



November 8, 2024
ZGA Job No. 2577.20

Department of Ecology, Central Regional Office
1250 West Alder Street
Union Gap, WA 98903-0009

Attention: Ms. Valerie Bound, Section Manager
Central Region Toxics Cleanup Program

Subject: Submittal of Subsurface Investigation and Request for No Further Action Opinion

Site Name: G&W Oil & Wood Inc.
Site Address: 903 West 1st Street, Cle Elum, Washington 98922
Facility/Site ID (FSID): 4658443
Cleanup Site ID (CSID): 7045

Dear Ms. Bound,

Zipper Geo Associates, LLC (ZGA) is pleased to present this *Submittal of Subsurface Investigation and Request for No Further Action Opinion*. At the request of the Subject Property owner and ZGA's client (*Cle Elum Development, LLC*), ZGA is respectfully re-engaging with the Washington State Department of Ecology (Ecology) to request an updated No Further Action determination for the G&W Oil & Wood Inc. site (Site) located at 903 West 1st Street in Cle Elum, Washington. The property is assigned FSID 4658443 and is associated with two cleanup sites:

- Pacific Pride Card Lock Site (CSID 7209, Voluntary Cleanup Program [VCP] Project # CE0332); and,
- G&W Oil & Wood Inc. Site (CSID 7045).

A number of relevant documents from ZGA's project folder pertaining to both of the above listed Sites are attached at the conclusion of this submittal.

Site Regulatory Status

The regulatory status of both sites are listed on Ecology's Cleanup and Tank Search database as "No Further Action" (NFA). The Pacific Pride Card Lock site was entered into the VCP in 2010 and received a formal Ecology-issued NFA Opinion dated November 8, 2010. The November 8, 2010 NFA Opinion was based on a remedial action cleanup effort documented in a deliverable entitled: *Final Cleanup Report, Pacific Pride Fueling Facility, 903 W. 1st Street, Cle Elum, WA*, prepared by DLH Environmental Consulting, dated July 29, 2010.

The November 8, 2010 NFA Opinion letter states:

*“at this time, a second site is located on this parcel and described in Site Assessment Report: Underground Storage Tank Removal & Soil Remediation, Assessment and Remediation Consulting Services (ARCS), June 28, 1999. This site has **not received** a No Further Action from Ecology and was not reviewed as part of this VCP application.”.*

Ecology provided a *Department Decision Recommendation* letter for the G&W Oil & Wood Inc. Site dated December 5, 2012 and signed by Ecology on December 13, 2012. This letter states:

“In keeping with the requirement of WAC 173-340-310 (5) I recommend that this site receive a No Further Action (NFA).

Supporting Criteria:

A UST Site Assessment Report, June 28, 1999 details the removal of two UST's [6K gasoline and 12K diesel], closure in place of two UST's [capacity not stated] partially under an existing building, and removal of related piping and pumps/dispensers.

The construction activities occurred during May 1999. The in-place closure of the USTs had limited soil sampling conducted to verify that contamination was not present. Groundwater was not encountered in any excavation to a final excavated depth of 12 feet. All confirmatory sampling from the tank removal, piping/dispensers, and closed-in-place tanks indicated concentrations below current MTCA cleanup levels.

An additional cleanup for another site on the property occurred in 2008. This cleanup received a No Further Action in 2010 after demonstrating both soil and groundwater below cleanup levels. Based on the lack of groundwater contamination, it can be reasonably concluded that the 1999 closed-in-place tanks did not leak significantly to warrant additional cleanup actions.

This Department Decision Recommendation should be reviewed and re-evaluated based on any new information about this site.”

It is our understanding that a formal NFA Opinion was never issued for the *G&W Oil & Wood Inc* Site (CSID 7045), however, the site is listed on Ecology's Cleanup and Tank Search database as “No Further Action” (NFA).

2022 Subsurface Investigation Results (ZGA)

On behalf of Cle Elum Development, LLC as part of environmental due diligence prior to purchase, ZGA observed the removal of two closed-in-place underground storage tanks (USTs) referenced in the 1999 ARCS Site Assessment Report. Our field observations, analytical laboratory results, and conclusions that in-situ soil is below applicable MTCA cleanup levels are summarized in ZGA's *Subsurface Investigation* report dated May 17, 2022 which is attached to this submittal. Relevant findings from the 2022 *Subsurface Investigation* report are summarized below.

- On April 8, 2022, *Santa Inc.*, an earthwork contractor under subcontract to *Cle Elum Development, LLC*, advanced eight test pits under the direction of ZGA. Each test pit was strategically located in areas of the property where previous remedial action occurred as documented the *Final Cleanup Report, Pacific Pride Fueling Facility, 903 W. 1st Street, Cle Elum, WA*, prepared by DLH Environmental Consulting, dated July 29, 2010.
- Soils removed from/exposed during advancement of the eight test pits did not exhibit indications of contaminant impact, such as stains, sheen, odors, or elevated PID readings.
- ZGA provided oversight and documented the removal of 6,000-gallon and 2,000-gallon gasoline USTs which were closed in place in 1999 and filled with controlled density fill (CDF). The two tanks were located immediately adjacent to one another. *Santa Inc.* removed the tanks on May 4, 2022.
- A Washington State UST Site Assessor from ZGA collected six (6) (four excavation sidewall and two bottom) soil samples from the single UST tank cavity following tank removal.
- Soils in the immediate vicinity of the tanks did not exhibit indications of contaminant impact, such as stains, sheen, odors, or elevated PID readings during or following removal.
- Contaminants of concern (COCs) were not reported exceeding laboratory method reporting limits (MRLs) in fifteen (15) of the eighteen (18) soil samples collected from the test pits and from the UST cavity following tank removal. In five (5) of the soil samples, COCs, while detectable, were reported at concentrations well below applicable Model Toxics Control Act (MTCA) cleanup levels.



Request for Opinion

Based on the results of the 1999 and 2010 investigations by others, the 2012 NFA Recommendation letter issued by Ecology, and the findings of ZGA's 2022 Subsurface Investigation, it is the professional opinion of the undersigned that the G&W Oil & Wood Inc site is worthy of an Opinion of No Further Action relative to the standards of MTCA. On behalf of our client and current property owner, *Cle Elum Development, LLC*, we are respectfully requesting a formal written Opinion of No Further Action for the site.

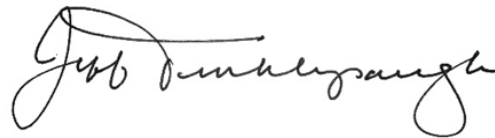
Closing

We look forward to your review of this submittal. If you have any questions, comments, or if ZGA may be of further assistance as pertains to the information presented herein, please contact ZGA at 425-582-9928 or knewman@zippergeo.com.



Respectfully submitted,
Zipper Geo Associates, LLC



Kaelin Newman, L.G., R.G.
Project Geologist



Jeffrey S. Tinklepaugh, L.G., L.E.G.
Senior Geologist



Sean W. Donnan, P.G., L.E.G., L.Hg.
Principal Hydrogeologist

Attachments:

- *Subsurface Investigation, 903 West 1st Street, Cle Elum, WA 98922*, prepared by ZGA, dated May 17, 2022.
- *Department Decision Recommendation, G&W Oil & Wood, FSID 4658443*, prepared by Ecology, dated December 13, 2012.
- *NFA Opinion Letter, Pacific Pride Card Lock site (FSID 4658443, VPC CE0332)*, prepared by Ecology, dated November 8, 2010.
- *Final Cleanup Report, Pacific Pride Fueling Facility, 903 W. 1st Street, Cle Elum, WA*, prepared by DLH Environmental Consulting, dated July 29, 2010.
- *Site Assessment Report: Underground Storage Tank Removal & Soil Remediation*, prepared for Pacific Pride Facility (G&W Oil and Wood, Inc.), 903 West First Street, Cle Elum, WA, prepared by Assessment and Remediation Consulting Services (ARCS), dated June 28, 1999.

Transmittal: One (1) copy electronic to addressee; cc to Cle Elum Development, LLC

**Subsurface Investigation
903 W 1st Street, Cle Elum, WA 98922
prepared by ZGA
May 17, 2022**

SUBSURFACE INVESTIGATION

903 WEST 1ST STREET
CLE ELUM, KITTIAS COUNTY, WASHINGTON

ZGA Project No. 2577.23

May 17, 2022

Prepared for:
Cle Elum Development LLC



Reference: Kittitas County Parcel Viewer with Google Earth aerial imagery basemap dated 2020.

Prepared by:

ZipperGeo
Geoprofessional Consultants

May 17, 2022

ZGA Job No. 2577.23

Cle Elum Development LLC
14241 NE Woodinville Duval Road. #135
Woodinville, Washington 98072

Attention: Mr. Sang Ji


Subject: Subsurface Investigation
903 West 1st Street
Cle Elum, Washington 98922
ZGA Project No. 2577.23

Dear Mr. Ji,

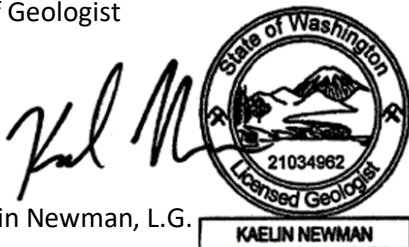
In accordance with your request and written authorization, Zipper Geo Associates, LLC (ZGA) has completed this Subsurface Investigation (SI) for the Property at the location noted above. This report presents the results of the subsurface exploration and laboratory analysis of soil and previous soil samples, as well as our interpretations of these data, and previous environmental work completed on the Property. Our services were completed in general accordance with our *Work Plan and Cost Estimate Limited Subsurface Investigation* (Proposal No. P22053) dated April 5, 2022. We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,

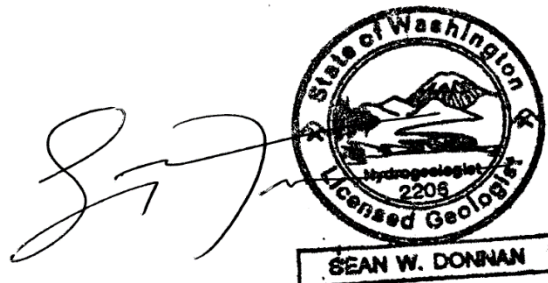
Zipper Geo Associates, LLC



Elizabeth Cobb,
Staff Geologist



Kaelin Newman, L.G.
Project Geologist



Sean W. Donnan, P.G., L.E.G., L.Hg.
Principal

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Table 1: Soil Analytical Summary

Table 2: Groundwater Analytical Summary Results

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Exploration Logs

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Analytical Laboratory Reports

Friedman and Bruya Inc. Analytical Report # 204132

Friedman and Bruya Inc. Analytical Report # 205052

1.0 INTRODUCTION

This report presents the findings of our Subsurface Investigation (SI) for 903 West 1st Street in Cle Elum, Washington (the Property). Our environmental consulting scope of services for this project included: the review and summary of previous environmental reports completed on the Property; a subsurface exploration program consisting of the advancement of eight test pits to depths of approximately 10 feet below ground surface (bgs) and the removal of two closed in-place underground storage tanks (USTs); the collection of a total of eighteen soil samples for laboratory analysis; subcontracted laboratory analysis of soil samples for chemicals of concern; and the preparation of this report.

1.1 Site Description

The project site is located at 903 West 1st Street in Cle Elum, Kittitas County, Washington. The Property consists of Kittitas County Tax Parcel No. 263835 totaling approximately 3.39-acres of mostly gravel covered areas with undeveloped land stretching to the west. It is currently owned by Cle Elum Development LLC. The site and vicinity are zoned for commercial use. The Property appears relatively flat with little topographic relief. The site has previously been used as a logging business, trucking/excavator business, storage yard space, fueling station, HVAC business, and most recently as a mixed storage and office space.

The Subject Property is bordered to the south by I-90 and the building is operated by Cle Elum Hardware, to the east by Warrior Quick Stop gas station, undeveloped land to the west, and the Laurel Hill Memorial Cemetery to the north.

1.2 Project Understanding

It is our understanding that the Cle Elum Development LLC is planning to demolish all surface structures and construct a commercial development on the Subject Property. The purpose of this Subsurface Investigation is to evaluate current subsurface conditions prior to redevelopment.

1.3 Standard of Care

The analytical results within this report are based on samples collected from the indicated locations at the time of sample collection and should not be construed as a warranty of the subsurface conditions throughout the site or at other times. Within the limitations of scope, schedule, and budget for our work, we warrant that our work has been done in accordance with our Work Plan and Cost Estimate and generally accepted environmental assessment practices by other professionals in this area at the time the report was prepared. No other warranty, express or implied, is made.

1.4 Reliance

This report has been prepared for the exclusive use of Cle Elum Development LLC and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Cle Elum Development LLC and ZGA.

2.0 DOCUMENT REVIEW

Several subsurface environmental investigations and remedial actions have been completed on the property since 1999. A summary of these reports and the Washington State Department of Ecology (Ecology) letters are provided below:

1999 Underground Storage Tank Removal and Remediation Report prepared by ARCS

This report documented the closures of four petroleum USTs (two 6,000-gallon gasoline USTs, one 2,000-gallon gasoline UST, and one 12,000-gallon UST) and associated piping on the Property. One of the 6,000 gallon and 12,000-gallon USTs were removed, while the other 6,000-gallon UST and 2,000-gallon USTs were closed in place.

Soils exhibiting signs of petroleum hydrocarbon impacts encountered in the excavation of the removed USTs was excavated and placed into a land farm for treatment. Soil samples collected from the limits of the UST excavation, product line and pump island locations did not exhibit concentrations of gasoline or diesel-range petroleum hydrocarbons or benzene, toluene, ethylbenzene, and xylenes in excess of laboratory detection limits. No samples were collected in the area of the closed-in-place USTs.

2008 Soil Boring and Sampling Report prepared by White Shield, Inc.

White Shield completed a subsurface investigation of the property that included advancing six hollow-stem auger borings across the property, and collection and analytical testing of soil samples collected from the borings. The borings were advanced to depths of 20.5 feet to 21.5 feet below ground surface. None of the borings encountered measurable groundwater. Selected soil samples collected from borings B-1, B-2, and B-4 did not exhibit detectable concentrations of GRPH, DRPH, ORPH, or BTEX compounds. The 15-foot sample collected from boring B-3 exhibited a DRPH concentration of 197 milligrams per kilogram (mg/kg), which is below the DRPH + ORPH cleanup level of 2,000 mg/kg. However, surface and near surface (2.5-foot depth samples collected from boring 5 exhibited DRPH concentrations of 11,900 mg/kg and 5,680 mg/kg, both of which are in excess of the MTCA Method A cleanup level. White Shield recommended remedial excavation and disposal of the surface and near surface contaminated soil in the immediate vicinity of boring B-5.

Based on the conclusions, White Shield made the following recommendations:

- Notify the Washington State Department of Ecology of the sample results;

- Clean up the contaminated soil in the Vicinity of boring B-5; and,
- Obtain groundwater samples at the site.

2009 Soil Boring and Groundwater Sampling Report prepared by White Shield, Inc.

This report documented advancing four additional hollow stem auger soil borings. Two of the borings (B-3W and B-6W) were installed with temporary PVC wells near the south side of USTs and pump islands, respectively. Groundwater depth in the wells was 27.40 feet and 29.31 feet below the top of the PVC well casings (essentially ground surface). Soil samples from the borings did not exhibit obvious signs of contaminant impacts, according to the report. Groundwater samples were collected from each of the two wells, and a duplicate sample was also collected from B-MW6. All of the samples did not exhibit concentrations of GRPH, DRPH, and BTEX in excess of laboratory detection limits.

2010 Final Cleanup Report prepared by DLH Environmental

This report documented the removal of concrete and the remaining underground fuel lines and confirmed and suspect petroleum contaminated soil. A total of 1,066.97 tons of PCS were excavated and exported to Cemex's treatment facility in Everett, Washington. Contaminated soil was reportedly removed from four areas on the Property. Confirmation soil samples collected from the final excavation limits did not exhibit concentrations of DRPH + ORPH in excess of the MTCA Method A cleanup level.

2010 No Further Action Letter prepared by Ecology

Per the request of James Oil Company LLC and based upon its review of previous assessment and remediation reports, and the clean, post-remedial action soil and groundwater data, Ecology granted the site a No Further Action determination.

2014 Phase I Environmental Site Assessment (ESA) prepared by the Pacific Groundwater Group (PGG)

PGG completed a Phase I ESA of the Property. The Phase I did not identify any Recognized Environmental Conditions associated with the Property.

2022 Phase I ESA prepared by the Stratum Group

The report provided the following conclusions and recommendations:

"The property consists of two buildings that have been used as storage/shop buildings with offices and gravel areas that have been used for parking and storage yard areas for businesses in the buildings. A portion of one building partially collapsed this past winter due to very heavy snow loads.

In the past there were two above ground fuel tanks and two underground fuel tanks on the

site. The underground tanks were closed in place and the above ground tanks were removed as well as the fuel pumps. During the UST closures, soil contamination was encountered at the fuel pump area and soil was excavated and a cleanup was completed. Washington State Department of Ecology issued a 'No Further Action' letter in 2010 and removed the site from the contaminated site list.

Based upon our site observations, historical research, and review of site documents regarding the past fueling on the site and assessment of potential of off-site contamination sources, it is our opinion that the risk of contamination on the site is minimal and therefore no further investigation is warranted."

2.1 Subsurface Investigation Objectives

The purpose of this SI was to further assess near surface soil conditions in the areas of former potential contaminant source areas which had not been evaluated prior to the planned property redevelopment.

3.0 METHODOLOGY

Our approach to this investigation was based on our above-described project understanding, the findings of previous site work, and our experience on similar sites in the region. Our specific goal was to evaluate soil conditions in areas that have not been previously assessed and collect soil samples for analytical testing.

This SI included the completion of the following tasks:

1. Prepare a site-specific health and safety plan in accordance with 29 CFR 1910.120 and Chapter 296-843 WAC.
2. Observe the advancement of eight test pits using an excavator under subcontract to the client.
3. Screen and log soil conditions and collect representative soil samples for analytical testing.
4. Observation of the removal of two UST's.
5. Collect soil samples during UST removal.
6. Subcontract analytical laboratory testing on the collected soil samples.
7. Complete a limited data analysis and QA/QC.
8. Prepare this Subsurface Investigation Report.

These tasks are summarized below.

2.1 Subsurface Exploration

Eight test pits (designated TP-1 through TP-8) were advanced on the subject property under ZGA observation by Santa, Inc. (Santa) on April 8th, 2022. Test pits were advanced to depths ranging from approximately 9 to 10 feet bgs.

A Washington State-licensed UST Site Assessor from ZGA observed removal of the previously closed in place USTs and screened and collected confirmation soil samples within the excavation below and lateral to the formal UST locations.

A ZGA geologist continuously observed all excavations and screened and collected soil samples for analytical testing. Soils were field screened for indications of environmental impacts such as unnatural discoloration, odor, residues, and the presence of elevated levels of volatile organic compounds (VOCs) using a photoionization detector (PID) via the headspace method.

2.2 Soil Sample Collection

Soil samples were collected during excavation operations to characterize the site in accordance with our client's objectives. Select samples were submitted for laboratory analysis based on the results of field screening, potential sources of release, and observed soil conditions.

Soil samples were extracted from excavator bucket using clean hand tools and disposable gloves. Soil samples were placed directly into laboratory supplied glassware and then stored in a chilled cooler pending transport to the analytical laboratory. All soil samples for analysis of volatile compounds were collected in accordance with EPA field preservation Method 5035A. Sample containers were labeled with our company's name, the project number, the sample ID, the date of collection, and the time of collection. Soil samples were shipped under chain-of-custody procedures to Friedman and Bruya Inc. laboratory of Seattle, Washington.

2.3 Laboratory Analysis of Soil Samples

Up to two soil samples were collected from each test pit and six soil samples collected from the limits of the UST excavation were submitted to the analytical laboratory and subjected to analytical laboratory testing on April 11th, 2022. Soil samples were analyzed for Contaminants of Concern (COCs) associated with a gasoline release in accordance with MTCA Table 830-1, *Required Testing for Petroleum Releases*. All selected soil samples from the test pits were analyzed for the compounds listed below:

- Gasoline-range petroleum hydrocarbons (GRPH) by Northwest Method NWTPH-Gx.
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B.
- Diesel and oil-range petroleum hydrocarbons (DRPH and ORPH, respectively) by Northwest Method NWTPH-Dx.
- Lead by EPA Method 200.8/6020A.

Additional selected soil samples were also analyzed for:

- Gasoline target volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, and xylenes (BTEX), 1-2, Dibromoethane (EDB), 1-2, dichloroethane (EDC), methyl tertiary-butyl ethyl (MTBE), and naphthalene's by EPA Method 8260D.
- Ethylene dibromide (EDB) utilizing a trace level laboratory method reporting limit (MRL) equal to the MTCA Method A soil cleanup standard of 0.005 mg/kg.

Six soil samples were collected from the UST sidewalls and base and were submitted to the analytical laboratory and subjected to analytical laboratory testing on May 4th, 2022. Soil samples were analyzed for Contaminants of Concern (COCs) under MTCA Table 830-1, *Required Testing for Petroleum Releases*. All of the samples were analyzed for the compounds listed below:

- GRPH by NWTPH-Gx.
- DRPH by NWTPH-Dx.
- BTEX by EPA Method 8260D.
- Lead by EPA Method 200.8/6020A.

Hold Times. All analyses were completed within specified hold times.

Method Blanks. Analytes were not detected in any of the laboratory method blanks.

Laboratory Control Sample Results. Recoveries were all within laboratory limits.

Laboratory Reporting Limits. Laboratory reporting detection limits (RDLs) were below applicable cleanup levels.

Chemical analyses were performed by Friedman & Bruya, Inc. (F&B) of Seattle, Washington, a Washington State-accredited analytical laboratory. Analytical laboratory reports and executed chain-of-custody forms are included in Appendix D. All analyses were completed using standard turnaround times. Data packages were checked for completeness immediately upon receipt from the laboratory to ensure that data and QA/QC information was present.

Data quality was assessed by considering hold times, surrogate recovery, method blanks, matrix spike and matrix spike duplicate (MS/MSD) recovery, and method reporting limits. QA/QC review was completed using guidance described in *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (Draft Final, USEPA, 2017). Our evaluation assumes that the QA/QC is correct as reported by the laboratory, and merely provides an interpretation of the QA/QC results. Based upon our interpretation of quality control information provided by the laboratories, it is our opinion that the overall dataset is useable as qualified for the purposes of this Limited Phase II ESA.

4.0 RESULTS

4.1 UST Removal

Each of the two USTs had been previously filled with controlled density fill (CDF). Based on the large volume and weight of the CDF, Santa removed portions of the CDF before removing the tanks. The CDF and soil surrounding the tanks were field screened with a photoionization detector (PID). Soils in the immediate vicinity of the tanks did not exhibit obvious signs of contaminant impacts, such as stains, sheen, odors, or elevated PID readings.

4.2 General Soil Conditions

Soil conditions observed in the test pits were relatively consistent across the site. The test pits generally disclosed local areas of silty sand with variable gravel and organic debris interpreted to be fill soil that extended to depths of up to about 7 feet below ground surface (bgs). Where fill was not present or underneath the fill native soil were exposed that consisted of gravelly sand to sandy gravel with cobbles that extended to the full depth explored of up to 10 feet bgs. The underlying native soils are interpreted to be quaternary alluvial deposits.

Soils in exposed in the test pits did not exhibit obvious signs of contaminant impacts, such as stains, sheen, odors, or elevated PID readings.

4.3 General Groundwater Conditions

Groundwater was not encountered at the time of our exploration work to depths of up to 10 feet bgs. Previous groundwater analytical results completed in 2010 from White Shield Inc. indicating no detectable concentrations of contaminants of concern above laboratory MRLs are summarized in Table 2, Appendix B.

4.4 Analytical Laboratory Test Results - Soil

GRPH, DRPH, and ORPH were not reported at concentrations exceeding the MRLs in any of the soil samples analyzed with the exception of sample ID "UST-SSW-7.5", which exhibited concentrations of DRPH of 100 mg/kg and ORPH of 750 mg/kg and are below the MTCA Method A cleanup level of 2,000 total mg/kg. Toluene, ethylbenzene, xylenes, and lead were detected in several soil samples at concentrations well below the applicable MTCA Method A cleanup levels. Other gasoline target volatile organic compounds (VOCs) including benzene, 1-2, Dibromoethane (EDB), 1-2, dichloroethane (EDC), methyl tertiary-butyl ethyl (MTBE), and naphthalene were not reported at concentrations exceeding laboratory MRLs.

Soil sample analytical results are summarized in Table 1, Appendix B. Analytical laboratory reports are included in Appendix D.

Analytical results were compared to the most conservative (unrestricted land use) “Method A” cleanup levels (CULs) set forth in Chapter 70.105D RCW and its implementing regulations, the Model Toxics Control Act (MTCA), Chapter 173-340 WAC. MTCA Method A CULs were applicable for this project as the Property is considered to have few hazardous substances, as described in Chapter 173-340-704.

5.0 CONCLUSIONS

Zipper Geo Associates, LLC (ZGA) has completed a Subsurface Investigation for the Cle Elum project located at 903 West 1st Street, Cle Elum, Kittitas County, Washington. Our scope of work included:

1. Preparation of a site-specific health and safety plan in accordance with 29 CFR 1910.120 and Chapter 296-843 WAC;
2. Observe removal of two previously closed in Place gasoline USTs;
3. Observation of eight subsurface explorations (TP-1 through TP-8) using a subcontracted excavator;
4. Collection of twelve soil samples from the test pits for laboratory analysis;
5. Observation of the removal of two closed in-place UST’s;
6. Collection of six soil samples during UST removal for laboratory analysis;
7. Laboratory analysis of soil samples for chemicals of concern;
8. Data analysis and QA/QC relative to applicable cleanup standards established under MTCA;
9. Tabulate data and draft figures to graphically depict test results;
10. Preparation of this SI Report.

Based on analytical laboratory test results of a total of eighteen soil samples collected on April 8, 2022 and May 4, 2022 and submitted for analytical testing, contaminants of concern were not reported at concentrations exceeding applicable MTCA Method A cleanup levels.

6.0 RECOMMENDATIONS

Based on the results of this investigation, no further environmental evaluation appears warranted at this time.

7.0 REFERENCES

Chapter 70.105D of the Revised Code of Washington and its implementing regulations, *the Model Toxics Control Act*, chapter 173-340 of the Washington Administrative Code.

DLH Environmental Consulting. (2010). *Final Cleanup Report Pacific Pride Fueling Facility Half-Acre Portion of Kittitas County Parcel #263835 903 W. 1st Street Cle Elum, Washington 98922*, July 29.

Pacific Groundwater Group. (2014). *Phase I Environmental Site Assessment 903 West 1st Street Cle Elum, Washington*, August 28.

State of Washington Department of Ecology. (2008). *Early Notice Letter regarding the release of hazardous substances on property located at 903 1st Street West, Cle Elum, Washington, F/SID #4658443*.

State of Washington Department of Ecology. (2010). *No Further Action at the following Site: Pacific Pride (formerly G&W Oil and Wood Inc.)*, November 8.

State of Washington Department of Ecology. (2012). *Department Decision Recommendation [for G&W Oil and Wood Inc.]*.

Stratum Group. (2022). *Report Environmental Site Assessment Phase I 903 West 1st Street Cle Elum, WA 98922*, March 22.

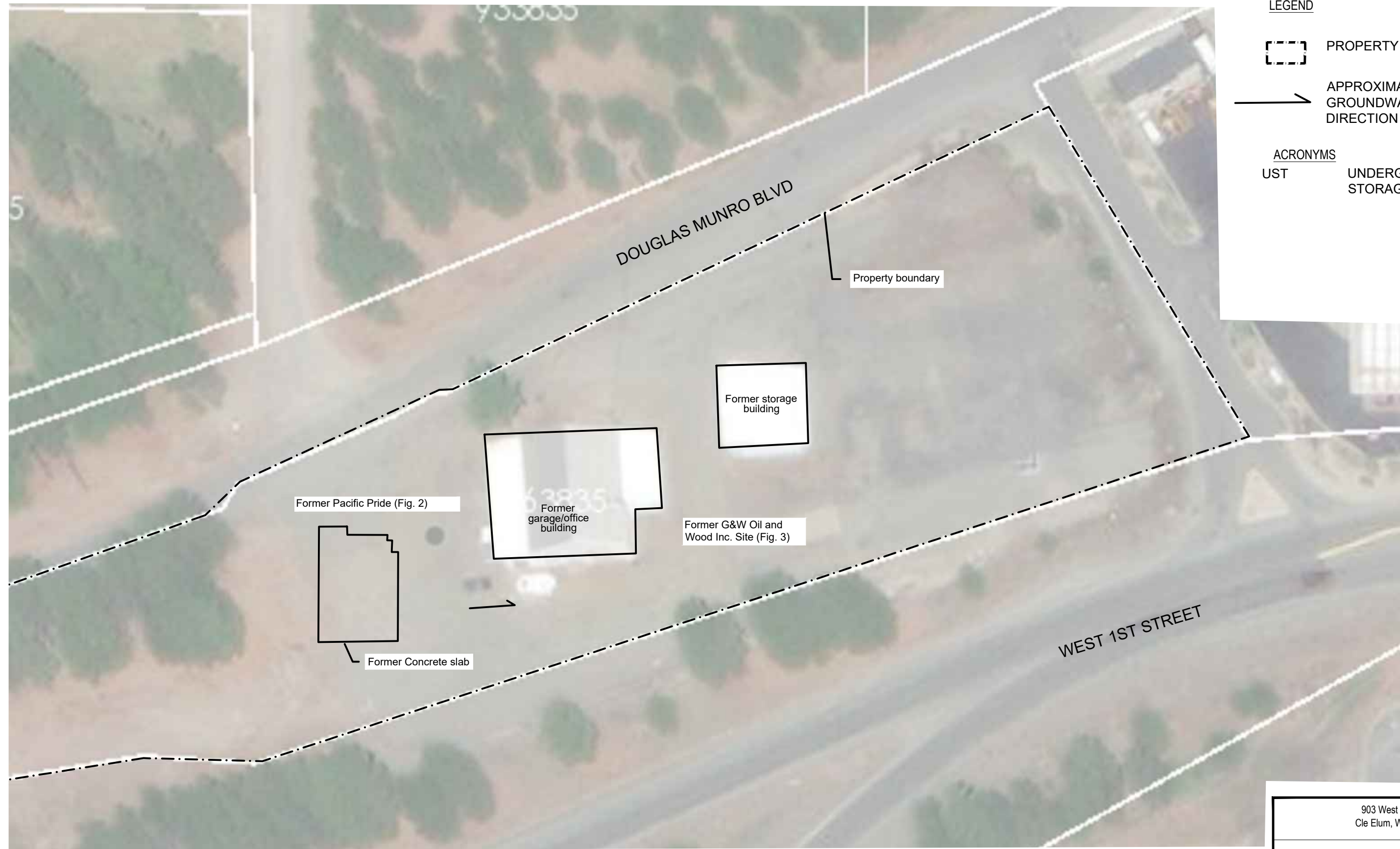
Tabor, R. W., Waitt, R. B., Frizzell, Jr., V. A., Swanson, D. A., Byerly, G. R., & Bentley, R. D. (2006, August 24). *Geologic map of the Wenatchee 1:100,000 quadrangle, central Washington: A digital Database/ USGS DS-137*. U.S. Geological Survey Publications Warehouse. <https://pubs.usgs.gov/ds/137/>

White Shield, Inc. (2008). *Soil Boring and Sampling Report Pacific Pride Fueling Station 903 1st Street West Cle Elum, Washington, 98922*, August 22.

