
Report

**2007 Field Data Report
Taku Gardens Former
Communications Site
Fort Wainwright, Alaska**

Prepared for
**U.S. Army Corps of Engineers
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Abbreviations

ADEC	Alaska Department of Environmental Conservation
ASL	Applied Sciences Laboratory
bgs	below ground surface
°F	degrees Fahrenheit
DQO	data quality objective
DRO	diesel-range organic
DU	decision unit
EDD	electronic deliverable document
EPA	U.S. Environmental Protection Agency
EPH	extractable petroleum hydrocarbons
ERPIMS	Environmental Restoration Program Information Management System
FCS	Former Communications Site
FDR	Field Data Report
FSP	field sampling plan
FS	Feasibility Study
FTL	field team leader
GRO	gasoline-range organic
ID	identifier
L	liter
mL	milliliter
MEC	munitions and explosives of concern
MI	multi-incremental
MS	matrix spike
MSD	matrix spike duplicate
PCB	polychlorinated biphenyl
PID	photoionization detector
PPE	personal protective equipment

ppm	parts per million
PSE	Preliminary Source Evaluation
PVC	polyvinyl chloride
QAPP	quality assurance project plan
QC	quality control
RI	Remedial Investigation
SAS	School Age Services
SB	soil boring
SOPs	Standards of Practice
SP	soil pile
STP	Sample Tracking Program
SVOC	semi-volatile organic compound
TASAC	TestAmerica Analytical Testing Corporation in West Sacramento, California
TASAN	TestAmerica Analytical Testing Corporation in Santa Ana, California
TASEA	TestAmerica Analytical Testing Corporation in Seattle, Washington
TATAC	TestAmerica Analytical Testing Corporation in Tacoma, Washington
TOC	Top of Casing
UXO	unexploded ordnance
VDMS	Validation Data Management System
VOA	volatile organic analysis
VOC	volatile organic compound
VPH	volatile petroleum hydrocarbons

SECTION 1

Introduction

This 2007 Field Data Report (FDR) presents the field and analytical data that were collected in 2007 as part of the ongoing Remedial Investigation (RI) and Feasibility Study (FS) at the Former Communications Site (FCS), also known as Taku Gardens Family Housing Development, on Fort Wainwright, Alaska. The FDR describes the sampling methods and procedures that the field teams used during the sampling effort, provides summary information and details regarding sample locations, sample quality assurance/quality control (QA/QC), and known deviations from the proposed sampling programs.

The data collected in 2007 will be used to characterize the nature and extent of potential contamination at the site, assess risk, and help support the evaluation of remedies that are protective of human and ecological receptors. A companion to this document, the *Preliminary Risk Evaluation Report* (CH2M HILL, in preparation), which will contain evaluations of the 2007 and historical data, is being prepared in concert with this FDR. Because of this, the FDR does not contain interpretations, conclusions, or recommendations based on field activities or sample results.

1.1 Project Background

An RI/FS is being conducted to ensure protection of human health and the environment in the FCS and adjacent areas. The U.S. Army, U.S. Environmental Protection Agency (EPA), and Alaska Department of Environmental Conservation (ADEC) agreed to conduct the RI/FS for the FCS using the Triad approach. Guided by the EPA's data quality objectives (DQOs) process, specific data needs for the project were developed in response to recognized data gaps. Specific field-data collection activities were then developed to satisfy the DQOs and provide data of known quality that would satisfy designated data uses and users. Figure 1-1 shows the extent of the FCS area, covering approximately 54 acres, including 55 constructed buildings. Figure 1-1 also includes the delineation of investigation subareas as they were defined during the 2007 field effort. Figure 1-2 includes the 2004 magnetic anomaly data and the delineation of the High Probability of Munitions and Explosives of Concern (MEC) subarea, also referred to as "Subarea A."

Several planning documents were prepared and/or referenced to guide and support the field-sampling efforts. These documents include the following:

- CH2M HILL. September 2007. *Draft Remedial Investigation Management Plan*.
- CH2M HILL. May 2007. *Draft Remedial Investigation Work Plan (Draft RI Work Plan)*.
- CH2M HILL. July 2007. *Addendum 1 to the Remedial Investigation Work Plan Sound Berm Investigation, Rev 1*.
- CH2M HILL. September 2007. *Addendum 2 to the Remedial Investigation Work Plan Soil Piles Investigation, Final*.

- CH2M HILL. August 2007. *Addendum 3 to the Remedial Investigation Work Plan Soil Gas Investigation, Final*.
- CH2M HILL. September 2007. *Addendum 4 to the Remedial Investigation Work Plan Groundwater Investigation, Final*.
- Jacobs Engineering Group, Inc. (Jacobs). September 2007. *Munitions and Explosives of Concern Support Work Plan*.
- Jacobs Engineering Group, Inc. (Jacobs). August 2007. *Former Communications Site PCB Removal Action, Final*.
- Northwind, Inc. May 2007. *Preliminary Source Evaluation II Report Taku Gardens, Fort Wainwright, Alaska (Final)*. Prepared for Department of the Army, U.S. Army Corps of Engineers, Alaska District, Elmendorf, Air Force Base, Alaska.
- Oasis Environmental, Inc. Anchorage Alaska. March 2007. *Preliminary Source Evaluation 1 Narrative Report, Former Communications Site, Fort Wainwright, Alaska. Interim Final*. Prepared for Department of the Army, U.S. Army Corps of Engineers, Alaska District, Elmendorf, Air Force Base, Alaska.

1.2 Sampling Program Overview

The field sampling was conducted in accordance with the procedures, methods, and Standards of Practice (SOPs) presented in the Quality Assurance Project Plan (QAPP) dated July 2007 and the associated Field Sampling Plan (FSP) dated July 27, 2007, both contained in the *Draft Remedial Investigation Management Plan* (CH2M HILL, 2007f). The 2007 field season occurred over a four month period from early July 2007 to early November 2007 and included the following sampling programs:

- Soil and Sediment Characterization
 - Sound berm sampling
 - Soil pile sampling
 - Confirmation sampling (Drum and Debris/PCB investigation excavations)
 - Drainage swale sediment sampling
- Soil Gas Sampling
 - Subslab soil gas
 - Vadose zone soil gas
- Hydrogeological Investigation
 - Monitoring well installation
 - Groundwater sampling
 - Aquifer testing

The field sampling schedule was driven by the approvals of Addendum 1 through Addendum 4 to the *Draft Remedial Investigation Work Plan* (CH2M HILL, 2007a) and Jacobs work plans (Jacobs, 2007a, 2007b). The schedule of sampling activities is summarized in Table 1-1.

1.3 Document Organization

The report is organized as follows:

Section 1. Introduction. This section provides general background information.

Section 2. Summary of Field Activities. This section describes the major elements of each sampling program, including information about sampling procedures, the types, number and location of collected samples, and whether any deviations from the FSP were required to accomplish the sampling.

Section 3. Equipment Decontamination and Investigation Derived Waste. This section describes the equipment decontamination procedures that were followed and the protocols used in the management of investigation derived waste.

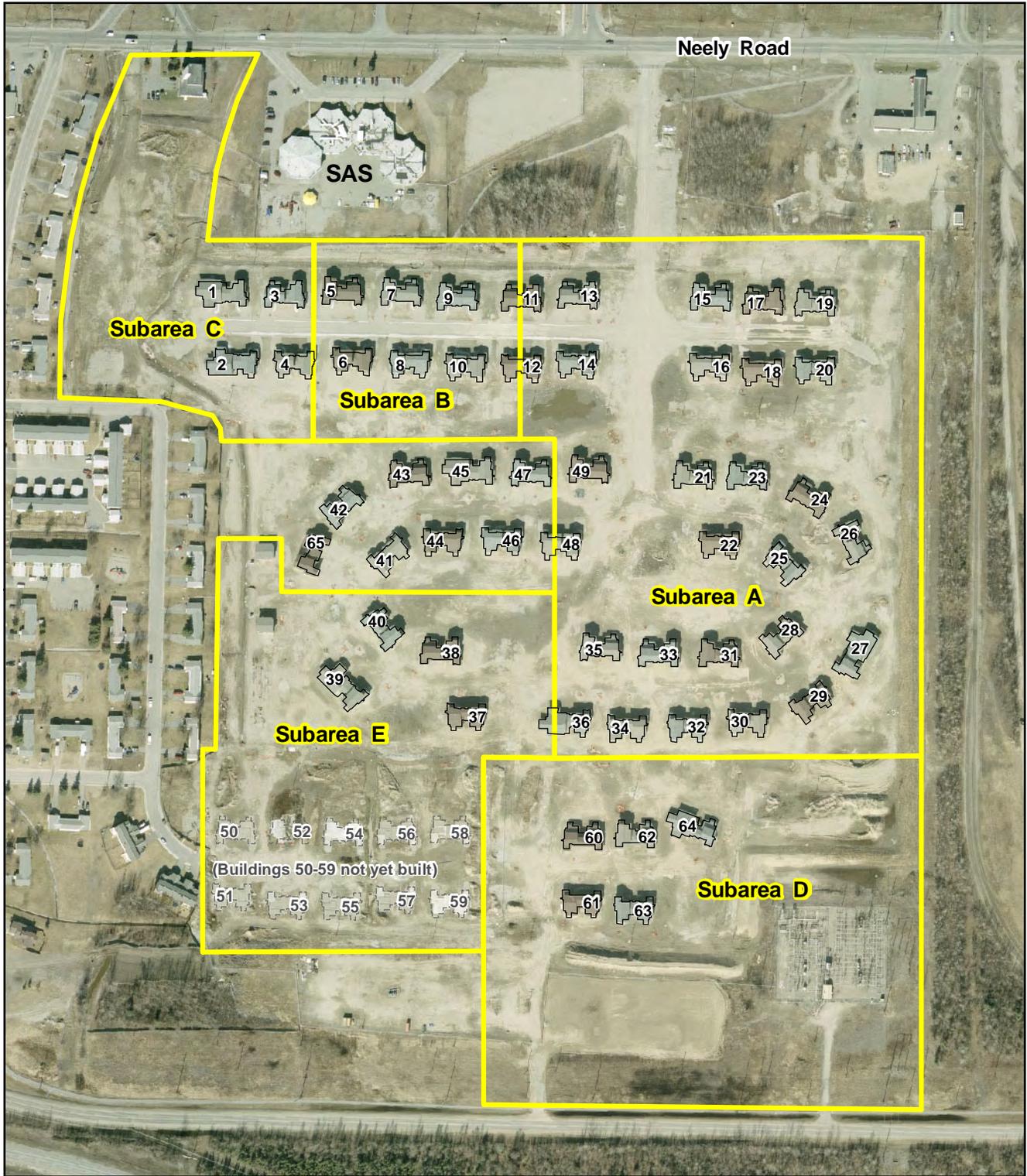
Section 4. Analytical Data Validation and Management. This section describes the management procedures and methods used to validate and process the analytical data for use in RI/FS decision making.

Section 5. References. This section lists the documents that were used in the creation of this document.

Figures and tables are included at the end of each section.

Appendixes to this field data report contain the following information:

- A Summary Tables of Validated Analytical Data (Provided on CD)
- B Data Quality Evaluation Reports (Provided on CD)
- C Soil Boring Logs (Provided on hard copy and CD)
- D Monitoring Well Installation Diagrams (Provided on hard copy and CD)
- E USACE Monitoring Well Sampling Final Field Parameters (Provided on CD)
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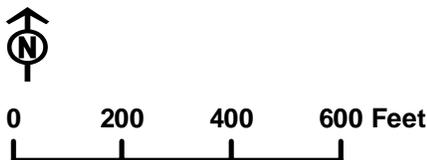
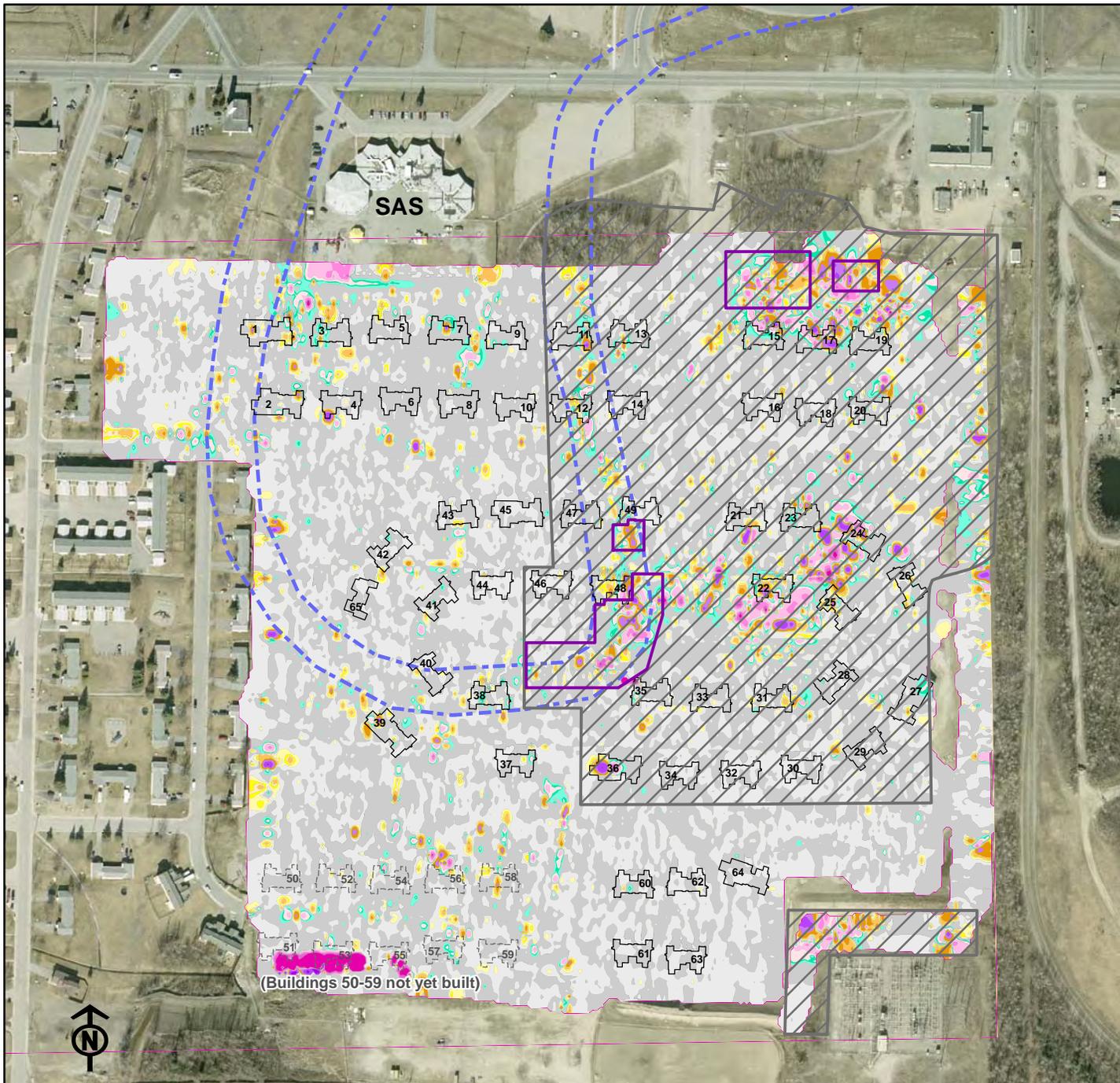


Figure 1-1
 Location of FCS Subareas
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska

Figure 1-2
 Geophysical Anomalies
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska



Legend

-  Moderate to High probability MEC area
-  Former slough channel
-  2007 Drum and Debris Investigation Area

**2004 Magnetic Data
 Vertical Gradient**

-  -4000
-  -1000
-  -500
-  -200
-  -100
-  -75
-  -50
-  -20
-  0
-  40
-  75
-  100
-  200
-  500
-  1000
-  2000
-  4000

(Buildings 50-59 not yet built)

0 100 200 300 Feet

SECTION 2

Summary of RI Field Activities

This section describes the 2007 RI field activities associated with each major sampling program.

2.1 Soil and Sediment Characterization

Soil and sediment characterization was accomplished through use of both multi-incremental (MI) sampling and discrete sampling. The following sections describe the sampling:

- Section 2.1.1, Sound Berm
- Section 2.1.2, Soil Piles
- Section 2.1.3, Drainage Swale Sediment
- Section 2.1.4, Soil Samples During Monitoring Well Installation
- Section 2.1.5, Soil Confirmation Sampling Following Excavation Activities

2.1.1 Sound Berm Sampling

The sound berm is a 6- to 10-foot high earthen structure that extends from northeast corner of the site running approximately 1,200 feet along the eastern boundary toward the south perimeter where it extends approximately 1,000 feet to the west. The sound berm was constructed from surface soil and organic matter obtained during site clearing at the FCS and additional soil from other Fort Wainwright construction sites (CH2M HILL, 2007b). The primary method used to investigate the sound berm was MI sampling. Sampling occurred from July 17 to August 3, 2007.

In accordance with Addendum 1 (CH2M HILL, 2007b) to the *Draft Remedial Investigation Work Plan* (CH2M HILL, 2007a) the sound berm was divided into nine decision units (DUs), each approximately 200 to 400 feet long. A DU is “the defined area or volume in question, that is, that area or volume about which we need to make a decision” (ADEC, 2007). Sound Berm DU boundaries and associated location identifier (IDs) are shown in Figure 2-1. Information about each DU sample, including Location ID, Sample ID, and target analytical suites, is provided in Table 2-1. Quality assurance/quality control (QA/QC) samples collected as part of the Sound Berm Sampling Program are identified in the comments column of Table 2-1. The validated analytical results for the samples are included in Appendix A. Note, however that these results have not been adjusted to account for the 95% upper confidence limit (UCL) calculations for the triplicate samples. These adjusted results will be provided in the Preliminary Risk Screening Evaluation Report (CH2M HILL, in preparation). The Sound Berm Data Quality Evaluation Report, included in Appendix B, provides an assessment of the data quality for the analytical results.

Sampling Procedure

The general work process for collecting samples to be analyzed for target analytes other than volatile organic compounds (VOCs) was as follows:

- After determining the quadrant for MI sample collection by dice roll, the area was cleared of vegetation and a 3-inch diameter hand auger was used to collect the 0- to 24-inch column of soil.
- This soil was coarse screened through a .25-inch screen sieve and homogenized in the field.
- Approximately 30 grams of each incremental sample were transferred by stainless steel trowel to a stainless steel bowl.
- All 30 incremental samples from a single DU were transferred to the same stainless steel bowl in this manner.
- The entire cumulative contents of the bowl were transferred to two 1-liter (L) glass jars for laboratory analysis.

The general work process for collecting samples to be analyzed for VOCs was as follows:

- VOC samples were collected from each incremental sample location immediately following the collection of the 0- to 24-inch column of soil for non-VOC samples.
- A disposable 3 milliliter (mL) plastic syringe with the narrow tip cut off was manually pressed into the intact soil at the bottom of the 24-inch hole to collect a 1 mL soil sample. The 1 mL sample of soil measure was used to approximate 1 gram of soil.
- The incremental soil sample was immediately transferred to a 4-ounce amber glass jar, with Teflon-lined screw lid, containing 30 mL of surrogate-spiked methanol for preservation. The jar was then sealed. The cumulative soil volume from the 30 incremental samples was approximately 30 grams of soil and was completely covered by methanol.

QA/QC Samples

The sampling program for the Sound Berms included collection of duplicate and triplicate samples at DU 9; duplicate and triplicate samples were collected from locations 5 feet north and 5 feet east of the original MI incremental sample location. Matrix spike and matrix spike duplicates (MS/MSD) samples were also collected at DU9 from the same quadrant and 3-foot column as the original incremental sample. After the soil from an incremental sample location had been sieved and homogenized and 30 grams transferred by a stainless steel trowel to a stainless steel bowl an additional 30 grams of soil were transferred to another stainless steel bowl for the MS/MSD sample. This procedure was repeated for all 30 incremental sample locations and the entire contents of the stainless steel bowl were transferred into two 1-L glass jars. The MS/MSD samples for VOC analysis were collected from the same soil column immediately following the collection of the original incremental sample and placed into a 4-ounce amber glass jar, with Teflon-lined screw lid, containing 30 mL of surrogate-spiked methanol for preservation.

Deviations or Unattainable Samples

There were no deviations to the FSP (CH2M HILL, 2007f) or Addendum 1 (CH2M HILL, 2007b) to the *Draft RI Work Plan* (CH2M HILL, 2007a). Photoionization detector (PID) field

screening results of each incremental sample location did not warrant collection of any additional discrete samples.

2.1.2 Soil Pile Sampling

There were 47 designated soil piles at the FCS. These piles were created during construction on site and generally originate from the areas near their current location, as shown in Figure 2-1. In accordance with Addendum 2 (CH2M HILL, 2007d) to the *Draft RI Work Plan* (CH2M HILL, 2007a) the primary method used to investigate the soil piles was MI sampling. Since the soil piles vary in volume from approximately 10 cubic yards to several hundred cubic yards (CH2M HILL, 2007c) smaller piles were grouped into single DUs and larger piles were divided into multiple DUs according to soil volume. DU volume ranged from 100 cubic yards to a maximum of 500 cubic yards. A total of 36 DUs were sampled between August 8 and September 21, 2007.

Figure 2-1 shows the location and name of each soil pile. Information about each DU sample collected during the soil pile sampling program, including Location ID, Sample ID, and target analytical suites is provided in Table 2-2. If a soil pile was part of a group the group name is listed first in Table 2-2 with the soil pile names that comprise the group listed in parentheses after the group name. For the three soil piles with volumes large enough to warrant multiple DUs per pile, the DU Location ID in Table 2-2 includes a numerical suffix (e.g. -1, -2, etc) after the soil pile name to differentiate DUs. Figure 2-2 shows the orientation of the four DUs comprising soil pile 06SP06, Figure 2-3 shows the orientation of the ten DUs in soil pile 06SP13, and Figure 2-4 shows the orientation of two DUs in soil pile 06SP36.

Group 8 also consists of two DUs; soil pile 06SP23 is one DU and incremental samples from both soil pile 06SP24 and soil pile 06SP25 comprise the second DU.

The QA/QC samples collected during the soil pile sampling are identified in the comments column of Table 2-2.

Soil piles 06SP11 and 06SP12 were not included in the MI sampling plan because earlier analytical results for these soil piles indicated arsenic concentrations above the acceptance criteria for the Fort Wainwright landfill. Soil piles 06SP11 and 06SP12 were removed from the site during the 2007 field season. After the piles were removed, three confirmation samples were taken from the footprint of the former pile and analyzed for arsenic. The confirmation samples associated with removal of 06SP11 and 06SP12 are included in Table 2-2.

Validated analytical results for the soil pile samples are included in Appendix A. As with the sound berm samples, these results have not been adjusted to account for the 95 percent upper confidence limit (UCL) calculations for the triplicate samples. These adjusted results will be provided in the Preliminary Risk Screening Evaluation Report (CH2M HILL, in preparation). The Soil Pile Data Quality Evaluation Report, included in Appendix B, provides an assessment of the data quality for the analytical results.

Sampling Procedure

The general work process for collecting samples to be analyzed for target analytes other than VOCs is the same as described in Section 2.1.2 with the following modifications:

- In each DU, 10 samples were “shallow” and 20 samples were “at depth,” meaning below half-height of the pile, which, in the case of large piles, was the 4- to 6-foot column.
- For soil piles where only polychlorinated biphenyls (PCBs) were to be analyzed, approximately 15 grams of an incremental sample was transferred by stainless steel trowel to a stainless steel bowl, and then entire cumulative contents were transferred into one 1 L glass jar for laboratory analyses.

The general work process for collecting samples to be analyzed for VOCs is described in Section 2.1.1. VOC samples were collected at each individual location immediately following the collection of the 0- to 24-inch column of soil for non-VOC samples.

QA/QC Samples

The sampling program for the Soil Piles included collection of duplicate and triplicate samples at soil piles SP06-01, SP13-05, SPA, and SP27 as shown in Table 2-2. The procedure for collecting duplicate and triplicate MI samples in the soil piles was slightly different from the procedure used for the Sound Berm DUs. Due to the varying sizes and sloped sides of the piles the duplicate and triplicate samples were collected from a location in the vicinity of the original sample that would provide a duplicate and triplicate sample from the same depth as the original sample, instead of collecting a duplicate and triplicate sample at a defined distance and direction from the original sample location.

MS/MSD samples were collected at SP06-01, SPA, and SP27 as shown in Table 2-2. The MS/MSD samples were collected using the same sampling procedures as in the Sound Berm sampling program.

Deviations or Unattainable Samples

The following deviations from the sampling program were required during the field event:

- Obvious odor and a PID reading of 43 parts per million (ppm) at one incremental sample location in 06SP06 DU1 warranted collecting a discrete sample, 06SP06-05, at this location. The discrete sample location was excluded from the incremental samples taken from DU 1. A replacement incremental sample, in a location 5 feet west of the original incremental sample, at the same depth, without an elevated PID reading, was collected.
- In Addendum 2 (CH2M HILL, 2007d) to the *Draft RI Work Plan* (CH2M HILL, 2007a), Soil Pile A (SPA) was included in Group 1 DU. On September 3, 2007, when temperatures were reaching highs of 70 degrees Fahrenheit (°F), the odor of fuel-type contaminants was apparent in SPA. Soil was removed and placed in a plastic freezer bag and left in the sun for 1 hour. PID headspace readings were over 450 ppm. SPA was excluded from the Group 1 DU and sampled as one individual DU.
- Co-located soil piles 06SP40 and 06SP41 had a significant amount of asphalt and concrete debris. Because the original pile could not be sampled at depth, a bulldozer was used to level the pile to a height of approximately 4 feet so that all incremental samples

collected would be in the 0- to 2-foot depth interval to minimize hand auger rejection. Additionally, Group 1 06SP03 contained significant amounts of asphalt and concrete debris and SPB contained a significant amount of metal debris.

- SP17 DU was also analyzed for PCBs and SP18 DU was also analyzed for SVOC in addition to analytical suites listed in Addendum 2 (CH2M HILL, 2007d) of the *Draft RI Work Plan*.

2.1.3 Drainage Swale Sediment Sampling

The two main drainage swales for the site converge north-northwest of Building 1, and a combined swale runs in a north-northeast direction past the School Age Services (SAS) building. In accordance with the *Draft RI Work Plan* (CH2M HILL, 2007a), three discrete samples were collected from sediment in the drainage swale on September 21, 2007. Sample locations with Location IDs are shown in Figure 2-1. Sample information including Location ID, Sample ID, and target analytical suites is provided in Table 2-3. All three samples were collected from the upper 6 inches of sediment in the drainage swale and contained large amounts of roots and organic matter. A light rain fell two days prior to the sampling effort, but there was no standing water in the drainage swale at the time of sampling.

Validated analytical results for the drainage swale sediment samples are included in Appendix A and the Drainage Swale DQE Report is included in Appendix B.

Sampling Procedure

The general work process for sample collection was as follows:

- Gasoline-range organic (GRO) compounds, VOC, and Hydrocarbon Speciation (VPH) samples were collected first using an EZ Sampler® syringe.
- Five grams of soil were placed directly into each of two 40 mL volatile organic analysis (VOA) vials preserved with sodium bisulfate, and two 40 mL VOA vials preserved with methanol.
- Using the EZ Sampler® syringe, 25 grams of soil were placed directly into one 4-ounce amber jar pre-filled with 30 mL of surrogate-spiked methanol to minimize volatilization.
- Sediment was then collected into one 16-ounce amber jar and two 4-ounce amber jars for analysis of non-VOC target analytes.

QA/QC Samples

The sampling program for the Drainage Swale Sediment included collection of field duplicate (FD) and MS/MSD samples at sample location DSS01-03. The field duplicate sample was collected immediately following the original sample collection from sediment adjacent to the original sample location, as were the MS/MSD samples.

Deviations or Unattainable Samples

There were no deviations to the FSP.

2.1.4. Soil Sampling During Monitoring Well Installation

Previous subsurface soil and groundwater sampling data did not provide enough site coverage to adequately delineate the nature and extent of potential contamination for the RI/FS. Additional monitoring well locations were proposed in Addendum 4 (CH2M HILL, 2007e) to the *Draft RI Work Plan* (CH2M HILL, 2007a) to provide site wide coverage with approximately one monitoring well per 0.75 acre.

Each temporary monitoring well installation during the 2007 field season included a logged soil boring, provided in Appendix C, and soil samples. Figure 2-5 shows the locations of 63 soil borings. Sixty of the soil borings were complete as temporary, 20-foot deep monitoring wells and two soil borings were completed as deep monitoring wells. Only one soil boring was not completed as a monitoring well (Soil Boring [SB] 66). Details of monitoring well installation are included in Section 2.3.1.

Three soil samples were collected from each soil boring, for a total of 189 soil samples. The first sample was collected near the ground surface (4 feet below ground surface [bgs]), the second sample was taken in the vadose zone (4 to 10 feet bgs), and third soil sample taken in the smear zone (11 to 13 feet bgs). In accordance with t Addendum 4 (CH2M HILL, 2007e) to the *Draft RI Work Plan* (CH2M HILL, 2007a), the target analytical suite for soil samples varied slightly based on the subarea in which the soil boring was located. The Subarea B analytical suite was used for borings located in portions of the FCS that did not have designated subareas (e.g., the area south of Subarea B and the School Age Services [SAS] building and its surrounding area). The Subarea C analytical suite was used for borings located in Subarea A. Information about each sample including Location ID, Sample ID, and target analytical suites is provided in Table 2-4. QA/QC samples are identified in Table 2-4.

Validated analytical results for the soil samples obtained during monitoring well installation are included in Appendix A and Appendix B includes the Monitoring Well Installation DQE.

Sampling Procedure

The general work process for borehole installation and collection of soil samples was as follows:

- Borings were installed using a CME-55 truck-mounted drill rig equipped with a 4.25-inch-inside-diameter, hollow-stem auger for installation of the 2-inch-diameter, temporary groundwater-monitoring wells. The drill rig was equipped with a hydraulically-driven percussion hammer that was used to drive a 2-foot-long, 3-inch-diameter, stainless-steel, split-barrel sampler for collection of soil core samples.
- At each soil sample interval, the sampler was advanced ahead of the lead auger to collect undisturbed soil samples. After the sampler had been driven and removed from the borehole, the barrel was split open exposing the soil core for inspection. A CH2M HILL hydrogeologist described each 2-foot core section, and recorded the results on standard soil boring log forms (Appendix C).
- A PID was used to field screen each 2-foot core section or, when temperatures were below 40°F, a heated-headspace PID reading was collected. In general, borings were advanced to approximately 5 feet below the observed water table (17 to 19 feet bgs) with

the exception of MW-39 and MW-40, which were installed to a depth of 30 feet and 51 feet bgs, respectively.

- GRO, VOC, and VPH samples were collected first and placed into prepared 40 mL VOA vials of methanol and bisulfate, and one 4-ounce amber jar, pre-filled with 30 mL surrogate-spiked methanol.
- Remaining soil from the sample interval after collection of GRO, VOC, and VPH samples was homogenized in a stainless steel bowl and transferred into two additional 4-ounce amber jars and one 16-ounce amber jar for analysis of remaining target analytes.

The general work process for 29 soil borings in the Moderate to High Probability of MEC subarea (Subarea A) was adjusted to allow for screening of possible MEC, as follows:

- A Jacobs unexploded ordnance (UXO) team member screened the surface of the proposed soil boring location per the *Munitions and Explosives of Concern Work Plan* (Jacobs, 2007).
- With the UXO team member's approval, excavation commenced. A backhoe was used to excavate to approximately 3 feet bgs. Soil in excavator bucket was screened by UXO team member. A CH2M HILL field team member screened the soil with a PID and collected soil samples from the excavator bucket.
- The excavation continued to 3- to 6-foot depth and a second soil sample was collected from the excavator bucket. After the UXO team member cleared the floor of the excavation, approximately 6 to 9 feet bgs, the excavation was backfilled with the same soil that was removed.
- A soil boring was advanced into all cleared excavations and the third soil sample, the smear zone sample, was collected using a split-barrel sampler as described above.

The following three proposed soil boring/monitoring well locations in the Moderate to High Probability of MEC subarea required field adjustment:

- Soil Boring 40: Concrete was encountered in the test pit at a depth of 3 feet; the location was moved 1 foot southwest.
- Soil Boring 69: Debris was encountered in the test pit, consisting of at least one mangled drum; the location was moved northeast, off the corner of Building 24.
- Soil Boring 68: Debris was encountered in the top 3 feet of the test pit; debris was removed and the area was cleared for continued drilling.

QA/QC Samples

The sampling programs for installation of monitoring wells included collection of QA/QC samples. Table 2-4 identifies FD samples and MS/MSD samples. Both the FD and MS/SD samples were collected immediately following the collection of the original samples from the same soil core section.

Deviations or Unattainable Samples

The following deviations from the sampling programs were required during the field event:

- Initially, to speed the Subarea A clearance process, soil collected from the excavator bucket was placed into a plastic bag, and soil was transferred from the plastic bag to the sample containers later on the same day. This process was followed for SB42, SB39, SB47, SB48, SB46, SB45, SB56, SB44, SB50, SB49, SB53, SB52, SB51, SB54, SB55, SB57, and SB44. A change was directed on October 4, 2007, due to concerns that VOC and semi-volatile organic compound (SVOC) samples would be affected by plastic bags. SB59 and SB60 did not have GRO, VOC, or low-level VOC samples collected during Subarea A clearance activities. Subarea A clearance sample collection was modified for SB61, SB62, SB68, SB69, SB70, SB71, SB72, and SB73; GRO, VOC and SVOC samples were taken directly from the excavator bucket first, then the remaining sample containers were filled directly from the excavator bucket.
- On October 6, 2007, the field team received new direction regarding extractable petroleum hydrocarbons (EPH)/volatile petroleum hydrocarbons (VPH) sample collections. EPH/VPH should only be evaluated for samples that had PID reading over 20 ppm. Table 2-4 indicates which samples were analyzed for EPH/VPH.
- The soil boring and well at proposed for Location SB75 was not installed during 2007 field season because its location was in conflict with the PCB investigation at Building 52.
- The proposed numbers of wells per subarea, per Addendum 4 (CH2M HILL, 2007e) of the *Draft RI Work Plan*, was exceeded in subareas E and B because an additional 15 monitoring wells were added to the installation and sampling plan on October 9, 2007.

2.1.5 Soil Confirmation Sampling Following Excavation Activities

Previous investigations of the FCS, including magnetic geophysical investigations, identified two primary areas of buried metal debris near Buildings 48 and 49. Building 49 drum removals and Building 48 anomaly investigations occurred during the 2007 field season. In October, additional geophysical anomalies were identified near Buildings 15 and 17, and debris investigations at these locations were added to the 2007 field work schedule.

Jacobs was contracted to perform the debris investigations via excavation, field screen soil removed from the excavations, and characterize any waste that was removed. CH2M HILL then performed confirmation sampling of the excavation floor and sidewalls to evaluate possible residual levels of contamination in the underlying/surrounding soil. The complete excavation reports will be provided by Jacobs.

Confirmation samples from drum and debris investigation excavations were analyzed for the target analytes listed for Subarea C in Addendum 4 (CH2M HILL, 2007e) of the *Draft RI Work Plan* (CH2M HILL, 2007a). Confirmation samples from PCB investigation excavation were analyzed for PCBs only. An overview of the confirmation sampling areas is shown in Figure 2-6.

Sampling Procedure

The general work process for collecting samples to be analyzed for target analytes was as follows:

- GRO, VOC, and VPH samples were collected first using an EZ Sampler® syringe
 - Five grams of soil per container was placed directly into two 40-mL VOA vials preserved with sodium bisulfate and two 40-mL VOA vials preserved with methanol.
 - An additional 25 grams of soil was placed directly into one 4-ounce amber jar filled with 30 mL of surrogate-spiked methanol to minimize volatilization.
- Samples to be analyzed for remaining target analytes were collected as grab samples with a stainless-steel hand auger or disposable 8-ounce non-reactive plastic trowel and transferred to the appropriate sample containers.

Building 49 Drum and Debris Investigation

Excavation near Building 49 occurred in September 2007. Nine discrete soil confirmation samples were collected from the floor and walls of the final Building 49 excavation. Four floor samples were located at depths of 8 to 9 feet bgs in a grid approximately 15 feet apart. Five wall samples were located from 4 to 4.5 feet bgs and approximately 30 feet apart. Three of the floor samples and four of the wall samples were collected in the larger excavation pit north of the water line. One floor sample and one wall sample was located in the smaller excavation pit south of the water line.

The sample locations and Location IDs for Building 49 confirmation samples are shown in Figure 2-7. Sample information including QA/QC samples is provided in Table 2-5, validated analytical results are provided in Appendix A, and Building 49 DQE Report is provided in Appendix B. The nine samples were collected between September 11, 12, 13, and 19, 2007. The same locations were re-sampled for, VOCs, GRO, and SVOC on October 5, 2007 because the original samples were collected from the excavator bucket and placed in plastic bags before the sampler transferred samples into the appropriate sample container. The samples collected on October 5, 2007 were collected directly from in-situ soil in the wall and floor of the excavation as the excavations were deemed safe to enter by CH2M HILL personnel in a revised Health and Safety decision.

Building 48 Drum and Debris Investigation

The Building 48 excavation occurred in September and October 2007. A total of 59 discrete soil confirmation samples were collected from the floor and walls of the final Building 48 excavation during October 2007. The sample location and location IDs are shown in Figure 2-8, and corresponding sample information with location ID, sample ID, and analytical suite is included in Table 2-6. Thirty-five of the samples were from the excavation walls and 24 were from the excavation floor. In general, confirmation samples were collected on a 50 foot by 50 foot grid. However, in areas of suspected contamination, the sample density was increased according to the best professional judgment of the field team. The sample ID, depth, and justification for each sample location are listed in Table 2-7.

In the excavation area north of the glycol line (glycol line was avoided during excavation) and closest to Building 48, 38 confirmation samples were collected. In this excavation there was a suspected solvent-affected area located in the vicinity of sample location ID Bldg48-12. Analytical results from the sampling of a drum associated with this area will be included in the forthcoming Jacobs Engineering report. Five samples were collected from the floor beneath the suspected solvent area in a 10-foot by 10-foot grid.

In the area surrounding sample location ID Bldg48-26, batteries and battery parts were removed. Five floor samples were located in a 15-foot by 20-foot grid. The remaining floor samples were located in a 25-foot by 30-foot grid. The northern and eastern walls along the edge of Building 48, as well as the section of wall closest to the solvent area, were sampled every 15 feet and the remaining walls had sample locations every 30 feet.

South of the glycol line, west of Building 35, the excavation was shallower and 21 confirmation samples were collected. Paint drums were recovered in the vicinity of sample location ID Bldg48-40 and wall samples along this wall were 15 feet apart. The remaining wall and floor samples in the excavations south of the glycol line were approximately 30 feet apart.

Validated analytical data is provided in Appendix A and the Building 48 Investigation DQE Report is included in Appendix B.

Buildings 15 and 17 Drum and Debris Investigation

The Building 15 and 17 excavations took place in October 2007. A total of 15 discrete soil confirmation samples were collected from the floor and walls of the final Building 15 excavation, of which nine were wall samples taken at 50-foot intervals and six were floor samples taken in an approximately 50-foot by 50-foot grid areas, with an extra sample in the southeast corner where batteries, fiberglass, and transformer parts were found.

A total of five discrete soil samples were collected from the Building 17 excavation, one sample from each wall and one floor sample. Building 15 and 17 excavations were secured for 2007, with the intent to return to the sites and continue anomaly investigations. The sample locations and location IDs are shown in Figure 2-9 and sample information is provided in Table 2-8. Validated analytical results are provided in Appendix A and the DQE Report is provided in Appendix B.

PCB Investigation

CH2M HILL provided PCB screening and confirmation sampling for the PCB investigation activities in the exclusion zone and adjacent area, shown in Figure 2-10 and 2-11 and in the Transformer Service Area as shown in Figure 2-12. Hach® test kits were used to screen samples taken from the Building 52 excavation area and the screening results are shown in Table 2-9. Table 2-9 includes all samples that were screened; however the field location used to track screening does not directly correlate to a final sample location ID. Location IDs were assigned when a sample was sent to the fixed lab for analysis. The first screening samples collected and evaluated with the Hach® test kits did not correlate with the fixed lab results. The field team lead contacted Hach® and was given corrected instructions. When used correctly, the Hach® screening results correlated with confirmation results in 94 out of 107 instances, or 87.8 percent.

Previous sampling information was used to identify areas for excavation. Excavation for the Building 52 area was divided into four main sections—identified on Figure 2-6 as 100, 200, 300, and 400— and excavation occurred incrementally in each area until all sections were connected. When the excavation “paused” in a given area, confirmation samples were taken in a 10-foot by 10-foot grid along the floor and sidewalls. Samples from the Building 52 excavation were then screened with Hach® test kits. If the sample failed the screening, the grid node was re-excavated vertically 1 foot or horizontally 5 feet depending on the failing sample location. This procedure continued until the screening sample passed and then a confirmation sample was collected and sent to laboratory for a fixed lab analysis.

After initial excavation in the Transformer Service Area (TSA) and five soil boring locations within an area identified in the PSE II (Northwind, 2007) as greater than 1 ppm PCBs confirmation samples were not screened but sent directly to the fixed laboratory. Additional details of the PCB investigation will be provided in the forthcoming Jacob’s Engineering report.

Sample location IDs, sample IDs, analytical suites, and QA/QC information for samples submitted for laboratory analysis is included in Table 2-10. The validated analytical results are provided in Appendix A and the PCB DQE Report is provided in Appendix B.

QA/QC Samples

QA/QC samples were collected in accordance with the FSP and samples are identified on Tables 2-5 through 2-10.

Deviations of Unattainable Samples

The following deviations from the sampling program were required during the field event:

- Building 49: The VPH, GRO, VOC, and SVOC analyses were cancelled for 10 samples. These 10 samples were originally collected from the excavator bucket into a plastic bag. Samples were then transferred from the plastic bag to sample containers. The recollected samples were taken from the in-situ soil on the floor and walls of the excavation after a revised health and safety decision. Re-samples are noted on Table 2-5.
- Building 48: Samples 07FW-A-EXBld48-07, 07FW-A-EXBld48-09, 07FW-A-EXBld48-17 and 07FW-A-EXBld48-18 were cancelled for all analyses after it was determined the samples were not needed too many samples within an area with no suspected sources. The SW8151A (herbicide) analysis was already completed when the laboratory was notified of the cancellation; therefore, the herbicide data were reported and are the only data available for these four samples. Samples 07FW-EXBld48-32, 07FW-EXBld48-34, and 07FW-EXBld48-36 were also cancelled for all analysis after is was determined the samples were not needed due to too many samples within an area with no suspected sources.
- Building 48: The VPH, GRO, VOC, and SVOC analyses were cancelled for 24 samples. These 24 samples were originally collected into a plastic bag and samples were transferred from the plastic bag to sample containers. The recollected samples were taken from the in-situ soil on the floor and walls of the excavation after a revised health and safety decision to allow samplers in the excavations. Re-samples are noted on Table 2-6.

- **PCB Investigation:** When the field team tried to order additional Hach® kits in early October they were informed that required products were on back-order until November 2007. Samples were sent directly to the fixed lab with out screening in mid to late October. However, from October 27 to October 31 2007 a substitute screening system, the Rapid Assay PCB Analysis kit by Strategic Diagnostics Incorporated was used. No excavation occurred based on the Rapid Assay kits screening results but the screening results and the corresponding fixed lab confirmation sample results are provided in Table 2-9.

2.2 Soil Gas Sampling

A passive soil gas investigation was conducted at the FCS in 2006 as part of the PSE II investigation (Northwind, 2007). The 2006 soil gas investigation was conducted in the northwest portion of the site and near Building 49, as described in Addendum 3 (CH2M HILL, 2007c) of the *Draft RI Work Plan* (CH2M HILL, 2007a). Petroleum-derived constituents were detected in almost all sample locations. Benzene, toluene, ethylbenzene, and xylene compounds as well as trichloroethene, and tetrachloroethane were detected less frequently. The tentatively identified compounds (TICs) identified in the samples appeared to be limited to chlorofluorocarbons (CH2M HILL, 2007c).

The sample results from the PSE II investigation (Northwind, 2007) were limited to the northwest corner of the site and are qualitative and cannot be used to determine actual concentrations of VOCs in a given location. Consequently, active soil gas sampling was conducted during 2007 field season to fill data gaps for the nature and extent and risk assessment elements of the RI/FS.

Soil gas sampling was accomplished in accordance with Addendum 3 (CH2M HILL, 2007c) of the *Draft RI Work Plan* (CH2M HILL, 2007a). Sample locations and location IDs are shown on Figure 2-5. Sample information, including Location ID, Sample ID, Alternate Sample ID, and analytical suite is provided in Table 2-11. Validated analytical results are included in Appendix A and the Soil Gas DQE Report is included in Appendix B.

2.2.1 Subslab Soil Gas Probe Installation

A total of 110 semi-permanent, subslab, soil-gas probes were installed in the 55 duplex houses on the site. The subslab probes were installed, two per duplex, with one in each garage. The first group of subslab probes were installed on August 20 through 23, 2007, in the left garages except for SG025-R, SG048-R, SG049-R, and SG060-R, which were installed in the right garage because of limited access to the left side garage. The second group of subslab soil-gas probes was installed on October 3 through October 6, 2007, in the other garage of the duplex unit. The vapor probes were intact during last inspection in November 2007, and can potentially be employed in future sampling.

The subslab soil-gas probe installation followed the Standard Operating Procedures included in Addendum 3 (CH2M HILL, 2007c) of the *Draft RI Work Plan* (CH2M HILL, 2007a). The sampling zone was established by drilling through the floor and 3 inches into the subslab material with a concrete hammer drill. All slabs were 5 inches thick and each probe consisted of a 3.5-inch-long, 0.25-inch-outside diameter, stainless-steel tube connected to a gastight Swagelok fitting, compatible with the sampling assembly. The fitting was

installed flush with the floor and sealed with fast drying cement. The fitting was closed with a Swagelok screw cap before and after sampling to prevent ventilation of the sampling zone between sampling. The concrete was allowed to set for a minimum of 24 hours before sampling the probes.

2.2.2 Subslab Soil Gas Sampling

The first set of subslab, soil-gas probes were sampled from August 22 through August 30, 2007. The weather during this period was primarily sunny or partly cloudy and dry with a few occasional short rain showers. The air temperatures ranged from 50 to 70°F. The second set of subslab, soil-gas probes was sampled from October 11 through October 26, 2007. During this time period some rain and snow precipitation occurred; however, the majority of the days were sunny, cool, and dry. During this period, the topsoil began to freeze. Temperatures typically ranged from 10 to 50°F. Also, during the end of this second round of sampling, the power was restored to the site, with the exception of 12 buildings (40, 41, 44, 46, 48, 22, 25, 28, 31, 33, 35, 38).

The procedure for the subslab, soil-gas sampling is included in Addendum 3 (CH2M HILL, 2007c) of the *Draft RI Work Plan* (CH2M HILL, 2007a). A vacuum leak test was performed on the sampling assembly before each sampling event. A leak test of the probe with helium gas, a helium gas enclosure, and helium detector was performed on all the subslab probes, as described in Addendum 3 (CH2M HILL, 2007c) of the *Draft RI Work Plan* (CH2M HILL, 2007a). Leaks were detected in a few of the soil samples; these were corrected by tightening fittings and, in a few cases, if the concrete had cracked around the fitting, adding clay until the probe passed the leak test. Two liters of air were purged at a flow rate of 200 mL per minute prior to collecting the soil gas sample into a 6 L Summa canister at a flow rate of 200 mL minute.

2.2.3 Vadose Zone Soil Gas Probe Installation

On September 5 through September 11, 2007, a total of 53 semi-permanent, soil-gas probes were installed 5 feet bgs in open areas of the site. One soil gas probe, SG050, located in the PCB area was destroyed by excavation equipment after it was sampled. The remaining vapor probes were intact during last inspection in November 2007, and can potentially be employed in future sampling.

The soil-gas probes were installed using a direct push rig. The probes consisted of a 0.25-inch Teflon tubing transfer line, connected to a stainless-steel disposable tip. A pilot hole was drilled by driving a 0.75- to 1.5-inch rod to 6 feet bgs. The diameter varied due to trouble shooting with the drilling equipment. Next a 0.5-inch rod with the transfer tubing inside and the probe tip at the end of the rod was driven inside the pilot hole. The rod was retracted leaving the Teflon tubing connected to the disposable tip in place at 6 feet bgs. Filter pack sand (10/20) was added to approximately 4 to 5 feet bgs around the sample tip. In some locations, the native sand collapsed around the tip, still ensuring a gas permeable zone around the tip. Crumbled bentonite chips were added one cup at a time and hydrated from 4 to 5 feet bgs to about 3 inches bgs. To verify the design, leak tests were performed with vacuum and helium tests on the initial probes immediately after installation. Additional leak tests were performed on 10 percent of sample locations during sampling of the probes.

2.2.4 Vadose Zone Soil Gas Sampling

Vadose zone soil gas sampling occurred from September 7 through September 29, 2007.

A vacuum leak test was performed on the sampling assembly before each sampling. A leak test of the probe with helium gas, helium gas enclosure, and helium detector was performed on 10 percent of the probes. None of the soil-gas probes had measurable leaks detected. Two liters of air was purged at a flow rate of 200 mL per minute prior to collecting the soil-gas sample into a 6 L Summa canister at a flow rate of 200 mL per minute.

QA/QC Samples

QA/QC samples were collected in accordance with the FSP and samples are identified on Tables 2-11. Three separate sets of ambient air samples were collected as equipment blanks and the discussion of these sample results is included in the Soil Gas DQE Report in Appendix B. Onsite and offsite ambient air was sampled during the two sub-sampling events. The onsite ambient air was collected adjacent to sample location ID SG047-L. The offsite ambient air sample was collected along the western site fence. The ambient air samples were collected at breathing height for a standing adult person.

Deviations or Unattainable Samples

The following deviations from the sampling programs were required during the field event:

- Proposed SAS subslab sample SGS068 was not installed or sampled. The management team decided to see if the results of the vadose zone soil gas samples outside of the SAS warranted sub-slab sampling of the building.

2.3 Hydrogeological Investigation

Previous subsurface soil and groundwater sampling data did not provide enough coverage to adequately delineate nature and extent of potential contamination for the RI/FS. Additional monitoring well locations were proposed in Addendum 4 (CH2M HILL, 2007e) of the *Draft RI Work Plan* (CH2M HILL, 2007a) to provide sitewide coverage with approximately one monitoring well per 0.75 acre. Figure 2-13 shows monitoring well sample locations and location IDs.

2.3.1 Monitoring Well Installation

Temporary groundwater monitoring wells were installed following the completion of the soil borings described in Section 2.1.4. Table 2-12 lists the well depths and screened intervals for the wells installed during 2007 field season and for the 13 permanent monitoring wells that existed prior to the RI. Appendix D includes monitoring well installation diagrams for wells installed during 2007 field season.

Groundwater monitoring well casings were constructed of 2-inch-diameter, threaded flush-joint schedule 40 polyvinyl chloride (PVC) pipe. Pre-packed screens that consisted of a 2-inch-diameter, threaded flush-joint schedule 40 PVC casing with 0.010-inch factory machine slots were used. Casings and screens were installed by connecting individual sections as they were lowered into the borehole through the hollow center of the auger column. A

threaded cap was attached to the bottom of the screened interval before lowering the section into the borehole.

Pre-cleaned and prepackaged 10/20 silica sand was used to fill the annulus between the screen and the borehole wall from the bottom of the borehole to approximately 2 feet above the top of the screened interval. Bentonite chips were placed above the 10/20 sand pack to approximately 2 feet bgs. The chips were allowed to hydrate for a minimum of 30 minutes, following the addition of potable water into the annular space. Augers were slowly retracted during placement of the sand pack and bentonite. The depth of each of the materials was continually verified during installation using a weighted tape measure to assure that bridging did not occur. The surface completion consisted of a PVC riser with pressure cap enclosed in a locking steel protective cover. Clean backfill material was placed around the protective cover from 2 feet bgs to ground surface to complete the temporary monitoring well construction. The protective cover was locked.

2.3.2. Monitoring Well Development

Monitoring-well development occurred between September 17 and October 18, 2007. The development procedures were modified by the project team in early October. The FSP well development procedures included monitoring pH, temperature, conductivity, dissolved oxygen, and turbidity during development and development would continue until those parameters stabilized. The procedures were changed to state that wells will be developed until stable turbidity measurements were observed or until measurements less than 5 nephelometric turbidity units (NTU) were recorded. It was determined by the management team that turbidity was the key parameter to monitor during development and the recording of additional information was not providing any more usable data. This change saved some time during development so more wells could be developed per day. All development water was containerized. Table 2-13 provides monitoring well development information.

2.3.3 Groundwater Sampling

The FCS water-table aquifer is located in unconsolidated alluvial sediments ranging from fine silts to coarse sands and shallow groundwater is found approximately 7 to 8ft bgs. Monitoring-well sampling took place from October 2 through October 26, 2007, as part of the groundwater investigation phase at the FCS. In accordance with the FSP (CH2M HILL, 2007f) and Addendum 4 (CH2M HILL, 2007e) seventy-three groundwater monitoring wells were sampled utilizing EPA low-flow groundwater sampling field procedures. Sample locations and location IDs are shown in Figure 2-13. Sample information, including Location ID, Sample ID, and analytical suites is included in Table 2-14. Validated analytical results are included in Appendix A, and the Groundwater Sampling DQE Report is included in Appendix B.

Sampling Procedures

The general procedures for monitoring-well sampling and water-level measurement were as follows:

- Monitoring wells were sampled using a low-flow purging procedure (purge rate equals that of recharge rate) with a peristaltic pump (geopump), HORIBA U-22 water quality meter, and disposable tubing.
- During purging, field water quality parameter measurements (pH, temperature, conductivity, turbidity, and flow rate) were recorded approximately every 5 minutes until the parameters stabilized. A table listing the final parameter measurements is included in Appendix E and the field sampling records for the sampling event are provided in Appendix F.
- Sample collection followed stabilization with VOCs collected first, followed by other target analytes suites.
- Calibration of the HORIBA U-22 water quality monitor was accomplished at a minimum of once each morning. If, at any time during the day, it was suspected that the unit was not functioning properly, activities were to be halted and recalibration of the unit accomplished. However, no recalibration was required during the field event.

QA/QC Samples

The sampling programs for groundwater included collection of QA/QC samples. Table 2-14 identifies FD samples and MS/MSD samples. Both the FD and MS/MSD samples were collected immediately following the collection of the original samples.

Deviations or Unattainable Samples

The following deviations from the sampling program were required during the field event:

- MW6B, installed prior to the RI, was not sampled. MW6A was sampled; due to the close proximity of the two wells and the fact that they were screened in the same interval only one well needed to be sampled to characterize that location.
- MW12 was not sampled. Due a communication error in the number of pre-RI wells requiring sampling and the fact that MW12 is a flush mount well (covered in snow during sampling period) it was overlooked by the Field Team Lead during sample planning.
- EPH/VPH samples were collected at select wells with evidence of petroleum compounds. Table 2-14 shows which samples have EPH/VPH analysis.

