Memo

PIONEER TECHNOLOGIES CORPORATION
5205 Corporate Ctr. Ct. SE, Ste. A
Olympia, WA 98503-5901
Phone: 360.570.1700
Fax: 360.570.1777
www.uspioneer.com

to: Steve Teel, LHG (Department of Ecology)

from: Shella Swain & Chris Waldron

cc: Kip Summers, P.E. (City of Olympia)

date: August 21, 2014

subject: Supplemental Sediment Sampling Results for the Solid Wood Incorporated Site

Preface: This memorandum was originally submitted to the Washington State Department of Ecology (Ecology) on April 21, 2014. Ecology provided comments on July 30, 2014 (see Attachment 1). This memorandum has been revised, where appropriate, based on Ecology's comments.

This technical memorandum presents the results of the supplemental sediment sampling event that was performed at the Solid Wood Incorporated Site (Site) located in Olympia, Washington. This sampling was conducted on behalf of the City of Olympia (City) under the Site's existing Agreed Order (No. DE-08-TCPSR-5415) in accordance with the supplemental sediment field sampling and analysis plan (FSAP), which is Addendum No. 7 to the work plan for the Site (PIONEER 2013; Parametrix 2008).

Samples were collected from 14 sample locations in the Focus Area identified in the FSAP (PIONEER 2013; Figure 1). The Focus Area was identified based on sampling and bioassay test results; specifically, sampling locations where concentrations of total petroleum hydrocarbons in the diesel fraction (TPH-D) and TPH in the heavy oil fraction (TPH-HO) exceeded the Ecology derived screening level of 100 mg/kg and where the single failure of the bioassay tests occurred. The purpose of this supplemental sampling event was to identify which areas of the Focus Area are adequately characterized and which may need additional evaluation.

1 Background

Previous sediment investigations, conducted as part of the Remedial Investigation/Feasibility Study and Interim Actions (IAs), have characterized the concentrations of (1) Sediment Management Standards (SMS) constituents (Washington Administrative Code [WAC] 173-204-320–Table 1), and (2) TPH-D/TPH-HO in beach sediment adjacent to the upland area (Parametrix 2008, 2010, 2011a, 2011b). All constituent concentrations were below applicable SMS Chemical Criteria (i.e., WAC 173-204-320 or WAC 173-204-520); however, concentrations of the TPH-D/TPH-HO exceeded an Ecology-derived screening level of 100 milligrams per kilogram (mg/kg).

Additionally, previous sediment characterization efforts included three bioassay tests: 1) a 10-day amphipod solid phase survival test using *Eohaustorius estuarius*, 2) a sediment larval test using *Mytilus galloprovincialis*, and 3) a 20-day polychaete solid phase survival and growth test using *Neanthes arenaceodentata*. Only one sample location and a corresponding field duplicate (SD-30 and SD-30-DUP) failed one of the three bioassay tests (Figure 2). Three additional samples were collected at a later date from the SD-30 location and one of those samples (SD-33C) failed the sediment larval test as well (Parametrix 2011b). Consequently, Ecology required that the City collect additional samples to further characterize TPH-D/TPH-HO concentrations in beach sediment adjacent to the upland area near SD-30.

1.1 SCREENING LEVELS

According to Ecology's Draft Sediment Cleanup User's Manual II, the typical biologically-active zone in the Puget Sound has been defined as the uppermost 10 centimeters (0.33 ft) of sediments, where the majority of marine benthic invertebrates are generally found (Ecology 2013). The Draft Sediment Cleanup User's Manual II also states that the biologically-active zone can be deeper at sites if receptors (e.g., geoduck *[Panopea generosa],* ghost shrimp *[Callianassa californiensis]*) are present at the site (Ecology 2013). However, there have been no observations of these species in Site sediment. Consequently, only the screening level for sediments in the biologically active zone has been determined. The TPH-D/TPH-HO screening level for shallow sediment samples is 100 mg/kg, which is based on Ecology's direction that this value be used to characterize sediment in order to protect marine benthic invertebrates in the biologically active zone. The screening level for deeper sediment samples has not been determined at this time but will be determined in the future in accordance with the requirements of the SMS and the Model Toxics Control Act (MTCA).

2 Supplemental Sediment Investigation

In accordance with the FSAP, 27 samples were collected from 14 locations in the Focus Area. Sampling was conducted during low tide on February 3rd, 2014 to February 5th, 2014, to ensure that the proposed sample locations were not under water. Surficial gravel was removed from the sampling locations prior to collecting the sediment samples. Surficial sediment samples were collected to a depth of half a foot below ground surface (bgs) with a trowel, and were mixed in a stainless steel bowl prior to being placed in a sample jar. Deep sediment samples were collected from two to three feet (ft) bgs using a hand auger. Sediment from the hand auger was mixed in a stainless steel bowl prior to being placed in a sample jar. After each sample, the trowel, hand auger, and stainless steel bowls were decontaminated. They were scrubbed with a brush and a phosphate-free detergent (Alconox), and then rinsed with deionized water. Field quality control guidelines were followed in accordance with the work plan for the Site (Parametrix 2008). One field duplicate was collected every 20 samples, per analysis[1]. One equipment blank was collected every 20 samples.[2] All samples were placed in a cooler and held at approximately four degrees Celsius until they were received by the project laboratory, Anatek Laboratories in Moscow, Idaho.

Surficial sediment samples were collected from all locations to assess the horizontal extent of contamination within the Focus Area. As required by Ecology, deep samples were also collected from 13 of the 14 shallow sediment sampling locations to assess the vertical extent of contamination. Per the FSAP, only seven of the 13 deep samples and one sample (SD-50 which is located proximate to SD-30/SD-30-DUP/SD-33C and is the location with the single bioassay failure), were analyzed immediately. The other six deep samples were archived and were only to be analyzed if the co-located surficial samples exceeded Ecology's 100 mg/kg TPH screening level. One additional surficial sample (SD-55) was intended to be archived but was inadvertently analyzed by the lab and the results are included in this report. Photos of sediment sampling activities are provided in Attachment 2 and sampling activity field logs are included in Attachment 3.

The sediment samples were shipped overnight to Anatek Laboratories in Moscow, Idaho for TPH-D and TPH-HO analysis via NWTPH-DX with silica gel cleanup[3], and grain size analysis. Anatek Laboratories used method ASTM D422/ASTM D421 (with a #230 sieve) for the grain size analysis, which is the fixed laboratory analytical method

[1] This is a slight deviation from the FSAP which stated that one field duplicate per day would be collected every 20 samples, per analysis.

[2] In order to collect the equipment blank, the sampling equipment was decontaminated and rinsed again with deionized water. The rinsate was collected in sampling jars and analyzed.

[3] The project laboratory was not able to achieve the intended practical quantitation limit (PQL) of 50 mg/kg for TPH-HO due to a high amount of moisture in the sediment samples.

equivalent to the field, wet sieve method stated in the FSAP[4]. The analytical laboratory report is included in Attachment 4.

3 Supplemental Sediment Sampling Results

3.1 TOTAL PETROLEUM HYDROCARBON RESULTS

All beach sediment samples, with the exception of the six archived deep samples, were analyzed for TPH-D and TPH-HO using the NWTPH-Dx method preceded by a silica gel cleanup. TPH-D/TPH-HO results are presented in Table 1. TPH-D was not detected in any of the samples. TPH-HO was detected in eight of the 21 samples (Figure 3). The detected TPH-HO results ranged from 106 mg/kg to 882 mg/kg. Per the FSAP, the six deep archived samples (collected from SD-42, SD-45, SD-46, SD-49, SD-52, and SD-54) were not analyzed because TPH-D and TPH-HO were not detected in the co-located shallow sample locations or because the TPH-D/TPH-HO concentrations in the co-located shallow samples were less than 100 mg/kg (PIONEER 2013). Field duplicate results for SD-WB-51-020314 and SD-WB-51-020314-(01) were comparable (i.e., the TPH-D was not detected and the TPH-HO results were 788 mg/kg and 975 mg/kg, respectively). The equipment blank sample (i.e., EB-WB-020514) was non-detect for TPH-D and TPH-HO.

