " | " | 83.3 | 131 | 57.5% | (60-150) | 6.75% | " | " | M8 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 89.8%* | | | *Limits: 50-150%* | " | | | | | | | *05/27/08 19:33* | |
| *Triacontane* | | *99.0%* | | | *50-150%* | " | | | | | | | " | |

TestAmerica Anchorage

Troy Engstrom

Troy J. Engstrom, Lab Director

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**Amended Report**

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8050077** **Soil Preparation Method: EPA 3545**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (8050077-BLK1)** | | | | | | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | ND | --- | 20.0 | mg/kg wet | 1x | -- | -- | -- | -- | -- | -- | 06/03/08 10:09 | |
| Residual Range Organics | " | ND | --- | 50.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 97.0%* | | | *Limits: 50-150%* | " | | | | | | | *06/03/08 10:09* | |
| *Triacontane* | | *91.5%* | | | *50-150%* | " | | | | | | | " | |
| **LCS (8050077-BS1)** | | | | | | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | 127 | --- | 20.0 | mg/kg wet | 1x | -- | 128 | 100% | (75-125) | -- | -- | 06/03/08 10:42 | |
| Residual Range Organics | " | 118 | --- | 50.0 | " | " | -- | 129 | 92.0% | (60-120) | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 96.6%* | | | *Limits: 60-120%* | " | | | | | | | *06/03/08 10:42* | |
| *Triacontane* | | *99.9%* | | | *60-120%* | " | | | | | | | " | |
| **LCS Dup (8050077-BSD1)** | | | | | | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | 121 | --- | 20.0 | mg/kg wet | 1x | -- | 128 | 94.9% | (75-125) | 5.23% | (20) | 06/03/08 11:15 | |
| Residual Range Organics | " | 113 | --- | 50.0 | " | " | -- | 129 | 87.7% | (60-120) | 4.77% | " | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 92.7%* | | | *Limits: 60-120%* | " | | | | | | | *06/03/08 11:15* | |
| *Triacontane* | | *97.2%* | | | *60-120%* | " | | | | | | | " | |
| **Duplicate (8050077-DUP1)** | | | | | **QC Source: ARE0068-01** | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | 7310 | --- | 1880 | mg/kg dry | 100x | 8570 | -- | -- | -- | 15.9% | (20) | 06/04/08 12:29 | RL7 |
| Residual Range Organics | " | 38900 | --- | 4700 | " | " | 44300 | -- | -- | -- | 12.9% | " | " | RL7 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 178%* | | | *Limits: 50-150%* | " | | | | | | | *06/04/08 12:29* | *Z3, ZX* |
| *Triacontane* | | *469%* | | | *50-150%* | " | | | | | | | " | *Z3, ZX* |
| **Matrix Spike (8050077-MS1)** | | | | | **QC Source: ARE0068-01** | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | 9860 | --- | 2070 | mg/kg dry | 100x | 8570 | 132 | 974% | (75-125) | -- | -- | 06/04/08 13:33 | MHA, RL7 |
| Residual Range Organics | " | 48000 | --- | 5190 | " | " | 44300 | 134 | 2790% | (60-150) | -- | -- | " | MHA, RL7 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 360%* | | | *Limits: 50-150%* | " | | | | | | | *06/04/08 13:33* | *Z3, ZX* |
| *Triacontane* | | *454%* | | | *50-150%* | " | | | | | | | " | *Z3, ZX* |
| **Matrix Spike Dup (8050077-MSD1)** | | | | | **QC Source: ARE0068-01** | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | 10000 | --- | 1930 | mg/kg dry | 100x | 8570 | 123 | 1180% | (75-125) | 1.64% | (25) | 06/04/08 14:05 | MHA, RL7 |
| Residual Range Organics | " | 50600 | --- | 4830 | " | " | 44300 | 124 | 5040% | (60-150) | 5.15% | " | " | MHA, RL7 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 244%* | | | *Limits: 50-150%* | " | | | | | | | *06/04/08 14:05* | *Z3, ZX* |
| *Triacontane* | | *696%* | | | *50-150%* | " | | | | | | | " | *Z3, ZX* |

TestAmerica Anchorage

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Troy J. Engstrom, Lab Director

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ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8050080** **Soil Preparation Method: EPA 5035**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (8050080-BLK1)** | | | | | | | | **Extracted: 05/30/08 15:29** | | | | | | |
| Benzene | EPA 8260B | ND | --- | 0.0133 | mg/kg wet | 1x | -- | -- | -- | -- | -- | -- | 05/31/08 14:27 | |
| Toluene | " | ND | --- | 0.0166 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Ethylbenzene | " | ND | --- | 0.0166 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Xylenes (total) | " | ND | --- | 0.0500 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Gasoline Range Organics | " | ND | --- | 3.33 | " | " | -- | -- | -- | -- | -- | -- | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 99.9%* | | | *Limits: 80-120%* | " | | | | | | | *05/31/08 14:27* | |
| *Dibromofluoromethane* | | *95.8%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *121%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *94.2%* | | | *80-120%* | " | | | | | | | " | |
| **LCS (8050080-BS1)** | | | | | | | | **Extracted: 05/30/08 15:29** | | | | | | |
| Benzene | EPA 8260B | 0.271 | --- | 0.0133 | mg/kg wet | 1x | -- | 0.264 | 103% | (80-120) | -- | -- | 05/31/08 13:21 | |
| Toluene | " | 1.84 | --- | 0.0166 | " | " | -- | 1.94 | 95.0% | " | -- | -- | " | |
| Ethylbenzene | " | 0.377 | --- | 0.0166 | " | " | -- | 0.404 | 93.4% | " | -- | -- | " | |
| Xylenes (total) | " | 2.22 | --- | 0.0500 | " | " | -- | 2.32 | 96.0% | " | -- | -- | " | |
| Gasoline Range Organics | " | 23.4 | --- | 3.33 | " | " | -- | 22.0 | 106% | (60-120) | -- | -- | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 102%* | | | *Limits: 80-120%* | " | | | | | | | *05/31/08 13:21* | |
| *Dibromofluoromethane* | | *95.8%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *113%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *94.4%* | | | *80-120%* | " | | | | | | | " | |
| **LCS Dup (8050080-BSD1)** | | | | | | | | **Extracted: 05/30/08 15:29** | | | | | | |
| Benzene | EPA 8260B | 0.291 | --- | 0.0133 | mg/kg wet | 1x | -- | 0.264 | 110% | (80-120) | 7.12% | (25) | 05/31/08 13:54 | |
| Toluene | " | 1.96 | --- | 0.0166 | " | " | -- | 1.94 | 101% | " | 6.26% | " | " | |
| Ethylbenzene | " | 0.399 | --- | 0.0166 | " | " | -- | 0.404 | 98.7% | " | 5.49% | " | " | |
| Xylenes (total) | " | 2.37 | --- | 0.0500 | " | " | -- | 2.32 | 102% | " | 6.24% | " | " | |
| Gasoline Range Organics | " | 25.4 | --- | 3.33 | " | " | -- | 22.0 | 116% | (60-120) | 8.46% | (20) | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 101%* | | | *Limits: 80-120%* | " | | | | | | | *05/31/08 13:54* | |
| *Dibromofluoromethane* | | *95.6%* | | | *80-120%* | " | | | | | | | " | |
| *Toluene-d8* | | *93.6%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *120%* | | | *50-150%* | " | | | | | | | " | |

TestAmerica Anchorage

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**Amended Report**

Troy J. Engstrom, Lab Director

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ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8050080** **Soil Preparation Method: EPA 5035**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Duplicate (8050080-DUP1)** | | | | | **QC Source: ARE0067-17** | | | | **Extracted: 05/30/08 15:29** | | | | | |
| Gasoline Range Organics | EPA 8260B | ND | --- | 3.37 | mg/kg dry | 1.5x | ND | -- | -- | -- | NR | (20) | 06/01/08 04:45 | |
| *Surrogate(s): 4-BFB* | | *Recovery: 101%* | | | *Limits: 80-120%* | " | | | | | | | *06/01/08 04:45* | |
| *Dibromofluoromethane* | | *97.4%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *127%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *94.1%* | | | *80-120%* | " | | | | | | | " | |
| **Matrix Spike (8050080-MS1)** | | | | | **QC Source: ARE0067-17** | | | | **Extracted: 05/30/08 15:29** | | | | | |
| Benzene | EPA 8260B | 0.751 | --- | 0.0135 | mg/kg dry | 1.5x | ND | 0.540 | 139% | (80-120) | -- | -- | 06/01/08 05:23 | |
| Toluene | " | 0.686 | --- | 0.0168 | " | " | ND | 0.517 | 133% | " | -- | -- | " | |
| Ethylbenzene | " | 0.694 | --- | 0.0168 | " | " | ND | 0.519 | 134% | " | -- | -- | " | |
| Xylenes (total) | " | 2.21 | --- | 0.0505 | " | " | ND | 1.56 | 141% | " | -- | -- | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 102%* | | | *Limits: 80-120%* | " | | | | | | | *06/01/08 05:23* | |
| *Dibromofluoromethane* | | *98.4%* | | | *80-120%* | " | | | | | | | " | |
| *Toluene-d8* | | *92.8%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *127%* | | | *50-150%* | " | | | | | | | " | |
| **Matrix Spike Dup (8050080-MSD1)** | | | | | **QC Source: ARE0067-17** | | | | **Extracted: 05/30/08 15:29** | | | | | M7 |
| Benzene | EPA 8260B | 0.879 | --- | 0.0135 | mg/kg dry | 1.5x | ND | 0.540 | 163% | (80-120) | 15.6% | (25) | 06/01/08 05:55 | |
| Toluene | " | 0.808 | --- | 0.0168 | " | " | ND | 0.517 | 156% | " | 16.3% | " | " | |
| Ethylbenzene | " | 0.828 | --- | 0.0168 | " | " | ND | 0.519 | 160% | " | 17.7% | " | " | |
| Xylenes (total) | " | 2.63 | --- | 0.0505 | " | " | ND | 1.56 | 169% | " | 17.5% | " | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 101%* | | | *Limits: 80-120%* | " | | | | | | | *06/01/08 05:55* | |
| *Dibromofluoromethane* | | *97.4%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *127%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *93.8%* | | | *80-120%* | " | | | | | | | " | |

TestAmerica Anchorage

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Troy J. Engstrom, Lab Director

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ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8060002** **Soil Preparation Method: EPA 5035**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (8060002-BLK1)** | | | | | | | **Extracted: 06/01/08 11:07** | | | | | | | |
| Benzene | EPA 8260B | ND | --- | 0.0133 | mg/kg wet | 1x | -- | -- | -- | -- | -- | -- | 06/02/08 05:42 | |
| Toluene | " | ND | --- | 0.0166 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Ethylbenzene | " | ND | --- | 0.0166 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Xylenes (total) | " | ND | --- | 0.0500 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Gasoline Range Organics | " | ND | --- | 3.33 | " | " | -- | -- | -- | -- | -- | -- | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 100%* | | | *Limits: 80-120%* | " | | | | | | | *06/02/08 05:42* | |
| *Dibromofluoromethane* | | *97.4%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *118%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *91.8%* | | | *80-120%* | " | | | | | | | " | |
| **LCS (8060002-BS1)** | | | | | | | **Extracted: 06/01/08 11:07** | | | | | | | |
| Benzene | EPA 8260B | 0.285 | --- | 0.0133 | mg/kg wet | 1x | -- | 0.264 | 108% | (80-120) | -- | -- | 06/02/08 04:27 | |
| Toluene | " | 1.87 | --- | 0.0166 | " | " | -- | 1.94 | 96.5% | " | -- | -- | " | |
| Ethylbenzene | " | 0.394 | --- | 0.0166 | " | " | -- | 0.404 | 97.5% | " | -- | -- | " | |
| Xylenes (total) | " | 2.34 | --- | 0.0500 | " | " | -- | 2.32 | 101% | " | -- | -- | " | |
| Gasoline Range Organics | " | 26.2 | --- | 3.33 | " | " | -- | 22.0 | 119% | (60-120) | -- | -- | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 101%* | | | *Limits: 80-120%* | " | | | | | | | *06/02/08 04:27* | |
| *Dibromofluoromethane* | | *99.1%* | | | *80-120%* | " | | | | | | | " | |
| *Toluene-d8* | | *92.5%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *116%* | | | *50-150%* | " | | | | | | | " | |
| **LCS Dup (8060002-BSD1)** | | | | | | | **Extracted: 06/01/08 11:07** | | | | | | | |
| Benzene | EPA 8260B | 0.289 | --- | 0.0133 | mg/kg wet | 1x | -- | 0.264 | 109% | (80-120) | 1.39% | (25) | 06/02/08 05:00 | |
| Toluene | " | 1.92 | --- | 0.0166 | " | " | -- | 1.94 | 99.2% | " | 2.67% | " | " | |
| Ethylbenzene | " | 0.396 | --- | 0.0166 | " | " | -- | 0.404 | 98.0% | " | 0.506% | " | " | |
| Xylenes (total) | " | 2.36 | --- | 0.0500 | " | " | -- | 2.32 | 102% | " | 1.11% | " | " | |
| Gasoline Range Organics | " | 26.3 | --- | 3.33 | " | " | -- | 22.0 | 120% | (60-120) | 0.520% | (20) | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 100%* | | | *Limits: 80-120%* | " | | | | | | | *06/02/08 05:00* | |
| *Dibromofluoromethane* | | *98.0%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *120%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *92.2%* | | | *80-120%* | " | | | | | | | " | |

TestAmerica Anchorage

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CS Approval Number: UST-067

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| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8060002** **Soil Preparation Method: EPA 5035**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Duplicate (8060002-DUP1)** | | | | | **QC Source: ARE0067-28** | | | | **Extracted: 06/01/08 11:07** | | | | | |
| Gasoline Range Organics | EPA 8260B | 4.95 | --- | 2.96 | mg/kg dry | 1x | 3.53 | -- | -- | -- | 33.5% | (20) | 06/02/08 17:01 | R2 |
| *Surrogate(s): 4-BFB* | | *Recovery: 102%* | | | *Limits: 80-120%* | " | | | | | | | *06/02/08 17:01* | |
| *Dibromofluoromethane* | | *92.7%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *126%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *99.2%* | | | *80-120%* | " | | | | | | | " | |

**QC Batch: 8060005** **Soil Preparation Method: EPA 5035**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (8060005-BLK1)** | | | | | | | | | **Extracted: 06/02/08 16:14** | | | | | |
| Benzene | EPA 8260B | ND | --- | 0.0133 | mg/kg wet | 1x | -- | -- | -- | -- | -- | -- | 06/04/08 00:29 | |
| Toluene | " | ND | --- | 0.0166 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Ethylbenzene | " | ND | --- | 0.0166 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Xylenes (total) | " | ND | --- | 0.0500 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Gasoline Range Organics | " | ND | --- | 3.33 | " | " | -- | -- | -- | -- | -- | -- | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 112%* | | | *Limits: 80-120%* | " | | | | | | | *06/04/08 00:29* | |
| *Dibromofluoromethane* | | *83.2%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *119%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *93.9%* | | | *80-120%* | " | | | | | | | " | |
| **LCS (8060005-BS1)** | | | | | | | | | **Extracted: 06/02/08 16:14** | | | | | |
| Benzene | EPA 8260B | 0.237 | --- | 0.0133 | mg/kg wet | 1x | -- | 0.264 | 89.8% | (80-120) | -- | -- | 06/03/08 23:23 | |
| Toluene | " | 1.82 | --- | 0.0166 | " | " | -- | 1.94 | 94.0% | " | -- | -- | " | |
| Ethylbenzene | " | 0.368 | --- | 0.0166 | " | " | -- | 0.404 | 91.2% | " | -- | -- | " | |
| Xylenes (total) | " | 2.21 | --- | 0.0500 | " | " | -- | 2.32 | 95.6% | " | -- | -- | " | |
| Gasoline Range Organics | " | 23.9 | --- | 3.33 | " | " | -- | 22.0 | 109% | (60-120) | -- | -- | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 112%* | | | *Limits: 80-120%* | " | | | | | | | *06/03/08 23:23* | |
| *Dibromofluoromethane* | | *84.8%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *133%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *92.8%* | | | *80-120%* | " | | | | | | | " | |

TestAmerica Anchorage

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**Amended Report**

Troy J. Engstrom, Lab Director

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | |
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: Nino Muniz | 06/13/08 10:03 |