2.3.4 Water Level Survey

Water level monitoring was conducted a minimum of 3 days after the last water sampling on October 24, 2007, to allow the water table to equilibrate after purging and sampling. The rebound of the water table was observed to be rapid across the site during well development and water sampling.

A sitewide groundwater level survey was conducted on October 27, 2007, to establish the groundwater flow direction and estimate the site-specific groundwater gradient. The survey was supplemented with additional water level information on October 29 and November 7, 2007. The water-level survey data are included in Table 2-15. Figure 2-14 shows the final resulting water-level contours for the site on October 27, 2007. Data from MW01 and MW02 are not shown on Figure 2-14 because the provided survey data was questionable and a new land survey for top of casing (TOC) elevation is required.

The initial water level survey on October 27, 2007, included existing wells MW01 to MW04 and MW07 to MW11, and all new monitoring wells MW13 to MW65 and MW67 to MW76. On October 29, 2007, the water-level survey was supplemented with water-level monitoring of existing wells AP-3564, AP-6729, and AP-7183, located adjacent to the railroad, northeast of the site. MW58 was sampled after water level survey on October 27, 2007, since this well is located in the fenced playground area of the SAS and is only accessible on weekends.

On November 7, 2007, the water levels were re-surveyed for wells MW01, MW02, MW35, MW39, and MW43. MW05, which was omitted during the October 27, 2007 survey, was also included. A correction factor of 0.17 was applied to the November 7, 2007 water levels based on transducer readings of the water level monitored in MW39 between October 27 and November 7, 2007.

Survey Procedures

The general work process for the water level survey was as follows:

- A permanent mark at the top of the PVC well casing on the northern side served as the point of reference for water level measurement in each well and was the TOC point for land survey. A knick in the outer metal protection casing further indicates the side of the well for water level measurements.
- The water levels were measured with an electronic water level sounder. Two independent readings to the third decimal were recorded in the field form.
- Transducers had previously been installed in wells AP-7183, MW07, MW39 and MW40 in anticipation of the pump test. Water level measurements were obtained from these wells without removing the transducers because such removal may have disrupted the equilibrium of the water level in the well resulting in an erroneous measurement.
- The average water level result was later used along with the TOC land survey results to establish the groundwater elevations.

Strong fuel/diesel odor was noted in MW65 and sheen observed on the electronic sounder tape; however, no measurable non-aqueous phase liquid was recorded. This corresponds to observations in MW65, nearby SB66, and existing well MW06 during drilling, development, and water sampling.

2.3.5 Pump Test

A modified pump test was performed to develop site-specific quantitative information regarding aquifer permeability. Classic aquifer testing was not conducted due to high well yields and associated water disposal issues with potentially contaminated groundwater.

Prior to the pump test, new In-Situ Inc. Level TROLL 500 pressure sensor transducers were installed in MW39 (deep well), MW40 (deep well), MW07 (AP-9482), and well AP-7183 following the manufacturer's suggested installation and set-up guidelines. Times of use meters, Onset HOBO® on/off data loggers model H06-004-02, were installed on the power cables feeding the motors for Pump 1 and Pump 2 in the supply well at Building 3559. The HOBO® logger installed on Pump 2 malfunctioned and trouble shooting over the phone with Onset did not resolve the problem. Since Pump 2 was turned off for the duration of the pump test, this was acceptable.

A pump test was conducted on November 2, 2007, as follows (times shown are times on the instrument gauge in the water plant):

- 8:30 a.m. Pump 1 off. Pump 2 flow rate reduced during the morning demand so the clear well could be drawn down.
- 8:48 a.m. Pump 2 was manually turned off. Clear well level reading from the monitoring equipment in the water plant reported 7.9063 feet.
- 8:53 a.m. Pump 1 manually turned on to full capacity (rated at 1,700 gallons per minute) until the clear well reached normal operating level of approx 9.3 feet at 9:37 a.m..
- 9:38 a.m. Pump 1 manually turned off and Pump 2 turned back on and returned to "auto" status.

During the pump test, readings of the clear well level, total gallons flowing into the water plant, and gallons per day of effluent as shown on monitoring equipment in the water plant were recorded in 2 minute intervals, with 1 minute intervals when the clear well reached 9.15 feet, until the test was stopped.

After the test, the time of use meter information from Pump 1 was downloaded. On November 8, 2007, 24 hours after the conclusion of the pump test, the transducer data and water levels from the four wells were downloaded. The transducers were left in place pending a Triad Team decision on where to relocate the transducers.

Raw data from the time of use meters, transducer data, and pump test are included in Appendix G.

2.4 Survey Activities

A site topographic survey was conducted from July 10 to July 15, 2007, by Lantech, Inc. The topographic survey consists of existing ground surface in the entire FCS with the exception of the PCB exclusion zone. The survey was conducted utilizing a grid pattern with a maximum of 20 feet between survey points. The U.S. Corps of Engineers Brass Cap Monuments at the northwestern and western ends of the FCS sites were used as the basis of coordinates and elevations. The accuracy of the topographic survey is to the nearest 1 foot horizontally, and 0.1 foot vertically, and is included in Figure 2-15.

Sample locations were surveyed using a hand-held Trimble® GeoXT™ in the coordinate system U.S. State Plan 1983, Alaska Zone 4 , vertical datum NAD1983 (Alaska) and

converted to WGS84 UTM Zone 6N, vertical datum NAVD88. The following sample locations were surveyed by the field team using a hand-held Trimble® GeoXT™:

- Boundaries of sound berm decision units
- Boundaries of soil pile decision units
- Soil gas sampling points (vadose zone)
- Soil gas ambient air sample point
- Soil Boring 66
- Confirmation soil samples for excavations and PCB removal

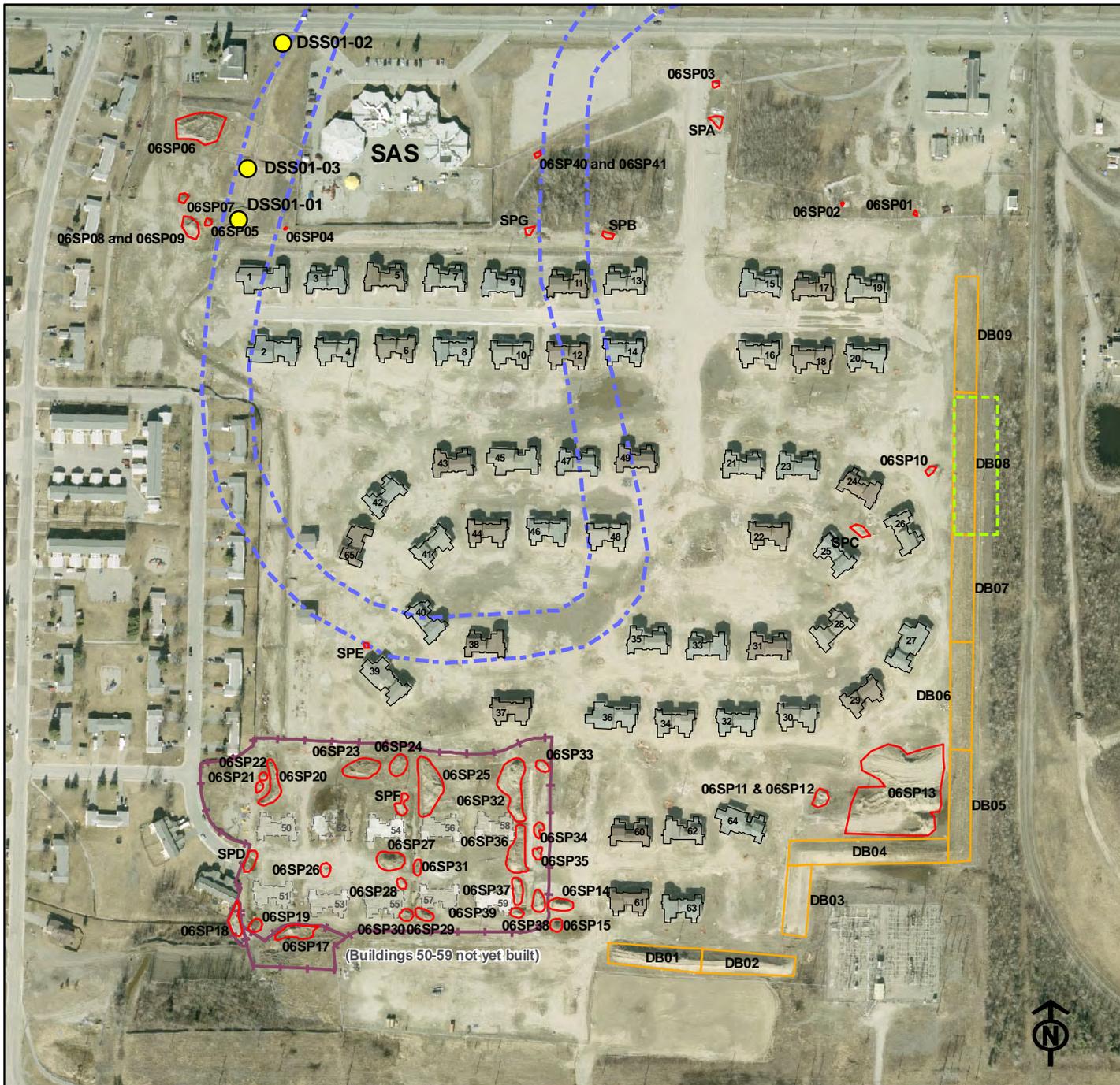
The following sample locations were surveyed by Lantech, Inc., as part of the monitoring well survey:

- Groundwater from MW13 to MW76
- Soil samples from MW13 to MW76

The survey locations for MW1 to MW12 were provided in the *Preliminary Source Evaluation II* (Northwind, 2007) and were not re-surveyed during the 2007 field effort. The coordinates provided for MW1 and MW2 did not correlate to the actual field locations and were corrected by field team using the Trimble® GeoXT™; however, the TOC elevation measurements for the wells were not re-surveyed.

The soil gas subslab sample locations from inside the garages were not surveyed; an approximate X-Y location, the center of each garage, is provided. The field team could not use the Trimble® GeoXT™ inside the garages due to lack of satellite reception. In addition, the drainage swale sediment sample locations were not survey with the Trimble® GeoXT™ due to oversight and were approximated from field sketches.

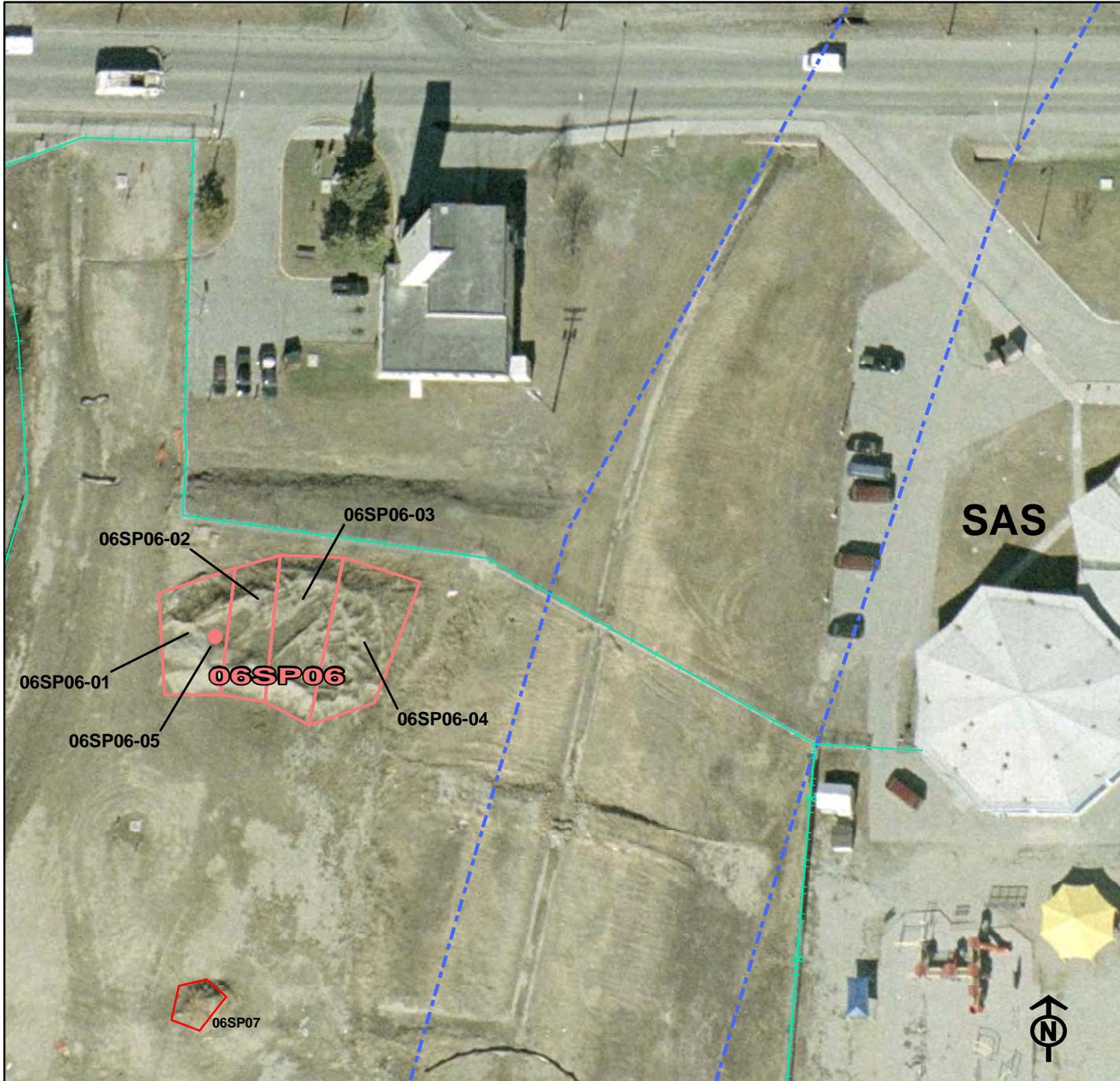
Figure 2-1
 Sound Berm, Soil Pile, and
 Drainage Swale Sample Locations
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska



Legend

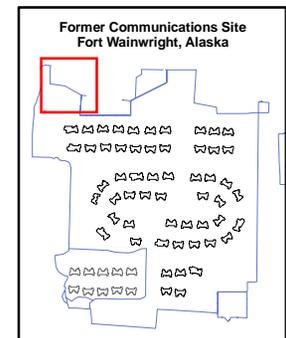
-  PCB Exclusionary Zone
-  Former Slough Channel
-  Transformer Service Area
- 06SP03**
 Soil Pile
- DB5**
 Multi Incremental Decision Unit Boundary
-  Drainage Swale Sediment Sample

Figure 2-2
Decision Units for
Soil Pile 06SP06
 Field Data Report
Former Communications Site
Fort Wainwright, Alaska



Legend

-  Former Slough Channel
-  Security Fences
-  Soil Piles
-  Multi Incremental Decision Unit Boundary
-  Discrete Sample Location



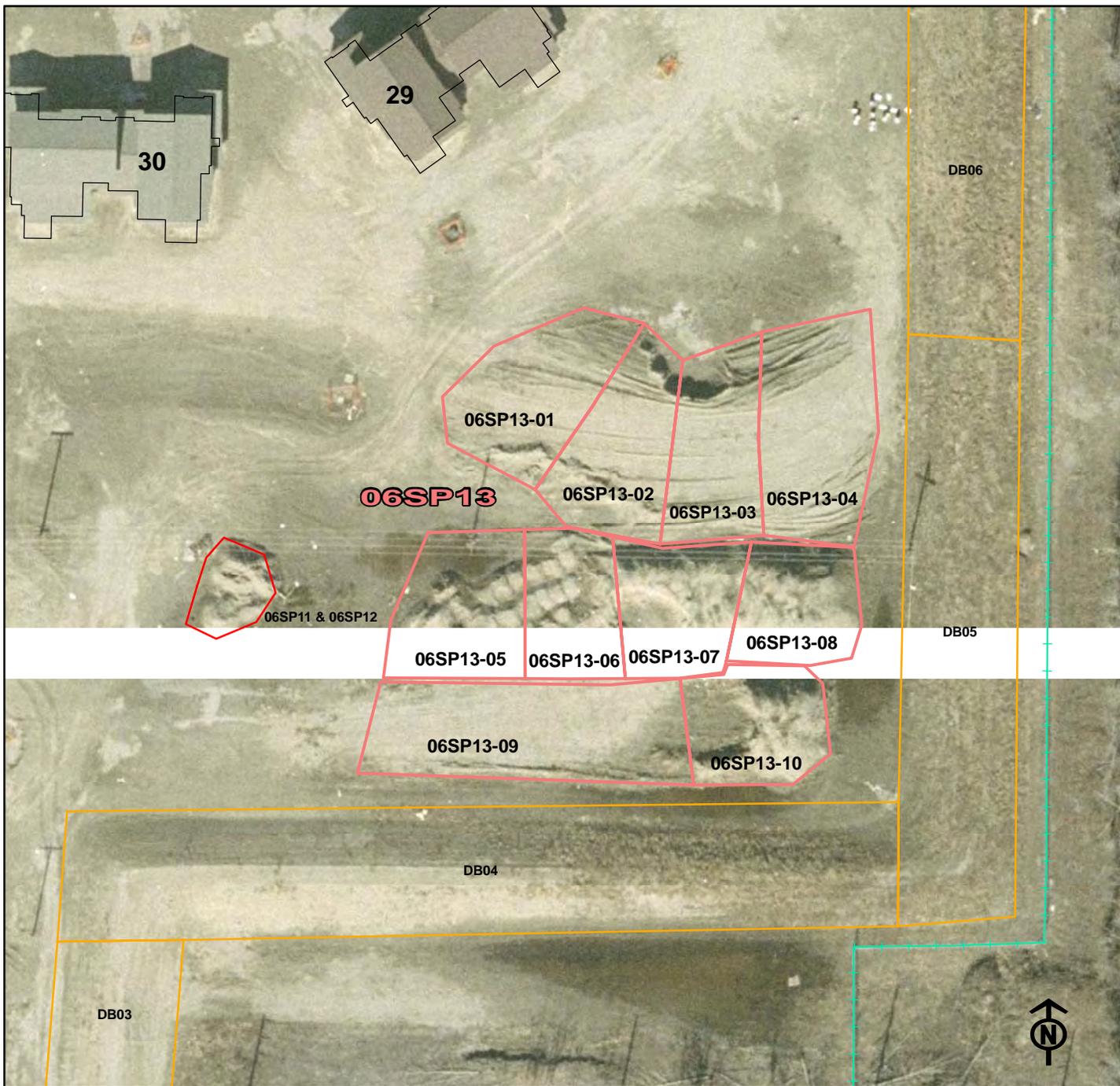


Figure 2-3
Decision Units for
Soil Pile 06SP13
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska

Legend

-  Security Fences
-  Soil Piles
-  Sound Berms
-  Multi Incremental Decision Unit Boundary

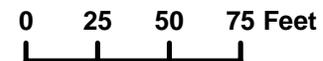
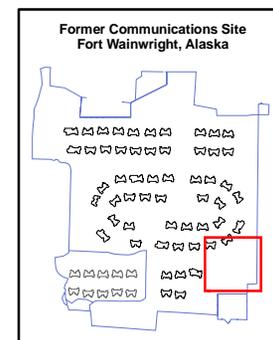


Figure 2-4
Decision Units for
Soil Pile 06SP32
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska



Legend

-  PCB Exclusionary Zone
-  Soil Piles
-  Multi Incremental Decision Unit Boundary

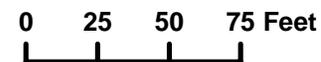
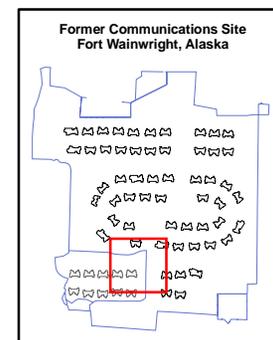
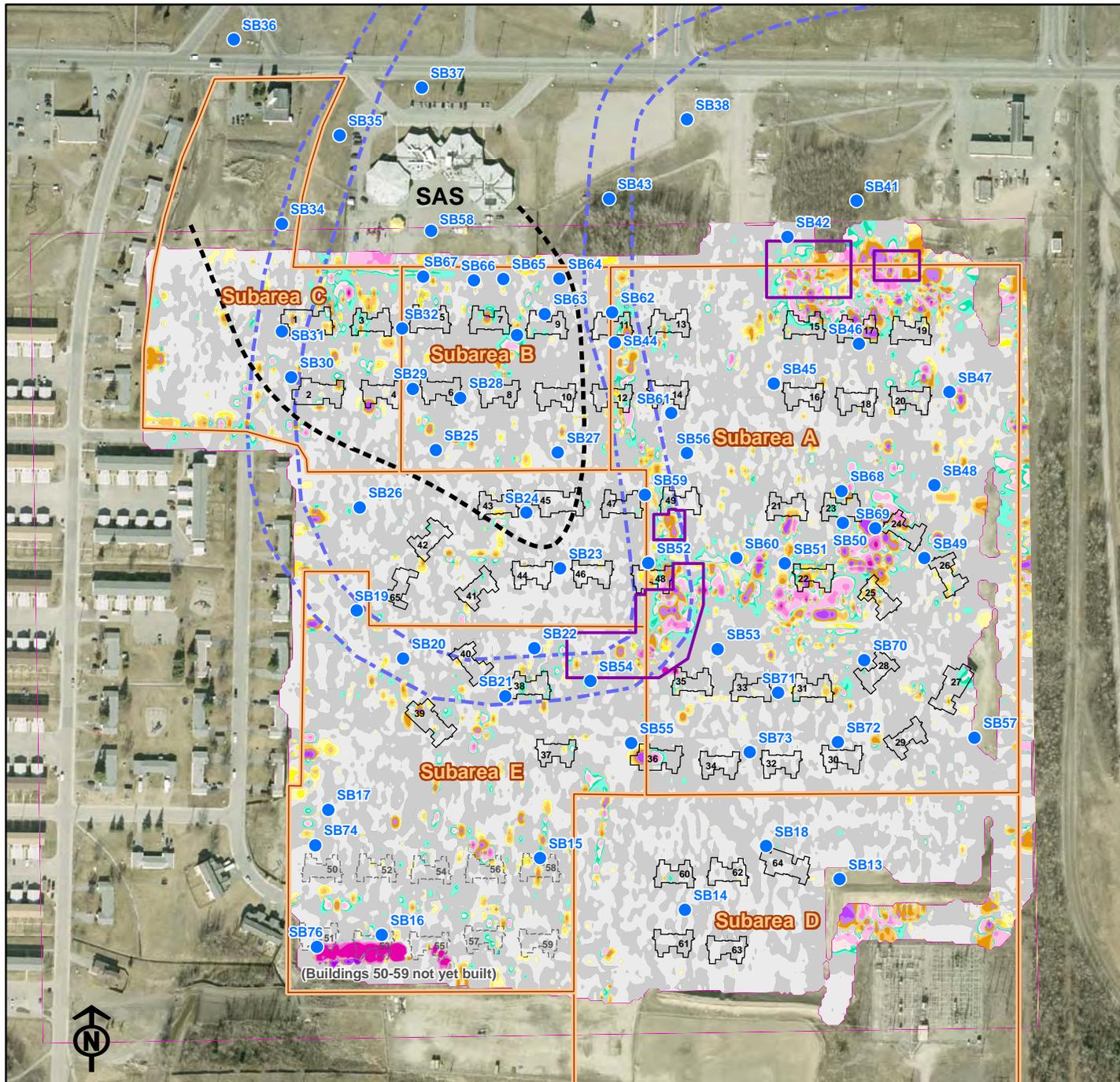


Figure 2-5
 Soil Sample Locations
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska



Legend

- Former slough channel
- 2007 Drum and Debris Investigation Area
- Area within elevated VOC/POL concentration
- Soil sample locations (3 samples per location)

**2004 Magnetic Data
 Vertical Gradient**

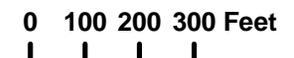
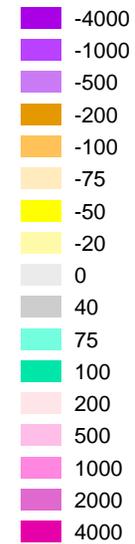
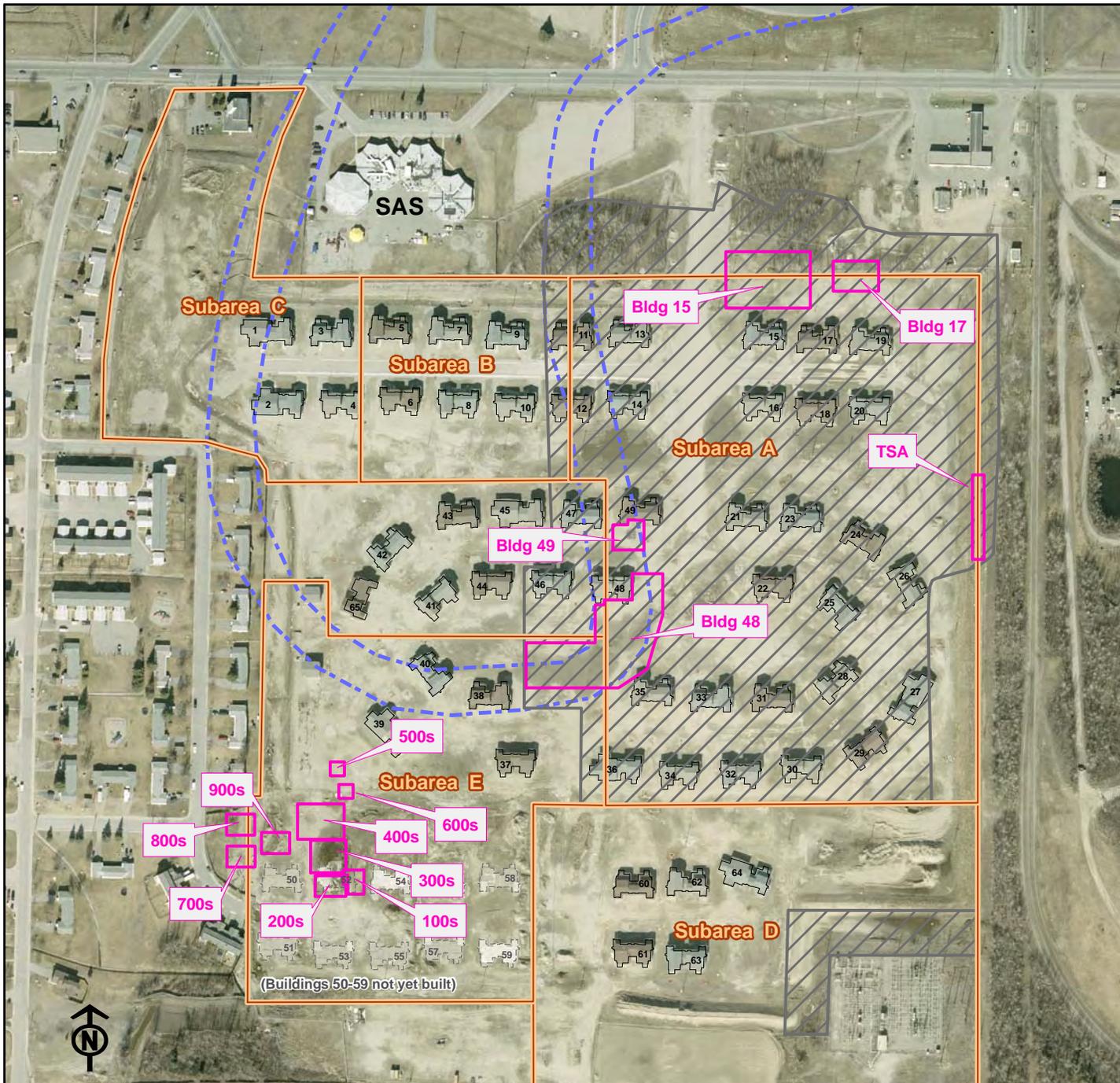


Figure 2-6
 Confirmation Sample Areas
 Overview
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska



Legend

-  Moderate to High probability MEC area
-  Former slough channel
-  Confirmation sample areas

Figure 2-7
 Building 49 Confirmation
 Sample Locations
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska



Legend

-  Former Slough Channel
-  Sample Location

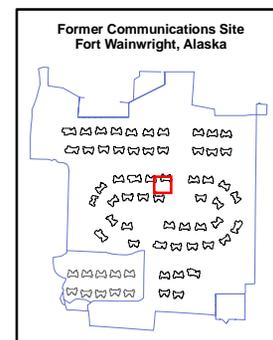
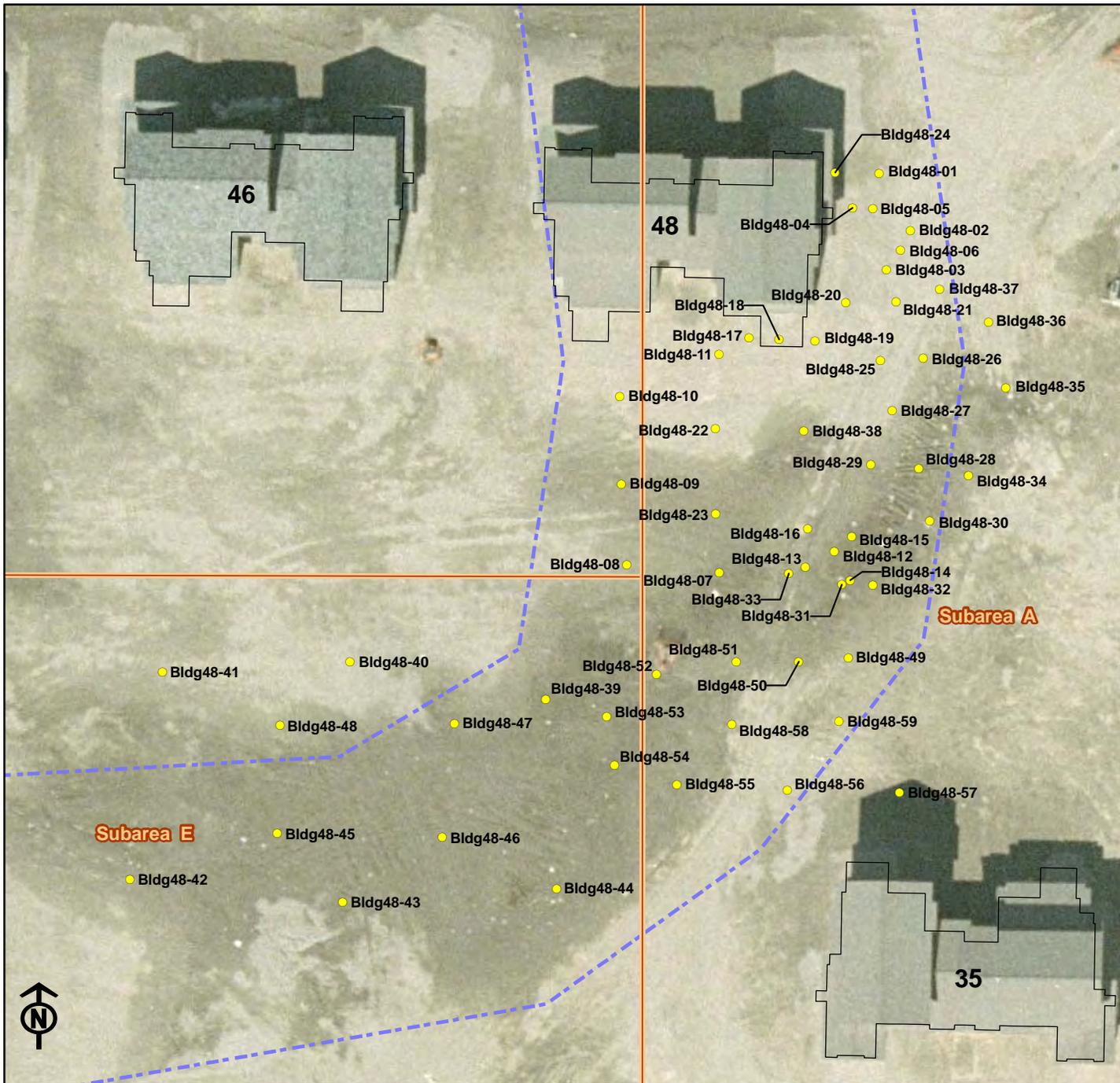
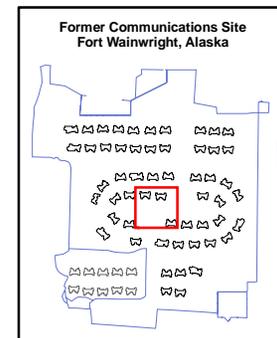


Figure 2-8
 Building 48 Confirmation
 Sample Locations
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska



Legend

-  Former Slough Channel
-  Sample Location



0 10 20 30 40 50 Feet

Figure 2-9
 Buildings 15 and 17 Confirmation
 Sample Locations
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska



Legend

- Sample Location

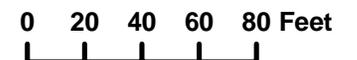
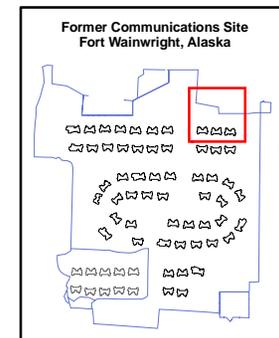
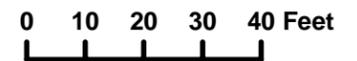
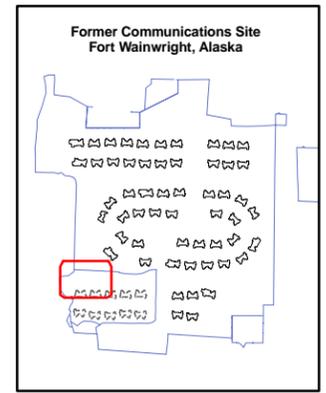




Figure 2-11
Exclusion Zone
PCB Confirmation Sample Locations
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska

- Legend**
- Sample Location
 - +— Fences



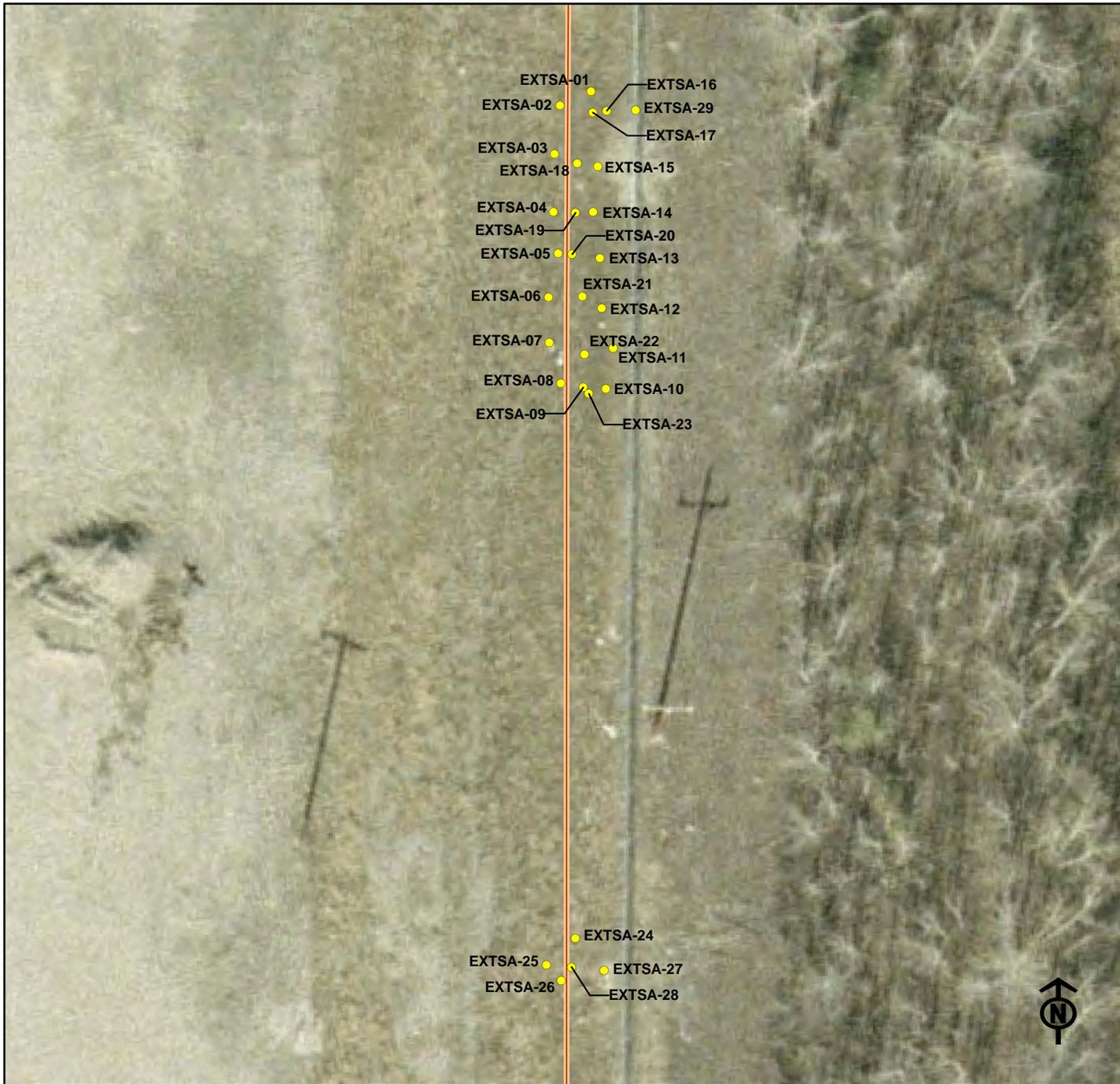


Figure 2-12
Transformer Service Area PCB
Confirmation Sample Locations
Field Data Report
*Former Communications Site
Fort Wainwright, Alaska*

Legend

- PCB Sample Location

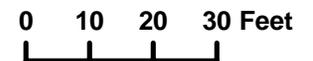
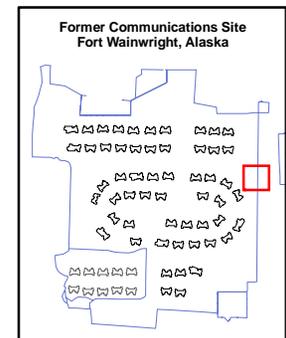


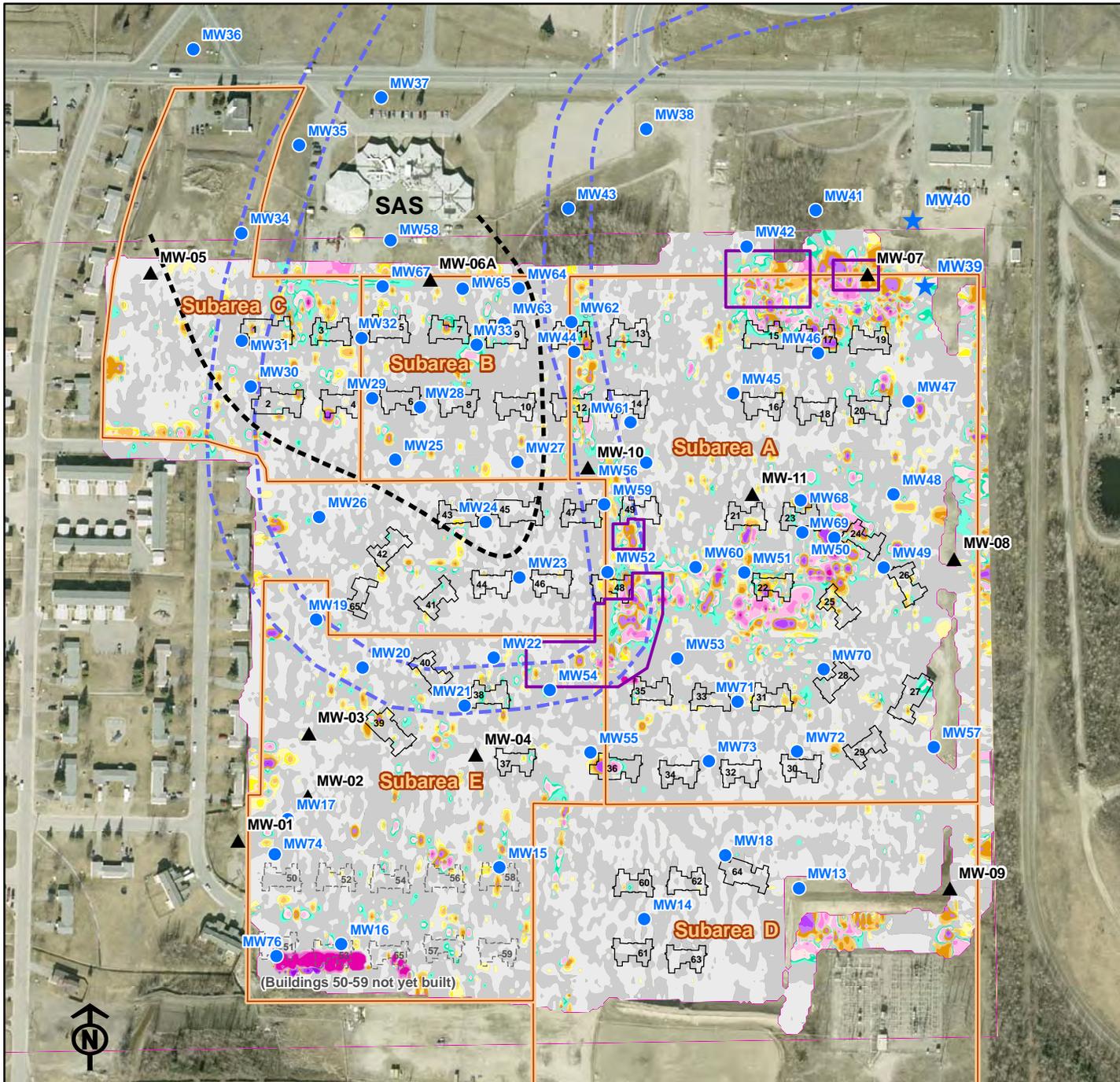
Figure 2-13
 Soil Gas Sample Locations
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska



Legend

-  Moderate to high probability MEC area
-  Former slough channel
-  Area within elevated VOC/POL concentrations
-  Soil gas sample locations, inside garages
-  Soil gas sample locations, not inside garages
-  SG068 -- Not installed in 2007
-  SG050 -- Damaged by truck after sampling

Figure 2-14
 Groundwater Sample Locations
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska



Legend

- Former slough channel
- 2007 Drum and Debris Investigation Area
- Area within elevated VOC/POL concentration
- Monitoring wells installed during Remedial Investigation (RI)
- Deep well installed during RI
- Pre-RI monitoring wells

**2004 Magnetic Data
 Vertical Gradient**

- 4000
- 1000
- 500
- 200
- 100
- 75
- 50
- 20
- 0
- 40
- 75
- 100
- 200
- 500
- 1000
- 2000
- 4000

0 100 200 300 Feet

Figure 2-15
Groundwater Contours
Field Data Report
Former Communications Site
Fort Wainwright, Alaska



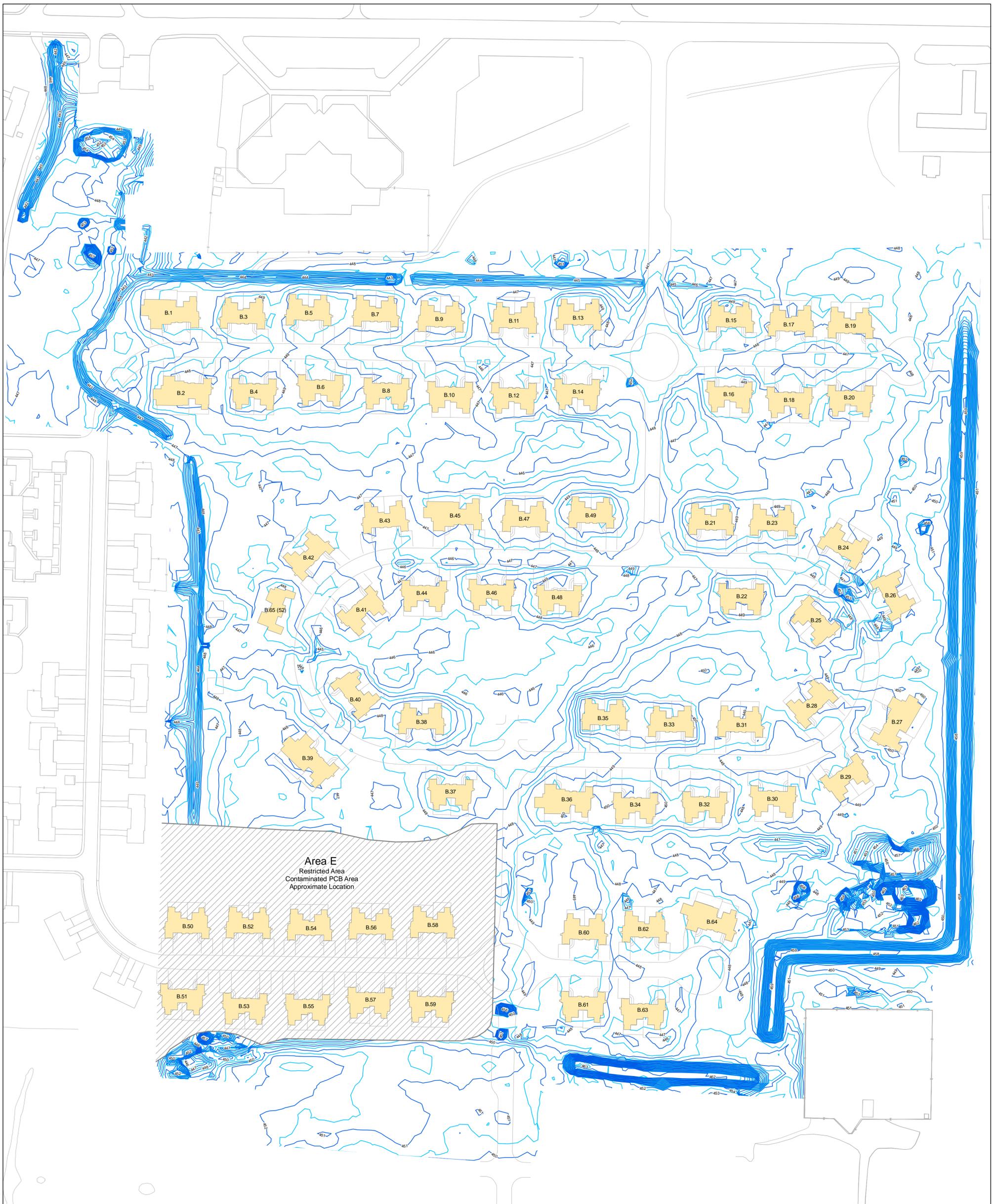
Legend

- Former slough channel
- Capture Zone, Supply Well 3559
- Groundwater level contour, with elevation in feet above Mean Sea Level (NAVD88)
- Monitoring wells installed during Remedial Investigation (RI)
- Deep wells installed during RI
- Pre-RI monitoring wells

Notes:

MW01 and MW02 water levels not used due to questionable survey data.

Hydraulic gradient is 7.55×10^{-4} ft./ft.