3.2 GRAIN SIZE RESULTS

Grain size results are presented in Table 1. Grain size results are presented as the percentage of fine sediment (silt and clay) found within the sample and ranged from 1.1% to 13%.

4 Discussion and Evaluation

The purpose of this section is to discuss the extent of TPH-D/TPH-HO concentrations in sediment within the Focus Area relative to the appropriate screening levels.

4.1 COMPARISON OF SUPPLEMENTAL SAMPLING SEDIMENT RESULTS TO SCREENING LEVELS

TPH-D was not detected in any of the shallow sediment samples. TPH-HO was detected in four of the 14 shallow sediment samples and all four samples exceeded the 100 mg/kg screening level. Samples with detected TPH-HO concentrations greater than Ecology's 100 mg/kg screening level were limited to the southern portion of the Focus Area (see Figure 3). The exceedances were delineated by SD-48 to the north, SD-53 to the south, SD-55 to the east, and SD-50 to the west. TPH-HO was not detected in the shallow samples in the northern portion of the Focus Area and the most southeastern portion of the Focus Area (SD-52 and SD-54).

4.2 COMPARISON OF GRAIN SIZE TO SAMPLING RESULTS

The TPH-HO results did not appear to correlate with sediment grain size (see Table 1 and the information presented below that demonstrates that TPH-HO concentrations were not correlated with grain size).

Sample	Grain Size	TPH –HO Concentration (mg/kg)
SD-42 (0 – 0.5 ft bgs)	1. 1%	Not Detected
SD-50 (0 – 0.5 ft bgs)	3.3%	309
SD-44 (2 – 3 ft bgs)	13%	Not Detected
SD-51 (2 – 3 ft bgs)	12%	882

[4] This is a slight deviation from the FSAP which stated that a field, wet sieve method would be used to determine grain size of the sediment samples.

4.3 COMPARISON OF PREVIOUS SAMPLING RESULTS AND PREVIOUS BIOASSAY TESTS

An additional evaluation was performed to determine if a clear dose response relationship could be identified for TPH-D/TPH-HO concentrations and bioassay test results. The TPH-D/TPH-HO concentrations from previously collected sediment samples were compared to previous bioassay test results from the same locations (see Table 2 and Figure 2). Nine bioassays tests were performed on samples with a range of TPH-D/TPH-HO concentrations (81 mg/kg to 563 mg/kg; Parametrix 2008, 2010, 2011a, 2011b). Only three of the nine sediment samples failed a bioassay test and all three bioassay failures occurred at the same location (i.e., SD30, SD30 (dup), and SD33C where collected from the same location). The lowest TPH-D/TPH-HO concentration that failed a bioassay test was 320 mg/kg (i.e., SD30); however, three samples had TPH-D/TPH-HO results greater than or equal to 320 mg/kg also passed all of the bioassay tests (see Table 2 and Figure 2):

1. SD26/27: TPH-D/TPH-HO = 320 mg/kg and passed all bioassay tests
2. SDD29: TPH-D/TPH-HO = 417 mg/kg and passed all bioassay tests
3. SD25: TPH-D/TPH-HO = 490 mg/kg and passed all bioassay tests

Based on the conflicting TPH-D/TPH-HO results and bioassay test results presented above, the Site-specific dose-response relationship between TPH-D/TPH-HO concentrations and bioassay results is uncertain. It is possible that SD-30/SD-30 (DUP)/SD-33C failed a bioassay test because of the TPH-D concentrations in the samples (TPH-D was detected in each of these samples at concentrations ranging from 50 mg/kg to 93 mg/kg). However, this is uncertain because similar TPH-D concentrations were detected in two of the samples that passed the bioassay tests (SD28: TPH-D = 37 mg/kg and SD29: TPH-D = 87 mg/kg). Alternatively, SD-30/SD-30 (Dup)/SD-33C may have failed the bioassay tests because the locations may be more representative of upland conditions and do not provide suitable habitat for the organisms used in the bioassays.

5 Conclusions and Recommendations

TPH-D was not detected in any supplemental sediment sample; therefore, the Focus Area is adequately characterized for TPH-D. Detected TPH-HO concentrations were primarily limited to the southern portion of the Focus Area. Four of the samples had concentrations that exceeded screening levels and all exceedances were observed in shallow sediment samples (see Figure 3). An additional evaluation of previous bioassay test and sampling results indicated that the dose-response relationship between TPH-D/TPH-HO and bioassay results is uncertain.

Based on current and previous results, additional characterization (via sediment chemistry and bioassays) of the southern portion of the Focus Area is recommended. The purpose of the bioassay tests is to refine that dose-response relationship between the TPH-D/TPH-HO concentrations and bioassay results in order to finalize delineation of the Focus Area and, if possible, develop a Site-specific shallow sediment remediation level for the Site based on protection of benthic invertebrates. Specifically, four bioassays are recommended in the area where the TPH-HO exceedances were identified and a previous bioassay test failed (see Figure 4). Three of the recommended bioassay locations (SD-56, SD-57, and SD-58) are spaced evenly between the northern and southern TPH-HO delineation boundary. The fourth recommended bioassay location (SD-59) is located on the eastern edge of the delineation boundary. All of the recommended bioassay locations were placed further into the intertidal zone (i.e., further than SD-30/SD-30 (Dup)/SD-33C), which should provide more suitable habitat for the organisms used in the bioassays.

If Ecology approves this proposal, a FSAP will be prepared within 30 days, samples will be collected within 30 to 60 days of FSAP approval, and then a report will be submitted within 45 days of receiving the bioassay results.

6 References

Ecology. 2013. Draft Sediment Cleanup User's Manual II. Publication no. 12-09-057. Olympia, Washington. December.

Parametrix. 2008. Work Plan for Remedial Investigation/Feasibility Study and Interim Action Solid Wood Incorporated Site (West Bay Park). Olympia, Washington. October.

Parametrix. 2010. Solid Wood Incorporated Site (West Bay Park) Interim Action Report. Olympia, Washington. September.

Parametrix. 2011a. Solid Wood Incorporated Site RI/FS and IA Work Plan Addendum No. 4 – Supplemental Post Piling Removal Sediment Sampling and Analysis Plan. Olympia, Washington. March.

Parametrix. 2011b. Results of Supplemental Post Piling Removal Sediment Sampling. Olympia, Washington. August.

PIONEER. 2013. Addendum No. 7 to the Work Plan for the RI/FS and IA for the Solid Wood Incorporated Site – Supplemental Sediment Field Sampling and Analysis Plan. Olympia, Washington. October.

ATTACHMENTS

Tables

Table 1: Supplemental Sediment Sampling Results
Table 2: Previous Sediment Sampling Results

Figures

Figure 1: Supplemental Sediment Sampling Locations
Figure 2: Previous TPH and Bioassay Results
Figure 3: TPH-HO Results
Figure 4: Recommended Bioassay Locations

Attachment 1: Ecology's Comments on the Technical Memorandum
Attachment 2: Photo Log
Attachment 3: Field Logs
Attachment 4: Analytical Laboratory Report

This page has been left blank intentionally to allow for double-sided printing.

Tables

This page has been left blank intentionally to allow for double-sided printing.

Table 1: Supplemental Sediment Sampling Results

Sample	Depth (ft bgs)	TPH-D (mg/kg)	TPH-HO (mg/kg)	Grain Size (% fines)
SD-42	0 - 0.5	25 U	100 U	1.1
SD-43	0 - 0.5	25 U	100 U	2.3
	2 - 3	50 U	351	2.7
SD-44	0 - 0.5	25 U	100 U	6.5
	2 - 3	25 U	100 U	13
SD-45	0 - 0.5	25 U	100 U	2.3
SD-46	0 - 0.5	25 U	100 U	5.8
SD-47	0 - 0.5	25 U	100 U	4.2
	2 - 3	25 U	100 U	5.9
SD-48	0 - 0.5	25 U	117	3.6
	2 - 3	25 U	200	5.4
SD-49	0 - 0.5	50 U	200 U	4.5
SD-50	0 - 0.5	25 U	309	3.3
	2 - 3	25 U	196	2.2
SD-51	0 - 0.5	25 U	100 U	4.4
	2 - 3	100 U	882	12
SD-52	0 - 0.5	25 U	100 U	5.9
SD-53	0 - 0.5	25 U	115	3.6
	2 - 3	25 U	100 U	5.3
SD-54	0 - 0.5	25 U	100 U	1.4
SD-55	0 - 0.5	25 U	106	2.0

Notes:

U: Non-detect

Shaded cells indicate that the concentration in the shallow sample (0-0.5 ft bgs) exceeded Ecology's screening level of 100 mg/kg.