## Selected Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8060005** **Soil Preparation Method: EPA 5035**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LCS Dup (8060005-BSD1)** | | | | | | | **Extracted: 06/02/08 16:14** | | | | | | | |
| Benzene | EPA 8260B | 0.242 | --- | 0.0133 | mg/kg wet | 1x | -- | 0.264 | 91.8% | (80-120) | 2.22% | (25) | 06/03/08 23:56 | |
| Toluene | " | 1.85 | --- | 0.0166 | " | " | -- | 1.94 | 95.8% | " | 1.85% | " | " | |
| Ethylbenzene | " | 0.372 | --- | 0.0166 | " | " | -- | 0.404 | 92.1% | " | 0.990% | " | " | |
| Xylenes (total) | " | 2.25 | --- | 0.0500 | " | " | -- | 2.32 | 97.1% | " | 1.55% | " | " | |
| Gasoline Range Organics | " | 22.5 | --- | 3.33 | " | " | -- | 22.0 | 102% | (60-120) | 6.29% | (20) | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 113%* | | | *Limits: 80-120%* | " | | | | | | | *06/03/08 23:56* | |
| *Dibromofluoromethane* | | *84.1%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *132%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *94.7%* | | | *80-120%* | " | | | | | | | " | |
| **Duplicate (8060005-DUP1)** | | | | | **QC Source: ARE0061-15** | | **Extracted: 06/02/08 16:14** | | | | | | | |
| Gasoline Range Organics | EPA 8260B | ND | --- | 8.66 | mg/kg dry | 1x | ND | -- | -- | -- | 20.5% | (20) | 06/04/08 16:50 | R2 |
| *Surrogate(s): 4-BFB* | | *Recovery: 110%* | | | *Limits: 80-120%* | " | | | | | | | *06/04/08 16:50* | |
| *Dibromofluoromethane* | | *83.2%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *120%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *94.6%* | | | *80-120%* | " | | | | | | | " | |
| **Matrix Spike (8060005-MS1)** | | | | | **QC Source: ARE0061-15** | | **Extracted: 06/02/08 16:14** | | | | | | | M7 |
| Benzene | EPA 8260B | 1.88 | --- | 0.0347 | mg/kg dry | 1x | ND | 1.17 | 161% | (80-120) | -- | -- | 06/04/08 17:23 | |
| Toluene | " | 1.98 | --- | 0.0433 | " | " | ND | 1.12 | 177% | " | -- | -- | " | |
| Ethylbenzene | " | 2.02 | --- | 0.0433 | " | " | ND | " | 180% | " | -- | -- | " | |
| Xylenes (total) | " | 6.50 | --- | 0.130 | " | " | ND | 3.38 | 192% | " | -- | -- | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 110%* | | | *Limits: 80-120%* | " | | | | | | | *06/04/08 17:23* | |
| *Dibromofluoromethane* | | *82.4%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *122%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *92.6%* | | | *80-120%* | " | | | | | | | " | |
| **Matrix Spike Dup (8060005-MSD1)** | | | | | **QC Source: ARE0061-15** | | **Extracted: 06/02/08 16:14** | | | | | | | M7 |
| Benzene | EPA 8260B | 1.50 | --- | 0.0347 | mg/kg dry | 1x | ND | 1.17 | 128% | (80-120) | 22.7% | (25) | 06/04/08 17:56 | |
| Toluene | " | 1.60 | --- | 0.0433 | " | " | ND | 1.12 | 143% | " | 21.4% | " | " | |
| Ethylbenzene | " | 1.62 | --- | 0.0433 | " | " | ND | " | 144% | " | 22.0% | " | " | |
| Xylenes (total) | " | 5.20 | --- | 0.130 | " | " | ND | 3.38 | 154% | " | 22.2% | " | " | |
| *Surrogate(s): 4-BFB* | | *Recovery: 110%* | | | *Limits: 80-120%* | " | | | | | | | *06/04/08 17:56* | |
| *Dibromofluoromethane* | | *83.5%* | | | *80-120%* | " | | | | | | | " | |
| *a,a,a-TFT* | | *118%* | | | *50-150%* | " | | | | | | | " | |
| *Toluene-d8* | | *93.4%* | | | *80-120%* | " | | | | | | | " | |

TestAmerica Anchorage

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**Amended Report**

Troy J. Engstrom, Lab Director

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ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 10:03 |

## Physical Parameters by APHA/ASTM/EPA Methods - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8050070** **Soil Preparation Method: *** DEFAULT PREP**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Duplicate (8050070-DUP1)** | | | | | **QC Source: ARE0052-01** | | | | **Extracted: 05/27/08 13:42** | | | | | |
| Dry Weight | TA-SOP | 95.5 | --- | 1.00 | % | 1x | 96.1 | -- | -- | -- | 0.643% | (25) | 05/28/08 08:35 | |

**QC Batch: 8060003** **Soil Preparation Method: *** DEFAULT PREP**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Duplicate (8060003-DUP1)** | | | | | **QC Source: ARE0068-05** | | | | **Extracted: 06/02/08 14:38** | | | | | |
| Dry Weight | TA-SOP | 93.3 | --- | 1.00 | % | 1x | 93.1 | -- | -- | -- | 0.190% | (25) | 06/03/08 14:05 | |

**QC Batch: 8060046** **Soil Preparation Method: *** DEFAULT PREP**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Duplicate (8060046-DUP1)** | | | | | **QC Source: ARE0067-11** | | | | **Extracted: 06/12/08 13:53** | | | | | A-01 |
| Dry Weight | TA-SOP | 93.3 | --- | 1.00 | % | 1x | 93.1 | -- | -- | -- | 0.215% | (25) | 06/12/08 14:05 | |

**QC Batch: 8060047** **Soil Preparation Method: *** DEFAULT PREP**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Duplicate (8060047-DUP1)** | | | | | **QC Source: ARE0067-14** | | | | **Extracted: 06/12/08 13:54** | | | | | |
| Dry Weight | TA-SOP | 85.8 | --- | 1.00 | % | 1x | 84.4 | -- | -- | -- | 1.65% | (25) | 06/12/08 14:06 | A-01 |

TestAmerica Anchorage

Troy Engstrom

Troy J. Engstrom, Lab Director

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ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

**Amended Report**

| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 10:03 |

## Notes and Definitions

Report Specific Notes:

| | | |
|---|---|---|
| A-01 | - | No dry weight container available for analysis. Dry weight data is from corresponding sample IDs in work order ARE0068 per client request. |
| M7 | - | The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS). |
| M8 | - | The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS). |
| MHA | - | Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS). |
| R2 | - | The RPD exceeded the acceptance limit. |
| RL3 | - | Reporting limit raised due to high concentrations of non-target analytes. |
| RL7 | - | Sample required dilution due to high concentrations of target analyte. |
| Z3 | - | The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information. |
| ZX | - | Due to sample matrix effects, the surrogate recovery was outside the acceptance limits. |

Laboratory Reporting Conventions:

| | | |
|---|---|---|
| DET | - | Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only. |
| ND | - | Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate). |
| NR/NA | - | Not Reported / Not Available |
| dry | - | Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight. |
| wet | - | Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis. |
| RPD | - | RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries). |
| MRL | - | METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table. |
| MDL* | - | METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results. |
| Dil | - | Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data. |
| Reporting Limits | - | Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable. |
| Electronic Signature | - | Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy.* Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature. |

TestAmerica
ANALYTICAL TESTING CORPORATION

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9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

# CHAIN OF CUSTODY REPORT

Work Order #: AREOO67

CLIENT: ADEC

INVOICE TO: OASIS ENVIRONMENTAL

REPORT TO: OASIS ENVIRONMENTAL (NINO MUNIZ)
ADDRESS: 825 W. 8TH AVE, ANCHORAGE, AK. 99501
PHONE: 258-4880 FAX: 258-4530

P.O. NUMBER:

PROJECT NAME: PILOT POINT - ALASKA PACKERS
PROJECT NUMBER: 14-123
SAMPLED BY: C. SHORT, Z. KIRK

**TURNAROUND REQUEST**
in Business Days *
Organic & Inorganic Analyses: [10] STD. [7] [5] [4] [3] [2] [1] [<1]
Petroleum Hydrocarbon Analyses: [X] STD. [4] [3] [2] [1] [<1]
[OTHER] Specify:
* Turnaround Requests less than standard may incur Rush Charges

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | PRESERVATIVE: MeOH | REQUESTED ANALYSES: GRO/AK101 BTEX/8021B | DRO/AK102 REO/AK103 | MATRIX (W, S, O) | # OF CONT. | LOCATION / COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|---|
| 1 | S20155 | 0900 / 052108 | X | | | SOIL | 1 | | 01 |
| 2 | S20255 | 0910 | | | | | | | 02 |
| 3 | S20355 | 0915 | | | | | | | 03 |
| 4 | S20455 | 0920 | | | | | | | 04 |
| 5 | S20555 | 0923 | | | | | | | 05 |
| 6 | DUP-01 | 0925 | | X | | | 2 | | 06 |
| 7 | S10155 | 0935 | | | | | | | 07 |
| 8 | S10255 | 0940 | | | | | | | 08 |
| 9 | S10355 | 0945 | | | | | | | 09 |
| 10 | S10455 | 0950 | | | | | | | 10 |

RELEASED BY: [signature] DATE: 052208
PRINT NAME: ALEXANDER SHORT FIRM: OASIS ENV. TIME: 1700

RECEIVED BY: [signature] DATE: 05/22/08
PRINT NAME: Shannon Drake FIRM: Anchorage TIME: 0 1729

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

#1 TEMP: 5.9 PAGE 1 OF 4

#2 1.9 05/23/08

TAL-1000 0907

# TestAmerica
ANALYTICAL TESTING CORPORATION


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11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210


## CHAIN OF CUSTODY REPORT

**Work Order #:** ARE0067

CLIENT: ADEC

REPORT TO: OASIS ENVIRONMENTAL (NINO MUNIZ)
ADDRESS: 825 W. 8TH AVE.
ANCHORAGE, AK. 99501
PHONE: 258-4880 FAX: 258-4330

INVOICE TO: OASIS ENVIRONMENTAL

P.O. NUMBER:

PROJECT NAME: PILOT POINT - ALASKA PACKERS
PROJECT NUMBER: 14-123
SAMPLED BY: C. SHORT, Z. KIRK

**TURNAROUND REQUEST**
in Business Days *
Organic & Inorganic Analyses: [10] STD. [7] [5] [4] [3] [2] [1] [<1]
Petroleum Hydrocarbon Analyses: [X] STD. [4] [3] [2] [1] [<1]
[OTHER] Specify:
* Turnaround Requests less than standard may incur Rush Charges

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | PRESERVATIVE: MeOH | REQUESTED ANALYSES: GRO-AK101 / BTEX-8021B | DRO/RRO AK102 | DRO/RRO AK103 | MATRIX (W, S, O) | # OF CONT. | LOCATION / COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | S10SS | 052108 / 0955 | X | | | | SOIL | 1 | | 11 |
| 2 | DUP-02 | 0810 | X | X | | | | 2 | | 12 |
| 3 | TF01SS | 1030 | X | | | | | 1 | | 13 |
| 4 | TF02SS | 1035 | X | | | | | | | 14 |
| 5 | TF03SS | 1040 | X | | | | | | | 15 |
| 6 | TF04SS | 1045 | X | | | | | | | 16 |
| 7 | TF05SS | 1050 | X | | | | | 3 | MS/MSD | 17 |
| 8 | TF06SS | 1055 | X | | | | | | | 11 |
| 9 | TF07SS | 1100 | X | | | | | | | 19 |
| 10 | TF08SS | 1105 | X | | | | | | | 20 |

RELEASED BY: [signature] DATE: 052208
PRINT NAME: CHARLES SHORT FIRM: OASIS ENV. TIME: 1700

RECEIVED BY: [signature] DATE: 05/22/08
PRINT NAME: Johanna Dew FIRM: Anchorage TIME: 1727

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

TEMP: 5.9



TAL-1000 0907

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2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

# CHAIN OF CUSTODY REPORT

Work Order #: ARE0067

CLIENT: ADEC

INVOICE TO: OASIS ENVIRONMENTAL

REPORT TO: OASIS ENVIRONMENTAL (NINO MUNIZ)
ADDRESS: 825 W. 8TH AVE.
ANCHORAGE, AK. 99501

PHONE: 258-4880 FAX: 258-4330

P.O. NUMBER:

PROJECT NAME: PILOT POINT - ALASKA PACKERS

PROJECT NUMBER: 14-123

SAMPLED BY: C. SHORT, Z. KIRK

**TURNAROUND REQUEST**
in Business Days *
Organic & Inorganic Analyses: [10] STD. [7] [5] [4] [3] [2] [1] [<1]
Petroleum Hydrocarbon Analyses: [X] STD. [4] [3] [2] [1] [<1]
[OTHER] Specify:
* Turnaround Requests less than standard may incur Rush Charges

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | PRESERVATIVE: MeOH | REQUESTED ANALYSES: GRO/AK101 BTEX/8021B | MATRIX (W, S, O) | # OF CONT. | LOCATION / COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|
| 1 | TF0955 | 052108 / 1110 | | X | SOIL | 1 | | 21 |
| 2 | TF1055 | 1115 | | | | | | 22 |
| 3 | TF1155 | 1120 | | | | | | 23 |
| 4 | TF1255 | 1125 | | | | | | 24 |
| 5 | TF1355 | 1130 | | | | | | 25 |
| 6 | TF1455 | 1135 | | | | | | 26 |
| 7 | TF1555 | 1140 | | | | | | 27 |
| 8 | TF1655 | 1145 | | | | | | 28 |
| 9 | TF1755 | 1150 | | | | | | 29 |
| 10 | TF1855 | 1155 | | | | | | 30 |

RELEASED BY: [signature] DATE: 052208
PRINT NAME: CHARLOTTE SHORT FIRM: OASIS ENV. TIME: 1700

RECEIVED BY: [signature] DATE: 05/22/08
PRINT NAME: Johanna Drehr FIRM: Anchorage TIME: 1729

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

TEMP: 5.9

TestAmerica
ANALYTICAL TESTING CORPORATION

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210
11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

# CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: ADEC

INVOICE TO: OASIS ENVIRONMENTAL

REPORT TO: OASIS ENVIRONMENTAL
ADDRESS: 825 W. 8TH AVE, ANCHORAGE, AK. 99501

PHONE: 258-4880 FAX: 258-4330

P.O. NUMBER:

PROJECT NAME: PILOT POINT - ALASKA PACKERS

PROJECT NUMBER: 14-123

SAMPLED BY: C. SHORT, Z. KIRK

**TURNAROUND REQUEST**
in Business Days *

Organic & Inorganic Analyses: 10 STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: X STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | PRESERVATIVE: MeOH | REQUESTED ANALYSES: GRO/ AK101 / BTEX/ 8021B | MATRIX (W, S, O) | # OF CONT. | LOCATION / COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|
| 1 | TF1955 | 052108 / 1200 | | X | SOIL | 1 | | 31 |
| 2 | TF2055 | ↓ 1205 | | ↓ | ↓ | ↓ | | 32 |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |

RELEASED BY: [signature] DATE: 052208
PRINT NAME: CHARLES SHORT FIRM: OASIS ENV. TIME: 1700

RECEIVED BY: [signature] DATE: 05/22/08
PRINT NAME: Johanna Drecher FIRM: Anchorage TIME: 1729

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

TEMP: 5.9



TAL-1000 0907

# 1 Light Blue

# Test America Cooler Receipt Form

(Army Corps. Compliant)

**WORK ORDER #** AREOO67 **CLIENT:** Oasis **PROJECT:** Pilot Point

Date /Time Cooler Arrived 05 / 22 / 08 17:29 Cooler signed for by: Johanna Drehr (Print name)

## Preliminary Examination Phase:

Date cooler opened: ☒ same as date received *or* ___/___/___

Cooler opened by (print) Johanna Drehr (sign) [signature]

1. Delivered by ☐ ALASKA AIRLINES ☐ Fed-Ex ☐ UPS ☐ NAC ☐ LYNDEN ☒ CLIENT ☐ Other:

Shipment Tracking # if applicable _____ (include copy of shipping papers in file)