\\miner\proj\USACE\357465TakuGardens\GIS\MapFiles\Fig_2-16_RI_TakuFDR_FCS_Topo.mxd 01/30/2008 15:48:20PM

Figure 2-16
 FCS Topographic Survey
 Field Data Report
 Former Communications Site
 Fort Wainwright, Alaska

TABLE 2-1
Sound Berm Sample Collection Summary

Location ID	Sample ID	Depth (feet bgs)	Sample Date	Sample Type/Method	Comments	SVOC	DRO/RRO	Metals	Pesticides	Herbicides	PCB	VOCs	Transitional Explosives
DB01	07FW-DB01-071807	0-2	7/17/2007	soil/MI			X	X	X		X	X	X
DB01	07FW-DB01-073007	0-2	7/30/2007	soil/MI		X				X			
DB02	07FW-DB02-071807	0-2	7/18/2007	soil/MI			X	X	X		X	X	X
DB02	07FW-DB02-073007	0-2	7/30/2007	soil/MI		X				X			
DB03	07FW-DB03-080307	0-2	8/3/2007	soil/MI		X	X	X	X	X	X	X	X
DB04	07FW-DB04-080307	0-2	8/3/2007	soil/MI		X	X	X	X	X	X	X	X
DB05	07FW-DB05-073007	0-2	7/30/2007	soil/MI		X	X	X	X	X	X	X	X
DB06	07FW-DB06-073107	0-2	7/30/2007	soil/MI							X		
DB06	07FW-DB06-073107	0-2	7/31/2007	soil/MI		X	X	X	X	X		X	X
DB07	07FW-DB07-073107	0-2	7/30/2007	soil/MI							X		
DB07	07FW-DB07-073107	0-2	7/31/2007	soil/MI		X	X	X	X	X		X	X
DB08	07FW-DB08-080207	0-2	8/2/2007	soil/MI		X	X	X	X	X	X	X	X
DB09-01	07FW-DB09-01-080107	0-2	8/1/2007	soil/MI		X	X	X	X	X	X	X	X
DB09-02	07FW-DB09-02-080107	0-2	8/1/2007	soil/MI	duplicate	X	X	X	X	X	X	X	X
DB09-03	07FW-DB09-03-080107	0-2	8/1/2007	soil/MI	triplicate	X	X	X	X	X	X	X	X
DB09-03	07FW-DB09-03-080107MS	0-2	8/1/2007	soil/MI	matrix spike	X	X	X	X	X	X		X
DB09-03	07FW-DB09-03-080107SD	0-2	8/1/2007	soil/MI	matrix spike duplicate	X	X	X	X	X	X		X

bgs = Below ground surface
DRO = Diesel-range organic
PCB = Polychlorinated biphenyl
RRO = Residual-range organic
SVOC = Semi-volatile organic compound
VOC = Volatile organic compound

TABLE 2-2
Soil Pile Sample Collection Summary

Location ID	Sample ID	Depth ^a feet bgs	Sample Date	Sample Type/Method	Comments	DRO/RO	Metals	PCB	VOC	SVOC
SP06-01	07FW-T-SP06-01-01		8/8/2007	soil/MI		X	X		X	X
SP06-01	07FW-T-SP06-01-02		8/8/2007	soil/MI	duplicate	X	X		X	X
SP06-01	07FW-T-SP06-01-03		8/8/2007	soil/MI	triplicate		X		X	
SP06-01	07FW-T-SP06-01MS		8/8/2007	soil/MI	matrix spike	X	X		X	X
SP06-01	07FW-T-SP06-01SD		8/8/2007	soil/MI	matrix spike duplicate	X	X		X	X
SP06-02	07FW-T-SP06-02		8/9/2007	soil/MI		X	X		X	X
SP06-02	07FW-T-SP06-02MS		8/9/2007	soil/MI	matrix spike		X			
SP06-02	07FW-T-SP06-02SD		8/9/2007	soil/MI	matrix spike duplicate		X			
SP06-03	07FW-T-SP06-03		8/10/2007	soil/MI		X	X		X	X
SP06-04	07FW-T-SP06-04		8/11/2007	soil/MI		X	X		X	X
SP06-05	07FW-T-SP06-05	2-3	8/11/2007	soil/grab	high PID; discrete sample	X			X	
SP12-01	07FW-CONF-SP12-01	0-.5	9/12/2007	soil/grab	confirmation sample after soil pile removed		X			
SP12-01	07FW-CONF-SP12-01MS		9/12/2007	soil/MI	confirmation sample after soil pile removed; matrix spike		X			
SP12-01	07FW-CONF-SP12-01SD		9/12/2007	soil/MI	confirmation sample after soil pile removed; matrix spike duplicate		X			
SP12-02	07FW-CONF-SP12-02	0-.5	9/12/2007	soil/grab	confirmation sample after soil pile removed		X			
SP12-03	07FW-CONF-SP12-03	0-.5	9/12/2007	soil/grab	confirmation sample after soil pile removed		X			
SP12-04	07FW-CONF-SP12-04	0-.5	9/12/2007	soil/grab	confirmation sample after soil pile removed		X			
SP12-05	07FW-CONF-SP12-05	0-.5	9/12/2007	soil/grab	confirmation sample after soil pile removed		X			
SP13-01	07FW-D-SP13-01		8/16/2007	soil/MI		X	X			X
SP13-02	07FW-D-SP13-02		8/16/2007	soil/MI		X	X			X
SP13-03	07FW-D-SP13-03		8/17/2007	soil/MI		X	X			X
SP13-04	07FW-D-SP13-04		8/18/2007	soil/MI		X	X			X
SP13-04	07FW-D-SP13-04MS		8/18/2007	soil/MI	matrix spike		X			
SP13-04	07FW-D-SP13-04SD		8/18/2007	soil/MI	matrix spike duplicate		X			
SP13-05	07FW-D-SP13-05-01		8/30/2007	soil/MI		X	X			X
SP13-05	07FW-D-SP13-05-02		8/30/2007	soil/MI	duplicate		X			
SP13-05	07FW-D-SP13-05-03		8/30/2007	soil/MI	triplicate		X			
SP13-06	07FW-D-SP13-06		8/31/2007	soil/MI		X	X			X

TABLE 2-2
Soil Pile Sample Collection Summary

Location ID	Sample ID	Depth ^a feet bgs	Sample Date	Sample Type/Method	Comments	DRO/RO	Metals	PCB	VOC	SVOC
SP13-07	07FW-D-SP13-07		8/18/2007	soil/MI		X	X			X
SP13-08	07FW-D-SP13-08		8/18/2007	soil/MI		X	X			X
SP13-08	07FW-D-SP13-08MS		8/18/2007	soil/MI	matrix spike		X			
SP13-08	07FW-D-SP13-08SD		8/18/2007	soil/MI	matrix spike duplicate		X			
SP13-09	07FW-D-SP13-09		9/20/2007	soil/MI		X	X			X
SP13-09	07FW-D-SP13-09MS		9/20/2007	soil/MI	matrix spike		X			
SP13-09	07FW-D-SP13-09SD		9/20/2007	soil/MI	matrix spike duplicate		X			
SP13-10	07FW-D-SP13-10		9/21/2007	soil/MI		X	X			X
SP13-10	07FW-D-SP13-10MS		9/21/2007	soil/MI	matrix spike		X			
SP13-10	07FW-D-SP13-10SD		9/21/2007	soil/MI	matrix spike duplicate		X			
SP17	07FW-E-SP17		9/13/2007	soil/MI		X	X	X		X
SP18	07FW-E-SP18		9/12/2007	soil/MI				X		X
SP20	07FW-E-SP20		8/28/2007	soil/MI				X		
SP27	07FW-E-SP27-01		8/25/2007	soil/MI				X		
SP27	07FW-E-SP27-02		8/25/2007	soil/MI	duplicate			X		
SP27	07FW-E-SP27-03		8/25/2007	soil/MI	triplicate			X		
SP27	07FW-E-SP27-MS		8/25/2007	soil/MI	matrix spike			X		
SP27	07FW-E-SP27-SD		8/25/2007	soil/MI	matrix spike duplicate			X		
SP29	07FW-E-SP29		8/14/2007	soil/MI				X		
SP38	07FW-E-SP38		8/27/2007	soil/MI				X		
SPA	07FW-T-SPA01		9/5/2007	soil/MI		X	X			
SPA	07FW-T-SPA01MS		9/5/2007	soil/MI	matrix spike	X	X			X
SPA	07FW-T-SPA01SD		9/5/2007	soil/MI	matrix spike duplicate	X	X			X
SPA	07FW-T-SPA02		9/5/2007	soil/MI	duplicate		X			X
SPA	07FW-T-SPA03		9/5/2007	soil/MI	triplicate		X			X
SPGROUP1(1,2,3,40,41,B,G)	07FW-T-SPG01		9/11/2007	soil/MI		X	X			X
SPGROUP10-01(32)	07FW-E-SPG10-01		8/15/2007	soil/MI				X		
SPGROUP10-01(32)	07FW-E-SPG10-02		8/15/2007	soil/MI				X		
SPGROUP11(33,34,35)	07FW-E-SPG11		8/14/2007	soil/MI				X		

TABLE 2-2
Soil Pile Sample Collection Summary

Location ID	Sample ID	Depth ^a feet bgs	Sample Date	Sample Type/Method	Comments	DRO/RRO	Metals	PCB	VOC	SVOC
SPGROUP12(36)	07FW-E-SPG12		8/29/2007	soil/MI				X		
SPGROUP13(37,39)	07FW-E-SPG13		8/27/2007	soil/MI				X		
SPGROUP14(D,E,F)	07FW-E-SPG14		8/28/2007	soil/MI				X		
SPGROUP2(4,5,7)	07FW-C-SPG02		8/7/2007	soil/MI		X	X		X	X
SPGROUP3(8,9)	07FW-C-SPG03		8/11/2007	soil/MI		X	X		X	X
SPGROUP4(10,C)	07FW-A-SPG04		8/13/2007	soil/MI		X	X			X
SPGROUP6(14,15)	07FW-E-SPG06		8/13/2007	soil/MI		X	X			X
SPGROUP7(19,21,22,26)	07FW-E-SPG07		8/29/2007	soil/MI				X		
SPGROUP8-01(25)	07FW-E-SPG08-01		8/15/2007	soil/MI				X		
SPGROUP8-02(23,24)	07FW-E-SPG08-02		8/15/2007	soil/MI				X		
SPGROUP9(28,30,31)	07FW-E-SPG09		8/14/2007	soil/MI				X		

^aMI samples do not have depths since increments from multiple depths were combined for each sample.

bgs = below ground surface DRO = Diesel-range organics

MI = Multi increment

PCB = Polychlorinated biphenyls

RRO = Residual-range organics

SVOC = Semivolatile organic compounds

VOC = Volatile organic compounds

TABLE 2-3
Drainage Swale Sediment Sample Summary Collection Summary

Location ID	Sample ID	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	Herbicides	VOC	Low-Level VOC	SVOC	Transitional Explosives
DSS01-01	07FWCDSS01-01	0 - 0.5	9/21/2007	sediment/grab		X	X	X	X	X	X	X	X	X	X	X
DSS01-01	07FWCDSS01-01MS	0 - 0.5	9/21/2007	sediment/grab	matrix spike					X						
DSS01-01	07FWCDSS01-01SD	0 - 0.5	9/21/2007	sediment/grab	matrix spike duplicate					X						
DSS01-02	07FWCDSS01-02	0 - 0.5	9/21/2007	sediment/grab		X	X	X	X	X	X	X	X	X	X	X
DSS01-03	07FWCDSS01-03	0 - 0.5	9/21/2007	sediment/grab		X	X	X	X	X	X	X	X	X	X	X
DSS01-03	07FWCDSS01-03FD	0 - 0.5	9/21/2007	sediment/grab	field duplicate	X	X			X	X	X	X	X	X	X
DSS01-03	07FWCDSS01-03MS	0 - 0.5	9/21/2007	sediment/grab	matrix spike			X	X							
DSS01-03	07FWCDSS01-03SD	0 - 0.5	9/21/2007	sediment/grab	matrix spike duplicate			X	X							

bgs = Below ground surface
DRO = Diesel-range organics
EPH = Extractable petroleum hydrocarbon
GRO = Gasoline-range organics
RRO = Residual-range organics
SVOC = semivolatile organic compound
VOC = volatile organic compound
VPH = volatile petroleum hydrocarbon

TABLE 2-4
Soil Boring Sample Collection Summary

Location ID ^a	Sample ID ^b	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW13	07FWDMW13-3.5FD	3.5 - 4.5	9/26/2007	soil/grab	field duplicate	X	X			X	X	X	X	X	X	X	
MW13	07FWDMW13-8.0	8 - 9	9/26/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW13	07FWDMW13-10.1	10.1 - 11.1	9/26/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW13	07FWDMW13-3.5	3.5 - 4.5	9/26/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW14	07FWDMW14-10.7MS	10.7 - 11.7	9/27/2007	soil/grab	matrix spike											X	
MW14	07FWDMW14-3.1MS	3.1 - 4.1	9/27/2007	soil/grab	matrix spike											X	
MW14	07FWDMW14-7.8MS	7.8 - 8.8	9/27/2007	soil/grab	matrix spike		X										
MW14	07FWDMW14-10.7SD	10.7 - 11.7	9/27/2007	soil/grab	matrix spike duplicate											X	
MW14	07FWDMW14-3.1SD	3.1 - 4.1	9/27/2007	soil/grab	matrix spike duplicate											X	
MW14	07FWDMW14-7.8SD	7.8 - 8.8	9/27/2007	soil/grab	matrix spike duplicate		X										
MW14	07FWDMW14-3.1	3.1 - 4.1	9/27/2007	soil/grab		X	X			X	X		X	X	X	X	
MW14	07FWDMW14-10.7	10.7 - 11.7	9/27/2007	soil/grab		X	X			X	X		X	X	X	X	
MW14	07FWDMW14-7.8	7.8 - 8.8	9/27/2007	soil/grab		X	X			X	X		X	X	X	X	
MW15	07FWEMW15-3.5MS	3.5 - 4.1	10/5/2007	soil/grab	matrix spike	X	X			X	X	X	X	X	X	X	
MW15	07FWEMW15-3.5SD	3.5 - 4.1	10/5/2007	soil/grab	matrix spike duplicate	X	X			X	X	X	X	X	X	X	
MW15	07FWEMW15-8.1	8.1 - 9.1	10/5/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW15	07FWEMW15-10.2	10.2 - 11.2	10/5/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW15	07FWEMW15-3.5	3.5 - 4.1	10/5/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW15	07FWEMW15-3.5B	3.5 - 4.1	10/5/2007	soil/grab	field duplicate	X	X			X	X	X	X	X	X	X	
MW16	07FWEMW16-3.2	3.2 - 4.2	10/5/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW16	07FWEMW16-12.5	12.5 - 13.5	10/5/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW16	07FWEMW16-8.5	8.5 - 9.5	10/5/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW17	07FWEMW17-10.0MS	10 - 12	10/11/2007	soil/grab	matrix spike					X	X		X				
MW17	07FWEMW17-10.0SD	10 - 12	10/11/2007	soil/grab	matrix spike duplicate					X	X		X				
MW17	07FWEMW17-10.0	10 - 12	10/11/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW17	07FWEMW17-3.5	3.5 - 4.5	10/11/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW17	07FWEMW17-7.5	7.5 - 9.5	10/11/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW18	07FWDMW18-10.3	10.3 - 11.3	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	
MW18	07FWDMW18-8.3	8.3 - 9.3	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	
MW18	07FWDMW18-3.5	3.5 - 4.5	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	

TABLE 2-4
Soil Boring Sample Collection Summary

Location ID ^a	Sample ID ^b	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW19	07FWEMW19-11MS	11 - 12	9/25/2007	soil/grab	matrix spike							X					
MW19	07FWEMW19-11SD	11 - 12	9/25/2007	soil/grab	matrix spike duplicate							X					
MW19	07FWEMW19-8.1	8.1 - 9.1	9/25/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW19	07FWEMW19-3.5	3.5 - 4.5	9/25/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW19	07FWEMW19-11	11 - 12	9/25/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW20	07FWEMW20-2.5FD	2.5 - 4.5	9/25/2007	soil/grab	field duplicate	X	X			X	X	X	X	X	X	X	
MW20	07FWEMW20-2.5MS	2.5 - 4.5	9/25/2007	soil/grab	matrix spike		X			X	X		X	X	X	X	
MW20	07FWEMW20-2.5SD	2.5 - 4.5	9/25/2007	soil/grab	matrix spike duplicate		X			X	X		X	X	X	X	
MW20	07FWEMW20-8.4	8.4 - 9.4	9/25/2007	soil/grab		X	X		X	X	X	X	X	X	X	X	
MW20	07FWEMW20-2.5	2.5 - 4.5	9/25/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW20	07FWEMW20-10.6	10.6 - 11.6	9/25/2007	soil/grab		X	X		X	X	X	X	X	X	X	X	
MW21	07FWEMW21-3.3	3.3 - 4.3	9/25/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW21	07FWEMW21-10.5	10.5 - 11.5	9/25/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW21	07FWEMW21-8.5	8.5 - 9.5	9/25/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW22	07FWEMW22-3.2FD	3.2 - 4.2	9/27/2007	soil/grab	field duplicate	X	X			X	X	X	X	X	X	X	
MW22	07FWEMW22-10.6MS	10.6 - 11.6	9/27/2007	soil/grab	matrix spike		X					X					
MW22	07FWEMW22-7.9MS	7.9 - 8.9	9/27/2007	soil/grab	matrix spike								X				
MW22	07FWEMW22-10.6SD	10.6 - 11.6	9/27/2007	soil/grab	matrix spike duplicate		X					X					
MW22	07FWEMW22-7.9SD	7.9 - 8.9	9/27/2007	soil/grab	matrix spike duplicate								X				
MW22	07FWEMW22-3.2	3.2 - 4.2	9/27/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW22	07FWEMW22-10.6	10.6 - 11.6	9/27/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW22	07FWEMW22-7.9	7.9 - 8.9	9/27/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW23	07FWBMW23-10MS	10 - 11	9/21/2007	soil/grab	matrix spike						X						X
MW23	07FWBMW23-10SD	10 - 11	9/21/2007	soil/grab	matrix spike duplicate						X						X
MW23	07FWBMW23-8.1	8.1 - 9.1	9/21/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW23	07FWBMW23-3.5	3.5 - 4.5	9/21/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW23	07FWBMW23-10	10 - 11	9/21/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW24	07FWBMW24-10.5	10.5 - 11.5	9/21/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW24	07FWBMW24-3.5	3.5 - 4.5	9/21/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW24	07FWBMW24-8.5	8.5 - 9.5	9/21/2007	soil/grab		X	X			X	X		X	X	X	X	X

TABLE 2-4
Soil Boring Sample Collection Summary

Location ID ^a	Sample ID ^b	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW25	07FWBMW25-10.5	10.5 - 11.5	9/19/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW25	07FWBMW25-3.5	3.5 - 4.5	9/19/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW25	07FWBMW25-7.5	7.5 - 8.5	9/19/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW26	07FWBMW26-3.2FD	3.2 - 4.2	9/19/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW26	07FWBMW26-11.7MS	10.7 - 11.7	9/19/2007	soil/grab	matrix spike					X						X	
MW26	07FWBMW26-8.5MS	8.5 - 9.5	9/19/2007	soil/grab	matrix spike											X	
MW26	07FWBMW26-11.7SD	10.7 - 11.7	9/19/2007	soil/grab	matrix spike duplicate					X						X	
MW26	07FWBMW26-8.5SD	8.5 - 9.5	9/19/2007	soil/grab	matrix spike duplicate											X	
MW26	07FWBMW26-3.2	3.2 - 4.2	9/19/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW26	07FWBMW26-8.5	8.5 - 9.5	9/19/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW26	07FWBMW26-11.7	10.7 - 11.7	9/19/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW27	07FWBMW27-2.5FD	2.5 - 4.5	9/21/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW27	07FWBMW27-2.5MS	2.5 - 4.5	9/21/2007	soil/grab	matrix spike		X	X	X	X	X		X		X	X	X
MW27	07FWBMW27-2.5SD	2.5 - 4.5	9/21/2007	soil/grab	matrix spike duplicate		X	X	X	X	X		X		X	X	X
MW27	07FWBMW27-10.5	10.5 - 11.5	9/21/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW27	07FWBMW27-2.5	2.5 - 4.5	9/21/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW27	07FWBMW27-8.5	8.5 - 9.5	9/21/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW28	07FWBMW28-10.5	10.5 - 11.5	9/18/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW28	07FWBMW28-3.5	3.5 - 4.5	9/18/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW28	07FWBMW28-8.5	8.5 - 9.5	9/18/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW29	07FWBMW29-2.5FD	2.5 - 4.5	9/18/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW29	07FWBMW29-2.5MS	2.5 - 4.5	9/18/2007	soil/grab	matrix spike	X	X	X	X	X	X		X	X	X	X	X
MW29	07FWBMW29-2.5SD	2.5 - 4.5	9/18/2007	soil/grab	matrix spike duplicate	X	X	X	X	X	X		X	X	X	X	X
MW29	07FWBMW29-12.5	12.5 - 13	9/18/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW29	07FWBMW29-2.5	2.5 - 4.5	9/18/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW29	07FWBMW29-7.5	7.5 - 9	9/18/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW30	07FWCMW30-8.2	8.2 - 9.2	9/18/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW30	07FWCMW30-3.5	3.5 - 4.5	9/18/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW30	07FWCMW30-11	11 - 12	9/18/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW31	07FWCMW31-12.5	12.5 - 13.5	9/14/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW31	07FWCMW31-2.5	2.5 - 4	9/14/2007	soil/grab		X	X			X	X		X	X	X	X	X

TABLE 2-4
Soil Boring Sample Collection Summary

Location ID ^a	Sample ID ^b	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW31	07FWCMW31-7.5	7.5 - 8.5	9/14/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW32	07FWBMW32-11MS	11 - 12	9/15/2007	soil/grab	matrix spike					X							
MW32	07FWBMW32-11SD	11 - 12	9/15/2007	soil/grab	matrix spike duplicate					X							
MW32	07FWBMW32-12.5	12.5 - 14.5	9/15/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW32	07FWBMW32-2.5	2.5 - 3.5	9/15/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW32	07FWBMW32-11	11 - 12	9/15/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW33	07FWBMW33-12.5	12.5 - 14.5	9/15/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW33	07FWBMW33-3.5	3.5 - 4.5	9/15/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW33	07FWBMW33-8.5	8.5 - 9.5	9/15/2007	soil/grab		X	X	X	X	X	X		X	X		X	X
MW34	07FWCMW34-6.0	6 - 7	9/22/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW34	07FWCMW34-3.5	3.5 - 4.5	9/22/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW34	07FWCMW34-7.5	7.5 - 8.5	9/22/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW35	07FWBMW35-2.7FD	2.7 - 3.7	9/22/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW35	07FWBMW35-8.2	8.2 - 9.2	9/22/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW35	07FWBMW35-10.5	10.5 - 11.5	9/22/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW35	07FWBMW35-2.7	2.7 - 3.7	9/22/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW36	07FWBMW36-3.5FD	3.5 - 4.5	9/24/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW36	07FWBMW36-10.8MS	10.8 - 11.8	9/24/2007	soil/grab	matrix spike		X		X		X						X
MW36	07FWBMW36-3.5MS	3.5 - 4.5	9/24/2007	soil/grab	matrix spike				X								
MW36	07FWBMW36-8.2MS	8.2 - 9.2	9/24/2007	soil/grab	matrix spike												X
MW36	07FWBMW36-10.8SD	10.8 - 11.8	9/24/2007	soil/grab	matrix spike duplicate		X				X						X
MW36	07FWBMW36-3.5SD	3.5 - 4.5	9/24/2007	soil/grab	matrix spike duplicate				X								
MW36	07FWBMW36-8.2SD	8.2 - 9.2	9/24/2007	soil/grab	matrix spike duplicate												X
MW36	07FWBMW36-8.2	8.2 - 9.2	9/24/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW36	07FWBMW36-3.5	3.5 - 4.5	9/24/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW36	07FWBMW36-10.8	10.8 - 11.8	9/24/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW37	07FWBMW37-3.0	3 - 4	9/24/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW37	07FWBMW37-7.3	7.3 - 8.3	9/24/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW37	07FWBMW37-10.5	10.5 - 11.5	9/24/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW38	07FWBMW38-10.5	10.5 - 11.5	9/24/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW38	07FWBMW38-3.5	3.5 - 4.5	9/24/2007	soil/grab		X	X		X	X	X		X	X	X	X	X

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Location ID ^a	Sample ID ^b	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW38	07FWBMW38-8.5	8.5 - 9.5	9/24/2007	soil/grab		X	X		X	X	X		X	X	X	X	X
MW39	07FWAMW39-10.8FD	10.8 - 11.8	9/29/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW39	07FWAMW39-3.0MS	0 - 3	9/25/2007	soil/grab	matrix spike					X			X				X
MW39	07FWAMW39-3.0SD	0 - 3	9/25/2007	soil/grab	matrix spike duplicate					X			X				X
MW39	07FWAMW39-10.8	10.8 - 11.8	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW39	07FWAMW39-3.0	0 - 3	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW39	07FWAMW39-6.0	3 - 6	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW40	07FWAMW40-10.5	10.5 - 11.5	10/1/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW40	07FWAMW40-3.0	0 - 3	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW40	07FWAMW40-6.0	3 - 6	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW41	07FWAMW41-3.0FD	0 - 3	9/29/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW41	07FWAMW41-3.0MS	0 - 3	9/29/2007	soil/grab	matrix spike	X	X			X	X		X	X	X	X	X
MW41	07FWAMW41-3.0SD	0 - 3	9/29/2007	soil/grab	matrix spike duplicate	X	X			X	X		X	X	X	X	X
MW41	07FWAMW41-3.0	0 - 3	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW41	07FWAMW41-6.0	3 - 6	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW41	07FWAMW41-10.8	10.8 - 11.8	10/1/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW42	07FWAMW42-10.4MS	10.4 - 11.4	10/2/2007	soil/grab	matrix spike												X
MW42	07FWAMW42-10.4SD	10.4 - 11.4	10/2/2007	soil/grab	matrix spike duplicate												X
MW42	07FWAMW42-3.0	0 - 3	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW42	07FWAMW42-6.0	3 - 6	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW42	07FWAMW42-10.4	10.4 - 11.4	10/2/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW43	07FWAMW43-3.0FD	0 - 3	9/29/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW43	07FWAMW43-10.4MS	10.4 - 11.4	10/2/2007	soil/grab	matrix spike												X
MW43	07FWAMW43-3.0MS	0 - 3	9/29/2007	soil/grab	matrix spike	X	X			X	X		X	X	X	X	X
MW43	07FWAMW43-10.4SD	10.4 - 11.4	10/2/2007	soil/grab	matrix spike duplicate												X
MW43	07FWAMW43-3.0SD	0 - 3	9/29/2007	soil/grab	matrix spike duplicate	X	X			X	X		X	X	X	X	X
MW43	07FWAMW43-3.0	0 - 3	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW43	07FWAMW43-7.0	3 - 7	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW43	07FWAMW43-10.4	10.4 - 11.4	10/2/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW44	07FWAMW44-10.3MS	10.3 - 11.3	10/3/2007	soil/grab	matrix spike		X				X						

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Location ID ^a	Sample ID ^b	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW44	07FWAMW44-3.0MS	0 - 3	9/26/2007	soil/grab	matrix spike					X			X			X	X
MW44	07FWAMW44-6.5MS	3 - 6.5	9/26/2007	soil/grab	matrix spike			X			X						
MW44	07FWAMW44-10.3SD	10.3 - 11.3	10/3/2007	soil/grab	matrix spike duplicate		X				X						
MW44	07FWAMW44-3.0SD	0 - 3	9/26/2007	soil/grab	matrix spike duplicate					X			X			X	X
MW44	07FWAMW44-6.5SD	3 - 6.5	9/26/2007	soil/grab	matrix spike duplicate			X			X						
MW44	07FWAMW44-3.0	0 - 3	9/26/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW44	07FWAMW44-10.3	10.3 - 11.3	10/3/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW44	07FWAMW44-6.5	3 - 6.5	9/26/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW45	07FWAMW45-3.0	0 - 3	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW45	07FWAMW45-7.0	3 - 7	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW45	07FWAMW45-10.8	10.8 - 11.8	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW46	07FWAMW46-3.0FD	0 - 3	9/25/2007	soil/grab	field duplicate		X			X	X		X		X	X	X
MW46	07FWAMW46-3.0MS	0 - 3	9/25/2007	soil/grab	matrix spike	X	X			X	X		X	X	X	X	X
MW46	07FWAMW46-3.0SD	0 - 3	9/25/2007	soil/grab	matrix spike duplicate	X	X			X	X		X	X	X	X	X
MW46	07FWAMW46-3.0	0 - 3	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW46	07FWAMW46-7.0	3 - 7	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW46	07FWAMW46-10.8	10.8 - 11.8	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW47	07FWAMW47-3.0	0 - 3	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW47	07FWAMW47-6.0	3 - 6	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW47	07FWAMW47-10.4	10.4 - 11.4	10/2/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW48	07FWAMW48-10.6MS	10.6 - 11.6	9/28/2007	soil/grab	matrix spike					X							
MW48	07FWAMW48-3.0MS	0 - 3	9/25/2007	soil/grab	matrix spike					X							
MW48	07FWAMW48-10.6SD	10.6 - 11.6	9/28/2007	soil/grab	matrix spike duplicate					X							
MW48	07FWAMW48-3.0SD	0 - 3	9/25/2007	soil/grab	matrix spike duplicate					X							
MW48	07FWAMW48-3.0	0 - 3	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW48	07FWAMW48-6.0	3 - 6	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW48	07FWAMW48-10.6	10.6 - 11.6	9/28/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW49	07FWAMW49-3.0	0 - 3	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW49	07FWAMW49-6.5	3 - 6.5	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW49	07FWAMW49-10.6	10.6 - 11.6	9/28/2007	soil/grab		X	X			X	X		X	X	X	X	X

TABLE 2-4
Soil Boring Sample Collection Summary

Location ID ^a	Sample ID ^b	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW50	07FWAMW50-10.3MS	10.3 - 11.3	10/3/2007	soil/grab	matrix spike		X										
MW50	07FWAMW50-10.3SD	10.3 - 11.3	10/3/2007	soil/grab	matrix spike duplicate		X										
MW50	07FWAMW50-3.0	0 - 3	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW50	07FWAMW50-6.0	3 - 6	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW50	07FWAMW50-10.3	10.3 - 11.3	10/3/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW51	07FWAMW51-3.0FD	0 - 3	9/26/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW51	07FWAMW51-3.0	0 - 3	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW51	07FWAMW51-7.5	3 - 7.5	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW51	07FWAMW51-10.8	10.8 - 11.8	10/3/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW52	07FWAMW52-3.0	0 - 3	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW52	07FWAMW52-6.0	3 - 6	9/29/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW52	07FWAMW52-11	11 - 12	10/4/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW53	07FWAMW53-3.0	0 - 3	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW53	07FWAMW53-6.0	3 - 6	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW53	07FWAMW53-10.4	10.4 - 11.4	10/4/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW54	07FWAMW54-6.0	3.5 - 6	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW54	07FWAMW54-10.3	10.3 - 11.3	10/4/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW54	07FWAMW54-3.5	0 - 3.5	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW55	07FWAMW55-11MS	11 - 12	9/27/2007	soil/grab	matrix spike					X	X						
MW55	07FWAMW55-6.0MS	3.5 - 6	9/26/2007	soil/grab	matrix spike											X	
MW55	07FWAMW55-11SD	11 - 12	9/27/2007	soil/grab	matrix spike duplicate					X	X						
MW55	07FWAMW55-6.0SD	3.5 - 6	9/26/2007	soil/grab	matrix spike duplicate											X	
MW55	07FWAMW55-6.0	3.5 - 6	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW55	07FWAMW55-3.5	0 - 3.5	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW55	07FWAMW55-11	11 - 12	9/27/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW56	07FWAMW56-4.0	0 - 4	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW56	07FWAMW56-6.0	4 - 6	9/25/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW56	07FWAMW56-10.7	10.7 - 11.7	10/3/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW57	07FWAMW57-10.7FD	10.7 - 11.7	9/28/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW57	07FWAMW57-10.7FDMS	10.7 - 11.7	9/28/2007	soil/grab	matrix spike						X					X	
MW57	07FWAMW57-10.7FDSD	10.7 - 11.7	9/28/2007	soil/grab	matrix spike duplicate						X					X	

TABLE 2-4
Soil Boring Sample Collection Summary

Location ID ^a	Sample ID ^b	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW57	07FWAMW57-3.0	0 - 3	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW57	07FWAMW57-7.0	3 - 7	9/26/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW57	07FWAMW57-10.7	10.7 - 11.7	9/28/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW58	07FWBMW58-3.5MS	3.5 - 4.5	9/22/2007	soil/grab	matrix spike					X	X		X				X
MW58	07FWCMW58-10.5MS	10.5 - 11.5	9/22/2007	soil/grab	matrix spike		X									X	
MW58	07FWBMW58-3.5SD	3.5 - 4.5	9/22/2007	soil/grab	matrix spike duplicate					X	X		X				X
MW58	07FWCMW58-10.5SD	10.5 - 11.5	9/22/2007	soil/grab	matrix spike duplicate		X									X	
MW58	07FWCMW58-8.2	8.2 - 9.2	9/22/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW58	07FWBMW58-3.5	3.5 - 4.5	9/22/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW58	07FWCMW58-10.5	10.5 - 11.5	9/22/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW59	07FWAMW59-10.4MS	10.4 - 11.4	10/6/2007	soil/grab	matrix spike					X						X	
MW59	07FWAMW59-10.4SD	10.4 - 11.4	10/6/2007	soil/grab	matrix spike duplicate					X						X	
MW59	07FWAMW59-3.0	0 - 3	10/4/2007	soil/grab	GRO, VOC, low-level VOC not collected		X			X	X		X			X	X
MW59	07FWAMW59-6.0	3 - 6	10/4/2007	soil/grab	GRO, VOC, low-level VOC not collected		X			X	X		X			X	X
MW59	07FWAMW59-10.4	10.4 - 11.4	10/6/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW60	07FWAMW60-6.0MS	3 - 6	10/4/2007	soil/grab	matrix spike												X
MW60	07FWAMW60-6.0SD	3 - 6	10/4/2007	soil/grab	matrix spike duplicate												X
MW60	07FWAMW60-3.0	0 - 3	10/4/2007	soil/grab	GRO, VOC, low-level VOC not collected		X			X	X		X			X	X
MW60	07FWAMW60-6.0	3 - 6	10/4/2007	soil/grab	GRO, VOC, low-level VOC not collected		X			X	X		X			X	X
MW60	07FWAMW60-10.7	10.7 - 11.7	10/6/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW61	07FWAMW61-3.0MS	0 - 3	10/11/2007	soil/grab	matrix spike	X	X			X	X		X	X	X	X	X
MW61	07FWAMW61-3.0SD	0 - 3	10/11/2007	soil/grab	matrix spike duplicate	X	X			X	X		X	X	X	X	X
MW61	07FWAMW61-3.0	0 - 3	10/11/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW61	07FWAMW61-6.0	0 - 3	10/11/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW61	07FWAMW61-10.5	10.5 - 12	10/12/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW61	07FWAMW61-3.0B	0 - 3	10/11/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
MW62	07FWAMW62-10.0	10 - 12	10/12/2007	soil/grab		X	X			X	X		X	X	X	X	X

TABLE 2-4
Soil Boring Sample Collection Summary

Location ID ^a	Sample ID ^b	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW62	07FWAMW62-3.0	0 - 3	10/11/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW62	07FWAMW62-6.0	0 - 3	10/11/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW63	07FWBMW63-11.0MS	11 - 12	10/9/2007	soil/grab	matrix spike					X			X			X	
MW63	07FWBMW63-8.5MS	8.5 - 9.5	10/9/2007	soil/grab	matrix spike		X									X	
MW63	07FWBMW63-11.0SD	11 - 12	10/9/2007	soil/grab	matrix spike duplicate					X			X			X	
MW63	07FWBMW63-8.5SD	8.5 - 9.5	10/9/2007	soil/grab	matrix spike duplicate		X									X	
MW63	07FWBMW63-11.0	11 - 12	10/9/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW63	07FWBMW63-3.5	3.5 - 4.5	10/9/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW63	07FWBMW63-8.5	8.5 - 9.5	10/9/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW64	07FWBMW64-3.5MS	3.5 - 4.5	10/8/2007	soil/grab	matrix spike						X						
MW64	07FWBMW64-3.5SD	3.5 - 4.5	10/8/2007	soil/grab	matrix spike duplicate						X						
MW64	07FWBMW64-8.2	8.2 - 9.2	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW64	07FWBMW64-10.5	10.5 - 12	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW64	07FWBMW64-3.5	3.5 - 4.5	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW65	07FWBMW65-11.0MS	11 - 12	10/10/2007	soil/grab	matrix spike		X	X		X	X		X				
MW65	07FWBMW65-7.5MS	7.5 - 9	10/10/2007	soil/grab	matrix spike	X								X			
MW65	07FWBMW65-11.0SD	11 - 12	10/10/2007	soil/grab	matrix spike duplicate		X	X		X	X		X				
MW65	07FWBMW65-7.5SD	7.5 - 9	10/10/2007	soil/grab	matrix spike duplicate	X								X			
MW65	07FWBMW65-11.0	11 - 12	10/10/2007	soil/grab		X	X	X	X	X	X		X	X		X	X
MW65	07FWBMW65-3.5	3.5 - 4.5	10/10/2007	soil/grab		X							X	X	X		
MW65	07FWBMW65-7.5	7.5 - 9	10/10/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW66	07FWBSB66-11.0MS	11 - 12	10/10/2007	soil/grab	matrix spike				X								
MW66	07FWBSB66-8.0MS	8 - 9.5	10/10/2007	soil/grab	matrix spike												X
MW66	07FWBSB66-8.0SD	8 - 9.5	10/10/2007	soil/grab	matrix spike duplicate												X
MW66	07FWBSB66-11.0	11 - 12	10/10/2007	soil/grab		X	X	X	X	X	X		X	X	X	X	X
MW66	07FWBSB66-8.0	8 - 9.5	10/10/2007	soil/grab			X			X	X		X		X	X	X
MW66	07FWBSB66-3.5	3.5 - 4.5	10/10/2007	soil/grab		X							X	X	X		
MW67	07FWBMW67-10.0	10 - 12	10/9/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW67	07FWBMW67-3.5	3.5 - 4.5	10/9/2007	soil/grab		X	X			X	X		X	X	X	X	X
MW67	07FWBMW67-8.5	8.5 - 9.5	10/9/2007	soil/grab		X	X			X	X		X	X	X	X	X

TABLE 2-4
Soil Boring Sample Collection Summary

Location ID ^a	Sample ID ^b	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
					duplicate												
MW76	07FWEMW76-8.0	8 - 9.5	10/10/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW76	07FWEMW76-10.5	10.5 - 12	10/10/2007	soil/grab		X	X			X	X	X	X	X	X	X	
MW76	07FWEMW76-3.5	3.5 - 4.5	10/10/2007	soil/grab		X	X			X	X	X	X	X	X	X	

^aThe location ID for "MW13" is equivalent to "SB13" shown on Figure 2-5

^bIn the sample ID "07FW"="2007 Ft Wainwright" and the next letter, "A", "B", "C", "D", or "E" is the corresponding subarea designation

bgs = Below ground surface
DRO = Diesel-range organics
EPH = Extractable petroleum hydrocarbon
GRO = Gasoline-range organics
RRO = Residual-range organics
SVOC = semivolatile organic compound
VOC = volatile organic compound
VPH = volatile petroleum hydrocarbon

TABLE 2-5
Building 49 Excavation Confirmation Sample Collection Summary

Location ID	Sample ID	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
Bldg49-01	07FW-C-EXDrum01	4.5 - 5	9/11/2007	soil/grab		X	X	X	X	X	X	X	X	X	X	X	X
Bldg49-01	07FW-C-EXDrum01MS	4.5 - 5	9/11/2007	soil/grab	matrix spike					X		X				X	X
Bldg49-01	07FW-C-EXDrum01SD	4.5 - 5	9/11/2007	soil/grab	matrix spike duplicate					X		X				X	X
Bldg49-01	07FW-C-EXDrum01R1	4.5 - 5	10/5/2007	soil/grab	re-sample	X								X	X	X	
Bldg49-01	07FW-C-EXDrum01R1B	4.5 - 5	10/5/2007	soil/grab	re-sample, field duplicate, SVOC sample contaminated during laboratory analysis	X								X	X		
Bldg49-01	07FW-C-EXDrum01R1MS	4.5 - 5	10/5/2007	soil/grab	re-sample, matrix spike	X								X	X	X	
Bldg49-01	07FW-C-EXDrum01R1SD	4.5 - 5	10/5/2007	soil/grab	re-sample, matrix spike duplicate	X								X	X	X	
Bldg49-02	07FW-C-EXDrum02	4.5 - 5	9/11/2007	soil/grab		X	X	X	X	X	X	X	X	X	X	X	X
Bldg49-02	07FW-C-EXDrum02MS	4.5 - 5	9/11/2007	soil/grab	matrix spike						X					X	
Bldg49-02	07FW-C-EXDrum02SD	4.5 - 5	9/11/2007	soil/grab	matrix spike duplicate						X					X	
Bldg49-02	07FW-C-EXDrum02R1	4.5 - 5	10/5/2007	soil/grab	re-sample	X								X	X	X	
Bldg49-03	07FW-C-EXDrum03	9 - 9.5	9/11/2007	soil/grab		X	X	X	X	X	X	X	X	X	X	X	X
Bldg49-03	07FW-C-EXDrum03R1	9 - 9.5	10/5/2007	soil/grab	re-sample	X								X	X	X	
Bldg49-04	07FW-C-EXDrum04	12 - 12.5	9/12/2007	soil/grab		X	X	X	X	X	X	X	X	X	X	X	X
Bldg49-04	07FW-C-EXDrum04R1	12 - 12.5	10/5/2007	soil/grab	re-sample	X								X	X	X	
Bldg49-05	07FW-C-EXDrum05	4 - 4.5	9/12/2007	soil/grab		X	X	X	X	X	X	X	X	X	X	X	X
Bldg49-05	07FW-C-EXDrum05R1	4 - 4.5	10/5/2007	soil/grab	re-sample	X								X	X	X	
Bldg49-06	07FW-C-EXDrum06-01	4.5 - 5	9/12/2007	soil/grab		X	X	X	X	X	X	X	X	X	X	X	X
Bldg49-06	07FW-C-EXDrum06R1	4.5 - 5	10/5/2007	soil/grab	re-sample	X								X	X	X	
Bldg49-07	07FW-C-EXDRUM07-01	8 - 8.5	9/13/2007	soil/grab		X	X	X	X	X	X	X	X	X	X	X	X
Bldg49-07	07FW-C-EXDRUM07-01MS	8 - 8.5	9/13/2007	soil/grab	matrix spike	X	X	X	X	X	X	X	X	X	X	X	X
Bldg49-07	07FW-C-EXDRUM07-01SD	8 - 8.5	9/13/2007	soil/grab	matrix spike duplicate	X	X	X	X	X	X	X	X	X	X	X	X
Bldg49-07	07FW-C-EXDRUM07-02	8 - 8.5	9/13/2007	soil/grab		X	X	X	X	X	X	X	X	X	X	X	X
Bldg49-07	07FW-C-EXDrum07R1	8 - 8.5	10/5/2007	soil/grab	re-sample	X								X	X	X	
Bldg49-08	07FW-C-EXDrum08	8 - 8.5	9/19/2007	soil/grab		X	X	X		X	X	X	X	X	X	X	X
Bldg49-08	07FW-C-EXDrum08R1	8 - 8.5	10/5/2007	soil/grab	re-sample	X								X	X	X	
Bldg49-09	07FW-C-EXDrum09	4.5 - 5	9/19/2007	soil/grab		X	X	X		X	X	X	X	X	X	X	X
Bldg49-09	07FW-C-EXDrum09R1	4.5 - 5	10/5/2007	soil/grab	re-sample	X								X	X	X	

bgs = Below ground surface
DRO = Diesel-range organics
EPH = Extractable petroleum hydrocarbon
GRO = Gasoline-range organics

RRO = Residual-range organics
SVOC = semivolatle organic compound
VOC = volatile organic compound
VPH = volatile petroleum hydrocarbon

TABLE 2-6
Building 48 Excavation Confirmation Soil Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
Bldg48-01	07FW-A-EXBLD4801	4 - 5	9/13/2007	soil/grab		X	X	X	X	X	X	X	X	X	X	X	X
Bldg48-01	07FW-A-EXBLD4801MS	4 - 5	9/13/2007	soil/grab	matrix spike					X							
Bldg48-01	07FW-A-EXBLD4801SD	4 - 5	9/13/2007	soil/grab	matrix spike duplicate					X							
Bldg48-01	07FW-A-EXBld4801R1	4 - 5	10/6/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-02	07FW-A-EXBLD4802	5 - 6	9/13/2007	soil/grab		X	X	X		X	X	X	X	X	X	X	X
Bldg48-02	07FW-A-EXBld4802R1	5 - 6	10/6/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-03	07FW-A-EXBLD4803-01	5 - 6	9/13/2007	soil/grab		X	X	X	X	X	X	X	X	X	X	X	X
Bldg48-03	07FW-A-EXBLD4803-01MS	5 - 6	9/13/2007	soil/grab	matrix spike	X	X	X	X	X	X	X	X	X	X	X	X
Bldg48-03	07FW-A-EXBLD4803-01SD	5 - 6	9/13/2007	soil/grab	matrix spike duplicate	X	X	X	X	X	X	X	X	X	X	X	X
Bldg48-03	07FW-A-EXBLD4803-02	5 - 6	9/13/2007	soil/grab	field duplicate	X	X	X	X	X	X	X	X	X	X	X	X
Bldg48-04	07FW-A-EXBLD4804	6 - 7	9/13/2007	soil/grab		X	X	X		X	X	X	X	X	X	X	X
Bldg48-04	07FW-A-EXBld4804R1	6 - 7	10/6/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-05	07FW-A-EXBLD4805	7 - 8	9/13/2007	soil/grab		X	X	X		X	X	X	X	X	X	X	X
Bldg48-05	07FW-A-EXBld4805R1	7 - 8	10/6/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-06	07FW-A-EXBLD4806	7 - 8	9/13/2007	soil/grab		X	X	X		X	X	X	X	X	X	X	X
Bldg48-06	07FW-A-EXBld4806R1	7 - 8	10/6/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-06	07FW-A-EXBld4806R1B	7 - 8	10/6/2007	soil/grab	field duplicate	X								X	X	X	
Bldg48-06	07FW-A-EXBld4806R1MS	7 - 8	10/6/2007	soil/grab	matrix spike	X								X	X	X	
Bldg48-06	07FW-A-EXBld4806R1SD	7 - 8	10/6/2007	soil/grab	matrix spike duplicate	X								X	X	X	
Bldg48-07	07FW-A-EXBld48-07	2 - 2.5	10/1/2007	soil/grab	cancelled sample								X				
Bldg48-07	07FW-A-EXBld48-07MS	2 - 2.5	10/1/2007	soil/grab	matrix spike								X				
Bldg48-07	07FW-A-EXBld48-07SD	2 - 2.5	10/1/2007	soil/grab	matrix spike duplicate								X				
Bldg48-08	07FW-A-EXBld48-08	3 - 3.5	10/1/2007	soil/grab			X			X	X		X			X	X
Bldg48-08	07FW-A-EXBld48-08MS	3 - 3.5	10/1/2007	soil/grab	matrix spike		X			X						X	
Bldg48-08	07FW-A-EXBld48-08SD	3 - 3.5	10/1/2007	soil/grab	matrix spike duplicate		X			X						X	
Bldg48-08	07FW-A-EXBld4808R1	3 - 3.5	10/6/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-09	07FW-A-EXBld48-09	2 - 2.5	10/1/2007	soil/grab	cancelled sample								X				
Bldg48-10	07FW-A-EXBld48-10	3 - 4	10/1/2007	soil/grab			X			X	X		X			X	X
Bldg48-10	07FW-A-EXBld48-10R1	3 - 4	10/8/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-11	07FW-A-EXBld48-11	2 - 2.5	10/2/2007	soil/grab			X			X	X		X				X
Bldg48-11	07FW-A-EXBld48-11R1	2 - 2.5	10/8/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-12	07FW-A-EXBld48-12	9 - 9.5	10/3/2007	soil/grab			X			X	X		X			X	X
Bldg48-12	07FW-A-EXBld48-12B	9 - 9.5	10/3/2007	soil/grab	field duplicate		X			X	X		X			X	X

TABLE 2-6
Building 48 Excavation Confirmation Soil Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
Bldg48-12	07FW-A-EXBld48-12MS	9 - 9.5	10/3/2007	soil/grab	matrix spike		X			X	X		X			X	X
Bldg48-12	07FW-A-EXBld48-12SD	9 - 9.5	10/3/2007	soil/grab	matrix spike duplicate		X			X	X		X			X	X
Bldg48-12	07FW-A-EXBld48-12R1	9 - 9.5	10/8/2007	soil/grab	re-sample	X								X		X	
Bldg48-12	07FW-A-EXBld48-12R1B	9 - 9.5	10/8/2007	soil/grab	re-sample, field duplicate	X								X		X	
Bldg48-12	07FW-A-EXBld48-12R1MS	9 - 9.5	10/8/2007	soil/grab	matrix spike	X								X		X	
Bldg48-12	07FW-A-EXBld48-12R1SD	9 - 9.5	10/8/2007	soil/grab	matrix spike duplicate	X								X		X	
Bldg48-13	07FW-A-EXBld48-13	5 - 5.5	10/3/2007	soil/grab			X			X	X		X			X	X
Bldg48-13	07FW-A-EXBld48-13R1	5 - 5.5	10/8/2007	soil/grab	re-sample	X								X		X	
Bldg48-14	07FW-A-EXBld48-14	8 - 8.5	10/3/2007	soil/grab			X			X	X		X			X	X
Bldg48-14	07FW-A-EXBld48-14R1	8 - 8.5	10/8/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-15	07FW-A-EXBld48-15	10 - 10.5	10/3/2007	soil/grab			X			X	X		X			X	X
Bldg48-15	07FW-A-EXBld48-15R1	10 - 10.5	10/8/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-16	07FW-A-EXBld48-16	9 - 9.5	10/3/2007	soil/grab			X			X	X		X			X	X
Bldg48-16	07FW-A-EXBld48-16R1	9 - 9.5	10/8/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-17	07FW-A-EXBld48-17	4 - 5	10/4/2007	soil/grab	cancelled sample								X				
Bldg48-18	07FW-A-EXBld48-18	4 - 5	10/4/2007	soil/grab	cancelled sample								X				
Bldg48-19	07FW-A-EXBld48-19	3 - 3.5	10/4/2007	soil/grab			X			X	X		X			X	X
Bldg48-19	07FW-A-EXBld48-19B	3 - 3.5	10/4/2007	soil/grab	field duplicate		X			X	X		X			X	X
Bldg48-19	07FW-A-EXBld48-19R1	3 - 3.5	10/8/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-19	07FW-A-EXBld48-19R1B	3 - 3.5	10/8/2007	soil/grab	re-sample, field duplicate	X								X	X	X	
Bldg48-20	07FW-A-EXBld48-20	3 - 3.5	10/4/2007	soil/grab			X			X	X		X			X	X
Bldg48-20	07FW-A-EXBld48-20R1	3 - 3.5	10/8/2007	soil/grab	re-sample	X								X		X	
Bldg48-21	07FW-A-EXBld48-21	7 - 8	10/4/2007	soil/grab			X			X	X		X			X	X
Bldg48-21	07FW-A-EXBld48-21R1	7 - 8	10/8/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-22	07FW-A-EXBld48-22	6 - 7	10/4/2007	soil/grab			X			X	X		X			X	X
Bldg48-22	07FW-A-EXBld48-22R1	6 - 7	10/8/2007	soil/grab	re-sample	X								X	X	X	
Bldg48-23	07FW-A-EXBld48-23	5 - 6	10/4/2007	soil/grab			X			X	X		X			X	X
Bldg48-23	07FW-A-EXBld48-23R1	5 - 6	10/8/2007	soil/grab	re-sample	X								X		X	
Bldg48-24	07FW-A-EXBld48-24	6 - 6.5	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-24	07FW-A-EXBld48-24MS	6 - 6.5	10/8/2007	soil/grab	matrix spike					X							X
Bldg48-24	07FW-A-EXBld48-24SD	6 - 6.5	10/8/2007	soil/grab	matrix spike duplicate					X							X
Bldg48-25	07FW-A-EXBld48-25	7 - 7.5	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X

TABLE 2-6
Building 48 Excavation Confirmation Soil Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
Bldg48-26	07FW-A-EXBld48-26	6 - 6.5	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-26	07FW-A-EXBld48-26MS	6 - 6.5	10/8/2007	soil/grab	matrix spike											X	
Bldg48-26	07FW-A-EXBld48-26SD	6 - 6.5	10/8/2007	soil/grab	matrix spike duplicate											X	
Bldg48-27	07FW-A-EXBld48-27	6 - 6.5	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-28	07FW-A-EXBld48-28	5 - 5.5	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-29	07FW-A-EXBld48-29	5.5 - 6	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-30	07FW-A-EXBld48-30	2.5 - 3	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-30	07FW-A-EXBld48-30MS	2.5 - 3	10/8/2007	soil/grab	matrix spike											X	
Bldg48-30	07FW-A-EXBld48-30SD	2.5 - 3	10/8/2007	soil/grab	matrix spike duplicate											X	
Bldg48-31	07FW-A-EXBld48-31	2.5 - 3	10/8/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-33	07FW-A-EXBld48-33	3 - 3.5	10/9/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-35	07FW-A-EXBld48-35	2.5 - 3	10/9/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-37	07FW-A-EXBld48-37	3 - 3.5	10/9/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-38	07FW-A-EXBld48-38	6 - 6.5	10/9/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-39	07FW-A-EXBld48-39	2.5 - 3	10/10/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-39	07FW-A-EXBld48-39MS	2.5 - 3	10/10/2007	soil/grab	matrix spike	X				X				X			
Bldg48-39	07FW-A-EXBld48-39SD	2.5 - 3	10/10/2007	soil/grab	matrix spike duplicate	X				X				X			
Bldg48-40	07FW-A-EXBld48-40	1.5 - 2	10/10/2007	soil/grab		X	X			X	X		X	X		X	X
Bldg48-41	07FW-A-EXBld48-41	1.5 - 2	10/10/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-42	07FW-A-EXBld48-42	1 - 1.5	10/10/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-43	07FW-A-EXBld48-43	2.5 - 3	10/10/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-44	07FW-A-EXBld48-44	2 - 2.5	10/10/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-45	07FW-A-EXBld48-45	5 - 5.5	10/10/2007	soil/grab		X	X			X	X		X	X		X	X
Bldg48-46	07FW-A-EXBld48-46	3.5 - 4	10/10/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-47	07FW-A-EXBld48-47	5 - 5.5	10/10/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-47	07FW-A-EXBld48-47B	5 - 5.5	10/10/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
Bldg48-48	07FW-A-EXBld48-48	3.5 - 4	10/10/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-49	07FW-A-EXBld48-49	1 - 1.5	10/15/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-50	07FW-A-EXBld48-50	2.5 - 3	10/15/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-50	07FW-A-EXBld48-50B	2.5 - 3	10/15/2007	soil/grab	field duplicate	X	X			X	X		X	X	X	X	X
Bldg48-50	07FW-A-EXBld48-50MS	2.5 - 3	10/15/2007	soil/grab	matrix spike	X	X			X	X		X	X	X	X	X
Bldg48-50	07FW-A-EXBld48-50SD	2.5 - 3	10/15/2007	soil/grab	matrix spike duplicate	X	X			X	X		X	X	X	X	X
Bldg48-51	07FW-A-EXBld48-51	2 - 2.5	10/15/2007	soil/grab		X	X			X	X		X	X	X	X	X

TABLE 2-6
 Building 48 Excavation Confirmation Soil Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
Bldg48-52	07FW-A-EXBld48-52	3 - 3.5	10/15/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-53	07FW-A-EXBld48-53	3.5 - 4	10/15/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-54	07FW-A-EXBld48-54	5 - 5.5	10/16/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-55	07FW-A-EXBld48-55	3.5 - 4	10/16/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-56	07FW-A-EXBld48-56	2 - 2.5	10/16/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-57	07FW-A-EXBld48-57	3 - 3.5	10/16/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-58	07FW-A-EXBld48-58	8 - 8.5	10/16/2007	soil/grab		X	X			X	X		X	X	X	X	X
Bldg48-59	07FW-A-EXBld48-59	7.5 - 8	10/16/2007	soil/grab		X	X			X	X		X	X	X	X	X

bgs = Below ground surface
 DRO = Diesel-range organics
 EPH = Extractable petroleum hydrocarbon
 GRO = Gasoline-range organics
 RRO = Residual-range organics
 SVOC = semivolatile organic compound
 VOC = volatile organic compound
 VPH = volatile petroleum hydrocarbon

TABLE 2-7

Building 48 Excavation Confirmation Soil Sampling Overview
Taku Garden Field Data Report, Fort Wainwright, Fairbanks, Alaska

Sample ID	Wall or floor	Depth (ft bgs)	Sample Justification
Northern excavation			
07FW-A-Exbld48-01	Wall	4-5	General screening
07FW-A-Exbld48-02	Wall	5-6	General screening
07FW-A-Exbld48-03	Wall	5-6	General screening
07FW-A-Exbld48-04	Wall	6-7	General screening
07FW-A-Exbld48-05	Floor	7-8	General screening
07FW-A-Exbld48-06	Floor	7-8	General screening
07FW-A-Exbld48-07	Wall	2-2.5	General screening; sample cancelled during analysis
07FW-A-Exbld48-08	Wall	3-3.5	General screening
07FW-A-Exbld48-09	Wall	2-2.5	General screening; sample cancelled during analysis
07FW-A-Exbld48-10	Wall	3-4	General screening
07FW-A-Exbld48-11	Wall	5-6	General screening
07FW-A-Exbld48-12	Floor	9	Solvent area
07FW-A-Exbld48-13	Floor	5	Solvent area
07FW-A-Exbld48-14	Floor	8	Solvent area
07FW-A-Exbld48-15	Floor	10	Solvent area
07FW-A-Exbld48-16	Floor	9	Solvent area
07FW-A-Exbld48-17	Wall	4-5	Wall towards building 48; sample cancelled during analysis
07FW-A-Exbld48-18	Wall	4-5	Wall towards building 48: sample cancelled during analysis
07FW-A-Exbld48-19	Wall	3-3.5	Wall towards building 48
07FW-A-Exbld48-20	Wall	3-3.5	Wall towards building 48
07FW-A-Exbld48-21	Floor	7-8	General screening
07FW-A-Exbld48-22	Floor	6-7	General screening
07FW-A-Exbld48-23	Floor	5-6	General screening
07FW-A-Exbld48-24	Trench / Wall	6	Trench towards building 48
07FW-A-Exbld48-25	Floor	7	Battery part area
07FW-A-Exbld48-26	Floor	6	Battery part area
07FW-A-Exbld48-27	Floor	6	Battery part area
07FW-A-Exbld48-28	Floor	5	Battery part area
07FW-A-Exbld48-29	Floor	5.5	Battery part area
07FW-A-Exbld48-30	Wall	2.5	General screening
07FW-A-Exbld48-31	Wall	2.5	General screening
07FW-A-Exbld48-32	Wall	4.5	General screening; sample cancelled after collection
07FW-A-Exbld48-33	Wall	3	Wall by solvent area
07FW-A-Exbld48-34	Wall	3.5	Wall by solvent area; sample cancelled after collection

TABLE 2-7

Building 48 Excavation Confirmation Soil Sampling Overview
Taku Garden Field Data Report, Fort Wainwright, Fairbanks, Alaska