TPH-D and TPH-HO were analyzed using the NWTPH-Dx method preceded by a silica gel cleanup.

Table 2: Previous Sediment Sampling Results

Sediment Sample	Sample Depth (ft bgs)	Sample Date	TPH-D (mg/kg)	TPH-HO (mg/kg)	Total TPH[1] (mg/kg)	Pass/Fail Biological Criteria?	Grain Size (% fines)
SD12	0 - 0.3	5/28/08	32 U	64 U	64 U	NA	NA
SD12	2 - 3	5/28/08	50 U	200	200	NA	NA
SD14	0 - 0.3	5/28/08	32 U	95	95	NA	NA
SD14	2 - 3	5/28/08	150 U	1,040	1,040	NA	NA
SD15	0 - 0.3	5/28/08	30 U	150	150	NA	NA
SD15	2 - 3	5/28/08	36 U	72 U	72 U	NA	NA
SD16	0 - 0.3	5/28/08	58 U	590	590	NA	NA
SD16	0 - 0.3	5/28/08	86	460	546	NA	NA
SD17	0 - 0.3	5/28/08	63 U	140	140	NA	NA
SD17 (dup)	2 - 3	5/28/08	64 U	270	270	NA	NA
SD17	2 - 3	5/28/08	66	330	396	NA	NA
SD23	0 - 0.3	6/3/08	57 U	150	150	NA	NA
SD23 (dup)	0 - 0.3	6/3/08	54 U	110	110	NA	NA
SD23	2 - 3	6/3/08	49 U	160	160	NA	NA
SD24	0 - 0.3	6/3/08	51 U	270	270	NA	NA
SD24	2 - 3	6/3/08	53	290	343	NA	NA
SD25	0.5	9/28/09	68 U	490	490	Pass	48
SD26/27	0.5	9/28/09	63 U	320	320	Pass	NA
SD28	0.5	9/28/09	37	99	136	Pass	42
SD29	0.5	9/28/09	87	330	417	Pass	26
SD32C	0.5	4/19/11	28 U	110	110	Pass	24
SD30	0.5	9/28/09	50 J	320	320	Fail	17
SD30 (dup)	0.5	9/28/09	77 J	370	447	Fail	21
SD31	0.5	9/28/09	17 U	81	81	Pass	31
SD33A	0.5	4/19/11	18 U	78	78	NA	NA
SD33A (dup)	0.5	4/19/11	22 J	130	152	NA	NA
SD33B	0.5	4/19/11	65 J	340	405	NA	NA
SD33C	0.5	4/19/11	93 J	470	563	Fail	9.0
SD34	0.5	7/19/12	180 U	1,500	1,500	NA	NA
SD35	0.5	7/19/12	45 U	310	310	NA	NA
SD35 (dup)	0.5	7/19/12	38 U	120	120	NA	NA
SD36	0.5	7/19/12	51 U	520	520	NA	NA
SD37	0.5	7/19/12	64	380	444	NA	NA
SD38	0.5	7/19/12	35 U	140	140	NA	NA
SD39	0.5	7/19/12	42 U	190	190	NA	NA
SD40	0.5	7/19/12	66	380	446	NA	NA
SD41	0.5	7/19/12	61	320	381	NA	NA

Notes:

J: Concentration presented is estimated.

U: Non-detect

Shaded cells indicate that the shallow sample (0-0.5 ft bgs) exceeded Ecology's screening level of 100 mg/kg.

TPH-D and TPH-HO were analyzed using the NWTPH-Dx method preceded by a silica gel cleanup.

[1]SMS Criteria compound totaling rules (WAC 173-204-320) were applied to Total TPH concentrations:

-Where only nontected values were identified, the highest detection limit represents the sum of the respective compounds/isomers; and

-Where one or more individual compounds/isomers were identified, only the detected concentrations are summed to represent the group sum.

Figures

This page has been left blank intentionally to allow for double-sided printing.

Legend

- Focus Area
- TPH-HO Delineation Boundary
- Shallow Sediment Samples (0-0.5' bgs)
- Deep Sediment Samples (2-3' bgs)

0 25 50 75 Feet

PIONEER TECHNOLOGIES CORPORATION

Supplemental Sediment Sampling Locations
Supplemental Sediment Sampling Results for the Solid Wood Incorporated Site
Olympia, Washington

Figure 1

This page has been left blank intentionally to allow for double-sided printing.

Legend

Focus Area

1. TPH-HO Concentration[1]
2. TPH-D Concentration[1]
3. Bioassay Results[2]

TPH Concentrations

- Non-Detect
- 0 - 100 mg/kg
- 101 - 400 mg/kg
- 401 - 700 mg/kg
- > 701 mg/kg

Bioassay Results

- Pass
- Fail

Notes:
[1] Only the maximum concentration at each sample location is displayed.
[2] If one of the three bioassay tests failed the sample location was designated "fail".

0 50 100 150 Feet

PIONEER TECHNOLOGIES CORPORATION

Previous TPH and Bioassay Results
Supplemental Sediment Sampling Results for the Solid Wood Incorporated Site
Olympia, Washington

Figure 2

This page has been left blank intentionally to allow for double-sided printing.

Legend

Focus Area

TPH-HO Delineation Boundary

Shallow Sediment Results (0-0.5' bgs)

- Non-detect
- TPH-HO <= 100 mg/kg
- TPH-HO > 100 mg/kg

Deep Sediment Results (2-3' bgs)

- Non-detect
- 0 - 100 mg/kg
- 101 - 400 mg/kg
- 401 - 700 mg/kg
- > 701 mg/kg

Notes:
TPH-D was not detect in any sample.

0 25 50 75 Feet

PIONEER TECHNOLOGIES CORPORATION

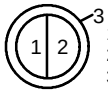
TPH-HO Results
Supplemental Sediment Sampling Results for the Solid Wood Incorporated Site
Olympia, Washington

Figure 3

This page has been left blank intentionally to allow for double-sided printing.

Legend

- Focus Area
- TPH-HO Delineation Boundary
- Recommended Bioassay Locations



1. TPH-HO Concentration[1]
2. TPH-D Concentration[1]
3. Bioassay Results[2]

TPH Concentrations (0-0.5' bgs)

- Non-Detect
- 0 - 100 mg/kg
- 101 - 400 mg/kg
- 401 - 700 mg/kg
- > 701 mg/kg

Bioassay Results

- Pass
- Fail

Notes:
[1] Only the maximum concentration at each sample location is displayed.
[2] If one of the three bioassay tests failed the sample location was designated "fail".

0 25 50 Feet

PIONEER TECHNOLOGIES CORPORATION

Recommended Bioassay Locations
Supplemental Sediment Sampling Results for the Solid Wood Incorporated Site
Olympia, Washington

Figure 4

This page has been left blank intentionally to allow for double-sided printing.

Attachment 1

This page has been left blank intentionally to allow for double-sided printing.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

July 30, 2014

Mr. Kip Summers, Project Coordinator
Olympia Parks, Arts and Recreation Department
222 Columbia St. NW
Olympia, WA 98501

Re: **Ecology Request for Bioassay Work Plan and Comments on the *Supplemental Sediment Sampling Results for the Solid Wood Incorporated Site,* dated April 21, 2014, prepared by Pioneer Technologies Corporation, Solid Wood Inc. Site (West Bay Park), Olympia, WA, Agreed Order DE-08-TCPSR-5415**
Facility/Site No.: 94656838,
Cleanup/Site ID No.: 4228.