White Shield, Inc. (2009). *Soil Boring and Groundwater Sampling Report, Former Pacific Pride Fueling Station 903 1st Street West Cle Elum, Washington, 98922*, November 30.

APPENDIX A

FIGURES



LEGEND



PROPERTY BOUNDARY

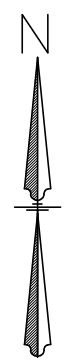


APPROXIMATE
GROUNDWATER MIGRATION
DIRECTION

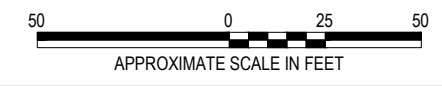
ACRONYMS

UST

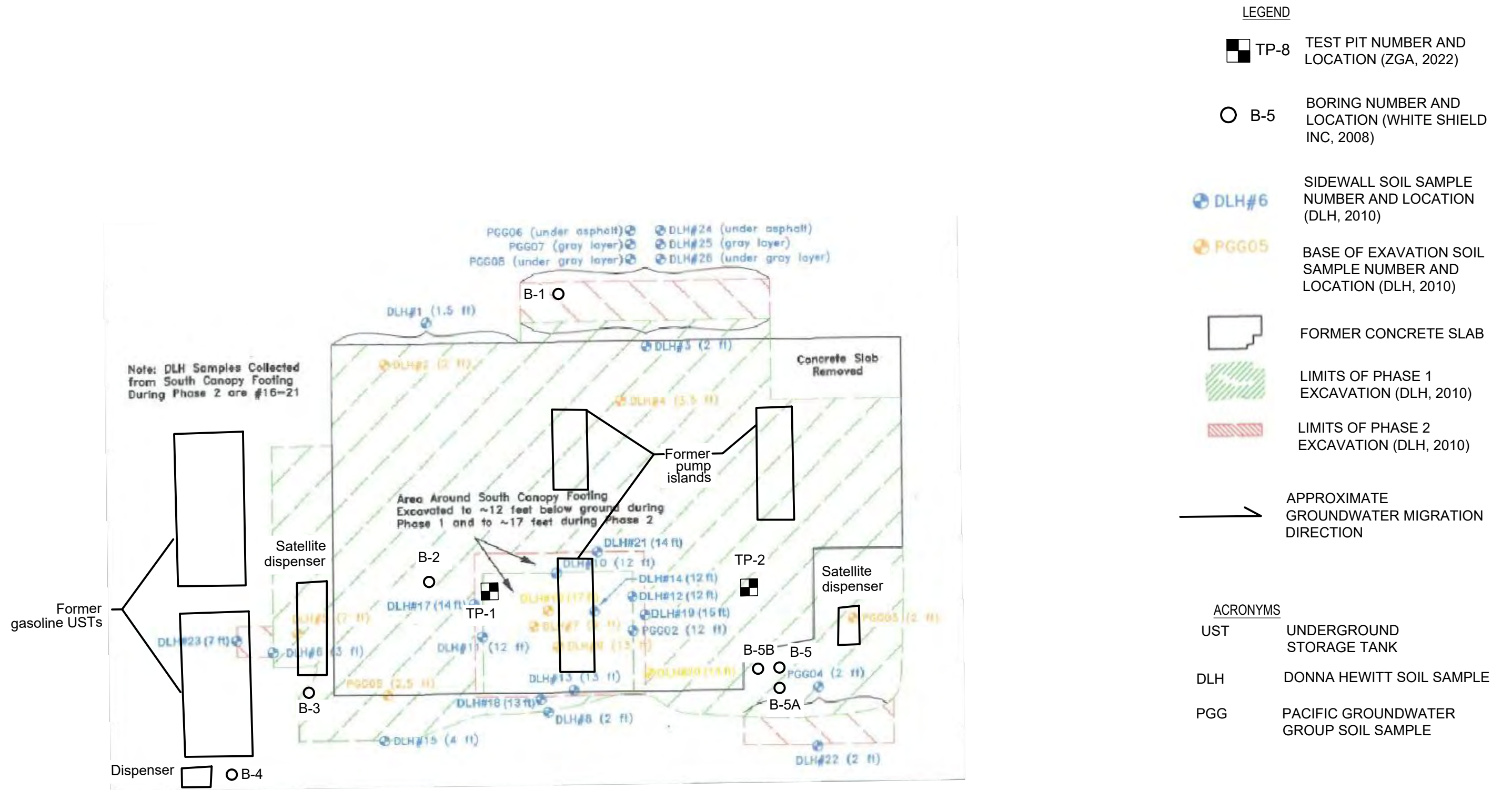
UNDERGROUND
STORAGE TANK



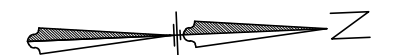
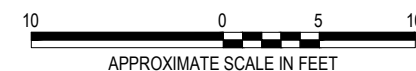
REFERENCE: (1) KITTITAS COUNTY ASSESSOR'S MAP WITH GOOGLE EARTH AERIAL IMAGERY BASEMAP, (2) ASSESSMENT AND REMEDIATION CONSULTING SERVICES UST SITE ASSESSMENT SITE DIAGRAM DATED JUNE 28, 1999 (3) ZGA FIELD MEASUREMENTS.



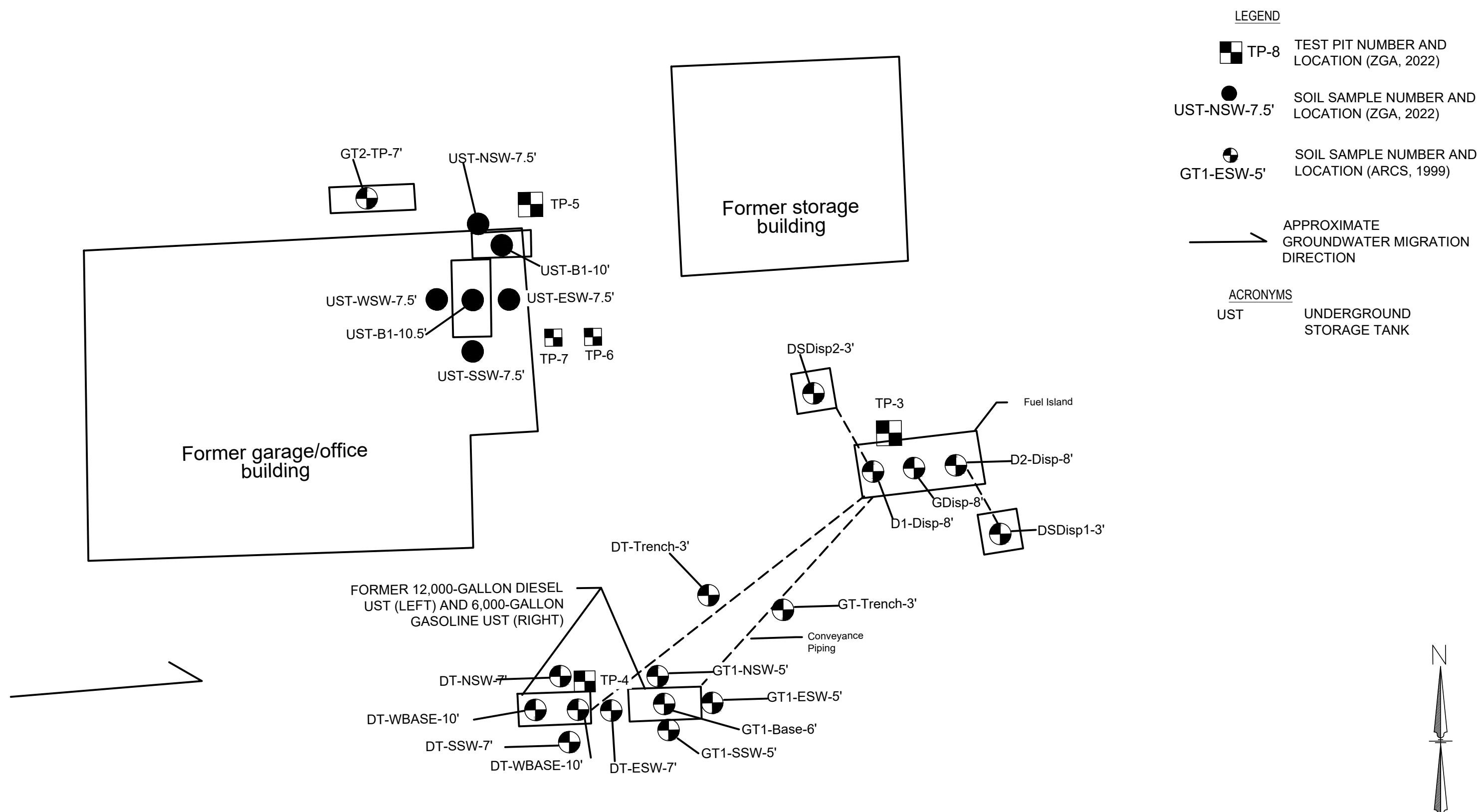
903 West 1st Street Cle Elum, Washington		
SITE & EXPLORATION PLAN		
APRIL 2022	Job No.	2577.23
Zipper Geo Associates, LLC 19019 36th Ave. W., Suite E Lynnwood, WA, 98036		FIGURE SHT. 1 of 1
		1







REFERENCE: (1) FIGURE 2, APPROXIMATE BORING LOCATIONS FROM SOIL BORING AND SAMPLING REPORT PREPARED BY WHITE SHIELD INC. DATED AUGUST 22, 2008 (2) ASSESSMENT AND REMEDIATION CONSULTING SERVICES UST SITE ASSESSMENT SITE DIAGRAM DATED JUNE 28, 1999 (3) FIGURE 1, JAMES OIL PACIFIC PRIDE SITE MAP AND SAMPLE LOCATIONS FROM CLEANUP ACTION REPORT PREPARED BY DLH ENVIRONMENTAL CONSULTING DATED JULY 29, 2010. ZGA FIELD MEASUREMENTS.

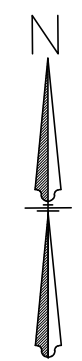


903 West 1st Street Cle Elum, Washington		
FORMER PACIFIC PRIDE SITE		
APRIL 2022	Job No.	2577.23
Zipper Geo Associates, LLC 19019 36th Ave. W., Suite E Lynnwood, WA, 98036	FIGURE	2
SHT. 1 of 1		

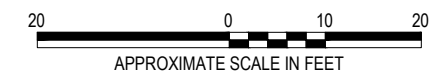


LEGEND

-  TP-8 TEST PIT NUMBER AND LOCATION (ZGA, 2022)
-  UST-NSW-7.5' SOIL SAMPLE NUMBER AND LOCATION (ZGA, 2022)
-  GT1-ESW-5' SOIL SAMPLE NUMBER AND LOCATION (ARCS, 1999)
-  APPROXIMATE GROUNDWATER MIGRATION DIRECTION
- ACRONYMS
- UST UNDERGROUND STORAGE TANK



REFERENCE: (1) FIGURE 2, APPROXIMATE BORING LOCATIONS FROM SOIL BORING AND SAMPLING REPORT PREPARED BY WHITE SHIELD INC. DATED AUGUST 22, 2008 (2) ASSESSMENT AND REMEDIATION CONSULTING SERVICES UST SITE ASSESSMENT SITE DIAGRAM DATED JUNE 28, 1999 (3) FIGURE 1, JAMES OIL PACIFIC PRIDE SITE MAP AND SAMPLE LOCATIONS FROM CLEANUP ACTION REPORT PREPARED BY DLH ENVIRONMENTAL CONSULTING DATED JULY 29, 2010. ZGA FIELD MEASUREMENTS.



903 West 1st Street Cle Elum, Washington		
FORMER G&W OIL AND WOOD INC. SITE		
APRIL 2022	Job No.	2577.23
Zipper Geo Associates, LLC 19019 36th Ave. W., Suite E Lynnwood, WA, 98036		FIGURE SHT. 1 of 1
		3

APPENDIX B

TABLES

Table 1. Soil Analytical Summary Results



Date of Collection	Exploration ID	Depth (ft.)	Petroleum Hydrocarbons (mg/kg)			Volatile Petroleum Compounds (mg/kg)					Fuel Additives (mg/kg)				Metals
			Gasoline	Diesel	Oil	B	T	E	X	Hexane	EDB	EDC	MTBE	Nap.	Pb
MTCA Method A (mg/kg):			30 ^A /100	2,000 total		0.03	7	6	9	NE	0.005	NE	0.1	5	250
MTCA Method B Cancer (mg/kg):										NE		11			
MTCA Method B Non-Cancer (mg/kg):										4,800					
Regional 90th Percentile Natural Background:			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24
1999 ARCS															
5/19/1999	GT1-Base-6	6	ND	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	GT1-SSW-5	5	ND	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	GT1-NSW-5	5	ND	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	GT1-ESW-5	5	ND	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	GDISP-8	8	ND	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	D1-DISP-8	8	--	ND	ND	--	--	--	--	--	--	--	--	--	--
	D2-DISP-8	8	ND	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	DSDISP1-3	3	ND	--	--	ND	ND	ND	ND	--	--	--	--	--	--
	DSDISP2-3	3	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
	DTWBASE-10	10	--	93	ND	--	--	--	--	--	--	--	--	--	--
	DTEBASE-10	10	--	67	ND	--	--	--	--	--	--	--	--	--	--
	DTESW-7	10	--	ND	ND	--	--	--	--	--	--	--	--	--	--
	DTSSW-7	10	--	160	360	--	--	--	--	--	--	--	--	--	--
	DTNSW-7	10	--	58	86	--	--	--	--	--	--	--	--	--	--
	DT-Trench-3	3	--	ND	ND	--	--	--	--	--	--	--	--	--	--
	GT-Trench-3	3	ND	--	--	ND	ND	ND	ND	--	--	--	--	--	--
GT2-TP-7	7	ND	--	--	ND	ND	ND	ND	--	--	--	--	--	--	
2008 White Shield															
6/27/2008	B-1-2	2	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
	B-1-17.5	17.5	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
	B-2-5	5	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
	B-2-20	20	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
	B-3-2	2	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
	B-3-15	15	ND	197	ND	ND	ND	ND	ND	--	--	--	--	--	--
	B-4-7.5	7.5	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
	B-4-17.5	17.5	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
	B-5-2.5	2.5	ND	11,900	ND	ND	ND	ND	0.49	--	--	--	--	--	--
	B-5-15	15	ND	947	ND	ND	ND	ND	ND	--	--	--	--	--	--
	B-5A-2.5	2.5	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
	B-5B-SUR	Surface	ND	5,680	ND	ND	ND	ND	ND	--	--	--	--	--	--
	S-5B-2.5	2.5	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--
	S-5B-Pile	Pile	ND	854	ND	ND	ND	ND	ND	--	--	--	--	--	--

Table 1. Soil Analytical Summary Results



Date of Collection	Exploration ID	Depth (ft.)	Petroleum Hydrocarbons (mg/kg)			Volatile Petroleum Compounds (mg/kg)					Fuel Additives (mg/kg)				Metals
			Gasoline	Diesel	Oil	B	T	E	X	Hexane	EDB	EDC	MTBE	Nap.	Pb
MTCA Method A (mg/kg):			30 ^A /100	2,000 total		0.03	7	6	9	NE	0.005	NE	0.1	5	250
MTCA Method B Cancer (mg/kg):										NE		11			
MTCA Method B Non-Cancer (mg/kg):										4,800					
Regional 90th Percentile Natural Background:			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24
2010 DLH															
5/18/2010	51810-16	17	--	<50	<250	--	--	--	--	--	--	--	--	--	--
	51810-17	14	--	<50	<250	--	--	--	--	--	--	--	--	--	--
	51810-18	13	--	<50	<250	--	--	--	--	--	--	--	--	--	--
	51810-19	14	--	<50	<250	--	--	--	--	--	--	--	--	--	--
	51810-20	14	--	<50	<250	--	--	--	--	--	--	--	--	--	--
	51810-21	14	--	<50	<250	--	--	--	--	--	--	--	--	--	--
	51810-22	2	--	96	400	--	--	--	--	--	--	--	--	--	--
	51810-23	7	--	<50	<250	--	--	--	--	--	--	--	--	--	--
	51810-24	--	--	190	470	--	--	--	--	--	--	--	--	--	--
	51810-25	--	--	5,700	5,800*	--	--	--	--	--	--	--	--	--	--
	51810-26	--	--	<50	<250	--	--	--	--	--	--	--	--	--	--
2022 ZGA															
4/8/2022	TP-1	3.5	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	12.2
		10	<5	<50	<250	<0.001	0.0027	0.0014	0.010	<0.25	<0.005	<0.002	<0.001	<0.005	4.6
	TP-2	2.5	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	4.89
		8	<5	<50	<250	<0.001	0.0032	<0.001	<0.003	<0.25	<0.005	<0.002	<0.001	<0.005	3.41
	TP-3	4	<5	<50	<250	<0.001	0.0026	<0.001	<0.003	<0.25	<0.005	<0.002	<0.001	<0.005	3.85
		9	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	3.66
	TP-4	3	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	5.14
		8	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	3.38
	TP-5	10	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	3.54
	TP-6	10	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	3.67
	TP-7	10	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	4.01
TP-8	6	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	3.23	
5/4/2022	UST-NSW	7.5	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	16.4
	UST-ESW	7.5	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	7.36
	UST-SSW	7.5	<5	100x	750	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	28.6
	USTWSW	7.5	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	9.46
	UST-B1	10.5	<5	<50	<250	<0.02	0.04	<0.02	<0.06	--	--	--	--	--	6.97
	UST-B2	10	<5	<50	<250	<0.02	<0.02	<0.02	<0.06	--	--	--	--	--	4.82

Table 1. Soil Analytical Summary Results

Date of Collection	Exploration ID	Depth (ft.)	Petroleum Hydrocarbons (mg/kg)			Volatile Petroleum Compounds (mg/kg)					Fuel Additives (mg/kg)				Metals
			Gasoline	Diesel	Oil	B	T	E	X	Hexane	EDB	EDC	MTBE	Nap.	Pb
MTCA Method A (mg/kg):			30 ^A /100	2,000 total		0.03	7	6	9	NE	0.005	NE	0.1	5	250
MTCA Method B Cancer (mg/kg):										NE		11			
MTCA Method B Non-Cancer (mg/kg):										4,800					
Regional 90th Percentile Natural Background:			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24

LEGEND		NOTES AND LABORATORY MODIFIERS	
200	Most applicable MTCA cleanup level (defaults to MTCA Method A, then Method B if Method A is not established).	^A	The MTCA Method A cleanup level for gasoline in soil in the presence of benzene is 30 mg/kg.
400	Other cleanup level provided for relative comparison, but not selected as most applicable.		
NE	Not Established.		
N/A	Not Applicable.		
<5	Analyte not detected above laboratory RDL.	^X	"The sample chromatographic pattern does not resemble the fuel standard used for quantitation."
10	Analyte detected above laboratory RDL, but below MTCA cleanup level.		
40	Analyte detected above MTCA cleanup level.		
<0.3	RDL exceeds MTCA cleanup level.		
16.6	Analyte detected above laboratory RDL, but below background concentration.		
ND	Not detected above unspecified laboratory RDL.		
--	Not tested.		
*	A duplicate sample of this material was collected and analyzed by PGG and below cleanup levels in 2010.		

ACRONYMS AND ABBREVIATIONS			
As	Arsenic	MTCA	Chapter 70A.305 RCW and its implementing regulations, the Model Toxics Control Act, Chapter 70A.340 WAC.
B	Benzene	N/A	Not Applicable
E	Ethylbenzene	NE	Not Established
EDB	1,2-Dibromoethane	Pb	Lead
EDC	1,2-Dichloroethane	RDL	Reporting Detection Limit
ft.	Feet	T	Toluene
MTBE	Methyl Tertbutyl Ether	VOCs	Volatile Organic Compounds
Nap.	Napthalene	X	Xylenes
mg/kg	Milligrams per Kilogram, equivalent to parts-per-million (ppm)	VOCs	Volatile Organic Compounds

**Table 2. Groundwater Analytical
Summary Results**

Date of Collection	Well/Boring ID	Well Depth (ft)	Petroleum Hydrocarbons (µg/L)			Volatile Organic Compounds (µg/L)			
			Gasoline	Diesel	Oil	B	T	E	X
MTCA Method A (µg/L):			800 ^A /1,000	500 total		5	1,000	700	1,000
White Shield Groundwater Samples, November 2009									
11/2/2009	B-6W	30	<100	<200	--	<1	<2	<1	<3
	B-2W*	30	<100	<200	--	<1	<2	<1	<3
	B-3W	30	<100	<200	--	<1	<2	<1	<3

LEGEND

200	Most applicable MTCA cleanup level (defaults to MTCA Method A, then Method B if Method A is not established).
400	Other cleanup level provided for relative comparison, but not selected as most applicable.
NE	Not Established.
<5	Analyte not detected above laboratory RDL.
10	Analyte detected above laboratory RDL, but below MTCA cleanup level.
40	Analyte detected above MTCA cleanup level.
<0.3	RDL exceeds MTCA cleanup level.
--	Not Tested.

ACRONYMS AND ABBREVIATIONS

B	Benzene
T	Toluene
E	Ethylbenzene
X	Xylenes
µg/L	Micrograms per Liter, equivalent to parts-per-billion (ppb)
MTCA	Chapter 70A.305 RCW and its implementing regulations, the Model Toxics Control Act, Chapter 173-340 WAC.
RDL	Reporting Detection Limit

NOTES AND LABORATORY MODIFIERS

^A	The MTCA Method A cleanup level for gasoline in groundwater varies depending on the reported concentrations of benzene and other volatile petroleum compounds. Based on the detection of benzene in the sample collected from MW-4, we interpret that the lower cleanup level is most applicable to this site.
^B	VOCs analyzed by EPA Method 8260D.
*	"Sample B-2W is a blind duplicate of sample B-6W".
x	"The sample chromatographic pattern does not resemble the fuel standard used for quantitation."

APPENDIX C

BORING LOGS

ZIPPER GEO ASSOCIATES, LLC

19019 36th Avenue West, Suite E, Lynnwood, Washington 98036

	<p align="center"><u>Test Pit TP-1</u></p> <p>Location: See Figures 1 - 3 Approx. Ground Surface Elevation: TBD</p>	<p>Project: Cle Elum Development LLC Project No: 2577 Date Excavated: April 8, 2022</p>			
Depth (ft)	Material Description	Sample	N _c	%M	Testing
1	1 to 2 inches gravel surfacing over medium dense, damp, grayish-brown, gravelly silty SAND (fill)				
2					
3		TP-1 @ 3.5 ft.			
4					
5					
6	Black plastic, some woody debris, blue/white crystals (possible remnant of previous remedial cleanup) (fill)				
7					
8					
9					
10					
6	Medium dense, damp, reddish brown, sandy GRAVEL w/ cobbles				
7					
8					
9					
10					
10	Test pit completed at approximately 10 ft. No groundwater seepage at the time of excavation. Caving observed @ 7ft	TP-1 @ 10 ft.			
11					
12					
13					
14					
15					
16					
17					
	Note: N _c is the Dynamic Cone Penetrometer blow count per 1.75-inch interval measured in accordance with ASTM Special Technical Publication #399.				

ZIPPER GEO ASSOCIATES, LLC

19019 36th Avenue West, Suite E, Lynnwood, Washington 98036

	<p align="center"><u>Test Pit TP-2</u></p> <p>Location: See Figures 1 – 3 Approx. Ground Surface Elevation: TBD</p>	<p>Project: Cle Elum Development LLC Project No: 2577 Date Excavated: April 8, 2022</p>			
Depth (ft)	Material Description	Sample	N _c	%M	Testing
1	1 to 2 inches gravel surfacing over medium dense, damp, brownish gray, gravely silty SAND (Fill)				
2	Pea gravel @ 2ft	TP-2 @ 2.5 ft			
3	Medium dense, damp, reddish brown, silty SAND to sandy SILT (Fill)				
4					
5					
6	Medium dense, damp, reddish brown, gravelly SAND w cobbles (native alluvium)				
7					
8		TP-2 @ 8 ft.			
9					
10					
11	Test pit completed at approximately 10 ft. No groundwater seepage at time of excavation. Caving observed @ 7ft No odors, no staining, PID <1ppm				
12					
13					
14					
15					
16					
17					
	Note: N _c is the Dynamic Cone Penetrometer blow count per 1.75-inch interval measured in accordance with ASTM Special Technical Publication #399.				

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19019 36th Avenue West, Suite E, Lynnwood, Washington 98036

	<p align="center"><u>Test Pit TP-3</u></p> <p>Location: See Figures 1 -3 Approx. Ground Surface Elevation: TBD</p>	<p>Project: Cle Elum Development LLC Project No: 2577 Date Excavated: April 8, 2022</p>			
Depth (ft)	Material Description	Sample	N _c	%M	Testing
1	0.5 inches gravel surfacing over dark brown, silty SAND, some gravel with roots (fill) Becomes reddish brown (fill) Woody debris (fill)				
2					
3					
4		TP-3 @ 4 ft			
5					
6	----- Dark brown, silty to sandy GRAVEL with cobbles (native) Damp, brown, sandy GRAVEL with cobbles, trace silts Damp, brown, sandy GRAVEL some cobbles, trace silts				
7					
8					
9		TP-3 @ 9 ft.			
10					
11	Test pit completed at approximately 10 ft. No groundwater seepage at time of excavation. Caving observed @ 10ft No odors				
12					
13					
14					
15					
16					
17					
	Note: N _c is the Dynamic Cone Penetrometer blow count per 1.75-inch interval measured in accordance with ASTM Special Technical Publication #399.				

ZIPPER GEO ASSOCIATES, LLC

19019 36th Avenue West, Suite E, Lynnwood, Washington 98036

	<p align="center"><u>Test Pit TP-4</u></p> <p>Location: See Figures 1 - 3 Approx. Ground Surface Elevation: TBD</p>	<p>Project: Cle Elum Development LLC Project No: 2577 Date Excavated: April 8, 2022</p>			
Depth (ft)	Material Description	Sample	N _c	%M	Testing
1	0.5 inches gravel surfacing medium dense, damp to moist, brown to reddish silty SAND with gravel, trace cobbles (native alluvium) Increasing cobble content to cobbly sandy GRAVEL, "some" to "with" silt (native alluvium)				
2					
3		TP-4 @ 3 ft			
4					
5					
6					
7					
8		TP-4 @ 8 ft.			
9	Test pit completed at approximately 9 ft. No groundwater seepage at time of excavation. No caving No odors				
10					
11					
12					
13					
14					
15					
16					
17					
	Note: N _c is the Dynamic Cone Penetrometer blow count per 1.75-inch interval measured in accordance with ASTM Special Technical Publication #399.				

ZIPPER GEO ASSOCIATES, LLC

19019 36th Avenue West, Suite E, Lynnwood, Washington 98036

	<u>Test Pit TP-5</u> Location: See Figures 1 - 3 Approx. Ground Surface Elevation: TBD	Project: Cle Elum Development LLC Project No: 2577 Date Excavated: April 8, 2022			
Depth (ft)	Material Description	Sample	N _c	%M	Testing
1	Moist, brown, sandy GRAVEL some cobbles (fill)				
2					
3					
4	Moist, brown, sandy GRAVEL some cobbles (native alluvium)				
5					
6					
7	Moist, brown, sandy GRAVEL with cobbles				
8					
9					
10	Test pit completed at approximately 9 ft. No groundwater No caving No odors *UST exposed @7ft, ~2ft North from building post*	TP-5 @ 10 ft			
11					
12					
13					
14					
15					
16					
17					
	Note: N _c is the Dynamic Cone Penetrometer blow count per 1.75-inch interval measured in accordance with ASTM Special Technical Publication #399.				