Sample ID	Wall or floor	Depth (ft bgs)	Sample Justification
07FW-A-Exbld48-35	Wall	2.5	Wall by solvent area
07FW-A-Exbld48-36	Wall	4	Wall by solvent area; sample cancelled after collection
07FW-A-Exbld48-37	Wall	3	General screening
07FW-A-Exbld48-38	Floor	6	General screening
Southeastern Excavation			
07FW-A-Exbld48-39	Wall	2.5	General screening
07FW-A-Exbld48-40	Wall	1.5	General screening
07FW-A-Exbld48-41	Wall	1.5	General screening
07FW-A-Exbld48-42	Wall	1	General screening
07FW-A-Exbld48-43	Wall	2.5	General screening
07FW-A-Exbld48-44	Wall	2	General screening
07FW-A-Exbld48-45	Floor	5	General screening
07FW-A-Exbld48-46	Floor	3.5	General screening
07FW-A-Exbld48-47	Floor	5	General screening
07FW-A-Exbld48-48	Floor	3.5	General screening
07FW-A-Exbld48-49	Wall	1-1.5	Wall with paint buckets
07FW-A-Exbld48-50	Wall	2.5-3	Wall with paint buckets
07FW-A-Exbld48-51	Wall	2-2.5	Wall with paint buckets
07FW-A-Exbld48-52	Wall	3-3.5	Wall with paint buckets
07FW-A-Exbld48-53	Wall	3.5-4	Wall with paint buckets
07FW-A-Exbld48-54	Floor	5-5.5	General screening
07FW-A-Exbld48-55	Wall	3.5-4	General screening
07FW-A-Exbld48-56	Wall	2-2.5	General screening
07FW-A-Exbld48-57	Wall	3-3.5	General screening
07FW-A-Exbld48-58	Floor	8-8.5	General screening
07FW-A-Exbld48-59	Floor	7.5-8	General screening

ft bgs = feet below ground surface

TABLE 2-8
Building 15 and 17 Excavation Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	Metals	Pesticides	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
EXBld15-01	07FW-A-EXBld15-01	6 - 6.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-01	07FW-A-EXBld15-01B	6 - 6.5	10/24/2007	soil/grab	field duplicate	X	X	X	X	X	X	X	X	X
EXBld15-01	07FW-A-EXBld15-01MS	6 - 6.5	10/24/2007	soil/grab	matrix spike	X	X	X	X	X	X	X	X	X
EXBld15-01	07FW-A-EXBld15-01SD	6 - 6.5	10/24/2007	soil/grab	matrix spike duplicate	X	X	X	X	X	X	X	X	X
EXBld15-02	07FW-A-EXBld15-02	5 - 5.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-03	07FW-A-EXBld15-03	5 - 5.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-04	07FW-A-EXBld15-04	5 - 5.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-05	07FW-A-EXBld15-05	5 - 5.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-06	07FW-A-EXBld15-06	3.5 - 4	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-07	07FW-A-EXBld15-07	4 - 4.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-08	07FW-A-EXBld15-08	3.5 - 4	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-09	07FW-A-EXBld15-09	3.5 - 4	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-10	07FW-A-EXBld15-10	7 - 7.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-10	07FW-A-EXBld15-10MS	7 - 7.5	10/24/2007	soil/grab	matrix spike									X
EXBld15-10	07FW-A-EXBld15-10SD	7 - 7.5	10/24/2007	soil/grab	matrix spike duplicate									X
EXBld15-10	07FW-A-EXBld15-10B	7 - 7.5	10/24/2007	soil/grab	field duplicate	X	X	X	X	X	X	X	X	X
EXBld15-10	07FW-A-EXBld15-10BMS	7 - 7.5	10/24/2007	soil/grab	matrix spike		X							
EXBld15-10	07FW-A-EXBld15-10BSD	7 - 7.5	10/24/2007	soil/grab	matrix spike duplicate		X							
EXBld15-11	07FW-A-EXBld15-11	7 - 7.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-11	07FW-A-EXBld15-11MS	7 - 7.5	10/24/2007	soil/grab	matrix spike			X					X	
EXBld15-11	07FW-A-EXBld15-11SD	7 - 7.5	10/24/2007	soil/grab	matrix spike duplicate			X					X	
EXBld15-12	07FW-A-EXBld15-12	7 - 7.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-12	07FW-A-EXBld15-12MS	7 - 7.5	10/24/2007	soil/grab	matrix spike								X	
EXBld15-12	07FW-A-EXBld15-12SD	7 - 7.5	10/24/2007	soil/grab	matrix spike duplicate								X	
EXBld15-13	07FW-A-EXBld15-13	7 - 7.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-13	07FW-A-EXBld15-13MS	7 - 7.5	10/24/2007	soil/grab	matrix spike				X					

TABLE 2-8
Building 15 and 17 Excavation Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	Metals	Pesticides	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
EXBld15-13	07FW-A-EXBld15-13SD	7 - 7.5	10/24/2007	soil/grab	matrix spike duplicate				X					
EXBld15-14	07FW-A-EXBld15-14	7 - 7.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-15	07FW-A-EXBld15-15	7 - 7.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld15-15	07FW-A-EXBld15-15MS	7 - 7.5	10/24/2007	soil/grab	matrix spike			X						
EXBld15-15	07FW-A-EXBld15-15SD	7 - 7.5	10/24/2007	soil/grab	matrix spike duplicate			X						
EXBld17-01	07FW-A-EXBld17-01	3.5 - 4	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld17-01	07FW-A-EXBld17-01B	3.5 - 4	10/24/2007	soil/grab	field duplicate	X	X	X	X	X	X	X	X	X
EXBld17-02	07FW-A-EXBld17-02	5 - 5.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld17-03	07FW-A-EXBld17-03	2 - 2.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld17-03	07FW-A-EXBld17-03MS	2 - 2.5	10/24/2007	soil/grab	matrix spike					X				
EXBld17-03	07FW-A-EXBld17-03SD	2 - 2.5	10/24/2007	soil/grab	matrix spike duplicate					X				
EXBld17-04	07FW-A-EXBld17-04	3.5 - 4	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X
EXBld17-05	07FW-A-EXBld17-05	6 - 6.5	10/24/2007	soil/grab		X	X	X	X	X	X	X	X	X

bgs = Below ground surface
DRO = Diesel-range organics
GRO = Gasoline-range organics
RRO = Residual-range organics
SVOC = semivolatile organic compound
VOC = volatile organic compound

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
NA	N1	less than 1	9/22/07	Not sent for confirmation sampling; wall later excavated		
NA	N2	less than 1	9/22/07	Not sent for confirmation sampling; wall later excavated		
W404A	S1	less than 1	9/22/07	Not sent for confirmation sampling		
W405A	S2	less than 1	9/22/07	Not sent for confirmation sampling		
NA	W1	less than 1	9/22/07	Not sent for confirmation sampling; wall later excavated		
NA	W2	less than 1	9/22/07	Not sent for confirmation sampling; wall later excavated		
F407A	F1	less than 1	9/22/07	Not sent for confirmation sampling		
F413A	F2	less than 1	9/22/07	Not sent for confirmation sampling		
F414A	F3	less than 1	9/22/07	Not sent for confirmation sampling		
F408A	F4	less than 1	9/22/07	Not sent for confirmation sampling		
W406A	S3	greater than 1	9/24/07	Not sent for confirmation sampling		
F415A	F5	greater than 1	9/24/07	Not sent for confirmation sampling		
NA	F5.5	greater than 1	9/24/07	Not sent for confirmation sampling; less than 10- by 10-foot area		
W407A	W3	greater than 1	9/24/07	Not sent for confirmation sampling		
W408A	W4	greater than 1	9/24/07	Not sent for confirmation sampling		
W409A	W5	greater than 1	9/24/07	Not sent for confirmation sampling		
F419A	F6	less than 1	9/24/07	07-FW-E-EX52-FL04	9/25/07	4.1
F422A	F7	less than 1	9/24/07	07-FW-E-EX52-FL05	9/25/07	5.8
F425A	F8	less than 1	9/24/07	07-FW-E-EX52-FL06	9/25/07	less than 1
NA	N1	greater than 1	9/24/07	Excavated to N1B/W422A		
NA	N2	less than 1	9/24/07	Excavated to N2B/W421A, due to proximity to N1 and orientation of excavator		
W404A	S1	less than 1	9/24/07	07-FW-E-EX52-SW-01	9/25/07	less than 1

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
W450A	S2	greater than 1	9/24/07	Not sent for confirmation sampling		
NA	W1	greater than 1	9/24/07	Excavated to W1B/W402A		
NA	W2	greater than 1	9/24/07	Excavated to W2B/W403A		
NA	F1	greater than 1	9/24/07	Excavated to F407A		
F413A	F2	greater than 1	9/24/07	07-FW-E-EX52-FL01	9/25/07	less than 1
F414A	F3	greater than 1	9/24/07	07-FW-E-EX52-FL02	9/25/07	less than 1
F408A	F4	less than 1	9/24/07	07-FW-E-EX52-FL03	9/25/07	less than 1
NA	N3	greater than 1	9/24/07	Excavated to N3B/W420A		
NA	N4	greater than 1	9/24/07	Excavated to N4B/W419A		
NA	N5	greater than 1	9/24/07	Excavated to N5B/W418A		
NA	F9	greater than 1	9/24/07	Excavated to F409A		
F410A	F10	less than 1	9/24/07	07-FW-E-EX52-FL07	9/25/07	less than 1
	F11	greater than 1	9/24/07	Excavated to F411A		
W402A	W1B	greater than 1	9/25/07	07-FW-E-EX52-WW01	9/26/07	4.3mg/kg
W403A	W2B	greater than 1	9/25/07	07-FW-E-EX52-WW02	9/26/07	2.3mg/kg
NA	S.5	less than 1	9/25/07	Not sent for confirmation sampling, less than 10- by 10-foot area		
W411A	E1	greater than 1	9/25/07	Excavated to W425A		
W412A	E2	greater than 1	9/25/07	Excavated to W426A		
W413A	E3	greater than 1	9/25/07	Excavated to W427A		
F430A	F12	greater than 1	9/25/07	07-FW-E-EX52-F430A	10/11/07	less than 1
F427A	F13	greater than 1	9/25/07	07-FW-E-EX52-F427A	10/11/07	less than 1
F424A	F14	less than 1	9/29/07	07-FW-E-EX52-F424A	10/11/07	less than 1
F421A	F15	less than 1	9/29/07	07-FW-E-EX52-F421A	10/11/07	less than 1
F418A	F16	greater than 1	9/29/07	07-FW-E-EX52-F418A	10/11/07	less than 1
F412A	F17	greater than 1	9/29/07	07-FW-E-EX52-F411A	10/11/07	less than 1

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
Samples using new procedures from Hach® technical support						
NA	101	greater than 1	10/6/07	100 area excavated, re-numbered and re-sampled		
NA	102	greater than 1	10/6/07	101 area excavated, re-numbered and re-sampled		
NA	103	less than 1	10/6/07	102 area excavated, re-numbered and re-sampled		
NA	104	greater than 1	10/6/07	103 area excavated, re-numbered and re-sampled		
NA	105	greater than 1	10/6/07	104 area excavated, re-numbered and re-sampled		
NA	106	less than 1	10/6/07	105 area excavated, re-numbered and re-sampled		
NA	107	greater than 1	10/6/07	106 area excavated, re-numbered and re-sampled		
NA	108	greater than 1	10/6/07	107 area excavated, re-numbered and re-sampled		
NA	F101	less than 1	10/6/07	108 area excavated, re-numbered and re-sampled		
NA	F102	less than 1	10/6/07	109 area excavated, re-numbered and re-sampled		
NA	F103	less than 1	10/6/07	110 area excavated, re-numbered and re-sampled		
NA	F104	less than 1	10/6/07	111 area excavated, re-numbered and re-sampled		
NA	F105	greater than 1	10/6/07	112 area excavated, re-numbered and re-sampled		
NA	F106	greater than 1	10/6/07	113 area excavated, re-numbered and re-sampled		
NA	F107	greater than 1	10/6/07	114 area excavated, re-numbered and re-sampled		
W108B	W108B	less than 1	10/23/07	07-FW-EX52-W108B	10/23/07	less than 1

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
W109B	W109B	less than 1	10/23/07	07-FW-EX52-W109B	10/23/07	12
F104B	F104B	less than 1	10/23/07	07-FW-EX52-F104B	10/23/07	less than 1
F111A	F111A	less than 1	10/23/07	07-FW-EX52-F111A	10/23/07	less than 1
F112A	F112A	greater than 1	10/23/07	07-FW-E-EX52-F112A	10/23/07	less than 1
W201A	201	less than 1	10/1/07	07-FW-E-EX52-W201A	10/3/07	less than 1
W201A	202	less than 1	10/1/07	07-FW-E-EX52-W202A	10/3/07	less than 1
NA	203	greater than 1	10/1/07	Excavated to W203A		
NA	204	greater than 1	10/1/07	Excavated to W204A		
W205A	205	less than 1	10/1/07	07-FW-EX52-W205A	10/3/07	less than 1
W206A	206	less than 1	10/1/07	07-FW-EX52-W206A	10/3/07	less than 1
W207A	207	less than 1	10/1/07	07-FW-EX52-W207A	10/3/07	less than 1
W208A	208	less than 1	10/1/07	07-FW-EX52-W208A	10/3/07	less than 1
W209A	209	less than 1	10/2/07	07-FW-EX52-W209A	10/3/07	less than 1
W210A	210	less than 1	10/2/07	07-FW-EX52-W210A	10/3/07	less than 1
W211A	211	less than 1	10/2/07	07-FW-EX52-W211A	10/3/07	less than 1
W212A	212	less than 1	10/2/07	07-FW-EX52-W212A	10/3/07	less than 1
W213A	213	less than 1	10/2/07	07-FW-EX52-W213A	10/3/07	less than 1
W214A	214	less than 1	10/2/07	07-FW-EX52-W214A	10/3/07	less than 1
W215A	215	less than 1	10/2/07	07-FW-EX52-W215A	10/3/07	less than 1
F201A	F201	less than 1	10/2/07	07-FW-E-EX52-F201A	10/3/07	less than 1
F202A	F202	less than 1	10/2/07	07-FW-E-EX52-F202A	10/3/07	less than 1
F203A	F203	less than 1	10/2/07	07-FW-E-EX52-F203A	10/3/07	1.17 mg/kg
F204A	F204	less than 1	10/2/07	07-FW-E-EX52-F204A	10/3/07	less than 1
F205A	F205	less than 1	10/2/07	07-FW-E-EX52-F205A	10/3/07	less than 1
F206A	F206	less than 1	10/2/07	07-FW-E-EX52-F206A	10/3/07	less than 1
F207A	F207	less than 1	10/2/07	07-FW-E-EX52-F207A	10/3/07	less than 1
F208A	F208	less than 1	10/2/07	07-FW-E-EX52-F208A	10/3/07	less than 1

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
F209A	F209	less than 1	10/2/07	07-FW-E-EX52-F209A	10/3/07	less than 1
F210A	F210	less than 1	10/2/07	07-FW-E-EX52-F210A	10/3/07	less than 1
F211A	F211	less than 1	10/2/07	07-FW-E-EX52-F211A	10/3/07	less than 1
F212A	F212	less than 1	10/2/07	07-FW-E-EX52-F212A	10/3/07	less than 1
NA						
W301A	301	less than 10	10/2/07	Re-screened for 1ppm		
W302A	302	less than 10	10/2/07	Re-screened for 1ppm		
W303A	303	less than 10	10/2/07	Re-screened for 1ppm		
W304A	304	less than 10	10/2/07	Re-screened for 1ppm		
W305A	305	less than 10	10/2/07	Re-screened for 1ppm		
W306A	306	less than 10	10/2/07	Re-screened for 1ppm		
W307A	307	less than 10	10/2/07	Re-screened for 1ppm		
W308A	308	less than 10	10/2/07	Re-screened for 1ppm		
W309A	309	less than 10	10/2/07	Re-screened for 1ppm		
W310A	310	less than 10	10/2/07	Re-screened for 1ppm		
W311A	311	less than 10	10/2/07	Re-screened for 1ppm		
W312A	312	less than 10	10/2/07	Re-screened for 1ppm		
NA	313	greater than 10	10/2/07	Excavated to W325A		
W314A	314	greater than 10	10/2/07	Re-screened for 1ppm, too close to power line to excavate		
W315A	315	less than 10	10/2/07	Re-screened for 1ppm		
W316A	316	less than 10	10/2/07	Re-screened for 1ppm		
W318A	318	less than 10	10/2/07	Re-screened for 1ppm		
NA	313	greater than 1	10/6/07	Excavated to W325A		
W314A	314	less than 1	10/6/07	07FW-E-EX52-W314A	10/8/07	less than 1
W315A	315	less than 1	10/6/07	07FW-E-EX52-W315A	10/8/07	less than 1
W316A	316	less than 1	10/6/07	07FW-E-EX52-W316A	10/8/07	4.24

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
F313A	F313	less than 1	10/6/07	07FW-E-EX52-F313A	10/8/07	less than 1
F313A	F314	less than 1	10/6/07	07FW-E-EX52-F314A	10/8/07	less than 1
F315A	F315	less than 1	10/6/07	07FW-E-EX52-F315A	10/8/07	less than 1
F316A	F316	less than 1	10/6/07	07FW-E-EX52-F316A	10/8/07	less than 1
F317A	F317	less than 1	10/6/07	07FW-E-EX52-F317A	10/8/07	less than 1
W317A	317	less than 10	10/6/07	Re-screened for 1ppm		
W318A	318	less than 10	10/6/07	Re-screened for 1ppm		
W319A	319	less than 10	10/6/07	Re-screened for 1ppm		
W320A	320	less than 10	10/6/07	Re-screened for 1ppm		
W321A	321	less than 10	10/6/07	Re-screened for 1ppm		
W322A	322	less than 10	10/6/07	Re-screened for 1ppm		
NA	323	greater than 10	10/6/07	Re-excavated to W324A		
F307A	F307	less than 10	10/6/07	Re-screened for 1ppm		
NA	F308	greater than 10	10/6/07	Excavated and re-screened for 1ppm		
NA	F309	greater than 10	10/6/07	Excavated and re-screened for 1ppm		
NA	F310	greater than 10	10/6/07	Excavated and re-screened for 1ppm		
F311A	F311	less than 10	10/6/07	Re-screened for 1ppm		
NA	F312	greater than 10	10/6/07	Excavated and re-screened for 1ppm		
F318A	F318	less than 10	10/6/07	Re-screened for 1ppm		
F324A	F324	less than 10	10/6/07	Re-screened for 1ppm		
F330A	F330	less than 10	10/6/07	Re-screened for 1ppm		
F336A	F336	less than 10	10/6/07	Re-screened for 1ppm		
F337A	F337	less than 10	10/6/07	Re-screened for 1ppm		
F338A	F338	less than 10	10/6/07	Re-screened for 1ppm		

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
F339A	F339	less than 10	10/6/07	Re-screened for 1ppm		
F340A	F340	less than 10	10/6/07	Re-screened for 1ppm		
F341A	F341	less than 10	10/6/07	Re-screened for 1ppm		
F342A	F342	less than 10	10/6/07	Re-screened for 1ppm		
W301A	301	less than 1	10/8/07	07FW-E-EX52-W301A	10/8/07	less than 1
W302A	302	less than 1	10/8/07	07FW-E-EX52-W302A	10/8/07	less than 1
W303A	303	less than 1	10/8/07	07FW-E-EX52-W303A	10/8/07	less than 1
W304A	304	less than 1	10/8/07	07FW-E-EX52-W304A	10/8/07	less than 1
W305A	305	less than 1	10/8/07	07FW-E-EX52-W305A	10/8/07	less than 1
W306A	306	less than 1	10/8/07	07FW-E-EX52-W306A	10/8/07	less than 1
NA	307	greater than 1	10/8/07	Excavated to W329A		
W308A	308	less than 1	10/8/07	07FW-E-EX52-W308A	10/8/07	less than 1
W309A	309	less than 1	10/8/07	07FW-E-EX52-W309A	10/8/07	less than 1
W310A	310	less than 1	10/8/07	07FW-E-EX52-W310A	10/8/07	less than 1
W311A	311	less than 1	10/8/07	07FW-E-EX52-W311A	10/8/07	less than 1
W312A	312	less than 1	10/8/07	07FW-E-EX52-W312A	10/8/07	less than 1
W314A	314	less than 1	10/8/07	07FW-E-EX52-W314A	10/8/07	less than 1
W315A	315	less than 1	10/8/07	07FW-E-EX52-W315A	10/8/07	less than 1
W316A	316	less than 1	10/8/07	07FW-E-EX52-W316A	10/8/07	4.24
W317A	317	less than 1	10/8/07	07FW-E-EX52-W317A	10/8/07	less than 1
W318A	318	less than 1	10/8/07	07FW-E-EX52-W318A	10/8/07	1.39
W319A	319	less than 1	10/8/07	07FW-E-EX52-W319A	10/8/07	less than 1
NA	320	greater than 1	10/8/07	Excavated to W326A		
NA	321	greater than 1	10/8/07	Excavated to W327A		
NA	322	greater than 1	10/8/07	Excavated to W328A		
NA	F301	greater than 1	10/8/07	Excavated and sent for confirmation F301A		

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
F302A	F302	less than 1	10/8/07	07FW-E-EX52-F302A	10/8/07	less than 1
F303A	F303	less than 1	10/8/07	07FW-E-EX52-F303A	10/8/07	less than 1
F304A	F304	less than 1	10/8/07	07FW-E-EX52-F304A	10/8/07	5.31
F305A	F305	less than 1	10/8/07	07FW-E-EX52-F305A	10/8/07	less than 1
NA	F306	greater than 1	10/8/07	Excavated and sent for confirmation F306A		
F307A	F307	less than 1	10/8/07	07FW-E-EX52-F307A	10/8/07	less than 1
F311A	F311	less than 1	10/8/07	07FW-E-EX52-F311A	10/8/07	less than 1
F313A	F313	less than 1	10/8/07	07FW-E-EX52-F313A	10/8/07	less than 1
F314A	F314	less than 1	10/8/07	07FW-E-EX52-F314A	10/8/07	less than 1
F315A	F315	less than 1	10/8/07	07FW-E-EX52-F315A	10/8/07	less than 1
F316A	F316	less than 1	10/8/07	07FW-E-EX52-F316A	10/8/07	less than 1
F317A	F317	less than 1	10/8/07	07FW-E-EX52-F317A	10/8/07	less than 1
F318A	F318	less than 1	10/8/07	07FW-E-EX52-F318A	10/8/07	less than 1
F319A	F319	less than 1	10/8/07	07FW-E-EX52-F319A	10/8/07	less than 1
F320A	F320	less than 1	10/8/07	07FW-E-EX52-F320A	10/8/07	less than 1
F321A	F321	less than 1	10/8/07	07FW-E-EX52-F321A	10/8/07	less than 1
F322A	F322	less than 1	10/8/07	07FW-E-EX52-F322A	10/8/07	less than 1
F323A	F323	less than 1	10/8/07	07FW-E-EX52-F323A	10/8/07	less than 1
F324A	F324	less than 1	10/8/07	07FW-E-EX52-F324A	10/8/07	less than 1
F325A	F325	less than 1	10/8/07	07FW-E-EX52-F325A	10/8/07	less than 1
F326A	F326	less than 1	10/8/07	07FW-E-EX52-F326A	10/8/07	less than 1
F327A	F327	less than 1	10/8/07	07FW-E-EX52-F327A	10/8/07	less than 1
F328A	F328	less than 1	10/8/07	07FW-E-EX52-F328A	10/8/07	less than 1
F329A	F329	less than 1	10/8/07	07FW-E-EX52-F329A	10/9/07	less than 1
F330A	F330	less than 1	10/8/07	07FW-E-EX52-F330A	10/9/07	less than 1
NA	F331	greater than 1	10/8/07	Excavated and sent for confirmation F331A		

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
NA	F332	greater than 1	10/8/07	Excavated and sent for confirmation F332A		
F333A	F333	less than 1	10/8/07	07FW-E-EX52-F333A	10/9/07	less than 1
F334A	F334	less than 1	10/8/07	07FW-E-EX52-F334A	10/9/07	less than 1
F335A	F335	less than 1	10/8/07	07FW-E-EX52-F335A	10/9/07	less than 1
F336A	F336	less than 1	10/8/07	07FW-E-EX52-F336A	10/9/07	less than 1
NA	F337	greater than 1	10/8/07	Excavated and sent for confirmation F337A		
NA	F338	greater than 1	10/8/07	Excavated and sent for confirmation F338A		
F339A	F339	less than 1	10/8/07	07FW-E-EX52-F339A	10/9/07	less than 1
F340A	F340	less than 1	10/8/07	07FW-E-EX52-F340A	10/9/07	less than 1
F341A	F341	less than 1	10/8/07	07FW-E-EX52-F341A	10/9/07	less than 1
F342A	F342	less than 1	10/8/07	07FW-E-EX52-F342A	10/9/07	less than 1
F308A	F308	less than 1	10/10/07	07FW-E-EX52-F308A	10/10/07	less than 1
F309A	F309	less than 1	10/10/07	07FW-E-EX52-F309A	10/10/07	less than 1
F310A	F310	less than 1	10/10/07	07FW-E-EX52-F310A	10/10/07	less than 1
NA	F312	greater than 1	10/10/07	Excavated and sent for confirmation F312A		
W324A	W324	less than 1	10/10/07	07FW-E-EX52-W324A	10/10/07	less than 1
W325A	W325	less than 1	10/10/07	07FW-E-EX52-W325A	10/10/07	2.42
W411A	E1	greater than 1	10/6/07	Excavated to W425A		
W412A	E2	greater than 1	10/6/07	Excavated to W426A		
W413A	E3	greater than 1	10/6/07	Excavated to W427A		
W414A	E4	greater than 1	10/6/07	07FW-E-EX52-W414A	10/11/07	less than 1
W415A	E5	greater than 1	10/6/07	07FW-E-EX52-W415A	10/11/07	less than 1
W416A	E6	greater than 1	10/6/07	07FW-E-EX52-W416A	10/11/07	less than 1
W417A	E7	greater than 1	10/6/07	07FW-E-EX52-W417A	10/11/07	8.65

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
W401A	W401	less than 1	10/10/07	07FW-E-EX52-W401A	10/11/07	less than 1
W1B	W402	greater than 1	10/10/07	Excavated to W424A		
W2B/W403A	W403	less than 1	10/10/07	07FW-E-EX52-W403A	10/11/07	less than 1
N4B	W419	less than 1	10/10/07	07FW-E-EX52-NW04	9/27/07	4
F406B	F406	less than 1	10/10/07	07FW-E-EX52-F406A	10/11/07	less than 1
F6/F419A	F419	greater than 1	10/10/07	07FW-E-EX52-F419A	10/11/07	less than 1
F7/F422A	F422	less than 1	10/10/07	07FW-E-EX52-F422A	10/11/07	less than 1
F8/F425A	F425	less than 1	10/10/07	07FW-E-EX52-F425A	10/11/07	less than 1
E7/W417A	W417	greater than 1	10/10/07	07FW-E-EX52-W417A	10/11/07	8.65
W405B	W405B	less than 1	10/23/07	07FW-E-EX52-W405B	10/23/07	less than 1
W409B	W409B	less than 1	10/23/07	07FW-E-EX52-W409B	10/23/07	less than 1
W410B	W410B	less than 1	10/23/07	07FW-E-EX52-W410B	10/23/07	less than 1
F113A at 3ft	Bridge 1	less than 1	10/12/07	Not sent for confirmation		
F114A at 5ft	Bridge 2	less than 1	10/12/07	Not sent for confirmation		
F114A at 3ft	Bridge 3	greater than 1	10/12/07	Excavated to 5ft depth		
SDI ENSYS Screening Kits						
F112A	F112A	ND	10/30/07	07FW-E-EX52-F112A	10/23/07	less than 1
F112A	F112A	ND	10/30/07	07FW-E-EX52-F112A	10/23/07	less than 1
F113A	F113A	ND	10/30/07	07FW-E-EX52-F113A	10/25/07	less than 1
F113A	F113A	ND	10/30/07	07FW-E-EX52-F113A	10/25/07	less than 1
F114A	F114A	ND	10/30/07	07FW-E-EX52-F114A	10/25/07	less than 1
F114A	F114A	ND	10/30/07	07FW-E-EX52-F114A	10/25/07	less than 1
F115A	F115A	ND	10/31/07	07FW-E-EX52-F115A	10/31/07	less than 1
W109C	W109C	ND	10/31/07	07FW-E-EX52-W109C	10/31/07	less than 1
F351A	F351A	ND	10/30/07	07FW-E-EX52-F351A	10/23/07	less than 1
F351A	F351A	ND	10/30/07	07FW-E-EX52-F351A	10/23/07	less than 1
F352A	F352A	high	10/29/07	07FW-E-EX52-F352A	10/27/07	7

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
W303A-2B	W303A-2B	ND	10/29/07	07FW-E-EX52-W303A-2B	10/27/07	less than 1
W325B	W325B	high	10/30/07	07FW-E-EX52-W325B	10/23/07	less than 1
W325B	W325B	high	10/30/07	07FW-E-EX52-W325B	10/23/07	less than 1
W329A	W329A	ND	10/30/07	07FW-E-EX52-W329A	10/11/07	less than 1
W329A	W329A	ND	10/30/07	07FW-E-EX52-W329A	10/11/07	less than 1
F432B	F432B	ND	10/30/07	07FW-E-EX52-F432B	10/29/07	less than 1
F432B	F432B	ND	10/30/07	07FW-E-EX52-F432B	10/29/07	less than 1
F433B	F433B	ND	10/30/07	07FW-E-EX52-F433B	10/29/07	less than 1
F434B	F434B	ND	10/30/07	07FW-E-EX52-F434B	10/29/07	less than 1
F434B	F434B	ND	10/30/07	07FW-E-EX52-F434B	10/29/07	less than 1
F439A	F439A	ND	10/29/07	07FW-E-EX52-F439A	10/25/07	17
F439A	F439A	.70 ppm	10/30/07	07FW-E-EX52-F439A	10/25/07	17
F439A	F439A	.50 ppm	10/30/07	07FW-E-EX52-F439A	10/25/07	17
NA	North side of pole (F439 area)	high	10/27/07	Not sent for confirmation, less than 10- by 10-foot area		
NA	South side of pole (F439 area)	ND	10/29/07	Not sent for confirmation, less than 10- by 10-foot area		
F440A	F440A	ND	10/27/07	07FW-E-EX52-F440A	10/23/07	less than 1
F441A	F441A	ND	10/29/07	07FW-E-EX52-F441A	10/23/07	less than 1
F442A	F442A	1.06 ppm	10/30/07	07FW-E-EX52-F442A	10/23/07	2.3
F442A	F442A	.70 ppm	10/30/07	07FW-E-EX52-F442A	10/23/07	2.3
F442B	F442B	ND	10/31/07	07FW-E-EX52-F442B	10/31/07	less than 1
F443B	F443B	ND	10/30/07	07FW-E-EX52-F443A	10/23/07	less than 1
F445A	F445A	ND	10/27/07	07FW-E-EX52-F445A	10/23/07	less than 1
F446A	F446A	ND	10/27/07	07FW-E-EX52-F446A	10/23/07	less than 1
F447A	F447A	ND	10/29/07	07FW-E-EX52-F447A	10/24/07	less than 1
F448A	F448A	ND	10/27/07	07FW-E-EX52-F448A	10/24/07	25
F448B	F448B	ND	10/31/07	07FW-E-EX52-F448B	10/31/07	less than 1

TABLE 2-9
PCB Hach® Test Kit Sample Screening Results

Location ID ^a	Field Notes Location ID	Screen Result	Screen Date	Confirmation Sample ID	Confirmation Sample Date	Confirmation Result (mg/kg)
W431A	F448N	high	10/27/07	07FW-E-EX52-W431A	10/31/07	less than 1
W401B	W401B	ND	10/29/07	07FW-E-EX52-W401B	10/24/07	less than 1
W403B	W403B	ND	10/29/07	07FW-E-EX52-W403B	10/23/07	9.2
W405B	W405B	ND	10/29/07	07FW-E-EX52-W405B	10/23/07	less than 1
W417B	W417B	high	10/29/07	07FW-E-EX52-W417B	10/25/07	8.5
W417C	W417C	ND	10/30/07	07FW-E-EX52-W417C	10/30/07	less than 1
W417C	W417C	ND	10/30/07	07FW-E-EX52-W417C	10/30/07	less than 1
W424B	W424B	ND	10/30/07	07FW-E-EX52-W424B	10/23/07	less than 1
W424B	W424B	ND	10/30/07	07FW-E-EX52-W424B	10/23/07	less than 1
W426B	W426B	high	10/27/07	07FW-E-EX52-W426B	10/23/07	36
W427B	W427B	2.03 ppm	10/29/07	07FW-E-EX52-W427B	10/24/07	less than 1
W430A	W430A	ND	10/30/07	07FW-E-EX52-W430A	10/30/07	less than 1
W430A	W430A	ND	10/30/07	07FW-E-EX52-W430A	10/30/07	less than 1
W431A	W431A	ND	10/31/07	07FW-E-EX52-W431A	10/31/07	less than 1
F801B	F801B	ND	10/29/07	07FW-E-EX52-F801B	10/25/07	less than 1
F802A	F802A	ND	10/30/07	07FW-E-EX52-F802A	10/25/07	less than 1
F802A	F802A	ND	10/30/07	07FW-E-EX52-F802A	10/25/07	less than 1
W802B	W802B	ND	10/30/07	07FW-E-EX52-W802B	10/25/07	less than 1
W802B	W802B	ND	10/30/07	07FW-E-EX52-W802B	10/25/07	less than 1

^aLocation ID corresponds to location ID shown on Figures 2-10 and 2-11 and location ID shown in Table 2-10. Field notes location ID may or may not correlate with a confirmation location ID because field locations that failed a screen were excavated before re-screening or confirmation sampling. The newly-excavated location was confirmation sampled and a sample location ID was assigned at that time.

mg/kg = milligrams per kilogram
 NA = Not applicable
 ND = Non detect
 ppm = parts per million

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-F101A	07FW-E-EX52-F101A	4 - 4.5	10/11/2007	soil/grab		X
EX52-F102A	07FW-E-EX52-F102A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F103A	07FW-E-EX52-F103A	3 - 3.5	10/11/2007	soil/grab		X
EX52-F104A	07FW-E-EX52-F104A	2 - 2.5	10/11/2007	soil/grab		X
EX52-F104B	07FW-E-EX52-F104BFD	4 - 4.5	10/23/2007	soil/grab	field duplicate	X
EX52-F105A	07FW-E-EX52-F105AFD	4 - 4.5	10/11/2007	soil/grab	field duplicate	X
EX52-F106A	07FW-E-EX52-F106A	4 - 4.5	10/11/2007	soil/grab		X
EX52-F107A	07FW-E-EX52-F107A	6 - 6.5	10/11/2007	soil/grab		X
EX52-F108A	07FW-E-EX52-F108A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F109A	07FW-E-EX52-F109A	4 - 4.5	10/11/2007	soil/grab		X
EX52-F110A	07FW-E-EX52-F110A	4 - 4.5	10/11/2007	soil/grab		X
EX52-F111A	07FW-E-EX52-F111A	5.5 - 6	10/23/2007	soil/grab		X
EX52-F112A	07FW-E-EX52-F112A	4 - 4.5	10/23/2007	soil/grab		X
EX52-F113A	07FW-E-EX52-F113AFD	3 - 3.5	10/25/2007	soil/grab	field duplicate	X
EX52-F114A	07FW-E-EX52-F114A	5 - 5.5	10/25/2007	soil/grab		X
EX52-F114A	07FW-E-EX52-F114AFD	5 - 5.5	10/25/2007	soil/grab	field duplicate	X
EX52-F115A	07FW-E-EX52-F115A	5.5 - 6	10/31/2007	soil/grab		X
EX52-F201A	07FW-E-EX52-F201A	5 - 5.5	10/3/2007	soil/grab		X
EX52-F202A	07FW-E-EX52-F202A	5 - 5.5	10/3/2007	soil/grab		X
EX52-F203A	07FW-E-EX52-F203A	5 - 5.5	10/3/2007	soil/grab		X
EX52-F203B	07FW-E-EX52-F203BFD	8 - 8.5	10/15/2007	soil/grab	field duplicate	X
EX52-F204A	07FW-E-EX52-F204A	5 - 5.5	10/3/2007	soil/grab		X
EX52-F205A	07FW-E-EX52-F205A	5 - 5.5	10/3/2007	soil/grab		X
EX52-F205A	07FW-E-EX52-F205AFD	5 - 5.5	10/3/2007	soil/grab	field duplicate	X
EX52-F206A	07FW-E-EX52-F206A	5 - 5.5	10/3/2007	soil/grab		X
EX52-F207A	07FW-E-EX52-F207A	5 - 5.5	10/3/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-F208A	07FW-E-EX52-F208A	5 - 5.5	10/3/2007	soil/grab		X
EX52-F209A	07FW-E-EX52-F209A	5 - 5.5	10/3/2007	soil/grab		X
EX52-F210A	07FW-E-EX52-F210A	5 - 5.5	10/3/2007	soil/grab		X
EX52-F211A	07FW-E-EX52-F211A	5 - 5.5	10/3/2007	soil/grab		X
EX52-F212A	07FW-E-EX52-F212AFD	5 - 5.5	10/3/2007	soil/grab	field duplicate	X
EX52-F213A	07FW-E-EX52-F213A	5.5 - 6	10/3/2007	soil/grab		X
EX52-F213C	07FW-E-EX52-F213C	7 - 7.5	10/15/2007	soil/grab		X
EX52-F214A	07FW-E-EX52-F214A	5.5 - 6	10/3/2007	soil/grab		X
EX52-F215A	07FW-E-EX52-F215A	8 - 8.5	10/15/2007	soil/grab		X
EX52-F301A	07FW-E-EX52-F301A	8 - 8.5	10/11/2007	soil/grab		X
EX52-F301B	07FW-E-EX52-F301B	12 - 12.5	10/23/2007	soil/grab		X
EX52-F302A	07FW-E-EX52-F302A	8 - 8.5	10/8/2007	soil/grab		X
EX52-F303A	07FW-E-EX52-F303A	8 - 8.5	10/8/2007	soil/grab		X
EX52-F304A	07FW-E-EX52-F304A	8 - 8.5	10/8/2007	soil/grab		X
EX52-F304B	07FW-E-EX52-F304B	12 - 12.5	10/16/2007	soil/grab	VOC and SVOC samples collected in addition to PCB. F304 is adjacent to utility pole remnant	
EX52-F305A	07FW-E-EX52-F305A	8 - 8.5	10/8/2007	soil/grab		X
EX52-F306A	07FW-E-EX52-F306A	6.5 - 7	10/12/2007	soil/grab		X
EX52-F307A	07FW-E-EX52-F307A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F308A	07FW-E-EX52-F308A	6.5 - 7	10/10/2007	soil/grab		X
EX52-F309A	07FW-E-EX52-F309A	6.5 - 7	10/10/2007	soil/grab		X
EX52-F310A	07FW-E-EX52-F310A	6 - 6.5	10/10/2007	soil/grab		X
EX52-F311A	07FW-E-EX52-F311A	6 - 6.5	10/8/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-F312A	07FW-E-EX52-F312A	8 - 8.5	10/12/2007	soil/grab		X
EX52-F313A	07FW-E-EX52-F313A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F314A	07FW-E-EX52-F314A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F315A	07FW-E-EX52-F315A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F316A	07FW-E-EX52-F316A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F317A	07FW-E-EX52-F317A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F318A	07FW-E-EX52-F318A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F319A	07FW-E-EX52-F319A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F320A	07FW-E-EX52-F320A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F321A	07FW-E-EX52-F321A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F322A	07FW-E-EX52-F322A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F323A	07FW-E-EX52-F323A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F324A	07FW-E-EX52-F324A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F325A	07FW-E-EX52-F325A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F326A	07FW-E-EX52-F326A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F327A	07FW-E-EX52-F327A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F328A	07FW-E-EX52-F328A	5 - 5.5	10/8/2007	soil/grab		X
EX52-F329A	07FW-E-EX52-F329A	5 - 5.5	10/9/2007	soil/grab		X
EX52-F330A	07FW-E-EX52-F330A	5 - 5.5	10/9/2007	soil/grab		X
EX52-F331A	07FW-E-EX52-F331A	8 - 8.5	10/11/2007	soil/grab		X
EX52-F332A	07FW-E-EX52-F332A	8 - 8.5	10/11/2007	soil/grab		X
EX52-F333A	07FW-E-EX52-F333A	5 - 5.5	10/9/2007	soil/grab		X
EX52-F334A	07FW-E-EX52-F334AFD	5 - 5.5	10/9/2007	soil/grab	field duplicate	X
EX52-F335A	07FW-E-EX52-F335AFD	5 - 5.5	10/9/2007	soil/grab	field duplicate	X
EX52-F336A	07FW-E-EX52-F336A	5 - 5.5	10/9/2007	soil/grab		X
EX52-F337A	07FW-E-EX52-F337A	8 - 8.5	10/11/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-F338A	07FW-E-EX52-F338A	8 - 8.5	10/11/2007	soil/grab		X
EX52-F339A	07FW-E-EX52-F339A	5 - 5.5	10/9/2007	soil/grab		X
EX52-F340A	07FW-E-EX52-F340A	5 - 5.5	10/9/2007	soil/grab		X
EX52-F341A	07FW-E-EX52-F341A	5 - 5.5	10/9/2007	soil/grab		X
EX52-F342A	07FW-E-EX52-F342A	5 - 5.5	10/9/2007	soil/grab		X
EX52-F343A	07FW-E-EX52-F343AFD	5 - 5.5	10/10/2007	soil/grab	field duplicate	X
EX52-F344A	07FW-E-EX52-F344A	6 - 6.5	10/10/2007	soil/grab		X
EX52-F345A	07FW-E-EX52-F345AFD	6 - 6.5	10/12/2007	soil/grab	field duplicate	X
EX52-F346A	07FW-E-EX52-F346A	6 - 6.5	10/12/2007	soil/grab		X
EX52-F347A	07FW-E-EX52-F347A	6 - 6.5	10/12/2007	soil/grab		X
EX52-F348A	07FW-E-EX52-F348A	8 - 8.5	10/11/2007	soil/grab		X
EX52-F350A	07FW-E-EX52-F350A	6 - 6.5	10/16/2007	soil/grab		X
EX52-F351A	07FW-E-EX52-F351A	6 - 6.5	10/23/2007	soil/grab		X
EX52-F352A	07FW-E-EX52-F352A	12 - 12.5	10/27/2007	soil/grab		X
EX52-F353A	07FW-E-EX52-F353A	5.5 - 6	11/2/2007	soil/grab		X
EX52-F401A	07FW-E-EX52-FL13	5 - 5.5	9/26/2007	soil/grab		X
EX52-F401A	07FW-E-EX52-FL13FD	5 - 5.5	9/26/2007	soil/grab	field duplicate	X
EX52-F402A	07FW-E-EX52-FL08	3.5 - 4	9/26/2007	soil/grab		X
EX52-F403A	07FW-E-EX52-FL09	5 - 5.5	9/26/2007	soil/grab		X
EX52-F404A	07FW-E-EX52-FL10	5 - 5.5	9/26/2007	soil/grab		X
EX52-F405A	07FW-E-EX52-FL11	5 - 5.5	9/26/2007	soil/grab		X
EX52-F406A	07FW-E-EX52-F406A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F406A	07FW-E-EX52-FL12	8 - 8.5	9/26/2007	soil/grab		X
EX52-F406B	07FW-E-EX52-F406BFD	8 - 8.5	10/24/2007	soil/grab	field duplicate	X
EX52-F407A	07FW-E-EX52-F407A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F408A	07FW-E-EX52-FL03	5 - 5.5	9/25/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-F409A	07FW-E-EX52-F409A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F410A	07FW-E-EX52-F410A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F410A	07FW-E-EX52-FL07	5 - 5.5	9/25/2007	soil/grab		X
EX52-F411A	07FW-E-EX52-F411A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F412A	07FW-E-EX52-F412A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F413A	07FW-E-EX52-FL01	3.5 - 4	9/25/2007	soil/grab		X
EX52-F414A	07FW-E-EX52-FL02	5 - 5.5	9/25/2007	soil/grab		X
EX52-F415A	07FW-E-EX52-F415AFD	5 - 5.5	10/11/2007	soil/grab	field duplicate	X
EX52-F416A	07FW-E-EX52-F416A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F417A	07FW-E-EX52-F417A	2 - 2.5	10/11/2007	soil/grab		X
EX52-F418A	07FW-E-EX52-F418A	2 - 2.5	10/11/2007	soil/grab		X
EX52-F419A	07FW-E-EX52-F419A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F419A	07FW-E-EX52-FL04	5 - 5.5	9/25/2007	soil/grab		X
EX52-F419A	07FW-E-EX52-FL04FD	5 - 5.5	9/25/2007	soil/grab	field duplicate	X
EX52-F420A	07FW-E-EX52-F420AFD	5 - 5.5	10/11/2007	soil/grab	field duplicate	X
EX52-F421A	07FW-E-EX52-F421A	2 - 2.5	10/11/2007	soil/grab		X
EX52-F422A	07FW-E-EX52-F422A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F422A	07FW-E-EX52-FL05	5 - 5.5	9/25/2007	soil/grab		X
EX52-F423A	07FW-E-EX52-F423A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F424A	07FW-E-EX52-F424A	2 - 2.5	10/11/2007	soil/grab		X
EX52-F425A	07FW-E-EX52-F425A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F425A	07FW-E-EX52-FL06	5 - 5.5	9/25/2007	soil/grab		X
EX52-F426A	07FW-E-EX52-F426A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F427A	07FW-E-EX52-F427A	2 - 2.5	10/11/2007	soil/grab		X
EX52-F428A	07FW-E-EX52-F428A	5 - 5.5	10/11/2007	soil/grab		X
EX52-F429A	07FW-E-EX52-F429A	5 - 5.5	10/11/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-F430A	07FW-E-EX52-F430A	2 - 2.5	10/11/2007	soil/grab		X
EX52-F431A	07FW-E-EX52-F431A	5 - 5.5	10/12/2007	soil/grab		X
EX52-F431A	07FW-E-EX52-F431AFD	5 - 5.5	10/12/2007	soil/grab	field duplicate	X
EX52-F432A	07FW-E-EX52-F432A	3 - 3.5	10/12/2007	soil/grab		X
EX52-F432B	07FW-E-EX52-F432B	7 - 7.5	10/29/2007	soil/grab		X
EX52-F433A	07FW-E-EX52-F433A	3 - 3.5	10/12/2007	soil/grab		X
EX52-F433B	07FW-E-EX52-F433B	7 - 7.5	10/29/2007	soil/grab		X
EX52-F434A	07FW-E-EX52-F434A	3 - 3.5	10/12/2007	soil/grab		X
EX52-F434B	07FW-E-EX52-F434B	7 - 7.5	10/29/2007	soil/grab		X
EX52-F435A	07FW-E-EX52-F435A	5 - 5.5	10/12/2007	soil/grab		X
EX52-F436A	07FW-E-EX52-F436A	5 - 5.5	10/12/2007	soil/grab		X
EX52-F437A	07FW-E-EX52-F437A	5 - 5.5	10/12/2007	soil/grab		X
EX52-F438A	07FW-E-EX52-F438A	5 - 5.5	10/12/2007	soil/grab		X
EX52-F439A	07FW-E-EX52-F439A	3 - 3.5	10/25/2007	soil/grab		X
EX52-F439B	07FW-E-EX52-F439B	7 - 7.5	10/30/2007	soil/grab		X
EX52-F439B	07FW-E-EX52-F439BFD	7 - 7.5	10/30/2007	soil/grab	field duplicate	X
EX52-F439C	07FW-E-EX52-F439C	9.5 - 10	11/2/2007	soil/grab		X
EX52-F440A	07FW-E-EX52-F440A	5.5 - 6	10/23/2007	soil/grab		X
EX52-F441A	07FW-E-EX52-F441A	5.5 - 6	10/23/2007	soil/grab		X
EX52-F442A	07FW-E-EX52-F442A	3.5 - 4	10/23/2007	soil/grab		X
EX52-F442B	07FW-E-EX52-F442B	5 - 5.5	10/31/2007	soil/grab		X
EX52-F443A	07FW-E-EX52-F443A	6 - 6.5	10/23/2007	soil/grab		X
EX52-F444A	07FW-E-EX52-F444A	6 - 6.5	10/23/2007	soil/grab		X
EX52-F445A	07FW-E-EX52-F445A	4 - 4.5	10/23/2007	soil/grab		X
EX52-F446A	07FW-E-EX52-F446A	4 - 4.5	10/23/2007	soil/grab		X
EX52-F447A	07FW-E-EX52-F447A	6 - 6.5	10/24/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-F448A	07FW-E-EX52-F448A	5 - 5.5	10/24/2007	soil/grab		X
EX52-F448B	07FW-E-EX52-F448B	6.5 - 7	10/31/2007	soil/grab		X
EX52-F701A	07FW-E-EX52-F701A	2 - 2.5	10/17/2007	soil/grab		X
EX52-F702A	07FW-E-EX52-F702A	2 - 2.5	10/17/2007	soil/grab		X
EX52-F703A	07FW-E-EX52-F703A	2 - 2.5	10/17/2007	soil/grab		X
EX52-F801A	07FW-E-EX52-F801A	2 - 2.5	10/17/2007	soil/grab		X
EX52-F801B	07FW-E-EX52-F801B	4 - 4.5	10/25/2007	soil/grab		X
EX52-F802A	07FW-E-EX52-F802A	4 - 4.5	10/25/2007	soil/grab		X
EX52-F901A	07FW-E-EX52-F901A	5.5 - 6	10/17/2007	soil/grab		X
EX52-W101A	07FW-E-EX52-W101A	2.5 - 3.5	10/11/2007	soil/grab		X
EX52-W102A	07FW-E-EX52-W102A	3 - 4	10/11/2007	soil/grab		X
EX52-W103A	07FW-E-EX52-W103A	1.5 - 2.5	10/11/2007	soil/grab		X
EX52-W104A	07FW-E-EX52-W104A	1 - 2	10/11/2007	soil/grab		X
EX52-W105A	07FW-E-EX52-W105A	2 - 3	10/11/2007	soil/grab		X
EX52-W106A	07FW-E-EX52-W106A	2 - 3	10/11/2007	soil/grab		X
EX52-W107A	07FW-E-EX52-W107A	2.5 - 3.5	10/11/2007	soil/grab		X
EX52-W108A	07FW-E-EX52-W108A	3 - 4	10/11/2007	soil/grab		X
EX52-W108B	07FW-E-EX52-W108B	2 - 3	10/23/2007	soil/grab		X
EX52-W109A	07FW-E-EX52-W109A	2 - 3	10/11/2007	soil/grab		X
EX52-W109B	07FW-E-EX52-W109B	1 - 2	10/23/2007	soil/grab		X
EX52-W109C	07FW-E-EX52-W109C	3 - 4	10/31/2007	soil/grab		X
EX52-W110A	07FW-E-EX52-W110A	2 - 3	10/11/2007	soil/grab		X
EX52-W111A	07FW-E-EX52-W111A	2.5 - 3.5	10/11/2007	soil/grab		X
EX52-W112A	07FW-E-EX52-W112A	2 - 3	10/11/2007	soil/grab		X
EX52-W112A	07FW-E-EX52-W112AFD	2 - 3	10/11/2007	soil/grab	field duplicate	X
EX52-W201A	07FW-E-EX52-W201A	2 - 3	10/3/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-W202A	07FW-E-EX52-W202A	2 - 3	10/3/2007	soil/grab		X
EX52-W203A	07FW-E-EX52-W203A	2 - 3	10/3/2007	soil/grab		X
EX52-W203C	07FW-E-EX52-W203C	4 - 5	10/15/2007	soil/grab		X
EX52-W204A	07FW-E-EX52-W204A	2 - 3	10/3/2007	soil/grab		X
EX52-W205A	07FW-E-EX52-W205A	2 - 3	10/3/2007	soil/grab		X
EX52-W206A	07FW-E-EX52-W206A	2 - 3	10/3/2007	soil/grab		X
EX52-W207A	07FW-E-EX52-W207A	2 - 3	10/3/2007	soil/grab		X
EX52-W208A	07FW-E-EX52-W208A	2 - 3	10/3/2007	soil/grab		X
EX52-W209A	07FW-E-EX52-W209A	2 - 3	10/3/2007	soil/grab		X
EX52-W210A	07FW-E-EX52-W210A	2 - 3	10/3/2007	soil/grab		X
EX52-W210A	07FW-E-EX52-W210AFD	2 - 3	10/3/2007	soil/grab	field duplicate	X
EX52-W211A	07FW-E-EX52-W211A	2.5 - 3.5	10/3/2007	soil/grab		X
EX52-W212A	07FW-E-EX52-W212A	2 - 3	10/3/2007	soil/grab		X
EX52-W213A	07FW-E-EX52-W213A	2.5 - 3.5	10/3/2007	soil/grab		X
EX52-W214A	07FW-E-EX52-W214A	2 - 3	10/3/2007	soil/grab		X
EX52-W215A	07FW-E-EX52-W215A	2 - 3	10/3/2007	soil/grab		X
EX52-W216A	07FW-E-EX52-W216A	2 - 3	10/3/2007	soil/grab		X
EX52-W301A	07FW-E-EX52-W301A	5 - 6	10/8/2007	soil/grab		X
EX52-W302A	07FW-E-EX52-W302A	5 - 6	10/8/2007	soil/grab		X
EX52-W303A	07FW-E-EX52-W303A	5 - 6	10/8/2007	soil/grab		X
EX52-W303A	07FW-E-EX52-W303A-2	9 - 10	10/17/2007	soil/grab		X
EX52-W303A-2B	07FW-E-EX52-W303A-2B	7 - 8	10/27/2007	soil/grab		X
EX52-W304A	07FW-E-EX52-W304A	5 - 6	10/8/2007	soil/grab		X
EX52-W305A	07FW-E-EX52-W305A	5 - 6	10/8/2007	soil/grab		X
EX52-W306A	07FW-E-EX52-W306A	5 - 6	10/8/2007	soil/grab		X
EX52-W308A	07FW-E-EX52-W308A	2.5 - 3.5	10/8/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-W309A	07FW-E-EX52-W309A	2.5 - 3.5	10/8/2007	soil/grab		X
EX52-W310A	07FW-E-EX52-W310A	2.5 - 3.5	10/8/2007	soil/grab		X
EX52-W311A	07FW-E-EX52-W311A	2.5 - 3.5	10/8/2007	soil/grab		X
EX52-W312A	07FW-E-EX52-W312A	4 - 5	10/8/2007	soil/grab		X
EX52-W314A	07FW-E-EX52-W314A	4 - 5	10/8/2007	soil/grab		X
EX52-W315A	07FW-E-EX52-W315A	4 - 5	10/8/2007	soil/grab		X
EX52-W316A	07FW-E-EX52-W316A	2.5 - 3.5	10/8/2007	soil/grab		X
EX52-W317A	07FW-E-EX52-W317A	2.5 - 3.5	10/8/2007	soil/grab		X
EX52-W318A	07FW-E-EX52-W318A	2.5 - 3.5	10/8/2007	soil/grab		X
EX52-W318B	07FW-E-EX52-W318B	5 - 6	10/16/2007	soil/grab		X
EX52-W319A	07FW-E-EX52-W319A	2.5 - 3.5	10/8/2007	soil/grab		X
EX52-W324A	07FW-E-EX52-W324A	2.5 - 3.5	10/10/2007	soil/grab		X
EX52-W325A	07FW-E-EX52-W325A	2.5 - 3.5	10/10/2007	soil/grab		X
EX52-W325B	07FW-E-EX52-W325B	2.5 - 3.5	10/23/2007	soil/grab		X
EX52-W326A	07FW-E-EX52-W326A	4 - 5	10/12/2007	soil/grab		X
EX52-W327A	07FW-E-EX52-W327A	4 - 5	10/12/2007	soil/grab		X
EX52-W328A	07FW-E-EX52-W328A	4 - 5	10/12/2007	soil/grab		X
EX52-W329A	07FW-E-EX52-W329A	5 - 6	10/11/2007	soil/grab		X
EX52-W401A	07FW-E-EX52-W401A	2.5 - 3.5	10/11/2007	soil/grab		X
EX52-W401A	07FW-E-EX52-WW00	2.5 - 3.5	9/26/2007	soil/grab		X
EX52-W401B	07FW-E-EX52-W401B	3 - 4	10/24/2007	soil/grab		X
EX52-W402A	07FW-E-EX52-WW01	2.5 - 3.5	9/26/2007	soil/grab		X
EX52-W403A	07FW-E-EX52-W403A	2.5 - 3.5	10/11/2007	soil/grab		X
EX52-W403A	07FW-E-EX52-WW02	2.5 - 3.5	9/26/2007	soil/grab		X
EX52-W403B	07FW-E-EX52-W403B	3 - 4	10/23/2007	soil/grab		X
EX52-W404A	07FW-E-EX52-SW01	2.5 - 3.5	9/25/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-W405A	07FW-E-EX52-W405A	2.5 - 3.5	10/11/2007	soil/grab		X
EX52-W405A	07FW-E-EX52-W405AFD	2.5 - 3.5	10/11/2007	soil/grab	field duplicate	X
EX52-W405B	07FW-E-EX52-W405B	3 - 4	10/23/2007	soil/grab		X
EX52-W406A	07FW-E-EX52-W406A	2.5 - 3.5	10/11/2007	soil/grab		X
EX52-W407A	07FW-E-EX52-W407A	4 - 5	10/11/2007	soil/grab		X
EX52-W408A	07FW-E-EX52-W408A	4 - 5	10/11/2007	soil/grab		X
EX52-W409A	07FW-E-EX52-W409A	4 - 5	10/11/2007	soil/grab		X
EX52-W409B	07FW-E-EX52-W409B	4 - 5	10/23/2007	soil/grab		X
EX52-W410A	07FW-E-EX52-W410A	4 - 5	10/11/2007	soil/grab		X
EX52-W410B	07FW-E-EX52-W410B	4 - 5	10/23/2007	soil/grab		X
EX52-W414A	07FW-E-EX52-W414A	1 - 2	10/11/2007	soil/grab		X
EX52-W415A	07FW-E-EX52-W415A	1 - 2	10/11/2007	soil/grab		X
EX52-W416A	07FW-E-EX52-W416A	4 - 5	10/11/2007	soil/grab		X
EX52-W417A	07FW-E-EX52-W417A	4 - 5	10/11/2007	soil/grab		X
EX52-W417B	07FW-E-EX52-W417B	4 - 5	10/25/2007	soil/grab		X
EX52-W417B	07FW-E-EX52-W417BFD	4 - 5	10/25/2007	soil/grab	field duplicate	X
EX52-W417C	07FW-E-EX52-W417C	4.5 - 5.5	10/30/2007	soil/grab		X
EX52-W418A	07FW-E-EX52-NW05	2.5 - 3.5	9/26/2007	soil/grab		X
EX52-W419A	07FW-E-EX52-NW04	2.5 - 3.5	9/26/2007	soil/grab		X
EX52-W420A	07FW-E-EX52-NW03	2.5 - 3.5	9/26/2007	soil/grab		X
EX52-W421A	07FW-E-EX52-NW02	2.5 - 3.5	9/26/2007	soil/grab		X
EX52-W422A	07FW-E-EX52-NW01	2.5 - 3.5	9/26/2007	soil/grab		X
EX52-W423A	07FW-E-EX52-NW00	2.5 - 3.5	9/26/2007	soil/grab		X
EX52-W423A	07FW-E-EX52-NW00FD	2.5 - 3.5	9/26/2007	soil/grab	field duplicate	X
EX52-W424A	07FW-E-EX52-W424A	2.5 - 3.5	10/12/2007	soil/grab		X
EX52-W424B	07FW-E-EX52-W424B	3 - 4	10/23/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-W425A	07FW-E-EX52-W425A	1.5 - 2.5	10/12/2007	soil/grab		X
EX52-W425B	07FW-E-EX52-W425B	3.5 - 4.5	10/23/2007	soil/grab		X
EX52-W426A	07FW-E-EX52-W426A	1.5 - 2.5	10/12/2007	soil/grab		X
EX52-W426B	07FW-E-EX52-W426B	4 - 5	10/23/2007	soil/grab		X
EX52-W426C	07FW-E-EX52-W426C	4 - 5	11/1/2007	soil/grab		X
EX52-W427A	07FW-E-EX52-W427A	1.5 - 2.5	10/12/2007	soil/grab		X
EX52-W427B	07FW-E-EX52-W427B	4 - 5	10/24/2007	soil/grab		X
EX52-W428A	07FW-E-EX52-W428A	2.5 - 3.5	10/12/2007	soil/grab		X
EX52-W429A	07FW-E-EX52-W429A	2.5 - 3.5	10/12/2007	soil/grab		X
EX52-W430A	07FW-E-EX52-W430A	4.5 - 5.5	10/30/2007	soil/grab		X
EX52-W431A	07FW-E-EX52-W431A	4 - 5	10/31/2007	soil/grab		X
EX52-W701A	07FW-E-EX52-W701A	1 - 2	10/17/2007	soil/grab		X
EX52-W702A	07FW-E-EX52-W702A	1 - 2	10/17/2007	soil/grab		X
EX52-W703A	07FW-E-EX52-W703A	1 - 2	10/17/2007	soil/grab		X
EX52-W704A	07FW-E-EX52-W704A	1 - 2	10/17/2007	soil/grab		X
EX52-W705A	07FW-E-EX52-W705A	1 - 2	10/17/2007	soil/grab		X
EX52-W706A	07FW-E-EX52-W706A	1 - 2	10/17/2007	soil/grab		X
EX52-W707A	07FW-E-EX52-W707A	1 - 2	10/17/2007	soil/grab		X
EX52-W708A	07FW-E-EX52-W708A	1 - 2	10/17/2007	soil/grab		X
EX52-W801A	07FW-E-EX52-W801A	1 - 2	10/17/2007	soil/grab		X
EX52-W802A	07FW-E-EX52-W802A	1 - 2	10/17/2007	soil/grab		X
EX52-W802B	07FW-E-EX52-W802B	2 - 3	10/25/2007	soil/grab		X
EX52-W802B	07FW-E-EX52-W802BFD	2 - 3	10/25/2007	soil/grab	field duplicate	X
EX52-W803A	07FW-E-EX52-W803A	1 - 2	10/17/2007	soil/grab		X
EX52-W804A	07FW-E-EX52-W804A	1 - 2	10/17/2007	soil/grab		X
EX52-W901A	07FW-E-EX52-W901A	4 - 5	10/17/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-W902A	07FW-E-EX52-W902A	3.5 - 4.5	10/17/2007	soil/grab		X
EX52-W903A	07FW-E-EX52-W903A	4 - 5	10/17/2007	soil/grab		X
EX52-W904A	07FW-E-EX52-W904A	3.5 - 4.5	10/17/2007	soil/grab		X
EXSB105-F501	07FW-E-EXSB105-F501	2 - 2.5	10/6/2007	soil/grab		X
EXSB105-F502	07FW-E-EXSB105-F502	1 - 1.5	10/6/2007	soil/grab		X
EXSB105-F502B	07FW-E-EX52-F502B	6 - 6.5	10/15/2007	soil/grab		X
EXSB105-F503	07FW-E-EXSB105-F503	1 - 1.5	10/6/2007	soil/grab		X
EXSB105-F504	07FW-E-EXSB105-F504	1 - 1.5	10/6/2007	soil/grab		X
EXSB105-F505	07FW-E-EXSB105-F505	1 - 1.5	10/6/2007	soil/grab		X
EXSB98-F601	07FW-E-EXSB98-F601FD	3 - 3.5	10/6/2007	soil/grab	field duplicate	X
EXSB98-F602	07FW-E-EXSB98-F602	2 - 2.5	10/6/2007	soil/grab		X
EXSB98-F603	07FW-E-EXSB98-F603	1.5 - 2	10/6/2007	soil/grab		X
EXSB98-F604	07FW-E-EXSB98-F604	1 - 1.5	10/6/2007	soil/grab		X
EXSB98-F605	07FW-E-EXSB98-F605	2 - 2.5	10/6/2007	soil/grab		X
EXTSA-01	07FW-A-EXTSA-01	1 - 1.5	10/3/2007	soil/grab		X
EXTSA-01	07FW-A-EXTSA-01FD	1 - 1.5	10/3/2007	soil/grab	field duplicate	X
EXTSA-02	07FW-A-EXTSA-02	2 - 2.5	10/3/2007	soil/grab		X
EXTSA-03	07FW-A-EXTSA-03	2 - 2.5	10/3/2007	soil/grab		X
EXTSA-04	07FW-A-EXTSA-04	2 - 2.5	10/3/2007	soil/grab		X
EXTSA-05	07FW-A-EXTSA-05	2 - 2.5	10/3/2007	soil/grab		X
EXTSA-06	07FW-A-EXTSA-06	2 - 2.5	10/3/2007	soil/grab		X
EXTSA-07	07FW-A-EXTSA-07	2 - 2.5	10/3/2007	soil/grab		X
EXTSA-08	07FW-A-EXTSA-08	2 - 2.5	10/3/2007	soil/grab		X
EXTSA-09	07FW-A-EXTSA-09	1 - 1.5	10/3/2007	soil/grab		X
EXTSA-10	07FW-A-EXTSA-10	1 - 1.5	10/3/2007	soil/grab		X
EXTSA-11	07FW-A-EXTSA-11	1 - 1.5	10/3/2007	soil/grab		X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EXTSA-12	07FW-A-EXTSA-12	1 - 1.5	10/3/2007	soil/grab		X
EXTSA-13	07FW-A-EXTSA-13	1 - 1.5	10/3/2007	soil/grab		X
EXTSA-14	07FW-A-EXTSA-14	1 - 1.5	10/3/2007	soil/grab		X
EXTSA-15	07FW-A-EXTSA-15	1 - 1.5	10/3/2007	soil/grab		X
EXTSA-16	07FW-A-EXTSA-16	1 - 1.5	10/3/2007	soil/grab		X
EXTSA-17	07FW-A-EXTSA-17	3 - 3.5	10/3/2007	soil/grab		X
EXTSA-18	07FW-A-EXTSA-18	3 - 3.5	10/3/2007	soil/grab		X
EXTSA-19	07FW-A-EXTSA-19	3 - 3.5	10/3/2007	soil/grab		X
EXTSA-20	07FW-A-EXTSA-20	3 - 3.5	10/3/2007	soil/grab		X
EXTSA-21	07FW-A-EXTSA-21	3 - 3.5	10/3/2007	soil/grab		X
EXTSA-22	07FW-A-EXTSA-22	3 - 3.5	10/3/2007	soil/grab		X
EXTSA-23	07FW-A-EXTSA-23	3 - 3.5	10/3/2007	soil/grab		X
EXTSA-24	07FW-A-EXTSA-24	1.5 - 2	10/3/2007	soil/grab		X
EXTSA-24	07FW-A-EXTSA-24FD	1.5 - 2	10/3/2007	soil/grab	field duplicate	X
EXTSA-25	07FW-A-EXTSA-25	2.5 - 3	10/3/2007	soil/grab		X
EXTSA-26	07FW-A-EXTSA-26	1 - 1.5	10/3/2007	soil/grab		X
EXTSA-27	07FW-A-EXTSA-27	1 - 1.5	10/3/2007	soil/grab		X
EXTSA-28	07FW-A-EXTSA-28	3 - 3.5	10/3/2007	soil/grab		X
EXTSA-29	07FW-A-EXTSA-29	3 - 3.5	10/15/2007	soil/grab		X
EX52-F104B	07FW-E-EX52-F104BMS	4 - 4.5	10/23/2007	soil/grab	matrix spike	X
EX52-F104B	07FW-E-EX52-F104BSD	4 - 4.5	10/23/2007	soil/grab	matrix spike duplicate	X
EX52-F113A	07FW-E-EX52-F113AMS	3 - 3.5	10/25/2007	soil/grab	matrix spike	X
EX52-F113A	07FW-E-EX52-F113ASD	3 - 3.5	10/25/2007	soil/grab	matrix spike duplicate	X
EX52-F114A	07FW-E-EX52-F114AMS	5 - 5.5	10/25/2007	soil/grab	matrix spike	X
EX52-F114A	07FW-E-EX52-F114ASD	5 - 5.5	10/25/2007	soil/grab	matrix spike duplicate	X
EX52-F206A	07FW-E-EX52-F206AMS	5 - 5.5	10/3/2007	soil/grab	matrix spike	X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-F206A	07FW-E-EX52-F206ASD	5 - 5.5	10/3/2007	soil/grab	matrix spike duplicate	X
EX52-F304B	07FW-E-EX52-F304BMS	12 - 12.5	10/16/2007	soil/grab	matrix spike, also analyzed for SVOC	
EX52-F304B	07FW-E-EX52-F304BSD	12 - 12.5	10/16/2007	soil/grab	matrix spike duplicate , also analyzed for SVOC	
EX52-F306A	07FW-E-EX52-F306AMS	6.5 - 7	10/12/2007	soil/grab	matrix spike	X
EX52-F306A	07FW-E-EX52-F306ASD	6.5 - 7	10/12/2007	soil/grab	matrix spike duplicate	X
EX52-F329A	07FW-E-EX52-F329AMS	5 - 5.5	10/9/2007	soil/grab	matrix spike	X
EX52-F329A	07FW-E-EX52-F329ASD	5 - 5.5	10/9/2007	soil/grab	matrix spike duplicate	X
EX52-F334A	07FW-E-EX52-F334AMS	5 - 5.5	10/9/2007	soil/grab	matrix spike	X
EX52-F334A	07FW-E-EX52-F334ASD	5 - 5.5	10/9/2007	soil/grab	matrix spike duplicate	X
EX52-F338A	07FW-E-EX52-F338AMS	8 - 8.5	10/11/2007	soil/grab	matrix spike	X
EX52-F338A	07FW-E-EX52-F338ASD	8 - 8.5	10/11/2007	soil/grab	matrix spike duplicate	X
EX52-F352A	07FW-E-EX52-F352AMS	12 - 12.5	10/27/2007	soil/grab	matrix spike	X
EX52-F352A	07FW-E-EX52-F352ASD	12 - 12.5	10/27/2007	soil/grab	matrix spike duplicate	X
EX52-F401A	07FW-E-EX52-FL13MS	5 - 5.5	9/26/2007	soil/grab	matrix spike	X
EX52-F401A	07FW-E-EX52-FL13SD	5 - 5.5	9/26/2007	soil/grab	matrix spike duplicate	X
EX52-F413A	07FW-E-EX52-FL01MS	3.5 - 4	9/25/2007	soil/grab	matrix spike	X
EX52-F413A	07FW-E-EX52-FL01SD	3.5 - 4	9/25/2007	soil/grab	matrix spike duplicate	X
EX52-F415A	07FW-E-EX52-F415AMS	5 - 5.5	10/11/2007	soil/grab	matrix spike	X
EX52-F415A	07FW-E-EX52-F415ASD	5 - 5.5	10/11/2007	soil/grab	matrix spike duplicate	X
EX52-F431A	07FW-E-EX52-F431AMS	5 - 5.5	10/12/2007	soil/grab	matrix spike	X
EX52-F431A	07FW-E-EX52-F431ASD	5 - 5.5	10/12/2007	soil/grab	matrix spike duplicate	X
EX52-F439B	07FW-E-EX52-F439BMS	6.5 - 7	10/30/2007	soil/grab	matrix spike	X
EX52-F439B	07FW-E-EX52-F439BSD	6.5 - 7	10/30/2007	soil/grab	matrix spike duplicate	X
EX52-F439C	07FW-E-EX52-F439CMS	9.5 - 10	11/2/2007	soil/grab	matrix spike	X
EX52-F439C	07FW-E-EX52-F439CSD	9.5 - 10	11/2/2007	soil/grab	matrix spike duplicate	X