Dear Mr. Summers:

Thank you for submitting the above-referenced report for our review. Please revise the report to incorporate the following comments and then resubmit it within 30 days of the date of this letter.

1. Section 1.1, Screening Levels: At this stage of the investigation, Ecology does not agree with the report's proposed use of two screening levels. Instead, the original screening level of 100 milligrams per kilogram (mg/kg) should continue to be used. The purpose of the investigation was to characterize the depth and extent of TPH contamination above the 100 mg/kg screening level. If subsequent bioassay results indicate that cleanup is needed to protect benthic invertebrates, then potential cleanup options would need to be explored that consider Site sediment dynamics (for example erosion and deposition). It is necessary to know how deep the contamination is in order to evaluate feasibility of cleanup alternatives. Ecology acknowledges that human health risk for the sediments pathway also needs to be considered at the Site. However, that evaluation should be done separately from the current effort to better identify the area of benthic concern for hydrocarbon impacts. Please revise the text and figures of the report using the benthic screening criteria only.

2. Section 2, 1st paragraph: Please clarify how equipment blanks were collected.

3. Deviations from the Supplemental Sediment Field Sampling and Analysis Plan (FSAP): Thank you for noting in Section 2 (footnotes 1 and 2) the deviations from the FSAP. There is one further deviation that should also be noted. The practical quantitation limit (PQL) defined in Table 2 of the FSAP for total petroleum hydrocarbons – heavy oil range (TPH-HO) was 50 mg/kg. However, the PQL that was actually used (Table 1) was 100 mg/kg. Ecology recommends that a TPH-HO reporting limit of 50 mg/kg be used for future work.

4. Table 1 and Section 3.1, Total Petroleum Hydrocarbons Results: Please clarify in the text and in the table whether or not silica gel cleanup preparation was used.

Ecology agrees with the proposed path forward to collect samples for bioassay analysis at the four sample locations shown in Figure 4. **Please prepare a FSAP for Ecology review within 30 days of the date of this letter.** Please also include in the FSAP that the samples from each bioassay location will also be analyzed for total petroleum hydrocarbons – diesel range (TPH-D) and TPH-HO with silica gel cleanup preparation.

If you have any questions about any of the information presented in this letter, please contact me at (360) 407-6247 or via e-mail at steve.teel@ecy.wa.gov.

Sincerely,

SSTeel

Steve Teel, LHG
Hydrogeologist
Toxics Cleanup Program
Southwest Regional Office

ST/ksc:Seds Report comments rev july 2014

By certified mail: (7013 2630 0001 9408 9074)

cc: Mr. Chris Waldron, Pioneer Technologies Corporation
Mr. David Hanna, Pioneer Technologies Corporation
Mr. Chris Waldron, Pioneer Technologies Corporation
Mr. Tom Morrill, City Attorney
Ms. Alexandra K. Smith, Environmental Legal Counsel, Port of Olympia
Scott Rose – Ecology
Joyce Mercuri – Ecology
Peter Striplin - Ecology
Diana Smith - Ecology

Attachment 2

This page has been left blank intentionally to allow for double-sided printing.

Photographic Log

Table of Contents

This page has been left blank intentionally to allow for double-sided printing.

Photographic Log

Photo No. 1: Sediment from SD-42 **Date:** 2/5/2014 **Direction Photo Taken:** NA **Description:** Sediment from the shallow sample at SD-42. Coarse sand texture with minimal amount of rocks.	

Photo No. 2: SD-42 Sample Location **Date:** 2/5/2014 **Direction Photo Taken:** NA **Description:** Deep sample at SD-42.	

Photographic Log

Photo No. 3: SD-44 Sample Location **Date:** 2/5/2014 **Direction Photo Taken:** NA **Description:** Sample location at SD-44. The sediment was extremely saturated and lighter in color with a high amount of large stones, shell, and clay.	

Photo No. 4: SD-45 Sample Location **Date:** 2/4/2014 **Direction Photo Taken:** NA **Description:** Sample location at SD-45. The sediment was extremely saturated and the sample hole filled with water. Large rocks were present throughout the sample. There was a high amount of biological activity including crabs and invertebrates.	

Photographic Log

Photo No. 5: SD-46 Sample Location **Date:** 2/4/2014 **Direction Photo Taken:** NA **Description:** The shallow sample at SD-46. There was a small amount of pebbles and a high amount of organic matter.	

Photo No. 6: SD-47 Sample Location **Date:** 2/4/2014 **Direction Photo Taken:** NA **Description:** Sample location at SD-47. SD-47 had a high amount of biological activity, including barnacles and crabs.	

Photographic Log

Photo No. 7: SD-48 Sample Location **Date:** 2/3/2014 **Direction Photo Taken:** NA **Description:** Sample location at SD-48. The sample was dark brown and contained a high amount of organic matter, including bark.	

Photo No. 8: SD-49 Sample Location **Date:** 2/4/2014 **Direction Photo Taken:** NA **Description:** SD-49 had a high amount of large stones and a high amount of crabs and invertebrate activity.	

Photographic Log

Photo No. 9: Sediment from SD-49 **Date:** 2/4/2014 **Direction Photo Taken:** NA **Description:** Sediment from SD-49 contained a high amount of large stones.	

Photo No. 10: SD-50 Sample Location **Date:** 2/3/2014 **Direction Photo Taken:** NA **Description:** SD-50 had a slight sheen when water pooled in the sample hole. There was minimal rock and shell, and a high amount of organic material.	

Photographic Log

Photo No. 11: SD-52 Sample Location **Date:** 2/3/2014 **Direction Photo Taken:** NA **Description:** Slight sheen visible in the pooled water. Large rocks and bricks were present in the deep sample.	

Photo No. 12: SD-53 Sample Location **Date:** 2/4/2014 **Direction Photo Taken:** NA **Description:** SD-53 sediment had a spongy texture and a large amount of small pebbles.	

Photographic Log

Photo No. 13: SD-54 Sample Location **Date:** 2/3/2014 **Direction Photo Taken:** NA **Description:** There was a sheen present on the pooled water. Large rocks and shells were present in the shallow sample.	

Photo No. 14: SD-55 Sample Location **Date:** 2/3/2014 **Direction Photo Taken:** NA **Description:** SD-55 sediment was dark gray sand with a high amount of shell and wood particles, and large mussels.	

This page has been left blank intentionally to allow for double-sided printing.

Attachment 3

This page has been left blank intentionally to allow for double-sided printing.

PIONEER
DAILY FIELD REPORT

Date: 2/3/14 Site Location: West Bay Site Arrival Time: 1:40 Site Departure Time: 5:30

WEATHER
TEMPERATURE
WIND

Clear Sun	Overcast	Drizzle	Rain	Snow
To 32	32-50	50-70	70-85	85 Up
Calm	Med.	Strong	Severe	

PEOPLE PRESENT ON-SITE

NAME	ASSOCIATION	TIME ON-SITE AND OFF-SITE
Shella Swain	PIONEER	1:40 - 5:30
Daniel Brittain	PIONEER	1:40 - 5:30

NOTES ON WORK COMPLETED

1:40 Arrival on-site. Tide still high

2:15 SD-55
Dark gray ~~clays~~ and ~~mud~~ no odor or sheen
shell & wood particles, large mussels & rocks

2:30 SD-54 2:30^s, 2:35^d
~~Dark~~ gray sand, no odor or sheen
large rocks and shells
extremely saturated, stream run into

Deep sample, no shell pieces
- Deep water ~~cooling~~ while digging
- sheen on water
- no odor

2:~~35~~ SD-52 3:25, 3:45
shallow - when water pooled, slight sheen was visible

deep. large rocks & bricks dug up

3:47 SD-51 shallow at 3.50
SS began shallow while DIs dug deep @ SD-52

4:15 SD-51 Deep
- Mostly sand, some wood particles
- no odor or sheen seen

4:20 SD-51 -2-3 dup

SIGNATURE: _____ DATE: 2/3/14

PIONEER
DAILY FIELD REPORT

Date: 2/3/14 Site Location: West Bay Site Arrival Time: 1:40 Site Departure Time: 5:30