ZIPPER GEO ASSOCIATES, LLC

19019 36th Avenue West, Suite E, Lynnwood, Washington 98036

	Test Pit TP-6 Location: See Figures 1 - 3 Approx. Ground Surface Elevation: TBD		Project: Cle Elum Development LLC Project No: 2577 Date Excavated: April 8, 2022		
Depth (ft)	Material Description	Sample	N _c	%M	Testing
1	Moist, reddish dark brown, silty to sandy GRAVEL with cobbles; reworked native soil (fill)				
2					
3					
4					
5	Moist, reddish brown, silty to sandy GRAVEL with cobbles; reworked native soil				
6					
7					
8					
9	Wet, reddish brown, silty to sandy GRAVEL with cobbles (native alluvium)				
10		TP-6 @ 10 ft			
11					
12					
13	Test pit completed at approximately 10 ft. No groundwater seepage at time of excavation. No caving No odors				
14					
15					
16					
17					
	Note: N _c is the Dynamic Cone Penetrometer blow count per 1.75-inch interval measured in accordance with ASTM Special Technical Publication #399.				

ZIPPER GEO ASSOCIATES, LLC

19019 36th Avenue West, Suite E, Lynnwood, Washington 98036

	<p align="center"><u>Test Pit TP-7</u></p> <p>Location: See Figures 1 - 3 Approx. Ground Surface Elevation: TBD</p>	<p>Project: Cle Elum Development LLC Project No: 2577 Date Excavated: April 8, 2022</p>			
Depth (ft)	Material Description	Sample	N _c	%M	Testing
1	Moist, reddish brown, sandy GRAVEL with cobbles, trace silt, (native alluvium)				
2					
3					
4					
5					
6					
7					
8	Reddish brown, sandy GRAVEL with cobbles				
9					
10		TP-7 @ 10 ft			
11	Test pit completed at approximately 10 ft. No groundwater seepage at time of excavation. No caving No odors				
12					
13					
14					
15					
16					
17					
	Note: N _c is the Dynamic Cone Penetrometer blow count per 1.75-inch interval measured in accordance with ASTM Special Technical Publication #399.				

ZIPPER GEO ASSOCIATES, LLC

19019 36th Avenue West, Suite E, Lynnwood, Washington 98036

	<u>Test Pit TP-8</u> Location: See Figures 1 - 3 Approx. Ground Surface Elevation: TBD	Project: Cle Elum Development LLC Project No: 2577 Date Excavated: April 8, 2022			
Depth (ft)	Material Description	Sample	N _c	%M	Testing
1	Moist, brown, sandy GRAVEL, some cobbles, wood matter (fill)				
2					
3					
4					
5					
6	Damp, brown, sandy GRAVEL, some cobbles, organic debris (fill)	TP-8 @ 6 ft			
7					
8					
9	Damp, black, sandy SILT with interbedded cobbles, organic rich (fill)				
10					
11					
12	Saturated brown, sandy GRAVEL, some cobbles (native)				
13					
14					
15					
16					
17					
	Test pit completed at approximately 10 ft. No groundwater seepage at time of excavation. No caving No odors				
	Note: N _c is the Dynamic Cone Penetrometer blow count per 1.75-inch interval measured in accordance with ASTM Special Technical Publication #399.				

APPENDIX D

ANALYTICAL LABORATORY REPORTS

Friedman & Bruya, Inc
Analytical Report# 204132

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
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www.friedmanandbruya.com

April 18, 2022

Kaelin Newman, Project Manager
Zipper Geo Associates, LLC
19019 36th Ave W, Suite E
Lynnwood, WA 98036

Dear Ms Newman:

Included are the results from the testing of material submitted on April 11, 2022 from the Cle Elum 2577, F&BI 204132 project. There are 27 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Sean Donnan, Chuck Cacek, Elizabeth Cobb
ZGA0418R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 11, 2022 by Friedman & Bruya, Inc. from the Zipper Geo Associates, LLC Cle Elum 2577, F&BI 204132 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Zipper Geo Associates, LLC</u>
204132 -01	TP1-3.5'
204132 -02	TP1-10'
204132 -03	TP2-2.5'
204132 -04	TP2-8'
204132 -05	TP3-4'
204132 -06	TP3-9'
204132 -07	TP4-3'
204132 -08	TP4-8'
204132 -09	TP5-10'
204132 -10	TP6-10'
204132 -11	TP7-10'
204132 -12	TP8-6'

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/18/22

Date Received: 04/11/22

Project: Cle Elum 2577, F&BI 204132

Date Extracted: 04/13/22

Date Analyzed: 04/13/22

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-G_x**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 50-150)
TP1-10' 204132-02	<5	86
TP2-8' 204132-04	<5	96
TP3-4' 204132-05	<5	85
Method Blank 02-822 MB	<5	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/18/22

Date Received: 04/11/22

Project: Cle Elum 2577, F&BI 204132

Date Extracted: 04/13/22

Date Analyzed: 04/13/22

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
TP1-3.5' 204132-01	<0.02	<0.02	<0.02	<0.06	<5	79
TP2-2.5' 204132-03	<0.02	<0.02	<0.02	<0.06	<5	85
TP3-9' 204132-06	<0.02	<0.02	<0.02	<0.06	<5	89
TP4-3' 204132-07	<0.02	<0.02	<0.02	<0.06	<5	65
TP4-8' 204132-08	<0.02	<0.02	<0.02	<0.06	<5	86
TP5-10' 204132-09	<0.02	<0.02	<0.02	<0.06	<5	89
TP6-10' 204132-10	<0.02	<0.02	<0.02	<0.06	<5	85
TP7-10' 204132-11	<0.02	<0.02	<0.02	<0.06	<5	86
TP8-6' 204132-12	<0.02	<0.02	<0.02	<0.06	<5	91
Method Blank 02-822 MB	<0.02	<0.02	<0.02	<0.06	<5	82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/18/22

Date Received: 04/11/22

Project: Cle Elum 2577, F&BI 204132

Date Extracted: 04/11/22

Date Analyzed: 04/11/22

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
TP1-3.5' 204132-01	<50	<250	111
TP1-10' 204132-02	<50	<250	111
TP2-2.5' 204132-03	<50	<250	99
TP2-8' 204132-04	<50	<250	109
TP3-4' 204132-05	<50	<250	110
TP3-9' 204132-06	<50	<250	111
TP4-3' 204132-07	<50	<250	108
TP4-8' 204132-08	<50	<250	102
TP5-10' 204132-09	<50	<250	100
TP6-10' 204132-10	<50	<250	101

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/18/22

Date Received: 04/11/22

Project: Cle Elum 2577, F&BI 204132

Date Extracted: 04/11/22

Date Analyzed: 04/11/22

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-D_x**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
TP7-10' 204132-11	<50	<250	101
TP8-6' 204132-12	<50	<250	100
Method Blank 02-863 MB	<50	<250	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP1-3.5'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-01
Date Analyzed:	04/11/22	Data File:	204132-01.059
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	12.2
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP1-10'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-02
Date Analyzed:	04/11/22	Data File:	204132-02.060
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	4.60
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP2-2.5'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-03
Date Analyzed:	04/11/22	Data File:	204132-03.063
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	4.89
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP2-8'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-04
Date Analyzed:	04/11/22	Data File:	204132-04.064
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	3.41
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP3-4'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-05
Date Analyzed:	04/11/22	Data File:	204132-05.065
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	3.85
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP3-9'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-06
Date Analyzed:	04/11/22	Data File:	204132-06.066
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	3.66
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP4-3'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-07
Date Analyzed:	04/11/22	Data File:	204132-07.067
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	5.14
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP4-8'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-08
Date Analyzed:	04/11/22	Data File:	204132-08.068
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	3.38
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP5-10'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-09
Date Analyzed:	04/11/22	Data File:	204132-09.071
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	3.54
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP6-10'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-10
Date Analyzed:	04/11/22	Data File:	204132-10.072
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	3.67
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP7-10'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-11
Date Analyzed:	04/11/22	Data File:	204132-11.073
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	4.01
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	TP8-6'	Client:	Zipper Geo Associates, LLC
Date Received:	04/11/22	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	204132-12
Date Analyzed:	04/11/22	Data File:	204132-12.074
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	3.23
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Zipper Geo Associates, LLC
Date Received:	NA	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/11/22	Lab ID:	I2-276 mb
Date Analyzed:	04/11/22	Data File:	I2-276 mb.051
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	AR

Analyte:	Concentration mg/kg (ppm)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition LL

Client Sample ID: TP1-10'	Client: Zipper Geo Associates, LLC
Date Received: 04/11/22	Project: Cle Elum 2577, F&BI 204132
Date Extracted: 04/13/22	Lab ID: 204132-02 1/0.25
Date Analyzed: 04/13/22	Data File: 041333.D
Matrix: Soil	Instrument: GCMS13
Units: mg/kg (ppm) Dry Weight	Operator: WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	84	118
Toluene-d8	101	86	117
4-Bromofluorobenzene	98	90	112

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.25
Methyl t-butyl ether (MTBE)	<0.001
1,2-Dichloroethane (EDC)	<0.002
Benzene	<0.001
Toluene	0.0027
1,2-Dibromoethane (EDB)	<0.005
Ethylbenzene	0.0014
Total Xylenes	0.010
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition LL

Client Sample ID: TP2-8'	Client: Zipper Geo Associates, LLC
Date Received: 04/11/22	Project: Cle Elum 2577, F&BI 204132
Date Extracted: 04/13/22	Lab ID: 204132-04 1/0.25
Date Analyzed: 04/13/22	Data File: 041334.D
Matrix: Soil	Instrument: GCMS13
Units: mg/kg (ppm) Dry Weight	Operator: WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	84	118
Toluene-d8	102	86	117
4-Bromofluorobenzene	100	90	112

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.25
Methyl t-butyl ether (MTBE)	<0.001
1,2-Dichloroethane (EDC)	<0.002
Benzene	<0.001
Toluene	0.0032
1,2-Dibromoethane (EDB)	<0.005
Ethylbenzene	<0.001
Total Xylenes	<0.003
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition LL

Client Sample ID: TP3-4'	Client: Zipper Geo Associates, LLC
Date Received: 04/11/22	Project: Cle Elum 2577, F&BI 204132
Date Extracted: 04/13/22	Lab ID: 204132-05 1/0.25
Date Analyzed: 04/13/22	Data File: 041335.D
Matrix: Soil	Instrument: GCMS13
Units: mg/kg (ppm) Dry Weight	Operator: WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	84	118
Toluene-d8	94	86	117
4-Bromofluorobenzene	97	90	112

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.25
Methyl t-butyl ether (MTBE)	<0.001
1,2-Dichloroethane (EDC)	<0.002
Benzene	<0.001
Toluene	0.0026
1,2-Dibromoethane (EDB)	<0.005
Ethylbenzene	<0.001
Total Xylenes	<0.003
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260D Dual Acquisition LL

Client Sample ID:	Method Blank	Client:	Zipper Geo Associates, LLC
Date Received:	Not Applicable	Project:	Cle Elum 2577, F&BI 204132
Date Extracted:	04/13/22	Lab ID:	02-0775 mb 1/0.25
Date Analyzed:	04/13/22	Data File:	041308.D
Matrix:	Soil	Instrument:	GCMS13
Units:	mg/kg (ppm) Dry Weight	Operator:	WE

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	84	118
Toluene-d8	101	86	117
4-Bromofluorobenzene	101	90	112

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.25
Methyl t-butyl ether (MTBE)	<0.001
1,2-Dichloroethane (EDC)	<0.002
Benzene	<0.001
Toluene	<0.001
1,2-Dibromoethane (EDB)	<0.005
Ethylbenzene	<0.001
Total Xylenes	<0.003
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/18/22

Date Received: 04/11/22

Project: Cle Elum 2577, F&BI 204132

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 204147-07 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	89	69-120
Toluene	mg/kg (ppm)	0.5	89	70-117
Ethylbenzene	mg/kg (ppm)	0.5	90	65-123
Xylenes	mg/kg (ppm)	1.5	89	66-120
Gasoline	mg/kg (ppm)	20	90	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/18/22

Date Received: 04/11/22

Project: Cle Elum 2577, F&BI 204132

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-D_x**

Laboratory Code: 204130-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	102	110	73-135	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/18/22

Date Received: 04/11/22

Project: Cle Elum 2577, F&BI 204132

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL METALS USING EPA METHOD 6020B**

Laboratory Code: 204132-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	4.05	87	91	75-125	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	96	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/18/22

Date Received: 04/11/22

Project: Cle Elum 2577, F&BI 204132

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR VOLATILES BY EPA METHOD 8260D**

Laboratory Code: 204162-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Hexane	mg/kg (ppm)	1	<0.25	79	65	10-137	19
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	<0.05	92	87	21-145	6
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	<0.05	84	78	12-160	7
Benzene	mg/kg (ppm)	1	<0.03	80	73	29-129	9
Toluene	mg/kg (ppm)	1	<0.05	93	80	35-130	15
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	<0.05	95	84	28-142	12
Ethylbenzene	mg/kg (ppm)	1	<0.05	95	81	32-137	16
Total Xylenes	mg/kg (ppm)	3	<0.15	94	82	34-136	14
Naphthalene	mg/kg (ppm)	1	<0.05	106	87	14-157	20

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Hexane	mg/kg (ppm)	1	100	43-142
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	1	109	60-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	1	101	56-135
Benzene	mg/kg (ppm)	1	96	71-118
Toluene	mg/kg (ppm)	1	112	66-126
1,2-Dibromoethane (EDB)	mg/kg (ppm)	1	115	74-132
Ethylbenzene	mg/kg (ppm)	1	115	64-123
Total Xylenes	mg/kg (ppm)	3	113	78-122
Naphthalene	mg/kg (ppm)	1	123	63-140

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

Report To 204132 Kaolin, Sean, Elizabeth

Company Chuck

Address 1601

City, State, ZIP _____

Phone _____ Email _____

SAMPLERS (signature) 204132

PROJECT NAME

Cle Elum

PO #

2577

REMARKS

Need verbatals whenever available

INVOICE TO

Project specific RI's? Yes / No

Yes / No

Page # 1 of 2

TURNAROUND TIME

Standard turnaround

☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

EDB trace level

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Gas target VOCs by 8260	Trace level EDB	Lead by 200.8/60/20A	Notes
TP1-3.5'	014-F	4/8/2022	0916	Soil	6	X	X	X	X	X	X	X	X	X	X	
TP1-10'	02		1027			X	X	X	X	X	X	X	X	X	X	
TP2-25'	03		1045			X	X	X	X	X	X	X	X	X	X	
TP2-8'	04		1054			X	X	X	X	X	X	X	X	X	X	
TP3-4'	05		1117			X	X	X	X	X	X	X	X	X	X	
TP3-9'	06		1131			X	X	X	X	X	X	X	X	X	X	
TP4-3'	07		1152			X	X	X	X	X	X	X	X	X	X	
TP4-8'	08		1209			X	X	X	X	X	X	X	X	X	X	
TP5-10'	09		1238			X	X	X	X	X	X	X	X	X	X	
TP6-10'	10		1244			X	X	X	X	X	X	X	X	X	X	

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Relinquished by: 204132

Kaolin Newman

204132

4/11/22

0830

Received by: W

Khai Hoang

FBI

4/11/22

8:30

Relinquished by:

Received by:

100

Friedman & Bruya, Inc.
Ph. (206) 285-8282

C12

04.11.22

SAMPLERS (signature)

22

2011.11.22

Page # 2 of 2 252

20

PROJECT NAME
C/2 Felum

PO# 2577

☒ Standard turnaround
☐ RUSH _____
Rush charges authorized by: _____

REMARKS
At 10:00 p.m. in

INVOICE TO

SAMPLE DISPOSAL

☐ Archive samples

Email:

Project specific RIAs? - ☒

☐ Owner _____

☐ Default: Discharge after 30 _____

ANALYSES REQUESTED

[illegible]

Friedman & Bruya, Inc.
Ph. (206) 285-8282

SIGNATURE

PRINT NAME: _____

COMPANY

DATE _____

TIME

Relinquished by:

Figure 1. A schematic diagram of the experimental setup. The subject is seated in a chair, viewing a screen displaying a target (a red dot) and a starting point (a green dot). The subject's hand is positioned at the starting point, and the target is located at a distance of 10 cm from the starting point. The subject is instructed to move their hand from the starting point to the target. The screen is divided into two regions: a starting region (green) and a target region (red). The subject's hand is positioned at the starting point, and the target is located at a distance of 10 cm from the starting point. The subject is instructed to move their hand from the starting point to the target.

ATTN:

100

TABLE

Received by:

10/21/2001

11

79111	1000
79112	1000

7-00

Poliswibad Inc.

KH01 100

T
S
T

7/11/20

8

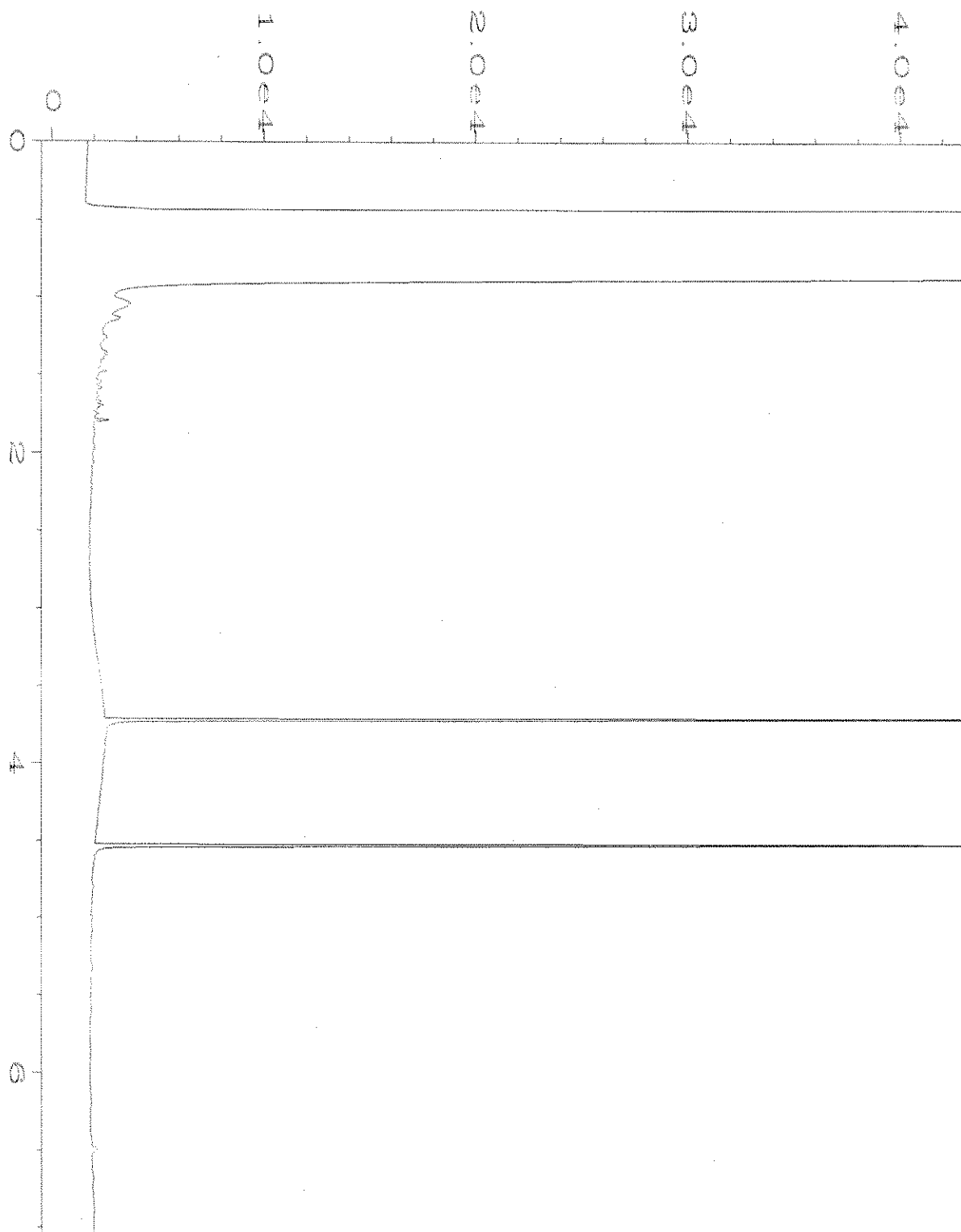
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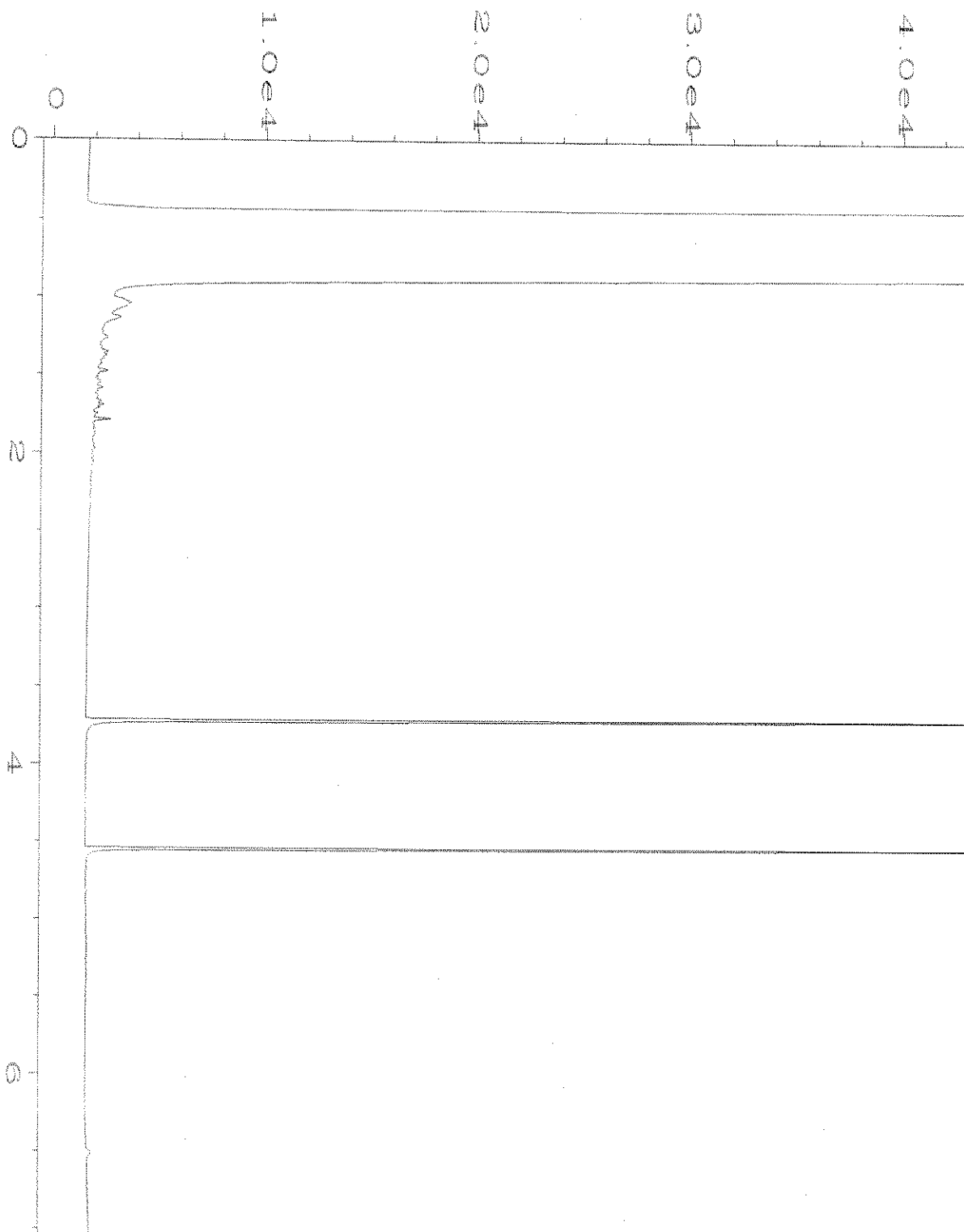
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2024

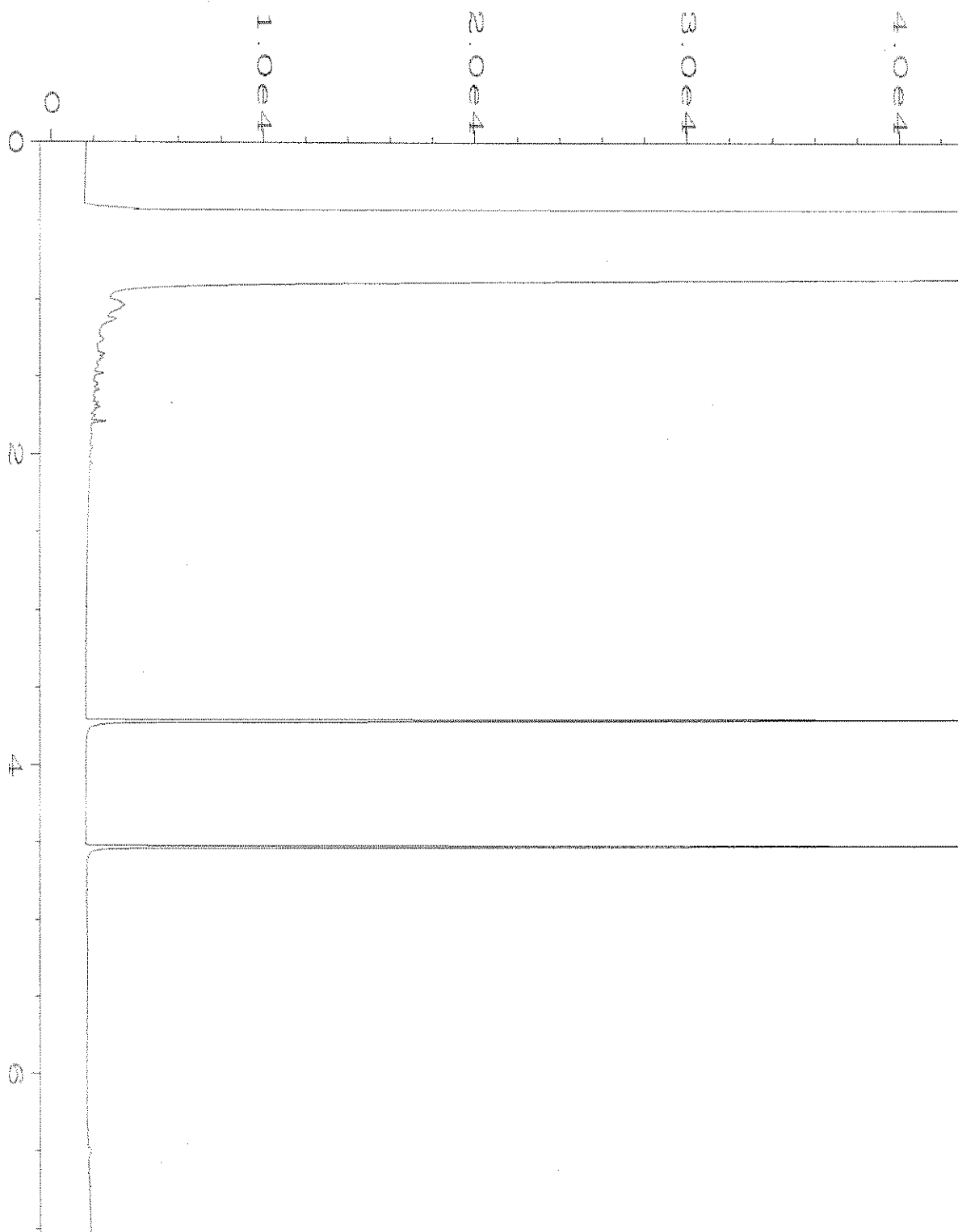
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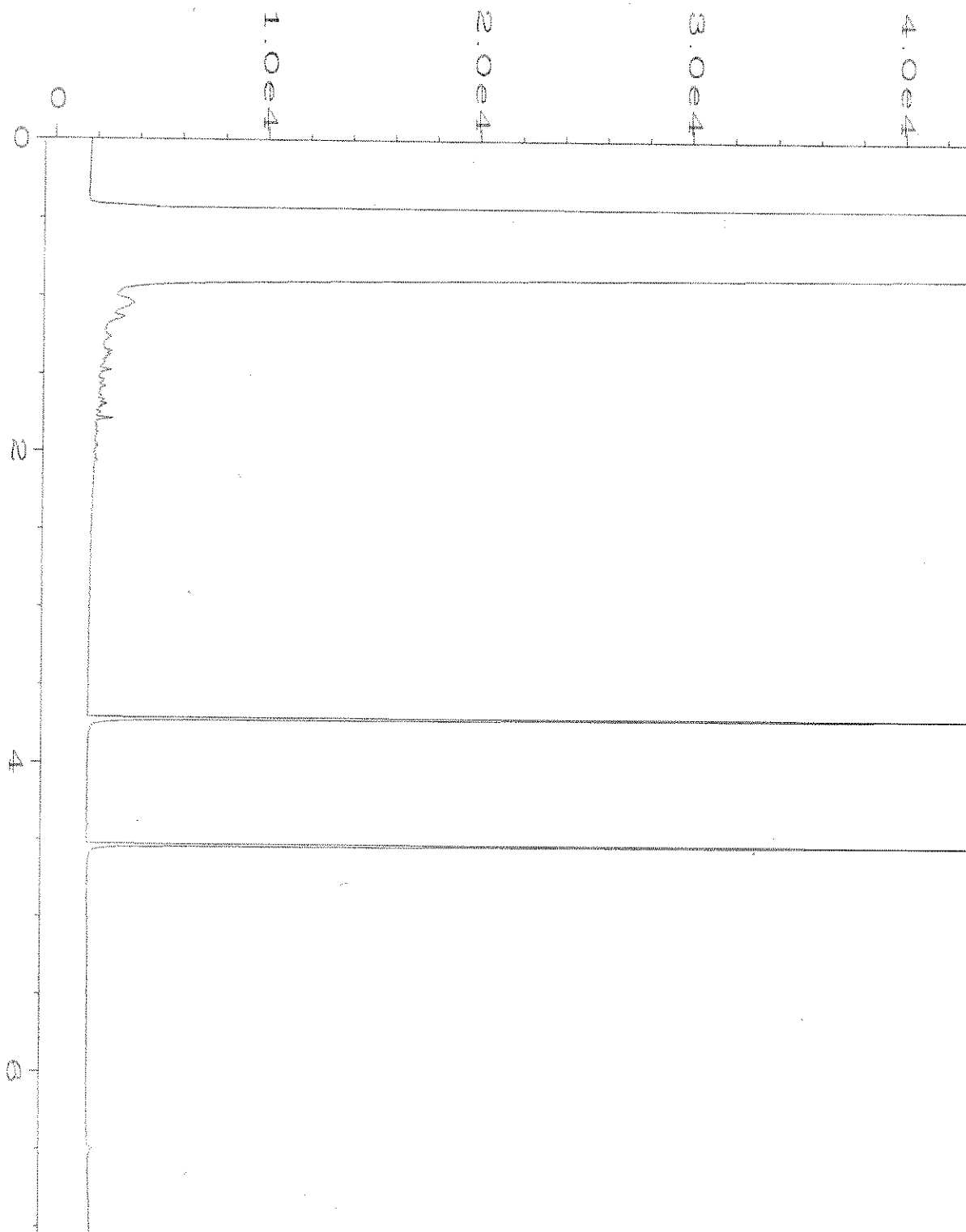
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Operator	: TL	Vial Number	: 25
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-01	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 11 Apr 22 12:52 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:21 AM		