2. Number of Custody Seals 2 Signed by See back Date 05/22/08

Were custody seals unbroken and intact on arrival? ☒ Yes ☐ No

3. Were custody papers sealed in a plastic bag? ☒ Yes ☐ No

4. Were custody papers filled out properly (ink, signed, etc.)? ☒ Yes ☐ No

5. Did you sign the custody papers in the appropriate place? ☒ Yes ☐ No

6. Was ice used? ☒ Yes ☐ No Type of ice: ☐ blue ice ☒ gel ice ☐ real ice ☐ dry ice Condition of Ice: Soft

Temperature by Digi-Thermo Probe 5.9 °C Thermometer # rcc#4
Acceptance Criteria: 0 - 6°C

7. Packing in Cooler: ☒ bubble wrap ☐ styrofoam ☒ cardboard ☐ Other: _____

8. Did samples arrive in plastic bags? ☒ Yes ☒ No tared jar yes otw - 4oz no

9. Did all bottles arrive unbroken, and with labels in good condition? ☒ Yes ☐ No

10. Are all bottle labels complete (ID, date, time, etc.) ☒ Yes ☐ No

11. Do bottle labels and Chain of Custody agree? ☐ Yes ☒ No

12. Are the containers and preservatives correct for the tests indicated? ☒ Yes ☐ No

13. Conoco Phillips, Alyeska, BP H2O samples only: pH < 2? ☐ Yes ☐ No ☒ N/A

14. Is there adequate volume for the tests requested? ☒ Yes ☐ No

15. Were VOA vials free of bubbles? ☒ N/A ☐ Yes ☐ No

If "NO" which containers contained "head space" or bubbles? _____

## Log-in Phase:

Date of sample log-in 5 / 23 / 08

Samples logged in by (print) Kyle Burrows (sign) [signature]

1. Was project identifiable from custody papers? ☒ Yes ☐ No
2. Do Turn Around Times and Due Dates agree? ☒ Yes ☐ No
3. Was the Project Manager notified of status? ☒ Yes ☐ No
4. Was the Lab notified of status? ☒ Yes ☐ No
5. Was the COC scanned and copied? ☒ Yes ☐ No

CUSTODY SEAL

Date 5-22-08

Signature

TestAmerica

ANALYTICAL TESTING CORPORATION

CUSTODY SEAL

Date 5-22-08

Signature

TestAmerica

ANALYTICAL TESTING CORPORATION

# Laboratory Data Review Checklist

Completed by: Marty Hannah

Title: Environmental Scientist

Date: June 30, 2008

CS Report Name: 2008 Alaska Packers Site Assessment

Report Date: June 30, 2008

Consultant Firm: OASIS Environmental Inc/

Laboratory Name: TestAmerica-Tacoma and Anchorage

Laboratory Report Number: ARE0068

ADEC File Number:

ADEC RecKey Number:

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   ☒ Yes ☐ No Comments:

   DRO was performed at TestAmerica-Anchorage

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   ☒ Yes ☐ No Comments:

   Lead and PAH analyses were performed at TestAmerica-Tacoma.

2. Chain of Custody (COC)

   a. COC information completed, signed, and dated (including released/received by)?

   ☒ Yes ☐ No Comments:

b. Correct analyses requested?

☑ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☑ Yes ☐ No Comments:

Cooler was received at 1.9 degrees C.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☑ Yes ☐ No Comments:

Samples were semi-volatile and metals soils. Ice was the preservative.

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☑ Yes ☐ No Comments:

All samples were received in good condition.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☐ Yes ☐ No Comments:

No discrepancies were noted.

e. Data quality or usability affected? Explain.

Comments:

Data quality objectives were met with respect to sample shipping and documentation.

4. Case Narrative

a. Present and understandable?

☑ Yes ☐ No Comments:

b. Discrepancies, errors or QC failures identified by the lab?

☐ Yes ☐ No Comments:

No discrepancies were noted.

c. Were all corrective actions documented?

☐ Yes ☐ No Comments:

No corrective actions were required.

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

Comments:

All sample results are usable for project purposes.

5. Samples Results

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

☒ Yes ☐ No Comments:

b. All applicable holding times met?

☒ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

e. Data quality or usability affected? Explain.

Comments:

Sample results are usable for project purposes.

6. QC Samples

a. Method Blank

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

☒ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☑ Yes ☐ No Comments:

The lead blank result was just above the MDL and well below the PQL. All sample results for lead were well above the PQL. The 8270 PAH method blank had nearly half its compound list with hits below the PQL but abovethe MDL. Some of the sample results were near the levels reported in the blank and were flagged.

iii. If above PQL, what samples are affected?

Comments:

Samples with PAH results

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

☑ Yes ☐ No Comments:

Samples with results less than 5 times the amount found in the method blank were flagged JB and are considered estimates.

v. Data quality or usability affected? Explain.

Comments:

While not rejected for the analyte levels found in the method blank, the results are considered estimates at best.

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

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

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

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

☐ Yes ☒ No Comments:

DRO MS/MSD percent recoveries and RPDs were outside of acceptance limits due to presence of large concentrations of target analytes and high dilutions. All LCS/LCSD results met method acceptance limits.

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

Comments:

Not applicable

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

☐ Yes ☐ No Comments:

Not applicable

vii. Data quality or usability affected? Explain.

Comments:

Data quality objectives were met for laboratory QC spike samples.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☒ Yes ☐ No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☐ Yes ☒ No Comments:

Some DRO surrogate recoveries were outside of method acceptance limits due to large presence of target analytes and high dilutions.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No Comments:

Samples with failed surrogate recoveries are flagged JS and are considered estimates.

iv. Data quality or usability affected? Explain.

Comments:

Overall, data quality objectives were met for the project.

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

i. One trip blank reported per matrix, analysis and cooler?

☐ Yes ☒ No Comments:

All samples were semi-volatiles or metals.

ii. All results less than PQL?

☐ Yes ☐ No Comments:

Not applicable

iii. If above PQL, what samples are affected?

Comments:

Not applicable

iv. Data quality or usability affected? Explain.

Comments:

Not applicable

e. Field Duplicate

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

☒ Yes ☐ No Comments:

ii. Submitted blind to lab?

☐ Yes ☒ No Comments:

Samples were named dup-3 and dup-4. It was not clear on the CoC which samples they matched.

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

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

Where $R_1$ = Sample Concentration
$R_2$ = Field Duplicate Concentration

☐ Yes ☒ No Comments:

Dup 3 and its parent TF12 met RPD limits for DRO and RRO, Dup 4 and TF 14 did not meet RPD limits for DRO and RRO for RPD. All other results were ND or no duplicate analyses was requested.

iv. Data quality or usability affected? Explain.

Comments:

Overall, data quality objectives were met for field duplicates.

f. Decontamination or Equipment Blank (if applicable)

☐ Yes ☐ No ☒ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

Not applicable

ii. If above PQL, what samples are affected?

Comments:

Not applicable

iii. Data quality or usability affected? Explain.

Comments:

Not applicable

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☐ Yes ☐ No Comments:

Not applicable

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THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

June 13, 2008

Nino Muniz
Oasis Environmental, Inc.
825 W 8th Ave, ste 200
Anchorage, AK/USA 99501-4427

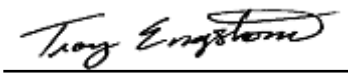
RE: Pilot Point - Alaska Packers

Enclosed are the results of analyses for samples received by the laboratory on 05/22/08 17:29. The following list is a summary of the Work Orders contained in this report, generated on 06/13/08 09:54.

If you have any questions concerning this report, please feel free to contact me.

| Work Order | Project | ProjectNumber |
|---|---|---|
| ARE0068 | Pilot Point - Alaska Packers | 14-123 |

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| S101SS | ARE0068-01 | Soil | 05/21/08 09:35 | 05/22/08 17:29 |
| S102SS | ARE0068-02 | Soil | 05/21/08 09:40 | 05/22/08 17:29 |
| S103SS | ARE0068-03 | Soil | 05/21/08 09:45 | 05/22/08 17:29 |
| S104SS | ARE0068-04 | Soil | 05/21/08 09:50 | 05/22/08 17:29 |
| S105SS | ARE0068-05 | Soil | 05/21/08 09:55 | 05/22/08 17:29 |
| S201SS | ARE0068-06 | Soil | 05/21/08 09:00 | 05/22/08 17:29 |
| S202SS | ARE0068-07 | Soil | 05/21/08 09:10 | 05/22/08 17:29 |
| S203SS | ARE0068-08 | Soil | 05/21/08 09:15 | 05/22/08 17:29 |
| S204SS | ARE0068-09 | Soil | 05/21/08 09:20 | 05/22/08 17:29 |
| S205SS | ARE0068-10 | Soil | 05/21/08 09:23 | 05/22/08 17:29 |
| TF01SS | ARE0068-11 | Soil | 05/21/08 10:30 | 05/22/08 17:29 |
| TF02SS | ARE0068-12 | Soil | 05/21/08 10:35 | 05/22/08 17:29 |
| TF03SS | ARE0068-13 | Soil | 05/21/08 10:40 | 05/22/08 17:29 |
| TF04SS | ARE0068-14 | Soil | 05/21/08 10:45 | 05/22/08 17:29 |
| TF05SS | ARE0068-15 | Soil | 05/21/08 10:50 | 05/22/08 17:29 |
| TF06SS | ARE0068-16 | Soil | 05/21/08 10:55 | 05/22/08 17:29 |
| TF07SS | ARE0068-17 | Soil | 05/21/08 11:00 | 05/22/08 17:29 |
| TF08SS | ARE0068-18 | Soil | 05/21/08 11:05 | 05/22/08 17:29 |
| TF09SS | ARE0068-19 | Soil | 05/21/08 11:10 | 05/22/08 17:29 |
| TF10SS | ARE0068-20 | Soil | 05/21/08 11:15 | 05/22/08 17:29 |
| TF11SS | ARE0068-21 | Soil | 05/21/08 11:20 | 05/22/08 17:29 |
| TF12SS | ARE0068-22 | Soil | 05/21/08 11:25 | 05/22/08 17:29 |
| TF13SS | ARE0068-23 | Soil | 05/21/08 11:30 | 05/22/08 17:29 |
| TF14SS | ARE0068-24 | Soil | 05/21/08 11:35 | 05/22/08 17:29 |
| TF15SS | ARE0068-25 | Soil | 05/21/08 11:40 | 05/22/08 17:29 |
| TF16SS | ARE0068-26 | Soil | 05/21/08 11:45 | 05/22/08 17:29 |
| TF17SS | ARE0068-27 | Soil | 05/21/08 11:50 | 05/22/08 17:29 |
| TF18SS | ARE0068-28 | Soil | 05/21/08 11:55 | 05/22/08 17:29 |
| TF19SS | ARE0068-29 | Soil | 05/21/08 12:00 | 05/22/08 17:29 |
| TF20SS | ARE0068-30 | Soil | 05/21/08 12:05 | 05/22/08 17:29 |
| C-01-01 | ARE0068-31 | Soil | 05/21/08 13:40 | 05/22/08 17:29 |
| C-01-02 | ARE0068-32 | Soil | 05/21/08 13:30 | 05/22/08 17:29 |
| E-01-01 | ARE0068-33 | Soil | 05/21/08 14:00 | 05/22/08 17:29 |
| E-01-02 | ARE0068-34 | Soil | 05/21/08 14:10 | 05/22/08 17:29 |
| E-02-01 | ARE0068-35 | Soil | 05/21/08 14:25 | 05/22/08 17:29 |

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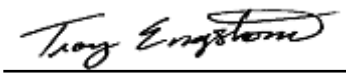

Troy J. Engstrom, Lab Director

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

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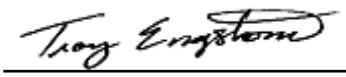
CS Approval Number: UST-067

| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| E-02-02 | ARE0068-36 | Soil | 05/21/08 14:35 | 05/22/08 17:29 |
| J-01-01 | ARE0068-37 | Soil | 05/21/08 14:50 | 05/22/08 17:29 |
| J-01-02 | ARE0068-38 | Soil | 05/21/08 15:00 | 05/22/08 17:29 |
| H-01-01 | ARE0068-39 | Soil | 05/21/08 15:15 | 05/22/08 17:29 |
| H-01-02 | ARE0068-40 | Soil | 05/21/08 15:25 | 05/22/08 17:29 |

TestAmerica Anchorage



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

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-01 (S101SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:35** | | | | | |
| **Diesel Range Organics** | AK102/103 | **8570** | ----- | 2050 | mg/kg dry | 100x | 8050077 | 05/30/08 09:15 | 06/04/08 13:01 | JN | **RL7** |
| **Residual Range Organics** | " | **44300** | ----- | 5130 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *206%* | | *50 - 150 %* | " | | | " | | ***ZX, Z3*** |
| *Triacontane* | | | *539%* | | *50 - 150 %* | " | | | " | | ***ZX, Z3*** |
| **ARE0068-02 (S102SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:40** | | | | | |
| **Diesel Range Organics** | AK102/103 | **6630** | ----- | 2040 | mg/kg dry | 100x | 8050077 | 05/30/08 09:15 | 06/04/08 13:23 | JN | **RL7** |
| **Residual Range Organics** | " | **35600** | ----- | 5090 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *NR* | | *50 - 150 %* | " | | | " | | ***Z3*** |
| *Triacontane* | | | *2610%* | | *50 - 150 %* | " | | | " | | ***Z3, ZX*** |
| **ARE0068-03 (S103SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:45** | | | | | |
| **Diesel Range Organics** | AK102/103 | **3840** | ----- | 2140 | mg/kg dry | 100x | 8050077 | 05/30/08 09:15 | 06/04/08 13:56 | JN | **RL7** |
| **Residual Range Organics** | " | **27800** | ----- | 5340 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *NR* | | *50 - 150 %* | " | | | " | | ***Z3*** |
| *Triacontane* | | | *1750%* | | *50 - 150 %* | " | | | " | | ***Z3, ZX*** |
| **ARE0068-04 (S104SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:50** | | | | | |
| **Diesel Range Organics** | AK102/103 | **1300** | ----- | 207 | mg/kg dry | 10x | 8050077 | 05/30/08 09:15 | 06/03/08 13:26 | JN | **RL7** |
| **Residual Range Organics** | " | **9120** | ----- | 518 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *92.6%* | | *50 - 150 %* | " | | | " | | |
| *Triacontane* | | | *89.1%* | | *50 - 150 %* | " | | | " | | |
| **ARE0068-05 (S105SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:55** | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 20.3 | mg/kg dry | 1x | 8050077 | 05/30/08 09:15 | 06/03/08 13:59 | JN | |
| Residual Range Organics | " | ND | ----- | 50.8 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *98.1%* | | *50 - 150 %* | " | | | " | | |
| *Triacontane* | | | *93.2%* | | *50 - 150 %* | " | | | " | | |
| **ARE0068-06 (S201SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:00** | | | | | |
| **Diesel Range Organics** | AK102/103 | **594** | ----- | 229 | mg/kg dry | 10x | 8050077 | 05/30/08 09:15 | 06/03/08 14:31 | JN | **RL7** |
| **Residual Range Organics** | " | **2290** | ----- | 572 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *82.7%* | | *50 - 150 %* | " | | | " | | |

TestAmerica Anchorage

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Troy Engstrom

Troy J. Engstrom, Lab Director

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| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

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

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-06 (S201SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:00** | | | | | |
| *Triacontane* | | | *92.2%* | | *50 - 150 %* | *10x* | | | *06/03/08 14:31* | | |
| **ARE0068-07 (S202SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:10** | | | | | |
| **Diesel Range Organics** | AK102/103 | **2430** | ----- | 220 | mg/kg dry | 10x | 8050077 | 05/30/08 09:15 | 06/03/08 17:08 | JN | **RL7** |
| **Residual Range Organics** | " | **11500** | ----- | 550 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *101%* | | *50 - 150 %* | " | | | | " | |
| *Triacontane* | | | *92.5%* | | *50 - 150 %* | " | | | | " | |
| **ARE0068-08 (S203SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:15** | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 21.1 | mg/kg dry | 1x | 8050077 | 05/30/08 09:15 | 06/03/08 15:03 | JN | |
| **Residual Range Organics** | " | **84.4** | ----- | 52.8 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *100%* | | *50 - 150 %* | " | | | | " | |
| *Triacontane* | | | *95.0%* | | *50 - 150 %* | " | | | | " | |
| **ARE0068-09 (S204SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:20** | | | | | |
| **Diesel Range Organics** | AK102/103 | **31.8** | ----- | 20.4 | mg/kg dry | 1x | 8050077 | 05/30/08 09:15 | 06/03/08 17:41 | JN | |
| **Residual Range Organics** | " | **165** | ----- | 50.9 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *80.8%* | | *50 - 150 %* | " | | | | " | |
| *Triacontane* | | | *80.8%* | | *50 - 150 %* | " | | | | " | |
| **ARE0068-10 (S205SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:23** | | | | | |
| **Diesel Range Organics** | AK102/103 | **34.1** | ----- | 20.6 | mg/kg dry | 1x | 8050077 | 05/30/08 09:15 | 06/03/08 15:35 | JN | |
| **Residual Range Organics** | " | **134** | ----- | 51.5 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *94.7%* | | *50 - 150 %* | " | | | | " | |
| *Triacontane* | | | *92.0%* | | *50 - 150 %* | " | | | | " | |
| **ARE0068-11 (TF01SS)** | | | **Soil** | | | **Sampled: 05/21/08 10:30** | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 22.3 | mg/kg dry | 1x | 8050077 | 05/30/08 09:15 | 06/03/08 18:13 | JN | |
| Residual Range Organics | " | ND | ----- | 55.6 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *88.2%* | | *50 - 150 %* | " | | | | " | |
| *Triacontane* | | | *86.0%* | | *50 - 150 %* | " | | | | " | |