WEATHER
TEMPERATURE
WIND

Clear Sun	Overcast	Drizzle	Rain	Snow
To 32	32-50	50-70	70-85	85 Up
Calm	Med.	Strong	Severe	

PEOPLE PRESENT ON-SITE

NAME	ASSOCIATION	TIME ON-SITE AND OFF-SITE
Daniel Bretham	PIONEER	1:40 - 5:30
Shella Swaim	PIONEER	1:45 - 5:30

NOTES ON WORK COMPLETED

4:35 SD-50 shallow
4:40 deep

- slight sheen
- no odor
- minimal rock/shell
- lots of organic material

~~5:00~~
4:50 SD-48 shallow
5:00 SD-45 deep

- very milky - higher on beach in ~~red~~ rocky area
- high amounts of bark
- no odor or sheen visible

SIGNATURE: [signature] DATE: 2/3/14

PIONEER
DAILY FIELD REPORT

Date: 2/4/14 Site Location: West Bay Site Arrival Time: 1:30 Site Departure Time: 6:00

WEATHER

Clear Sun	Overcast	Drizzle	Rain	Snow
TEMPERATURE				
To 32	32-50	50-70	70-85	85 Up
WIND				
Calm	Med.	Strong	Severe	

PEOPLE PRESENT ON-SITE

NAME	ASSOCIATION	TIME ON-SITE AND OFF-SITE
SHAUN SWAIN	PIONEER	1:30 - 6:00
Daniel Shilton	PIONEER	1:30 - 6:00

NOTES ON WORK COMPLETED

SP-53 shallow 4:10

- large grain size
- spongy texture
- no sheen or odor
- shell pebbles

deep 5:30
- less sample volume due to rocks + high amount of liquid

SD-46 shallow 4:50

- large grain size
- spongy texture
- no odor or sheen

SP 44 shallow 5:30
- light brown clayey sand
- rocky + shell.
- no odor or sheen

SIGNATURE: DATE: 2/4/14

PIONEER
DAILY FIELD REPORT

Date: 2/4/14 Site Location: West Bay Site Arrival Time: 1:30 Site Departure Time: 6:00

WEATHER
TEMPERATURE
WIND

(Clear Sun)	Overcast	Drizzle	Rain	Snow
To 32	(32-50)	50-70	70-85	85 Up
Calm	(Med.)	Strong	Severe	

PEOPLE PRESENT ON-SITE

NAME	ASSOCIATION	TIME ON-SITE AND OFF-SITE
Shella Swain	PIONEER	1:30 - 6:00
Daniel Buttain	PIONEER	1:30 - 6:00
Steve Teel	Ecology	3:00 - 3:45

NOTES ON WORK COMPLETED

SD-49 Shallow 2:05
Deep 2:15

- Difficulty collecting 1st sample - lots of large rocks
- no odor, sheen
- lots of crabs and invertebrate activity

SD-47 shallow 2:35
deep 3:05

- Lots of large rock, crab and invertebrate activity
- dark sand
- no odor or sheen

SD-45 shallow 3:15
deep 3:45

- Lots of biological activity - crabs, invertebrates
- no odor or sheen
- larger grain size

SD-43 shallow 3:50
deep 4:10

*not much sample volume due to rocks + high liquid

- large grain size / unsaturated
- high amount of shell
- no odor
- light brown

SIGNATURE: _____ DATE: 2/4/14

PIONEER
DAILY FIELD REPORT

Date: 2/5/14 Site Location: westport Site Arrival Time: 1 30 Site Departure Time: 4:00

WEATHER
TEMPERATURE
WIND

Clear Sun	Overcast	Drizzle	Rain	Snow
To 32	32-50	50-70	70-85	85 Up
Calm	Med.	Strong	Severe	

PEOPLE PRESENT ON-SITE

NAME	ASSOCIATION	TIME ON-SITE AND OFF-SITE
DANIEL BRITTAIN	PIONEER	1 30 - 4:00
SHELLA SWAIN	PIONEER	1:30 - 4:00

NOTES ON WORK COMPLETED

SD-4/6 deep 1:50

- dark brown, spongy
- saturated
- small amount of pebbles
- no odor or sheen
- lots of organic matter

SD-44 deep 2:00

- light brown, extremely saturated
- fine grain → ?
- very rocky
- no biological activity
- no odor or sheen

SD-42 shallow 2:15
deep 2:30

- sandy area → grey, brown
- med grain
- no odor or sheen

Overall notes: Samples further south appeared darker. Samples near spit were light brown. smaller grain size in further but samples. Most bio. activity mid-beach in middle of focus area.

SIGNATURE: [signature] DATE: 2/5/2014

This page has been left blank intentionally to allow for double-sided printing.

Attachment 4

This page has been left blank intentionally to allow for double-sided printing.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-001	**Sampling Date**	2/5/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-44-020514-2-3	**Sampling Time**	2:00 PM	**Extraction Date**	2/8/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/10/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/10/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-001

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	115.4	50-150

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-004	**Sampling Date**	2/5/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-42-020514-05-1	**Sampling Time**	2:15 PM	**Extraction Date**	2/8/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/10/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/10/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-004

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	123.6	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-005	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-51-020314-2-3-(01)	**Sampling Time**	4:20 PM	**Extraction Date**	2/8/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	100	2/10/2014	KFG	NWTPHDX	
Lube Oil	975	mg/kg	400	2/10/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-005

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	122.6	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-006	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-51-020314-2-3	**Sampling Time**	4:15 PM	**Extraction Date**	2/8/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	100	2/10/2014	KFG	NWTPHDX	
Lube Oil	788	mg/kg	400	2/10/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-006

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	121.4	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-007	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-50-020314-05-1	**Sampling Time**	4:35 PM	**Extraction Date**	2/8/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/10/2014	KFG	NWTPHDX	
Lube Oil	309	mg/kg	100	2/10/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-007

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	116.8	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-008	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-48-020314-05-1	**Sampling Time**	4:50 PM	**Extraction Date**	2/8/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/10/2014	KFG	NWTPHDX	
Lube Oil	117	mg/kg	100	2/10/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-008

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	113.4	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-009	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-48-020314-2-3	**Sampling Time**	5:00 PM	**Extraction Date**	2/8/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/10/2014	KFG	NWTPHDX	
Lube Oil	200	mg/kg	100	2/10/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-009

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	111.8	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-010	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-50-020314-2-3	**Sampling Time**	4:40 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	196	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-010

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	111.8	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-011	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-54-020314-05-1	**Sampling Time**	2:30 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-011

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	117.2	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-013	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-55-020314-05-1	**Sampling Time**	2:15 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	106	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-013

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	113.4	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-014	**Sampling Date**	2/4/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-44-020414-05-1	**Sampling Time**	5:30 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-014

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	118.6	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-015	**Sampling Date**	2/4/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-46-020414-05-1	**Sampling Time**	4:50 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-015

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	120.4	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-017	**Sampling Date**	2/4/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-53-020414-05-1	**Sampling Time**	4:10 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	115	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-017

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	118.4	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-018	**Sampling Date**	2/4/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-53-020414-2-3	**Sampling Time**	5:30 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-018

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	113.8	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-019	**Sampling Date**	2/4/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-43-020414-2-3	**Sampling Time**	4:16 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	50	2/11/2014	KFG	NWTPHDX	
Lube Oil	351	mg/kg	200	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-019

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	116.2	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-020	**Sampling Date**	2/4/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-47-020414-05-1	**Sampling Time**	2:25 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-020

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	68.4	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-021	**Sampling Date**	2/4/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-43-020414-05-1	**Sampling Time**	3:50 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-021

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	65.6	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-022	**Sampling Date**	2/4/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-47-020414-2-3	**Sampling Time**	3:05 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-022