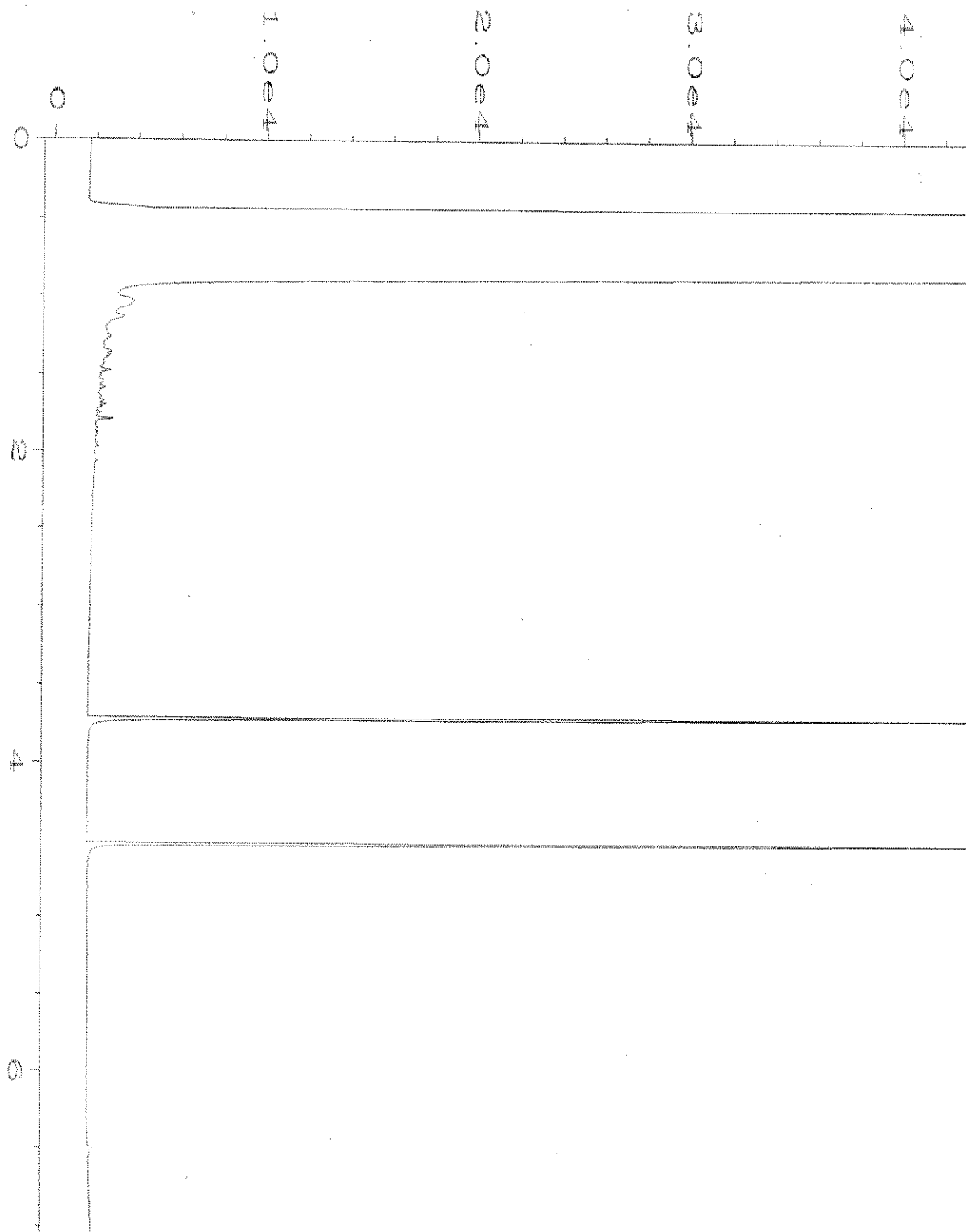
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Operator	: TL	Vial Number	: 26
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-02	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 11 Apr 22 01:28 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:21 AM		



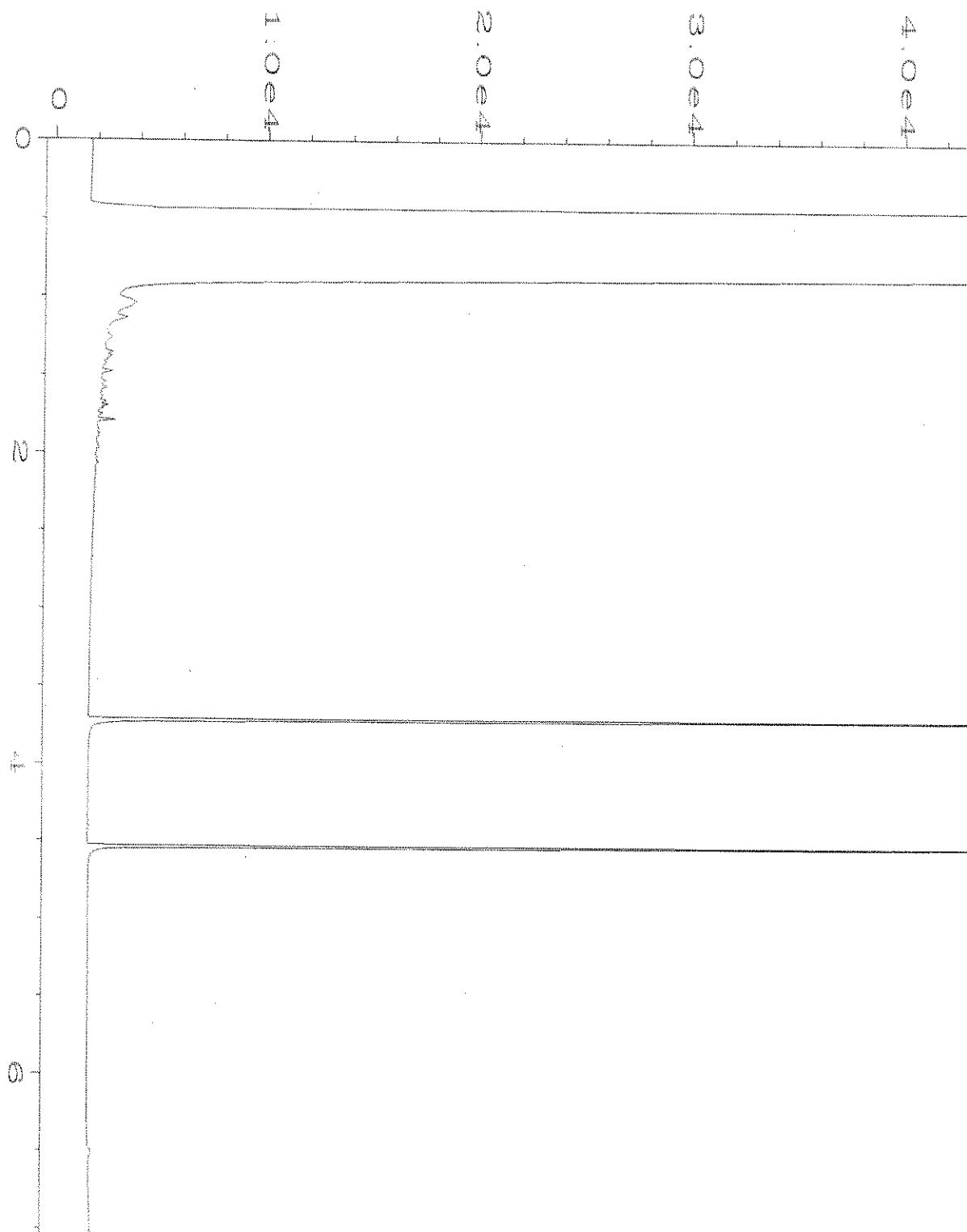
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Operator	: TL	Vial Number	: 27
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-03	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 11 Apr 22 01:40 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	: 12 Apr 22 08:21 AM		



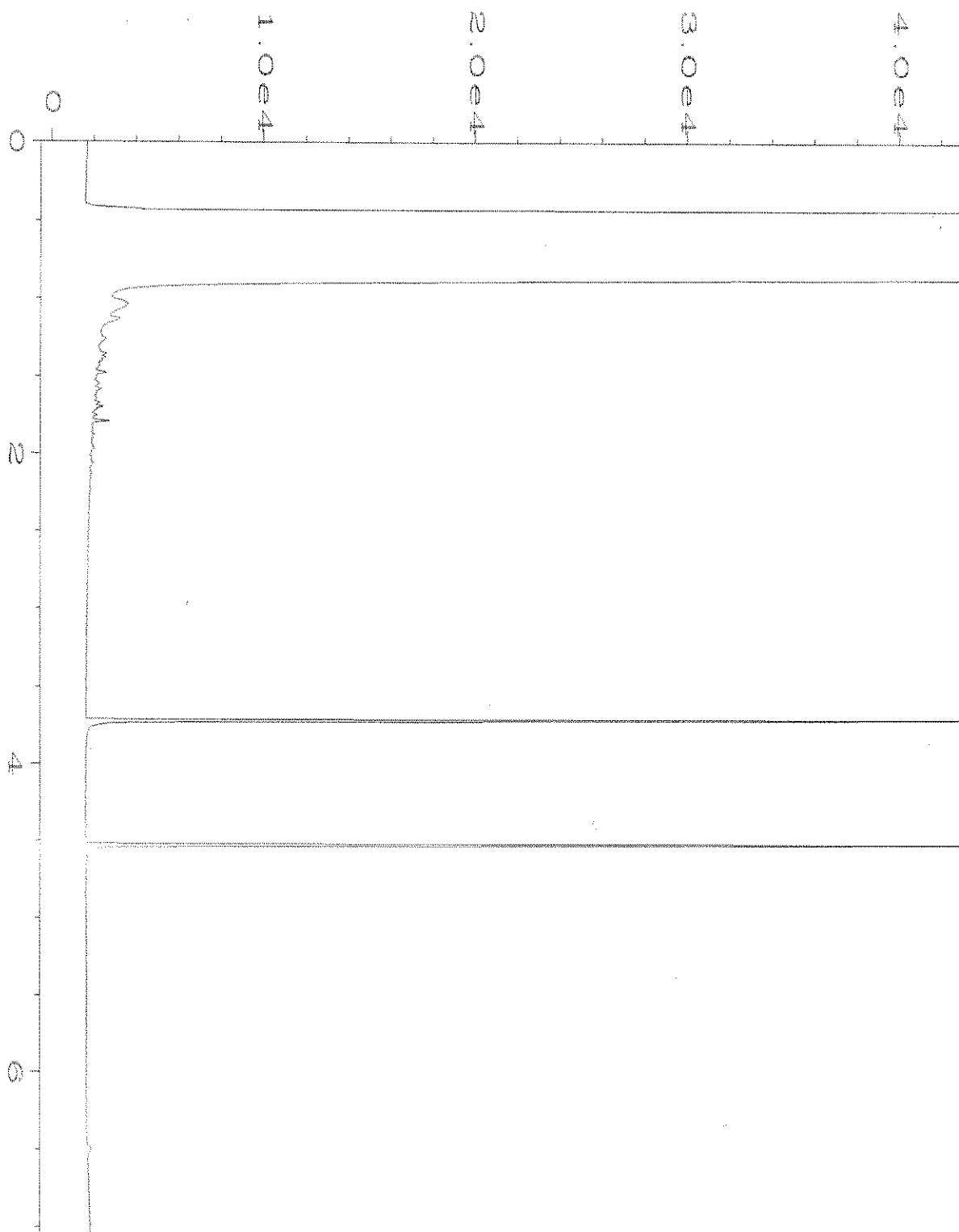
Data File Name	: C:\HPCHEM\4\DATA\04-11-22\028F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 28
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-04	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 11 Apr 22 01:52 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:21 AM		



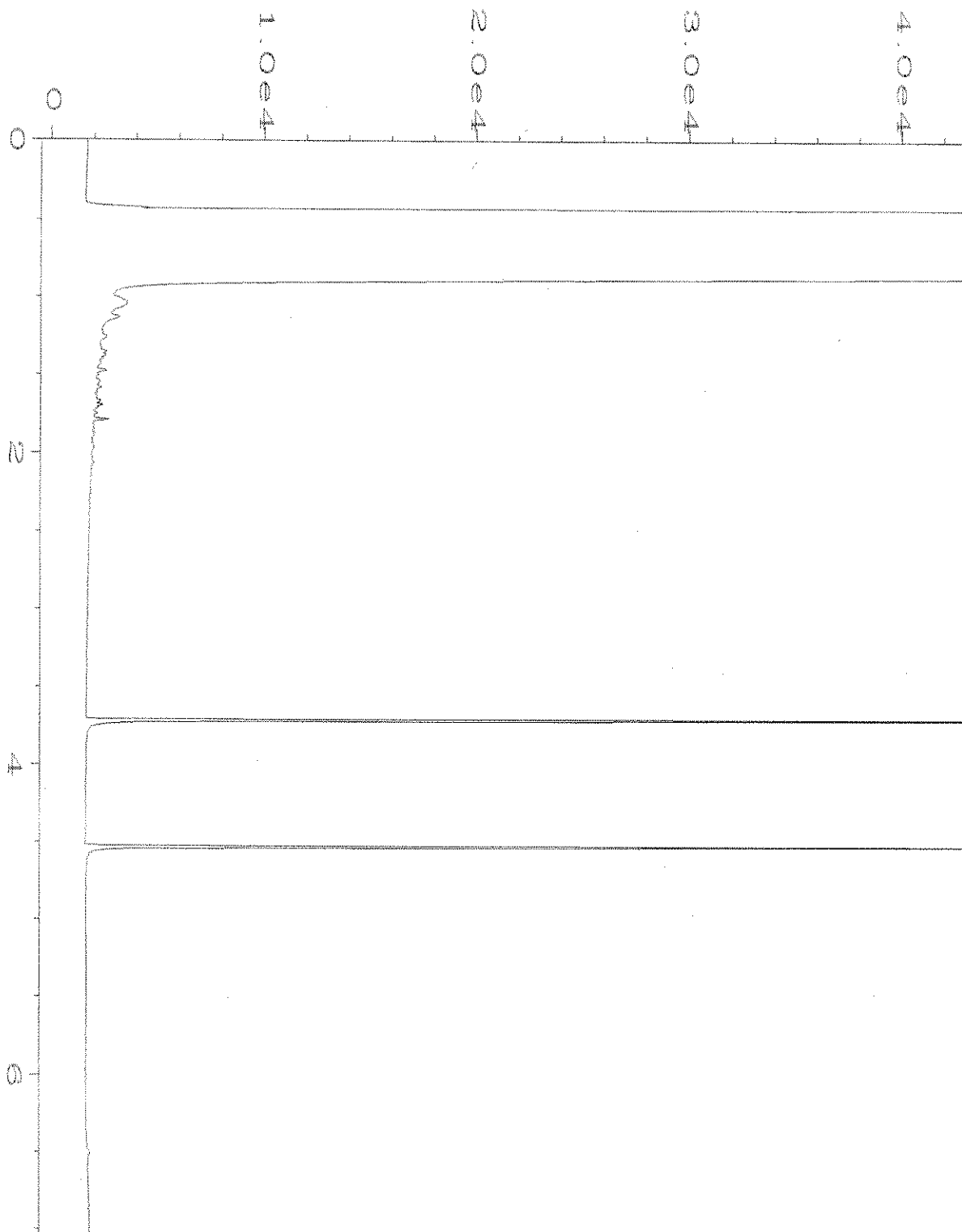
Data File Name	: C:\HPCHEM\4\DATA\04-11-22\029F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 29
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-05	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 11 Apr 22 02:05 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:21 AM		



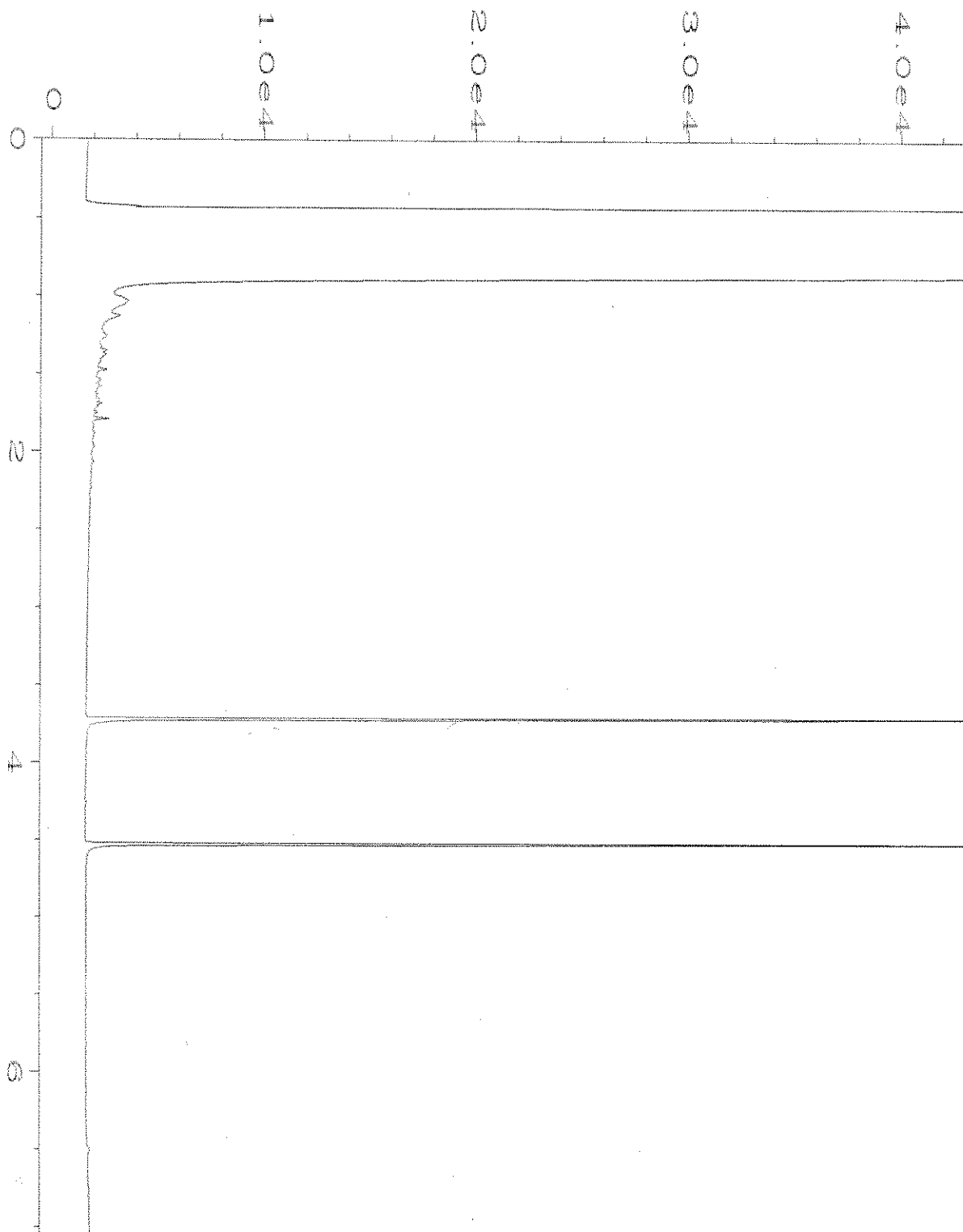
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Operator	: TL	Vial Number	: 30
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-06	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 11 Apr 22 02:17 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:21 AM		



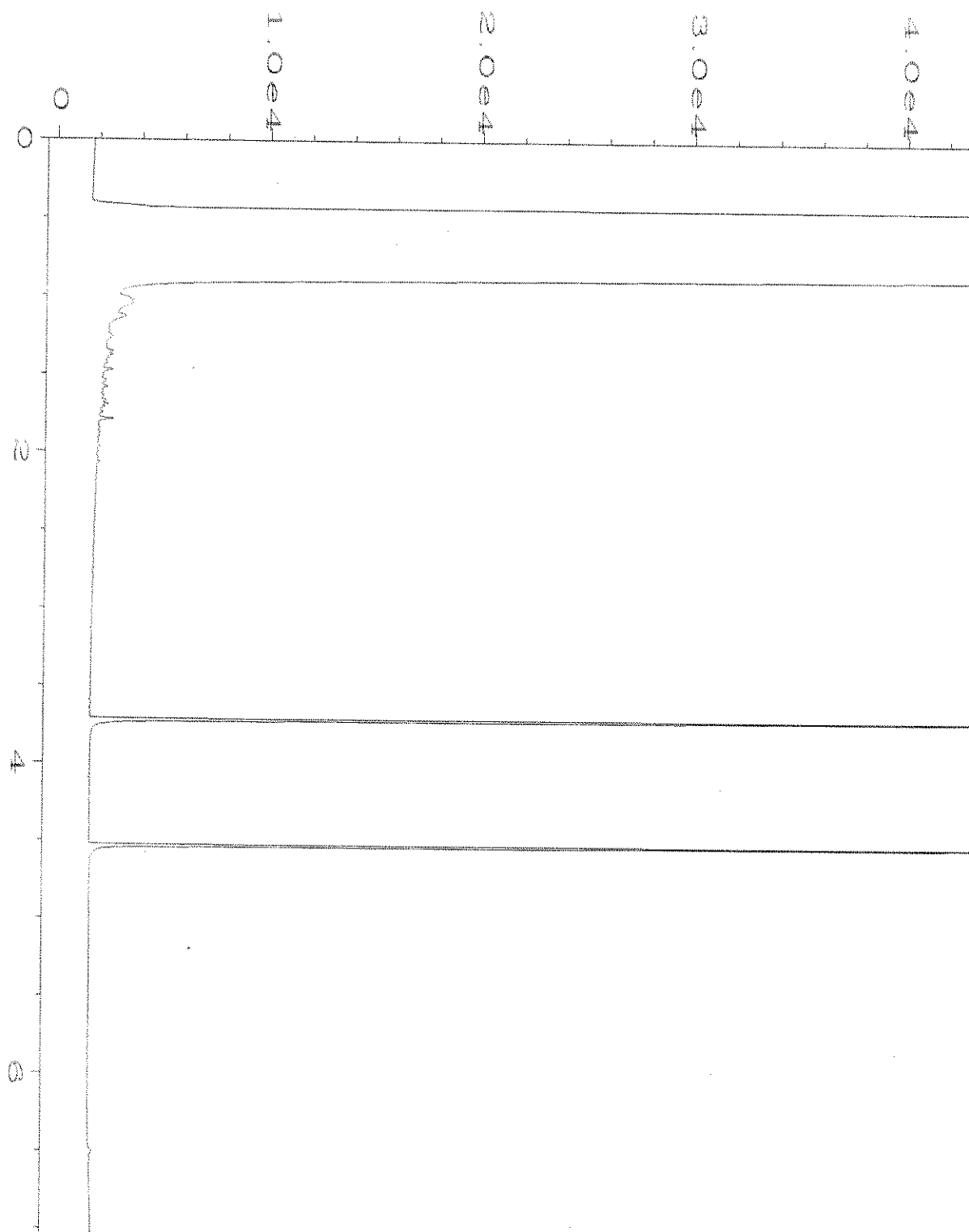
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Operator	: TL	Vial Number	: 31
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-07	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 11 Apr 22 02:29 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	: 12 Apr 22 08:22 AM		



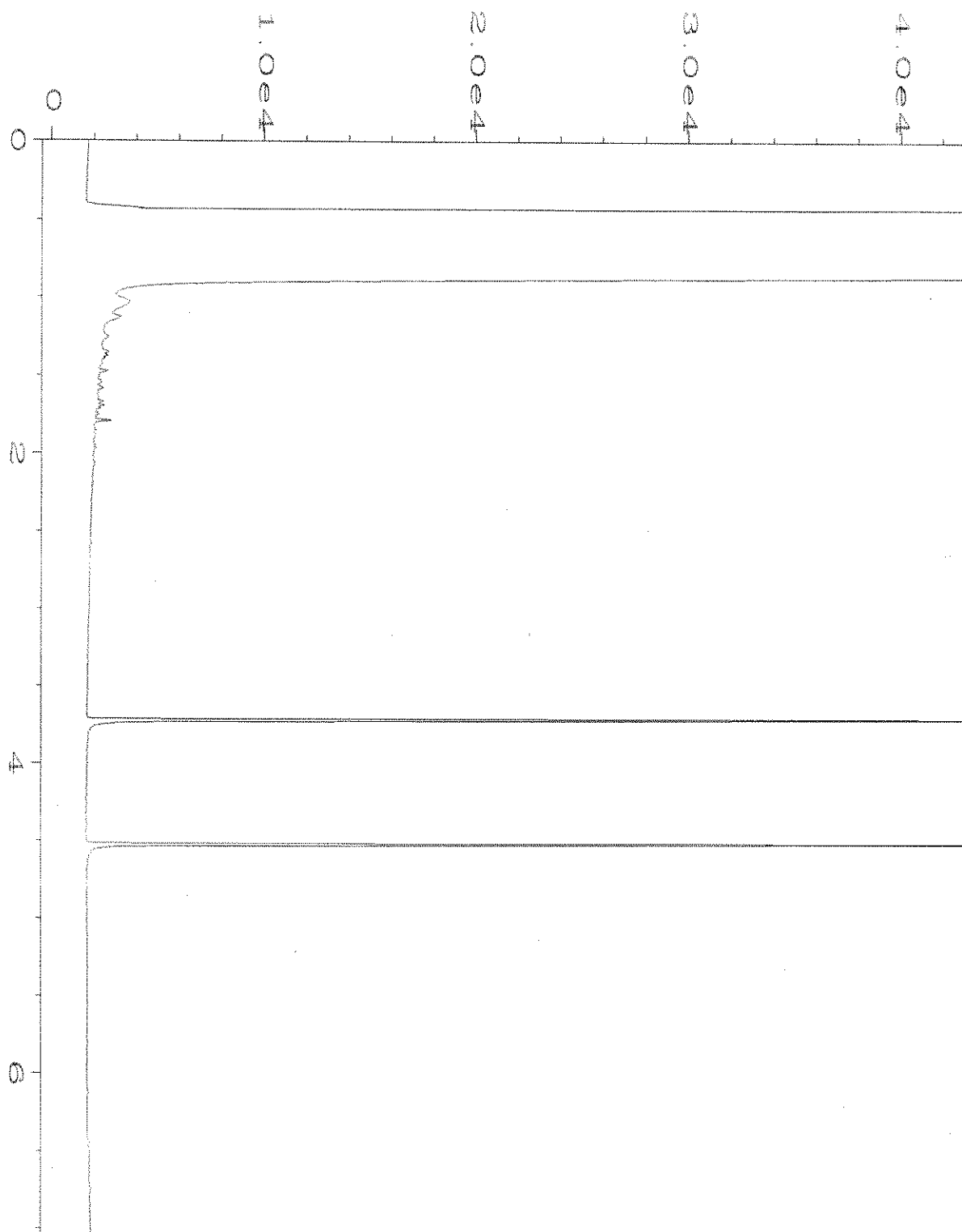
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Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-08	Sequence Line	: 7
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Acquired on	: 11 Apr 22 02:42 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:22 AM		