TestAmerica Anchorage

Troy Engstrom

Troy J. Engstrom, Lab Director

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ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
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CS Approval Number: UST-067

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|---|---|---|---|
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| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

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

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-12 (TF02SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:35** | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 21.8 | mg/kg dry | 1x | 8060004 | 06/02/08 14:42 | 06/04/08 00:08 | JN | |
| Residual Range Organics | " | ND | ----- | 54.4 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *84.2%* | | *50 - 150 %* | " | | | " | | |
| *Triacontane* | | | *81.0%* | | *50 - 150 %* | " | | | " | | |
| **ARE0068-13 (TF03SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:40** | | | | | |
| **Diesel Range Organics** | AK102/103 | **29.0** | ----- | 21.3 | mg/kg dry | 1x | 8060004 | 06/02/08 14:42 | 06/04/08 12:17 | JN | |
| **Residual Range Organics** | " | **155** | ----- | 53.2 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *89.1%* | | *50 - 150 %* | " | | | " | | |
| *Triacontane* | | | *100%* | | *50 - 150 %* | " | | | " | | |
| **ARE0068-14 (TF04SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:45** | | | | | |
| **Diesel Range Organics** | AK102/103 | **264** | ----- | 21.8 | mg/kg dry | 1x | 8060004 | 06/02/08 14:42 | 06/04/08 14:37 | JN | |
| **Residual Range Organics** | " | **1440** | ----- | 54.4 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *103%* | | *50 - 150 %* | " | | | " | | |
| *Triacontane* | | | *100%* | | *50 - 150 %* | " | | | " | | |
| **ARE0068-15 (TF05SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:50** | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 22.7 | mg/kg dry | 1x | 8060004 | 06/02/08 14:42 | 06/03/08 21:26 | JN | |
| Residual Range Organics | " | ND | ----- | 56.8 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *86.7%* | | *50 - 150 %* | " | | | " | | |
| *Triacontane* | | | *83.4%* | | *50 - 150 %* | " | | | " | | |
| **ARE0068-16 (TF06SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:55** | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 21.4 | mg/kg dry | 1x | 8060004 | 06/02/08 14:42 | 06/04/08 14:29 | JN | |
| Residual Range Organics | " | ND | ----- | 53.4 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *91.9%* | | *50 - 150 %* | " | | | " | | |
| *Triacontane* | | | *87.2%* | | *50 - 150 %* | " | | | " | | |
| **ARE0068-17 (TF07SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:00** | | | | | |
| **Diesel Range Organics** | AK102/103 | **102000** | ----- | 12500 | mg/kg dry | 100x | 8060004 | 06/02/08 14:42 | 06/04/08 12:50 | JN | **RL7** |
| **Residual Range Organics** | " | **57000** | ----- | 31200 | " | " | " | " | " | JN | **RL7** |

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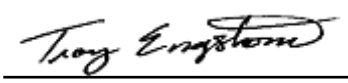

Troy J. Engstrom, Lab Director

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| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

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

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-17 (TF07SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:00** | | | | | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *2420%* | | *50 - 150 %* | *100x* | | | *06/04/08 12:50* | | ***Z3, ZX*** |
| *Triacontane* | | | *764%* | | *50 - 150 %* | *"* | | | *"* | | ***Z3, ZX*** |
| **ARE0068-18 (TF08SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:05** | | | | | |
| **Diesel Range Organics** | AK102/103 | **188** | ----- | 167 | mg/kg dry | 10x | 8060004 | 06/02/08 14:42 | 06/04/08 15:40 | JN | **RL7** |
| **Residual Range Organics** | " | **564** | ----- | 417 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *92.6%* | | *50 - 150 %* | *"* | | | *"* | | |
| *Triacontane* | | | *125%* | | *50 - 150 %* | *"* | | | *"* | | |
| **ARE0068-19 (TF09SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:10** | | | | | |
| **Diesel Range Organics** | AK102/103 | **561** | ----- | 294 | mg/kg dry | 10x | 8060004 | 06/02/08 14:42 | 06/04/08 15:01 | JN | **RL7** |
| **Residual Range Organics** | " | **1560** | ----- | 735 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *73.4%* | | *50 - 150 %* | *"* | | | *"* | | |
| *Triacontane* | | | *137%* | | *50 - 150 %* | *"* | | | *"* | | |
| **ARE0068-20 (TF10SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:15** | | | | | |
| **Diesel Range Organics** | AK102/103 | **393** | ----- | 277 | mg/kg dry | 10x | 8060004 | 06/02/08 14:42 | 06/04/08 16:12 | JN | **RL7** |
| **Residual Range Organics** | " | **1060** | ----- | 692 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *90.2%* | | *50 - 150 %* | *"* | | | *"* | | |
| *Triacontane* | | | *132%* | | *50 - 150 %* | *"* | | | *"* | | |
| **ARE0068-21 (TF11SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:20** | | | | | |
| **Diesel Range Organics** | AK102/103 | **963** | ----- | 260 | mg/kg dry | 10x | 8060004 | 06/02/08 14:42 | 06/04/08 15:33 | JN | **RL7** |
| **Residual Range Organics** | " | **2140** | ----- | 650 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *128%* | | *50 - 150 %* | *"* | | | *"* | | |
| *Triacontane* | | | *116%* | | *50 - 150 %* | *"* | | | *"* | | |
| **ARE0068-22 (TF12SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:25** | | | | | |
| **Diesel Range Organics** | AK102/103 | **110000** | ----- | 16700 | mg/kg dry | 100x | 8060010 | 06/04/08 07:50 | 06/05/08 17:57 | JN | **RL7** |
| **Residual Range Organics** | " | **44700** | ----- | 41700 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *200%* | | *50 - 150 %* | *"* | | | *"* | | ***Z3, ZX*** |
| *Triacontane* | | | *226%* | | *50 - 150 %* | *"* | | | *"* | | ***Z3, ZX*** |

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| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

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

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-23 (TF13SS)** | | **Soil** | | | **Sampled: 05/21/08 11:30** | | | | | | |
| **Diesel Range Organics** | AK102/103 | **3160** | ----- | 2070 | mg/kg dry | 100x | 8060010 | 06/04/08 07:50 | 06/05/08 18:02 | JN | **RL7** |
| **Residual Range Organics** | " | **6470** | ----- | 5180 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *NR* | | *50 - 150 %* | " | | | " | | ***Z3*** |
| *Triacontane* | | | *239%* | | *50 - 150 %* | " | | | " | | ***Z3, ZX*** |
| **ARE0068-24 (TF14SS)** | | **Soil** | | | **Sampled: 05/21/08 11:35** | | | | | | |
| **Diesel Range Organics** | AK102/103 | **3990** | ----- | 2750 | mg/kg dry | 100x | 8060010 | 06/04/08 07:50 | 06/05/08 18:30 | JN | **RL7** |
| **Residual Range Organics** | " | **7910** | ----- | 6870 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *NR* | | *50 - 150 %* | " | | | " | | ***Z3*** |
| *Triacontane* | | | *NR* | | *50 - 150 %* | " | | | " | | ***Z3*** |
| **ARE0068-25 (TF15SS)** | | **Soil** | | | **Sampled: 05/21/08 11:40** | | | | | | |
| **Diesel Range Organics** | AK102/103 | **35100** | ----- | 11400 | mg/kg dry | 100x | 8060010 | 06/04/08 07:50 | 06/05/08 18:34 | JN | **RL7** |
| **Residual Range Organics** | " | **36000** | ----- | 28500 | " | " | " | " | " | JN | **RL7** |
| *Surrogate(s): 1-Chlorooctadecane* | | | *303%* | | *50 - 150 %* | " | | | " | | ***Z3, ZX*** |
| *Triacontane* | | | *204%* | | *50 - 150 %* | " | | | " | | ***Z3, ZX*** |
| **ARE0068-26 (TF16SS)** | | **Soil** | | | **Sampled: 05/21/08 11:45** | | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 23.7 | mg/kg dry | 1x | 8060010 | 06/04/08 07:50 | 06/05/08 19:03 | JN | |
| Residual Range Organics | " | ND | ----- | 59.2 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *101%* | | *50 - 150 %* | " | | | " | | |
| *Triacontane* | | | *95.3%* | | *50 - 150 %* | " | | | " | | |
| **ARE0068-27 (TF17SS)** | | **Soil** | | | **Sampled: 05/21/08 11:50** | | | | | | |
| **Diesel Range Organics** | AK102/103 | **164** | ----- | 25.0 | mg/kg dry | 1x | 8060010 | 06/04/08 07:50 | 06/05/08 19:06 | JN | |
| **Residual Range Organics** | " | **272** | ----- | 62.4 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *82.7%* | | *50 - 150 %* | " | | | " | | |
| *Triacontane* | | | *105%* | | *50 - 150 %* | " | | | " | | |
| **ARE0068-28 (TF18SS)** | | **Soil** | | | **Sampled: 05/21/08 11:55** | | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 33.2 | mg/kg dry | 1x | 8060010 | 06/04/08 07:50 | 06/05/08 19:36 | JN | |
| **Residual Range Organics** | " | **101** | ----- | 82.9 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *98.8%* | | *50 - 150 %* | " | | | " | | |

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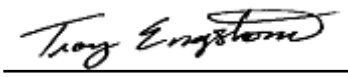

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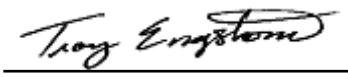
## Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-28 (TF18SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:55** | | | | | |
| *Triacontane* | | | *95.7%* | | *50 - 150 %* | *1x* | | | *06/05/08 19:36* | | |
| **ARE0068-29 (TF19SS)** | | **Soil** | | | | **Sampled: 05/21/08 12:00** | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 24.1 | mg/kg dry | 1x | 8060010 | 06/04/08 07:50 | 06/05/08 19:38 | JN | |
| Residual Range Organics | " | ND | ----- | 60.2 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *85.2%* | | *50 - 150 %* | *"* | | | *"* | | |
| *Triacontane* | | | *81.7%* | | *50 - 150 %* | *"* | | | *"* | | |
| **ARE0068-30 (TF20SS)** | | **Soil** | | | | **Sampled: 05/21/08 12:05** | | | | | |
| Diesel Range Organics | AK102/103 | ND | ----- | 23.9 | mg/kg dry | 1x | 8060010 | 06/04/08 07:50 | 06/05/08 20:09 | JN | |
| Residual Range Organics | " | ND | ----- | 59.8 | " | " | " | " | " | JN | |
| *Surrogate(s): 1-Chlorooctadecane* | | | *90.6%* | | *50 - 150 %* | *"* | | | *"* | | |
| *Triacontane* | | | *95.2%* | | *50 - 150 %* | *"* | | | *"* | | |

TestAmerica Anchorage



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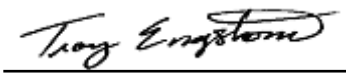
Report Created: 06/13/08 09:54

## Physical Parameters by APHA/ASTM/EPA Methods

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-01 (S101SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:35** | | | | | |
| **Dry Weight** | TA-SOP | **93.1** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |
| **ARE0068-02 (S102SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:40** | | | | | |
| **Dry Weight** | TA-SOP | **92.8** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |
| **ARE0068-03 (S103SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:45** | | | | | |
| **Dry Weight** | TA-SOP | **91.2** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |
| **ARE0068-04 (S104SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:50** | | | | | |
| **Dry Weight** | TA-SOP | **94.5** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |
| **ARE0068-05 (S105SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:55** | | | | | |
| **Dry Weight** | TA-SOP | **93.1** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |
| **ARE0068-06 (S201SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:00** | | | | | |
| **Dry Weight** | TA-SOP | **87.3** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |
| **ARE0068-07 (S202SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:10** | | | | | |
| **Dry Weight** | TA-SOP | **89.7** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |
| **ARE0068-08 (S203SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:15** | | | | | |
| **Dry Weight** | TA-SOP | **93.4** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |
| **ARE0068-09 (S204SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:20** | | | | | |
| **Dry Weight** | TA-SOP | **92.4** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |
| **ARE0068-10 (S205SS)** | | | **Soil** | | | **Sampled: 05/21/08 09:23** | | | | | |
| **Dry Weight** | TA-SOP | **93.8** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |
| **ARE0068-11 (TF01SS)** | | | **Soil** | | | **Sampled: 05/21/08 10:30** | | | | | |
| **Dry Weight** | TA-SOP | **85.1** | ----- | 1.00 | % | 1x | 8060003 | 06/02/08 14:38 | 06/03/08 14:05 | DS | |

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## Physical Parameters by APHA/ASTM/EPA Methods

TestAmerica Anchorage

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-12 (TF02SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:35** | | | | | |
| **Dry Weight** | TA-SOP | **84.4** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-13 (TF03SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:40** | | | | | |
| **Dry Weight** | TA-SOP | **89.2** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-14 (TF04SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:45** | | | | | |
| **Dry Weight** | TA-SOP | **90.9** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-15 (TF05SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:50** | | | | | |
| **Dry Weight** | TA-SOP | **87.0** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-16 (TF06SS)** | | **Soil** | | | | **Sampled: 05/21/08 10:55** | | | | | |
| **Dry Weight** | TA-SOP | **89.1** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-17 (TF07SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:00** | | | | | |
| **Dry Weight** | TA-SOP | **79.7** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-18 (TF08SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:05** | | | | | |
| **Dry Weight** | TA-SOP | **87.6** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-19 (TF09SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:10** | | | | | |
| **Dry Weight** | TA-SOP | **67.5** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-20 (TF10SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:15** | | | | | |
| **Dry Weight** | TA-SOP | **72.0** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-21 (TF11SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:20** | | | | | |
| **Dry Weight** | TA-SOP | **76.6** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-22 (TF12SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:25** | | | | | |
| **Dry Weight** | TA-SOP | **80.4** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |

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CS Approval Number: UST-067

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|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## Physical Parameters by APHA/ASTM/EPA Methods

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| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-23 (TF13SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:30** | | | | | |
| **Dry Weight** | TA-SOP | **72.9** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-24 (TF14SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:35** | | | | | |
| **Dry Weight** | TA-SOP | **72.2** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-25 (TF15SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:40** | | | | | |
| **Dry Weight** | TA-SOP | **83.7** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-26 (TF16SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:45** | | | | | |
| **Dry Weight** | TA-SOP | **83.7** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-27 (TF17SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:50** | | | | | |
| **Dry Weight** | TA-SOP | **75.6** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-28 (TF18SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:55** | | | | | |
| **Dry Weight** | TA-SOP | **57.6** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-29 (TF19SS)** | | **Soil** | | | | **Sampled: 05/21/08 12:00** | | | | | |
| **Dry Weight** | TA-SOP | **78.6** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |
| **ARE0068-30 (TF20SS)** | | **Soil** | | | | **Sampled: 05/21/08 12:05** | | | | | |
| **Dry Weight** | TA-SOP | **81.2** | ----- | 1.00 | % | 1x | 8060008 | 06/03/08 14:32 | 06/04/08 10:40 | DS | |

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CS Approval Number: UST-067

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|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## Inductively Coupled Plasma - Mass Spectrometry