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	58.0	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-023	**Sampling Date**	2/4/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-45-020414-05-1	**Sampling Time**	3:15 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-023

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	50.6	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-025	**Sampling Date**	2/4/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-49-020414-05-1	**Sampling Time**	2:05 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	50	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	200	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-025

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	52.6	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-026	**Sampling Date**	2/5/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	EB-WB-020514	**Sampling Time**	3:00 PM	**Extraction Date**	2/7/2014	
Matrix	Water	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/L	0.1	2/10/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/L	0.5	2/10/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-026

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	103.2	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-027	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-52-020314-05-1	**Sampling Time**	3:25 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-027

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	74.3	50-150

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number	140207024-029	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-51-020314-05-1	**Sampling Time**	3:50 PM	**Extraction Date**	2/10/2014	
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Diesel	ND	mg/kg	25	2/11/2014	KFG	NWTPHDX	
Lube Oil	ND	mg/kg	100	2/11/2014	KFG	NWTPHDX	

Surrogate Data

Sample Number 140207024-029

Surrogate Standard	Method	Percent Recovery	Control Limits
hexacosane	NWTPHDX	56.8	50-150

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Diesel	87.0	mg/kg	100	87.0	50-150	2/8/2014	2/10/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140207024-004	Diesel	ND	94.4	mg/kg	100	94.4	50-150	2/8/2014	2/10/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Diesel	89.6	mg/kg	100	89.6	5.2	0-50	2/8/2014	2/10/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Diesel	ND	mg/kg	25	2/8/2014	2/10/2014
Lube Oil	ND	mg/kg	100	2/8/2014	2/10/2014

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Diesel	99.2	mg/kg	100	99.2	50-150	2/10/2014	2/11/2014

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
140207024-018	Diesel	ND	147	mg/kg	100	147.0	50-150	2/10/2014	2/11/2014

Matrix Spike Duplicate

Parameter	MSD Result	Units	MSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Diesel	106	mg/kg	100	106.0	32.4	0-50	2/10/2014	2/11/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Diesel	ND	mg/kg	25	2/10/2014	2/11/2014
Lube Oil	ND	mg/kg	100	2/10/2014	2/11/2014

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Diesel	0.769	mg/L	1	76.9	50-150	2/7/2014	2/10/2014

Lab Control Sample Duplicate

Parameter	LCSD Result	Units	LCSD Spike	%Rec	%RPD	AR %RPD	Prep Date	Analysis Date
Diesel	0.819	mg/L	1	81.9	6.3	0-50	2/7/2014	2/10/2014

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Diesel	ND	mg/L	0.1	2/7/2014	2/10/2014
Lube Oil	ND	mg/L	0.5	2/7/2014	2/10/2014

AR	Acceptable Range
ND	Not Detected
PQL	Practical Quantitation Limit
RPD	Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Dr Moscow ID 83843 (208) 883-2839 FAX 882-9246
moscow@anateklabs.com

February 21, 2013

Pioneer Technologies Corp
5205 Corporate Center Crt SE Suite A
Olympia, WA 98503
Project Manager: Shella Swain

Laboratory Project #: 140207024
Client Project #: West Bay
Date Sampled: 2/3-2/5
Sampled by: Shella Swain
Date Received: 2/7/2014

Anatek Sample ID	Sample ID		Result	Analysis	Analyst
140207024-001	SD-WB-44-020514-2-3		12.5%	2/18/2014	KG
140207024-004	SD-WB-42-020514-05-1		1.12%	2/18/2014	KG
140207024-005	SD-WB-51-020314-2-3-(01)		10.4%	2/18/2014	KG
140207024-006	SD-WB-51-020314-2-3		12.6%	2/18/2014	KG
140207024-007	SD-WB-50-020314-05-1		3.28%	2/18/2014	KG
140207024-008	SD-WB-48-020314-05-1		3.62%	2/18/2014	KG
140207024-009	SD-WB-48-020314-2-3		5.43%	2/18/2014	KG
140207024-010	SD-WB-50-020314-2-3		2.24%	2/18/2014	KG
140207024-011	SD-WB-54-020314-05-1		1.35%	2/18/2014	KG
140207024-013	SD-WB-55-020314-05-1		2.03%	2/18/2014	KG
140207024-014	SD-WB-44-020414-05-1		6.51%	2/18/2014	KG
140207024-015	SD-WB-46-020414-05-1		5.82%	2/18/2014	KG
140207024-017	SD-WB-53-020414-05-1		3.63%	2/18/2014	KG
140207024-018	SD-WB-53-020414-2-3		5.33%	2/18/2014	KG
140207024-019	SD-WB-43-020414-2-3		2.67%	2/18/2014	KG
140207024-020	SD-WB-47-020414-05-1		4.21%	2/18/2014	KG
140207024-021	SD-WB-43-020414-05-1		2.34%	2/18/2014	KG
140207024-022	SD-WB-47-020414-2-3		5.85%	2/18/2014	KG
140207024-023	SD-WB-45-020414-05-1		2.30%	2/18/2014	KG
140207024-025	SD-WB-49-020414-05-1		4.52%	2/18/2014	KG
140207024-027	SD-WB-52-020314-05-1		5.89%	2/18/2014	KG
140207024-029	SD-WB-51-020314-05-1		4.37%	2/18/2014	KG

** - A known amount of dried sample was determined by difference and the fine particulates removed from it by washing through a #230 sieve until the water ran clear. The remaining sample was then quantitatively transferred into a funnel, collected in a pre-weighed filter paper, and the filter placed in a pre-weighed beaker for overnight drying. % Fines was determined as follows:

% Fines = 100% - 100% x ((Final Wt. - Beaker Wt. - Filter Wt.) / (Initial Jar Wt. - Final Jar Wt.))

Approved by: John W. Cobb

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number 140207024-001 **Sampling Date** 2/5/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-44-020514-2-3 **Sampling Time** 2:00 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	16.9	Percent		2/8/2014	KFG	%moisture	

Sample Number 140207024-004 **Sampling Date** 2/5/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-42-020514-05-1 **Sampling Time** 2:15 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	10.2	Percent		2/8/2014	KFG	%moisture	

Sample Number 140207024-005 **Sampling Date** 2/3/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-51-020314-2-3-(01) **Sampling Time** 4:20 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	76.2	Percent		2/8/2014	KFG	%moisture	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095; FL(NELAP): E871099

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number 140207024-006 **Sampling Date** 2/3/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-51-020314-2-3 **Sampling Time** 4:15 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	77.7	Percent		2/8/2014	KFG	%moisture	

Sample Number 140207024-007 **Sampling Date** 2/3/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-50-020314-05-1 **Sampling Time** 4:35 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	75	Percent		2/8/2014	KFG	%moisture	

Sample Number 140207024-008 **Sampling Date** 2/3/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-48-020314-05-1 **Sampling Time** 4:50 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	33	Percent		2/8/2014	KFG	%moisture	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number 140207024-009 **Sampling Date** 2/3/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-48-020314-2-3 **Sampling Time** 5:00 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	60	Percent		2/8/2014	KFG	%moisture	

Sample Number 140207024-010 **Sampling Date** 2/3/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-50-020314-2-3 **Sampling Time** 4:40 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	42.6	Percent		2/8/2014	KFG	%moisture	

Sample Number 140207024-011 **Sampling Date** 2/3/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-54-020314-05-1 **Sampling Time** 2:30 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	19.8	Percent		2/8/2014	KFG	%moisture	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number 140207024-013 **Sampling Date** 2/3/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-55-020314-05-1 **Sampling Time** 2:15 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	32.2	Percent		2/8/2014	KFG	%moisture	

Sample Number 140207024-014 **Sampling Date** 2/4/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-44-020414-05-1 **Sampling Time** 5:30 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	11.6	Percent		2/8/2014	KFG	%moisture	

Sample Number 140207024-015 **Sampling Date** 2/4/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-46-020414-05-1 **Sampling Time** 4:50 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	33.3	Percent		2/8/2014	KFG	%moisture	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number 140207024-017 **Sampling Date** 2/4/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-53-020414-05-1 **Sampling Time** 4:10 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	27.9	Percent		2/8/2014	KFG	%moisture	