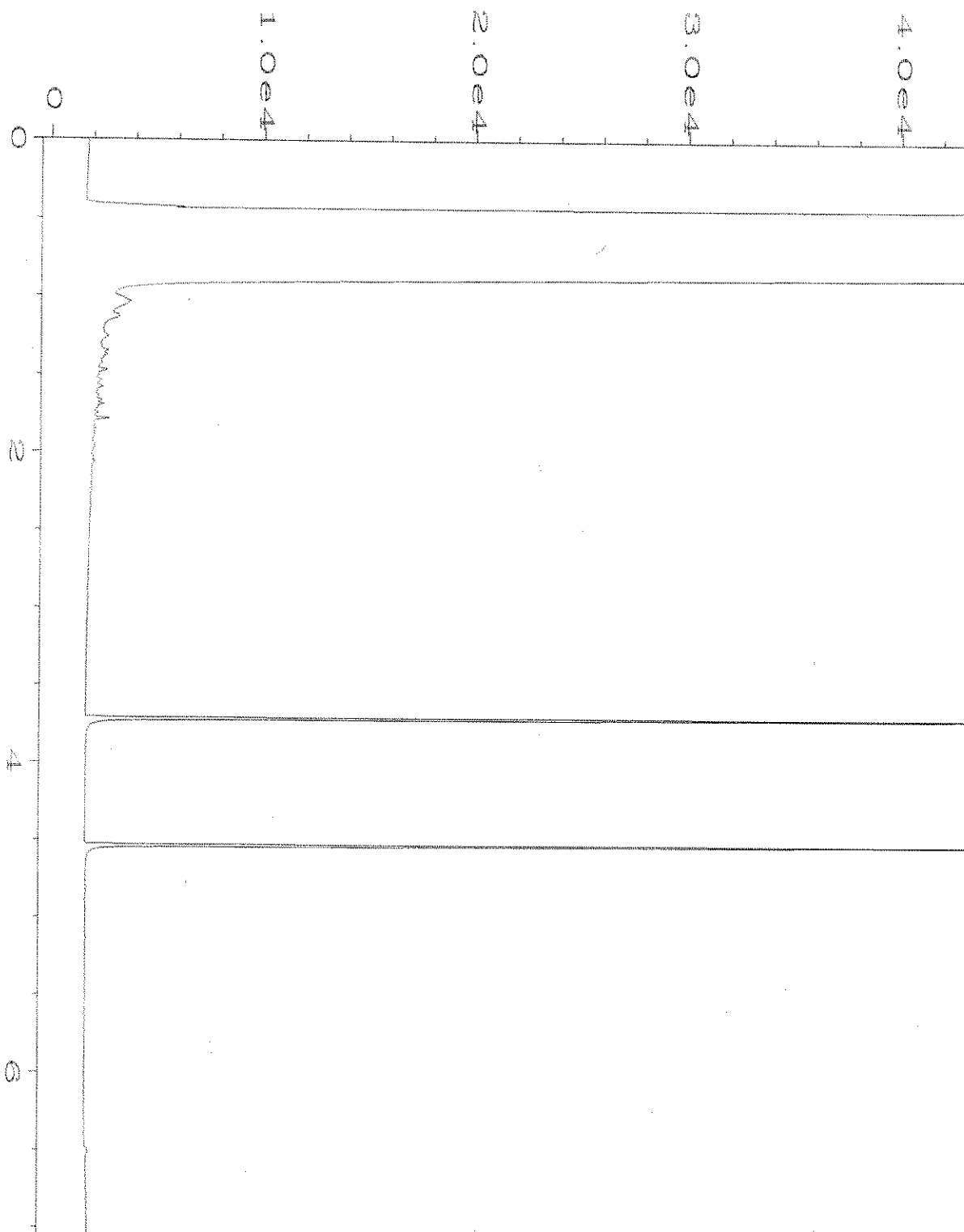
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Operator	: TL	Vial Number	: 33
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-09	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 11 Apr 22 02:54 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	: 12 Apr 22 08:22 AM		



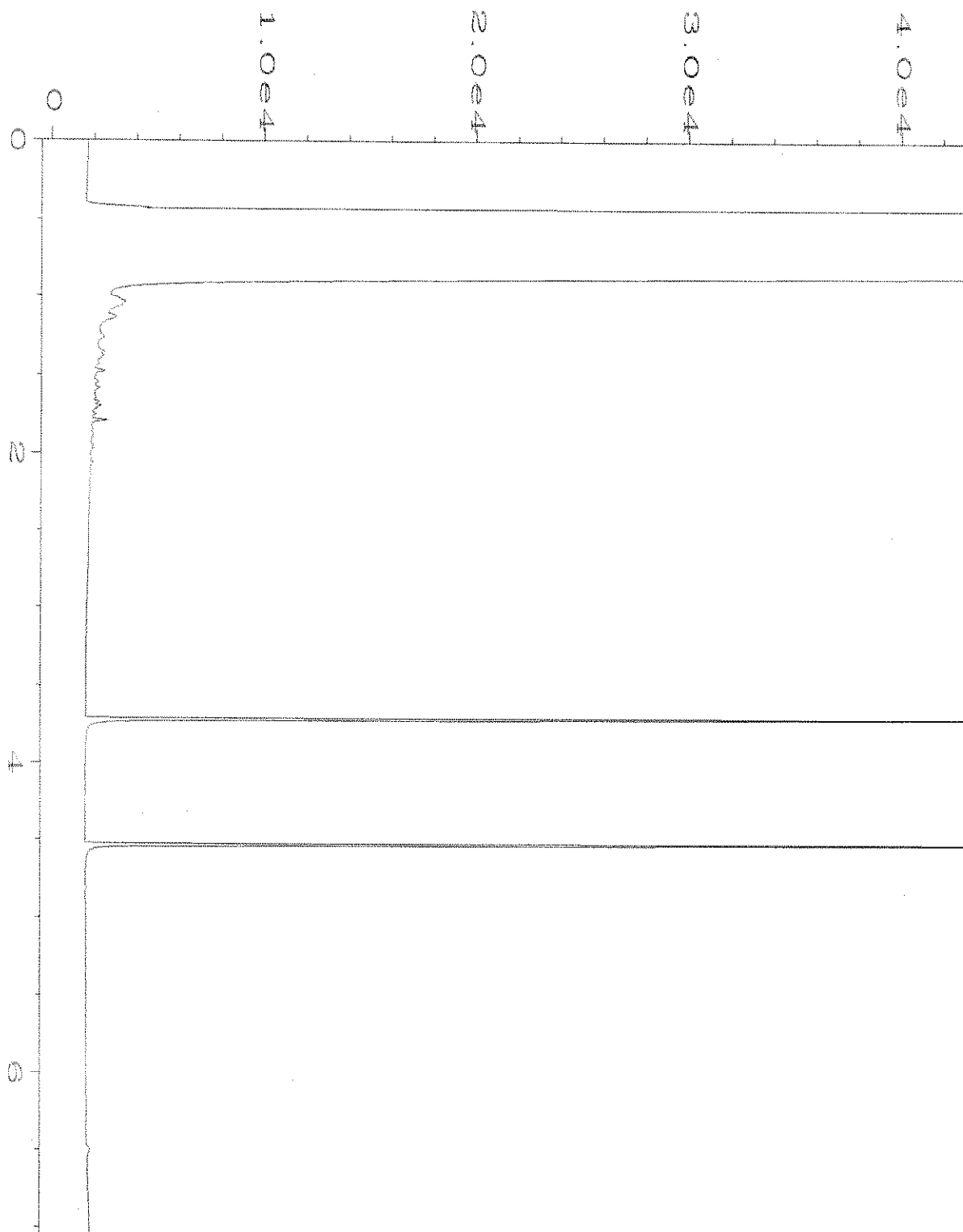
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Operator	: TL	Vial Number	: 34
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-10	Sequence Line	: 7
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 11 Apr 22 03:06 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:23 AM		



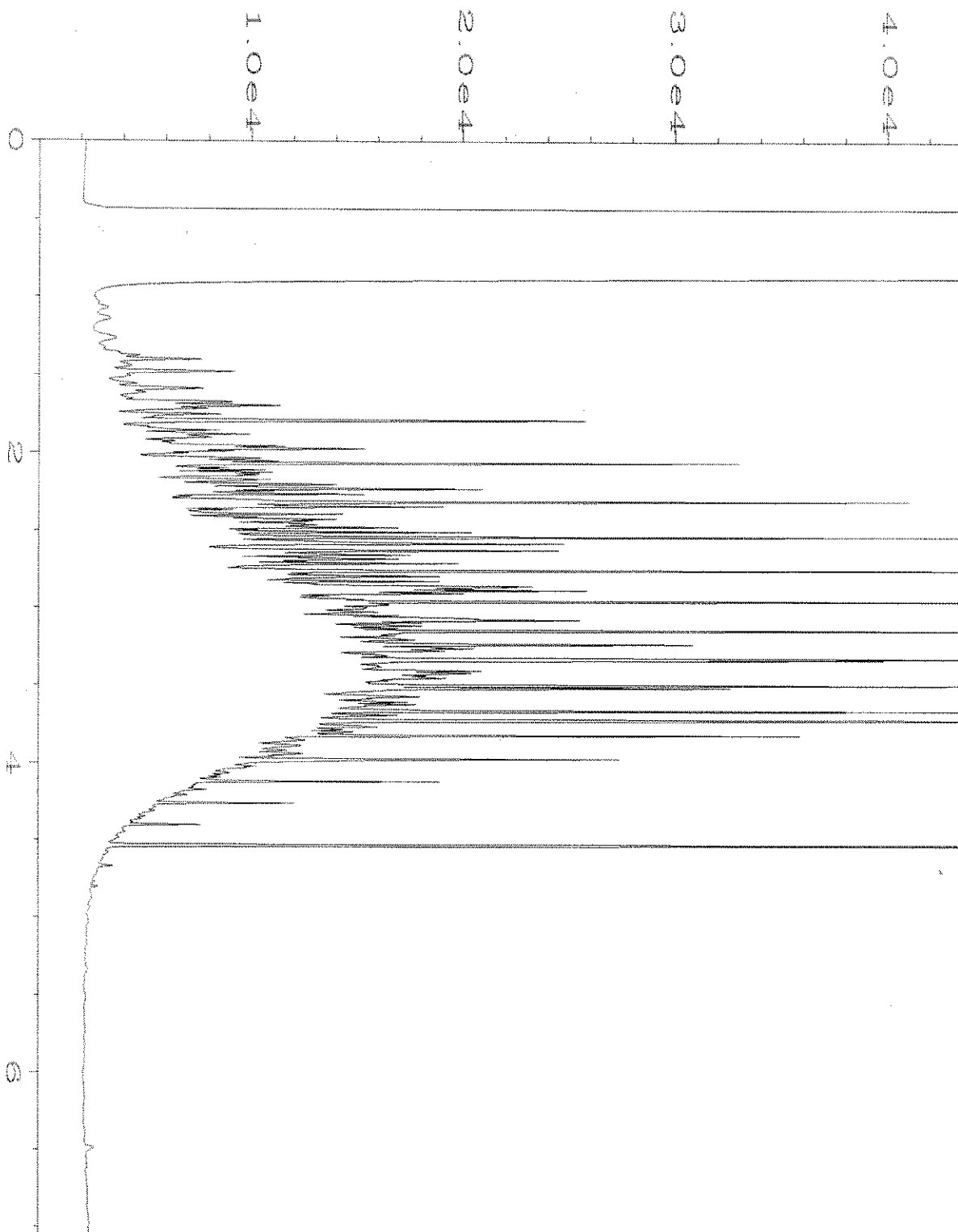
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Operator	: TL	Vial Number	: 35
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-11	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 11 Apr 22 03:19 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:23 AM		



Data File Name	: C:\HPCHEM\4\DATA\04-11-22\036F0701.D	Page Number	: 1
Operator	: TL	Vial Number	: 36
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 204132-12	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 11 Apr 22 03:31 PM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:24 AM		



Data File Name	: C:\HPCHEM\4\DATA\04-11-22\019F0301.D	Page Number	: 1
Operator	: TL	Vial Number	: 19
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 02-863 mb	Sequence Line	: 3
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 11 Apr 22 11:13 AM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:24 AM		



Data File Name	: C:\HPCHEM\4\DATA\04-11-22\003F0201.D	Page Number	: 1
Operator	: TL	Vial Number	: 3
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 Dx 65-122D	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 11 Apr 22 06:02 AM	Analysis Method	: DEFAULT.MTH
Report Created on:	12 Apr 22 08:24 AM		

Friedman & Bruya, Inc
Analytical Report# 205052

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 11, 2022

Sean Donnan, Project Manager
Zipper Geo Associates, LLC
19019 36th Ave W, Suite E
Lynnwood, WA 98036

Dear Mr Donnan:

Included are the results from the testing of material submitted on May 4, 2022 from the Cle Elum 2577, F&BI 205052 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Kaelin Newman, Elizabeth Cobb
ZGA0511R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 4, 2022 by Friedman & Bruya, Inc. from the Zipper Geo Associates, LLC Cle Elum 2577, F&BI 205052 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Zipper Geo Associates, LLC</u>
205052 -01	UST-NSW-7.5'
205052 -02	UST-ESW-7.5'
205052 -03	UST-SSW-7.5'
205052 -04	UST-WSW-7.5'
205052 -05	UST-B1-10.5'
205052 -06	UST-B2-10'

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/22

Date Received: 05/04/22

Project: Cle Elum 2577, F&BI 205052

Date Extracted: 05/06/22

Date Analyzed: 05/09/22

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
UST-NSW-7.5' 205052-01	<0.02	<0.02	<0.02	<0.06	<5	81
UST-ESW-7.5' 205052-02	<0.02	<0.02	<0.02	<0.06	<5	99
UST-SSW-7.5' 205052-03	<0.02	<0.02	<0.02	<0.06	<5	99
UST-WSW-7.5' 205052-04	<0.02	<0.02	<0.02	<0.06	<5	99
UST-B1-10.5' 205052-05	<0.02	0.040	<0.02	<0.06	<5	98
UST-B2-10' 205052-06	<0.02	<0.02	<0.02	<0.06	<5	99
Method Blank 02-905 MB	<0.02	<0.02	<0.02	<0.06	<5	99

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/22

Date Received: 05/04/22

Project: Cle Elum 2577, F&BI 205052

Date Extracted: 05/04/22

Date Analyzed: 05/04/22

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND RESIDUAL RANGE
USING METHOD NWTPH-D_x**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
UST-NSW-7.5' 205052-01	<50	<250	92
UST-ESW-7.5' 205052-02	<50	<250	88
UST-SSW-7.5' 205052-03	100 x	750	92
UST-WSW-7.5' 205052-04	<50	<250	92
UST-B1-10.5' 205052-05	<50	<250	89
UST-B2-10' 205052-06	<50	<250	92
Method Blank 02-1063 MB	<50	<250	90

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	UST-NSW-7.5'	Client:	Zipper Geo Associates, LLC
Date Received:	05/04/22	Project:	Cle Elum 2577, F&BI 205052
Date Extracted:	05/05/22	Lab ID:	205052-01
Date Analyzed:	05/06/22	Data File:	205052-01.084
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	16.4
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	UST-ESW-7.5'	Client:	Zipper Geo Associates, LLC
Date Received:	05/04/22	Project:	Cle Elum 2577, F&BI 205052
Date Extracted:	05/05/22	Lab ID:	205052-02
Date Analyzed:	05/06/22	Data File:	205052-02.091
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	7.36
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	UST-SSW-7.5'	Client:	Zipper Geo Associates, LLC
Date Received:	05/04/22	Project:	Cle Elum 2577, F&BI 205052
Date Extracted:	05/05/22	Lab ID:	205052-03
Date Analyzed:	05/06/22	Data File:	205052-03.092
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	28.6
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	UST-WSW-7.5'	Client:	Zipper Geo Associates, LLC
Date Received:	05/04/22	Project:	Cle Elum 2577, F&BI 205052
Date Extracted:	05/05/22	Lab ID:	205052-04
Date Analyzed:	05/06/22	Data File:	205052-04.093
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	9.46
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	UST-B1-10.5'	Client:	Zipper Geo Associates, LLC
Date Received:	05/04/22	Project:	Cle Elum 2577, F&BI 205052
Date Extracted:	05/05/22	Lab ID:	205052-05
Date Analyzed:	05/06/22	Data File:	205052-05.094
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	6.97
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	UST-B2-10'	Client:	Zipper Geo Associates, LLC
Date Received:	05/04/22	Project:	Cle Elum 2577, F&BI 205052
Date Extracted:	05/05/22	Lab ID:	205052-06
Date Analyzed:	05/06/22	Data File:	205052-06.095
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	4.82
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Zipper Geo Associates, LLC
Date Received:	NA	Project:	Cle Elum 2577, F&BI 205052
Date Extracted:	05/05/22	Lab ID:	I2-334 mb
Date Analyzed:	05/05/22	Data File:	I2-334 mb.047
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/22

Date Received: 05/04/22

Project: Cle Elum 2577, F&BI 205052

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 205064-04 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	92	69-120
Toluene	mg/kg (ppm)	0.5	92	70-117
Ethylbenzene	mg/kg (ppm)	0.5	96	65-123
Xylenes	mg/kg (ppm)	1.5	93	66-120
Gasoline	mg/kg (ppm)	20	130	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/22

Date Received: 05/04/22

Project: Cle Elum 2577, F&BI 205052

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-D_x**

Laboratory Code: 205052-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	67	105	111	73-135	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	108	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/11/22

Date Received: 05/04/22

Project: Cle Elum 2577, F&BI 205052

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL METALS USING EPA METHOD 6020B**

Laboratory Code: 205054-02 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	<5	92	91	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	94	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

**Department Decision
Recommendation
G&W Oil & Wood, FSID 4658443
December 13, 2012**

Department Decision Recommendation

Site: G&W Oil & Wood FSID#4658443 CITY: Cle Elum County: Kittitas

In keeping with the requirement of WAC 173-340-310 (5) I recommend that this site receive a No Further Action (NFA).

Supporting Criteria:

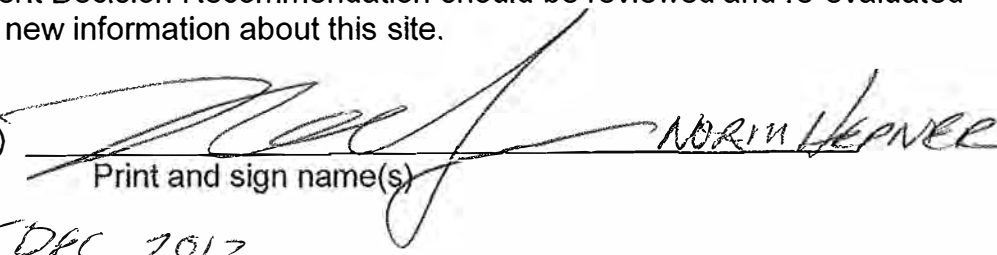
A UST Site Assessment Report, June 28, 1999 details the removal of two UST's [6K gasoline and 12K diesel], closure in place of two UST's [capacity not stated] partially under an existing building, and removal of related piping and pumps/dispensers.

The construction activities occurred during May 1999. The in-place closure of the USTs had limited soil sampling conducted to verify that contamination was not present. Groundwater was not encountered in any excavation to a final excavated depth of 12 feet. All confirmatory sampling from the tank removal, piping/dispensers, and closed-in-place tanks indicated concentrations below current MTCA cleanup levels.

An additional cleanup for another site on the property occurred in 2008. This cleanup received a No Further Action in 2010 after demonstrating both soil and groundwater below cleanup levels. Based on the lack of groundwater contamination, it can be reasonably concluded that the 1999 closed-in-place tanks did not leak significantly to warrant additional cleanup actions.

This Department Decision Recommendation should be reviewed and re-evaluated based on any new information about this site.

Investigator(s)


Print and sign name(s)

DATE: 5 DEC 2012


Section Manager

DATE: 12-13-12

**NFA Opinion Letter
Pacific Pride Card Lock, FSID 4658443, VCP CE0332
November 8, 2010**



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

November 8, 2010

Mr. Jeff James
James Oil Company
666 Griffin Avenue
Enumclaw, WA 98022

Re: No Further Action at the following Site:

- **Site Name:** Pacific Pride (formerly G&W Oil and Wood Inc.)
- **Site Address:** 903 West 1st, Cle Elum, WA 98922
- **Facility/Site ID:** 4658443
- **VCP Project #:** CE0332

Dear Mr. James:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Pacific Pride, Facility #4658443 (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Sites described below. The Site is defined by the nature and extent of contamination associated with the following release:

Mr. Jeff James
James Oil Company
November 8, 2010
Page 2

- Petroleum hydrocarbons (Diesel and Heavy Oil) into the Site's soil as depicted in enclosure A and reported in Final Cleanup Report, Pacific Pride Fueling Facility, DLH Environmental Consulting, July 29, 2010.

A detailed description and diagram of the Site, as currently known to Ecology, is contained in the Final Cleanup Report, Pacific Pride Fueling Facility, DLH Environmental Consulting, July 29, 2010.

Please note that a parcel of real property can be affected by multiple sites. At this time, a second site is located on this parcel and described in Site Assessment Report: Underground Storage Tank Removal & Soil Remediation, Assessment and Remediation Consulting Services (ARCS), June 28, 1999. This site has **not received** a No Further Action from Ecology and was not reviewed as part of this VCP application.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Soil Boring and Groundwater Sampling Report, Former Pacific Pride Fueling Station, 903 1st Street West, Cle Elum, WA 98922, White Shield, Inc., August 22, 2008
2. Soil Boring and Groundwater Sampling Report, Former Pacific Pride Fueling Station, 903 1st Street West, Cle Elum, WA 98922, White Shield, Inc., November 30, 2009
3. Final Cleanup Report, Pacific Pride Fueling Station, Half-Acre Portion of Kittitas County Parcel #263835, 903 W. 1st Street West, Cle Elum, WA 98922, DLH Environmental Consulting, July 29, 2010

These documents are kept at the Central Regional Office of Ecology (CRO) for review by appointment only. You can make an appointment by calling the CRO resource contact, Roger Johnson, at 509-454-7658.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined the characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described in the documents listed above.

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels you established for the Site meet the substantive requirements of MTCA.

a. Cleanup levels.

Soil: Diesel and Heavy Oil, MTCA Method A cleanup level of 2000 mg/kg

The MTCA Method A cleanup level is a conservative cleanup level based on unrestricted land use and protection of human health.

The Terrestrial Ecological unrestricted land use soil concentration value from Table 749-2 for protection of ecological resources is 460 mg/kg for Diesel.

Under WAC 173-340-7492, the simplified terrestrial ecological evaluation can be ended at a site where not more than 350 square feet of total area soil contamination remains. In a September 10, 2010 email from DLH Environmental Consulting, the consultant estimates that less than 350 square feet of contamination remains at this site.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA. The cleanup resulted in the removal and excavation of all contaminated soil above MTCA Method A cleanup levels and treatment/disposal of contaminated soil at CEMEX Soil Remediation, Everett, WA.

Adequate sampling was performed to characterize, excavate, and treat/dispose of the contaminated soil; focused confirmatory sampling in the excavation was adequate to professionally confirm cleanup of the site.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site.

Listing of the Site

Based on this opinion, Ecology will initiate the process of removing the Site from our lists of hazardous waste sites, including:

- Confirmed and Suspected Contaminated Sites List
- Leaking Underground Storage Tank List

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

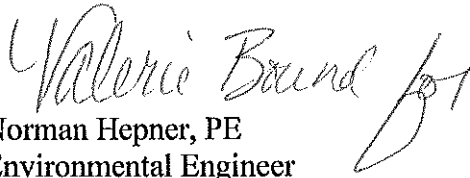
Mr. Jeff James
James Oil Company
November 8, 2010
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Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (CE0332).

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion or the termination of the Agreement, please contact me at (509) 457-7127.

Sincerely,


Norman Hepner, PE
Environmental Engineer
CRO Toxics Cleanup Program

cc: Estate of Wayne A. Hill c/o Renee Hill, Personal Representative
Dolores Mitchell, VCP Financial Manager

**Final Cleanup Report
Pacific Pride Fueling Facility
903 W. 1st Street, Cle Elum, WA
prepared by DLH Environmental Consulting
July 29, 2010**

FINAL CLEANUP REPORT



PACIFIC PRIDE FUELING FACILITY
HALF-ACRE PORTION OF KITTITAS COUNTY PARCEL # 263835
903 W. 1ST STREET
CLE ELUM, WASHINGTON 98922

SUBMITTED TO:

JEFF JAMES
JAMES OIL COMPANY
666 GRIFFIN AVENUE
ENUMCLAW, WASHINGTON 98022

PREPARED BY:


Donna Hewitt L.G.

DLH ENVIRONMENTAL CONSULTING
2400 NW 80TH STREET
PMB 114
SEATTLE, WASHINGTON 98117

JULY 29, 2010

RECEIVED

AUG 30 2010

DEPARTMENT OF ECOLOGY - CENTRAL REGIONAL OFFICE

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APPENDICES

APPENDIX A:	Site Map, Site Figures, and Photographs
APPENDIX B:	Laboratory Data/Chain of Custody Forms
APPENDIX C:	Soil Disposal Data
APPENDIX D:	Concrete and Drum Disposal Data
APPENDIX E:	Previous Report, White Shield, Inc. 8/22/2008
APPENDIX F:	Previous Groundwater Report, White Shield, Inc. 11/30/2009
APPENDIX G:	Pacific Groundwater Group Soil Sampling, Analysis, and Supplemental Data

1.0 BACKGROUND

The subject site (referred to in this report as the "Site") is identified as an approximate ½ acre area in the center of property currently owned by the Estate of Wayne A. Hill. James Oil leased the "Site" from on or about November 24, 1988 through September 30, 2009. The Estate of Wayne A. Hill property is identified as a 3.39 acre parcel located at 903 W. 1st Street in Cle Elum, Washington. According to the Kittitas County Assessor's office, the parcel number for the Hill property is #263835, and is legally described as: SEC. 27; TWP. 20; RGE. 15; PTN. NE1/4 SW1/4 & PTN. NW1/4 SW1/4 (PTN SURVEY B30/P203) PTN VAC RANGER STATION RD (ORD 1194).

The Pacific Pride fueling facility was constructed in 1999 as a cooperative effort of James Oil Company, Inc. and Wayne A. Hill. The "Site" was constructed in late 1998. The fueling facility consisted of two above ground fuel storage tanks (AST's), dispensers, turbines, monitoring equipment, TLS, Pacific Pride Fuel Controller, a canopy and various piping and electrical equipment associated with the fueling process.

According to Mr. James all of the above ground equipment including the AST's, turbines, dispensers, TLS, Pacific Pride Fuel Controller, and above ground piping and electrical was owned by James Oil Company. Also, according to Mr. James, Wayne Hill, (now the Estate of Wayne A. Hill), purchased and owned all below ground piping and electrical, sumps, islands, canopy, and fueling slabs.

James Oil's use of the "Site" terminated at the end of September 2009. According to Jeff James, the above ground equipment, owned by James Oil, was removed in the first ten days of October 2009 by James Oil. The Estate owned property was removed in April 2010. James Oil and the Estate are now working cooperatively to clean up the site and receive an NFA letter.

On November 5, 2007, White Shield, Inc. (WSI) was retained to conduct a site visit at 903 W. 1st Street in Cle Elum, Washington with Ms. Renee Hill, Trustee for the Wayne A. Hill estate (property owner). Subsequently, WSI was retained in 2008 and 2009 to collect soil and water samples to assess the potential of hydrocarbon releases associated with the Pacific Pride Fueling Facility. The characterization of the soil documented in the WSI reports (Appendices E and F) indicated that diesel/heavy oil in the soil was confirmed above the current MTCA limits of 2000 ppm. Detailed information with regard to site information, soil sample locations, and subsurface soil conditions can be found in the WSI reports located in the above-mentioned appendices of this report.

2.0 PROJECT DESCRIPTION/SCOPE OF WORK

The scope of work for this project consisted of overseeing the removal of a concrete pad located on the "Site"; the removal of remaining fuel product piping, vent lines, and other fueling facility materials located underneath the concrete pad; the removal of confirmed impacted soil; and the investigation of stained soil areas adjacent to the concrete pad that were discovered during previous studies. DLH Environmental Consulting (DLH) was retained by James Oil Company (property lessee) to provide oversight of the aforementioned tasks and to collect the required soil samples during initial excavation and to collect confirmational soil samples once the impacted soils were removed. DLH was responsible for taking all soil samples to the project laboratory for analysis. The project laboratory was Friedman & Bruya, Inc. located in Seattle, Washington.

In addition to the work conducted by DLH, a representative of Pacific Groundwater Group (PGG) was onsite during this project on behalf of the property owner Estate of

Wayne A. Hill. PGG also took soil samples for analysis and has provided that information in Appendix G.

3.0 "SITE" CONDITIONS

The "Site" consists of a leveled area north of W. 1st Street. It consists of a large concrete pad surrounded by a mixture of asphalt and gravel access roads on the north, south and east, and graveled and relatively leveled property on the west where the former ASTs were located. There is a cemetery to the northwest, a few buildings/garages to the east, a logging company equipment storage yard to the west, and an on-ramp to Interstate I-90 located directly south. The vacant buildings/garages to the east and the logging company equipment storage yard to the west are on the Estate of Wayne A. Hill property. The property and surrounding topography slope gently south/southeast toward the Yakima river. The property is approximately 2000 feet above sea level.

Prior to the decommissioning of the fueling facility in September 2009 there was a large canopy covering the concrete pad. The canopy was removed as a part of the decommissioning but the concrete footings that held the canopy were left in place underneath the concrete pad. During the removal of impacted soils the southern concrete footing was removed.