TABLE 2-10
PCB Sample Collection Summary

Location ID	Sample ID	Depth Ft bgs	Sample Date	Sample Type/Method	Comments	PCB
EX52-F901A	07FW-E-EX52-F901AMS	5.5 - 6	10/17/2007	soil/grab	matrix spike	X
EX52-F901A	07FW-E-EX52-F901ASD	5.5 - 6	10/17/2007	soil/grab	matrix spike duplicate	X
EX52-W109C	07FW-E-EX52-W109CMS	3 - 4	10/31/2007	soil/grab	matrix spike	X
EX52-W109C	07FW-E-EX52-W109CSD	3 - 4	10/31/2007	soil/grab	matrix spike duplicate	X
EX52-W405B	07FW-E-EX52-W405BMS	3 - 4	10/23/2007	soil/grab	matrix spike	X
EX52-W405B	07FW-E-EX52-W405BSD	3 - 4	10/23/2007	soil/grab	matrix spike duplicate	X
EX52-W417B	07FW-E-EX52-W417BMS	4 - 5	10/25/2007	soil/grab	matrix spike	X
EX52-W417B	07FW-E-EX52-W417BSD	4 - 5	10/25/2007	soil/grab	matrix spike duplicate	X
EX52-W429A	07FW-E-EX52-W429AMS	2.5 - 3.5	10/12/2007	soil/grab	matrix spike	X
EX52-W429A	07FW-E-EX52-W429ASD	2.5 - 3.5	10/12/2007	soil/grab	matrix spike duplicate	X
EX52-W802B	07FW-E-EX52-W802BMS	2 - 3	10/25/2007	soil/grab	matrix spike	X
EX52-W802B	07FW-E-EX52-W802BSD	2 - 3	10/25/2007	soil/grab	matrix spike duplicate	X
EXTSA-01	07FW-A-EXTSA-01MS	1 - 1.5	10/3/2007	soil/grab	matrix spike	X
EXTSA-01	07FW-A-EXTSA-01SD	1 - 1.5	10/3/2007	soil/grab	matrix spike duplicate	X
EXTSA-17	07FW-A-EXTSA-17MS	3 - 3.5	10/3/2007	soil/grab	matrix spike	X
EXTSA-17	07FW-A-EXTSA-17SD	3 - 3.5	10/3/2007	soil/grab	matrix spike duplicate	X
EXTSA-29	07FW-A-EXTSA-29MS	3 - 3.5	10/15/2007	soil/grab	matrix spike	X
EXTSA-29	07FW-A-EXTSA-29SD	3 - 3.5	10/15/2007	soil/grab	matrix spike duplicate	X

PCB = polychlorinated biphenyl

SVOC semi-volatile organic compound

VOC = volatile organic compound

TABLE 2-11
Soil Gas Sample Collection Summary

Location ID	Alternate Location ID (1 is Aug sampling event, 2 is October sampling event)	Physical House Number	Sample ID	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	TO15
SG001-L	SG001-1	4723-1	07FWCSG001	0.5 - 0.5	8/29/2007	soil gas/grab		X
SG001-R	SG001-2	4723-2	07FWCSG001-2	0.5 - 0.5	10/18/2007	soil gas/grab		X
SG002-L	SG002-1	4722-1	07FWCSG002	0.5 - 0.5	8/29/2007	soil gas/grab		X
SG002-R	SG002-2	4722-2	07FWCSG002-2	0.5 - 0.5	10/18/2007	soil gas/grab		X
SG003-L	SG003-1	4721-1	07FWCSG003	0.5 - 0.5	8/29/2007	soil gas/grab		X
SG003-R	SG003-2	4721-2	07FWCSG003-2	0.5 - 0.5	10/18/2007	soil gas/grab		X
SG004-L	SG004-1	4720-1	07FWCSG004	0.5 - 0.5	8/30/2007	soil gas/grab		X
SG004-L	SG004-1	4720-1	07FWCSG994	0.5 - 0.5	8/30/2007	soil gas/grab	field duplicate	X
SG004-R	SG004-2	4720-2	07FWCSG004-2	0.5 - 0.5	10/18/2007	soil gas/grab		X
SG004-R	SG004-2	4720-2	07FWCSG0798-2	0.5 - 0.5	10/18/2007	soil gas/grab	field duplicate	X
SG005-L	SG005-1	4719-1	07FWBSG005	0.5 - 0.5	8/28/2007	soil gas/grab		X
SG005-R	SG005-2	4719-2	07FWBSG005-2	0.5 - 0.5	10/18/2007	soil gas/grab		X
SG006-L	SG006-1	4718-1	07FWBSG006	0.5 - 0.5	8/28/2007	soil gas/grab		X
SG006-R	SG006-2	4718-2	07FWBSG006-2	0.5 - 0.5	10/18/2007	soil gas/grab		X
SG007-L	SG007-1	4717-1	07FWBSG007	0.5 - 0.5	8/28/2007	soil gas/grab		X
SG007-R	SG007-2	4717-2	07FWBSG007-2	0.5 - 0.5	10/18/2007	soil gas/grab		X
SG007-R	SG007-2	4717-2	07FWBSG799-2	0.5 - 0.5	10/18/2007	soil gas/grab	field duplicate	X
SG008-L	SG008-1	4716-1	07FWBSG008	0.5 - 0.5	8/28/2007	soil gas/grab		X
SG008-R	SG008-2	4716-2	07FWBSG008-2	0.5 - 0.5	10/19/2007	soil gas/grab		X
SG009-L	SG009-1	4715-1	07FWBSG009	0.5 - 0.5	8/28/2007	soil gas/grab		X
SG009-L	SG009-1	4715-1	07FWBSG995	0.5 - 0.5	8/28/2007	soil gas/grab	field duplicate	X
SG009-R	SG009-2	4715-2	07FWBSG009-2	0.5 - 0.5	10/12/2007	soil gas/grab		X
SG010-L	SG010-1	4714-1	07FWBSG010	0.5 - 0.5	8/28/2007	soil gas/grab		X
SG010-R	SG010-2	4714-2	07FWBSG010-2	0.5 - 0.5	10/19/2007	soil gas/grab		X

TABLE 2-11
Soil Gas Sample Collection Summary

Location ID	Alternate Location ID (1 is Aug sampling event, 2 is October sampling event)	Physical House Number	Sample ID	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	TO15
SG011-L	SG011-1	4713-1	07FWBSG011	0.5 - 0.5	8/28/2007	soil gas/grab		X
SG011-R	SG011-2	4713-2	07FWBSG011-2	0.5 - 0.5	10/18/2007	soil gas/grab		X
SG012-L	SG012-1	4712-1	07FWBSG012	0.5 - 0.5	8/28/2007	soil gas/grab		X
SG012-R	SG012-2	4712-2	07FWBSG012-2	0.5 - 0.5	10/20/2007	soil gas/grab		X
SG012-R	SG012-2	4712-2	07FWBSG797-2	0.5 - 0.5	10/20/2007	soil gas/grab	field duplicate	X
SG013-L	SG013-1	4711-1	07FWASG013	0.5 - 0.5	8/28/2007	soil gas/grab		X
SG013-R	SG013-2	4711-2	07FWASG013-2	0.5 - 0.5	10/12/2007	soil gas/grab		X
SG014-L	SG014-1	4710-1	07FWBSG014	0.5 - 0.5	8/28/2007	soil gas/grab		X
SG014-R	SG014-2	4710-2	07FWBSG014-2	0.5 - 0.5	10/20/2007	soil gas/grab		X
SG015-L	SG015-1	4709-1	07FWASG015	0.5 - 0.5	8/25/2007	soil gas/grab		X
SG015-R	SG015-2	4709-2	07FWASG015-2	0.5 - 0.5	10/11/2007	soil gas/grab		X
SG016-L	SG016-1	4708-1	07FWASG016	0.5 - 0.5	8/25/2007	soil gas/grab		X
SG016-R	SG016-2	4708-2	07FWASG016-2	0.5 - 0.5	10/11/2007	soil gas/grab		X
SG017-L	SG017-1	4707-1	07FWASG017	0.5 - 0.5	8/25/2007	soil gas/grab		X
SG017-R	SG017-2	4707-2	07FWASG017-2	0.5 - 0.5	10/11/2007	soil gas/grab		X
SG018-L	SG018-1	4706-1	07FWASG018	0.5 - 0.5	8/25/2007	soil gas/grab		X
SG018-R	SG018-2	4706-2	07FWASG018-2	0.5 - 0.5	10/11/2007	soil gas/grab		X
SG019-L	SG019-1	4705-1	07FWASG019	0.5 - 0.5	8/26/2007	soil gas/grab		X
SG019-L	SG019-1	4705-1	07FWASG997	0.5 - 0.5	8/26/2007	soil gas/grab	field duplicate	X
SG019-R	SG019-2	4705-2	07FWASG019-2	0.5 - 0.5	10/11/2007	soil gas/grab		X
SG020-L	SG020-1	4704-1	07FWASG020	0.5 - 0.5	8/25/2007	soil gas/grab		X
SG020-R	SG020-2	4704-2	07FWASG020-2	0.5 - 0.5	10/11/2007	soil gas/grab		X
SG021-L	SG021-1	4743-1	07FWASG021	0.5 - 0.5	8/25/2007	soil gas/grab		X
SG021-R	SG021-2	4743-2	07FWASG021-2	0.5 - 0.5	10/26/2007	soil gas/grab		X

TABLE 2-11
Soil Gas Sample Collection Summary

Location ID	Alternate Location ID (1 is Aug sampling event, 2 is October sampling event)	Physical House Number	Sample ID	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	TO15
SG022-L	SG022-1	4744-1	07FWASG022	0.5 - 0.5	8/25/2007	soil gas/grab		X
SG022-R	SG022-2	4744-2	07FWASG022-2	0.5 - 0.5	10/26/2007	soil gas/grab		X
SG023-L	SG023-1	4742-1	07FWASG023	0.5 - 0.5	8/27/2007	soil gas/grab		X
SG023-R	SG023-2	4742-2	07FWASG023-2	0.5 - 0.5	10/26/2007	soil gas/grab		X
SG024-L	SG024-1	4741-1	07FWASG024	0.5 - 0.5	8/25/2007	soil gas/grab		X
SG024-R	SG024-2	4741-2	07FWASG024-2	0.5 - 0.5	10/26/2007	soil gas/grab		X
SG025-L	SG025-1	4745-1	07FWASG025-2	0.5 - 0.5	10/26/2007	soil gas/grab		X
SG025-R	SG025-2	4745-2	07FWASG025	0.5 - 0.5	8/24/2007	soil gas/grab		X
SG026-L	SG026-1	4740-1	07FWASG026	0.5 - 0.5	8/25/2007	soil gas/grab		X
SG026-R	SG026-2	4740-2	07FWASG026-2	0.5 - 0.5	10/26/2007	soil gas/grab		X
SG027-L	SG027-1	4739-1	07FWASG027	0.5 - 0.5	8/23/2007	soil gas/grab		X
SG027-R	SG027-2	4739-2	07FWASG027-2	0.5 - 0.5	10/25/2007	soil gas/grab		X
SG028-L	SG028-1	4746-1	07FWASG028	0.5 - 0.5	8/24/2007	soil gas/grab		X
SG028-R	SG028-2	4746-2	07FWASG028-2	0.5 - 0.5	10/25/2007	soil gas/grab		X
SG029-L	SG029-1	4738-1	07FWASG029	0.5 - 0.5	8/23/2007	soil gas/grab		X
SG029-R	SG029-2	4738-2	07FWASG029-2	0.5 - 0.5	10/25/2007	soil gas/grab		X
SG030-L	SG030-1	4737-1	07FWASG030	0.5 - 0.5	8/23/2007	soil gas/grab		X
SG030-R	SG030-2	4737-2	07FWASG030-2	0.5 - 0.5	10/24/2007	soil gas/grab		X
SG031-L	SG031-1	4747-1	07FWASG031	0.5 - 0.5	8/23/2007	soil gas/grab		X
SG031-R	SG031-2	4747-1	07FWASG031-2	0.5 - 0.5	10/25/2007	soil gas/grab		X
SG032-L	SG032-1	4736-1	07FWASG032	0.5 - 0.5	8/23/2007	soil gas/grab		X
SG032-R	SG032-2	4736-2	07FWASG032-2	0.5 - 0.5	10/24/2007	soil gas/grab		X
SG033-L	SG033-1	4748-1	07FWASG033	0.5 - 0.5	8/23/2007	soil gas/grab		X
SG033-R	SG033-2	4748-2	07FWASG033-2	0.5 - 0.5	10/25/2007	soil gas/grab		X

TABLE 2-11
Soil Gas Sample Collection Summary

Location ID	Alternate Location ID (1 is Aug sampling event, 2 is October sampling event)	Physical House Number	Sample ID	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	TO15
SG034-L	SG034-1	4735-1	07FWASG034	0.5 - 0.5	8/23/2007	soil gas/grab		X
SG034-R	SG034-2	4735-2	07FWASG034-2	0.5 - 0.5	10/24/2007	soil gas/grab		X
SG035-L	SG035-1	4749-1	07FWASG035	0.5 - 0.5	8/23/2007	soil gas/grab		X
SG035-L	SG035-1	4749-1	07FWASG999	0.5 - 0.5	8/23/2007	soil gas/grab	field duplicate	X
SG035-R	SG035-2	4749-1	07FWASG035-2	0.5 - 0.5	10/25/2007	soil gas/grab		X
SG036-L	SG036-1	4734-1	07FWASG036	0.5 - 0.5	8/23/2007	soil gas/grab		X
SG036-R	SG036-2	4734-2	07FWASG036-2	0.5 - 0.5	10/24/2007	soil gas/grab		X
SG037-L	SG037-1	4733-1	07FWESG037	0.5 - 0.5	8/24/2007	soil gas/grab		X
SG037-R	SG037-2	4733-2	07FWESG037-2	0.5 - 0.5	10/24/2007	soil gas/grab		X
SG038-L	SG038-1	4750-1	07FWESG038	0.5 - 0.5	8/24/2007	soil gas/grab		X
SG038-R	SG038-2	4750-2	07FWESG038-2	0.5 - 0.5	10/24/2007	soil gas/grab		X
SG039-L	SG039-1	4731-1	07FWESG039	0.5 - 0.5	8/24/2007	soil gas/grab		X
SG039-R	SG039-2	4731-2	07FWESG039-2	0.5 - 0.5	10/26/2007	soil gas/grab		X
SG040-L	SG040-1	4751-1	07FWESG040	0.5 - 0.5	8/24/2007	soil gas/grab		X
SG040-L	SG040-1	4751-1	07FWESG998	0.5 - 0.5	8/24/2007	soil gas/grab	field duplicate	X
SG040-R	SG040-2	4751-2	07FWESG040-2	0.5 - 0.5	10/23/2007	soil gas/grab		X
SG041-L	SG041-1	4752-1	07FWFSG041	0.5 - 0.5	8/27/2007	soil gas/grab		X
SG041-R	SG041-2	4752-2	07FWFSG041-2	0.5 - 0.5	10/23/2007	soil gas/grab		X
SG042-L	SG042-1	4728-1	07FWFSG042	0.5 - 0.5	8/27/2007	soil gas/grab		X
SG042-R	SG042-2	4728-2	07FWFSG042-2	0.5 - 0.5	10/20/2007	soil gas/grab		X
SG042-R	SG042-2	4728-2	07FWFSG796-2	0.5 - 0.5	10/20/2007	soil gas/grab		X
SG043-L	SG043-1	4727-1	07FWFSG043	0.5 - 0.5	8/27/2007	soil gas/grab		X
SG043-L	SG043-1	4727-1	07FWFSG996	0.5 - 0.5	8/27/2007	soil gas/grab	field duplicate	X
SG043-R	SG043-2	4727-2	07FWFSG043-2	0.5 - 0.5	10/23/2007	soil gas/grab		X

TABLE 2-11
Soil Gas Sample Collection Summary

Location ID	Alternate Location ID (1 is Aug sampling event, 2 is October sampling event)	Physical House Number	Sample ID	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	TO15
SG044-L	SG044-1	4753-1	07FWFSG044	0.5 - 0.5	8/27/2007	soil gas/grab		X
SG044-R	SG044-2	4753-2	07FWFSG044-2	0.5 - 0.5	10/23/2007	soil gas/grab		X
SG045-L	SG045-1	4726-1	07FWFSG045	0.5 - 0.5	8/27/2007	soil gas/grab		X
SG045-R	SG045-2	4726-2	07FWFSG045-2	0.5 - 0.5	10/23/2007	soil gas/grab		X
SG046-L	SG046-1	4754-1	07FWFSG046	0.5 - 0.5	8/26/2007	soil gas/grab		X
SG046-R	SG046-2	4754-2	07FWFSG046-2	0.5 - 0.5	10/23/2007	soil gas/grab		X
SG047-L	SG047-1	4725-1	07FWFSG047	0.5 - 0.5	8/27/2007	soil gas/grab		X
SG047-R	SG047-2	4725-2	07FWFSG047-2	0.5 - 0.5	10/21/2007	soil gas/grab		X
SG047-R	SG047-2	4725-2	07FWFSG795-2	0.5 - 0.5	10/21/2007	soil gas/grab	field duplicate	X
SG048-L	SG048-1	4755-2	07FWFSG048-2	0.5 - 0.5	10/23/2007	soil gas/grab		X
SG048-R	SG048-2	4755-1	07FWFSG048	0.5 - 0.5	8/26/2007	soil gas/grab		X
SG049-L	SG049-1	4724-1	07FWASG049-2	0.5 - 0.5	10/23/2007	soil gas/grab		X
SG049-R	SG049-2	4724-2	07FWASG049	0.5 - 0.5	8/26/2007	soil gas/grab		X
SG050			07FWESG050	6 - 6	9/8/2007	soil gas/grab		X
SG051			07FWESG051	6 - 6	9/8/2007	soil gas/grab		X
SG052			07FWESG052	6 - 6	9/8/2007	soil gas/grab		X
SG053			07FWESG053	6 - 6	9/8/2007	soil gas/grab		X
SG054			07FWESG054	6 - 6	9/8/2007	soil gas/grab		X
SG054			07FWESG991	6 - 6	9/8/2007	soil gas/grab		X
SG055			07FWESG055	6 - 6	9/8/2007	soil gas/grab		X
SG056			07FWESG056	6 - 6	9/8/2007	soil gas/grab		X
SG057			07FWESG057	6 - 6	9/8/2007	soil gas/grab		X
SG058			07FWESG058	6 - 6	9/8/2007	soil gas/grab		X
SG059			07FWESG059	6 - 6	9/8/2007	soil gas/grab		X

TABLE 2-11
Soil Gas Sample Collection Summary

Location ID	Alternate Location ID (1 is Aug sampling event, 2 is October sampling event)	Physical House Number	Sample ID	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	TO15
SG060-L	SG060-1	4761-2	07FWDSG060	0.5 - 0.5	8/22/2007	soil gas/grab		X
SG060-R	SG060-2	4761-2	07FWDSG060-2	0.5 - 0.5	10/26/2007	soil gas/grab		X
SG061-L	SG061-1	4762-1	07FWDSG061	0.5 - 0.5	8/22/2007	soil gas/grab		X
SG061-R	SG061-2	4762-2	07FWDSG061-2	0.5 - 0.5	10/25/2007	soil gas/grab		X
SG062-L	SG062-1	4759-1	07FWDSG062	0.5 - 0.5	8/22/2007	soil gas/grab		X
SG062-R	SG062-2	4759-2	07FWDSG062-2	0.5 - 0.5	10/26/2007	soil gas/grab		X
SG063-L	SG063-1	4760-1	07FWDSG063	0.5 - 0.5	8/23/2007	soil gas/grab		X
SG063-R	SG063-2	4760-2	07FWDSG063-2	0.5 - 0.5	10/26/2007	soil gas/grab		X
SG063-R	SG063-2	4760-2	07FWDSG794-2	0.5 - 0.5	10/26/2007	soil gas/grab	field duplicate	X
SG064-L	SG064-1	4757-1	07FWDSG064	0.5 - 0.5	8/22/2007	soil gas/grab		X
SG064-R	SG064-2	4757-2	07FWDSG064-2	0.5 - 0.5	10/26/2007	soil gas/grab		X
SG065-L	SG065-1	4729-1	07FWFSG065	0.5 - 0.5	8/27/2007	soil gas/grab		X
SG065-R	SG065-2	4729-2	07FWFSG065-2	0.5 - 0.5	10/20/2007	soil gas/grab		X
SG066			07FWSSG066	6 - 6	9/9/2007	soil gas/grab		X
SG067			07FWCSG067	6 - 6	9/9/2007	soil gas/grab		X
SG069			07FWCSG069	6 - 6	9/24/2007	soil gas/grab		X
SG070			07FWCSG070	6 - 6	9/24/2007	soil gas/grab		X
SG071			07FWSSG071	6 - 6	9/9/2007	soil gas/grab		X
SG071			07FWSSG992	6 - 6	9/9/2007	soil gas/grab	field duplicate	X
SG072			07FWSSG072	6 - 6	9/9/2007	soil gas/grab		X
SG073			07FWSSG073	6 - 6	9/9/2007	soil gas/grab		X
SG074			07FWBSG074	6 - 6	9/12/2007	soil gas/grab		X
SG075			07FWBSG075	6 - 6	9/24/2007	soil gas/grab		X
SG076			07FWBSG076	6 - 6	9/24/2007	soil gas/grab		X

TABLE 2-11
Soil Gas Sample Collection Summary

Location ID	Alternate Location ID (1 is Aug sampling event, 2 is October sampling event)	Physical House Number	Sample ID	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	TO15
SG077			07FWCSG077	6 - 6	9/24/2007	soil gas/grab		X
SG078			07FWCSG078	6 - 6	9/24/2007	soil gas/grab		X
SG079			07FWCSG079	6 - 6	9/10/2007	soil gas/grab		X
SG080			07FWCSG080	6 - 6	9/10/2007	soil gas/grab		X
SG081			07FWCSG081	6 - 6	9/10/2007	soil gas/grab		X
SG082			07FWBSG082	6 - 6	9/29/2007	soil gas/grab		X
SG083			07FWBSG083	6 - 6	9/29/2007	soil gas/grab		X
SG084			07FWBSG084	6 - 6	9/24/2007	soil gas/grab		X
SG084			07FWBSG899	6 - 6	9/24/2007	soil gas/grab	field duplicate	X
SG085			07FWBSG085	6 - 6	9/24/2007	soil gas/grab		X
SG086			07FWBSG086	6 - 6	9/24/2007	soil gas/grab		X
SG087			07FWFSG087	6 - 6	9/7/2007	soil gas/grab		X
SG088			07FWFSG088	6 - 6	9/8/2007	soil gas/grab		X
SG088			07FWFSG993	6 - 6	9/8/2007	soil gas/grab	field duplicate	X
SG089			07FWBSG089	6 - 6	9/7/2007	soil gas/grab		X
SG090			07FWFSG090	6 - 6	9/7/2007	soil gas/grab		X
SG091			07FWCSG091	6 - 6	9/6/2007	soil gas/grab		X
SG092			07FWCSG092	6 - 6	9/7/2007	soil gas/grab		X
SG093			07FWCSG093	6 - 6	9/10/2007	soil gas/grab		X
SG094			07FWFSG094	6 - 6	9/8/2007	soil gas/grab		X
SG095			07FWFSG095	6 - 6	9/10/2007	soil gas/grab		X
SG096			07FWFSG096	6 - 6	9/10/2007	soil gas/grab		X
SG096			07FWFSG990	6 - 6	9/10/2007	soil gas/grab	field duplicate	X
SG097			07FWFSG097	6 - 6	9/10/2007	soil gas/grab		X

TABLE 2-11
Soil Gas Sample Collection Summary

Location ID	Alternate Location ID (1 is Aug sampling event, 2 is October sampling event)	Physical House Number	Sample ID	Depth Feet bgs	Sample Date	Sample Type/Method	Comments	TO15
SG098			07FWESG098	6 - 6	9/10/2007	soil gas/grab		X
SG099			07FWESG099	6 - 6	9/10/2007	soil gas/grab		X
SG100			07FWESG100	6 - 6	9/10/2007	soil gas/grab		X
SG101			07FWDSG101	6 - 6	9/10/2007	soil gas/grab		X
SG102			07FWDSG102	6 - 6	9/10/2007	soil gas/grab		X
SG103			07FWDSG103	6 - 6	9/10/2007	soil gas/grab		X
SG104			07FWDSG104	6 - 6	9/10/2007	soil gas/grab		X
SG105			07FWDSG105	6 - 6	9/10/2007	soil gas/grab		X

TABLE 2-12

Monitoring Well Depth and Screen Intervals

Location ID	Installation Date	Depth (feet bgs)	Top of Screen (feet bgs)	Bottom of Screen (feet bgs)	Comments
MW-01	9/15/2005	22.0	12.0	22.0	pre-2007 RI installation, AP-9488
MW-02	9/17/2005	18.0	7.5	17.5	pre-2007 RI installation, AP-9489
MW-03	9/18/2005	20.0	9.5	19.5	pre-2007 RI installation, AP-9490
MW-04	8/11/2006	18.0	7.5	17.5	pre-2007 RI installation, AP-9478
MW-05	8/15/2006	20.0	9.5	19.5	pre-2007 RI installation, AP-9479
MW-06A	8/15/2006	21.0	10.5	20.5	pre-2007 RI installation, AP-9480
MW-06B	8/31/2006	22.5	17.0	22.0	pre-2007 RI installation, AP-9481
MW-07	8/15/2006	20.0	9.5	19.5	pre-2007 RI installation, AP-9482
MW-08	8/12/2006	19.5	9.0	19.0	pre-2007 RI installation, AP-9483
MW-09	8/12/2006	19.0	8.5	18.5	pre-2007 RI installation, AP-9484
MW-10	8/13/2006	20.0	9.5	19.5	pre-2007 RI installation, AP-9485
MW-11	8/12/2006	20.0	9.5	19.5	pre-2007 RI installation, AP-9486
MW-12	9/11/2006	19.0	8.5	18.5	pre-2007 RI installation, AP-9487
MW-13	9/26/2007	18.0	7.0	17.0	
MW-14	9/27/2007	18.0	7.0	17.0	
MW-15	10/5/2007	18.0	7.0	17.0	
MW-16	10/5/2007	19.0	8.0	18.0	
MW-17	10/11/2007	18.0	7.0	17.0	
MW-18	9/26/2007	18.0	6.9	16.9	
MW-19	9/25/2007	18.0	6.7	16.7	
MW-20	9/25/2007	18.0	7.0	17.0	
MW-21	9/25/2007	18.0	7.0	17.0	
MW-22	9/27/2007	18.0	7.0	17.0	
MW-23	9/21/2007	18.0	7.0	17.0	
MW-24	9/21/2007	18.0	7.0	17.0	
MW-25	9/19/2007	18.5	7.6	17.6	
MW-26	9/19/2007	18.0	6.7	16.6	
MW-27	9/21/2007	18.0	6.9	16.9	
MW-28	9/18/2007	19.5	8.5	18.5	
MW-29	9/18/2007	19.0	8.0	18.0	
MW-30	9/18/2007	18.0	7.0	17.0	
MW-31	9/14/2007	17.5	7.0	17.0	
MW-32	9/15/2007	20.5	9.0	19.0	

TABLE 2-12
Monitoring Well Depth and Screen Intervals

Location ID	Installation Date	Depth (feet bgs)	Top of Screen (feet bgs)	Bottom of Screen (feet bgs)	Comments
MW-33	9/15/2007	18.5	8.0	18.0	
MW-34	9/22/2007	16.0	4.9	14.9	
MW-35	9/22/2007	18.0	6.4	16.4	
MW-36	9/24/2007	19.0	7.0	17.0	
MW-37	9/24/2007	18.0	7.0	17.0	
MW-38	9/24/2007	19.0	7.2	17.2	
MW-39	9/29/2007	31.0	9.6	29.6	deep well
MW-40	10/1/2007	51.0	29.3	49.3	deep well
MW-41	10/1/2007	18.5	7.5	17.5	
MW-42	10/2/2007	19.0	8.0	18.0	
MW-43	10/2/2007	18.0	7.0	17.0	
MW-44	10/3/2007	18.0	7.5	17.5	
MW-45	9/29/2007	18.5	7.5	17.5	
MW-46	9/29/2007	18.5	7.6	17.6	
MW-47	10/2/2007	18.0	7.0	17.0	
MW-48	9/28/2007	18.5	7.5	17.5	
MW-49	9/28/2007	19.0	8.0	18.0	
MW-50	10/3/2007	18.0	7.0	17.0	
MW-51	10/3/2007	18.0	7.0	17.0	
MW-52	10/4/2007	18.0	7.0	17.0	
MW-53	10/4/2007	18.0	7.0	17.0	
MW-54	10/4/2007	18.0	7.0	17.0	
MW-55	9/27/2007	18.5	7.5	17.5	
MW-56	10/3/2007	18.0	6.8	16.8	
MW-57	9/28/2007	18.5	7.4	17.4	
MW-58	9/22/2007	20.0	9.0	19.0	
MW-59	10/6/2007	18.0	7.0	17.0	
MW-60	10/6/2007	18.0	7.0	17.0	
MW-61	10/12/2007	18.0	7.0	17.0	
MW-62	10/12/2007	18.0	7.0	17.0	
MW-63	10/9/2007	18.0	7.0	17.0	
MW-64	10/8/2007	18.0	7.0	17.0	
MW-65	10/10/2007	18.0	7.0	17.0	

TABLE 2-12
Monitoring Well Depth and Screen Intervals

Location ID	Installation Date	Depth (feet bgs)	Top of Screen (feet bgs)	Bottom of Screen (feet bgs)	Comments
MW-67	10/9/2007	18.0	7.0	17.0	
MW-68	10/13/2007	18.0	7.0	17.0	
MW-69	10/14/2007	18.0	7.0	17.0	
MW-70	10/13/2007	18.0	7.0	17.0	
MW-71	10/13/2007	18.0	7.0	17.0	
MW-72	10/14/2007	18.0	7.0	17.0	
MW-73	10/14/2006	18.0	7.0	17.0	
MW-74	10/11/2007	19.0	8.0	18.0	
MW-76	10/10/2007	18.0	7.0	17.0	

bgs = below ground surface

TABLE 2-13
Monitoring Well Development Information

Location ID	Date	Surge Interval (time)	Purge Interval (time)	Final Turbidity (NTU)	Total Volume Purged (gal)	Comments
MW-13	9/28/2007	Surged with surge rod for 15 minutes	08:50 to 9:21	0.56	43	
MW-14	9/27/2007		16:27 to 17:08	2.83	37	
MW-15	10/15/2007		13:58 to 14:32	2.52	44	
MW-16	10/15/2007		14:35 to 15:01	4.15	50	
MW-17	10/15/2007		15:14 to 15:39	2.34	48	
MW-18	9/28/2007		10:42 to 11:30	1.74	49	
MW-19	9/27/2007		14:34 to 15:08	0.70	42	
MW-20	9/27/2007	Surged with surge rod for 25 minutes	11:45 to 12:36	0.57	41	
MW-21	9/27/2007		09:19 to 9:58	1.97	56	
MW-22	10/16/2007		10:46 to 11:14	3.20	55	
MW-23	9/28/2007		13:25 to 14:27	6.55	53	
MW-24	9/27/2007		15:43 to 16:22	7.37	59	
MW-25	9/20/2007	Surged with surge rod for 19 minutes	14:20 to 14:53	7.09	48	DO meter reading incorrectly
MW-26	9/20/2007	Surged with surge rod for 25 minutes	13:20 to 13:53	2.59	49	DO meter reading incorrectly
MW-27	10/13/2007		12:36 to 13:20	23.40	65	
MW-28	9/20/2007	Surged with surge rod for 28 minutes	09:50 to 10:23	2.81	57	DO meter reading incorrectly
MW-29	9/20/2007	Surged with surge rod for 10 minutes	08:35 to 9:15	2.75	45	DO meter reading incorrectly
MW-30	9/20/2007	Surged with surge rod for 28 minutes	11:04 to 11:25	2.30	49	DO meter reading incorrectly
MW-31	9/17/2007	Surged with surge rod for 30 minutes	09:00 to 10:55	10.40	30	DO meter reading incorrectly
MW-32	9/17/2007	Surged with surge rod for 26 minutes	11:33 to 12:18	11.10	50	
MW-33	9/17/2007	Surged with surge rod for 15 minutes	14:19 to 15:12	9.20	50	Smelled like gasoline, sheen, yellow tint, no free product
MW-34	10/1/2007		16:37 to 17:15	2.25	57	
MW-35	10/13/2007		10:54 to 11:18	1.52	60	
MW-36	10/18/2007		14:30 to 14:57	1.31	51	
MW-37	9/29/2007		16:17 to 16:38	1.61	39	
MW-38	10/16/2007		14:02 to 14:28	1.62	43	

TABLE 2-13
Monitoring Well Development Information

Location ID	Date	Surge Interval (time)	Purge Interval (time)	Final Turbidity (NTU)	Total Volume Purged (gal)	Comments
MW-39	10/2/2007		12:14 to 13:30	3.73	78	
MW-40	10/3/2007		12:05 to 15:07	5.98	195	
MW-41	10/3/2007		10:20 to 11:46	0.79	36	
MW-42	10/4/2007		11:19 to 12:48		50	Turbidity meter broke, 50 gallons purged and water clear, development complete
MW-43	10/16/2007		15:12 to 15:33	0.94	40	
MW-44	10/13/2007		09:59 to 10:42	3.90	65	
MW-45	10/2/2007		15:16 to 15:50	1.43	51	
MW-46	10/2/2007		08:48 to 9:32	0.24	47	
MW-47	10/18/2007		11:08 to 11:36	1.27	51	
MW-48	10/1/2007		09:05 to 9:42	1.30	44	
MW-49	10/1/2007		14:17 to 15:15	1.04	52	
MW-50	10/18/2007		09:12 to 9:46	1.40	66	
MW-51	10/13/2007		14:28 to 15:00	2.37	57	
MW-52	10/13/2007		15:19 to 15:39	0.48	36	
MW-53	10/13/2007		16:15 to 16:39	1.05	52	
MW-54	10/13/2007		16:53 to 17:17	13.30	55	
MW-55	10/3/2007		08:54 to 9:32	3.62	63	
MW-56						Missing development log
MW-57	10/1/2007		11:27 to 12:15	0.95	50	
MW-58	9/29/2007	Surged with surge rod for 21 minutes	13:33 to 14:46	1.94	49	
MW-59	10/12/2007		11:34 to 12:03	1.06	59	
MW-60	10/12/2007		10:42 to 11:14	1.29	57	
MW-61	10/17/2007		14:21 to 15:02	3.63	60	
MW-62	10/18/2007		13:42 to 14:10	4.00	57	
MW-63	10/18/2007		12:30 to 12:59	6.06	49	
MW-64	10/15/2007		16:26 to 16:47	10.20	33	
MW-65	10/17/2007		17:45 to 18:10	3.67	47	
MW-67	10/17/2007		11:02 to 11:36	2.42	61	
MW-68	10/12/2007		10:00 to 10:24	1.13	50	
MW-69	10/15/2007		17:00 to 17:35	0.36	62	

TABLE 2-13
Monitoring Well Development Information

Location ID	Date	Surge Interval (time)	Purge Interval (time)	Final Turbidity (NTU)	Total Volume Purged (gal)	Comments
MW-70	10/12/2007		13:06 to 13:40	1.32	60	
MW-71	10/12/2007		13:58 to 14:45	1.32	68	
MW-72	10/16/2007		16:00 to 16:35	2.40	64	
MW-73	10/12/2007		15:12 to 15:48	3.25	64	
MW-74	10/17/2007		15:31 to 16:02	1.70	51	
MW-76	10/17/2007		16:55 to 17:27	2.57	57	

DO = dissolved oxygen
gal = gallon
NTU = nephelometric turbidity unit

TABLE 2-14
Monitoring Well Groundwater Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW01	07FWEMW01-GW	-	10/18/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW02	07FWEMW02-GW	-	10/18/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW03	07FWEMW03-GW	-	10/18/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW03	07FWEMW03-GWMS	-	10/18/2007	groundwater/grab	matrix spike					X							
MW03	07FWEMW03-GWSD	-	10/18/2007	groundwater/grab	matrix spike duplicate					X							
MW04	07FWEMW04-GW	-	10/18/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW05	07FWCMW05-GW	-	10/15/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW06	07FWBMW06A-GW	-	10/17/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW07	07FWAMW07-GW	-	10/16/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW08	07FWAMW08-GW	-	10/16/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW09	07FWDMMW09-GW	-	10/16/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW10	07FWAMW10-GW	-	10/14/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW11	07FWAMW11-GW	-	10/16/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW13	07FWDMMW13-GW	-	10/9/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW14	07FWDMMW14-GW	-	10/9/2007	groundwater/grab		X	X			X	X		X	X		X	
MW14	07FWDMMW14-GWMS	-	10/9/2007	groundwater/grab	matrix spike					X							
MW14	07FWDMMW14-GWSD	-	10/9/2007	groundwater/grab	matrix spike duplicate					X							
MW15	07FWEMW15-GW	-	10/20/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW15	07FWEMW15-GWMS	-	10/20/2007	groundwater/grab	matrix spike	X	X			X			X	X			
MW15	07FWEMW15-GWSD	-	10/20/2007	groundwater/grab	matrix spike duplicate	X	X			X			X	X			
MW15	07FWEMW15-GWB	-	10/20/2007	groundwater/grab	field duplicate	X	X			X	X	X	X	X		X	
MW16	07FWEMW16-GW	-	10/16/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW17	07FWEMW17-GW	-	10/16/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW18	07FWDMMW18-GW	-	10/9/2007	groundwater/grab		X	X			X	X		X	X		X	
MW18	07FWDMMW18-GWMS	-	10/9/2007	groundwater/grab	matrix spike					X							
MW18	07FWDMMW18-GWSD	-	10/9/2007	groundwater/grab	matrix spike duplicate					X							

TABLE 2-14
Monitoring Well Groundwater Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW19	07FWEMW19-GW	-	10/8/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW20	07FWEMW20-GW	-	10/8/2007	groundwater/grab		X	X			X	X		X	X		X	
MW21	07FWEMW21-GW	-	10/8/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW22	07FWEMW22-GW	-	10/20/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW23	07FWBMW23-GW	-	10/13/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW24	07FWBMW24-GW	-	10/12/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW25	07FWBMW25-GW	-	10/6/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW26	07FWBMW26-GW	-	10/12/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW26	07FWBMW26-GWB	-	10/12/2007	groundwater/grab	field duplicate	X	X			X	X		X	X		X	X
MW27	07FWBMW27-GW	-	10/6/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW27	07FWBMW27-GWMS	-	10/6/2007	groundwater/grab	matrix spike					X							
MW27	07FWBMW27-GWSD	-	10/6/2007	groundwater/grab	matrix spike duplicate					X							
MW28	07FWBMW28-GW	-	10/13/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW29	07FWBMW29-GW	-	10/5/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW30	07FWCMW30-GW	-	10/4/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW31	07FWCMW31-GW	-	10/4/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW32	07FWCMW32-GW	-	10/4/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW33	07FWBMW33-GW	-	10/12/2007	groundwater/grab		X	X	X	X	X	X		X	X		X	X
MW33	07FWBMW33-GWMS	-	10/12/2007	groundwater/grab	matrix spike				X								
MW34	07FWCMW34-GW	-	10/5/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW34	07FWCMW34-GWMS	-	10/5/2007	groundwater/grab	matrix spike	X	X			X	X		X	X		X	X
MW34	07FWCMW34-GWSD	-	10/5/2007	groundwater/grab	matrix spike duplicate	X	X			X	X		X	X		X	X
MW34	07FWCMW34-GWB	-	10/5/2007	groundwater/grab	field duplicate	X	X			X	X		X	X		X	X
MW35	07FWBMW35-GW	-	10/16/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW35	07FWBMW35-GWMS	-	10/16/2007	groundwater/grab	matrix spike					X							
MW35	07FWBMW35-GWSD	-	10/16/2007	groundwater/grab	matrix spike duplicate					X							