Sample Number 140207024-018 **Sampling Date** 2/4/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-53-020414-2-3 **Sampling Time** 5:30 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	24.1	Percent		2/8/2014	KFG	%moisture	

Sample Number 140207024-019 **Sampling Date** 2/4/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-43-020414-2-3 **Sampling Time** 4:16 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	55.4	Percent		2/8/2014	KFG	%moisture	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number 140207024-020 **Sampling Date** 2/4/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-47-020414-05-1 **Sampling Time** 2:25 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	33	Percent		2/10/2014	KFG	%moisture	

Sample Number 140207024-021 **Sampling Date** 2/4/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-43-020414-05-1 **Sampling Time** 3:50 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	19.4	Percent		2/10/2014	KFG	%moisture	

Sample Number 140207024-022 **Sampling Date** 2/4/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-47-020414-2-3 **Sampling Time** 3:05 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	24.5	Percent		2/10/2014	KFG	%moisture	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: PIONEER TECHNOLOGIES CORPORATION
Address: 5205 CORPORATE CENTER COURT
LACEY, WA 98503
Attn: CHRIS WALDRON

Batch #: 140207024
Project Name: WEST BAY

Analytical Results Report

Sample Number 140207024-023 **Sampling Date** 2/4/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-45-020414-05-1 **Sampling Time** 3:15 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	26.5	Percent		2/10/2014	KFG	%moisture	

Sample Number 140207024-025 **Sampling Date** 2/4/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-49-020414-05-1 **Sampling Time** 2:05 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	42.2	Percent		2/10/2014	KFG	%moisture	

Sample Number 140207024-027 **Sampling Date** 2/3/2014 **Date/Time Received** 2/7/2014 1:09 PM
Client Sample ID SD-WB-52-020314-05-1 **Sampling Time** 3:25 PM
Matrix Soil **Sample Location**
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	36.1	Percent		2/10/2014	KFG	%moisture	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:	PIONEER TECHNOLOGIES CORPORATION	**Batch #:**	140207024
Address:	5205 CORPORATE CENTER COURT LACEY, WA 98503	**Project Name:**	WEST BAY
Attn:	CHRIS WALDRON		

Analytical Results Report

Sample Number	140207024-029	**Sampling Date**	2/3/2014	**Date/Time Received**	2/7/2014	1:09 PM
Client Sample ID	SD-WB-51-020314-05-1	**Sampling Time**	3:50 PM			
Matrix	Soil	**Sample Location**				
Comments						

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
%moisture	30.1	Percent		2/10/2014	KFG	%moisture	

Authorized Signature

John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Login Report

Customer Name: PIONEER TECHNOLOGIES CORPORATION
5205 CORPORATE CENTER COURT
LACEY WA 98503

Order ID: 140207024
Order Date: 2/7/2014

Contact Name: CHRIS WALDRON
Project Name: WEST BAY
Comment:

Sample #: 140207024-001 **Customer Sample #:** SD-WB-44-020514-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/5/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-002 **Customer Sample #:** SD-WB-42-020514-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/5/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
HOLD	M	hold	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-003 **Customer Sample #:** SD-WB-46-020514-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/5/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
HOLD	M	hold	2/19/2014	***Normal (~10 Days)***

Customer Name: PIONEER TECHNOLOGIES CORPORATION
5205 CORPORATE CENTER COURT
LACEY WA 98503

Order ID: 140207024
Order Date: 2/7/2014

Contact Name: CHRIS WALDRON

Project Name: WEST BAY

Comment:

Sample #: 140207024-004 **Customer Sample #:** SD-WB-42-020514-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/5/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-005 **Customer Sample #:** SD-WB-51-020314-2-3-(01)

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-006 **Customer Sample #:** SD-WB-51-020314-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-007 **Customer Sample #:** SD-WB-50-020314-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Customer Name: PIONEER TECHNOLOGIES CORPORATION
5205 CORPORATE CENTER COURT
LACEY WA 98503

Order ID: 140207024
Order Date: 2/7/2014

Contact Name: CHRIS WALDRON

Project Name: WEST BAY

Comment:

Sample #: 140207024-008 **Customer Sample #:** SD-WB-48-020314-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-009 **Customer Sample #:** SD-WB-48-020314-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-010 **Customer Sample #:** SD-WB-50-020314-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-011 **Customer Sample #:** SD-WB-54-020314-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Customer Name: PIONEER TECHNOLOGIES CORPORATION
5205 CORPORATE CENTER COURT
LACEY WA 98503

Order ID: 140207024
Order Date: 2/7/2014

Contact Name: CHRIS WALDRON

Project Name: WEST BAY

Comment:

Sample #: 140207024-012 **Customer Sample #:** SD-WB-52-020314-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
HOLD	M	hold	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-013 **Customer Sample #:** SD-WB-55-020314-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-014 **Customer Sample #:** SD-WB-44-020414-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-015 **Customer Sample #:** SD-WB-46-020414-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Customer Name: PIONEER TECHNOLOGIES CORPORATION
5205 CORPORATE CENTER COURT
LACEY WA 98503

Order ID: 140207024
Order Date: 2/7/2014

Contact Name: CHRIS WALDRON

Project Name: WEST BAY

Comment:

Sample #: 140207024-016 **Customer Sample #:** SD-WB-45-020414-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
HOLD	M	hold	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-017 **Customer Sample #:** SD-WB-53-020414-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-018 **Customer Sample #:** SD-WB-53-020414-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-019 **Customer Sample #:** SD-WB-43-020414-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Customer Name: PIONEER TECHNOLOGIES CORPORATION
5205 CORPORATE CENTER COURT
LACEY WA 98503

Order ID: 140207024
Order Date: 2/7/2014

Contact Name: CHRIS WALDRON

Project Name: WEST BAY

Comment:

Sample #: 140207024-020 **Customer Sample #:** SD-WB-47-020414-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-021 **Customer Sample #:** SD-WB-43-020414-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-022 **Customer Sample #:** SD-WB-47-020414-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-023 **Customer Sample #:** SD-WB-45-020414-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Customer Name: PIONEER TECHNOLOGIES CORPORATION
5205 CORPORATE CENTER COURT
LACEY WA 98503

Order ID: 140207024
Order Date: 2/7/2014

Contact Name: CHRIS WALDRON

Project Name: WEST BAY

Comment:

Sample #: 140207024-024 **Customer Sample #:** SD-WB-49-020414-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
HOLD	M	hold	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-025 **Customer Sample #:** SD-WB-49-020414-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/4/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-026 **Customer Sample #:** EB-WB-020514

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/5/2014
Quantity: 1 **Matrix:** Water **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-027 **Customer Sample #:** SD-WB-52-020314-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

Customer Name: PIONEER TECHNOLOGIES CORPORATION
5205 CORPORATE CENTER COURT
LACEY WA 98503

Order ID: 140207024
Order Date: 2/7/2014

Contact Name: CHRIS WALDRON

Project Name: WEST BAY

Comment:

Sample #: 140207024-028 **Customer Sample #:** SD-WB-54-020314-2-3

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
HOLD	M	hold	2/19/2014	***Normal (~10 Days)***

Sample #: 140207024-029 **Customer Sample #:** SD-WB-51-020314-05-1

Recv'd: ☑ **Collector:** SHELLA **Date Collected:** 2/3/2014
Quantity: 2 **Matrix:** Soil **Date Received:** 2/7/2014 1:09:00 PM
Comment:

Test	Lab	Method	Due Date	Priority
%Moisture	M	%moisture	2/19/2014	***Normal (~10 Days)***
TPHDX-NW	M	NWTPHDX	2/19/2014	***Normal (~10 Days)***

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature inside the cooler?	2.0
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Are VOC samples free of headspace?	N/A
Is there a trip blank to accompany VOC samples?	N/A
Labels and chain agree?	Yes

140207 024 **PITC** Last Due 2/19/2014
1st SAMP 2/3/2014 1st RCVD 2/7/2014
Anatek # WEST BAY

Anatek Labs, Inc.

Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Company Name: PIONEER TECHNOLOGIES CORP.
Address: 5205 CORPORATE CENTER CRT SE SUITE
City: OLYMPIA ~~LACEY~~ State: WA Zip: 98503
Phone: 360-570-1700
Fax:

Project Manager: CHRIS LOALDRON
Project Name & #: WEST BAY
Email Address: SWAINS@USPIONEER.COM
Purchase Order #:
Sampler Name & phone: SHELLA SWAIN 360-570-1700

Turn Around Time & Reporting

Please refer to our normal turn around times at: http://www.anateklabs.com/services/guidelines/reporting.asp

- [X] Normal
- [ ] Next Day*
- [ ] 2nd Day*
- [ ] Other*_____

*All rush order requests must be prior approved.

- [ ] Phone
- [ ] Mail
- [ ] Fax
- [X] Email

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative	TPH-Dx	GRAINSIZE								Note Special Instructions/Comments
1	SD-~~WB~~-44-020514-2-3	2/5/14 / 2:00	SOIL	2			X	X								MWBS
2	SD-WB-42-020514-2-3	2/5/14 / 2:30	SOIL	2			X	X							←	*ARCHIVE until further notice
3	SD-WB-46-020514-2-3	2/5/14 / 1:50	SOIL	2			X	X							←	*ARCHIVE until further notice
4	SD-WB-42-020514-05-1	2/5/14 / 2:15	SOIL	2			X	X								
5	SD-WB-51-020314-2-3-(61)	2/3/14 / 4:20	SOIL	2			X	X								
6	SD-WB-51-020314-2-3	2/3/14 / 4:15	SOIL	2			X	X								
7	SD-WB-50-020314-05-1	2/3/14 / 4:35	SOIL	2			X	X								
8	SD-WB-48-020314-05-1	2/3/14 / 4:50	SOIL	2			X	X								
9	SD-WB-48-020314-2-3	2/3/14 / 5:00	SOIL	2			X	X								
10	SD-WB-50-020314-2-3	2/3/14 / 5:40	SOIL	2			X	X								
11	SD-WB-54-020314-05-1	2/3/14 / 2:30	SOIL	2			X	X								
12	SD-WB-52-020314-2-3	2/3/14 / 3:45	SOIL	2			X	X					*			ARCHIVE
13	SD-WB-55-020314-05-1	2/3/14 / 2:15	SOIL	2			X	X								

	Printed Name	Signature	Company	Date	Time
Relinquished by	Shella Swain		PIONEER	2/5/14	3:30
Received by	B Thomson		Anatek	2/7/14	13:09
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist

Received Intact?	Y	N
Labels & Chains Agree?	Y	N
Containers Sealed?	Y	N
VOC Head Space?	Y	N

Fed ex Ice Y/N Sat NO
Temperature (°C) 2.0
Preservative: —
Date & Time: 2/7/14 13:09
Inspected By: BT

Anatek Labs, Inc.

Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Anatek Log-In #

Company Name: PIONEER TECHNOLOGIES CORP.
Address: 5205 CORPORATE CENTER COURT SE #1
City: LACEY State: WA Zip: 98503
Phone: 360-570-1700
Fax:

Project Manager: CHRIS WALDRON
Project Name & #: WEST BAY
Email Address: SWAINS@USPIONEER.com
Purchase Order #: -
Sampler Name & phone: SHELLA SWAIN 360-570-1700

Turn Around Time & Reporting

Please refer to our normal turn around times at: http://www.anateklabs.com/services/guidelines/reporting.asp

- ✓ Normal
- __ Next Day*
- __ 2nd Day*
- __ Other*_____

*All rush order requests must be prior approved.

- __ Phone
- __ Mail
- __ Fax
- __ Email

Provide Sample Description / **List Analyses Requested** / **Note Special Instructions/Comments**

Preservative:

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	TPH-Dx	GRAINSIZE								
14	SD-WB-44-020414-05-1	2/4/14 / 5:30	SOIL	4	2	X	X								
15	SD-WB-46-020414-05-1	2/4/14 / 4:50	SOIL	4	2	X	X								
16	SD-WB-45-020414-2-3	2/4/14 / 3:45	SOIL	4	2	X	X								
17	SD-WB-53-020414-05-1	2/4/14 / 4:10	SOIL	4	2	X	X								
18	SD-WB-53-020414-2-3	2/4/14 / 5:30	SOIL	4	2	X	X								
19	SD-WB-43-020414-2-3	2/4/14 / 4:16	SOIL	2		X	X								
20	SD-WB-47-020414-05-1	2/4/14 / 2:25	SOIL	2		X	X								
21	SD-WB-43-020414-05-1	2/4/14 / 3:50	SOIL	2		X	X								
22	SD-WB-47-020414-2-3	2/4/14 / 3:05	SOIL	2		X	X								
23	SD-WB-45-020414-05-1	2/4/14 / 3:15	SOIL	2		X	X								
24	SD-WB-49-020414-2-3	2/4/14 / 2:15	SOIL	2		X	X			* ARCHIVE					
25	SD-WB-49-020414-05-1	2/4/14 / 2:05	SOIL	2		X	X								
26	EB-WB-020514	2/5/14 / 3:00	WATER	1		X	X								

← * ARCHIVE UNTIL FURTHER NOTICE

	Printed Name	Signature	Company	Date	Time
Relinquished by	Shella Swain		PIONEER	2/5/14	3:40
Received by	B Thomson		Anatek	2/7/14	13:12
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist

Received Intact?	(Y)	N
Labels & Chains Agree?	(Y)	N
Containers Sealed?	(Y)	N
VOC Head Space?	Y	N

Fed ex
Ice yes
Seal NO

Temperature (°C): 2.0
Preservative: —
Date & Time: 2/7/14 13:12
Inspected By: BT

Anatek Labs, Inc.

Chain of Custody Record

1282 Alturas Drive, Moscow ID 83843 (208) 883-2839 FAX 882-9246
504 E Sprague Ste D, Spokane WA 99202 (509) 838-3999 FAX 838-4433

Anatek Log-In #

Company Name: PIONEER TECHNOLOGIES CORP
Address: 5205 CORPORATE CENTER COURT SE SUITE A
City: OLYMPIA State: WA Zip: 98503
Phone: 360-570-1700
Fax:

Project Manager: CHRIS WALDRON
Project Name & #: WEST BAY
Email Address: SWAINS@USPIONEER.COM
Purchase Order #:
Sampler Name & phone: SHELLA SWAIN, 360 570-1700

Turn Around Time & Reporting

Please refer to our normal turn around times at:
http://www.anateklabs.com/services/guidelines/reporting.asp

X Normal
__ Next Day*
__ 2nd Day*
__ Other*_____

*All rush order requests must be prior approved.

__ Phone
__ Mail
__ Fax
__ Email

Provide Sample Description / List Analyses Requested / Note Special Instructions/Comments

Lab ID	Sample Identification	Sampling Date/Time	Matrix	# of Containers	Sample Volume	Preservative	TPH-Dx	GRAIN SIZE								Note Special Instructions/Comments
27	SD-WB-52-020314-05-1	2/3/14 / 3:25	SOIL	2			X	X								
28	SD-WB-54-020314-2-3	2/3/14 / 2:35	SOIL	2			X	X								← Archive until further notice
29	SD-WB-51-020314-05-1	2/3/14 / 3:50	SOIL	2			X	X								

	Printed Name	Signature	Company	Date	Time
Relinquished by	Shella Swain		PIONEER	2/5/14	3:30
Received by	B Thomson		Anatek	2/7/14	13:10
Relinquished by					
Received by					
Relinquished by					
Received by					

Inspection Checklist

Received Intact? Y N
Labels & Chains Agree? Y N
Containers Sealed? Y N
VOC Head Space? Y N

Fed ex
Ice yes
Seal NO

Temperature (°C) 2.0
Preservative —
Date & Time: 2/7/14 13:09
Inspected By: BT