3.1 "Site" Soils

"Site" soils are basically described as a mixture of brownish sands and gravels with some silt. In several areas, there was dark reddish silty soil, and in other areas there were indications of fill materials such as old wood, wood chips, and other debris. More detailed soil data can be found in the White Shield, Inc. reports located in Appendices F and G and as documented by PGG in Appendix G.

3.2 Groundwater

Groundwater information noted in previous WSI reports (Appendix E and F) indicate that groundwater could be approximately 30 feet below ground level and flow direction could be toward the Yakima River located approximately 3/8 mile to the southeast.

Groundwater samples were collected from 2- temporary wells on October 29, 2009 by both White Shield, Inc. and DLH (see Appendix F). Results of that study indicated that gasoline, BTEX, and diesel were not detected above the laboratory reporting limits. No groundwater was encountered during the excavation activities of this current project.

3.3 Removal Activities

On April 27, 2010, both DLH Environmental Consulting and Pacific Groundwater Group representatives were onsite to conduct "Site" removal activities. Demolition and soil excavation services were provided by a HAZWOPER - trained excavator operator. The concrete pad was removed and soil was excavated starting at the north side of the concrete pad area, then along the west side of the concrete pad area. Both of these areas were noted in the former WSI reports as being suspected of having hydrocarbon contamination (stained soil and stains on the concrete pad). Once those areas had been excavated and soil samples collected for analysis, we proceeded to remove the soil in and around the former fuel dispenser locations and the associated product lines. All fueling system equipment had been removed from the ground up prior to this scope of work. What materials remained were underneath the concrete pad. Fuel dispensers had been removed only to the top of the concrete and therefore the spill buckets and product piping were still in place.

Green "Environ" flexible product piping was found under the concrete pad area still attached to the remaining fuel dispenser system. This is a double-walled product and was found to contain small amounts of free product (diesel). The free product was found contained in the secondary (interstitial) containment, which could possibly indicate that the product lines had failed. This free product, approximately 2-3 gallons, was disposed of in 55-gallon drums located onsite that had been formerly used for soil cuttings during drilling activities. Also at this time, all of the soil in the 55-gallon drums was emptied into a dump truck along with other excavated materials for disposal.

The soil around these product pipes, including pea gravel used as backfill, was also removed and disposed of. During the rest of the day and the following day (April 28, 2010) soil was continually removed, loaded into dump trucks, and transported to CEMEX soil facility in Everett, WA.

After the initial impacted areas were dug out, sampled, and analyzed and after analysis was received from the project laboratory, additional soil was removed on May 18, 2010. The main area of concern at that time was diesel-impacted soil in and around the southern concrete canopy footing. A fuel dispenser had been located north of this footing and if the dispenser or product lines associated with this dispenser leaked and the sump failed, it is likely that the leaking product would come into contact with this concrete footing and migrate downward along the footing. The bottom of the footing was approximately 9 -10 feet below ground level. The footing was removed and properly disposed of (see Appendix D) and soil was continually excavated in and around this area until confirmational soil sampling was completed.

For the purpose of this report the "Site" is divided into the following four areas. Please refer to the figures in Appendix A to see area locations.

- Area A: the northern portion of the "Site"
- Area B: the western portion of the "Site"
- Area C: the south-central portion of the "Site" (this is where most of the impacted soil was removed surrounding a large concrete canopy footing)
- Area D: the southeast portion of the "Site".

3.4 Hydrocarbon Testing

Soil samples were collected for the analysis of both NWTPH-Dx, NWTPH-Gx and BTEX. However, the chromatograms generated from the NWTPH-Dx analysis indicated that no gasoline or BTEX was present, and therefore the samples were not analyzed for gasoline or BTEX. All EPA-established sample-handling protocols, including chain of custody procedures, were observed during the course of the project.

The following three tables document the soil sampling and analysis. Refer to the figures located in Appendix A for additional data and sample locations.

Table A
Soil Samples Collected on 4/27/2010 – Analytical Results

SAMPLE #	SAMPLE LOCATION Refer to drawings located in Appendix A. Discrete samples unless otherwise noted	ANALYSIS	RESULTS In parts per million (ppm) unless noted
42710-01	Area A: composite sample along northwest corner of excavation area, 1.5 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
42710-02	Area A: 2-3 ft southwest of sample # 01, 2 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
42710-03	Area A: composite sample along the northeast corner of the excavated area, 2 ft bgl	NWTPH-Dx	Diesel 1,300 Heavy oil 4,500
42710-04	Area A: south of sample # 03, 3.5 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
42710-05	Area B: 5 ft east of the western edge of the area, 7 ft bgl. East of sample #06	NWTPH-Dx	Diesel 1,700 Heavy oil < 250
42710-06	Area B: sidewall sample 3 ft bgl. On the western edge of the site area	NWTPH-Dx	Diesel 3,200 Heavy oil < 250
Stock 1	Area A: composite stockpiled soils generated during excavation activities from samples 01, 02, 03, and 04	NWTPH-Dx	Diesel 1,200 Heavy oil < 250
Stock 2	Area B: composite stockpiled soils generated during excavation activities from samples 05 and 06	NWTPH-Dx	Diesel 3,700 Heavy oil < 250

NWTPH = Washington Total Petroleum Hydrocarbon
Dx = Hydrocarbon identification for diesel and motor oil range C10-C36
None Detected = < 50 ppm (diesel range), < 250 ppm (motor oil range)
bgl = below ground level
MTCA Cleanup for Diesel and Heavy Oil is 2000 ppm

Table B
Soil Samples Collected on 4/28/2010 – Analytical Results

SAMPLE #	SAMPLE LOCATION Refer to drawings located in Appendix A. Discrete samples unless otherwise noted	ANALYSIS	RESULTS in parts per million (ppm) unless noted
42810-07	Area C: below concrete canopy footing, 9 ft bgl	NWTPH-Dx	Diesel 90 Heavy oil < 250
42810-08	Area D: composite sidewall sample, 2 ft bgl, after minor excavation	NWTPH-Dx	Diesel < 50 Heavy oil < 250
42810-09	Area C: below canopy footing, 13 ft bgl	NWTPH-Dx	Diesel 4,400 Heavy oil < 250
42810-10	Area C: north sidewall	NWTPH-Dx	Diesel 400 Heavy oil < 250
42810-11	Area C: west sidewall, 12 ft bgl	NWTPH-Dx	Diesel 750 Heavy oil < 250
42810-12	Area C: east sidewall, 12 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
42810-13	Area C: south sidewall, 13 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
stock 3	Area C: composite sample of soil excavated from Area C	NWTPH-Dx	Diesel 320 Heavy oil 590
42810-14	Area C: bottom of excavation- sidewall sample (eastern portion), 13 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
42810-15	Area B: south sidewall sample after excavation, 4 ft bgl.	NWTPH-Dx	Diesel < 50 Heavy oil < 250

NWTPH = Washington Total Petroleum Hydrocarbon
Dx = Hydrocarbon Identification for diesel and motor oil range C10-C36
None Detected = < 50 ppm (diesel range), < 250 ppm (motor oil range)
bgl = below ground level
MTCA Cleanup for Diesel and Heavy Oil is 2000 ppm

Table C
Final Confirmational Soil Samples Collected on 5/18/2010 – Analytical Results

SAMPLE #	SAMPLE LOCATION Refer to drawings located in Appendix A. Discrete samples unless otherwise noted	ANALYSIS	RESULTS in parts per million (ppm) unless noted
51810-16	Area C: bottom of excavation, 17 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
51810-17	Area C: west sidewall of excavation, 14 ft bgl	NWTPH-Dx	Diesel 500 Heavy oil < 250
51810-18	Area C: south sidewall of excavation, 13 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
51810-19	Area C: east sidewall of excavation, 14 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
51810-20	Area C: bottom of excavation- sidewall sample on southeast corner of excavation, 14 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
51810-21	Area C: north sidewall of excavation, 14 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
51810-22	Area D: sidewall sample on southeast side excavation, 2 ft bgl, after over-excavation of stained area	NWTPH-Dx	Diesel 96 Heavy oil 400
51810-23	Area B: west sidewall sample of Area B after over-excavation, 7 ft bgl	NWTPH-Dx	Diesel < 50 Heavy oil < 250
51810-24	Area A: material under asphalt on north side of Area A, after over- excavation	NWTPH-Dx	Diesel 190 Heavy oil 470
51810-25	Area A: material under sample #24 on north side of Area A, after over-excavation	NWTPH-Dx	Diesel 2700 * Heavy oil 5600 *
51810-26	Area A: material under sample #25 on north side of Area A, after over-excavation	NWTPH-Dx	Diesel < 50 Heavy oil < 250

NWTPH = Washington Total Petroleum Hydrocarbon
Dx = Hydrocarbon Identification for diesel and motor oil range C10-C36
None Detected = < 50 ppm (diesel range), < 250 ppm (motor oil range)
bgl = below ground level
MTCA Cleanup for Diesel and Heavy Oil is 2000 ppm

* A duplicate sample of this material was collected and analyzed by PGG and found to be below cleanup levels (Appendix G).

4.0 CONCLUSIONS

Based on laboratory analysis of the soil samples collected during this project, diesel and heavy oil impacted soil associated with the James Oil Company - Pacific Pride Fueling Facility "Site" has been removed and properly disposed of. Specifically the "Site" is identified as the approximate ½ acre area in the center of property currently owned by Estate of Wayne A Hill. And, the Estate's property is identified as a 3.39 acre parcel located at 903 W. 1st Street in Cle Elum, Washington. According to the Kittitas County Assessors office, the parcel number for the Hill property is #263835 and is described as being in the Northeast 1/4, Southwest 1/4, Section 27, Township 20 North, Range 15 East.

The following materials were removed from the "Site":

- ◆ **Diesel-impacted soil:** 1066.97 tons of diesel-impacted soil were disposed of at CEMEX soil remediation facility located in Everett, Washington. This included soil cuttings from previous studies that had been stored in 55-gallon steel drums. Once the soil from the drums was removed, the drums were disposed of at ICS-WA located in Seattle, Washington. **NOTE: The impacted soil contained both Diesel and Heavy oil range hydrocarbons.**
- ◆ **Diesel- impacted concrete:** One diesel-impacted concrete footing was disposed of at the Kittitas solid waste facility in Ellensburg, Washington.
- ◆ **Non-impacted concrete:** Concrete from the concrete pad located at the "Site" was disposed of at the Kittitas solid waste facility in Ellensburg, Washington.
- ◆ PVC product lines and miscellaneous construction debris associated with the fueling system were either removed and taken to the local dump or re-used by Jeff James at another fueling facility.

Stained concrete and soil noted in previous WSI reports have been excavated and impacted soils and impacted concrete have been removed and properly disposed. Any stained soil or concrete outside of the "Site" area is beyond the scope of, and exempt from, this study and report.

5.0 RECOMMENDATIONS

Based on the conclusions that all of the hydrocarbon impacted soil associated with the James Oil Company / Estate of Wayne A. Hill - Pacific Pride Fueling Facility "Site" as identified in this report has been removed and no recommendations will be made at this time.

6.0 LIMITATIONS

This report has been prepared for specific application to this project in a manner consistent with the level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. DLH Environmental Consulting shall not be responsible for conditions or consequences arising from relevant facts that were withheld, concealed, or not fully disclosed at the time this evaluation was performed.

Recommendations and conclusions contained in this report are based on the evaluation of technical information made available and reviewed during the course of this survey.

The findings, conclusions and recommendations stated in this report apply exclusively to the "Site" formerly leased by James Oil Company as indicated in the report and no

other areas of the Estate's property. This report in no way confirms that the Estate's property surrounding the "Site" is free of contamination. This report is solely based on field observations, soil sample collection, and analysis of the soil collected. Since the "Site" was a leased portion of a larger piece of property, this report in no way can be used for any other portions of the Estate of Wayne A Hill property. No other warranty, expressed or implied, is made concerning the professional conclusions or recommendations, except as specifically noted in this report.

DLH Environmental Consulting has no control over the accuracy of information provided by outside consultants, contractors, and agencies and, therefore, disclaims responsibility for any inaccuracies incurred. The underlying philosophy in formulating the conclusions and recommendations was to reduce uncertainties regarding the property and pertaining to environmental hazards, to the degree possible. Therefore, the results of this assessment should be viewed as reasonably accurate estimates, given the project limitations of the existing environmental condition of the property.

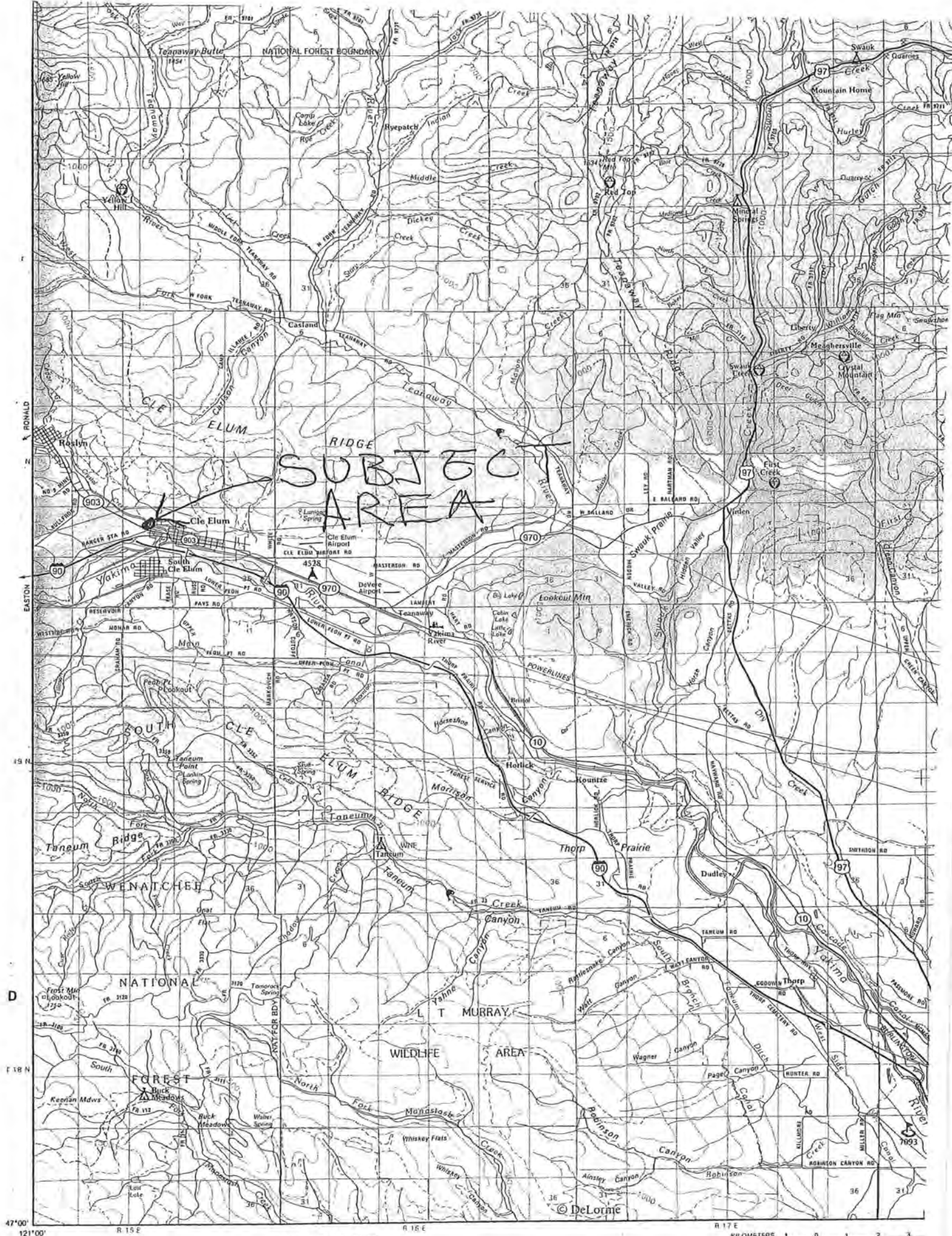
This report is for the exclusive use of James Oil Company, the Estate of Wayne A. Hill and their representatives and the Washington State Department of Ecology (WDOE) as necessary. If new information becomes available as a result of future site work, which may include excavations, borings, studies, etc., DLH Environmental Consulting reserves the right to reevaluate the conclusions of this report and to provide amendments as required. This report covers the soil removal activities that took place in April and May 2010.