TestAmerica Tacoma

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-31 (C-01-01)** | | **Soil** | | | | **Sampled: 05/21/08 13:40** | | | | | |
| **Lead** | 6020 | **230** | ----- | 0.23 | mg/Kg dry | 10x | 31881 | 05/29/08 09:33 | 05/29/08 14:59 | FCW | **B** |
| **ARE0068-32 (C-01-02)** | | **Soil** | | | | **Sampled: 05/21/08 13:30** | | | | | |
| **Lead** | 6020 | **120** | ----- | 0.23 | mg/Kg dry | 10x | 31881 | 05/29/08 09:33 | 05/29/08 15:50 | FCW | **B** |
| **ARE0068-33 (E-01-01)** | | **Soil** | | | | **Sampled: 05/21/08 14:00** | | | | | |
| **Lead** | 6020 | **180** | ----- | 0.30 | mg/Kg dry | 10x | 31881 | 05/29/08 09:33 | 05/29/08 15:55 | FCW | **B** |
| **ARE0068-34 (E-01-02)** | | **Soil** | | | | **Sampled: 05/21/08 14:10** | | | | | |
| **Lead** | 6020 | **170** | ----- | 0.34 | mg/Kg dry | 10x | 31881 | 05/29/08 09:33 | 05/29/08 16:00 | FCW | **B** |
| **ARE0068-35 (E-02-01)** | | **Soil** | | | | **Sampled: 05/21/08 14:25** | | | | | |
| **Lead** | 6020 | **280** | ----- | 0.25 | mg/Kg dry | 10x | 31881 | 05/29/08 09:33 | 05/29/08 16:05 | FCW | **B** |
| **ARE0068-36 (E-02-02)** | | **Soil** | | | | **Sampled: 05/21/08 14:35** | | | | | |
| **Lead** | 6020 | **210** | ----- | 0.25 | mg/Kg dry | 10x | 31881 | 05/29/08 09:33 | 05/29/08 16:10 | FCW | **B** |
| **ARE0068-37 (J-01-01)** | | **Soil** | | | | **Sampled: 05/21/08 14:50** | | | | | |
| **Lead** | 6020 | **8400** | ----- | 24 | mg/Kg dry | 1000 x | 31881 | 05/29/08 09:33 | 05/29/08 16:35 | FCW | **B** |
| **ARE0068-38 (J-01-02)** | | **Soil** | | | | **Sampled: 05/21/08 15:00** | | | | | |
| **Lead** | 6020 | **2400** | ----- | 0.25 | mg/Kg dry | 10x | 31881 | 05/29/08 09:33 | 05/29/08 16:20 | FCW | **B** |
| **ARE0068-39 (H-01-01)** | | **Soil** | | | | **Sampled: 05/21/08 15:15** | | | | | |
| **Lead** | 6020 | **420** | ----- | 0.23 | mg/Kg dry | 10x | 31881 | 05/29/08 09:33 | 05/29/08 16:25 | FCW | **B** |
| **ARE0068-40 (H-01-02)** | | **Soil** | | | | **Sampled: 05/21/08 15:25** | | | | | |
| **Lead** | 6020 | **150** | ----- | 0.20 | mg/Kg dry | 10x | 31881 | 05/29/08 09:33 | 05/29/08 16:30 | FCW | **B** |

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CS Approval Number: UST-067

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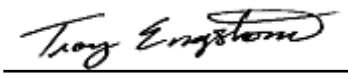
|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz |
| | | Report Created: 06/13/08 09:54 |

## Percent Moisture

TestAmerica Tacoma

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-01 (S101SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:35** | | | | | |
| **Percent Solids** | PercentMoisture | **93** | ----- | 0.10 | % | 1x | 31925 | 05/29/08 15:30 | 05/29/08 15:30 | DD | |
| **Percent Moisture** | " | **7.0** | ----- | 0.10 | " | " | " | " | " | DD | |
| **ARE0068-10 (S205SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:23** | | | | | |
| **Percent Solids** | PercentMoisture | **93** | ----- | 0.10 | % | 1x | 31925 | 05/29/08 15:30 | 05/29/08 15:30 | DD | |
| **Percent Moisture** | " | **7.0** | ----- | 0.10 | " | " | " | " | " | DD | |
| **ARE0068-22 (TF12SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:25** | | | | | |
| **Percent Solids** | PercentMoisture | **83** | ----- | 0.10 | % | 1x | 31925 | 05/29/08 15:30 | 05/29/08 15:30 | DD | |
| **Percent Moisture** | " | **17** | ----- | 0.10 | " | " | " | " | " | DD | |
| **ARE0068-24 (TF14SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:35** | | | | | |
| **Percent Solids** | PercentMoisture | **73** | ----- | 0.10 | % | 1x | 31925 | 05/29/08 15:30 | 05/29/08 15:30 | DD | |
| **Percent Moisture** | " | **27** | ----- | 0.10 | " | " | " | " | " | DD | |

TestAmerica Anchorage



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|---|---|---|---|
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| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## Semivolatile Organic Compounds by GC/MS (Selective

TestAmerica Tacoma

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-01 (S101SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:35** | | | | | |
| **Naphthalene** | 8270C | **50** | ----- | 53 | ug/Kg dry | 10x | 32013 | 05/30/08 16:51 | 06/02/08 19:40 | LZ | **J** |
| **2-Methylnaphthalene** | " | **76** | ----- | 53 | " | " | " | " | " | LZ | **B** |
| **1-Methylnaphthalene** | " | **64** | ----- | 53 | " | " | " | " | " | LZ | |
| **Acenaphthylene** | " | **30** | ----- | 53 | " | " | " | " | " | LZ | **J** |
| **Acenaphthene** | " | **36** | ----- | 53 | " | " | " | " | " | LZ | **J** |
| **Fluorene** | " | **37** | ----- | 53 | " | " | " | " | " | LZ | **J** |
| **Phenanthrene** | " | **55** | ----- | 53 | " | " | " | " | " | LZ | **B** |
| **Anthracene** | " | **26** | ----- | 53 | " | " | " | " | " | LZ | **J, B** |
| **Fluoranthene** | " | **440** | ----- | 53 | " | " | " | " | " | LZ | **B** |
| **Pyrene** | " | **1300** | ----- | 53 | " | " | " | " | " | LZ | **B** |
| **Benzo[a]anthracene** | " | **240** | ----- | 53 | " | " | " | " | " | LZ | |
| **Chrysene** | " | **400** | ----- | 53 | " | " | " | " | " | LZ | **B** |
| **Benzo[a]pyrene** | " | **93** | ----- | 53 | " | " | " | " | " | LZ | |
| **Indeno[1,2,3-cd]pyrene** | " | **58** | ----- | 53 | " | " | " | " | " | LZ | **B** |
| Dibenz(a,h)anthracene | " | ND | ----- | 53 | " | " | " | " | " | LZ | |
| **Benzo[g,h,i]perylene** | " | **220** | ----- | 53 | " | " | " | " | " | LZ | **B** |
| **Benzo[b]fluoranthene** | " | **190** | ----- | 53 | " | " | " | " | " | LZ | **B** |
| **Benzo[k]fluoranthene** | " | **94** | ----- | 53 | " | " | " | " | " | LZ | **B** |
| *Surrogate(s):* *Nitrobenzene-d5* | | | *84%* | | *38 - 141 %* | " | | | " | | |
| *2-Fluorobiphenyl* | | | *74%* | | *42 - 140 %* | " | | | " | | |
| *Terphenyl-d14* | | | *72%* | | *42 - 151 %* | " | | | " | | |
| **ARE0068-10 (S205SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:23** | | | | | |
| **Naphthalene** | 8270C | **0.94** | ----- | 5.0 | ug/Kg dry | 1x | 32013 | 05/30/08 16:51 | 06/02/08 20:44 | LZ | **J** |
| **2-Methylnaphthalene** | " | **1.0** | ----- | 5.0 | " | " | " | " | " | LZ | **J, B** |
| **1-Methylnaphthalene** | " | **0.80** | ----- | 5.0 | " | " | " | " | " | LZ | **J** |
| **Acenaphthylene** | " | **0.27** | ----- | 5.0 | " | " | " | " | " | LZ | **J** |
| Acenaphthene | " | ND | ----- | 5.0 | " | " | " | " | " | LZ | |
| Fluorene | " | ND | ----- | 5.0 | " | " | " | " | " | LZ | |
| **Phenanthrene** | " | **2.3** | ----- | 5.0 | " | " | " | " | " | LZ | **J, B** |
| **Anthracene** | " | **1.0** | ----- | 5.0 | " | " | " | " | " | LZ | **J, B** |
| **Fluoranthene** | " | **4.3** | ----- | 5.0 | " | " | " | " | " | LZ | **J, B** |
| **Pyrene** | " | **3.8** | ----- | 5.0 | " | " | " | " | " | LZ | **J, B** |
| **Benzo[a]anthracene** | " | **2.4** | ----- | 5.0 | " | " | " | " | " | LZ | **J** |
| **Chrysene** | " | **2.7** | ----- | 5.0 | " | " | " | " | " | LZ | **J, B** |
| **Benzo[a]pyrene** | " | **2.1** | ----- | 5.0 | " | " | " | " | " | LZ | **J** |
| **Indeno[1,2,3-cd]pyrene** | " | **2.3** | ----- | 5.0 | " | " | " | " | " | LZ | **J, B** |
| Dibenz(a,h)anthracene | " | ND | ----- | 5.0 | " | " | " | " | " | LZ | |

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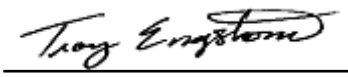

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## Semivolatile Organic Compounds by GC/MS (Selective

TestAmerica Tacoma

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-10 (S205SS)** | | **Soil** | | | | **Sampled: 05/21/08 09:23** | | | | | |
| **Benzo[g,h,i]perylene** | 8270C | **2.4** | ----- | 5.0 | ug/Kg dry | 1x | 32013 | 05/30/08 16:51 | 06/02/08 20:44 | LZ | **J, B** |
| **Benzo[b]fluoranthene** | " | **3.6** | ----- | 5.0 | " | " | " | " | " | LZ | **J, B** |
| **Benzo[k]fluoranthene** | " | **1.6** | ----- | 5.0 | " | " | " | " | " | LZ | **J, B** |
| *Surrogate(s): Nitrobenzene-d5* | | | *90%* | | *38 - 141 %* | " | | | " | | |
| *2-Fluorobiphenyl* | | | *79%* | | *42 - 140 %* | " | | | " | | |
| *Terphenyl-d14* | | | *87%* | | *42 - 151 %* | " | | | " | | |
| **ARE0068-22 (TF12SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:25** | | | | | |
| **Naphthalene** | 8270C | **130000** | ----- | 560 | ug/Kg dry | 100x | 32013 | 05/30/08 16:51 | 06/02/08 21:27 | LZ | |
| **2-Methylnaphthalene** | " | **870000** | ----- | 5600 | " | 1000 x | " | " | 06/02/08 21:06 | LZ | **B** |
| **1-Methylnaphthalene** | " | **460000** | ----- | 560 | " | 100x | " | " | 06/02/08 21:27 | LZ | |
| **Acenaphthylene** | " | **11000** | ----- | 560 | " | " | " | " | " | LZ | |
| **Acenaphthene** | " | **43000** | ----- | 560 | " | " | " | " | " | LZ | |
| **Fluorene** | " | **68000** | ----- | 560 | " | " | " | " | " | LZ | |
| **Phenanthrene** | " | **130000** | ----- | 560 | " | " | " | " | " | LZ | **B** |
| **Anthracene** | " | **27000** | ----- | 560 | " | " | " | " | " | LZ | **B** |
| **Fluoranthene** | " | **11000** | ----- | 560 | " | " | " | " | " | LZ | **B** |
| **Pyrene** | " | **29000** | ----- | 560 | " | " | " | " | " | LZ | **B** |
| **Benzo[a]anthracene** | " | **8300** | ----- | 560 | " | " | " | " | " | LZ | |
| **Chrysene** | " | **19000** | ----- | 560 | " | " | " | " | " | LZ | **B** |
| **Benzo[a]pyrene** | " | **4100** | ----- | 560 | " | " | " | " | " | LZ | |
| **Indeno[1,2,3-cd]pyrene** | " | **1200** | ----- | 560 | " | " | " | " | " | LZ | **B** |
| **Dibenz(a,h)anthracene** | " | **790** | ----- | 560 | " | " | " | " | " | LZ | **B** |
| **Benzo[g,h,i]perylene** | " | **2200** | ----- | 560 | " | " | " | " | " | LZ | **B** |
| **Benzo[b]fluoranthene** | " | **3700** | ----- | 560 | " | " | " | " | " | LZ | **B** |
| Benzo[k]fluoranthene | " | ND | ----- | 560 | " | " | " | " | " | LZ | |
| *Surrogate(s): Nitrobenzene-d5* | | | *414%* | | *38 - 141 %* | " | | | " | | ***X*** |
| *2-Fluorobiphenyl* | | | *81%* | | *42 - 140 %* | " | | | " | | |
| *Terphenyl-d14* | | | *94%* | | *42 - 151 %* | " | | | " | | |

TestAmerica Anchorage

Troy J. Engstrom, Lab Director

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

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THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

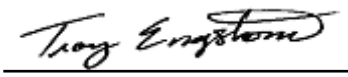
| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## Semivolatile Organic Compounds by GC/MS (Selective

TestAmerica Tacoma

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Batch | Prepared | Analyzed | Analyst | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ARE0068-24 (TF14SS)** | | **Soil** | | | | **Sampled: 05/21/08 11:35** | | | | | |
| **Naphthalene** | 8270C | **880** | ----- | 630 | ug/Kg dry | 100x | 32013 | 05/30/08 16:51 | 06/02/08 21:48 | LZ | |
| **2-Methylnaphthalene** | " | **2800** | ----- | 630 | " | " | " | " | " | LZ | **B** |
| **1-Methylnaphthalene** | " | **1700** | ----- | 630 | " | " | " | " | " | LZ | |
| **Acenaphthylene** | " | **110** | ----- | 630 | " | " | " | " | " | LZ | **J** |
| **Acenaphthene** | " | **170** | ----- | 630 | " | " | " | " | " | LZ | **J** |
| **Fluorene** | " | **330** | ----- | 630 | " | " | " | " | " | LZ | **J** |
| **Phenanthrene** | " | **890** | ----- | 630 | " | " | " | " | " | LZ | **B** |
| **Anthracene** | " | **210** | ----- | 630 | " | " | " | " | " | LZ | **J, B** |
| **Fluoranthene** | " | **830** | ----- | 630 | " | " | " | " | " | LZ | **B** |
| **Pyrene** | " | **1300** | ----- | 630 | " | " | " | " | " | LZ | **B** |
| Benzo[a]anthracene | " | ND | ----- | 630 | " | " | " | " | " | LZ | |
| **Chrysene** | " | **2300** | ----- | 630 | " | " | " | " | " | LZ | **B** |
| **Benzo[a]pyrene** | " | **1300** | ----- | 630 | " | " | " | " | " | LZ | |
| **Indeno[1,2,3-cd]pyrene** | " | **570** | ----- | 630 | " | " | " | " | " | LZ | **J, B** |
| **Dibenz(a,h)anthracene** | " | **310** | ----- | 630 | " | " | " | " | " | LZ | **J, B** |
| **Benzo[g,h,i]perylene** | " | **1000** | ----- | 630 | " | " | " | " | " | LZ | **B** |
| **Benzo[b]fluoranthene** | " | **960** | ----- | 630 | " | " | " | " | " | LZ | **B** |
| **Benzo[k]fluoranthene** | " | **240** | ----- | 630 | " | " | " | " | " | LZ | **J, B** |
| *Surrogate(s):* *Nitrobenzene-d5* | | | *84%* | | *38 - 141 %* | " | | | | " | |
| *2-Fluorobiphenyl* | | | *75%* | | *42 - 140 %* | " | | | | " | |
| *Terphenyl-d14* | | | *98%* | | *42 - 151 %* | " | | | | " | |