TABLE 2-14
Monitoring Well Groundwater Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW36	07FWBMW36-GW	-	10/15/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW36	07FWBMW36-GWMS	-	10/15/2007	groundwater/grab	matrix spike	X	X			X	X		X	X		X	X
MW36	07FWBMW36-GWSD	-	10/15/2007	groundwater/grab	matrix spike duplicate	X	X			X	X		X	X		X	X
MW36	07FWBMW36-GWB	-	10/15/2007	groundwater/grab	field duplicate	X	X			X	X		X	X		X	X
MW37	07FWBMW37-GW	-	10/13/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW38	07FWBMW38-GW	-	10/13/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW39	07FWAMW39-GW	-	10/15/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW40	07FWAMW40-GW	-	10/15/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW41	07FWAMW41-GW	-	10/14/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW42	07FWAMW42-GW	-	10/12/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW43	07FWAMW43-GW	-	10/19/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW43	07FWAMW43-GWMS	-	10/19/2007	groundwater/grab	matrix spike	X	X			X	X		X	X		X	X
MW43	07FWAMW43-GWSD	-	10/19/2007	groundwater/grab	matrix spike duplicate	X	X			X	X		X	X		X	X
MW43	07FWAMW43-GWB	-	10/19/2007	groundwater/grab	field duplicate	X	X			X	X		X	X		X	X
MW44	07FWAMW44-GW	-	10/17/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW45	07FWAMW45-GW	-	10/12/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW46	07FWAMW46-GW	-	10/11/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW47	07FWAMW47-GW	-	10/17/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW48	07FWAMW48-GW	-	10/10/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW49	07FWAMW49-GW	-	10/10/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW50	07FWAMW50-GW	-	10/20/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW51	07FWAMW51-GW	-	10/17/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW52	07FWAMW52-GW	-	10/17/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW53	07FWAMW53-GW	-	10/17/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW54	07FWAMW54-GW	-	10/17/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW55	07FWAMW55-GW	-	10/11/2007	groundwater/grab		X	X			X	X		X	X		X	X

TABLE 2-14
Monitoring Well Groundwater Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW56	07FWAMW56-GW	-	10/16/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW57	07FWAMW57-GW	-	10/10/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW57	07FWAMW57-GWB	-	10/10/2007	groundwater/grab	field duplicate	X	X			X	X		X	X		X	X
MW58	07FWBMW58-GW	-	10/13/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW58	07FWBMW58R1-GW	-	10/27/2007	groundwater/grab	resample for EPH/VPH			X	X								
MW58	07FWBMW58R1-GWMS	-	10/27/2007	groundwater/grab	matrix spike				X								
MW59	07FWAMW59-GW	-	10/18/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW60	07FWAMW60-GW	-	10/18/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW61	07FWAMW61-GW	-	10/21/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW62	07FWAMW62-GW	-	10/22/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW63	07FWBMW63-GW	-	10/22/2007	groundwater/grab		X	X	X	X	X	X		X	X		X	X
MW63	07FWBMW63-GWBMS	-	11/1/2007	groundwater/grab	matrix spike				X								
MW63	07FWBMW63-GWB	-	10/22/2007	groundwater/grab	field duplicate	X	X	X	X	X	X		X	X		X	X
MW64	07FWBMW64-GW	-	10/17/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW64	07FWBMW64R1-GW	-	10/24/2007	groundwater/grab	resample for EPH/VPH			X	X								
MW64	07FWBMW64-GWMS	-	10/17/2007	groundwater/grab	matrix spike					X							
MW64	07FWBMW64-GWSD	-	10/17/2007	groundwater/grab	matrix spike duplicate					X							
MW65	07FWBMW65-GW	-	10/19/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW65	07FWBMW65R1-GW	-	10/24/2007	groundwater/grab	resample for EPH/VPH			X	X								
MW67	07FWBMW67-GW	-	10/19/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW68	07FWAMW68-GW	-	10/19/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW68	07FWAMW68-GWMS	-	10/19/2007	groundwater/grab	matrix spike					X							
MW68	07FWAMW68-GWSD	-	10/19/2007	groundwater/grab	matrix spike duplicate					X							
MW69	07FWAMW69-GW	-	10/21/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW69	07FWAMW69-GWB	-	10/21/2007	groundwater/grab	field duplicate	X	X			X	X		X	X		X	X
MW70	07FWAMW70-GW	-	10/19/2007	groundwater/grab		X	X			X	X		X	X		X	X

TABLE 2-14
Monitoring Well Groundwater Sample Collection Summary

Location ID	Sample ID	Depth feet bgs	Sample Date	Sample Type/Method	Comments	GRO	DRO/RRO	EPH	VPH	Metals	Pesticides	PCB	Herbicides	VOC	Low-level VOC	SVOC	Transitional Explosives
MW71	07FWAMW71-GW	-	10/18/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW72	07FWAMW72-GW	-	10/18/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW73	07FWAMW73-GW	-	10/20/2007	groundwater/grab		X	X			X	X		X	X		X	X
MW74	07FWEMW74-GW	-	10/19/2007	groundwater/grab		X	X			X	X	X	X	X		X	
MW76	07FWEMW76-GW	-	10/20/2007	groundwater/grab		X	X			X	X	X	X	X		X	

bgs = Below ground surface
DRO = Diesel-range organic
PCB = Polychlorinated biphenyl
RRO = Residual-range organic
SVOC = Semi-volatile organic compound
VOC = Volatile organic compound

TABLE 2-15
Water Level Survey

Location ID	Date	Time	Depth to Water (ft btoc)			Casing Elevation (ft ^a)	Groundwater Elevation (ft ^a)	DTW on 11/8 (ft btoc)	WL ^b Correction (ft)	Groundwater Elevation (ft ^a)
			1st reading	2nd reading	Average					
MW01	10/27/2007	17.15	17.775	17.776	17.78	450.23	432.45	17.96	0.17	432.44
MW02	10/27/2007	17.09	15.390	15.390	15.39	452.59	437.20	15.56	0.17	437.20
MW03	10/27/2007	17.57	15.805	15.805	15.81	450.61	434.81			
MW04	10/27/2007	17.59	15.510	15.509	15.51	450.48	434.97			
MW05						449.67		15.52	0.17	434.32
MW07	10/27/2007	11.36	16.502	16.500	16.50	451.21	434.71			
MW08	10/27/2007	14.47	18.490	18.491	18.49	453.8	435.31			
MW09	10/27/2007	17.35	16.910	16.911	16.91	452.87	435.96			
MW11	10/27/2007	15.15	15.965	15.966	15.97	450.95	434.98			
MW13	10/27/2007	16.42	15.651	15.650	15.65	451.41	435.76			
MW14	10/27/2007	16.47	15.921	15.920	15.92	451.23	435.31			
MW15	10/27/2007	17.05	16.170	16.170	16.17	451.30	435.13			
MW16	10/27/2007	17.20	16.740	16.740	16.74	451.78	435.04			
MW17	10/27/2007	17.11	15.190	15.191	15.19	450.11	434.91			
MW18	10/27/2007	16.44	14.311	14.311	14.31	449.84	435.53			
MW19	10/27/2007	17.53	14.990	14.990	14.99	449.81	434.82			
MW20	10/27/2007	17.5	15.075	15.075	15.08	449.93	434.85			
MW21	10/27/2007	17.47	15.830	15.830	15.83	450.85	435.02			
MW22	10/27/2007	17.45	14.505	14.504	14.50	449.47	434.97			
MW23	10/27/2007	18.1	14.480	14.480	14.48	449.36	434.88			

TABLE 2-15
Water Level Survey

Location ID	Date	Time	Depth to Water (ft btoc)			Casing Elevation (ft ^a)	Groundwater Elevation (ft ^a)	DTW on 11/8 (ft btoc)	WL ^b Correction (ft)	Groundwater Elevation (ft ^a)
			1st reading	2nd reading	Average					
MW24	10/27/2007	18.13	14.640	14.640	14.64	449.44				
MW25	10/27/2007	18.15	14.870	14.871	14.87	449.56				
MW26	10/27/2007	18.25	14.740	14.741	14.74	449.46				
MW28	10/27/2007	18.19	17.655	17.655	17.66	452.31				
MW29	10/27/2007	18.21	16.600	16.600	16.60	451.25				
MW30	10/27/2007	18.29	15.465	15.465	15.47	449.98				
MW31	10/27/2007	18.32	15.310	15.310	15.31	449.81				
MW32	10/27/2007	18.38	16.580	16.581	16.58	451.10				
MW33	10/27/2007	18.42	15.841	15.840	15.84	450.46				
MW34	10/27/2007	18.35	11.570	11.570	11.57	445.93				
MW35	10/27/2007	9.45	14.481	14.480	14.48	448.67	434.19	14.64	0.17	434.20
MW36	10/27/2007	10.34	16.340	16.340	16.34	450.30	433.96			
MW37	10/27/2007	9.47	15.910	15.911	15.91	450.01	434.10			
MW38	10/27/2007	11.04	15.184	15.185	15.18	449.58	434.39			
MW39	10/27/2007	11.4	17.640	17.640	17.64	451.37	433.73	16.75	0.17	434.79
MW40	10/27/2007	10.48	17.131	17.130	17.13	451.78	434.65			
MW41	10/27/2007	10.52	16.368	16.370	16.37	451.00	434.63			
MW42	10/27/2007	11.32	15.810	15.812	15.81	450.52	434.71			
MW43	10/27/2007	11.08	19.796	19.795	19.80	449.44	429.65	15.12	0.17	434.49
MW44	10/27/2007	12.16	15.255	15.254	15.25	449.99	434.73			

TABLE 2-15
Water Level Survey

Location ID	Date	Time	Depth to Water (ft btoc)			Casing Elevation (ft ^a)	Groundwater Elevation (ft ^a)	DTW on 11/8 (ft btoc)	WL ^b Correction (ft)	Groundwater Elevation (ft ^a)
			1st reading	2nd reading	Average					
MW45	10/27/2007	12.07	15.480	15.478	15.48	450.33	434.85			
MW46	10/27/2007	11.58	15.834	15.836	15.84	450.73	434.89			
MW47	10/27/2007	11.49	16.285	16.283	16.28	451.33	435.05			
MW48	10/27/2007	14.20	16.320	16.319	16.32	451.50	435.18			
MW49	10/27/2007	14.33	16.610	16.610	16.61	451.89	435.28			
MW50	10/27/2007	15.00	16.120	16.120	16.12	451.29	435.17			
MW51	10/27/2007	15.05	15.375	15.375	15.38	450.50	435.12			
MW52	10/27/2007	15.3	17.210	17.209	17.21	452.19	434.98			
MW53	10/27/2007	16.18	16.255	16.255	16.26	451.44	435.18			
MW54	10/27/2007	17.42	14.220	14.220	14.22	449.27	435.05			
MW55	10/27/2007	16.14	16.482	16.481	16.48	451.60	435.12			
MW56	10/27/2007	15.48	14.191	14.191	14.19	449.03	434.84			
MW57	10/27/2007	16.53	16.905	16.906	16.91	452.55	435.65			
MW58	10/27/2007	9.18	14.175	14.180	14.18	448.64	434.46			
MW59	10/27/2007	15.37	16.112	16.111	16.11	450.99	434.88			
MW60	10/27/2007	15.08	14.648	14.648	14.65	449.69	435.04			
MW61	10/27/2007	15.52	15.105	15.104	15.10	449.90	434.79			
MW62	10/27/2007	18.48	14.450	14.451	14.45	449.11	434.66			
MW63	10/27/2007	18.45	15.785	17.785	16.79	450.39	433.60			
MW64	10/27/2007	18.55	15.070	15.071	15.07	449.66	434.59			

TABLE 2-15
Water Level Survey

Location ID	Date	Time	Depth to Water (ft btoc)			Casing Elevation (ft ^a)	Groundwater Elevation (ft ^a)	DTW on 11/8 (ft btoc)	WL ^b Correction (ft)	Groundwater Elevation (ft ^a)
			1st reading	2nd reading	Average					
MW65	10/27/2007	18.53	15.471	15.470	15.47	450.00	434.53			
MW67	10/27/2007	18.52	17.135	17.135	17.14	451.62	434.49			
MW68	10/27/2007	15.11	15.771	15.770	15.77	450.90	435.13			
MW69	10/27/2007	14.58	15.175	15.174	15.17	450.36	435.19			
MW70	10/27/2007	16.00	15.850	15.851	15.85	451.25	435.40			
MW71	10/27/2007	16.03	15.635	15.634	15.63	450.97	435.34			
MW73	10/27/2007	16.06	15.950	15.951	15.95	451.30	435.35			
MW74	10/27/2007	17.13	16.510	16.512	16.51	451.43	434.91			
MW76	10/27/2007	17.18	15.975	15.975	15.98	450.87	434.89			

^aElevation in feet above mean sea level (NAVD88).

^bMW01, MW02, MW35, MW39, and MW43 were surveyed on November 7, 2007. A correction factor was applied based on MW39 transducer water level readings from October 27, 2007 to November 7, 2007.

btoc = below top of casing

DTW = Depth to water

ft = feet

MW = Monitoring well

WL = Water level

SECTION 3

Equipment Decontamination and Investigation Derived Waste

This section described the equipment decontamination procedures that were followed and the protocols used in the management of investigation derived waste (IDW)

3.1 Equipment Decontamination

For all sample collection, nitrile gloves were worn and disposed of between samples.

3.1.1 Soil and Sediment Characterization

During MI sampling, all reusable equipment, including hand augers, bowls, and trowels, were decontaminated between DUs. Nitrile gloves, Tyvek booties, and work gloves were disposed of between DUs.

During discrete soil sampling all reusable equipment, including augers, split spoons, and rods were decontaminated between borings and/or sample intervals following the procedures in the FSP. Nitrile gloves, Tyvek booties, EZ Sampler® or Terra Core™ samplers, and 8-ounce non-reactive sample scoops were disposed of between samples.

3.1.2 Hydrogeological Investigation

Hollow-stem augers and split spoons used during well installation were decontaminated between each sample following the procedures in the FSP.. Jacobs provided and maintained a decontamination area for the drill rig augers. These were decontaminated by high pressure steam per ADEC recommended practices. Silicone and polyethylene tubing was utilized for groundwater sampling and discarded after each use.

Water level indicator

As the water level indicator was being retrieved from the well, the graduated tape was scrubbed with a potable water soaked paper towel. When probe was retrieved from the well, it was sprayed with Alconox and then rinsed by spraying with deionized water. The probe was then wiped probe clean with a paper towel.

3.2 IDW Management

IDW generated during the investigation included general refuse, soil cuttings, groundwater retrieved from well development and sampling activities, decontamination water, and used personal protective equipment (PPE) and sampling equipment. Jacobs managed all IDW generated on site. All IDW removed from drum and debris investigations were managed by Jacobs.

3.2.1 Soil Cuttings

Soil cuttings produced during well installation were containerized in 55-gallon or 35-gallon drums. The drums were labeled by CH2M HILL personnel; however, they were transported and stockpiled on site by Jacobs, in the southwest corner of the site, near the soil stockpile area. The soil will be disposed of after the analytical results from soil samples taken during installation are reviewed.

3.2.2 Groundwater

Groundwater produced during well development and sampling was containerized in 55-gallon or 35-gallon drums. The drums were labeled by CH2M HILL personnel; however, they were stored onsite in a lined drum storage cell built and maintained by Jacobs. Jacobs also transported the drums to Building 3476 (also referred to as DERA storage) on Fort Wainwright for storage. The groundwater will be disposed of after the analytical results from groundwater samples are reviewed.

3.2.3 Decontamination Water

The majority of decontamination water produced during investigation was containerized in 55-gallon or 35-gallon drums and stored with groundwater purge and sampling water drums in the drum storage area. One drum of decontamination water was stored in secondary containment inside the Exclusion Zone. Two drums were storage in secondary containment beside the CH2M HILL storage trailer and were primarily used prior to the construction of the drum storage area. Jacobs transported all decontamination water drums to the Building 3476 and sampled them for characterization and disposal.

3.2.4 PPE and Sampling Equipment

PPE and sampling equipment used inside the Exclusion Zone was containerized and managed by Jacobs. All other PPE was disposed of as non-regulated waste.

3.2.5 PCB Screening Kits

Used Hach® PCB test kits were containerized and managed by Jacobs.

3.2.6 General Refuse

General refuse was disposed of in an onsite dumpster rented from University Refuse, LLC., in Fairbanks, Alaska. The dumpster was serviced routinely during the investigation.

Analytical Data Validation and Management

This section describes the management procedures and processes used to validate and process the analytical data for use in RI/FS decision making.

4.1 Analytical Methods

Nineteen methods were used to analyze the FCS environmental samples. The samples were analyzed by TestAmerica Analytical Testing Corporation in West Sacramento, California (TASAC); TestAmerica Analytical Testing Corporation in Tacoma, Washington (TATAC); TestAmerica Analytical Testing Corporation in Santa Ana, California (TASAN); TestAmerica Analytical Testing Corporation in Seattle, Washington (TASEA); and, CH2M HILL's Applied Sciences Laboratory in Corvallis, Oregon (ASL).

The samples were collected and shipped by overnight carrier to TASAC. TASAC was responsible for shipment of samples to all other subcontracted laboratories for analysis. Some samples were shipped overnight directly to ASL for analysis. The samples were analyzed for one or more of the analytes/methods shown in Table 4-1.

4.2 Data Flow Process

The data flow process can generally be divided into the following three main phases:

1. Planning, field work, and data collection
2. Laboratory analysis and data validation
3. Data management, entry into the Taku Data Warehouse, and evaluation of the data

A number of tools for maintaining quality control were utilized throughout the data-flow process to provide high quality data to the end-users as soon as possible.

During the planning, fieldwork and data collection phase of the data flow process, the Sample Tracking Program (STP) was used by CH2M HILL staff to initiate the sample collection and sample documentation and tracking processes. During the laboratory analysis and data validation phase, the CH-Analyzer and Validation Data Management System (VDMS) software were used to aid in evaluation of the quality of the data. At the data management, entry into the Taku Data Warehouse and evaluation stage, the CH-IMPTool was used to transfer the data into the data warehouse. Additional details on use of each of the tools utilized by CH2M HILL (STP, CH-Analyzer, VDMS and CH-IMPTool) are summarized below.

4.2.1 Sample Tracking Program

During the planning stage, the project manager or field team leader (FTL) specified the data requirements for the sampling event. The project-specific data requirements are documented in the work plan. The FTL was responsible for reviewing the work plan and

specifying the QC lot information for the sampling event. All of this information was entered into the sample tracking program.

The STP was used to identify sampling container and preservation requirements, identify appropriate analytical laboratories for samples, and print labels for sample bottles and COC forms.

Once the field data and samples were collected, information on sampling date and time were entered into the STP and as necessary, field measurements, such as water levels and other data collected in the field. The information entered into the STP was exported into VDMS (CH2M HILL's data validation tool), where field data and laboratory analytical data were linked by LocID. (VDMS is described in more detail below). This allowed verification that all sample/method combinations were received by the laboratory.

4.2.2 CH-Analyzer

Before the laboratory analytical data was entered into VDMS, the laboratory electronic deliverable document (EDD) was processed through CH2M HILL's CH-Analyzer (Microsoft Access database application). The CH-Analyzer application includes several automated diagnostic checks to verify format and content compliance with EDD specifications. The analytical laboratory must use CH-Analyzer to check the format and content compliance of its EDD files, and correct any errors prior to transmitting the EDD to CH2M HILL. The laboratory forwarded the checked EDD and hard copy of the data to the Taku Program Chemist who ensured that the EDD verification process and loading occurred, a junior chemist or the database analyst performed the task.

The EDD was checked again using CH-Analyzer to verify correct format and content. If errors were found, the file was returned to the laboratory for correction and re-submittal.

CH-Analyzer was also used to perform a comparison of the COCs to the hardcopy/EDD content, perform a hardcopy/EDD comparison and resolve discrepancies, and document data error issues (such as EDD re-submissions, turnaround time problems, hardcopy incompleteness, etc.). These checks were conducted to ensure the consistency and the validity of the EDD's content before the data were electronically transferred to VDMS for data validation. The objective of applying the CH-Analyzer is to ensure that the validation process was carried out on consistently high-quality data and to minimize the chance of finding data errors later in the validation process, forcing the lab to re-send corrected data and then start the validation process over again.

4.2.3 VDMS

Once the EDD verification was complete, the EDD was electronically transferred into CH2M HILL's VDMS for data quality verification and validation according to project specifications. At import the data were checked against a list of valid values. Once all error messages were resolved validation began.

VDMS was operated in a semi-automated mode for performing validation of the environmental analytical data. Prior to operating VDMS in a semi-automated fashion for data validation, the chemist configured various tables that contain the quality control information, associated validation logic and the qualifiers applied for various QC criteria

that are not achieved. Flagging criteria was based on the Taku Project QAPP. The program chemist provided input and oversight to ensure that data flags were applied correctly by the junior-mid chemist.

4.2.4 Data Validation

Ninety percent of the data were validated according to Level III validation procedures. Ten percent of the soil and water data collected were validated following Level IV procedures. The procedures are outlined below.

Level III data validation procedures include the following:

- A review of the data set narrative to identify any issues that the lab reported in the data deliverable
- A check of sample integrity (sample collection, preservation, and holding times)
- An evaluation of basic QC measurements used to assess the accuracy, precision and representativeness of data including QC blanks, laboratory control samples, MS/MSD, surrogate recovery when applicable, and field or laboratory duplicate results
- A review of sample results, target compound lists, and detection limits to verify that project analytical requirements are met
- Evaluation of calibration and QC summary results against the project requirements
- Evaluation of internal standard QC summary results against the project requirements
- Evaluation of confirmation results against the project requirements when required by the method
- Initiation of corrective actions, as necessary, based on the data review findings
- Qualification of the data using appropriate qualifier flags, as necessary, to reflect data usability limitations
- Evaluation of calibration and quality control summary results against the project requirements
- Other method specific QC requirements

Level IV data validation procedures include the above listed items plus the following additional items:

- Review of sample chromatograms
- Verification of analyte identification
- Calculations for at least 10 percent of the data which will include back-calculating from the initial and continuing calibrations to confirm the result reported

4.2.5 Data Management System

Once the data were validated and approved by the Senior Chemist, export from VDMS to the project Warehouse was performed. The field and laboratory data were merged into a format that is amenable to the warehouse. The backbone of the warehouse is a SQL-server-based data warehouse.

Data Warehouse

- **Data Structure:** The data warehouse is a Microsoft SQL Server 2005 relational database. This database, and all other “CH” tools used, has a data structure designed to achieve compliance with the Environmental Restoration Program Information Management System (ERPIMS) standard specified by the Air Force Center for Engineering and the Environment. ERPIMS is an effective, comprehensive standard for environmental management. However, its use for this RI is incidental, and all data requirements and deliverables will conform to project standards as developed.
- **Data Loading:** Data was loaded into the warehouse with the use of the CH-IMPTool. The database analyst usually performed this task. The CH-IMPTool runs a series of QC checks and adds project-specific formatting and valid values, and loads the data into the warehouse.
- When data is loaded into the warehouse an automated script will run to identify the “best” result when more than one analytical result exists due to analyses by multiple methods or normal/field duplicate pairs. The analytical results presented in Appendix A are all “best” results. Below are the best result selection criteria:
 - When there are two detected results available for one analyte, the highest detected value is reported.
 - When there is one detected result and one non-detected result available for one analyte, the detected value is reported.
 - When there are two non-detected results available for one analyte, the result with the lowest reporting limit is reported.
 - When two results are reported with the same detected or non-detected value, the result with the highest ranking validation flag is reported.
 - No rejected data are included in the selection options.
- **Data Integrity:** The warehouse uses valid value tables when applying reference attributes to project data. Such reference data include the names of site objects and sampling locations, sampling matrix and method categories, analyte names, units, etc. The use of these reference tables is critical for maintaining the completeness and accuracy of data sets and is essential for accurate querying of the data.

All data were loaded and stored in such a manner that relationships between categories of data are enforced. For instance, all sampling records must be associated with a valid site object such as a planned sediment sampling location. The project repository database and all collection, analysis, and reporting tools used in the data management system are designed to enforce, for any project data record entered, entries in fields that refer to other types of data as required by the overall data model.

TABLE 4-1
Analytical Parameters

Parameter	Analytical Method	Laboratory
Volatile Organic Compounds, medium level	SW8260B	TASAC, TATAC
Volatile Organic Compounds, low level	SW8260B	TASAC, TATAC
Volatile Organic Compounds in Air	TO-15	TASAN
Semi-volatile Organic Compounds	SW8270C	TASAC
Polynuclear Aromatic Hydrocarbons	SW8270C-SIM	TASAC
Gasoline Range Organics	AK101	TASAC, TATAC
Diesel/Motor Oil Range Organics	AK102/AK103	TASAC, TATAC
Extractable Petroleum Hydrocarbon Speciation	NWEPH	TASEA
Purgeable Petroleum Hydrocarbon Speciation	NWVPH	TASEA
Metals by ICP	SW6010B	TASAC, TATAC
Metals by ICP-MS	SW6020	TASAC, TATAC
Mercury in water	SW7470A	TASAC, TATAC
Mercury in soil	SW7471A	TASAC
Pesticides	SW8081A	TASAC
Polychlorinated Biphenyls	SW8082	TASAC, ASL, TATAC
Herbicides	SW8151	TATAC
Explosives	SW8321A	TASAC
Explosives	SW8330	TASAC
Dioxins/Furans	SW8290	TASAC

SECTION 5

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Appendix A
Summary Tables of Validated Analytical Data
(Provided on CD)

Appendix B
Data Quality Evaluation Reports
(Provided on CD)

Appendix C
Soil Boring Logs
(Provided on hard copy and CD)



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-13 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12

START: 9/26/2007

END: 9/26/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	1S	ML		SILT (ML). Gray (10YR 5/1), moist, firm, minor fine gravel upper 0.8 foot bgs., organic layer 0.5 inch thick at 1.6 ft. bgs.	0	
					No recovery.		
2.5 - 4.5	2	2S	ML		SILT (ML). Brown (10YR 5/3), moist, soft, minor very fine sand, some oxidation staining.		Collect sample plus duplicate at 3.5 to 4.5 feet bgs. at 1045.
					No recovery.		
5 - 7	2	3S			SILT (ML). Same as above.	0	
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist, medium dense, fine sand, fine to coarse gravel.	0	
					No recovery.		
7.5 - 9.5	1.5	4S	SP		POORLY GRADED SAND (SP). Dark gray (10YR 4/1), moist, medium dense, very fine to fine sand, oxidized.	0	Collect sample at 8.0 to 9.0 feet bgs. at 1120.
					No recovery.		
10 - 12	1.1	5S	SP		POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist to wet. At ~12 feet bgs (on cap): medium dense, very fine to fine sand, some oxidation staining.	0	Collect sample at 10.1 to 11.1 feet bgs. at 1145.
					No recovery.		
12.5 - 14.5	1.2	6S	SP		POORLY GRADED SAND (SP). Very dark gray (10YR 3/1), wet, medium dense, very fine to fine sand.	0	
					No recovery.		
15 - 16.5	1.4	7S	SP		POORLY GRADED SAND (SP). Same as above.	0	
				GW	WELL GRADED GRAVEL WITH SAND (GW). Very dark gray, wet, medium dense, well graded sand.	0	Construct monitoring well MW-13.
					No recovery.		
20					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-14 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.5

START: 9/27/2007

END: 9/27/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	1S	ML	SILT (ML). Brown (10YR 4/3), moist, firm, minor oxidation staining.	0		
				No recovery.			
2.5 - 4.5	1.5	2S	ML	SILT (ML). Brown (10YR 4/3), moist, firm, oxidation staining, wood debris at 3.8 feet bgs.	0	Collect sample at 3.1 to 4.1 feet bgs. at 1320.	
5				SILT (ML). Same as above.	0		
5 - 7	1.7	3S	ML				
				POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, medium dense, very fine sand.			
				No recovery.			
7.5 - 9.5	1.3	4S	SP	POORLY GRADED SAND (SP). Same as above.	0	Collect sample at 7.8 to 8.8 feet bgs. at 1345.	
10				No recovery.			
10 - 12	1.7	5S	SP	POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist to wet. At 11.5 feet bgs: medium dense, very fine to fine sand, minor oxidation staining.	0	Collect sample at 10.7 to 11.7 feet bgs. at 1400.	
				No recovery.			
				POORLY GRADED SAND (SP). Same as above.	0		
12.5 - 14.5	1.5	6S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), wet, medium dense, fine sand, fine to coarse gravel.	0		
				No recovery.			
15				POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0		
15 - 16.5	1	7S	SP				
				No recovery.			
20							
						Construct monitoring well MW-14.	
25							
						Bottom of hole at 17 ft below ground surface	



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-15 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11

START: 10/5/2007

END: 10/5/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS	
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)	
5	0 - 2	1.8	1S	ML	SILT (ML). Brown (10YR 4/3), moist, soft, very minor fine gravel.	0	Collect sample at 2.5 to 4.1 feet bgs. at 1345.	
	2.5 - 4.5	1.6	2S	ML	No recovery.	0		
					SILT (ML). Brown (10YR 4/3), moist, soft to firm, minor very fine sand.			
	5 - 7	1.5	3S	SP	No recovery.	0		
					SILT (ML). Same as above. POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, medium dense, very fine sand.			
	10	7.5 - 9.5	1.6	4S	SP	No recovery.		0
						POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist, medium dense, fine sand, fine to coarse gravel.		
10 - 12		1.2	5S	ML	No recovery.	0		
15	12.5 - 14.5	1.3	6S	SP	POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist to wet, at 11 feet bgs.: fine to very fine sand.	0	Collect sample at 10.2 to 11.2 feet bgs. at 1445.	
					SANDY SILT (ML). Dark grayish brown (10YR 4/2), wet, firm, very fine sand.			
	15 - 16.5	0.7	7S	SP	No recovery.	0		
20					No recovery.	0	Construct monitoring well MW-15.	
					POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, find to coarse gravel.			
25					Bottom of hole at 17 ft below ground surface			



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-18 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12

START: 9/26/2007

END: 9/26/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	2	1S	ML	SILT (ML). Very dark grayish brown (10YR 3/2), moist, firm, some very fine sand, minor fine gravel.	0	
					No recovery.		
					SILT (ML). Same as above.	0	Collect sample at 3.5 to 4.5 feet bgs. at 1400.
2.5 - 4.5	2	2	2S	ML			
					POORLY GRADED SAND (SP). Dark grayish brown , moist, loose, very fine sand, oxidation staining.		
					No recovery.		
5					SILT (ML). Brown (10YR 4/3), moist, firm, some very fine sand.	0.2	
					POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist, medium dense, fine sand, fine gravel.		
					No recovery.		
5 - 7	1.6	3S					
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
					POORLY GRADED SAND (SP). Dark gray (10YR 4/1), moist, medium dense, very fine sand.		Collect sample at 8.3 to 9.3 feet bgs. at 1430.
7.5 - 9.5	1.8	4S					
					No recovery.		
					POORLY GRADED SAND (SP). Same as above.	0	
10							
					POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), moist, medium dense, fine sand, fine gravel.		Collect sample at 10.3 to 11.3 feet bgs. at 1455.
10 - 12	1.3	5S					
					No recovery.		
					POORLY GRADED SAND (SP). Very dark gray, wet, at 12 feet bgs.: medium dense, fine sand.	0	
12.5 - 14.5	1.7	6S					
					No recovery.		
15							
					POORLY GRADED SAND (SP). Same as above. Some fine gravel.	0	
15 - 16.5	1.4	7S					
							Construct monitoring well MW-18.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-19 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS:

START: 9/25/2007

END: 9/25/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	2	1S	ML	SILT (ML). Dark grayish brown (10YR 4/2), moist, medium dense, minor coarse gravel.	0	
					No recovery.		
2.5 - 4.5	2	2	2S	ML	SANDY SILT (ML). Dark brown (10YR 4/3), moist, firm, very fine sand, organic layer at 4.1 feet bgs.	0	Collect sample at 3.5 to 4.5 feet bgs. at 1250.
					No recovery.		
5 - 7	1.9	3	3S	ML	SILT (ML). Gray (10YR 5/1), moist, firm, minor very fine sand, oxidation staining.	0	
					No recovery.		
7.5 - 9.5	1.6	4	4S	SP	SILT (ML). Same as above. POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, medium dense, very fine sand, minor silt.	0	Collect sample at 8.1 to 9.1 feet bgs. at 1315.
					No recovery.		
10 - 12	2	5	5S	SP	POORLY GRADED SAND (SP). Dark gray (10YR 4/1), moist to wet at ~12 feet bgs., medium dense, fine sand.	2.3	Collect sample at 11.0 to 12.0 feet bgs. at 1340.
					No recovery.		
12.5 - 14.5	1.1	6	6S	SP	POORLY GRADED SAND (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand.	0.3	
					No recovery.		
15 - 16.5	1.5	7	7S	SP	POORLY GRADED SAND (SP). Same as above.	0	
					POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, fine to coarse gravel.		
					No recovery.		Construct monitoring well MW-19.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-20 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.6

START: 9/25/2007

END: 9/25/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	1S	ML	SILT (ML). Dark brown (10YR 4/3), moist, firm, minor fine gravel (0 to 8 feet bgs.).	0		
				No recovery.			
2.5 - 4.5	2	2S	ML	SILT (ML). Dark grayish brown (10YR 4/2), moist, firm, minor very fine sand.	0	Collect sample plus duplicate and MS/MSD at 2.5 to 4.5 feet bgs. at 0945.	
				No recovery.			
5 - 7	2	3S	ML	SILT (ML). Dark grayish brown (10YR 4/2), moist, firm, oxidation staining.	0		
				No recovery.			
7.5 - 9.5	1.9	4S	SP	SILT (ML). Same as above. POORLY GRADED SAND (SP). Brown (10YR 4/3), moist, medium dense, very fine sand.	0	Collect sample at 8.4 to 9.4 feet bgs. at 1030.	
				No recovery.			
10 - 12	1.8	5S	SP	POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist to wet at 11.6 feet bgs. medium dense, very fine to fine sand, minor oxidation staining.	0	Collect sample at 10.6 to 11.6 feet bgs. at 1050.	
				No recovery.			
12.5 - 14.5	1.5	6S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, fine to coarse gravel, minor cobble fragments.	0.3		
				No recovery.			
15 - 16.5	1.2	7S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0		
				No recovery.			
20				Bottom of hole at 17 ft below ground surface		Construct monitoring well MW-20.	
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-21 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 9/25/2007

END: 9/25/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2		1S	ML	SILT (ML). Dark grayish brown (10YR 4/2), moist, firm.	0	Collect sample at 3.3 to 4.3 feet bgs. at 1520.
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown (10YR 5/2), moist, fine sand, fine to coarse gravel.	0	
2.5 - 4.5	1.8	2S	ML	SILT (ML). Same as above. No recovery.	0		
			ML	SILT (ML). Very dark brown (10YR 2/2), moist, firm, some coarse gravel.	0		
			ML	SILT (ML). Grayish brown (10YR 5/2), moist, firm, oxidation staining.	0		
				No recovery.	0		
5 - 7	1.5	3S	ML	SILT (ML). Very dark grayish brown (10YR 3/2), moist, firm, oxidation staining.	0		
				No recovery.	0		
7.5 - 9.5	2	4S	ML	SILT (ML). Dark grayish brown (10YR 4/2), moist, firm, oxidation staining.	0	Collect sample at 8.5 to 9.5 feet bgs. at 1545.	
				No recovery.	0		
10 - 12	1.5	5S	ML	SILT (ML). Dark gray (10YR 4/1), moist, firm, heavily oxidized.	0	Collect sample at 10.5 to 11.5 feet bgs. at 1600.	
			SP	POORLY GRADED SAND (SP). Brown (10YR 4/3), moist, medium dense, fine sand. No recovery.	0		
12.5 - 14.5	1.2	6S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark grayish brown (10YR 3/2), wet, medium dense, fine sand, fine to coarse gravel.	0		
				No recovery.	0		
15 - 16.5	0.8	7S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	Construct monitoring well MW-21.	
			SP	WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, well graded sand. No recovery.	0		
20							Bottom of hole at 17 ft below ground surface
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-22 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.1

START: 9/27/2007

END: 9/27/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	1.7	1S	ML		SILT WITH SAND (ML). Dark grayish brown (10YR 4/2), moist, firm, very fine sand.	0	
					No recovery.		
2.5 - 4.5	1.7	2S	SP		POORLY GRADED SAND (SP). Gray (10YR 5/1), moist, loose, very fine sand.	0	Collect sample plus duplicate at 3.2 to 4.2 feet bgs. at 1000.
					SILT (ML). Very dark gray (10YR 3/1), moist, firm.		
5					No recovery.		
					POORLY GRADED SAND (SP). Brown (10YR 5/3), moist, medium dense, very fine sand.	0	
5 - 7	1.6	3S	SP				
					No recovery.		
					POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, medium dense, very fine sand.	0	Collect sample at 7.9 to 8.9 feet bgs. at 1040.
7.5 - 9.5	1.4	4S	SP				
					No recovery.		
					POORLY GRADED SAND (SP). Very dark grayish brown (10YR 3/2), moist, medium dense, very fine to fine sand. Wet on cap at ~12.1 feet bgs.	0	Collect sample at 10.6 to 11.6 feet bgs. at 1055.
10	1.6	5S	SP				
					No recovery.		
					POORLY GRADED SAND (SP). Very dark grayish brown (10Y 3/2), wet, medium dense, very fine to fine sand.	0	
12.5 - 14.5	0.9	6S	SP				
					No recovery.		
					POORLY GRADED SAND (SP). Same as above.	0	
15	1.5	7S	GW		WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, medium dense, fine sand.		
					No recovery.		Construct monitoring well MW-22.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-23 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.5

START: 9/21/2007

END: 9/21/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	1S	ML		SILT (ML). Brown (10YR 4/3), moist, firm, some fine gravel (at 0 to 0.8 feet bgs.), minor oxidation staining.	0	
					No recovery.	0	
					SILT (ML). Same as above.	0	
2.5 - 4.5	2	2S	ML				Collect sample at 3.5 to 4.5 feet bgs. at 1500.
					POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown (10YR 5/2), moist, medium dense, fine sand, fine to coarse gravel.		
					No recovery.	0	
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
5 - 7	1.3	3S	SP				
					No recovery.	0	
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
7.5 - 9.5	1.6	4S	SP				Collect sample at 8.1 to 9.1 feet bgs. at 1530.
					POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, fine sand.		
					No recovery.	0	
					POORLY GRADED SAND (SP). Same as above. Wet at ~11.5 feet bgs.	0	Collect sample at 10.0 to 11.0 feet bgs. at 1550.
10 - 12	1.2	5S	SP				
					POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand.		
					No recovery.	0	
					POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, fine to coarse gravel.	0	
12.5 - 14.5	1.4	6S	SP				
					No recovery.	0	
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
15 - 16.5	1.1	7S	SP				
					No recovery.	0	
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
							Construct monitoring well MW-23.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-24 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.5

START: 9/21/2007

END: 9/21/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2		2	1S	ML	SILT (ML). Brown (10YR 4/3), moist, firm, some fine gravel (at 0 to 0.8 feet bgs.).	0	Collect sample at 3.5 to 4.5 feet bgs. at 1155. Collect sample at 8.5 to 9.5 feet bgs. at 1220. Collect sample at 10.5 to 11.5 feet bgs. at 1340.
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown (10YR 5/2), moist, medium dense. No recovery.	0	
2.5 - 4.5	2	2S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown (10YR 5/2), moist, medium dense, fine sand, fine to coarse gravel. No recovery.	0		
			SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist, medium dense, fine sand, fine to coarse gravel. No recovery.	0		
5 - 7	1.6	3S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. No recovery.	0		
			SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. No recovery.	0		
7.5 - 9.5	2	4S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. No recovery.	0		
			ML	SILT WITH GRAVEL (ML). Dark brown, moist, firm to stiff, fine gravel. No recovery.	0		
10 - 12	1.5	5S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown, moist to wet at 11.5 feet bgs., medium dense, fine sand, fine to coarse gravel, oxidized. No recovery.	0		
			SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. Very dark gray (10YR 3/1), wet. No recovery.	0		
12.5 - 14.5	1.2	6S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. No recovery.	0		
			SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. No recovery.	0		
15 - 16.5	1	7S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. No recovery.	0	Construct monitoring well MW-24.	
20							
25							

Bottom of hole at 17 ft below ground surface



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-25 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 9/19/2007

END: 9/19/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2		2	1S	ML	SANDY SILT WITH GRAVEL (ML). Brown (10YR 4/3), moist, soft, fine gravel. SILT (ML). Brown (10YR 4/3), moist, firm, minor very fine sand.	0	
				ML			
2.5 - 4.5		2	2S	ML	No recovery. SILT WITH SAND (ML). Brown (10YR 5/3), moist, firm, very fine sand.	0	Collect sample at 3.5 to 4.5 feet bgs. at 1325.
				ML			
5 - 7		1.1	3S	SP	No recovery. POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, medium dense, fine sand, oxidized.	0	
				SP			
7.5 - 9.5		1	4S	SP	No recovery. POORLY GRADED SAND (SP). Brown (10YR 4/3), moist, medium dense, fine sand, oxidation staining.	0	Collect sample at 7.5 to 8.5 feet bgs. at 1345.
				SP			
10 - 12		1.5	5S	SP	No recovery. POORLY GRADED SAND WITH GRAVEL (SP). Dark yellowish brown (10YR 4/6), moist, loose, fine gravel. POORLY GRADED SAND (SP). Same as above.	0.1	Collect sample at 10.5 to 11.5 feet bgs. at 1400.
				SP			
12.5 - 14.5		1.1	6S	SP	No recovery. POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, fine to coarse gravel.	0.1	
				SP			
15 - 16.5		1.4	7S	GW	No recovery. WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, medium dense, well graded sand.		Construct monitoring well MW-25.
				GW			
20					Bottom of hole at 17.5 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-26 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.8

START: 9/19/2007

END: 9/19/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2		2	1S	SP-SM	POORLY GRADED SAND WITH SILT (SP-SM). Dark grayish brown (10YR 4/2), moist, loose, very fine sand.	0	Collect sample at 3.2 to 4.2 feet bgs. at 1025. Collect sample at 8.5 to 9.5 feet bgs. at 1055. Collect sample at 10.7 to 11.7 feet bgs. at 1110. Construct monitoring well MW-26.
				ML	SILT (ML). Brown (10YR 4/3), moist, firm. No recovery.	0	
2.5 - 4.5	1.7	2S	ML	SANDY SILT (ML). Dark grayish brown (10YR 4/2), moist, firm, very fine sand. No recovery.	0		
			SP-SM	POORLY GRADED SAND WITH SILT (SP-SM). Grayish brown (10YR 5/2), moist, medium dense, very fine sand.	0		
5 - 7	1.8	3S	SP-SM	No recovery.	0		
				POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, medium dense, fine sand.	0		
7.5 - 9.5	2	4S		No recovery.	0		
			SP	POORLY GRADED SAND (SP). Same as above.	0		
10 - 12	1.7	5S	SW	WELL GRADED SAND WITH GRAVEL (SW). Very dark grayish brown (10YR 3/2), moist to wet at 11.8 feet bgs.	0		
				No recovery.	0		
12.5 - 14.5	1.1	6S	GW	WELL GRADED GRAVEL WITH SAND (GW). Dark gray (10YR 4/1), wet, medium dense, well graded sand.	0		
				No recovery.	0		
15 - 16.5	1.3	7S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, fine gravel.	0		
20							Bottom of hole at 17 ft below ground surface
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-27 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.5

START: 9/21/2007

END: 9/21/3007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2		2	1S	ML	SILT (ML). Grayish brown (10YR 5/2), moist, firm, some very fine sand.	0	Collect sample plus duplicate and MS/MSD at 2.5 to 4.5 feet bgs. at 0915.
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Brown (10YR 5/3), moist, medium dense, fine sand. No recovery.	0.2	
2.5 - 4.5		2	2S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Brown (10YR 5/3), moist, medium dense, fine sand, fine to coarse gravel. No recovery.	0	
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist, medium dense, fine sand, fine to coarse gravel.	0	
5 - 7		2	3S	SP	No recovery.	0	
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
7.5 - 9.5		2	4S	SP	No recovery.	0	
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark grayish brown (10YR 3/2), moist to wet at 11.5 feet bgs., medium dense, fine sand, fine to coarse gravel.	0	
10 - 12		2	5S	SP	No recovery.	0	
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray, (10YR 3/1). Same as above.	0	
12.5 - 14.5		0.9	6S	SP	No recovery.	0	
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
15 - 16.5		1.5	7S	SP	No recovery.	0	
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
20					Bottom of hole at 17 ft below ground surface		Construct monitoring well MW-27.
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-28 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 13.6

START: 9/18/2007

END: 9/18/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2		2	1S		SILT (ML). Brown (10YR 4/3), moist, firm.	0	Collect sample 3.5 to 4.5 feet bgs.
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown (10YR 5/2), moist, loose. No recovery.	0	
2.5 - 4.5	2	2S	ML	SILT (ML). Brown (10YR 5/3), moist, firm, some oxidation staining, minor organic material. No recovery.	0		
				SILT (ML). Dark grayish brown (10YR 4/2), moist, firm, minor oxidation staining.	0		
5 - 7	2	3S	ML	No recovery.	0		
				SILT (ML). Same as above.	0		
7.5 - 9.5	1.8	4S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark gray (10YR 4/1), moist, medium dense.	0	Collect sample at 8.5 to 9.5 feet bgs.	
				No recovery.	0		
10 - 12	1.5	5S	SP	POORLY GRADED SAND (SP). Brown (10YR 5/3), moist, medium dense, fine sand, minor fine gravel.	0	Collect sample at 10.5 to 11.5	
				No recovery.	0		
12.5 - 14.5	1.6	6S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), moist to wet at 13.6 feet bgs., medium dense, fine to coarse gravel.	0		
				No recovery.	0		
15 - 16.5	1.3	7S	GW	WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, medium dense, well graded sand.	0	Construct monitoring well MW-27.	
				No recovery.			
20							
25					Bottom of hole at 18.5 ft below ground surface		



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-29 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 13

START: 9/18/2007

END: 9/18/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	1S	ML	SILT (ML). Brown (10YR 4/3), moist, firm, some fine to coarse gravel, minor very fine sand, minor oxidation staining.	0		
				No recovery.			
2.5 - 4.5	1.7	2S	ML	SILT (ML). Dark grayish brown (10YR 4/2), moist, firm, very minor oxidation staining.	0	Collect sample plus duplicate and MS/MSD at 2.5 to 4.5 feet bgs.	
				No recovery.			
5 - 7	1.9	3S	ML	SILT (ML). Same as above.	0		
				No recovery.			
7.5 - 9.5	1.5	4S	SP	SANDY SILT (ML). Brown (10YR 4/3), moist, firm, very fine sand. POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, medium dense, fine sand.	0	Collect sample at 7.5 to 9.5 feet bgs. at 1030.	
				No recovery.			
10 - 12	1.2	5S	ML SP	SANDY SILT (ML). Grayish brown (10YR 5/2), moist, firm, very fine sand. POORLY GRADED SAND (SP). Same as above.	0	Collect sample at 12.5 to 13.0 feet bgs.	
				No recovery.			
12.5 - 14.5	1.6	6S	SP	POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, wet at 13 feet bgs., medium dense, fine sand.	0		
				No recovery.			
15 - 16.5	1.2	7S	GW	WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, medium dense, well graded sand.	0		
				No recovery.			
20						Construct monitoring well MW-29.	
25						Bottom of hole at 18 ft below ground surface	



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-31 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 9/14/07

END: 9/14/07

LOGGER: D. Cichy

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	0.75	1S	ML		SANDY SILT WITH GRAVEL (ML). Dark brown (10YR 4/3), dry to moist, loose, 10% gravel, rounded grains.		Collect sample 2.5 to 4 feet bgs.
					No recovery. Same as above.		
2.5 - 4.5	0.8	2S	SC SP		CLAYEY SAND (SC). Black, dry to moist, loose to firm, fine sand. POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), dry, loose, very fine grains, mica.		Collect sample at 7.5 to 8.5 feet bgs.
					No recovery. POORLY GRADED SAND (SP). Same as above. 5 to 5.7: CLAYEY, minor gravels, 20% clay.		
5 - 7	100	3S	SP		No recovery. POORLY GRADED SAND (SP). Same as above. Fine.		Collect sample at 12.5 to 13.5 feet bgs.
7.5 - 9.5	100	4S	SP		No recovery. POORLY GRADED SAND (SP). Same as above. Moist at 10.5 feet bgs.		Construct monitoring well MW-31.
					No recovery. Same as above. Wet at 12.5 feet bgs.		
10 - 12	100	5S	SP		No recovery. WELL GRADED GRAVEL (GW). Very dark grayish brown (10YR 3/1), wet, loose, 1 to 3 cm grains.		Bottom of hole at 17 ft below ground surface
					No recovery. WELL GRADED GRAVEL. Same as above.		
12.5 - 14.5	100	6S	GW				
15 - 17		7S	GW				
20							
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-33 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.7

START: 9/15/07

END: 9/15/07

LOGGER: A. Guilfoyle

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	80	1S	SM	SILTY SAND (SM). Brown (10YR 4/3), dry, loose, predominately fine gravel. Wood fragments at 1.6 feet bgs.	0		
2 - 4	60	2S	SP	POORLY GRADED SAND (SP). Brown (7.5YR 5/2), dry, loose, medium grained.	0	Collect sample 3.5 to 4.5 feet bgs.	
5				Same as above.	0		
5 - 7	100	3S	SP	Same as above.	52		
7.5 - 9.5	100	4S	SP	Same as above.	40.5	Collect sample at 8.5 to 9.5 feet bgs.	
10				Same as above. At 11.5 feet bgs. increase in gravel to 20%.	168		
10 - 12	100	5S	SP	WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, loose, fine to coarse gravel.	2.8	Collect sample at 12.5 to 14.5 feet bgs.	
12.5 - 14.5	80	6S	GW	WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, loose, fine to coarse.			
15				Bottom of hole at 18.5 ft below ground surface			
15 - 17	70	7S	GW				
20							
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-35 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 10.8

START: 9/22/2007

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LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	1.5	1S	ML		SILT (ML). Dark brown (10YR 3/3), moist, soft, abundant organic material upper 0.3 feet bgs.	0	
					No recovery.		
2.5 - 4.5	1.2	2S	ML		SILT (ML). Brown (10YR 5/3), moist, firm, minor organic material.	0	Collect sample plus duplicate at 2.7 to 3.7 feet bgs. at 1230.
					No recovery.		
5 - 7	2	3S	ML		SILT (ML). Brown (10YR 4/3), moist, firm, some oxidation staining.	0	
					No recovery.		
7.5 - 9.5	1.7	4S	SP		POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, medium dense, very fine to fine sand.	0	Collect sample at 8.2 to 9.2 feet bgs. at 1255.
					No recovery.		
10 - 12	1.8	5S	SP		POORLY GRADED SAND (SP). Same as above. Wet at 10 feet bgs.	0	Collect sample at 10.5 to 11.5 feet bgs. at 1320.
					POORLY GRADED SAND WITH GRAVEL (SP). Very dark grayish brown, wet, medium dense, fine sand, fine to coarse gravel.		
					No recovery.		
12.5 - 14.5	1.6	6S	SP		POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
					WELL GRADED SAND WITH GRAVEL (SW). Very dark gray (10YR 3/1), wet, medium dense, fine to coarse gravel.		
					No recovery.		
15 - 16.5	0.8	7S	SW		WELL GRADED SAND WITH GRAVEL (SW). Same as above.		
					No recovery.		
20					Bottom of hole at 17 ft below ground surface		Construct monitoring well MW-35.
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-37 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12

START: 9/24/2007

END: 9/24/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	1S	ML	ML	SILT (ML). Brown (10YR 4/3), moist, firm, organic material, upper 0.3 feet bgs.: minor fine to coarse gravel.	0	
					No recovery.		
					SILT (ML). Same as above.	0	Collect sample at 3.0 to 4.0 feet bgs. at 1020.
2.5 - 4.5	1.5	2S	ML	ML			
					No recovery.		
					SILT (ML). Same as above.	0	
5 - 7	1.7	3S	ML	ML			
					POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist, medium dense, fine sand, fine to coarse gravel.		
					No recovery.		
					SILT (ML). Same as above.	0	Collect sample at 7.3 to 8.3 feet bgs. at 1045.
7.5 - 9.5	1.6	4S	ML	ML			
					POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, medium dense, very fine to fine sand.		
					No recovery.		
					POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, medium dense, very fine to fine sand, some fine gravel, wet at 12 feet bgs.	0	Collect sample at 10.5 to 11.5 feet bgs. at 1105.
10 - 12	1.5	5S	SP	SP			
					No recovery.		
					POORLY GRADED SAND (SP). Very dark grayish brown (10YR 3/2), wet, medium dense, fine sand.	0	
12.5 - 14.5	1.4	6S	SP	SP			
					No recovery.		
					POORLY GRADED SAND WITH GRAVEL (SP). Very dark grayish brown (10YR 5/2), wet, medium dense, fine sand and gravel.	0	
15 - 17	0.4	7S	SP	SP			
							Construct monitoring well MW-37.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-38 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.5

START: 9/24/2007

END: 9/24/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2		2	1S	ML	SILT (ML). Dark brown (10YR 3/3), moist, firm, organic material. SANDY SILT (ML). Grayish brown (10YR 5/2), moist, firm, very fine sand.	0	
				ML			
2.5 - 4.5	2	2S	2S	SP-SM	No recovery. POORLY GRADED SAND WITH SILT (SP-SM). Grayish brown (10YR 5/2), moist, medium dense, very fine sand.	3.1	Collect sample 3.5 to 4.5 feet bgs. at 1545.
				SP-SM			
5 - 7	2	3S	3S	SP	No recovery. POORLY GRADED SAND WITH SILT (SP-SM). Same as above. POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, medium dense, fine to very fine sand.	0	
				SP			
7.5 - 9.5	2	4S	4S	SP	No recovery. POORLY GRADED SAND (SP). Same as above.	0	Collect sample at 8.5 to 9.5 feet bgs. at 1610.
				SP			
10 - 12	2	5S	5S	SP	No recovery. POORLY GRADED SAND (SP). Same as above. POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown, moist to wet at 11.5 feet bgs., medium dense, fine sand, fine to coarse gravel.	0	
				SP			
12.5 - 14.5	1.4	6S	6S	SP	No recovery. POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, fine to coarse gravel.	0.2	Collect sample at 10.5 to 11.5 feet bgs. at 1625.
				SP			
15 - 17	1.1	7S	7S	SP	No recovery. POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
				SP			
20					Bottom of hole at 17 ft below ground surface		Construct monitoring well MW-38.
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-39 SHEET 1 OF 2