APPENDIX A

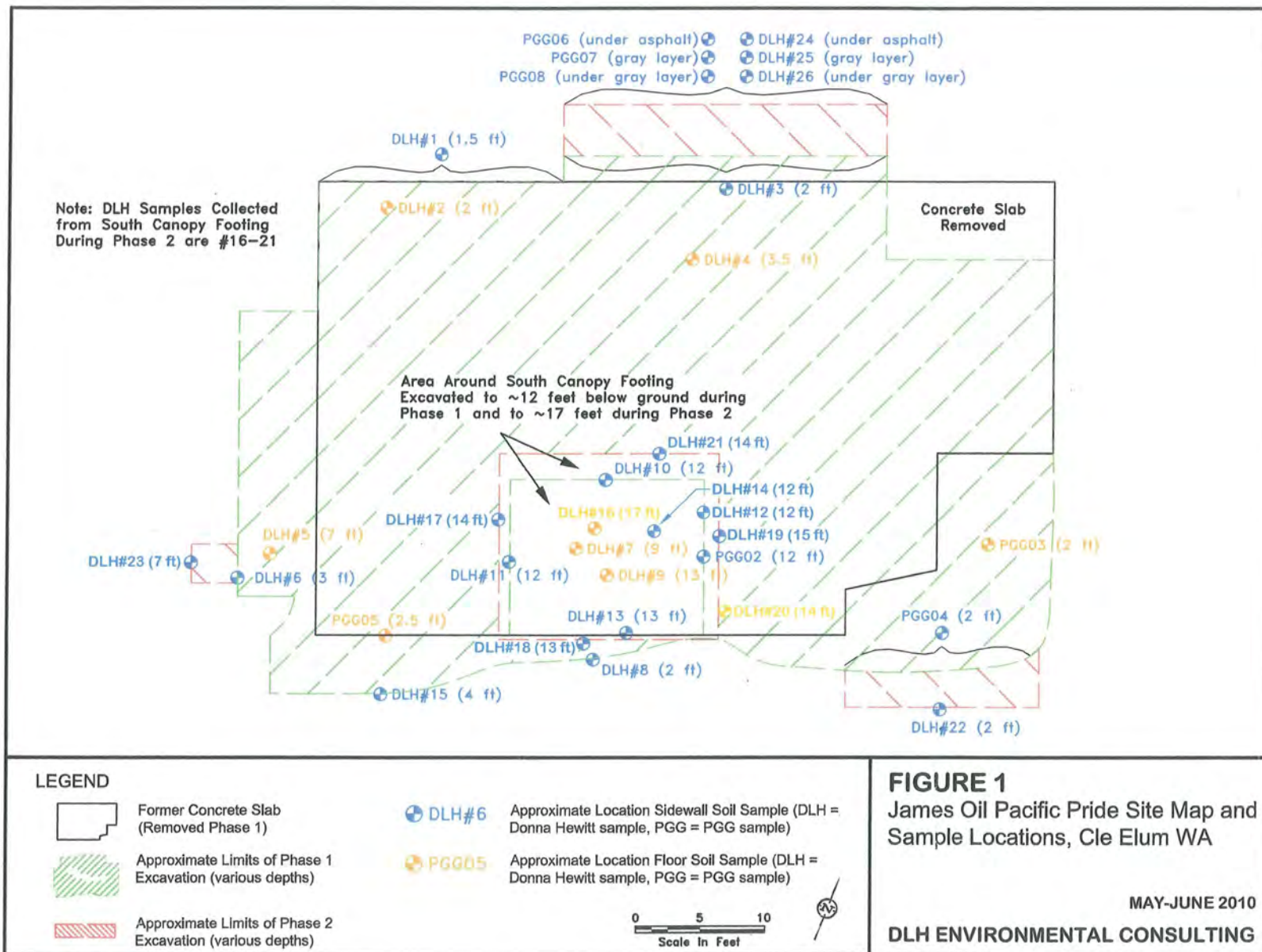
SITE MAP

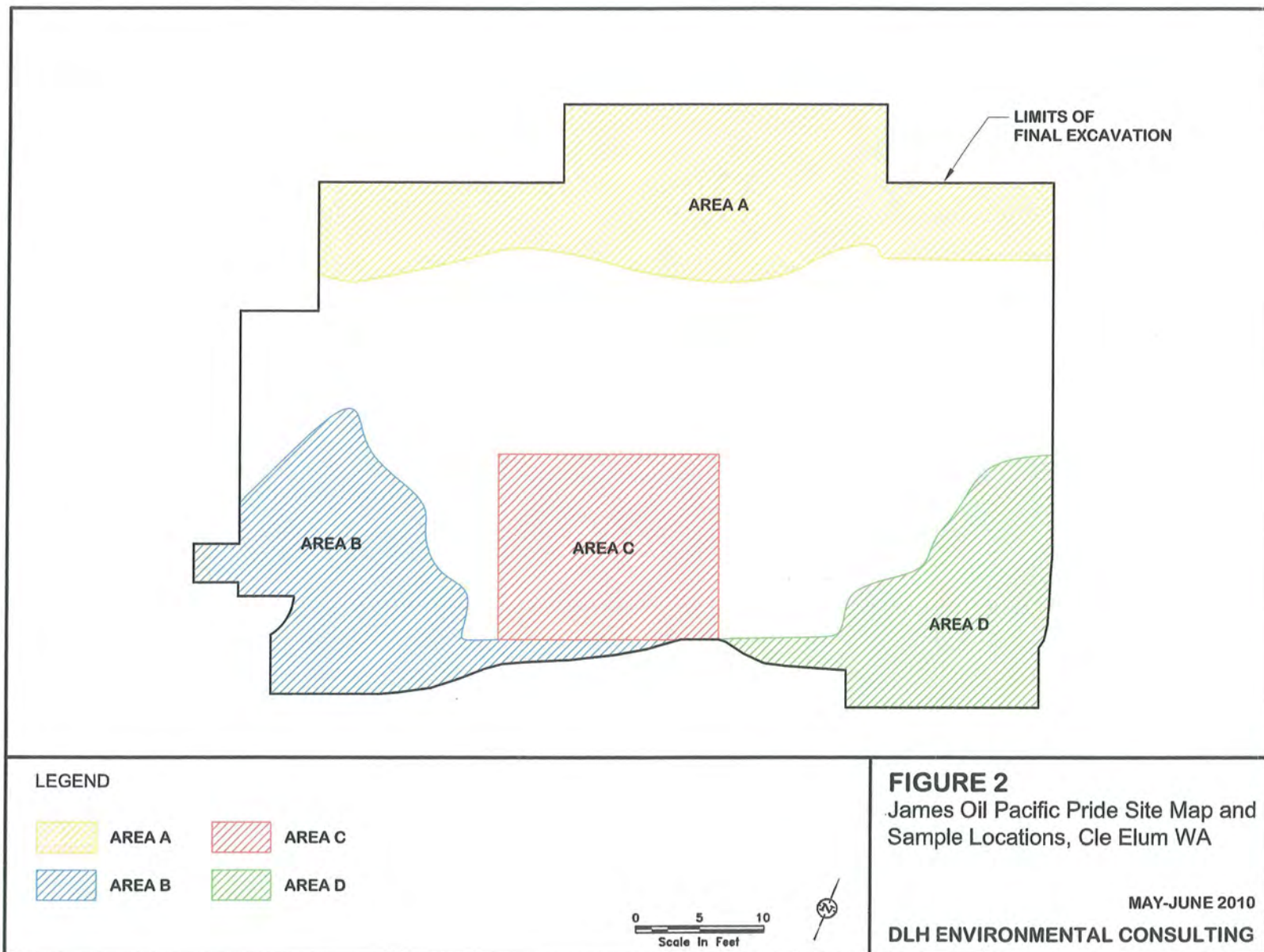
SITE FIGURES

SITE PHOTOGRAPHS



Continue on Page 50





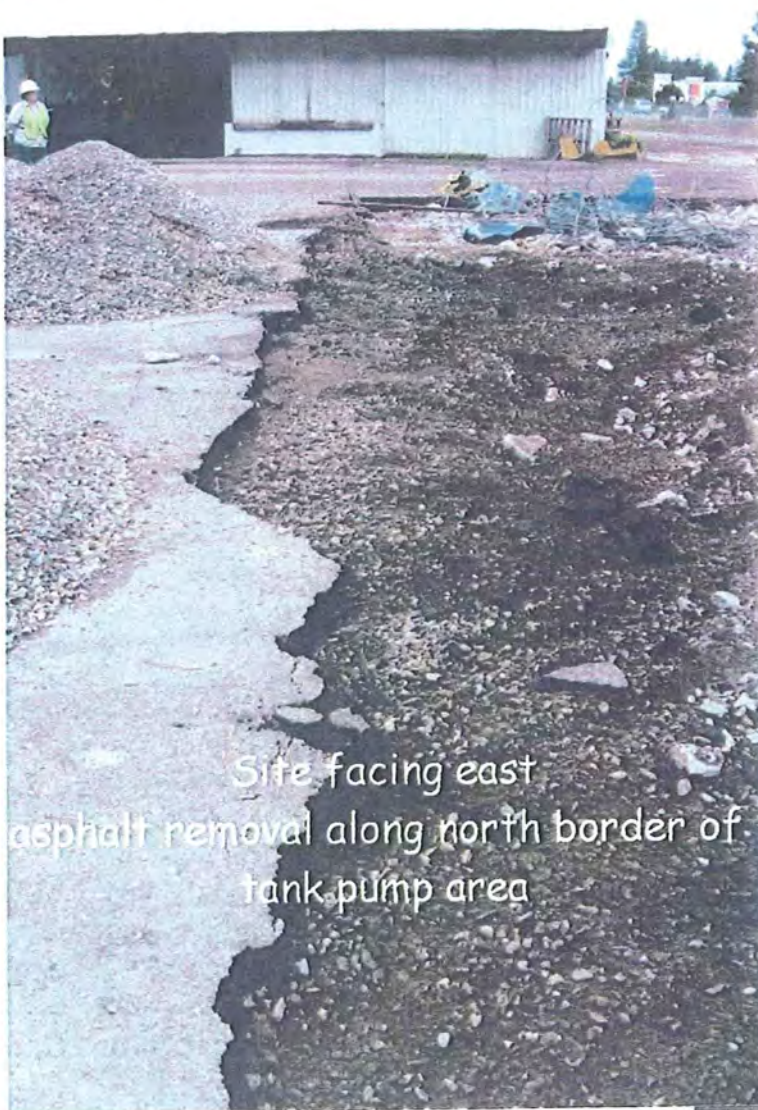


Subject site facing north

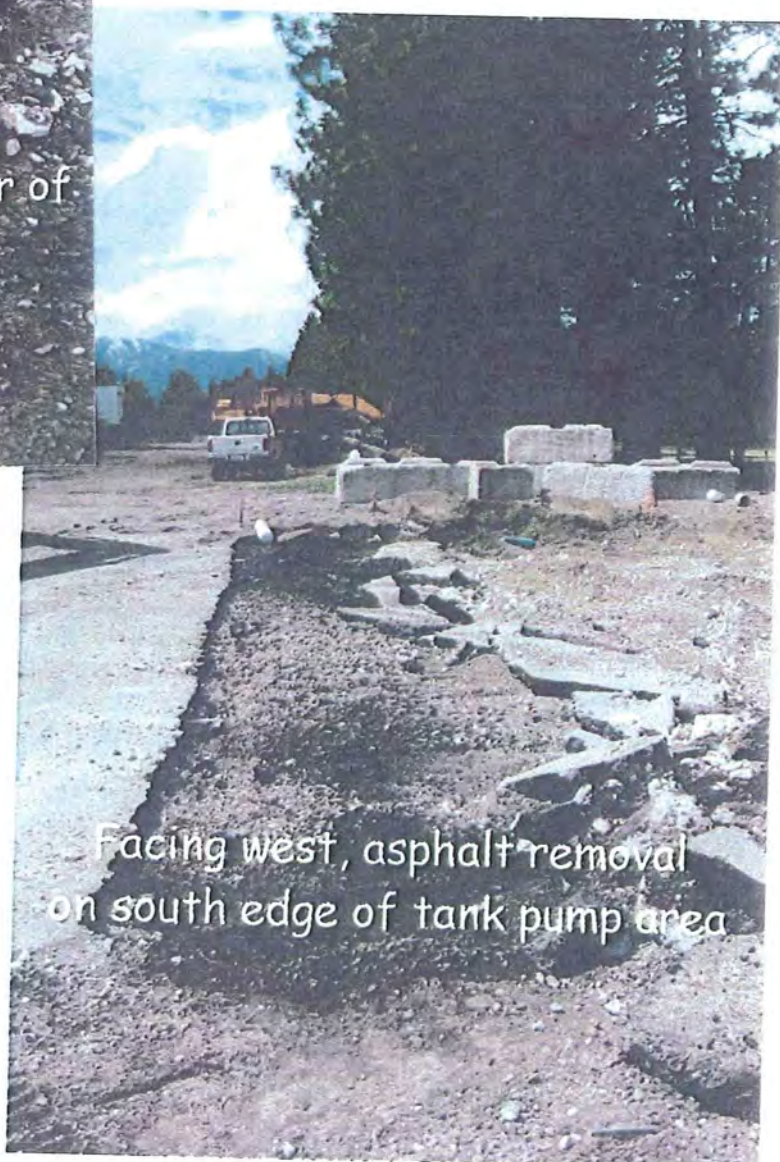


Subject site facing west

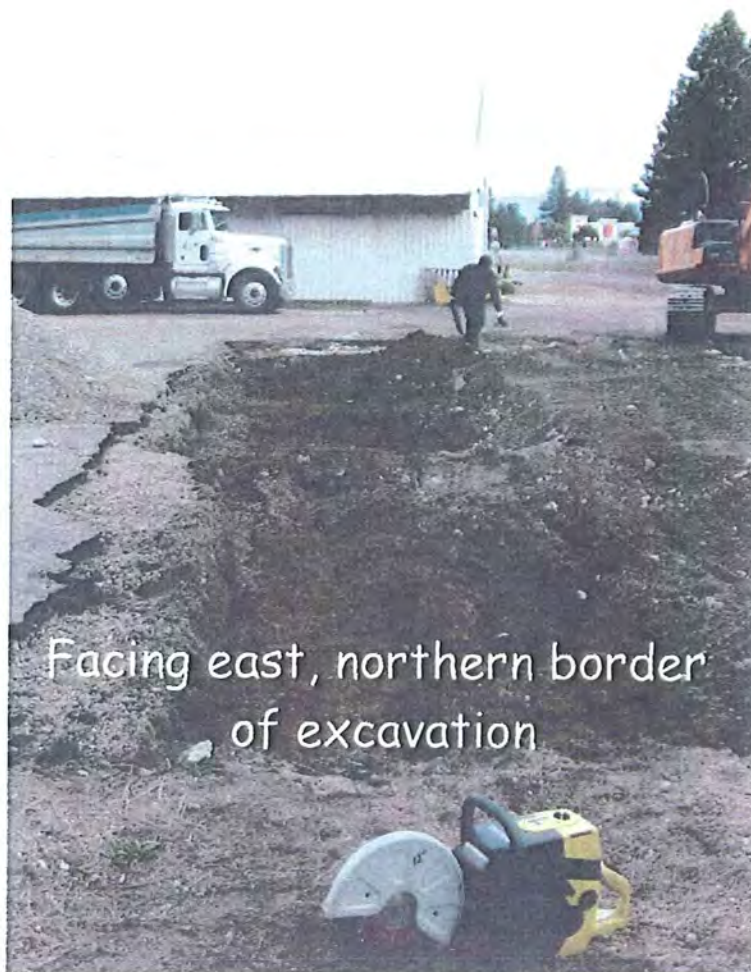




Site facing east
asphalt removal along north border of
tank pump area



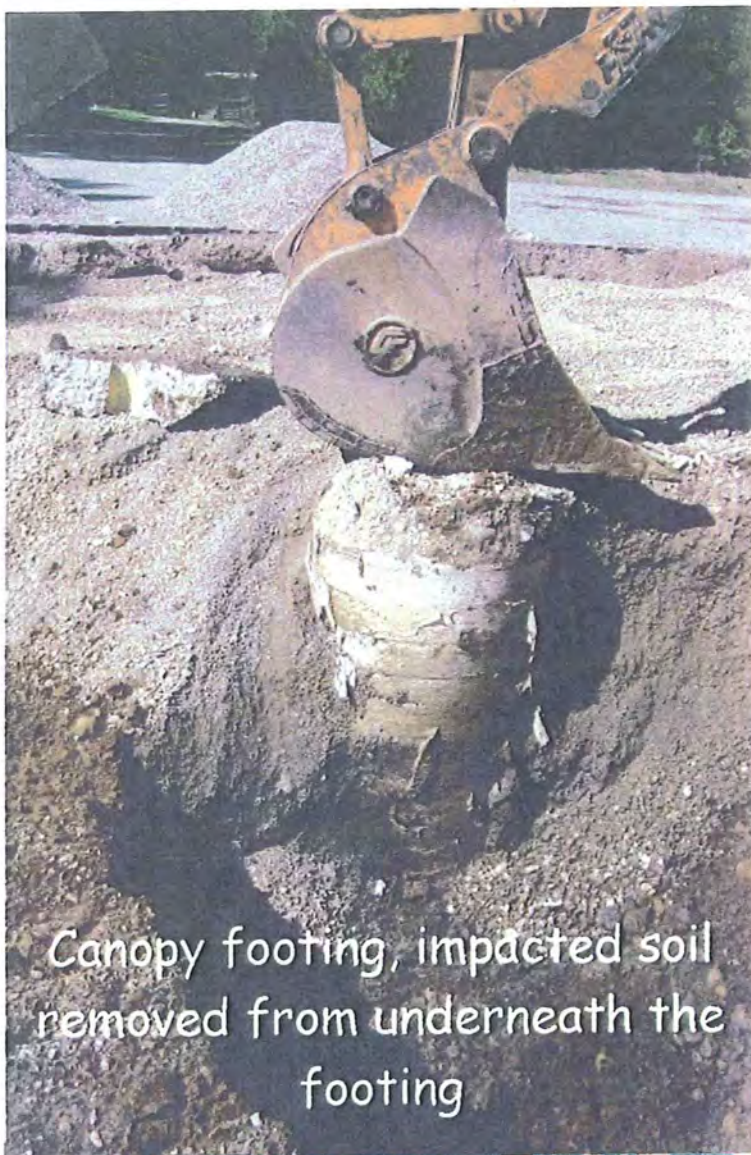
Facing west, asphalt removal
on south edge of tank pump area



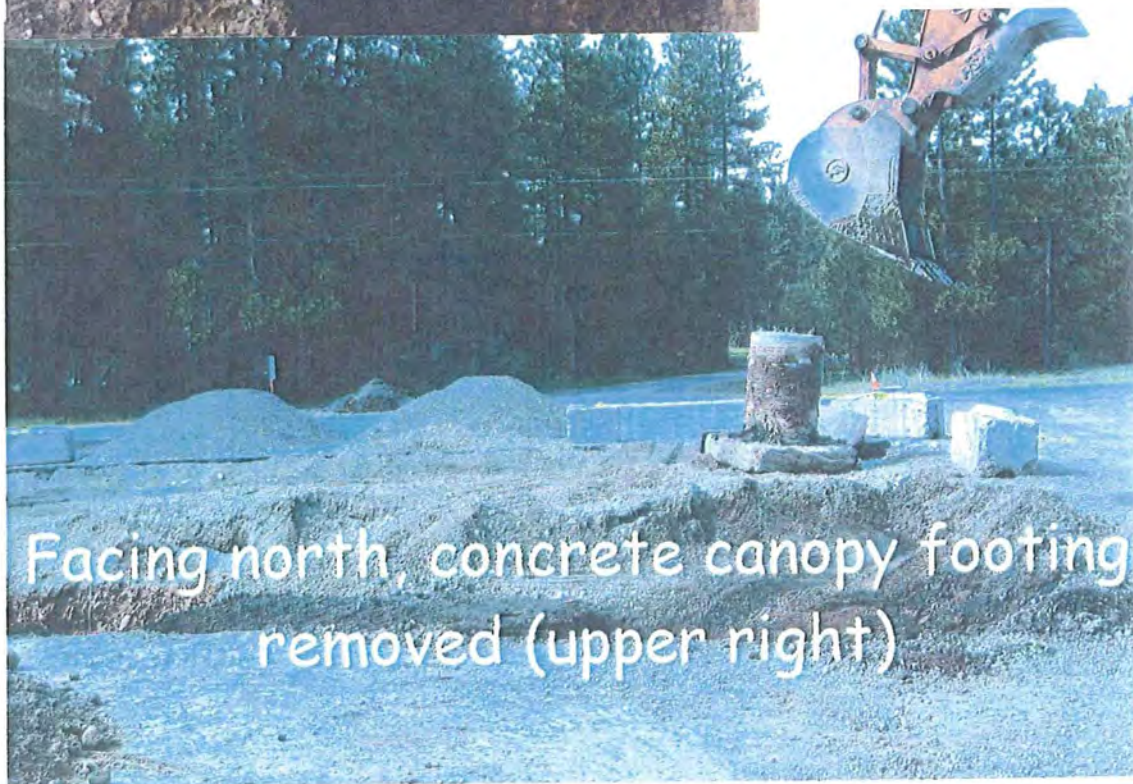




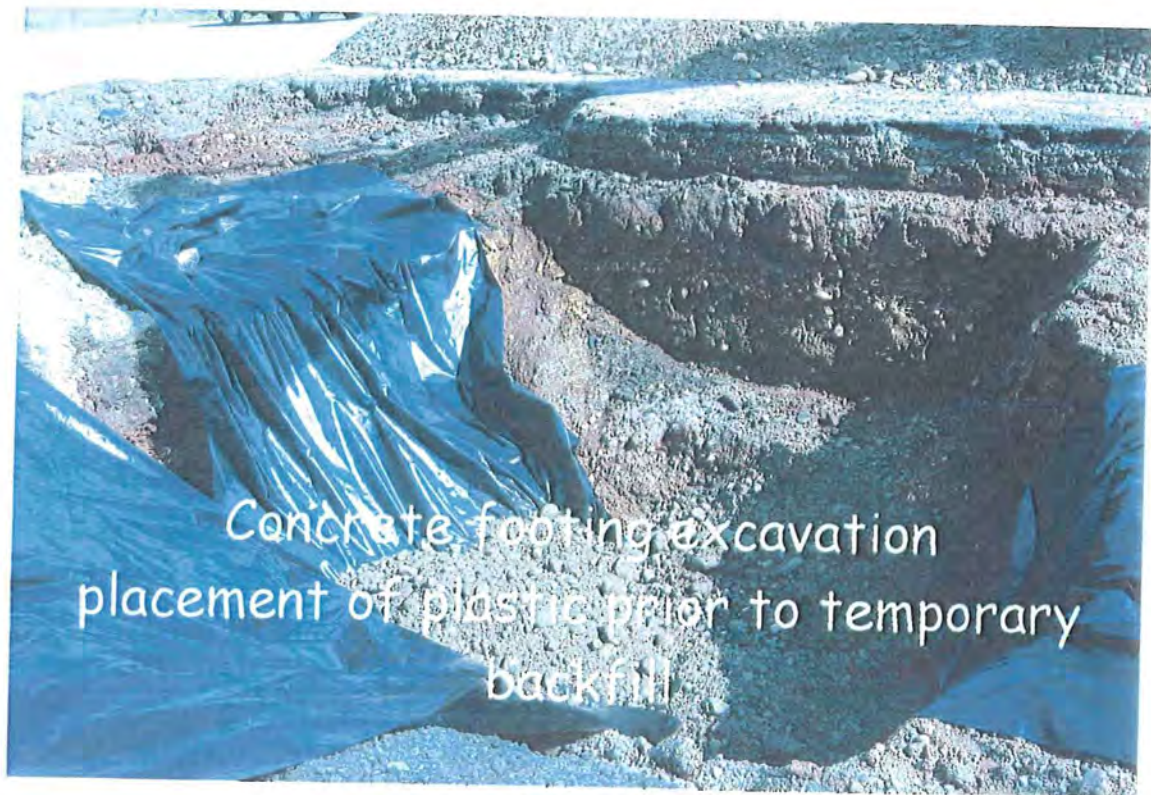




Canopy footing, impacted soil
removed from underneath the
footing



Facing north, concrete canopy footing
removed (upper right)



APPENDIX B

LABORATORY REPORTS

CHROMATOGRAMS

CHAIN OF CUSTODY FORMS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 4, 2010

Donna Hewitt, Project Manager
DLH Environmental Consulting
2400 NW 80th St., 114
Seattle, WA 98117-4449

Dear Ms. Hewitt:

Included are the results from the testing of material submitted on April 27, 2010 from the James Oil, F&BI 004289 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
DLH0504R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 27, 2010 by Friedman & Bruya, Inc. from the DLH Environmental Consulting James Oil, F&BI 004289 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>DLH Environmental Consulting</u>
004289-01	42710-01
004289-02	42710-02
004289-03	42710-03
004289-04	42710-04
004289-05	42710-05
004289-06	42710-06
004289-07	Stock1
004289-08	Stock2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/27/10

Project: James Oil, F&BI 004289

Date Extracted: 04/28/10

Date Analyzed: 04/28/10 and 04/29/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
42710-01 004289-01	<50	<250	92
42710-02 004289-02	<50	<250	84
42710-03 004289-03	1,300 x	4,500	94
42710-04 004289-04	<50	<250	92
42710-05 004289-05	1,700	<250	88
42710-06 004289-06	3,200	<250	91
Stock1 004289-07	1,200	<250	93
Stock2 004289-08	3,700	<250	86
Method Blank 00-0626 MB	<50	<250	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/27/10

Project: James Oil, F&BI 004289

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 004303-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	101	94	63-146	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	93	79-144

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

004289

SAMPLE CHAIN OF CUSTODY

ME 04/27/10

VSI
1/10/13

Send Report To

Donna Hewitt

Company

DLH environmental Consulting

Address

2400 NW 80th St Pmb #114

City, State, ZIP

Seattle, WA 98117

Phone #

206-632-3123 Fax #

SAMPLERS (signature)

PROJECT NAME/NO.

James Oil

PO #

REMARKS

Please look @ chromatograms if other
than diesel Run Gx/btex

Page #

of

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED										Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS					
42710-01	01A-E	7/27/10	1:41	Soil	5	X										Composite @ 1.5' side wall - North
02	02A-E		1:49		1	Y										Composite @ 1.5' side wall - North
03	03A-E		1:54		1	X										Composite @ 1.5' side wall, North
04	04A-E		2:20		1	X										2.5'
05	05A-E		2:54		1	X										7'
06	06A-E		3:06		1	X										3'
Stock 1	07		3:32		1	X										
Stock 2	08		3:35		1	X										

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COCCOC.DOC

SIGNATURE

Relinquished by:

Received by:

Relinquished by:

Received by:

PRINT NAME

Donna Hewitt

Yelena Aravina

COMPANY

DLH

F&B, Inc.

DATE

7/27/10

7/27/10

TIME

6:07

18:07

Sample received at 2:07

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 6, 2010

Donna Hewitt, Project Manager
DLH Environmental Consulting
2400 NW 80th St., 114
Seattle, WA 98117-4449

Dear Ms. Hewitt:

Included is the amended report from the testing of material submitted on April 27, 2010 from the James Oil, F&BI 004289 project. The sample chromatograms have been included, and the case narrative updated.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
DLH0504R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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<u>Laboratory ID</u>	<u>DLH Environmental Consulting</u>
004289-01	42710-01
004289-02	42710-02
004289-03	42710-03
004289-04	42710-04
004289-05	42710-05
004289-06	42710-06
004289-07	Stock1
004289-08	Stock2

No gasoline was seen in the diesel chromatograms. Per the chain of custody, the samples were not analyzed for NWTPH-Gx/8021B.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/27/10

Project: James Oil, F&BI 004289

Date Extracted: 04/28/10

Date Analyzed: 04/28/10 and 04/29/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 50-150)
42710-01 004289-01	<50	<250	92
42710-02 004289-02	<50	<250	84
42710-03 004289-03	1,300 x	4,500	94
42710-04 004289-04	<50	<250	92
42710-05 004289-05	1,700	<250	88
42710-06 004289-06	3,200	<250	91
Stock1 004289-07	1,200	<250	93
Stock2 004289-08	3,700	<250	86
Method Blank 00-0626 MB	<50	<250	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/27/10

Project: James Oil, F&BI 004289

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 004303-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	101	94	63-146	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	93	79-144

Data Qualifiers & Definitions

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A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

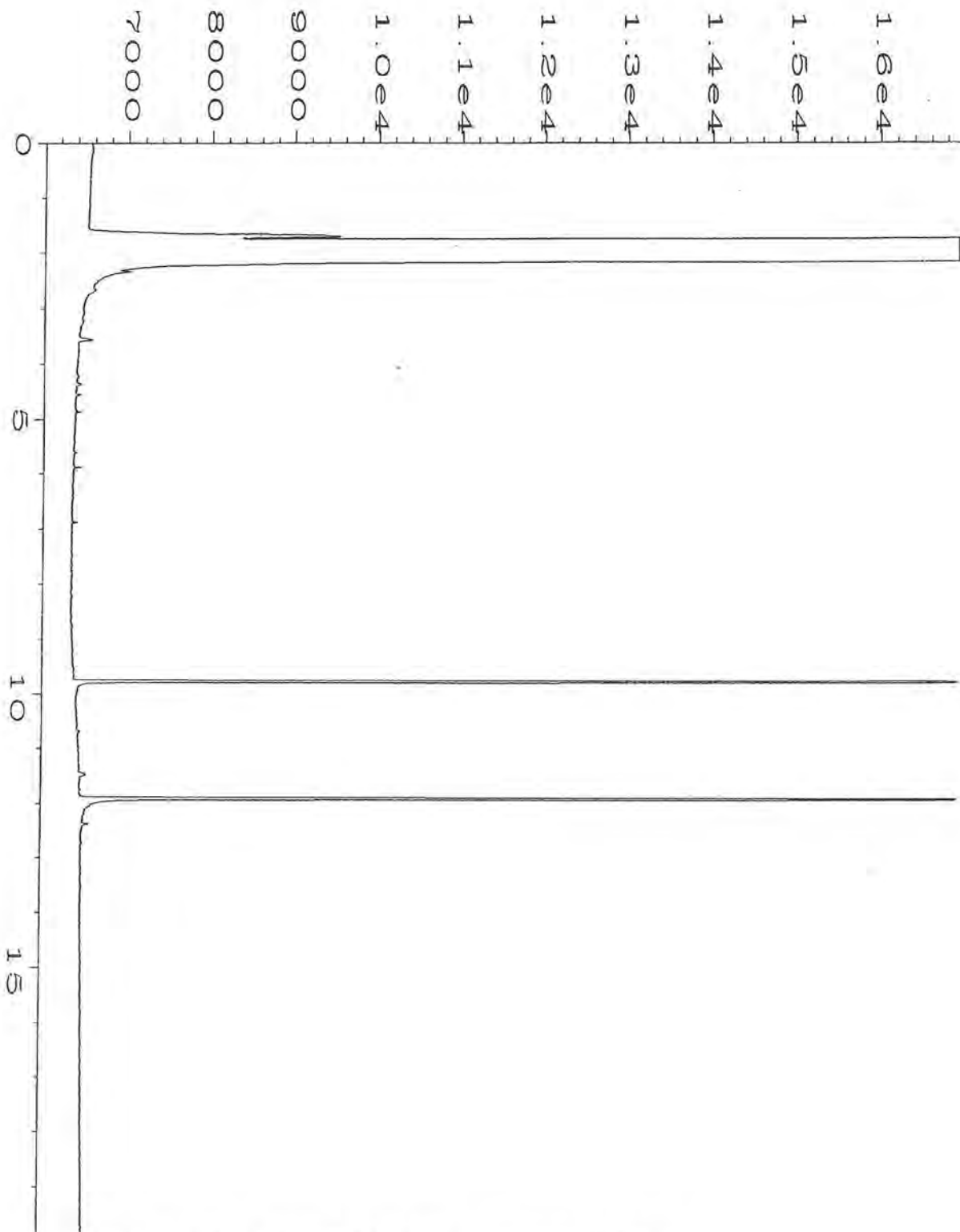
pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

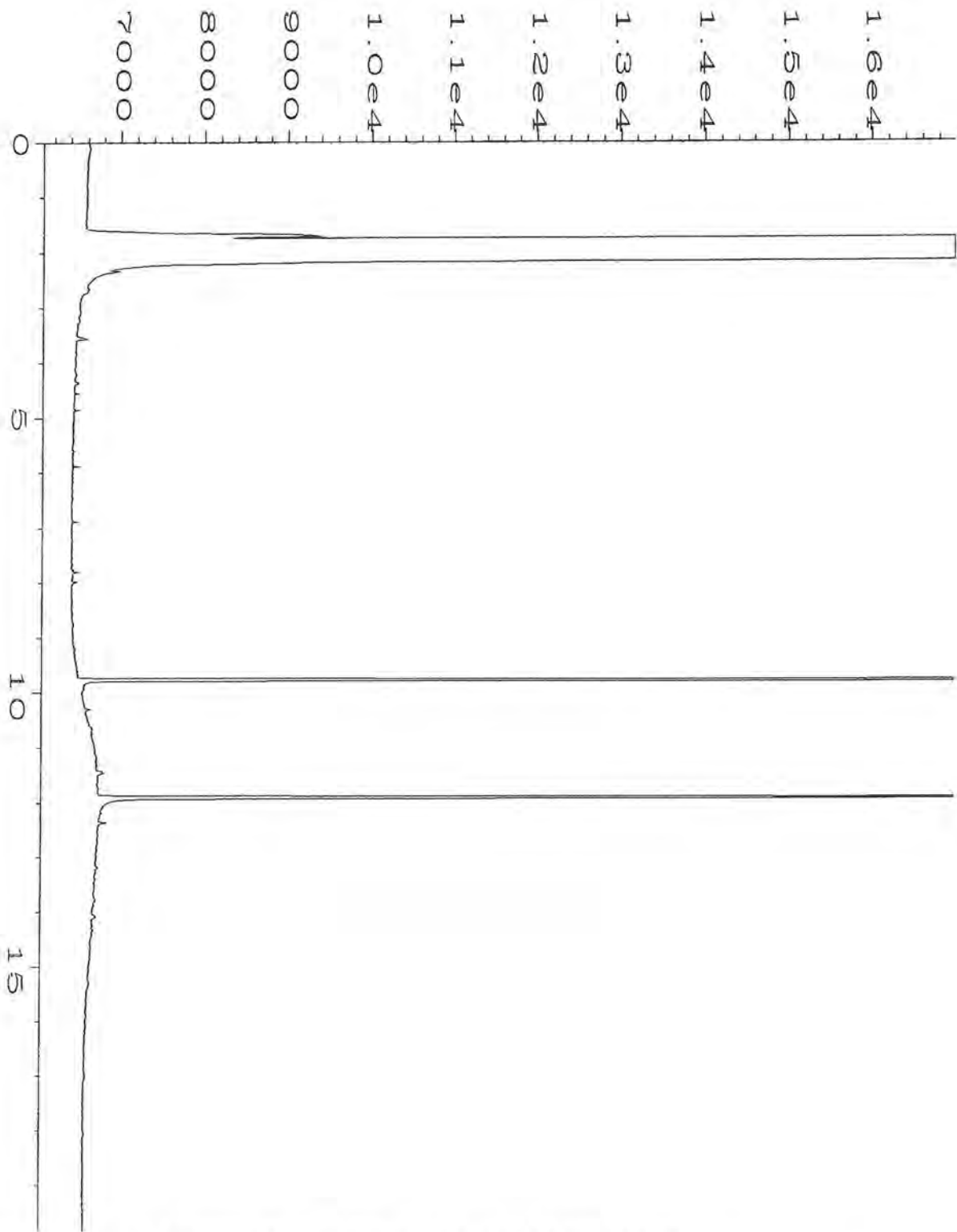
ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

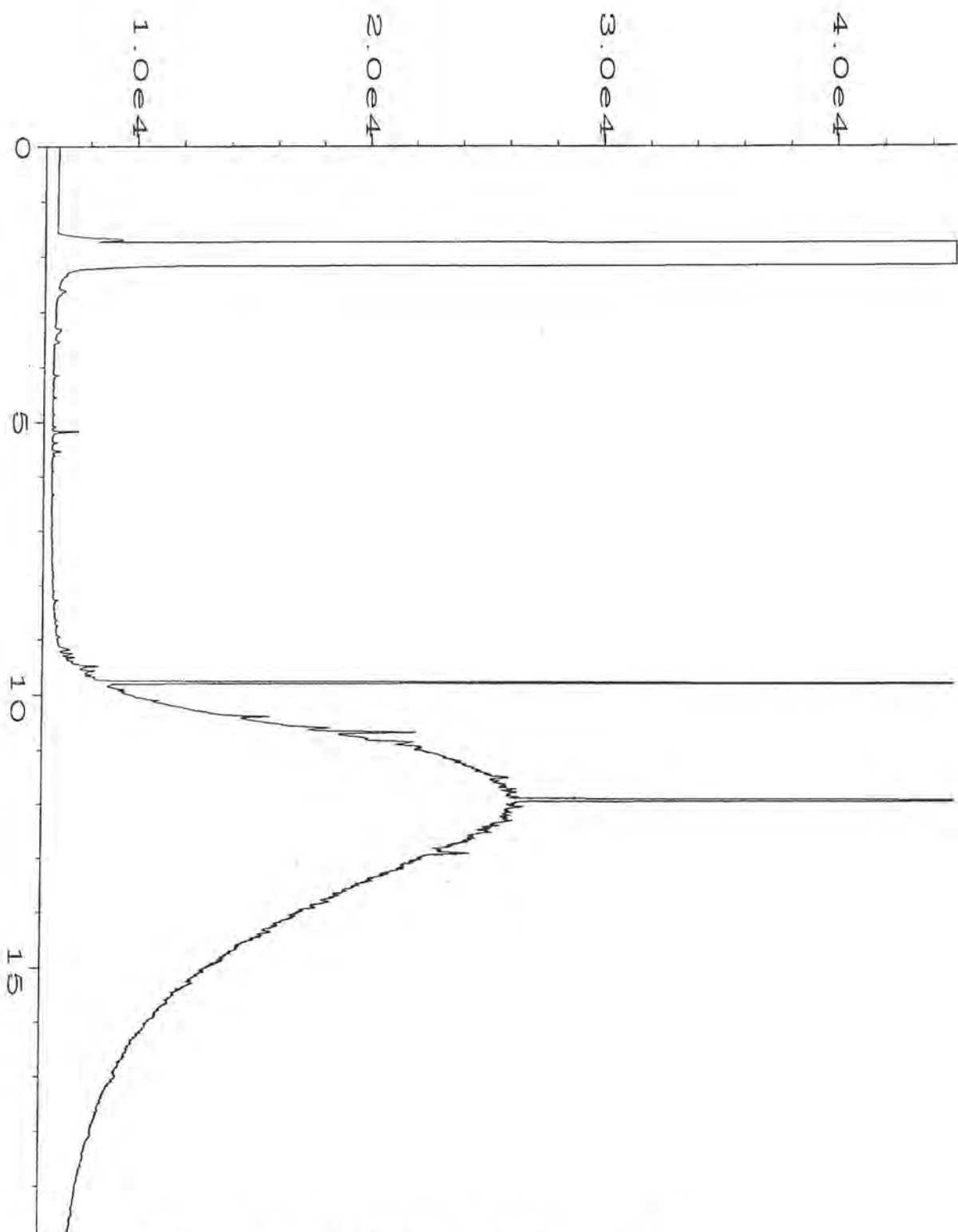
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



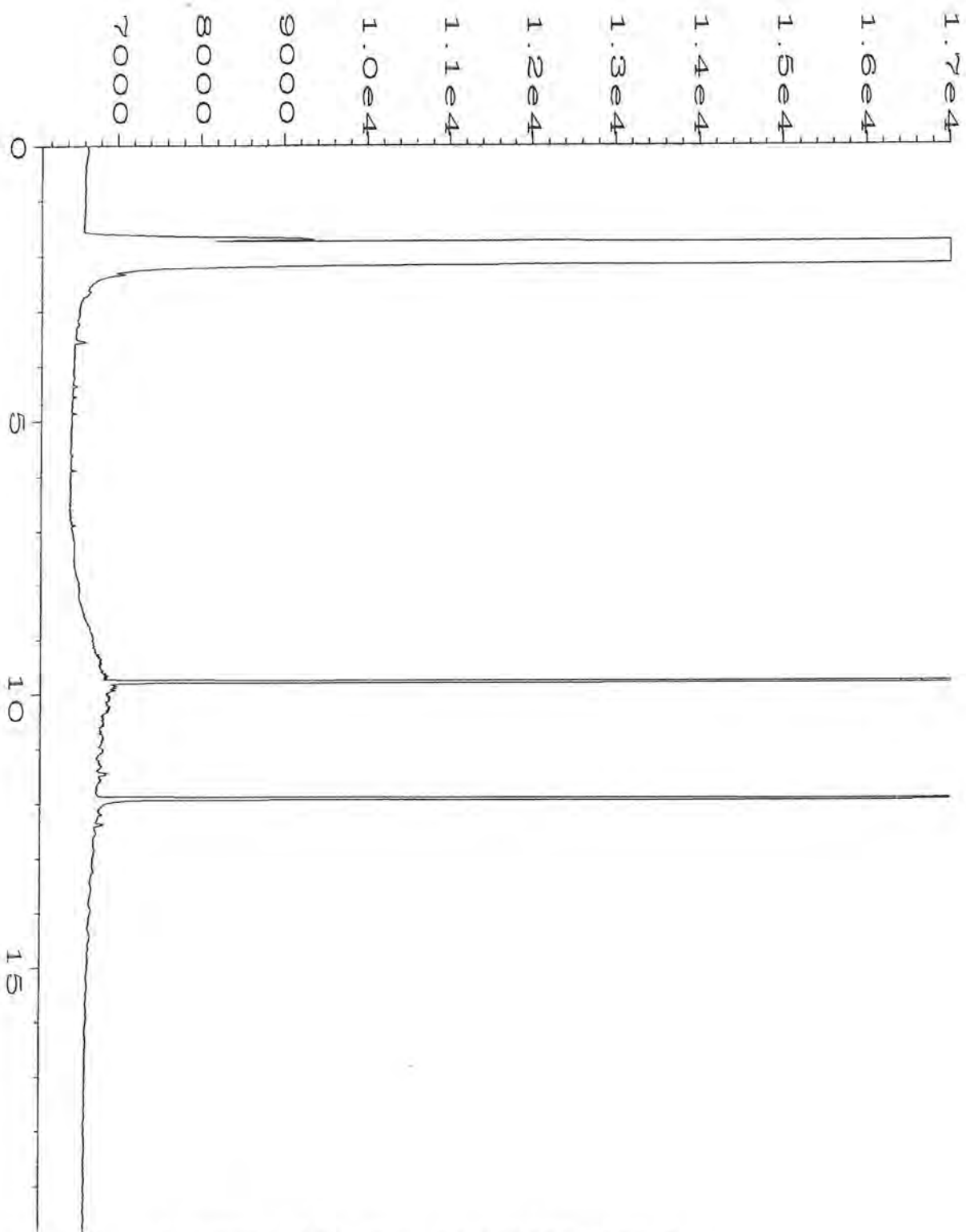
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Instrument	: GC1	Injection Number	: 1
Sample Name	: 004289-01	Sequence Line	: 6
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Acquired on	: 28 Apr 10 09:09 PM	Analysis Method	: TPHD.MTH
Report Created on:	06 May 10 01:50 PM		