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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CS Approval Number: UST-067

| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8050077** **Soil Preparation Method: EPA 3545**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (8050077-BLK1)** | | | | | | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | ND | --- | 20.0 | mg/kg wet | 1x | -- | -- | -- | -- | -- | -- | 06/03/08 10:09 | |
| Residual Range Organics | " | ND | --- | 50.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 97.0%* | | | *Limits: 50-150%* | " | | | | | | | *06/03/08 10:09* | |
| *Triacontane* | | *91.5%* | | | *50-150%* | " | | | | | | | " | |
| **LCS (8050077-BS1)** | | | | | | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | 127 | --- | 20.0 | mg/kg wet | 1x | -- | 128 | 100% | (75-125) | -- | -- | 06/03/08 10:42 | |
| Residual Range Organics | " | 118 | --- | 50.0 | " | " | -- | 129 | 92.0% | (60-120) | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 96.6%* | | | *Limits: 60-120%* | " | | | | | | | *06/03/08 10:42* | |
| *Triacontane* | | *99.9%* | | | *60-120%* | " | | | | | | | " | |
| **LCS Dup (8050077-BSD1)** | | | | | | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | 121 | --- | 20.0 | mg/kg wet | 1x | -- | 128 | 94.9% | (75-125) | 5.23% | (20) | 06/03/08 11:15 | |
| Residual Range Organics | " | 113 | --- | 50.0 | " | " | -- | 129 | 87.7% | (60-120) | 4.77% | " | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 92.7%* | | | *Limits: 60-120%* | " | | | | | | | *06/03/08 11:15* | |
| *Triacontane* | | *97.2%* | | | *60-120%* | " | | | | | | | " | |
| **Duplicate (8050077-DUP1)** | | | | | **QC Source: ARE0068-01** | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | 7310 | --- | 1880 | mg/kg dry | 100x | 8570 | -- | -- | -- | 15.9% | (20) | 06/04/08 12:29 | RL7 |
| Residual Range Organics | " | 38900 | --- | 4700 | " | " | 44300 | -- | -- | -- | 12.9% | " | " | RL7 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 178%* | | | *Limits: 50-150%* | " | | | | | | | *06/04/08 12:29* | *Z3, ZX* |
| *Triacontane* | | *469%* | | | *50-150%* | " | | | | | | | " | *Z3, ZX* |
| **Matrix Spike (8050077-MS1)** | | | | | **QC Source: ARE0068-01** | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | 9860 | --- | 2070 | mg/kg dry | 100x | 8570 | 132 | 974% | (75-125) | -- | -- | 06/04/08 13:33 | MHA, RL7 |
| Residual Range Organics | " | 48000 | --- | 5190 | " | " | 44300 | 134 | 2790% | (60-150) | -- | -- | " | MHA, RL7 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 360%* | | | *Limits: 50-150%* | " | | | | | | | *06/04/08 13:33* | *Z3, ZX* |
| *Triacontane* | | *454%* | | | *50-150%* | " | | | | | | | " | *Z3, ZX* |
| **Matrix Spike Dup (8050077-MSD1)** | | | | | **QC Source: ARE0068-01** | | **Extracted: 05/30/08 09:15** | | | | | | | |
| Diesel Range Organics | AK102/103 | 10000 | --- | 1930 | mg/kg dry | 100x | 8570 | 123 | 1180% | (75-125) | 1.64% | (25) | 06/04/08 14:05 | MHA, RL7 |
| Residual Range Organics | " | 50600 | --- | 4830 | " | " | 44300 | 124 | 5040% | (60-150) | 5.15% | " | " | MHA, RL7 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 244%* | | | *Limits: 50-150%* | " | | | | | | | *06/04/08 14:05* | *Z3, ZX* |
| *Triacontane* | | *696%* | | | *50-150%* | " | | | | | | | " | *Z3, ZX* |

TestAmerica Anchorage

Troy Engstrom

Troy J. Engstrom, Lab Director

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| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8060004** **Soil Preparation Method: EPA 3545**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (8060004-BLK1)** | | | | | | | **Extracted: 06/02/08 14:42** | | | | | | | |
| Diesel Range Organics | AK102/103 | ND | --- | 20.0 | mg/kg wet | 1x | -- | -- | -- | -- | -- | -- | 06/03/08 19:57 | |
| Residual Range Organics | " | ND | --- | 50.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 88.3%* | | | *Limits: 50-150%* | " | | | | | | | *06/03/08 19:57* | |
| *Triacontane* | | *85.3%* | | | *50-150%* | " | | | | | | | " | |
| **LCS (8060004-BS1)** | | | | | | | **Extracted: 06/02/08 14:42** | | | | | | | |
| Diesel Range Organics | AK102/103 | 124 | --- | 20.0 | mg/kg wet | 1x | -- | 128 | 97.2% | (75-125) | -- | -- | 06/03/08 18:51 | |
| Residual Range Organics | " | 118 | --- | 50.0 | " | " | -- | 129 | 91.7% | (60-120) | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 79.8%* | | | *Limits: 60-120%* | " | | | | | | | *06/03/08 18:51* | |
| *Triacontane* | | *84.3%* | | | *60-120%* | " | | | | | | | " | |
| **LCS Dup (8060004-BSD1)** | | | | | | | **Extracted: 06/02/08 14:42** | | | | | | | |
| Diesel Range Organics | AK102/103 | 115 | --- | 20.0 | mg/kg wet | 1x | -- | 128 | 90.3% | (75-125) | 7.32% | (20) | 06/03/08 19:24 | |
| Residual Range Organics | " | 110 | --- | 50.0 | " | " | -- | 129 | 85.5% | (60-120) | 6.95% | " | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 74.4%* | | | *Limits: 60-120%* | " | | | | | | | *06/03/08 19:24* | |
| *Triacontane* | | *79.1%* | | | *60-120%* | " | | | | | | | " | |
| **Duplicate (8060004-DUP1)** | | | | | | | **QC Source: ARE0068-15** **Extracted: 06/02/08 14:42** | | | | | | | |
| Diesel Range Organics | AK102/103 | ND | --- | 22.0 | mg/kg dry | 1x | ND | -- | -- | -- | 17.4% | (20) | 06/03/08 20:54 | |
| Residual Range Organics | " | ND | --- | 55.0 | " | " | ND | -- | -- | -- | 52.4% | " | " | R4 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 87.1%* | | | *Limits: 50-150%* | " | | | | | | | *06/03/08 20:54* | |
| *Triacontane* | | *83.6%* | | | *50-150%* | " | | | | | | | " | |
| **Matrix Spike (8060004-MS1)** | | | | | | | **QC Source: ARE0068-15** **Extracted: 06/02/08 14:42** | | | | | | | |
| Diesel Range Organics | AK102/103 | 134 | --- | 21.1 | mg/kg dry | 1x | 14.1 | 135 | 88.6% | (75-125) | -- | -- | 06/03/08 21:59 | |
| Residual Range Organics | " | 146 | --- | 52.9 | " | " | 30.8 | 136 | 84.4% | (60-150) | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 87.2%* | | | *Limits: 50-150%* | " | | | | | | | *06/03/08 21:59* | |
| *Triacontane* | | *81.6%* | | | *50-150%* | " | | | | | | | " | |
| **Matrix Spike Dup (8060004-MSD1)** | | | | | | | **QC Source: ARE0068-15** **Extracted: 06/02/08 14:42** | | | | | | | |
| Diesel Range Organics | AK102/103 | 145 | --- | 22.3 | mg/kg dry | 1x | 14.1 | 142 | 91.7% | (75-125) | 7.91% | (25) | 06/03/08 22:31 | |
| Residual Range Organics | " | 155 | --- | 55.8 | " | " | 30.8 | 144 | 86.1% | (60-150) | 5.91% | " | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 89.1%* | | | *Limits: 50-150%* | " | | | | | | | *06/03/08 22:31* | |
| *Triacontane* | | *83.5%* | | | *50-150%* | " | | | | | | | " | |

TestAmerica Anchorage

Troy Engstrom

Troy J. Engstrom, Lab Director

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|---|---|---|---|
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| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8060010** **Soil Preparation Method: EPA 3545**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Blank (8060010-BLK1)** | | | | | | | **Extracted: 06/04/08 07:50** | | | | | | | |
| Diesel Range Organics | AK102/103 | ND | --- | 20.0 | mg/kg wet | 1x | -- | -- | -- | -- | -- | -- | 06/05/08 16:51 | |
| Residual Range Organics | " | ND | --- | 50.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 104%* | | | *Limits: 50-150%* | " | | | | | | | *06/05/08 16:51* | |
| *Triacontane* | | *104%* | | | *50-150%* | " | | | | | | | " | |
| **LCS (8060010-BS1)** | | | | | | | **Extracted: 06/04/08 07:50** | | | | | | | |
| Diesel Range Organics | AK102/103 | 138 | --- | 20.0 | mg/kg wet | 1x | -- | 128 | 108% | (75-125) | -- | -- | 06/05/08 15:46 | |
| Residual Range Organics | " | 134 | --- | 50.0 | " | " | -- | 129 | 104% | (60-120) | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 93.7%* | | | *Limits: 60-120%* | " | | | | | | | *06/05/08 15:46* | |
| *Triacontane* | | *95.9%* | | | *60-120%* | " | | | | | | | " | |
| **LCS Dup (8060010-BSD1)** | | | | | | | **Extracted: 06/04/08 07:50** | | | | | | | |
| Diesel Range Organics | AK102/103 | 132 | --- | 20.0 | mg/kg wet | 1x | -- | 128 | 103% | (75-125) | 4.44% | (20) | 06/05/08 16:19 | |
| Residual Range Organics | " | 132 | --- | 50.0 | " | " | -- | 129 | 102% | (60-120) | 1.72% | " | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 92.2%* | | | *Limits: 60-120%* | " | | | | | | | *06/05/08 16:19* | |
| *Triacontane* | | *94.3%* | | | *60-120%* | " | | | | | | | " | |
| **Duplicate (8060010-DUP1)** | | | | | **QC Source: ARF0006-02** | | **Extracted: 06/04/08 07:50** | | | | | | | |
| Diesel Range Organics | AK102/103 | 21.7 | --- | 21.1 | mg/kg dry | 1x | 24.5 | -- | -- | -- | 12.0% | (20) | 06/05/08 15:22 | |
| Residual Range Organics | " | ND | --- | 52.8 | " | " | ND | -- | -- | -- | 104% | " | " | R4 |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 90.0%* | | | *Limits: 50-150%* | " | | | | | | | *06/05/08 15:22* | |
| *Triacontane* | | *85.6%* | | | *50-150%* | " | | | | | | | " | |
| **Matrix Spike (8060010-MS1)** | | | | | **QC Source: ARF0006-02** | | **Extracted: 06/04/08 07:50** | | | | | | | |
| Diesel Range Organics | AK102/103 | 148 | --- | 20.6 | mg/kg dry | 1x | 24.5 | 131 | 93.7% | (75-125) | -- | -- | 06/05/08 16:26 | |
| Residual Range Organics | " | 125 | --- | 51.5 | " | " | 6.44 | 133 | 89.7% | (60-150) | -- | -- | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 86.9%* | | | *Limits: 50-150%* | " | | | | | | | *06/05/08 16:26* | |
| *Triacontane* | | *83.2%* | | | *50-150%* | " | | | | | | | " | |
| **Matrix Spike Dup (8060010-MSD1)** | | | | | **QC Source: ARF0006-02** | | **Extracted: 06/04/08 07:50** | | | | | | | |
| Diesel Range Organics | AK102/103 | 167 | --- | 21.0 | mg/kg dry | 1x | 24.5 | 134 | 106% | (75-125) | 12.1% | (25) | 06/05/08 16:57 | |
| Residual Range Organics | " | 136 | --- | 52.6 | " | " | 6.44 | 135 | 95.5% | (60-150) | 8.05% | " | " | |
| *Surrogate(s): 1-Chlorooctadecane* | | *Recovery: 91.9%* | | | *Limits: 50-150%* | " | | | | | | | *06/05/08 16:57* | |
| *Triacontane* | | *89.7%* | | | *50-150%* | " | | | | | | | " | |

TestAmerica Anchorage

Troy J. Engstrom, Lab Director

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANCHORAGE, AK 2000 W. INTERNATIONAL AIRPORT ROAD, SUITE A-10
ANCHORAGE, AK 99502-1119
ph: (907) 563.9200 fax: (907) 563.9210
CS Approval Number: UST-067

| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## Physical Parameters by APHA/ASTM/EPA Methods - Laboratory Quality Control Results

TestAmerica Anchorage

**QC Batch: 8060003** **Soil Preparation Method: *** DEFAULT PREP**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Duplicate (8060003-DUP1)** | | | | | **QC Source: ARE0068-05** | | | | **Extracted: 06/02/08 14:38** | | | | | |
| Dry Weight | TA-SOP | 93.3 | --- | 1.00 | % | 1x | 93.1 | -- | -- | -- | 0.190% | (25) | 06/03/08 14:05 | |

**QC Batch: 8060008** **Soil Preparation Method: *** DEFAULT PREP**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Duplicate (8060008-DUP1)** | | | | | **QC Source: ARE0068-12** | | | | **Extracted: 06/03/08 14:32** | | | | | |
| Dry Weight | TA-SOP | 85.8 | --- | 1.00 | % | 1x | 84.4 | -- | -- | -- | 1.70% | (25) | 06/04/08 10:40 | |

TestAmerica Anchorage

Troy J. Engstrom, Lab Director

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| | | | |
|---|---|---|---|
| **Oasis Environmental, Inc.** | Project Name: | **Pilot Point - Alaska Packers** | |
| 825 W 8th Ave, ste 200 | Project Number: | 14-123 | Report Created: |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

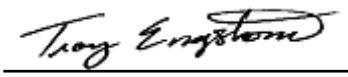
## Inductively Coupled Plasma - Mass Spectrometry - Laboratory Quality Control Results

TestAmerica Tacoma

**QC Batch: 31881** **Soil Preparation Method: 3050B**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (101065D)** | | | | **QC Source: ARE0068-31** | | | | **Extracted: 05/29/08 09:33** | | | | | | |
| Lead | 6020 | 278 | --- | 1.2 | mg/Kg dry | 50x | 230 | 59.1 | 89% | (75-125) | 11% | (35) | 05/29/08 15:19 | |
| **Matrix Spike (101065S)** | | | | **QC Source: ARE0068-31** | | | | **Extracted: 05/29/08 09:33** | | | | | | |
| Lead | 6020 | 248 | --- | 1.2 | mg/Kg dry | 50x | 230 | 60.6 | 37% | (75-125) | -- | -- | 05/29/08 15:14 | F |
| **Duplicate (101065X)** | | | | **QC Source: ARE0068-31** | | | | **Extracted: 05/29/08 09:33** | | | | | | |
| Lead | 6020 | 247 | --- | 0.24 | mg/Kg dry | 10x | 230 | -- | -- | -- | 9% | (35) | 05/29/08 15:04 | |
| **LCS (580-31946-13)** | | | | **QC Source:** | | | | **Extracted: 05/29/08 09:33** | | | | | | |
| Lead | 6020 | 46.1 | --- | 1.0 | mg/Kg dry | 50x | -- | 50.0 | 92% | (80-120) | -- | -- | 05/29/08 15:29 | |
| **LCS Dup (580-31946-14)** | | | | **QC Source:** | | | | **Extracted: 05/29/08 09:33** | | | | | | |
| Lead | 6020 | 46.1 | --- | 1.0 | mg/Kg dry | 50x | -- | 50.0 | 92% | (80-120) | 0% | (35) | 05/29/08 15:34 | |
| **Blank (580-31946-8)** | | | | **QC Source:** | | | | **Extracted: 05/29/08 09:33** | | | | | | |
| Lead | 6020 | 0.0026 | --- | 0.20 | mg/Kg dry | 10x | -- | -- | -- | -- | -- | -- | 05/29/08 14:48 | J |

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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CS Approval Number: UST-067

| | | |
|---|---|---|
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| 825 W 8th Ave, ste 200 | Project Number: | 14-123 |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz |
| | | Report Created: 06/13/08 09:54 |

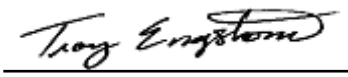
## Semivolatile Organic Compounds by GC/MS (Selective - Laboratory Quality Control Results