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 13.5

START: 9/29/2007

END: 9/29/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OL	Organics and topsoil (OL) at surface. Silty sand and little gravel.		
				SM	SANDY SILT (SM). Trace gravel.		
				SM	SANDY SILT (SM). Brown, damp.		Collect sample at 3 feet bgs. at 0926
5							
	5 - 7	1.1	1S	ML	SILT (ML). Dark grayish brown (10YR 4/2), moist, firm, medium to very fine sand, oxidation staining.	0	Collect sample at 6 feet bgs. at 0936
					No recovery.		
	7.5 - 9.5	1.5	2S	SP	SILT (ML). Same as above. POORLY GRADED SAND (SP). Gray (10YR 5/1), moist, loose, very fine sand.	0.2 0.1	
10							
					No recovery.		
	10 - 12	1.8	3S	SP	POORLY GRADED SAND (SP). Gray (10YR 5/1), moist, medium dense, very fine sand.	0	Collect sample at 10.8 to 11.8 feet bgs. at 0910.
					No recovery.		
	12 - 14.5	1.7	4S	SP	POORLY GRADED SAND (SP). Very dark grayish brown (10YR 3/2), moist to wet. At ~13.5 medium dense, very fine sand, minor fine gravel.	0	
15							
					No recovery.		
	15 - 16.5	1.5	5S	SP	POORLY GRADED SAND (SP). Same as above.	0	
					No recovery.		
					Drill was using center bit. Cuttings: POORLY GRADED SAND WITH GRAVEL (SP).		
20							
				SP			
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-39 SHEET 2 OF 2

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 13.5

START: 9/29/2007

END: 9/29/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
25 - 26		0.6	6S	GW	WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, dense, fine sand.	0	
				GW	Drill using center bit. Cuttings: WELL GRADED GRAVEL WITH SAND (GW).		
30					Bottom of hole at 30 ft below ground surface		Construct monitoring well MW-39.
35							
40							
45							
50							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-40 SHEET 1 OF 3

SOIL BORING LOG

PROJECT: Taku Gardens LOCATION : Ft. Wainwright, AK

ELEVATION: ft () DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5 START: 10/1/2007 END: 10/1/2007 LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
5				SP-SM	ORGANICS AND GRAVEL (SP-SM). Brown, fine sand, with some silt, gravel, dry, intermed. sorting.	0	Object encountered in NE corner of excavation. Concrete confirmed in hand shoveling by D. Franklin. Pit moved S by ~1 foot or so to avoid it.
				GW	Layer of gravel. Brown/red organics.		SW corner of pit: Chunk of concrete ~3 feet bgs. Collect sample at 0828.
				ML	CLAYEY SILT AND SAND (ML). Rust colored, gray, low stiffness.		
				ML	SILT (ML). Brown (10YR 5/3), moist, soft, minor very fine sand.		Collect sample at 0831.
					No recovery.		
10	7.5 - 9.5	1.3	2S	SP	POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, loose, very fine sand, minor oxidation staining.	0	
					No recovery.		
15	10 - 12	1.5	3S	SP	POORLY GRADED SAND (SP). Same as above.	0	Collect sample at 10.5 to 11.5 feet bgs. at 1445.
					No recovery.		
				SP	POORLY GRADED SAND (SP). Dark gray (10YR 4/1), wet, medium dense, very fine to fine sand.		
20	12.5 - 14.5	2	4S	SP	No recovery.	0	
				SP	POORLY GRADED SAND (SP). Same as above.		
25	15 - 16.5	1.2	5S	SP	Drill using center bit. No split spoon samples were collected from 16.5 to 40 feet bgs.	0	



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-40 SHEET 2 OF 3

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 10/1/2007

END: 10/1/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
30							
35							
40	40 - 41.5	0.5	6S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense to dense, fine sand, fine to coarse gravel. Drill using center bit to 51 feet bgs.	0	
45	41.5 - 50						
50							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-40 SHEET 3 OF 3

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 10/1/2007

END: 10/1/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
55					Bottom of hole at 51 ft below ground surface		Contract monitoring well MW-40.
60							
65							
70							
75							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-42 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 13

START: 10/20/2007

END: 10/20/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 5				SM-ML	Organics and topsoil. Dry to slightly damp, silty.	0	No debris noted.
5					SANDY SILT (ML). Brown, slightly damp to damp.		Collect sample at 0851.
5 - 7	2		1S	SP-SM	POORLY GRADED SAND WITH SILT (SP-SM). Gray (10YR 5/1), moist, loose, very fine sand.	0	Collect sample at 0900.
					No recovery.		
7.5 - 9.5	1.5		2S	SP-SM SP	POORLY GRADED SAND WITH SILT (SP-SM). Same as above. POORLY GRADED SAND WITH GRAVEL (SP). Gray (10YR 5/1), moist, medium dense, fine sand, fine gravel.	0	
10					No recovery.		
10 - 12	1.4		3S	SP SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, medium dense, very fine to fine sand, oxidized.	0	Collect sample at 10.4 to 11.4 feet bgs. at 0930.
					No recovery.		
12.5 - 14.5	0.9		4S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. Wet at 13 feet bgs. Wood debris at 13.2 feet bgs.	0	
15					No recovery.		
15 - 16.5	1.2		5S	SP	POORLY GRADED SAND (SP). Very dark gray (10YR 3/1), wet, medium dense, very fine to fine sand, minor fine gravel.	0	
					No recovery.		
20							Contract monitoring well MW-42.
					Bottom of hole at 18 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-43 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.2

START: 10/2/2007

END: 10/2/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
5				ML	Organic/tree debris. Brown, silty.	0	Brian is concerned well hit abandoned power line.
				SM	Organic layer. Brown, fine sand with silt. Organic debris and plenty of roots.		Collect sample at 0848.
				OL	Organic layer (OL). Trends N - S, deeper on North side.		
	5 - 7	1.7	1S	ML	SILT (ML). Gray (10YR 5/1), moist, soft, oxidation staining.	0	Collect sample at 0855.
	7.5 - 9.5	2	2S	SP	No recovery. SILT (ML). Same as above. POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, loose, very fine sand.	0	
				SP	No recovery. POORLY GRADED SAND (SP). Dark gray, moist to wet at 11.2 feet bgs., medium dense, very fine to fine sand.	0	Collect sample at 10.4 to 11.4 feet bgs. at 1130.
				SP	No recovery. POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, fine to coarse gravel, cobble fragments.	0	
GW				No recovery. WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, medium dense, fine sand.	0		
15 - 17	0.3	5S		No recovery.		Construct monitoring well MW-43.	
20				Bottom of hole at 17 ft below ground surface			
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-44 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.2

START: 10/3/2007

END: 10/3/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
					Few organics and gravel at surface.		No PID readings 0 to 5 feet bgs. Area A Clearance.
				SM-ML	FINE SAND/SILT (SM-ML). Brown, soil and debris.		Collect sample at 0910.
				ML	SANDY SILT (ML). Brown/gray, dry to slightly damp.		
					SANDY SILT WITH CLAY (ML). Brown/gray, low stiffness, low plasticity.		
5	5 - 7	0.7	1S	ML ML	SILT (ML). Brown (10YR 4/3), moist, soft, some well graded sand and gravel, backfill material.	0	Collect sample at 0915.
					No recovery.		
	7.5 - 9.5	2	2S	SP	SILT (ML). Same as above. POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, loose, very fine sand.	0	
10	10 - 12	1.3	3S	SP	No recovery. POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist to wet at 11.2 feet bgs., medium dense, very fine sand, oxidation staining.	0	Collect sample at 10.3 to 11.3 feet bgs. at 0930.
					No recovery.		
	12.5 - 14.5	1.8	4S	SP	POORLY GRADED SAND (SP). Same as above. POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, fine to coarse gravel.	0	
15	15 - 17	0.9	5S	GW	No recovery. WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, medium dense, fine sand.	0	
					No recovery.		Construct monitoring well MW-44.
20					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER: 357465.B1.01	BORING NUMBER: MW-45	SHEET 1 OF 1
SOIL BORING LOG		

PROJECT: Taku Gardens LOCATION : Ft. Wainwright, AK

ELEVATION: ft () DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5 START: 9/29/2007 END: 9/29/2007 LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS			
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)			
5				MW	SANDY SILT WITH GRAVEL (MW). Trace organics.	0	Collect sample at 3 feet bgs.			
				ML	SILT (ML). Gray/tan, damp, with clay.					
				CL	CLAY (CL). Gray.					
	5 - 7	1.7	1S	ML	SILT (ML). Grayish brown (10YR 5/2), moist, firm, minor very fine sand.					
	7.5 - 9.5	2	2S	ML	No recovery. SILT (ML). Same as above.			0.1	Collect sample at 7 feet bgs.	
				ML	SANDY SILT (ML). Grayish brown (10YR 5/2), moist, firm, 30% very fine sand.					
	10	10 - 12	1.8	3S	SP			No recovery. POORLY GRADED SAND (SP). Gray (10YR 5/1), moist, medium dense, very fine sand, minor silt.	0	Collect sample at 10.8 to 11.8 feet bgs. at 1200.
					SP			No recovery. POORLY GRADED SAND (SP). Same as above.	0	
		12.5 - 14.5	1.8	4S	SP			POORLY GRADED SAND WITH GRAVEL (SP). Very dark grayish brown (10YR 3/2), wet, medium dense, fine sand, fine to coarse gravel.	0	
					SP			No recovery. POORLY GRADED SAND (SP). Very dark gray, wet, medium dense, fine sand.		
15	15 - 16.5	0.9	5S	SP	No recovery.	0				
					No recovery.					
20					Bottom of hole at 17 ft below ground surface		Construct monitoring well MW-45.			
25										



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-46 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens LOCATION : Ft. Wainwright, AK

ELEVATION: ft () DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5 START: 9/29/2007 END: 9/29/2007 LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OL	Organics and topsoil (OL).		
				ML	SANDY GLACIAL SILT (ML). Tan/brown. No signs of debris. Fades to gray fine sand/silt at 3 feet bgs.		No debris encountered.
				SM	SANDY SILT (SM). Tan/gray, dry to slight damp, fine, few organics (roots) to depth. No debris or disturbance seen.		Collect sample at 1535 on 9/25/2007.
5	5 - 7	1.3	1S	ML	SANDY SILT (ML). Dark yellow brown (10YR 4/4), moist, soft, very fine sand, oxidation staining.	0	Collect sample at 1547 on 9/25/2007.
					No recovery.		
	7.5 - 9.5	1.6	2S	SP	POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, medium dense, very fine sand.	0	
10					No recovery.		
	10 - 12	1.8	3S	SP	POORLY GRADED SAND (SP). Gray (10YR 5/1), moist, medium dense, very fine sand.	0	Collect sample at 10.8 to 11.8 feet bgs. at 1400.
					No recovery.		
	12.5 - 14.5	1.8	4S	SP	POORLY GRADED SAND (SP). Same as above. POORLY GRADED SAND WITH GRAVEL (SP). Dark gray (10YR 4/1), wet, medium dense, fine sand, fine to coarse gravel.	0.1	
15					No recovery.		
	15 - 16.5	0.7	5S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
					No recovery.		
20							Construct monitoring well MW-46.
					Bottom of hole at 17.5 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-47 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens LOCATION : Ft. Wainwright, AK

ELEVATION: ft () DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5 START: 10/2/2007 END: 10/2/2007 LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				SM	Organics and gravelly silt (SM).		
				SP	Disturbed soils seen from 1 to 2 feet bgs. Angled line of disturbed darker brown intermediate to well sorted sand.		No debris encountered.
				ML	GLACIAL SILT (ML). Gray to rust/tan, slightly damp to damp, poorly sorted.		Collect sample at 2.0 feet bgs. at 0950.
5				ML			
	5 - 7	1	1S	ML	SILT (ML). Dark grayish brown (10YR 4/2), moist, soft, some well graded sand and gravel, backfill material.	0	Collect sample at 6.0 feet bgs. at 0958.
					No recovery.		
	7.5 - 9.5	1.7	2S	ML	SILT (ML). Same as above.	0	
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Gray (10YR 5/1), moist, loose, fine sand, fine gravel.		
10					No recovery.		
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
	10 - 12	1.4	3S	SP	POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, fine sand.		Collect sample at 10.4 to 11.4 feet bgs. at 1425.
					No recovery.		
	12.5 - 14.5	1.2	4S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark gray (10YR 4/1), wet, medium dense, fine sand, fine to coarse gravel.	0	
15					No recovery.		
	15 - 17	0.9	5S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
					No recovery.		
20							
					Bottom of hole at 17 ft below ground surface		Construct monitoring well MW-47.
25							



PROJECT NUMBER: 357465.B1.01	BORING NUMBER: MW-48	SHEET 1 OF 1
SOIL BORING LOG		

PROJECT: Taku Gardens LOCATION : Ft. Wainwright, AK

ELEVATION: ft () DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5 START: 9/28/2007 END: 9/28/2007 LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
					Organics and topsoil/silt at surface.		No debris noted/encountered.
					FINE SAND AND SILT (ML). Tan/brown (10YR 2/4), dry to slightly damp, medium dense, poorly sorted.		
					Same as above.		
					Band of fine grayish sand.		
					SANDY SILT (SP-ML). Gray (10YR 2/5) and tan (10YR 2/4), slightly damp to damp, medium dense, poorly sorted.		Collect sample at 1015.
5				SP-ML			
	5 - 7	1	1S	SP	POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, loose, very fine sand.	0	Collect sample at 1020.
					No recovery.		
				SP	POORLY GRADED SAND (SP). Same as above.	0	
	7.5 - 9.5	1.5	2S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown (10YR 4/2), moist, medium dense, fine sand, fine to coarse gravel.		
10					No recovery.		
	10 - 12	1.6	3S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist, medium dense, fine sand, fine to coarse gravel.	0	Collect sample at 10.6 to 11.6 feet bgs. at 1525.
					No recovery.		
	12.5 - 14.5	1.5	4S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. Wet.	0	
15					No recovery.		
	15 - 17	1.6	5S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, fine to coarse gravel.	0	
					No recovery.		
20							
					Bottom of hole at 17.5 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-49 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 13

START: 9/28/2007

END: 9/28/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OH	Organics and gravel (OH).		
				SP	FINE SAND (SP). Brown, dry to slightly damp, poorly sorted.		Collect sample at 2.0 feet bgs. at 0952.
				SM	SILTY SAND (SM). Gray/brown, dry to slightly damp, trace clay, gravel.		
				SP	FINE SAND (SP). Gray, slightly damp, little gravel, poorly sorted.		
5				SP			
	5 - 7	0.9	1S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown (10YR 5/2), moist, loose, fine sand, fine to coarse gravel, backfill material.	0	Collect sample at 6.0 feet bgs. at 0958.
					No recovery.		
	7.5 - 9.5	2	2S	SP	POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, medium dense, very fine sand.	0	Collect sample at 10.6 to 11.6 feet bgs. at 1345.
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above.		
10					No recovery.		
	10 - 12	1.6	3S		POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown (10YR 5/2), moist, medium dense, fine sand, fine to coarse gravel.	0	
					No recovery.		
	12.5 - 14.5	1.6	4S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark grayish brown (10YR 3/2), moist to wet at ~13 feet bgs., medium dense, fine sand, fine to coarse gravel.	0	
15					No recovery.		
	15 - 17	1.3	5S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
					No recovery.		
20							Construct monitoring well MW-49.
					Bottom of hole at 18 ft below ground surface		
25							



PROJECT NUMBER: 357465.B1.01	BORING NUMBER: MW-50	SHEET 1 OF 1
SOIL BORING LOG		

PROJECT: Taku Gardens LOCATION : Ft. Wainwright, AK

ELEVATION: ft () DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5 START: 10/3/2007 END: 10/3/2007 LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
5	5 - 7	0.3	1S	OL	Gravel. Few organics, scraps of building debris.	0	Collect sample at 2.0 feet bgs. at 0938.
				SP-SM	FINE SAND WITH SILT (SP-SM). Brown, little gravel, organics.		
				ML	SILT (ML) with clay layer, 2 inches thick, gray.		
				ML	SANDY SILT (ML). Gray/tan, little clay.		
				SP-SM	FINE SAND (SP-SM). Gray/tan, dry to slightly damp, trace gravel, little silt, poorly sorted.		
				SP	POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, loose, very fine sand.		
					No recovery.		
					POORLY GRADED SAND (SP). Brown (10YR 4/3), moist, medium dense, very fine sand, heavily oxidized.		
					No recovery.		
					POORLY GRADED SAND (SP). Same as above.		
10	7.5 - 9.5	2	2S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist, medium dense, very fine sand, fine to coarse gravel.	0	Collect sample at 6.0 feet bgs. at 0943.
					No recovery.		
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above.		
					POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist, medium dense, very fine sand, fine to coarse gravel.		
15	10 - 12	1.3	3S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. Wet at 12.5 feet bgs.	0	Collect sample at 10.3 to 11.3 feet bgs. at 1400.
					No recovery.		
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above.		
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above. Wet at 12.5 feet bgs.		
20	12.5 - 14.5	1.4	4S	SP	WELL GRADED GRAVEL WITH SAND (GW). Very dark brown (10YR 3/2), wet, medium dense, fine sand.	0	Construct monitoring well MW-50.
					No recovery.		
					WELL GRADED GRAVEL WITH SAND (GW). Very dark brown (10YR 3/2), wet, medium dense, fine sand.		
					No recovery.		
25	15 - 16.5	1.1	5S	GW			
					Bottom of hole at 17 ft below ground surface		



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-51 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.5

START: 10/3/2007

END: 10/3/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OH	Gravel at surface, organics (roots, branches) in 0 to 1 foot bgs.		
				SM	SILTY SAND (SM). Brown/tan, trace clay and organics.		
				SP-SM	Trace clay and organics (SP-SM). Dry to slightly damp, increasing sand to 5 feet bgs.		Collect sample including MS/MSD at 2.0 feet bgs. at 0935.
5							
	5 - 7	2	1S	SP	POORLY GRADED SAND (SP). Brown (10YR 4/3), moist, loose, very fine sand.	0	Collect sample at 6.0 feet bgs. at 0940.
					No recovery.		
	7.5 - 9.5	1.5	2S	SP	POORLY GRADED SAND (SP). Same as above.	0	
10							
					No recovery.		
	10 - 12	1.8	3S	SP	POORLY GRADED SAND (SP). Dark gray (10YR 4/1), moist to wet at 11.5 feet bgs., medium dense, very fine sand.	0	Collect sample at 10.8 to 11.8 feet bgs. at 1600.
					No recovery.		
	12.5 - 14.5	1.1	4S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark grayish brown (10YR 3/2), wet, medium dense, fine sand, fine to coarse gravel.	0	
15							
					No recovery.		
	15 - 16.5	1.1	5S	GW	WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, medium dense, fine sand, minor cobble fragments.	0	
					No recovery.		
							Construct monitoring well MW-51.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-52 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12

START: 10/4/2007

END: 10/4/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OH	Gravel at surface, few organics (OH).		
				SM-ML	FINE SAND WITH SILT (SM-ML). Brown, dry to slightly damp, some gravel.		
				ML	SANDY SILT WITH SOME CLAY (ML). Gray/brown, dry to slightly damp, few organics, trace gravel.		Collect sample at 2.0 feet bgs. at 0918 on 9/29/2007.
5				ML	SANDY SILT WITH GRAVEL (ML). Dark grayish brown (10YR 4/2), moist, soft, fine sand and gravel, backfill material.	0	
	5 - 7	1.7	1S	ML	No recovery.		Collect sample at 6.0 feet bgs. at 0921 on 9/29/2007.
				ML	SILT (ML). Brown (10YR 4/3), moist, firm, minor very fine sand, oxidation staining.	0	
	7.5 - 9.5	2	2S	ML	No recovery.		
10				ML	SILT (ML). Same as above.	0	
	10 - 12	2	3S	SP	POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist to wet at ~12 feet bgs., medium dense, very fine sand.	0	Collect sample at 11.0 to 12.0 feet bgs. at 0915.
				SP	No recovery.		
	12.5 - 14.5	1.9	4S	SP	POORLY GRADED SAND (SP). Dark gray (10YR 4/1), wet, medium dense, very fine to fine sand.	0	
15				SP	No recovery.		
	15 - 16.5	1.1	5S	SP	POORLY GRADED SAND (SP). Same as above.	0	
				SP	No recovery.		Construct monitoring well MW-52.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-53 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens LOCATION : Ft. Wainwright, AK

ELEVATION: ft () DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5 START: 10/4/2007 END: 10/4/2007 LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
					Gravel and organics at surface (OH).		
				ML	SANDY SILT (ML). Brown, dry to slightly damp, compacted, trace gravel, organics (roots, branches) seen to 3 feet bgs.		Collect sample at 2.0 feet bgs. at 1030.
				SM	Transitions to gray fine sand from the siltier brown/tan near surface.		
5							
	5 - 7	2	1S	ML	SANDY SILT (ML). Brown (10YR 4/3), moist, soft, very fine sand.	0	Collect sample at 6.0 feet bgs. at 1039.
					No recovery.		
	7.5 - 9.5	2	2S	SP	POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, medium dense, very fine sand.	0	
10							
					No recovery.		
	10 - 12	1.4	3S	SP	POORLY GRADED SAND (SP). Same as above.	0	Collect sample at 10.4 to 11.4 feet bgs. at 1130.
					No recovery.		
	12.5 - 14.5	1.5	4S	SP	POORLY GRADED SAND (SP). Very dark grayish brown (10YR 3/2), wet, medium dense, very fine to fine sand.	0	
15							
					No recovery.		
	15 - 16.5	1.3	5S	SP	POORLY GRADED SAND (SP). Same as above.	0	
					No recovery.		
20							
					Bottom of hole at 17 ft below ground surface		Construct monitoring well MW-53.
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-54 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11

START: 10/4/2007

END: 10/4/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OH	Organics and gravel at surface (OH).		
				SP-SM	FINE SAND WITH SILT (SP-SM). Brown/gray, dry, intermediate sorting. Many tree roots and organics.		Collect sample at 2.0 feet bgs. at 1055.
				SP	FINE SAND. Gray, dry to slightly damp.		
5							
	5 - 7	1.6	1S	ML	SANDY SILT (ML). Dark grayish brown (10YR 4/2), moist, soft, very fine sand, minor fine gravel.	0	Collect sample at 6.0 feet bgs. at 1100.
					No recovery.		
	7.5 - 9.5	1.5	2S	ML SP	SANDY SILT (ML). Same as above. POORLY GRADED SAND (SP). Gray (10YR 5/1), moist, medium dense, very fine to fine sand.	0	
10							
	10 - 12	1.3	3S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark gray (10YR 4/1), moist to wet at 11 feet bgs., medium dense, fine sand, fine to coarse gravel.	0	Collect sample at 10.3 to 11.3 feet bgs. at 1620.
					No recovery.		
	12.5 - 14.5	1.3	4S	SP GW	POORLY GRADED SAND WITH GRAVEL (SP). Same as above. WELL GRADED GRAVEL WITH SAND (GW). Very dark gray (10YR 3/1), wet, medium dense, fine sand.	0	
15							
	15 - 16.5	0.7	5S	GW	WELL GRADED GRAVEL WITH SAND (GW). Same as above.	0	
					No recovery.		Construct monitoring well MW-54.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-55 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens LOCATION : Ft. Wainwright, AK

ELEVATION: ft () DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5 START: 9/27/2007 END: 9/27/2007 LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OH	Organics and gravel at surface (OH).		
				SP-SM	FINE SAND. Gray.		
				SM	FINE SAND (SM). Tan/orange, dry to slightly damp, trace clay, silt. Organics/roots throughout interval.		Collect sample at 2.0 feet bgs. at 1117.
5					SILTY SAND (ML). Brown/orange, with little clay.		
	5 - 7	1	1S	ML ML	SILT (ML). Brown (10YR 4/3), moist, firm, minor very fine sand.	0	Collect sample at 6.0 feet bgs. at 1122.
					No recovery.		
	7.5 - 9.5	2	2S	ML	SILT (ML). Same as above.	0	
10					No recovery.		
	10 - 12	2	3S	ML	SILT (ML). Same as above.	0	
					POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown (10YR 5/2), moist, medium dense, fine sand, fine to coarse gravel.		
					No recovery.		
	12.5 - 14.5	1.7	4S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark grayish brown (10YR 3/2), wet, medium dense, fine sand, fine to coarse gravel.	0	Collect sample at 11 to 12 feet bgs. at 1545.
15					No recovery.		
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above.		
	15 - 17	1.1	5S	SP	POORLY GRADED SAND (SP). Very dark gray (10YR 3/1), wet, medium dense, very fine sand.	0	
					No recovery.		Construct monitoring well MW-55.
20							
					Bottom of hole at 17.5 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-56 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 11.7

START: 10/3/2007

END: 10/3/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
					Few organics and gravel at surface.		
				SM	FINE SAND WITH SILT (SM). Brown, few organics.		
				ML	SAND/SILT (ML). Gray.		
				CL	Transitions to SILTY CLAY (CL). Gray/brown, slightly damp, low to medium stiffness.		Collect sample at 4 feet bgs. at 1617 on 9/25/07.
5	5 - 7	1.4	1S	ML	SILT (ML). Brown (10YR 4/3), moist, soft, some fine sand and gravel, backfill material.	0	Collect sample at 6 feet bgs. at 1620 on 9/25/07.
					No recovery.		
	7.5 - 9.5	1.3	2S	SP	POORLY GRADED SAND (SP). Gray (10YR 5/1), moist, loose, very fine sand.	0	
10	10 - 12	1.7	3S	SP	No recovery. POORLY GRADED SAND (SP). Dark gray (10YR 4/1), moist to wet at 11.7 feet bgs., medium dense, very fine sand, some oxidation staining.	0	Collect sample at 10.7 to 11.7 feet bgs. at 1200.
					No recovery.		
	12.5 - 14.5	1.4	4S	SP	POORLY GRADED SAND (SP). Same as above.	0	
15	15 - 17	1	5S	SP	No recovery. POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, fine to coarse gravel. No recovery. POORLY GRADED SAND (SP). Very dark gray (10YR 3/1), wet, medium dense, fine sand, some fine gravel.	0	
					No recovery.		Construct monitoring well MW-56.
20					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-57 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 9/28/2007

END: 9/28/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OH	Organics and gravel at surface (OH).		
				SP-SM	VERY FINE SAND WITH SILT (SP-SM). Brown/tan, little clay, intermediate stiffness.		Collect sample at 2.0 feet bgs. at 1014 on 9/25/2007.
5					Organics present at depth. Rust/gray colored, organic layer from 4.5 to 5 feet bgs.		
	5 - 7	0.3	1S	ML	SILT (ML). Brown (10YR 4/3), moist, firm.	0	
					No recovery.		Collect sample at 7.0 feet bgs. at 1019 on 9/25/2007.
	7.5 - 9.5	1.6	2S	ML SP	SILT (ML). Same as above. POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, loose, very fine sand, minor oxidation staining.	0	
10					No recovery.		
				SP	POORLY GRADED SAND (SP). Same as above.	0	
	10 - 12	1.7	3S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Grayish brown (10YR 5/2), moist, medium dense, fine sand, fine to coarse gravel.	0	Collect sample plus duplicate sample at 10.7 to 11.7 feet bgs. at 0925.
					No recovery.		
	12.5 - 14.5	1.2	4S	SP	POORLY GRADED SAND (SP). Dark gray (10YR 4/2), wet, medium dense, very fine to fine sand, minor fine gravel.	0	
15					No recovery.		
	15 - 17	1.3	5S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark gray (10YR 4/2), wet, medium dense, fine sand.	0	
					No recovery.		Construct monitoring well MW-57.
20							
					Bottom of hole at 17.5 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-58 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 13.5

START: 9/22/2007

END: 9/22/2007

LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2		1S	SP	Asphalt. POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist, medium dense, fine sand.	0	
					No recovery.		
					SILT (ML). Very dark grayish brown (10YR 3/2), moist, firm.	0	
2.5 - 4.5	2		2S	ML			Collect sample at 3.5 to 4.5 feet bgs. at 0910.
					POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, fine sand.		
					No recovery.		
					SILT (ML). Grayish brown (10YR 5/2), moist, soft, very fine sand.	0	
5 - 7	1.5		3S	ML			
					No recovery.		
					POORLY GRADED SAND (SP). Brown (10YR 5/3), moist, medium dense, very fine to fine sand.	0	Collect sample at 8.2 to 9.2 feet bgs. at 0940.
7.5 - 9.5	1.7		4S	SP			
					POORLY GRADED SAND (SP). Dark grayish brown (10YR 4/2), moist, medium dense, very fine to fine sand.	0	Collect sample at 10.5 to 11.5 feet bgs. at 1005.
10 - 12	1.5		5S	SP			
					No recovery.		
					POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), moist to wet at 12.5 feet bgs., medium dense, fine sand, fine to coarse gravel.	0	
12.5 - 14.5	2		6S	SP			
					No recovery.		
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above.	0	
15 - 17	1.3		7S	SP			
					No recovery.		
					POORLY GRADED SAND WITH GRAVEL (SP). Same as above. With cobble fragments from 18.4 to 18.8 feet bgs.	0	
17.5 - 19	1.3		8S	SP			
							Construct monitoring well MW-58.
20							
					Bottom of hole at 19 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-59 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens LOCATION : Ft. Wainwright, AK

ELEVATION: ft () DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12 START: 10/6/2007 END: 10/6/2007 LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OH	Organics and gravel at surface (OH).		
				SP-SM	FINE SAND WITH SILT (SP-SM). Brown, dry to slightly damp. Some gravel and organics.		
5				ML	CLAYEY SANDY SILT (ML). Brown, organics, roots.		
	5 - 7	1.5	1S	ML	SILT (ML). Brown (10YR 4/3), moist, soft, oxidation staining.	0.2	Collect sample at 3.0 feet bgs. at 1049 on 10/4/2007.
					No recovery.		
	7.5 - 9.5	1.7	2S	ML	SILT (ML). Same as above.	0.2	Collect sample at 6.0 feet bgs. at 1454 on 10/4/2007.
				SP	POORLY GRADED SAND (SP). Grayish brown (10YR 5/2), moist, medium dense, very fine sand.		
10					No recovery.		
	10 - 12	1.5	3S	SP	POORLY GRADED SAND (SP). Same as above.	0.5	Collect sample at 10.4 to 11.4 feet bgs. at 1100.
					No recovery.		
	12.5 - 14.5	2	4S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark grayish brown (10YR 4/2), wet, medium dense to dense, fine sand, fine to coarse gravel, cobble fragments.	0.2	
15					No recovery.		
	15 - 16.5	1.3	5S	SP	POORLY GRADED SAND WITH GRAVEL (SP). Very dark gray (10YR 3/1), wet, medum dense, fine sand, fine to coarse gravel.	0.1	
					No recovery.		
20							Construct monitoring well MW-59.
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-60 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens LOCATION : Ft. Wainwright, AK

ELEVATION: ft () DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12 START: 10/6/2007 END: 10/6/2007 LOGGER: L. Kieffer

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				GW	Gravel at surface (GW).		
				ML	SANDY SILT (ML). Brown/gray, dry, to slightly damp, trace clay, organics at ~2 feet bgs.		Collect sample at 2.0 feet bgs. at 1416 on 10/4/2007.
5	5 - 7	1.2	1S	ML	SILT WITH GRAVEL (ML). Brown (10YR 4/3), moist, soft, fine gravel, minor sand, backfill material.	1.3	Collect sample at 5.0 feet bgs. at 1420 on 10/4/2007.
					No recovery.		
	7.5 - 9.5	1.4	2S	SP	POORLY GRADED SAND (SP). Gray (10YR 5/1), moist, loose, very fine sand, oxidation staining.	1.5	
10	10 - 12	1.7	3S	SP	POORLY GRADED SAND (SP). Very dark grayish brown (10YR 3/2), moist, medium dense, very fine sand.	1.9	Collect sample at 10.7 to 11.7 feet bgs. at 0910.
					No recovery.		
	12.5 - 14.5	1.3	4S	SP	POORLY GRADED SAND (SP). Same as above. Weathered staining at 13.6 feet bgs., very dark gray (10YR 3/1). Wet at 12 feet bgs.	1.4	
15	15 - 16.5	0.8	5S	SP	POORLY GRADED SAND (SP). Same as above.	1.6	
				SP	POORLY GRADED SAND WITH GRAVEL (SP). Dark gray (10YR 4/1), wet, fine sand, fine to coarse gravel.		
					No recovery.		Construct monitoring well MW-60.
20					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-62 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 10/12/2007

END: 10/12/2007

LOGGER: R. Clennon

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	1S	ML	SANDY SILT (ML). Dark brown (10YR 2/4), some gravel, organics.	0.4		
				No recovery.			
2.5 - 4.5	1.2	2S	ML	SANDY SILT WITH GRAVEL (ML). Brown (10YR 4/2), medium dense, fine sand, poorly sorted, organics.	3.2	Collect sample at 3.0 feet bgs. at 1740 on 10/11/2007.	
				No recovery.			
5 - 7	1.75	3S	ML	SANDY SILT WITH GRAVEL (ML). Brown (10YR 2/4), medium dense, poorly sorted, organics.	5.1		
			SP-SM	FINE SILTY SAND (SP-SM). Tan/brown (10YR 3/4), damp, medium dense, poorly sorted.		Collect sample at 6.0 feet bgs. at 1750 on 10/11/2007.	
				No recovery.			
7.5 - 9.5	1.25	4S		FINE SAND WITH SILT (SP). Brown (10YR 3/4), medium dense, poorly sorted.	6.8		
				No recovery.			
10 - 12	1.5	5S	SP	FINE SAND (SP). Brown (10YR 2/4), moist (increasing with depth), medium dense, poorly sorted, little silt.	4.2	Collect sample at 10.0 to 12.0 feet bgs. at 1015.	
				No recovery.			
12.5 - 14.5	1.75	6S	SP	FINE TO MEDIUM SAND (SP). Brown (10YR 2/4), wet, medium dense, poorly sorted.			
			SW	FINE SAND (SW). Brown (10YR 2/4), wet, medium dense, with gravel, well sorted.			
				No recovery.			
15 - 17	2	7S	SW	SAND WITH GRAVEL (SW). Wet, well sorted.			
						Construct monitoring well MW-62.	
20							
25							

Bottom of hole at 17 ft below ground surface



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-64 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12

START: 10/8/2007

END: 10/8/2007

LOGGER: R. Clennon

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	1S	SP		FINE SAND (SP). Brown (10YR 1/3), damp, medium dense.	0	
					No recovery.		
2.5 - 4.5	1.5	2S	ML		FINE SAND WITH SILT (ML). Brown (10YR 4/3), dry to slightly damp, medium dense, poorly sorted.	0	
					FINE SAND WITH SILT (SP-SM). Medium dense, poorly sorted.		Collect sample at 3.5 to 4.5 feet bgs. at 1035.
					No recovery.		
5 - 7	1.2	3S	SP		FINE SAND (SP). Brown (10YR 3/4), medium dense, poorly sorted.	0.2	
					No recovery.		
7.5 - 9.5	1.25	4S	ML		FINE SAND/SANDY SILT (ML). Brown (10YR 4/5), dry to slightly damp, poorly sorted, oxidation staining.	0.5	
					FINE SAND (SP). Brown (10YR 2/4), dry to slightly damp, poorly sorted, trace silt, trace gravel.		Collect sample at 8.5 to 9.5 feet bgs. at 1106.
					No recovery.		
10 - 12	1.7	5S	SP		FINE SAND (SP). Brown (10YR 2/4), damp to moist, medium dense, poorly sorted, trace gravel. Wet at ~12 feet bgs.	0.6	
					No recovery.		
12.5 - 14.5	1.3	6S	SP		FINE SAND (SP). Brown (10YR 2/4), wet, medium dense, poorly sorted, trace silt, trace gravel.	0.5	
					WELL GRADED GRAVEL WITH SAND (SW). Brown (10YR 1/4), wet.		
					No recovery.		
15 - 17	2	7S	GW		GRAVEL WITH SAND (GW). Brown (10YR 1/4), wet, well graded.		
							Construct monitoring well MW-64.
20							
25					Bottom of hole at 17 ft below ground surface		



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-65 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 10/10/2007

END: 10/10/2007

LOGGER: R. Clennon

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	1S	SM-ML		SANDY SILT (SM-ML). Brown (10YR 2/3), dry to slightly damp, loose to medium dense, poorly sorted, trace gravel.	0	
					No recovery.		
2.5 - 4.5	1.3	2S	SP		FINE SAND WITH GRAVEL (SP). Tan/gray (10YR 2/4), medium dense, poorly sorted.	0.9	
					FINE SAND (SP). Brown (10YR 2/4), poorly sorted, few gravel.		Collect sample at 3.5 to 4.5 feet bgs. at 1135.
5					No recovery.		
					FINE SAND (SP). Tan (10YR 2/4), medium dense, poorly sorted, trace gravel.	9.8	
5 - 7	1.2	3S	SP				
					No recovery.		
					FINE SAND (SP). Tan (10 YR 3/5), damp, poorly sorted.	86.7	Collect sample at 7.5 to 9.0 feet bgs. at 1155. Noticeable odor. 38.7 ppm heated headspace.
7.5 - 9.5	1.6	4S	SP				
10					No recovery.		
					FINE/SILTY SAND (SP-SM). Brown (10YR 3/4), damp to wet, medium dense, poorly sorted, few gravel.	273	Collect sample at 10.0 to 12.0 feet bgs. at 1205. Obvious odor. 95.7 ppm heated headspace.
10 - 12	1.4	5S	SP		FINE SAND WITH GRAVEL (SP). Tan/gray (10YR 2/5), moist, medium dense, intermediate to well sorted.		
					No recovery.		
					FINE SAND (SP). Brown (10YR 2/4), moist to wet, poorly sorted, little gravel and silt.	129	Obvious odor. 326 ppm heated headspace.
12.5 - 14.5	1.3	6S	SW-GW		SAND AND GRAVEL (SW-GW). Brown/gray, wet, well sorted.		
15					No recovery.		
					Same as above.		
15 - 17	2	7S	SW-GW				
							Construct monitoring well MW-65.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-67 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 10/9/2007

END: 10/9/2007

LOGGER: R. Clennon

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2		1S	SM	FINE SAND WITH SILT (SM). Brown, (10YR 3/3), medium dense, poorly sorted, little gravel.	0.2	
					No recovery.		
2.5 - 4.5	1.25		2S	SM-ML SP-SM	FINE SAND WITH SILT (SM-ML). Brown (10YR 3/3). Same as above. Oxidation staining. FINE SAND WITH SILT (SP-SM). Tan (10YR 3/4), medium dense, poorly sorted.	0.5	Collect sample at 3.5 to 4.5 feet bgs. at 1550.
					No recovery.		
5 - 7	1.2		3S	ML	FINE SANDY SILT (ML). Tan (10YR 2/4), medium dense, poorly sorted.	2.1	
					No recovery.		
7.5 - 9.5	1		4S	ML SP	SANDY SILT (ML). Brown (10YR 2/4), medium dense. FINE SAND (SP). Brown (10YR 2/1), medium dense, poorly sorted.	1.1	Collect sample at 8.5 to 9.5 feet bgs. at 1610.
					No recovery.		
10 - 12	1		5S	SP	FINE SAND (SP). Brown (10YR 3/4), damp to moist, medium dense, poorly sorted.	1	Collect sample at 10.0 to 12.0 feet bgs. at 1525.
					No recovery.		
12.5 - 14.5	1.1		6S	SP GW-SW	FINE SAND (SP). Brown (10YR 4/3), wet, loose to medium dense, well sorted, little silt and gravel. WELL GRADED GRAVEL AND SAND (GW-SW). Brown, well sorted, various colors.		
					No recovery.		
15 - 17	2		7S	SW	SAND WITH GRAVEL (SW). Brown, wet, medium dense.		
							Construct monitoring well MW-65.
20							
25					Bottom of hole at 17 ft below ground surface		



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-68 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 15

START: 10/13/07

END: 10/13/07

LOGGER: OJT

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OL	Soil and organics at surface (OL).		Debris: track chain, scrap metal, and rope. Other misc. scrap metal, burnt debris, possibly wood mostly within the top 3 feet bgs. Collect sample at 3.5 at 1710. Larger metal in SE corner, non munitions related. Collect sample at 6.0 feet bgs. at 1725.
				ML	SANDY SILT (ML). Brown (10YR 4/4), with gravel.		
				SP	FINE SAND WITH SILT (SP). Tan/gray.		
				OL	Organic layer. Black and rust colored.		
5					FINE SAND (SP). Gray/tan, damp to moist, medium dense, poorly sorted.		
	5 - 7	0.25	1S	SM-ML	SILTY SAND (SM-ML). Light brownish gray (10YR 6/2), dry, loose, poorly sorted.	0.8	
					No recovery.		
	7.5 - 9.5	2	2S	SM-ML	SILTY SAND (SM-ML). Same as above. Wood organic at 7 feet bgs.	0.8	
10					No recovery.		
				SM-ML	SILTY SAND (SM-ML). Same as above. Wood organic.	1.8	
	10 - 12	2	3S	SW	SAND/GRAVEL (SW). Light brownish gray (10YR 6/2), dry, loose.		
					No recovery.		
				SW	SAND/GRAVEL (SW). Very dark gray (10YR 3/1), loose. Water at 15 feet bgs.	2.4	
	12.5 - 15.5	2	4S	SW	Same as above. Gray (10YR 5/1), saturated, loose.		
15							Location cleared by DAVE as all debris was located in the top few feet and was mainly cleared out with the exception of large debris in the SE corner of pit. He moved stake west so that driller will be able to avoid it.
20					Bottom of hole at 15.5 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-70 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 10/13/07

END: 10/13/07

LOGGER: R. Clennon

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OH	Gravel and organics at surface (OH).		
				OL	SANDY SILT (ML). Gray/brown, medium dense, poorly sorted. Layer of black and rust colored organics (OL). SILT (ML). Oxidation staining.		Collect sample at 1605.
5				ML			
	5 - 7	0.9	1S	SM-ML	SANDY SILT (SM-ML). Brown (10YR 3/3), medium dense, poorly sorted, trace gravel.	0.4	Collect sample at 1620.
					No recovery.		
	7.5 - 9.5	1	2S	SP-SM	FINE SAND (SP-SM). Tan/brown (10YR 3/4), damp, medium dense, poorly sorted, little silt.	3.8	
10					No recovery.		
	10 - 12	0.95	3S	SP-SM	FINE SAND WITH SILT (SP-SM). Tan (10YR 3/4), damp, medium dense, poorly sorted.	3.9	Collect sample at 10.0 to 12.0 feet bgs. at 1345.
					No recovery.		
	12.5 - 14.5	1.3	4S	SW-GW	SAND AND GRAVEL (SW-GW). Brown/gray (10YR 2/5), wet, well graded.	3	
15					No recovery.		
	15 - 17	0.5	5S	SW-GW	SAND AND GRAVEL (SW-GW). Brown/gray (10YR 2/5), wet, well sorted.		
							Construct monitoring well MW-70.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-71 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 10/13/2007

END: 10/13/2007

LOGGER: R. Clennon

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OH	Gravel and organics at surface (OH).		
				ML	SANDY SILT (ML). Brown (10YR 3/4), poorly sorted, some gravel, organics, oxidation staining.		Collect sample at 1640 on 10/12/2007.
				SM	SILTY SAND (SM). Tan (10YR 2/4), medium dense, poorly sorted.		
5				SP-SM	FINE SAND WITH SILT (SP-SM). Tan/gray (10YR 2/4), poorly sorted.		
	5 - 7	0.9	1S	SP-SM	FINE SAND WITH SILT (SP-SM). Tan (10YR 3/4), dry to slightly damp, medium dense, poorly sorted.	1.2	Collect sample at 1645 on 10/12/2007.
					No recovery.		
	7.5 - 9.5	1	2S	SP-SM	FINE SAND (SP-SM). Tan (10YR 2/4), medium dense, poorly sorted, some silt.	2.1	
10					No recovery.		
	10 - 12	0.95	3S	SP-SM	FINE SAND (SP-SM). Tan/brown (10YR 3/4), damp to moist, medium dense, poorly sorted, some silt.	2	Collect sample at 10.0 to 12.0 feet bgs. at 1030.
					No recovery.		
	12.5 - 14.5	1.3	4S	SP	FINE SAND WITH GRAVEL (SP). Tan/gray (10YR 2/4), wet, well sorted.		
15					No recovery.		
	15 - 17	0.5	5S	SP-GW	SAND AND GRAVEL (SP-GW). Wet, well sorted.		
							Construct monitoring well MW-71.
20							
					Bottom of hole at 17 ft below ground surface		
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-73 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 15

START: 10/14/07

END: 10/14/07

LOGGER: OJT

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
				OH	Gravel and organics at surface (OH).		
				ML	SANDY SILT WITH GRAVEL (ML). Brown (10YR 3/2), medium dense, poorly sorted. Organic layer at 1.5 feet bgs.		Collect sample at 1500.
				ML	SANDY SILT (ML). Gray/brown (10YR 4/1), trace gravel, oxidation staining, organics.		Collect sample at 1505.
5							
	5 - 7	2	1S	ML	SILT (ML). Light olive brown (2.5Y 5/4), dry, loose, poorly graded.	1.2	
					No recovery.		
				SM	SILTY SAND (SM). Gray (2.5Y 6/1), dry, loose, poorly graded.	1.3	
	7.5 - 10	2	2S	ML	SILT (ML). Yellow (2.5Y 7/6), dry, loose, poorly graded.		
10							
				SM	SILTY SAND (SM). Gray (2.5Y 6/1), dry, loose.		
	10 - 12	2	3S	SM	SILTY SAND (SM). Gray (2.5Y 6/1), dry, loose, poorly graded.	2.4	
					No recovery.		
					No recovery.	1.8	
	12.5 - 15	1	4S				
15				SW	SAND/GRAVEL (SW). Very dark gray brown (2.5YR 3/2), saturated, loose. Water at 15 feet bgs.		
					Bottom of hole at 15 ft below ground surface		
20							
25							



PROJECT NUMBER:
357465.B1.01

BORING NUMBER:
MW-76 SHEET 1 OF 1

SOIL BORING LOG

PROJECT: Taku Gardens

LOCATION : Ft. Wainwright, AK

ELEVATION: ft ()

DRILLING CONTRACTOR: Discovery Drilling

DRILLING EQUIPMENT: CME-55 Hollow Stem Auger

DRILLING EQUIPMENT: 4.25-inch ID HSA with 2 foot core barrel sampler

WATER LEVELS: 12.5

START: 10/10/2007

END: 10/10/2007

LOGGER: R. Clennon

DEPTH (ft bgs)	INTERVAL (ft)	RECOVERY (%)	TYPE NUMBER	USCS CODE	SOIL DESCRIPTION	PID (ppm)	COMMENTS
					SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY		OBSERVATIONS (E.G., DEBRIS, SHEEN, STAINING), SAMPLING AND TESTING NOTES, DRILLING OPERATIONS (e.g., REFUSAL, DRILL RATE)
0 - 2	2	1S	ML	SANDY SILT (ML). Brown (10YR 3/4), dry, medium dense, poorly sorted, trace gravel.	0.4		
				No recovery.			
2.5 - 4.5	1.5	2S	ML	SANDY SILT (ML). Brown (10YR 2/4), poorly sorted, some gravel, few organics.	1.4		
			ML	SILT (ML). Brown (10YR 2/3), few clay, trace gravel, some organics.		Collect sample at 3.5 to 4.5 feet bgs. at 1515.	
				No recovery.			
5 - 7	1.6	3S	ML	SILT (ML). Brown (10YR 3/3), medium dense, few gravel, organics.	1.5		
			ML	SILT (ML). Tan (10YR 4/4), damp, medium dense to dense.			
				No recovery.			
7.5 - 9.5	1.6	4S	ML	SANDY SILT (ML). Tan (10YR 4/4), medium dense to dense.	2.3		
			SM	SILTY SAND (SM). Tan (10YR 3/4), medium dense, poorly sorted.		Collect sample at 8.0 to 9.5 feet bgs. at 1535.	
				No recovery.			
10 - 12	1.8	5S	SM	SILTY SAND (SM). Tan/brown (10YR 3/4), medium dense, poorly sorted, little silt.	0.9		
			SP-SM	FINE SAND (SP-SM). Tan/brown (10YR 3/4), moist, medium dense, poorly sorted.		Collect sample at 10.5 to 12.0 feet bgs. at 1550.	
				No recovery.			
12.5 - 14.5	1.6	6S	SP-SW	SAND WITH GRAVEL (SP-SW). Brown (10YR 2/4), wet, medium dense, intermediate sorting, increasing gravel with depth.	0.6		
			GW	GRAVEL WITH SAND (GW). Gray (10YR 1/3), wet, medium density, well graded.			
15 - 17		7S	GW	GRAVEL WITH SAND (GW). Gray (10YR 1/6).			
						Construct monitoring well MW-76.	
20							
25							
Bottom of hole at 17 ft below ground surface							

Appendix D
Monitoring Well Installation Diagrams
(Provided on hard copy and CD)



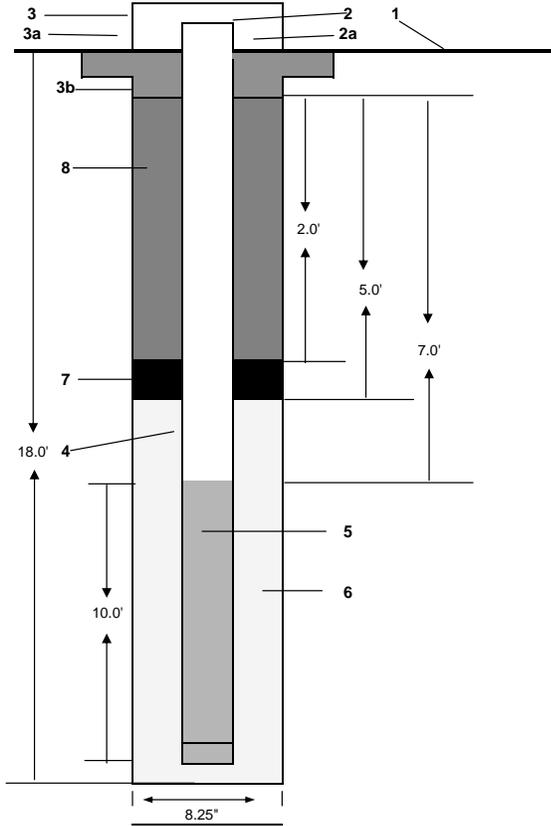
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-15

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 11 ft bgs START : 10-05-07/1450 LOGGER : L. Kieffe



1- Ground elevation at well	448.7 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451.3 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	7-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1.5-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



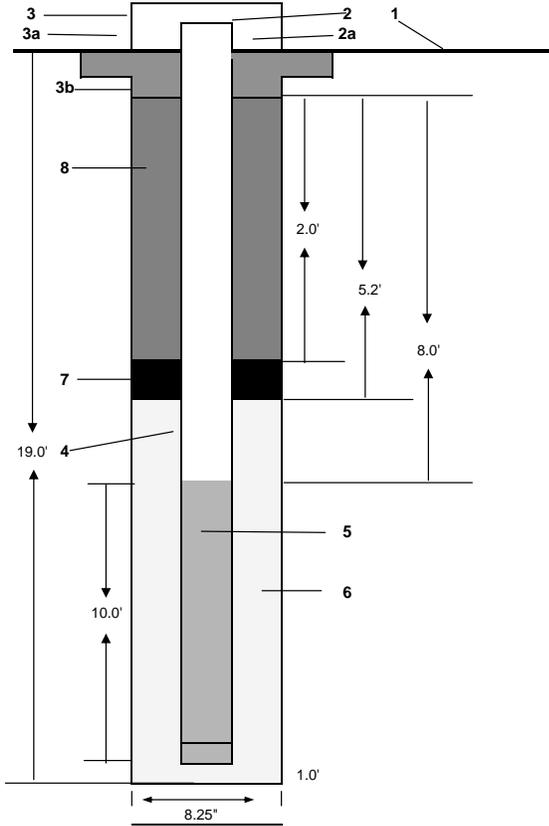
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-16

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 13 ft bgs START : 10-5-07/1105 LOGGER : L. Kieffe



1- Ground elevation at well	449.2 ft. above mean sea level (NAVD88)
2- Top of casing elevation	451.78 ft. above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.8' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus	8-50 lb. bags sand
around and above screen	
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1.5-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



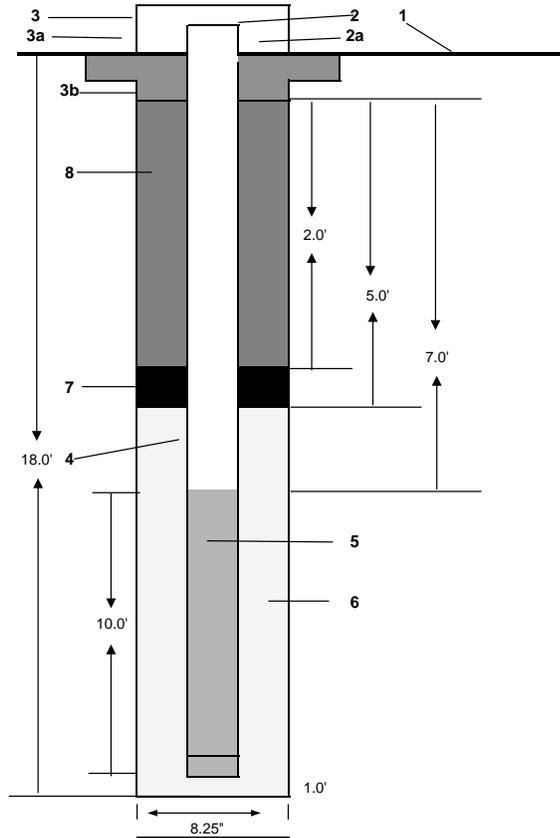
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-22

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55
 WATER LEVELS: 12.1ft bgs START : 9-27-07/1110 LOGGER : L. Kieffe



1- Ground elevation at well	446.9 ft, above mean sea level (NAVD88)
2- Top of casing elevation	449.47 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	7-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1.5-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



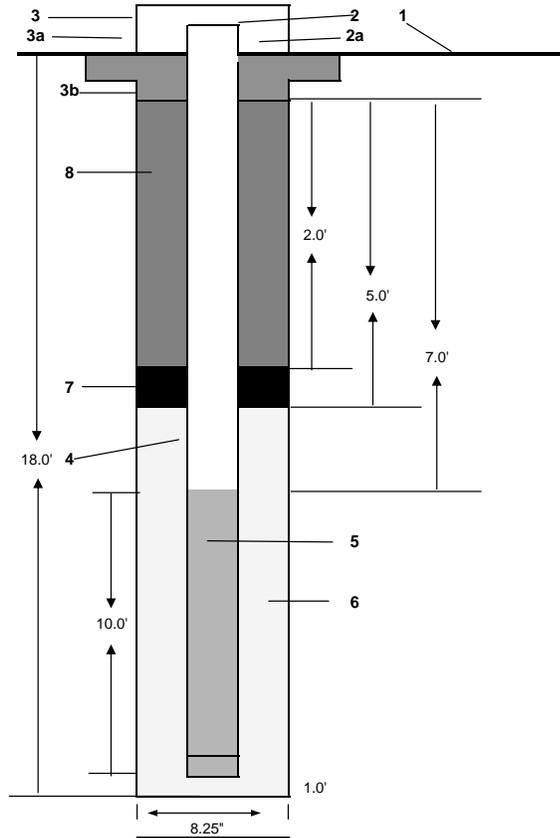
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-23

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55
 WATER LEVELS: 11.5 ft bgs START : 9-21-07/1600 LOGGER : L. Kieffe



1- Ground elevation at well	447 ft, above mean sea level (NAVD88)
2- Top of casing elevation	449.36 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.7' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



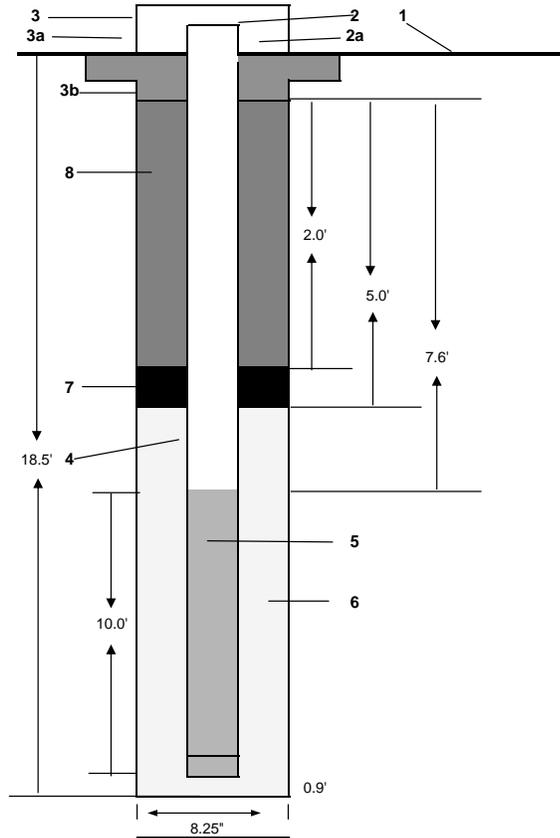
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-25

1 OF 1

WELL INSTALLATION DIAGRAM

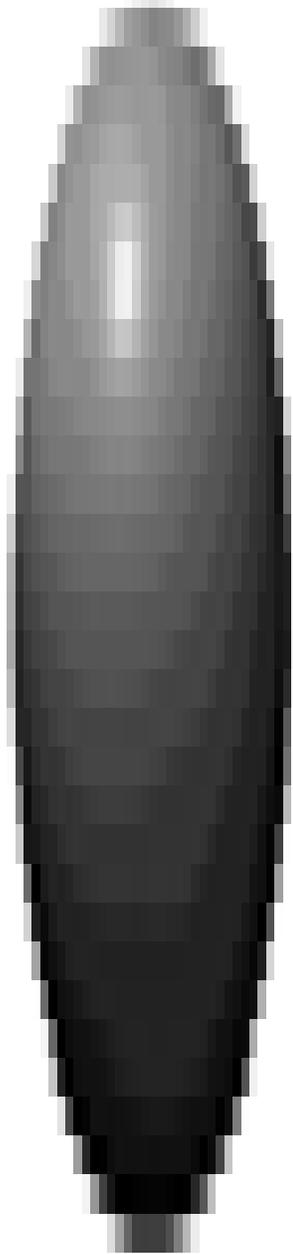
PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55
 WATER LEVELS: 12.5 ft bgs START : 9-19-07/1410 LOGGER : L. Kieffe



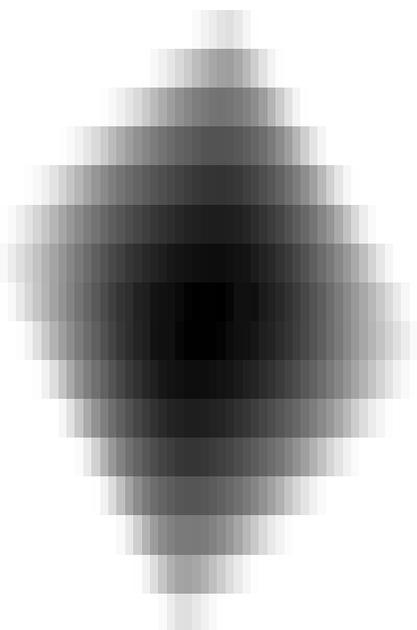
- | | |
|--|---|
| 1- Ground elevation at well | 447 ft, above mean sea level (NAVD88) |
| 2- Top of casing elevation | 449.56 ft, above mean sea level (NAVD88) |
| a) vent hole? | No |
| 3- Wellhead protection cover type: | 5.3' steel monument, 2.8' stick-up |
| a) weep hole? | No |
| b) concrete pad dimensions | N/A |
| 4- Diameter of surface casing: | 2" |
| Surface casing type: | PVC |
| 5- Type/slot size of screen | Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed |
| 6- Type screen filter | 10/20 sand within 3in schedule 40 PVC, .010 slot outer screen |
| a) Quantity used to fill annulus around and above screen | 6-50 lb. bags sand |
| 7- Type of seal | 3/8 Bentonite chips |
| a) Quantity used | 2-50 lb. bags |
| 8- Grout | Not used |
| a) Grout mix used | |
| b) Method of placement | |
| c) Vol. of well casing grout | |
| Development method | |
| Development time | |
| Estimated purge volume | |

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



CHAZMAHLL





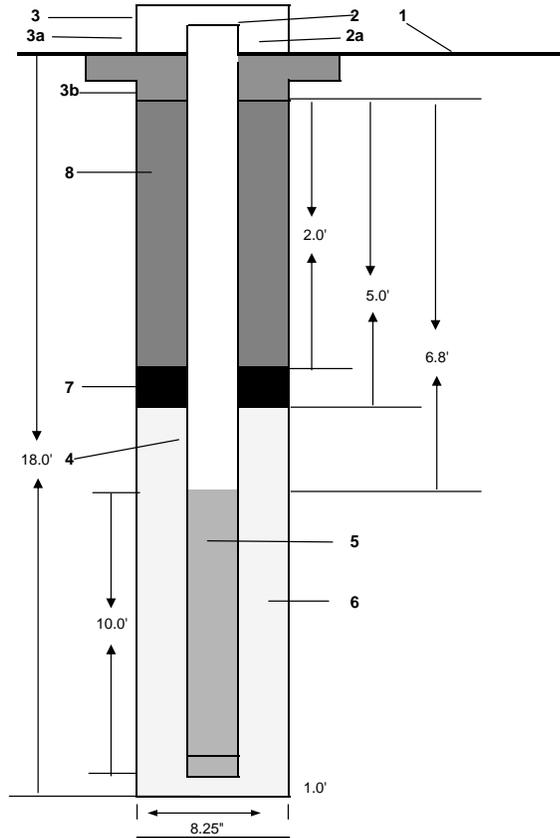
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-30

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55
 WATER LEVELS: 11.1 ft bgs START : 9-18-07/1515 LOGGER : L. Kieffe



1- Ground elevation at well	447.3 ft, above mean sea level (NAVD88)
2- Top of casing elevation	449.98 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 3.0' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	7-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	Surge/Bail and pump
Development time	49 minutes
Estimated purge volume	49.0 gallons

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.
 Water at start was dark brown and silty and cleaned up to clear.