TestAmerica Tacoma

**QC Batch: 32013** **Soil Preparation Method: 3550B**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike Dup (101061D)** | | | | | **QC Source: ARE0068-01** | | | | | **Extracted: 05/30/08 16:51** | | | | |
| Naphthalene | 8270C | 972 | --- | 53 | ug/Kg dry | 10x | 50 | 1060 | 87% | (64-129) | 4% | (26) | 06/02/08 20:23 | |
| 2-Methylnaphthalene | " | 1040 | --- | 53 | " | " | 76 | " | 91% | (65-125) | 6% | (27) | " | |
| 1-Methylnaphthalene | " | 998 | --- | 53 | " | " | 64 | " | 88% | (48-148) | 8% | (30) | " | |
| Acenaphthylene | " | 934 | --- | 53 | " | " | 30 | " | 85% | (69-129) | 4% | (28) | " | |
| Acenaphthene | " | 907 | --- | 53 | " | " | 36 | " | 82% | (65-130) | 3% | (27) | " | |
| Fluorene | " | 965 | --- | 53 | " | " | 37 | " | 88% | (68-128) | 5% | (31) | " | |
| Phenanthrene | " | 936 | --- | 53 | " | " | 55 | " | 83% | (65-125) | 5% | (28) | " | |
| Anthracene | " | 952 | --- | 53 | " | " | 26 | " | 87% | (73-123) | 3% | (27) | " | |
| Fluoranthene | " | 1300 | --- | 53 | " | " | 440 | " | 81% | (61-121) | 5% | (36) | " | |
| Pyrene | " | 2190 | --- | 53 | " | " | 1300 | " | 85% | (54-134) | 10% | (31) | " | |
| Benzo[a]anthracene | " | 1120 | --- | 53 | " | " | 240 | " | 84% | (64-124) | 6% | (27) | " | |
| Chrysene | " | 1140 | --- | 53 | " | " | 400 | " | 70% | (71-126) | 7% | (26) | " | F |
| Benzo[a]pyrene | " | 780 | --- | 53 | " | " | 93 | " | 65% | (68-128) | 2% | (30) | " | F |
| Indeno[1,2,3-cd]pyrene | " | 649 | --- | 53 | " | " | 58 | " | 56% | (59-139) | 5% | (29) | " | F |
| Dibenz(a,h)anthracene | " | 601 | --- | 53 | " | " | ND | " | 57% | (57-142) | 5% | (30) | " | |
| Benzo[g,h,i]perylene | " | 735 | --- | 53 | " | " | 220 | " | 49% | " | 1% | (28) | " | F |
| Benzo[b]fluoranthene | " | 856 | --- | 53 | " | " | 190 | " | 63% | (66-136) | 8% | (31) | " | F |
| Benzo[k]fluoranthene | " | 135 | --- | 53 | " | " | 94 | " | 4% | (63-143) | 134% | " | " | F |
| *Surrogate(s): Nitrobenzene-d5* | | *Recovery: 91%* | | | *Limits: 38-141%* | " | | | | | | | *06/02/08 20:23* | |
| *2-Fluorobiphenyl* | | | *73%* | | *42-140%* | " | | | | | | | *"* | |
| *Terphenyl-d14* | | | *69%* | | *42-151%* | " | | | | | | | *"* | |
| **Matrix Spike (101061S)** | | | | | **QC Source: ARE0068-01** | | | | | **Extracted: 05/30/08 16:51** | | | | |
| Naphthalene | 8270C | 932 | --- | 53 | ug/Kg dry | 10x | 50 | 1060 | 83% | (64-129) | -- | -- | 06/02/08 20:02 | |
| 2-Methylnaphthalene | " | 979 | --- | 53 | " | " | 76 | " | 86% | (65-125) | -- | -- | " | |
| 1-Methylnaphthalene | " | 923 | --- | 53 | " | " | 64 | " | 81% | (48-148) | -- | -- | " | |
| Acenaphthylene | " | 900 | --- | 53 | " | " | 30 | " | 82% | (69-129) | -- | -- | " | |
| Acenaphthene | " | 879 | --- | 53 | " | " | 36 | " | 80% | (65-130) | -- | -- | " | |
| Fluorene | " | 922 | --- | 53 | " | " | 37 | " | 84% | (68-128) | -- | -- | " | |
| Phenanthrene | " | 888 | --- | 53 | " | " | 55 | " | 79% | (65-125) | -- | -- | " | |
| Anthracene | " | 925 | --- | 53 | " | " | 26 | " | 85% | (73-123) | -- | -- | " | |
| Fluoranthene | " | 1230 | --- | 53 | " | " | 440 | " | 75% | (61-121) | -- | -- | " | |
| Pyrene | " | 1990 | --- | 53 | " | " | 1300 | " | 66% | (54-134) | -- | -- | " | |
| Benzo[a]anthracene | " | 1060 | --- | 53 | " | " | 240 | " | 78% | (64-124) | -- | -- | " | |
| Chrysene | " | 1060 | --- | 53 | " | " | 400 | " | 63% | (71-126) | -- | -- | " | F |
| Benzo[a]pyrene | " | 764 | --- | 53 | " | " | 93 | " | 63% | (68-128) | -- | -- | " | F |
| Indeno[1,2,3-cd]pyrene | " | 682 | --- | 53 | " | " | 58 | " | 59% | (59-139) | -- | -- | " | |
| Dibenz(a,h)anthracene | " | 630 | --- | 53 | " | " | ND | " | 60% | (57-142) | -- | -- | " | |
| Benzo[g,h,i]perylene | " | 743 | --- | 53 | " | " | 220 | " | 50% | " | -- | -- | " | F |

TestAmerica Anchorage



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CS Approval Number: UST-067

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|---|---|---|
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| 825 W 8th Ave, ste 200 | Project Number: | 14-123 |
| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz |
| | | Report Created: 06/13/08 09:54 |

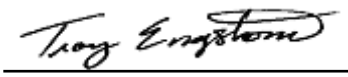
## Semivolatile Organic Compounds by GC/MS (Selective - Laboratory Quality Control Results

TestAmerica Tacoma

**QC Batch: 32013** **Soil Preparation Method: 3550B**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Matrix Spike (101061S)** | | | | | **QC Source: ARE0068-01** | | | | **Extracted: 05/30/08 16:51** | | | | | |
| Benzo[b]fluoranthene | 8270C | 787 | --- | 53 | ug/Kg dry | 10x | 190 | 1060 | 57% | (66-136) | -- | -- | 06/02/08 20:02 | F |
| Benzo[k]fluoranthene | " | 689 | --- | 53 | " | " | 94 | " | 56% | (63-143) | -- | -- | " | F |
| *Surrogate(s): Nitrobenzene-d5* | | *Recovery: 89%* | | | *Limits: 38-141%* | " | | | | | | | *06/02/08 20:02* | |
| *2-Fluorobiphenyl* | | *73%* | | | *42-140%* | " | | | | | | | *"* | |
| *Terphenyl-d14* | | *73%* | | | *42-151%* | " | | | | | | | *"* | |
| **Blank (580-32107-1)** | | | | | **QC Source:** | | | | **Extracted: 05/30/08 16:51** | | | | | |
| Naphthalene | 8270C | ND | --- | 5.0 | ug/Kg dry | 1x | -- | -- | -- | -- | -- | -- | 06/02/08 18:57 | |
| 2-Methylnaphthalene | " | 0.24 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| 1-Methylnaphthalene | " | ND | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Acenaphthylene | " | ND | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Acenaphthene | " | ND | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Fluorene | " | ND | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Phenanthrene | " | 0.49 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| Anthracene | " | 0.27 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| Fluoranthene | " | 0.33 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| Pyrene | " | 0.33 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| Benzo[a]anthracene | " | ND | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Chrysene | " | 0.48 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| Benzo[a]pyrene | " | ND | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | |
| Indeno[1,2,3-cd]pyrene | " | 0.32 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| Dibenz(a,h)anthracene | " | 0.29 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| Benzo[g,h,i]perylene | " | 0.42 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| Benzo[b]fluoranthene | " | 0.40 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| Benzo[k]fluoranthene | " | 0.34 | --- | 5.0 | " | " | -- | -- | -- | -- | -- | -- | " | J |
| *Surrogate(s): Nitrobenzene-d5* | | *Recovery: 87%* | | | *Limits: 38-141%* | " | | | | | | | *06/02/08 18:57* | |
| *2-Fluorobiphenyl* | | *80%* | | | *42-140%* | " | | | | | | | *"* | |
| *Terphenyl-d14* | | *86%* | | | *42-151%* | " | | | | | | | *"* | |
| **LCS (580-32107-2)** | | | | | **QC Source:** | | | | **Extracted: 05/30/08 16:51** | | | | | |
| Naphthalene | 8270C | 886 | --- | 5.0 | ug/Kg dry | 1x | -- | 1000 | 89% | (64-129) | -- | -- | 06/02/08 19:19 | |
| 2-Methylnaphthalene | " | 929 | --- | 5.0 | " | " | -- | " | 93% | (65-125) | -- | -- | " | |
| 1-Methylnaphthalene | " | 880 | --- | 5.0 | " | " | -- | " | 88% | (48-148) | -- | -- | " | |
| Acenaphthylene | " | 915 | --- | 5.0 | " | " | -- | " | 92% | (69-129) | -- | -- | " | |
| Acenaphthene | " | 876 | --- | 5.0 | " | " | -- | " | 88% | (65-130) | -- | -- | " | |
| Fluorene | " | 878 | --- | 5.0 | " | " | -- | " | 88% | (68-128) | -- | -- | " | |
| Phenanthrene | " | 869 | --- | 5.0 | " | " | -- | " | 87% | (65-125) | -- | -- | " | |
| Anthracene | " | 965 | --- | 5.0 | " | " | -- | " | 96% | (73-123) | -- | -- | " | |
| Fluoranthene | " | 910 | --- | 5.0 | " | " | -- | " | 91% | (61-121) | -- | -- | " | |
| Pyrene | " | 916 | --- | 5.0 | " | " | -- | " | 92% | (54-134) | -- | -- | " | |

TestAmerica Anchorage



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## Semivolatile Organic Compounds by GC/MS (Selective - Laboratory Quality Control Results

TestAmerica Tacoma

**QC Batch: 32013** **Soil Preparation Method: 3550B**

| Analyte | Method | Result | MDL* | MRL | Units | Dil | Source Result | Spike Amt | % REC | (Limits) | % RPD | (Limits) | Analyzed | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **LCS (580-32107-2)** | | | **QC Source:** | | | | | **Extracted: 05/30/08 16:51** | | | | | | |
| Benzo[a]anthracene | " | 866 | --- | 5.0 | " | " | -- | " | 87% | (64-124) | -- | -- | " | |
| Chrysene | " | 807 | --- | 5.0 | " | " | -- | " | 81% | (71-126) | -- | -- | " | |
| Benzo[a]pyrene | " | 920 | --- | 5.0 | " | " | -- | " | 92% | (68-128) | -- | -- | " | |
| Indeno[1,2,3-cd]pyrene | " | 763 | --- | 5.0 | " | " | -- | " | 76% | (59-139) | -- | -- | " | |
| Dibenz(a,h)anthracene | " | 765 | --- | 5.0 | " | " | -- | " | 77% | (57-142) | -- | -- | " | |
| Benzo[g,h,i]perylene | " | 714 | --- | 5.0 | " | " | -- | " | 71% | " | -- | -- | " | |
| Benzo[b]fluoranthene | " | 897 | --- | 5.0 | " | " | -- | " | 90% | (66-136) | -- | -- | " | |
| Benzo[k]fluoranthene | " | 920 | --- | 5.0 | " | " | -- | " | 92% | (63-143) | -- | -- | " | |
| *Surrogate(s): Nitrobenzene-d5* | | *Recovery: 91%* | | | *Limits: 38-141%* | " | | | | | | | *06/02/08 19:19* | |
| *2-Fluorobiphenyl* | | *81%* | | | *42-140%* | " | | | | | | | " | |
| *Terphenyl-d14* | | *86%* | | | *42-151%* | " | | | | | | | " | |

TestAmerica Anchorage

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| Anchorage, AK/USA 99501-4427 | Project Manager: | Nino Muniz | 06/13/08 09:54 |

## Notes and Definitions

Report Specific Notes:

| | | |
|---|---|---|
| B | - | Compound was found in the blank and sample. |
| F | - | MS or MSD exceeds the control limits |
| J | - | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| MHA | - | Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS). |
| R4 | - | Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information. |
| RL7 | - | Sample required dilution due to high concentrations of target analyte. |
| X | - | Surrogate exceeds the control limits |
| Z3 | - | The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information. |
| ZX | - | Due to sample matrix effects, the surrogate recovery was outside the acceptance limits. |

Laboratory Reporting Conventions:

| | | |
|---|---|---|
| DET | - | Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only. |
| ND | - | Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate). |
| NR/NA | - | Not Reported / Not Available |
| dry | - | Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight. |
| wet | - | Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis. |
| RPD | - | RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries). |
| MRL | - | METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table. |
| MDL* | - | METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results. |
| Dil | - | Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data. |
| Reporting Limits | - | Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable. |
| Electronic Signature | - | Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy.* Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature. |

**TestAmerica**
ANALYTICAL TESTING CORPORATION


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9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210


# CHAIN OF CUSTODY REPORT

**Work Order #:** ARE0068

CLIENT: ADEC

INVOICE TO: OASIS ENVIRONMENTAL

REPORT TO: OASIS ENVIRONMENTAL INC (NEMO MUNEZ)
ADDRESS: 825 W. 8TH AVE

PHONE: (907) 258-4880 FAX: (907) 258-4330

P.O. NUMBER:

PROJECT NAME: PILOT POINT - ALASKA PACKERS

PROJECT NUMBER: 14-123

SAMPLED BY: C. SHORT, Z. KERK

**TURNAROUND REQUEST** in Business Days *

Organic & Inorganic Analyses: 10 STD. | 7 | 5 | 4 | 3 | 2 | 1 | < 1

Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | < 1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | PRESERVATIVE | REQUESTED ANALYSES: DRO-AK102 | REQUESTED ANALYSES: RRO-AK103 | REQUESTED ANALYSES: PAH 8270 SIM | MATRIX (W, S, O) | # OF CONT. | LOCATION / COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | S101SS | 5.21.08 0935 | | X | X | | S | 2 | | |
| 2 | S102SS | 5.21.08 0940 | | X | | | S | 1 | | |
| 3 | S103SS | 5.21.08 0945 | | X | | | S | 1 | | |
| 4 | S104SS | 5.21.08 0950 | | X | | | S | 1 | | |
| 5 | S105SS | 5.21.08 0955 | | X | | | S | 1 | | |
| 6 | S201SS | 5.21.08 0900 | | X | | | S | 1 | | |
| 7 | S202SS | 5.21.08 0910 | | X | | | S | 1 | | |
| 8 | S203SS | 5.21.08 0915 | | X | | | S | 1 | | |
| 9 | S204SS | 5.21.08 0920 | | X | | | S | 1 | | |
| 10 | S205SS | 5.21.08 0923 | | X | X | | S | 2 | | |

| | | | | | |
|---|---|---|---|---|---|
| RELEASED BY: | | DATE: 5.22.08 | RECEIVED BY: | | DATE: 05/22/08 |
| PRINT NAME: ZACK KERK | FIRM: | TIME: 1700 | PRINT NAME: Johanna Drehr | FIRM: Anchorage | TIME: 1729 |
| RELEASED BY: | | DATE: | RECEIVED BY: | | DATE: |
| PRINT NAME: | FIRM: | TIME: | PRINT NAME: | FIRM: | TIME: |

ADDITIONAL REMARKS:

TEMP: 1.9°C



TAL-1000 0907

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ANALYTICAL TESTING CORPORATION

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9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

# CHAIN OF CUSTODY REPORT

**Work Order #:**

CLIENT: ADEC

INVOICE TO: OASIS ENVIRONMENTAL

REPORT TO: OASIS ENVIRONMENTAL INC (NIKO MUNZ)
ADDRESS: 825 W. 8TH AVE

PHONE: (907) 258-4880 FAX: (907) 258-4330

P.O. NUMBER:

PROJECT NAME: PILOT POINT - ALASKA PACKERS

PROJECT NUMBER: 14-123

SAMPLED BY: C. SHORT, Z. KERK

**TURNAROUND REQUEST**
in Business Days *
Organic & Inorganic Analyses: 10 STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: (5) STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE

REQUESTED ANALYSES

| CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | DRO-AK102 | RRO-AK103 | MATRIX (W, S, O) | # OF CONT. | LOCATION / COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|
| 1 TF01SS | 5.21.08 1030 | X | | S | 1 | | |
| 2 TF02SS | 5.21.08 1035 | X | | S | 1 | | |
| 3 TF03SS | 5.21.08 1040 | X | | S | 1 | | |
| 4 TF04SS | 5.21.08 1045 | X | | S | 1 | | |
| 5 TF05SS | 5.21.08 1050 | X | | S | 3 | MS/MSD | |
| 6 TF06SS | 5.21.08 1055 | X | | S | 1 | | |
| 7 TF07SS | 5.21.08 1100 | X | | S | 1 | | |
| 8 TF08SS | 5.21.08 1105 | X | | S | 1 | | |
| 9 TF09SS | 5.21.08 1110 | X | | S | 1 | | |
| 10 TF10SS | 5.21.08 1115 | X | | S | 1 | | |