NOT TO SCALE



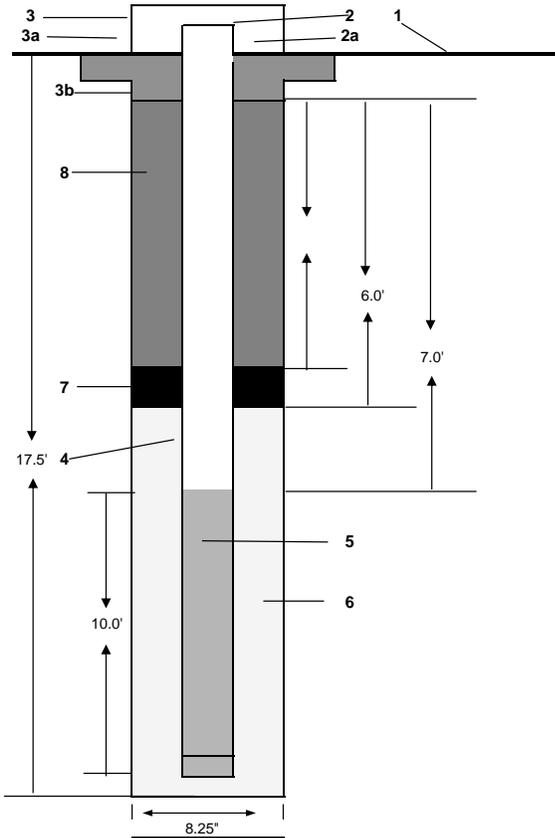
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-31

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12.5 ft bgs START : 9-14-2007/1400 LOGGER : A. Guilfoyle



- | | |
|--|---|
| 1- Ground elevation at well | 447.1 ft, above mean sea level (NAVD88) |
| 2- Top of casing elevation | 449.81 ft, above mean sea level (NAVD88) |
| a) vent hole? | No |
| 3- Wellhead protection cover type: | 5.3' steel monument, 2.9' stick-up |
| a) weep hole? | No |
| b) concrete pad dimensions | N/A |
| 4- Diameter of surface casing: | 2" |
| Surface casing type: | PVC |
| 5- Type/slot size of screen | Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed |
| 6- Type screen filter | 10/20 sand within 3in schedule 40 PVC, .010 slot outer screen |
| a) Quantity used to fill annulus around and above screen | 5-50 lb. bags sand |
| 7- Type of seal | 3/8 Bentonite chips |
| a) Quantity used | 2.5-50 lb. bags |
| 8- Grout | Not used |
| a) Grout mix used | |
| b) Method of placement | |
| c) Vol. of well casing grout | |
| Development method | |
| Development time | |
| Estimated purge volume | |

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



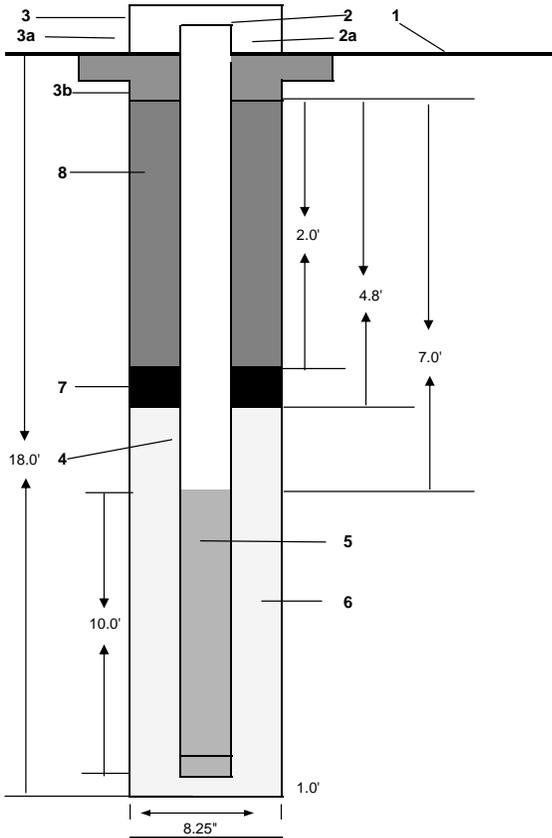
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-37

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12 ft bgs START : 9-24-07/1110 LOGGER : L. Kieffe



1- Ground elevation at well	447.6 ft, above mean sea level (NAVD88)
2- Top of casing elevation	450.01 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.7' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1-50 lb. bag
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



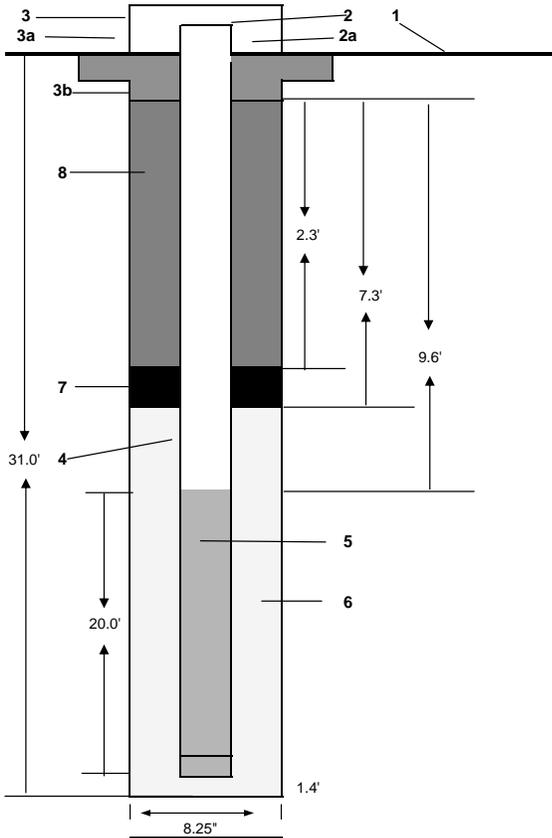
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-39

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 13.5 ft bgs START : 9-29-07/1000 LOGGER : L. Kieffe



NOT TO SCALE

1- Ground elevation at well	448.6 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451.37 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 3.0' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2.25-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.



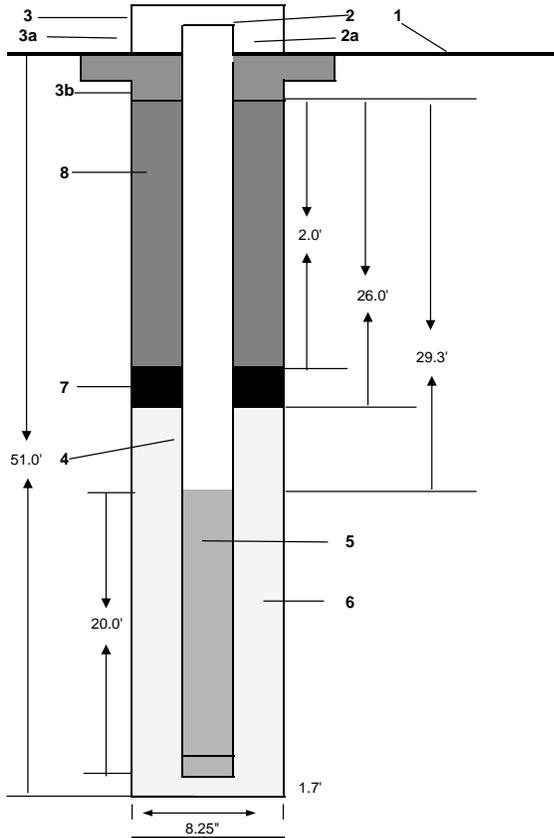
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-40

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12.5 ft bgs START : 10-1-07/1610 LOGGER : L. Kieffe



NOT TO SCALE

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.



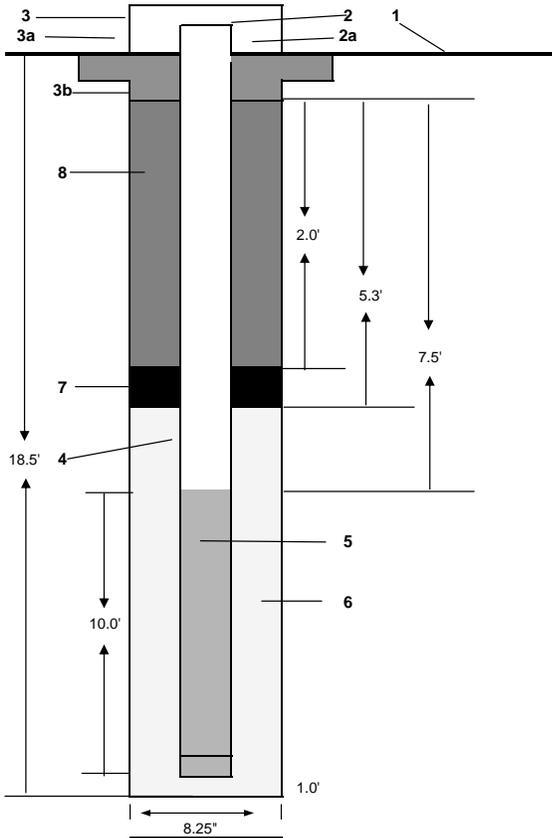
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-41

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12.5 ft bgs START : 10-1-07/1230 LOGGER : L. Kieffe



1- Ground elevation at well	448.5 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.7' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6.5-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



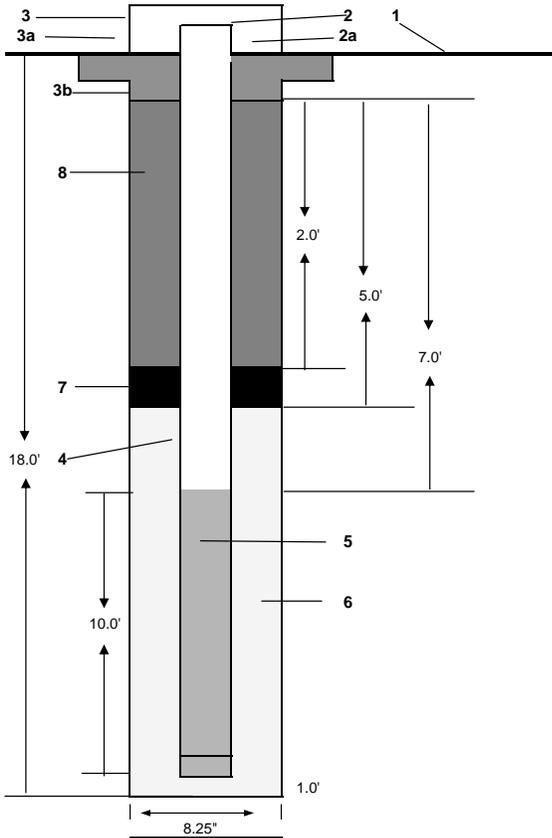
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-43

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 11.2 ft bgs START : 10-2-07/1155 LOGGER : L. Kieffe



- 1- Ground elevation at well 446.8 ft, above mean sea level (NAVD88)
- 2- Top of casing elevation 449.4 ft, above mean sea level (NAVD88)
 a) vent hole? No
- 3- Wellhead protection cover type: 5.3' steel monument, 2.9' stick-up
 a) weep hole? No
 b) concrete pad dimensions N/A
- 4- Diameter of surface casing: 2"
 Surface casing type: PVC
- 5- Type/slot size of screen Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
- 6- Type screen filter 10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
 a) Quantity used to fill annulus around and above screen 7.5-50 lb. bags sand
- 7- Type of seal 3/8 Bentonite chips
 a) Quantity used 2-50 lb. bags
- 8- Grout Not used
 a) Grout mix used _____
 b) Method of placement _____
 c) Vol. of well casing grout _____
- Development method _____
- Development time _____
- Estimated purge volume _____

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



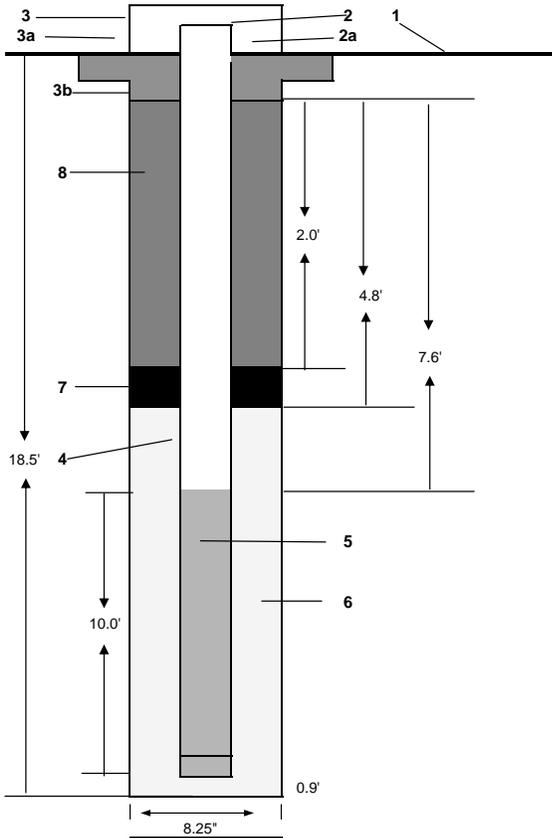
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-46

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12.5 ft bgs START : 9-29-07/1425 LOGGER : L. Kieffe



NOT TO SCALE

1- Ground elevation at well	448.2 ft, above mean sea level (NAVD88)
2- Top of casing elevation	450.7 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1.5-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.



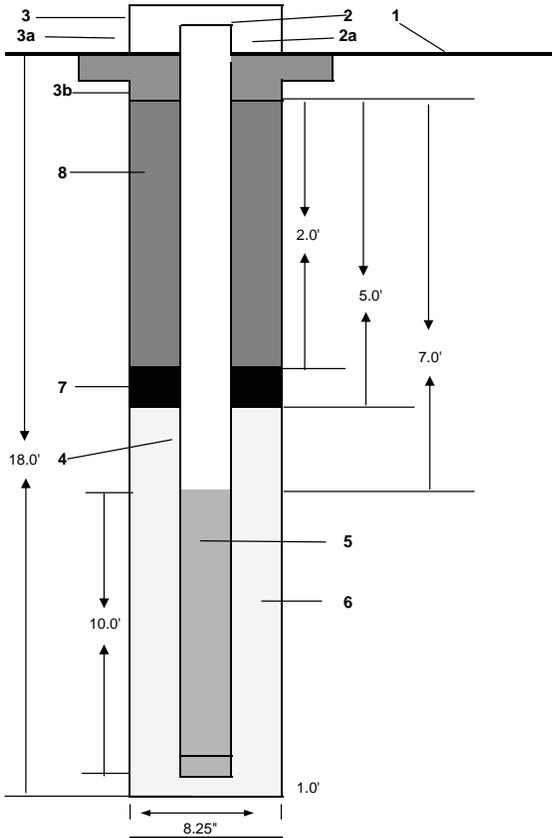
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-47

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12.5 ft bgs START : 10-2-07/1445 END: 1530 LOGGER : L. Kieffe



1- Ground elevation at well	448.8 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451.33 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.8' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6.5-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



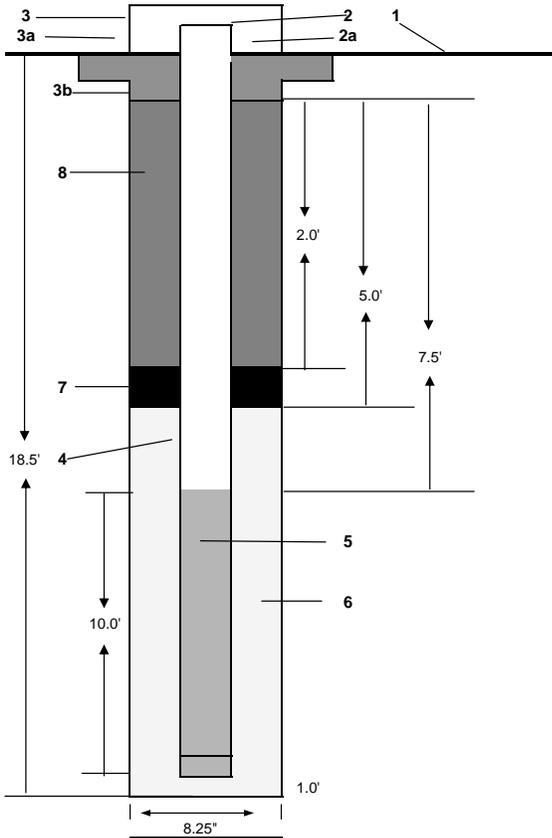
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-48

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12.5 ft bgs START : 9-28-07/1545 LOGGER : L. Kieffe



1- Ground elevation at well	449.1 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451.5 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.7' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1.75-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



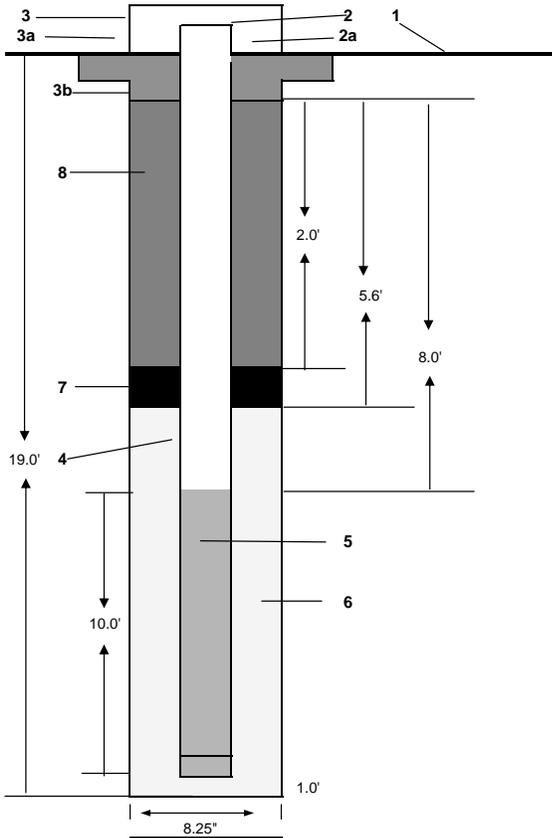
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-49

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 13 ft bgs START : 9-28-07/1400 LOGGER : L. Kieffe



1- Ground elevation at well	449.4 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451.89 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	7-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



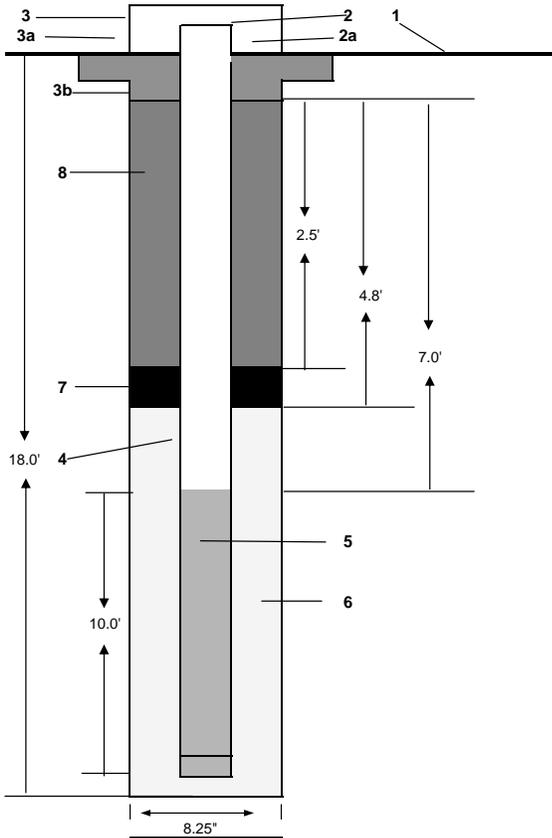
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-50

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12.5 ft bgs START : 10-3-07/1415 LOGGER : L. Kieffe



1- Ground elevation at well	449 ft, above mean sea level (NAVD88)
2- Top of casing elevation a) vent hole?	451.29 ft, above mean sea level (NAVD88) No
3- Wellhead protection cover type: a) weep hole? b) concrete pad dimensions	5.3' steel monument, 3.0' stick-up No N/A
4- Diameter of surface casing: Surface casing type:	2" PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter a) Quantity used to fill annulus around and above screen	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen 7.5-50 lb. bags sand
7- Type of seal a) Quantity used	3/8 Bentonite chips 1-50 lb. bag
8- Grout a) Grout mix used b) Method of placement c) Vol. of well casing grout	Not used _____ _____
Development method	_____
Development time	_____
Estimated purge volume	_____

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



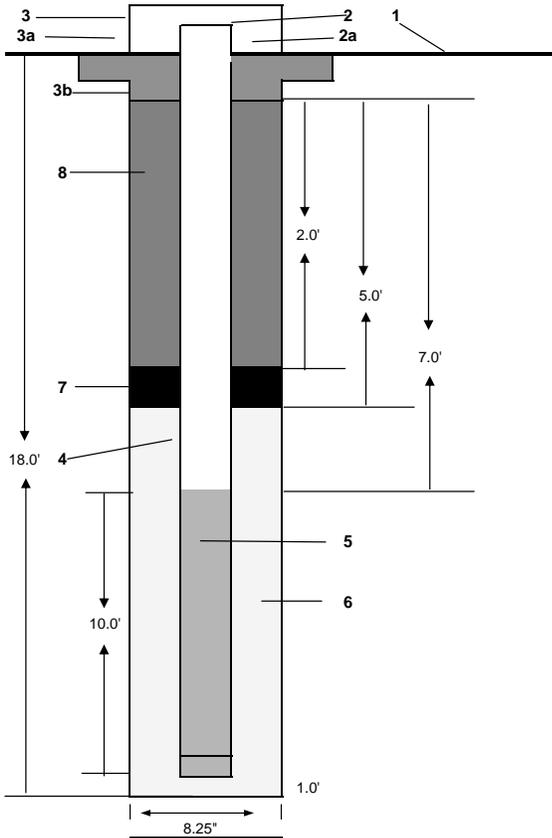
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-52

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12 ft bgs START : 10-11-07/0925 LOGGER : L. Kieffe



1- Ground elevation at well	449.5 ft, above mean sea level (NAVD88)
2- Top of casing elevation	452.19 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 3.0' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	8-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1-50 lb. bag
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



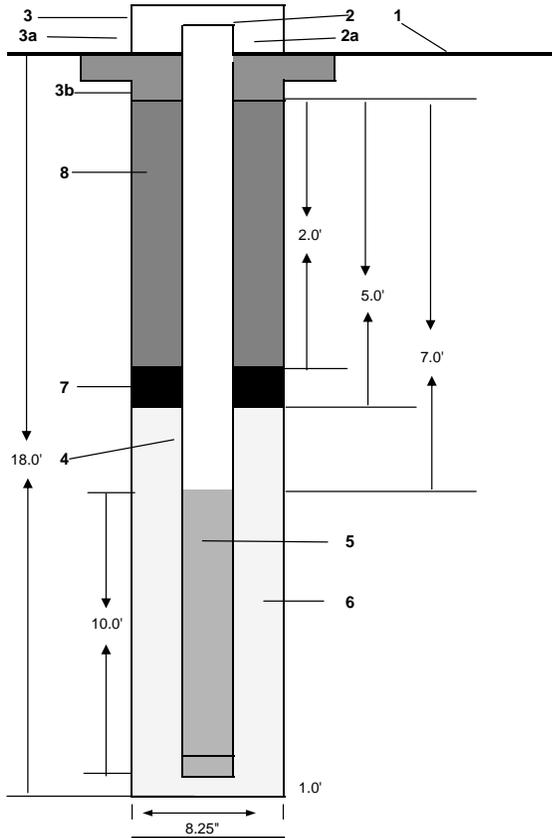
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-53

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12.5 ft bgs START : 10-4-07/1100 LOGGER : L. Kieffe



1- Ground elevation at well	449 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451.44 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 3.0' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1.5-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



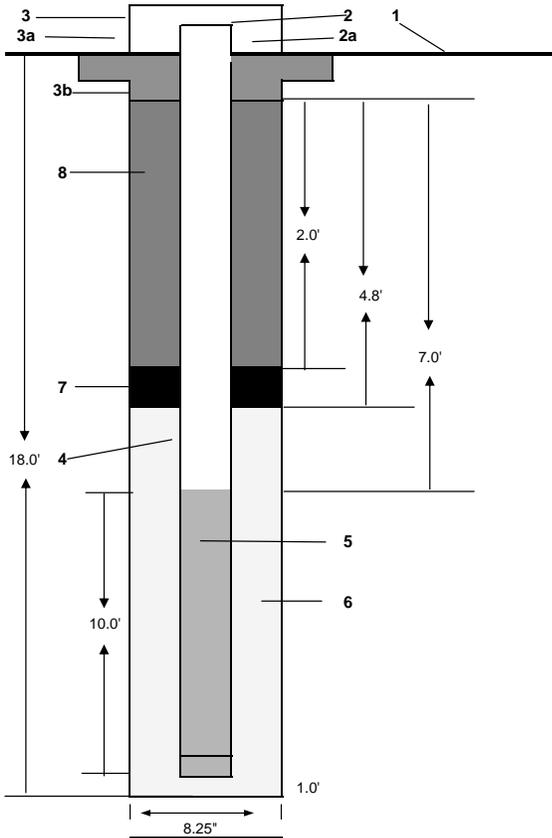
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-54

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 11 ft bgs START : 10-4-07/1645 LOGGER : L. Kieffe



1- Ground elevation at well	446.6 ft, above mean sea level (NAVD88)
2- Top of casing elevation	449.27 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6.5-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1.5-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



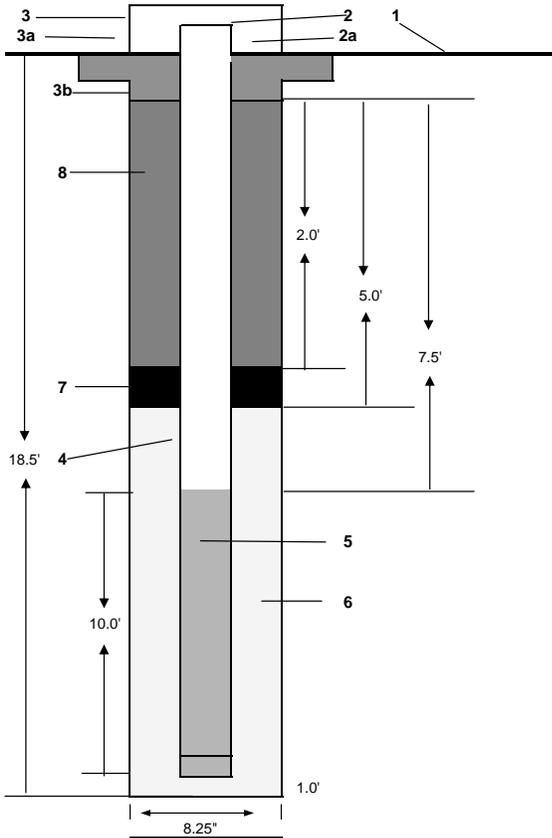
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-55

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12.5 ft bgs START : 9-27-07/1555 END: 1640 LOGGER : L. Kieffe



1- Ground elevation at well	449 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451.6 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	7-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1.5-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



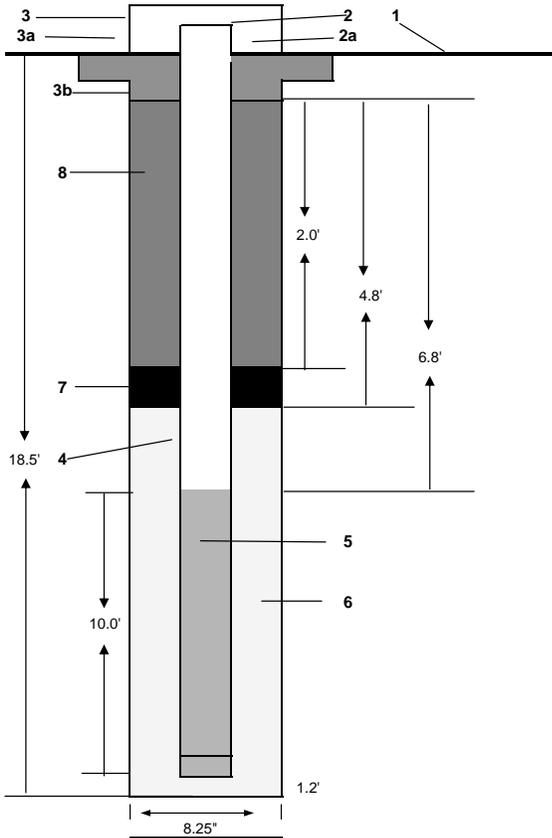
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-56

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 11.7 ft bgs START : 10-3-07/1215 LOGGER : L. Kieffe



1- Ground elevation at well	446.4 ft, above mean sea level (NAVD88)
2- Top of casing elevation	449.03 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 3.0' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6.5-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



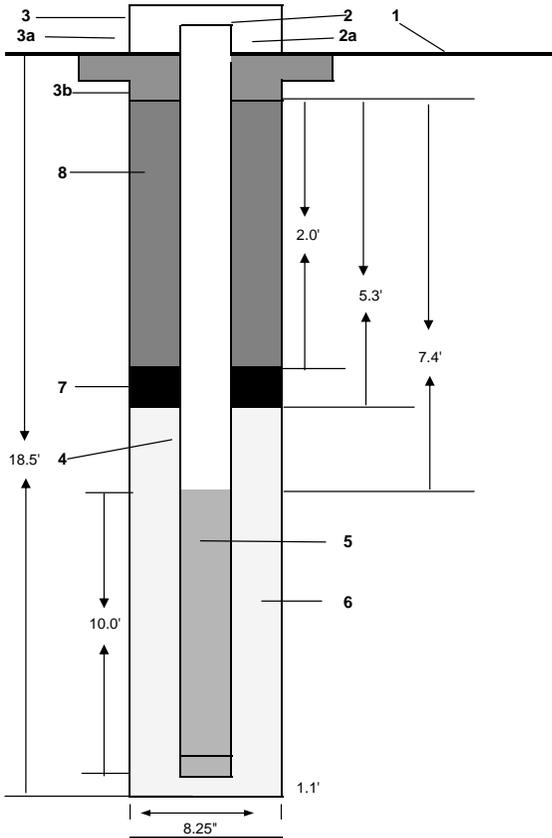
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-57

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12.5 ft bgs START : 9-28-07/0935 LOGGER : L. Kieffe



1- Ground elevation at well	450.1 ft, above mean sea level (NAVD88)
2- Top of casing elevation	452.55 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	7-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



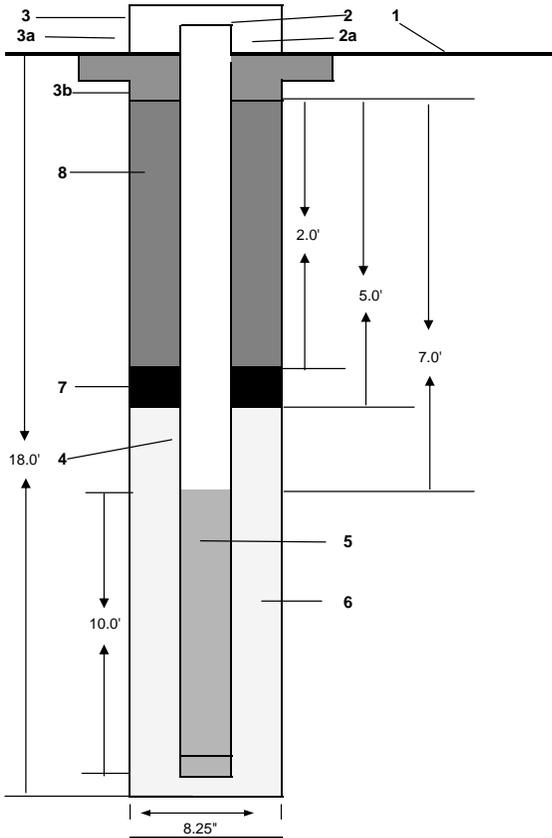
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-60

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger
 WATER LEVELS: 12 ft bgs START : 10-6-07/0925 LOGGER : L. Kieffe



1- Ground elevation at well	447.3 ft, above mean sea level (NAVD88)
2- Top of casing elevation	449.69 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	9-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	1.5-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



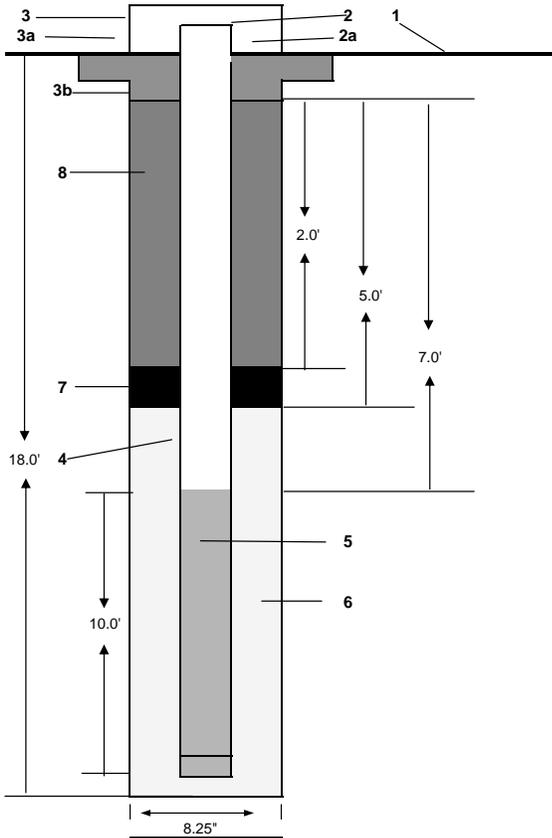
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-62

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger and 2" Split Spoon Sampler
 WATER LEVELS: 12.5 ft bgs START : 10-12-07/1025 LOGGER : R. Clennon



1- Ground elevation at well	447.7 ft, above mean sea level (NAVD88)
2- Top of casing elevation	449.11 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.5' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



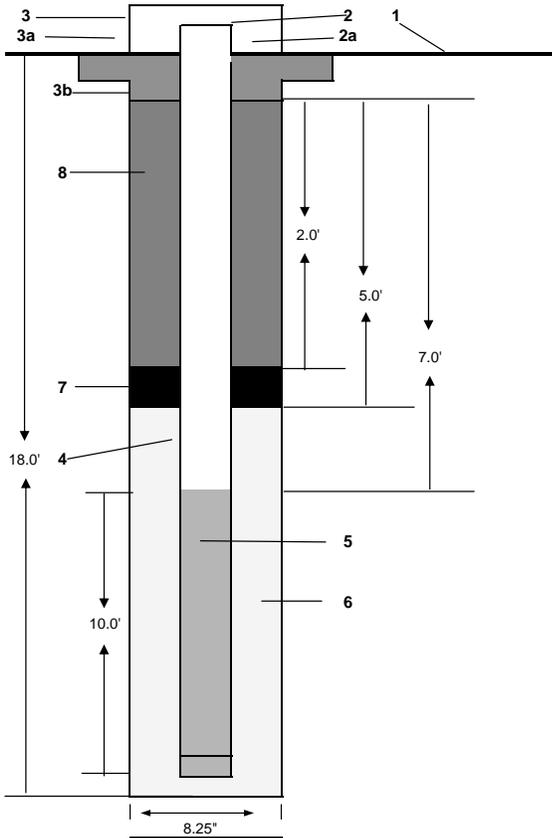
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-68

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger and 2" Split Spoon Sampler
 WATER LEVELS: 15 ft bgs START : 10-13-07/1516 END: 1610 LOGGER : M. Ost



1- Ground elevation at well	449 ft, above mean sea level (NAVD88)
2- Top of casing elevation	450.9 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.3' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	7-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



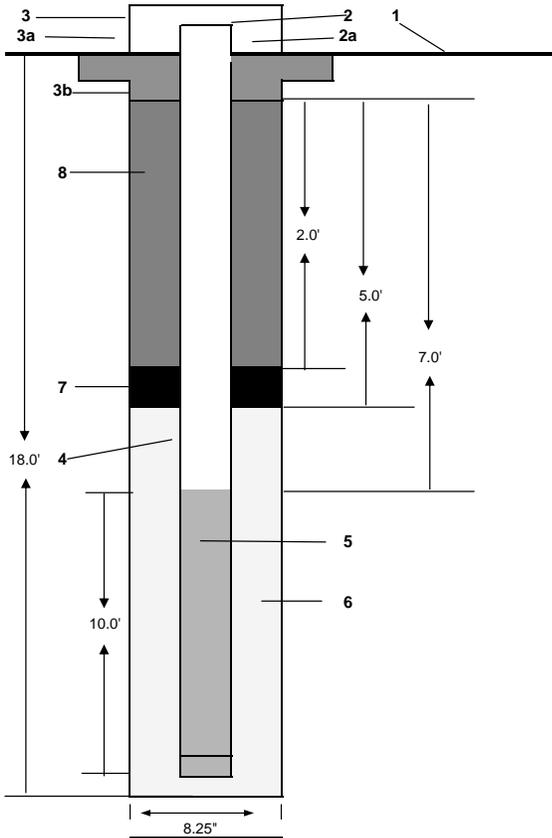
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-69

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : 4.25" ID Hollow Stem Auger
 WATER LEVELS: 14.0 ft l bgs START : 10-14-07/0930 END: 1027 LOGGER : M. Ost



1- Ground elevation at well	448.4 ft, above mean sea level (NAVD88)
2- Top of casing elevation	450.36 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.5' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



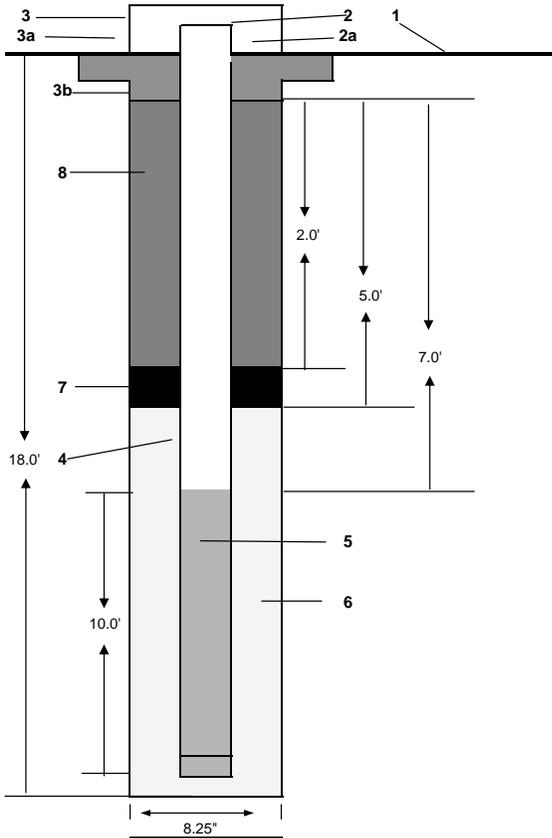
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-70

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger and 2" Split Spoon Sampler
 WATER LEVELS: 12.5 ft bgs START : 10-13-07/1400 LOGGER : R. Clennon



1- Ground elevation at well	449.5 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451.25 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.3' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	7-50 lb. bag sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bag
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



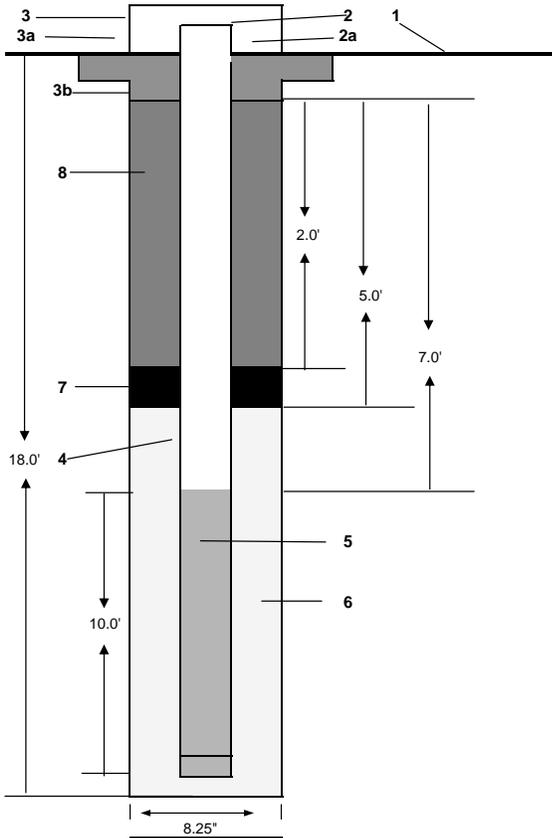
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-72

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : 4.25" ID Hollow Stem Auger
 WATER LEVELS: 15 ft bgs START : 10-14-07/1045 END: 1200 LOGGER : M. Ost



1- Ground elevation at well	448.7 ft, above mean sea level (NAVD88)
2- Top of casing elevation	450.37 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



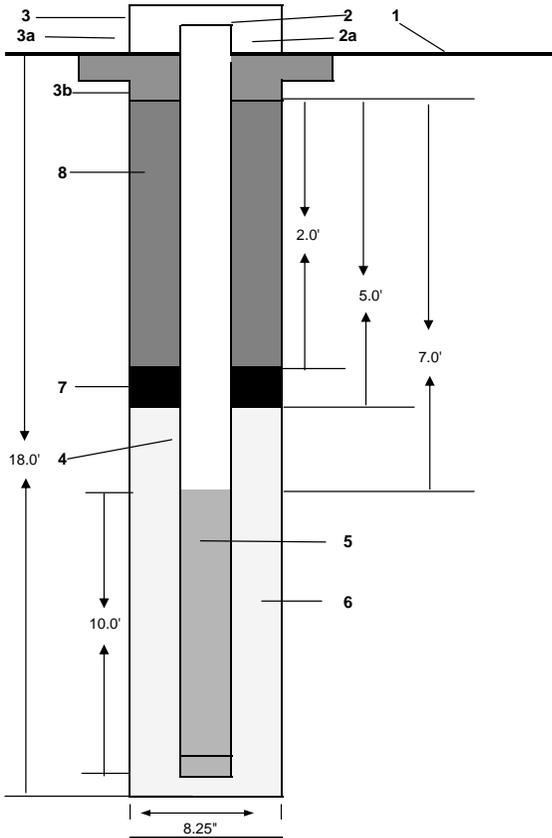
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-73

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : 4.25" ID Hollow Stem Auger
 WATER LEVELS: 15 ft bgs START : 10/14/07/1246 END: 1310 LOGGER : M. Ost



1- Ground elevation at well	449.5 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451.3 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	8-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bags
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



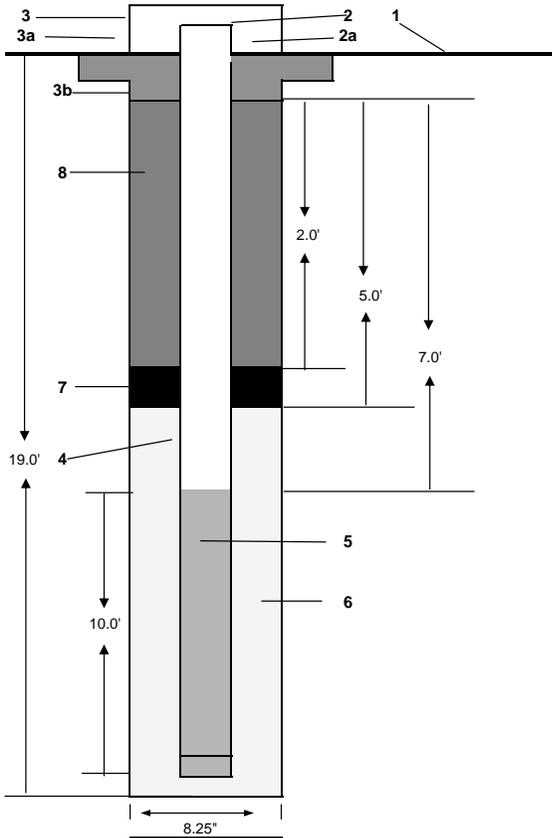
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-74

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger and 2" Split Spoon Sampler
 WATER LEVELS: 13 ft bgs START : 10-11-07/1115 LOGGER : R. Clennon



1- Ground elevation at well	448.3 ft, above mean sea level (NAVD88)
2- Top of casing elevation	451.43 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 3.4' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	7-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bag
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE



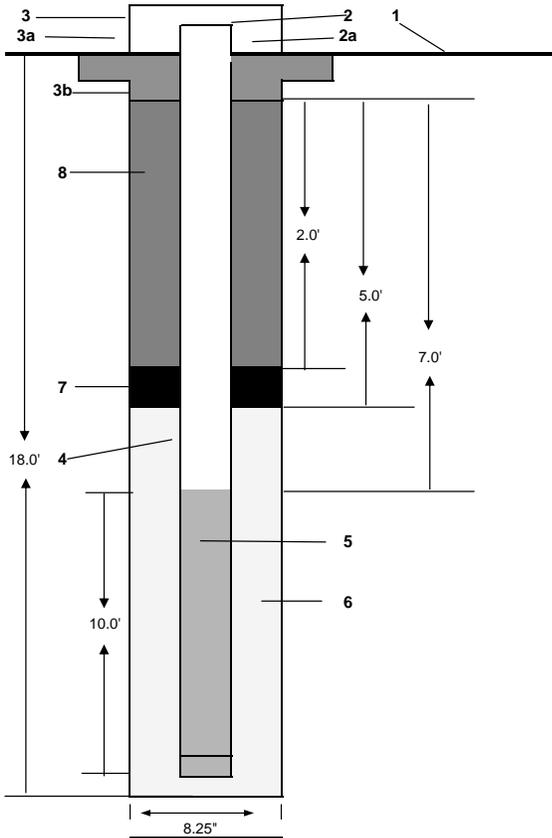
PROJECT NUMBER
357465.B1.01

WELL NUMBER
MW-76

1 OF 1

WELL INSTALLATION DIAGRAM

PROJECT : Taku Gardens LOCATION : Ft. Wainwright, AK
 DRILLING CONTRACTOR : Discovery Drilling
 DRILLING METHOD AND EQUIPMENT USED : CME-55 with 4.25" ID Hollow Stem Auger and 2" Split Spoon Sampler
 WATER LEVELS: 12.5 ft bgs START : 10-10-07/1600 LOGGER : R. Clennon



1- Ground elevation at well	448.3 ft, above mean sea level (NAVD88)
2- Top of casing elevation	450.87 ft, above mean sea level (NAVD88)
a) vent hole?	No
3- Wellhead protection cover type:	5.3' steel monument, 2.9' stick-up
a) weep hole?	No
b) concrete pad dimensions	N/A
4- Diameter of surface casing:	2"
Surface casing type:	PVC
5- Type/slot size of screen	Pre-pack: 2in schedule 40 PVD, .010 slots 0.010 Pre-packed
6- Type screen filter	10/20 sand within 3in schedule 40 PVC, .010 slot outer screen
a) Quantity used to fill annulus around and above screen	6-50 lb. bags sand
7- Type of seal	3/8 Bentonite chips
a) Quantity used	2-50 lb. bag
8- Grout	Not used
a) Grout mix used	
b) Method of placement	
c) Vol. of well casing grout	
Development method	
Development time	
Estimated purge volume	

Comments Well installed as temporary monitoring well. After data review select wells will be finished as permanent monitoring wells and the rest will be removed.

NOT TO SCALE

Appendix E
USACE Groundwater Sampling Final Field
Parameters (Provided on CD)

Appendix F
Groundwater Sampling Field Data
(Provided on CD)

Appendix G
Pump Test Raw Data (Provided on CD)

Appendix H
Field Notes (Provided on CD)

Appendix I
Field Photographs (Provided on CD)

Appendix J
ADEC Checklists (Provided on CD)

Appendix K
Raw Laboratory Data Reports (Provided on CD)