RELEASED BY: PRINT NAME: ZACK KERK FIRM: DATE: 5.22.08 TIME: 1700
RECEIVED BY: PRINT NAME: Johanna Dreher FIRM: Anchorage DATE: 05/22/08 TIME: 1724

RELEASED BY: PRINT NAME: FIRM: DATE: TIME:
RECEIVED BY: PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS:

TEMP: 1.9°C

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11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

# CHAIN OF CUSTODY REPORT

**Work Order #:**

CLIENT: ADEC

INVOICE TO: OASIS ENVIRONMENTAL

REPORT TO: OASIS ENVIRONMENTAL INC (NINO MUNEZ)
ADDRESS: 825 W. 8TH AVE

PHONE: (907) 258-4880 FAX: (907) 258-4370

P.O. NUMBER:

PROJECT NAME: PILOT POINT - ALASKA PACKERS

PROJECT NUMBER: 14-123

SAMPLED BY: C. SHORT, Z. KERR

**TURNAROUND REQUEST**
in Business Days *
Organic & Inorganic Analyses
10 STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses
5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | PRESERVATIVE | REQUESTED ANALYSES: DRO-AK102 | REQUESTED ANALYSES: RRO-AK103 | REQUESTED ANALYSES: PAH EPA 8270SCM | MATRIX (W, S, O) | # OF CONT. | LOCATION / COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | TF11SS | 5.21.08 1120 | | X | | | S | 1 | | |
| 2 | TF12SS | 5.21.08 1125 | | X | X | | S | 2 | | |
| 3 | TF13SS | 5.21.08 1130 | | X | | | S | 1 | | |
| 4 | TF14SS | 5.21.08 1135 | | X | X | | S | 2 | | |
| 5 | TF15SS | 5.21.08 1140 | | X | | | S | 1 | | |
| 6 | TF16SS | 5.21.08 1145 | | X | | | S | 1 | | |
| 7 | TF17SS | 5.21.08 1150 | | X | | | S | 1 | | |
| 8 | TF18SS | 5.21.08 1155 | | X | | | S | 1 | | |
| 9 | TF19SS | 5.21.08 1200 | | X | | | S | 1 | | |
| 10 | TF20SS | 5.21.08 1205 | | X | | | S | 1 | | |

RELEASED BY: PRINT NAME: ZACK KERR FIRM: DATE: 5.22.08 TIME: 1700
RECEIVED BY: PRINT NAME: Johanna Druhe FIRM: Anchorage DATE: 05/22/08 TIME: 1729

RELEASED BY: PRINT NAME: FIRM: DATE: TIME:
RECEIVED BY: PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS:

TEMP: 1.9°C

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11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290
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2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

# CHAIN OF CUSTODY REPORT

**Work Order #:**

CLIENT: ADEC

INVOICE TO: OASIS ENVIRONMENTAL

REPORT TO: OASIS ENVIRONMENTAL INC. (NINO MUNIZ)
ADDRESS: 825 W. 8th Ave.

PHONE: (907) 258-4880 FAX: (907) 258-4330

P.O. NUMBER:

PROJECT NAME: PELOT POINT ALASKA PACKERS

PROJECT NUMBER: 14-123

SAMPLED BY: CS, ZK

**TURNAROUND REQUEST**
**in Business Days ***
Organic & Inorganic Analyses
(10) STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses
5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* *Turnaround Requests less than standard may incur Rush Charges.*

| | CLIENT SAMPLE IDENTIFICATION | SAMPLING DATE/TIME | PRESERVATIVE | REQUESTED ANALYSES: Pb, 6PA 6020 | MATRIX (W, S. O) | # OF CONT. | LOCATION / COMMENTS | TA WO ID |
|---|---|---|---|---|---|---|---|---|
| 1 | C-01-01 | 5.21.08 1340 | | X | S | 1 | | |
| 2 | C-01-02 | 5.21.08 1330 | | X | S | 1 | | |
| 3 | E-01-01 | 5.21.08 1400 | | X | S | 1 | | |
| 4 | E-01-02 | 5.21.08 1410 | | X | S | 1 | | |
| 5 | E-02-01 | 5.21.08 1425 | | X | S | 1 | | |
| 6 | E-02-02 | 5.21.08 1435 | | X | S | 1 | | |
| 7 | D-01-01 | 5.21.08 1450 | | X | S | 1 | | |
| 8 | D-01-02 | 5.21.08 1500 | | X | S | 1 | | |
| 9 | H-01-01 | 5.21.08 1515 | | X | S | 1 | | |
| 10 | H-01-02 | 5.21.08 1525 | | X | S | 1 | | |

RELEASED BY: PRINT NAME: ZACK KERK FIRM: DATE: 5.22.08 TIME: 1700
RECEIVED BY: PRINT NAME: Johanna Dreher FIRM: Anchorage DATE: 05/22/08 TIME: 1729
RELEASED BY: PRINT NAME: FIRM: DATE: TIME:
RECEIVED BY: PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS:

TEMP: 19°C

TAL-1000 0907

#2 Dark Blue

# Test America Cooler Receipt Form

(Army Corps. Compliant)

**WORK ORDER #** AR00068 **CLIENT:** Oasis **PROJECT:** Point Point

Date /Time Cooler Arrived 05 / 22 / 08 17 : 29 Cooler signed for by: Johanna Dreher (Print name)

## Preliminary Examination Phase:

Date cooler opened: ☒ same as date received *or* ___/___/___

Cooler opened by (print) Johanna Dreher (sign) Johanna Dreher

1. Delivered by ☐ ALASKA AIRLINES ☐ Fed-Ex ☐ UPS ☐ NAC ☐ LYNDEN ☒ CLIENT ☐ Other: hand

Shipment Tracking # if applicable _____ (include copy of shipping papers in file)

2. Number of Custody Seals 2 Signed by see back Date 05/22/08

Were custody seals unbroken and intact on arrival? ☒ Yes ☐ No

3. Were custody papers sealed in a plastic bag? ☒ Yes ☐ No

4. Were custody papers filled out properly (ink, signed, etc.)? ☒ Yes ☐ No

5. Did you sign the custody papers in the appropriate place? ☒ Yes ☐ No

6. Was ice used? ☒ Yes ☐ No Type of ice: ☐ blue ice ☒ gel ice ☐ real ice ☐ dry ice Condition of Ice: Soft

Temperature by Digi-Thermo Probe 1.9 °C Thermometer # rec #4
Acceptance Criteria: 0 - 6°C

7. Packing in Cooler: ☒ bubble wrap ☐ styrofoam ☒ cardboard ☐ Other: _____

8. Did samples arrive in plastic bags? ☒ Yes ☒ No 4 8oz tan 4oz amber no

9. Did all bottles arrive unbroken, and with labels in good condition? ☒ Yes ☐ No

10. Are all bottle labels complete (ID, date, time, etc.) ☑ Yes ☐ No

11. Do bottle labels and Chain of Custody agree? ☑ Yes ☐ No

12. Are the containers and preservatives correct for the tests indicated? ☑ Yes ☐ No

13. Conoco Phillips, Alyeska, BP H2O samples only: pH < 2? ☐ Yes ☐ No ☑ N/A

14. Is there adequate volume for the tests requested? ☑ Yes ☐ No

15. Were VOA vials free of bubbles? ☑ N/A ☐ Yes ☐ No

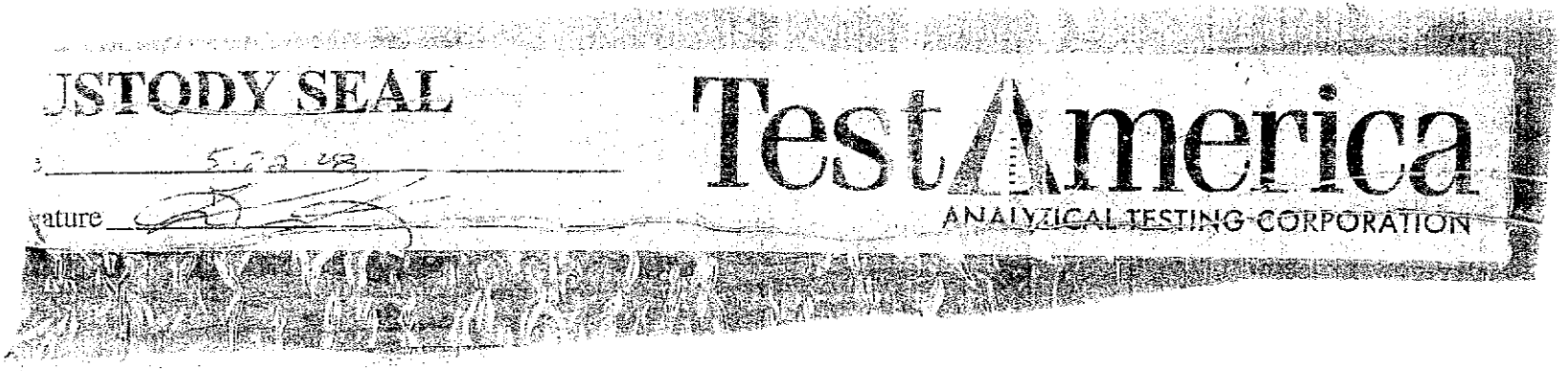
If "NO" which containers contained "head space" or bubbles? _____

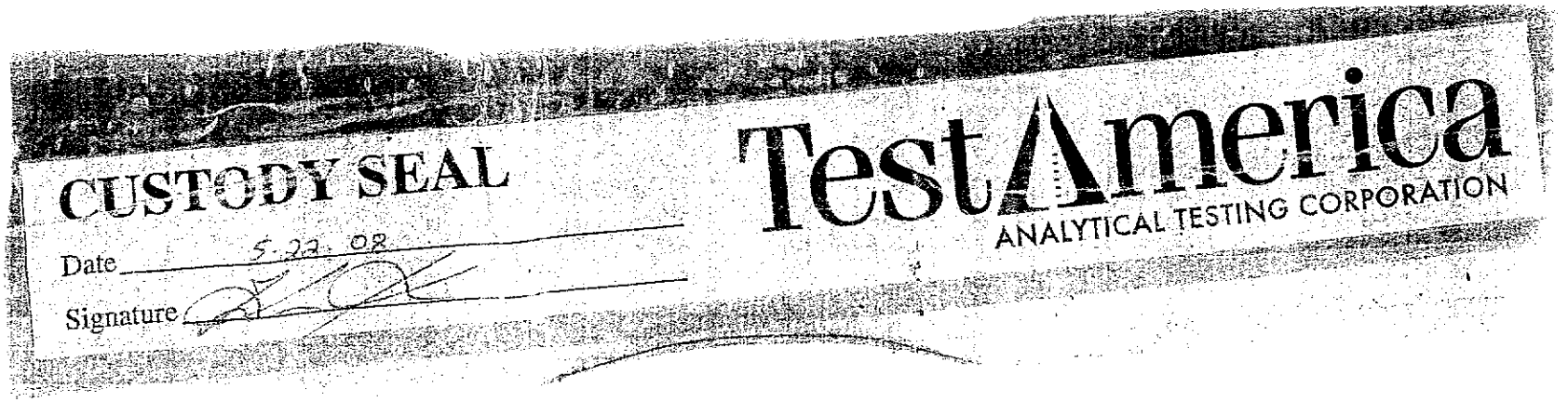
## Log-in Phase:

Date of sample log-in 05 / 23 / 08

Samples logged in by (print) DALJEET MAHAL (sign) DJ Mahal

1. Was project identifiable from custody papers? ☑ Yes ☐ No
2. Do Turn Around Times and Due Dates agree? ☑ Yes ☐ No
3. Was the Project Manager notified of status? ☑ Yes ☐ No
4. Was the Lab notified of status? ☑ Yes ☐ No
5. Was the COC scanned and copied? ☐ Yes ☐ No


JSTODY SEAL
5.22.08
ature
TestAmerica
ANALYZICAL TESTING CORPORATION


CUSTODY SEAL
Date 5.22.08
Signature
TestAmerica
ANALYTICAL TESTING CORPORATION

# APPENDIX E

## CSM Scoping Forms

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# HUMAN HEALTH CONCEPTUAL SITE MODEL

*Site:* Former Alaska Packers Processing Plant
Pilot Point, Alaska

***Follow the directions below. Do not consider engineering or land use controls when describing pathways.***

*Completed By:* H.R. Muniz, R.P.G.
*Date Completed:* 6/24/08

**(1)**
*Check the media that could be directly affected by the release.*

**(2)**
*For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Briefly list other mechanisms or reference the report for details.*

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

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

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

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

Revised 3/21/06

# Human Health Conceptual Site Model
# Scoping Form

**Site Name:** Former AK Packers, Pilot Point, AK

**File Number:**

**Completed by:** H.R. Muniz, R.P.G.

**Introduction**

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

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

## 1. *General Information:*

**Sources** *(check potential sources at the site)*

- ☐ USTs
- ☑ ASTs
- ☐ Dispensers/fuel loading racks
- ☐ Drums
- ☐ Vehicles
- ☐ Landfills
- ☐ Transformers
- ☐ Other: _____

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

- ☑ Spills
- ☑ Leaks
- ☐ Direct discharge
- ☐ Burning
- ☐ Other: _____

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

- ☑ Surface soil (0-2 feet bgs*)
- ☑ Subsurface Soil (>2 feet bgs)
- ☑ Air
- ☑ Groundwater
- ☐ Surface water
- ☐ Other: _____

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

- ☐ Residents (adult or child)
- ☑ Commercial or industrial worker
- ☑ Construction worker
- ☑ Subsistence harvester (i.e., gathers wild foods)
- ☑ Subsistence consumer (i.e., eats wild foods)
- ☑ Site visitor
- ☑ Trespasser
- ☑ Recreational user
- ☐ Farmer
- ☐ Other: _____

* bgs – below ground surface

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

### a) Direct Contact –

#### 1 Incidental Soil Ingestion

Is soil contaminated anywhere between 0 and 15 feet bgs? ☑

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

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

#### 2 Dermal Absorption of Contaminants from Soil

Is soil contaminated anywhere between 0 and 15 feet bgs? ☑

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

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

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

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

### b) Ingestion –

#### 1 Ingestion of Groundwater

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

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

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

### 2 Ingestion of Surface Water

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

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

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

### 3 Ingestion of Wild Foods

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

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

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

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

## c) Inhalation

### 1 Inhalation of Outdoor Air

Is soil contaminated anywhere between 0 and 15 feet bgs? ☑

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

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

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

### 2 Inhalation of Indoor Air

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

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

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

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

**Dermal Exposure to Contaminants in Groundwater and Surface Water**

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

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

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

Comments:

Surface water present around several buildings that could be contacted by site visitors, workers, and contacted and/or ingested by wildlife.

**Inhalation of Volatile Compounds in Household Water**

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

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

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

Comments:

**Inhalation of Fugitive Dust**

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

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers. This size can be inhaled and would be of concern for determining if this pathway is complete.

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

Comments:

**Direct Contact with Sediment**

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

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

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

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

Comments:

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

# APPENDIX A

## BIOACCUMULATIVE COMPOUNDS

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

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

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

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

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

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

# APPENDIX B

## VOLATILE COMPOUNDS

**Table B-1: List of Volatile Compounds of Potential Concern**
Common volatile contaminants of concern at contaminated sites. A chemical is defined as volatile if the Henry's Law constant is 1 x $10^{-5}$ atm-$m^3$/mol or greater and the molecular weight less than 200 g/mole (g/mole; EPA 2004a). Those compounds in Table X of 18 AAC 75.345 that are volatile, based on the definition above, are listed below.

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

# APPENDIX C

## COMPOUNDS OF CONCERN FOR VAPOR MIGRATION

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

A chemical is considered sufficiently toxic if the vapor concentration of the pure component poses an incremental lifetime cancer risk greater than 10-6 or a non-cancer hazard index greater than 1. A chemical is considered sufficiently volatile if it's Henry's Law constant is 1 x $10^{-5}$ atm-$m^3$/mol or greater.

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

Source: EPA 2002.