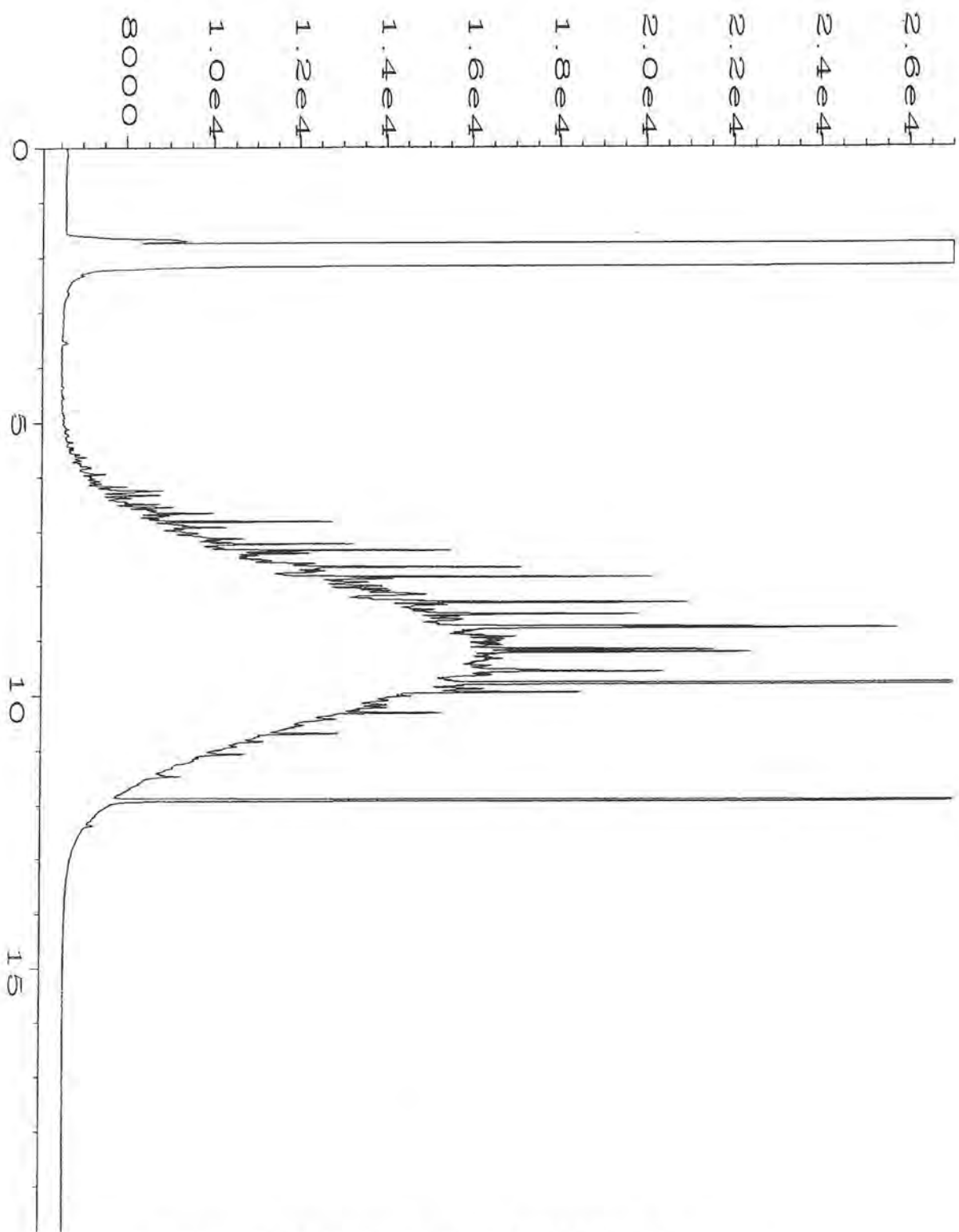
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Sample Name	: 004289-02	Sequence Line	: 8
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Printed on	: 28 Apr 10 10:28 PM	Analysis Method	: TPHD.MTH
Report Created on:	06 May 10 01:50 PM		



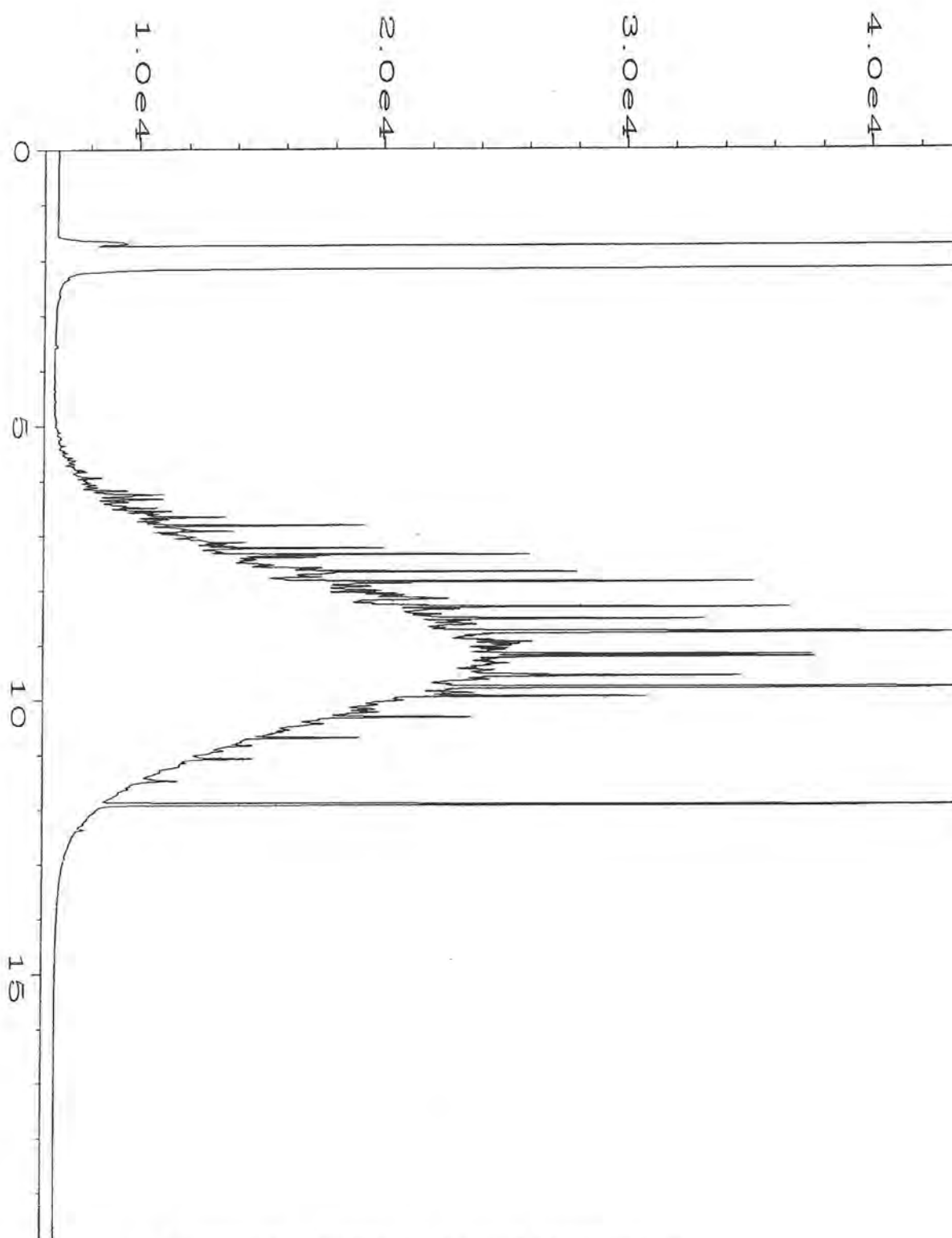
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Operator	: ay	Vial Number	: 27
Instrument	: GC1	Injection Number	: 1
Sample Name	: 004289-03	Sequence Line	: 8
Run Time Bar Code:		Instrument Method	: TPHD.MTH
Acquired on	: 28 Apr 10 10:55 PM	Analysis Method	: TPHD.MTH
Report Created on:	: 06 May 10 01:50 PM		



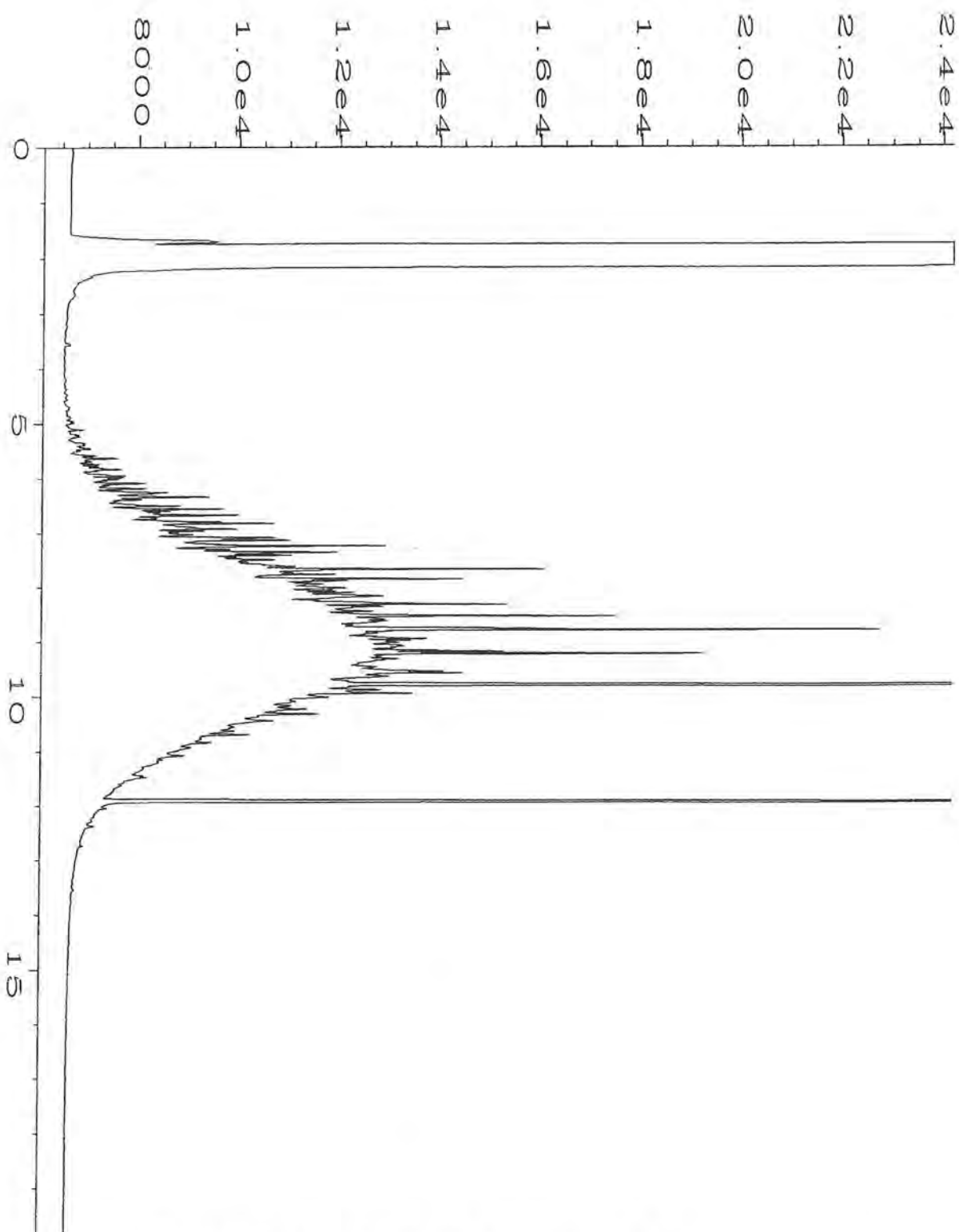
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Sample Name	: 004289-04	Sequence Line	: 8
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Report Created on:	06 May 10 01:50 PM	Analysis Method	: TPHD.MTH



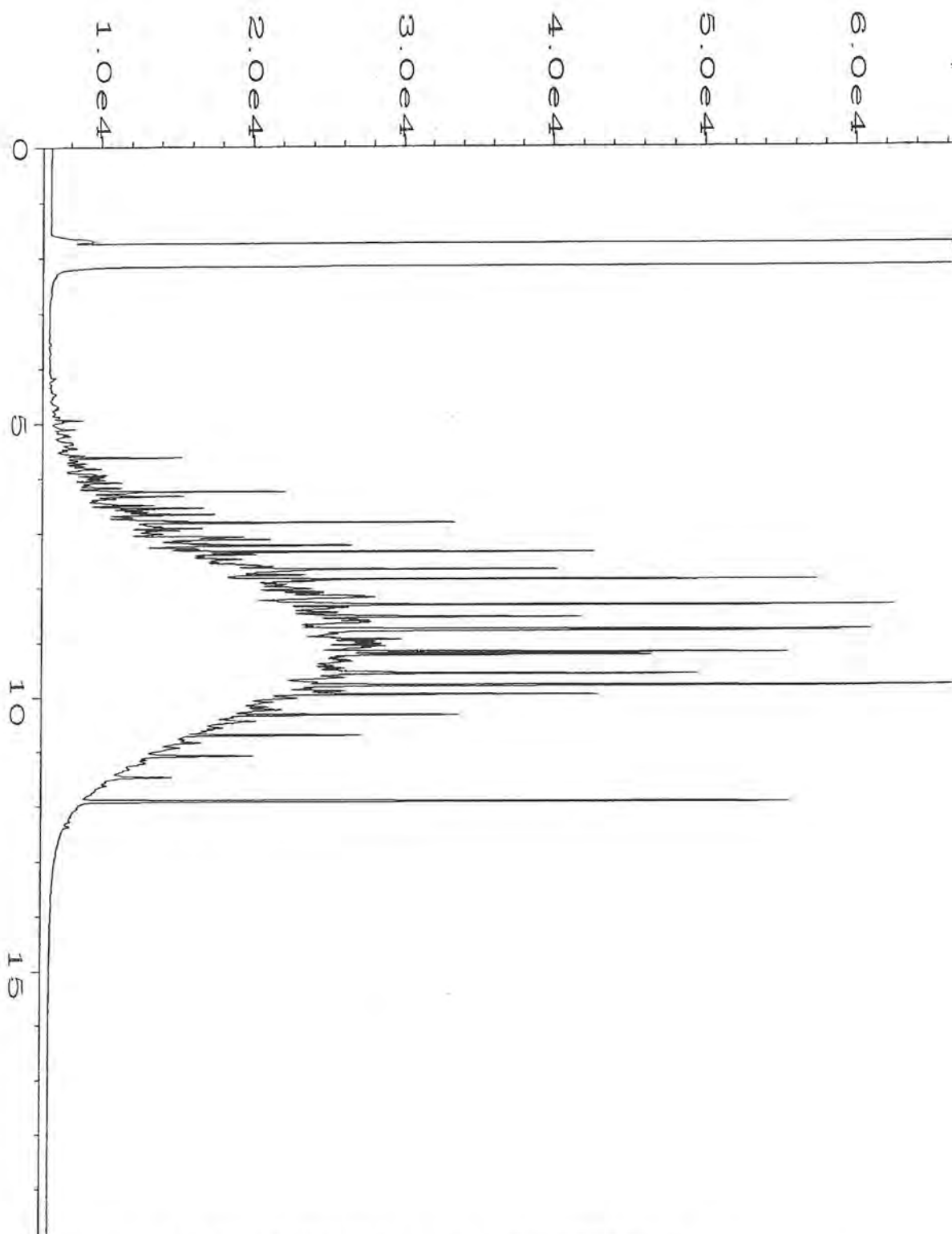
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Sample Name	: 004289-05	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 28 Apr 10 11:48 PM	Analysis Method	: TPHD.MTH
Report Created on:	06 May 10 01:50 PM		



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Operator	: ay	Vial Number	: 30
Instrument	: GC1	Injection Number	: 1
Sample Name	: 004289-06	Sequence Line	: 8
Print Time Bar Code:		Instrument Method	: TPHD.MTH
Printed on	: 29 Apr 10 00:14 AM	Analysis Method	: TPHD.MTH
Report Created on:	06 May 10 01:51 PM		



Data File Name	: C:\HPCHEM\1\DATA\04-28-10\031F0801.D	Page Number	: 1
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Sample Name	: 004289-07	Sequence Line	: 8
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 29 Apr 10 00:40 AM	Analysis Method	: TPHD.MTH
Report Created on:	06 May 10 01:51 PM		



Data File Name	: C:\HPCHEM\1\DATA\04-28-10\032F0801.D	Page Number	: 1
Operator	: ay	Vial Number	: 32
Instrument	: GC1	Injection Number	: 1
Sample Name	: 004289-08	Sequence Line	: 8
Printed on	: 29 Apr 10 01:06 AM	Instrument Method	: TPHD.MTH
Report Created on	: 06 May 10 01:51 PM	Analysis Method	: TPHD.MTH

004289

SAMPLE CHAIN OF CUSTODY

ME 04/27/10

VS1/1/2013

Send Report To: Donna Hewitt
Company: DLH Environmental Consulting
Address: 2400 New 82nd St PMB #114
City, State, ZIP: Seattle, WA 98117
Phone #: 206-632-3133 Fax #:

SAMPLERS (Signature): [Signature]
PROJECT NAME/NO.: James Oil
PO #:
REMARKS: Please look @ chromatograms if other than diesel PUN Gx/btex

Page # of
TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:
SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
42710-01	01A-E	7/27/10	1:41	Soil	5	X						Composite @ 1.5' side wall North
02	02A-E		1:49		1	X						Composite @ 1.5' side wall North
03	03A-E		1:54		1	X						Composite @ 1.5' side wall North
04	04A-E		2:20		1	X						Composite @ 1.5' side wall North
05	05A-E		2:54		1	X						2.5'
06	06A-E		3:06		1	X						7'
Stock 1	07		3:32		1	X						3'
Stock 2	08		3:35		1	X						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119
Ph. (206) 285-8282
Fax (206) 283-5044
FORMS/COC/DOC

Relinquished by: [Signature]	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Received by: [Signature]		Donna Hewitt	DLH	7/27/10	6:07
Relinquished by: [Signature]		Yelena Aramova	ESB, Inc.	7/27/10	18:07
Received by:					

Sample received at 7 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 18, 2010

Donna Hewitt, Project Manager
DLH Environmental Consulting
2400 NW 80th St., 114
Seattle, WA 98117-4449

Dear Ms. Hewitt:

Included is the amended report from the testing of material submitted on April 27, 2010 from the James Oil, F&BI 004289 project. Per your request, the qualifier on the diesel detection of sample 42710-03 was further explained in the case narrative.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
DLH0504R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 4, 2010

Donna Hewitt, Project Manager
DLH Environmental Consulting
2400 NW 80th St., 114
Seattle, WA 98117-4449

Dear Ms. Hewitt:

Included are the results from the testing of material submitted on April 27, 2010 from the James Oil, F&BI 004289 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
DLH0504R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 27, 2010 by Friedman & Bruya, Inc. from the DLH Environmental Consulting James Oil, F&BI 004289 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>DLH Environmental Consulting</u>
004289-01	42710-01
004289-02	42710-02
004289-03	42710-03
004289-04	42710-04
004289-05	42710-05
004289-06	42710-06
004289-07	Stock1
004289-08	Stock2

No gasoline was seen in the diesel chromatograms. Per the chain of custody, the samples were not analyzed for NWTPH-Gx/8021B.

The diesel result in sample 42710-03 is due to carryover from motor oil range material.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10
Date Received: 04/27/10
Project: James Oil, F&BI 004289
Date Extracted: 04/28/10
Date Analyzed: 04/28/10 and 04/29/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery) (Limit 50-150)
42710-01 004289-01	<50	<250	92
42710-02 004289-02	<50	<250	84
42710-03 004289-03	1,300 x	4,500	94
42710-04 004289-04	<50	<250	92
42710-05 004289-05	1,700	<250	88
42710-06 004289-06	3,200	<250	91
Stock1 004289-07	1,200	<250	93
Stock2 004289-08	3,700	<250	86
Method Blank 00-0626 MB	<50	<250	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/27/10

Project: James Oil, F&BI 004289

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 004303-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	101	94	63-146	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	93	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

004 29
Send Report To Donna Hewitt
Company DLH Environmental Consulting
Address 2400 NW 80th St Pembroke 114
City, State, ZIP Seattle, WA 98117
Phone # 206-632-3133 Fax #

Page # 11 of 13

Vol 11 of

PROJECT NAME/NO.	PO #
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REMARKS
Please look @ chromatograms if other than diesel Run Gx/btex

SAMPLE DISPOSAL
<input type="checkbox"/> Dispose after 30 days
<input type="checkbox"/> Return samples
<input type="checkbox"/> Will call with instructions


		ANALYSES REQUESTED														
Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS					Notes
42710-01	01A-E	7/27/10	1:41	Soil	5	X										Composite @ 1.5' & side wall - North
02	02A-E		1:49			X										Composite @ 1.5' side wall - North
03	03A-E		1:54			X										Composite @ 1.5' side wall - North
04	04A-E		2:20			X										Composite @ 1.5' side wall - North
05	05A-E		2:54			X										2.5'
06	06A-E		3:06			X										7'
Stock 1	07		3:32			X										3'
Stock 2	08		3:35			X										

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-
0000
Ph. (206) 285-8282
Fax (206) 283-5044
FORMS\COC\COC.DOC

SIGNATURE		PRINT NAME
-----------	---	------------

PRINT NAME	COMPANY

TIME

Relinquished by: 	David L. Bennett	4/27/07	6:07
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[illegible]

Relinquished by:		Helene A. Traversey	GB, Inc.	9/16/76	11-07
------------------	---	---------------------	----------	---------	-------

Received by:			
--------------	--	--	--

Samples received at 4 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 4, 2010

Donna Hewitt, Project Manager
DLH Environmental Consulting
2400 NW 80th St., 114
Seattle, WA 98117-4449

Dear Ms. Hewitt:

Included are the results from the testing of material submitted on April 28, 2010 from the James Oil, F&BI 004308 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
DLH0504R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 28, 2010 by Friedman & Bruya, Inc. from the DLH Environmental Consulting James Oil, F&BI 004308 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>DLH Environmental Consulting</u>
004308-01	42810-07
004308-02	42810-08
004308-03	42810-09
004308-04	42810-10
004308-05	42810-11
004308-06	42810-12
004308-07	42810-13
004308-08	42810-14
004308-09	42810-15
004308-10	Stock 3

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10
Date Received: 04/28/10
Project: James Oil, F&BI 004308
Date Extracted: 04/29/10
Date Analyzed: 04/29/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-D_x**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 50-150)
42810-07 004308-01	90	<250	99
42810-08 004308-02	<50	<250	99
42810-09 004308-03	4,400	<250	91
42810-10 004308-04	400	<250	88
42810-11 004308-05	750	<250	91
42810-12 004308-06	<50	<250	97
42810-13 004308-07	<50	<250	91
Stock 3 004308-10	320	590	92
Method Blank 00-0629 MB	<50	<250	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10
Date Received: 04/28/10
Project: James Oil, F&BI 004308
Date Extracted: 04/29/10
Date Analyzed: 04/29/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx
Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis
Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 50-150)
42810-14 004308-08	<50	<250	87
42810-15 004308-09	<50	<250	89
Method Blank 00-0629 MB	<50	<250	84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/28/10

Project: James Oil, F&BI 004308

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 004308-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	110	98	73-135	12

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/28/10

Project: James Oil, F&BI 004308

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 004308-08 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	99	96	73-135	3

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	74-139

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

004308

SAMPLE CHAIN OF CUSTODY

NE 04/28/10

VS2/DO3

Send Report To Donna Hewitt

Company DLH

Address 2400 NW 80th St PMB#114

City, State, ZIP Seattle, WA 98117

Phone # 206-632-3123 FAX #

SAMPLERS (signature)

PROJECT NAME/NO.

James Oil

REMARKS
Pls look @ Chromatograms. IF gas/btex
indication please run for gas/btex

PO #

Page # of

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
42810-07	01 A-E	4/28/10	11:50	Soil	5	X						✓ -p-dH 4/28/10 MS
08	02 A-E		12:15			X						@ 9'
09	03 A-E		1:20			X						Composit E-Side w. 2'
10	04 A-E		1:22			X						Bottom - 13'
11	05 A-E		1:27			X						9' NSW
12	06 A-E		1:39			X						9' WSW
13	07 A-E		1:48			X						9' ESW
14	08 A-E		3:44			X					X	9' SSW
15	09 A-E		3:49			X					X	Bat-P 4'
Stack 3	10		3:27			X						East SW 3'

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

Relinquished by: Donna Hewitt PRINT NAME
Signature: [Signature] SIGNATURE
Relinquished by: Kortland ON COMPANY
Signature: [Signature] COMPANY
Relinquished by: FABI DATE
Signature: [Signature] DATE
Received by: 17 °C
Signature: [Signature] TIME

004308

Send Report To

Company

Address

City, State, ZIP

Phone #

Donna Hewitt

DLH

2400 NW 80th St PMB #114

Seattle, WA 98117

Phone # 206-6323123 fax #

SAMPLE CHAIN OF CUSTODY

NE 04/28/10

152/203

SAMPLER'S (signature)

PROJECT NAME/NO.

James Oil

REMARKS
Pls Look @ Chromatograms. IF gas/btex
indication please run for gas/btex

PO #

Page #

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFPS		Other-Specific
42810-07	01A-E	4/28/10	11:50	Soil	5	X							✓ -p-DH 4/28/10 MS
08	02A-E		12:15			X							29'
09	03A-E		1:20			X							Comp 5 ft 15' SW 2'
10	04A-E		1:22			X							Bottom - ~13'
11	05A-E		1:27			X							9' NSW
12	06A-E		1:39			X							9' WSW
13	07A-E		1:48			X							9' ESW
14	08A-E		3:44			X					X		9' SSW
15	09A-E		3:49			X					X		BDTP 4'
Stack 3	10		3:27			X					X		East SW 3'

SIGNATURE		PRINT NAME		COMPANY	DATE	TIME
Relinquished by:		Donna Hewitt	DLH		4/28/10	1820
Received by:		Kortland ON	Fab		4-28-10	1820
Relinquished by:						
Received by:				Samples received at	17 °C	

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COCC\COCC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 6, 2010

Donna Hewitt, Project Manager
DLH Environmental Consulting
2400 NW 80th St., 114
Seattle, WA 98117-4449

Dear Ms. Hewitt:

Included is the amended report from the testing of material submitted on April 28, 2010 from the James Oil, F&BI 004308 project. The sample chromatograms have been included, and the case narrative updated.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
DLH0504R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 4, 2010

Donna Hewitt, Project Manager
DLH Environmental Consulting
2400 NW 80th St., 114
Seattle, WA 98117-4449

Dear Ms. Hewitt:

Included are the results from the testing of material submitted on April 28, 2010 from the James Oil, F&BI 004308 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
DLH0504R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 28, 2010 by Friedman & Bruya, Inc. from the DLH Environmental Consulting James Oil, F&BI 004308 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>DLH Environmental Consulting</u>
004308-01	42810-07
004308-02	42810-08
004308-03	42810-09
004308-04	42810-10
004308-05	42810-11
004308-06	42810-12
004308-07	42810-13
004308-08	42810-14
004308-09	42810-15
004308-10	Stock 3

No gasoline was seen in the diesel chromatograms. Per the chain of custody, the samples were not analyzed for NWTPH-Gx/8021B.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10
Date Received: 04/28/10
Project: James Oil, F&BI 004308
Date Extracted: 04/29/10
Date Analyzed: 04/29/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 50-150)
42810-07 004308-01	90	<250	99
42810-08 004308-02	<50	<250	99
42810-09 004308-03	4,400	<250	91
42810-10 004308-04	400	<250	88
42810-11 004308-05	750	<250	91
42810-12 004308-06	<50	<250	97
42810-13 004308-07	<50	<250	91
Stock 3 004308-10	320	590	92
Method Blank 00-0629 MB	<50	<250	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10
Date Received: 04/28/10
Project: James Oil, F&BI 004308
Date Extracted: 04/29/10
Date Analyzed: 04/29/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx
Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis
Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 50-150)
42810-14 004308-08	<50	<250	87
42810-15 004308-09	<50	<250	89
Method Blank 00-0629 MB	<50	<250	84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/28/10

Project: James Oil, F&BI 004308

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 004308-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	110	98	73-135	12

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/10

Date Received: 04/28/10

Project: James Oil, F&BI 004308

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 004308-08 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	99	96	73-135	3

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	74-139

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

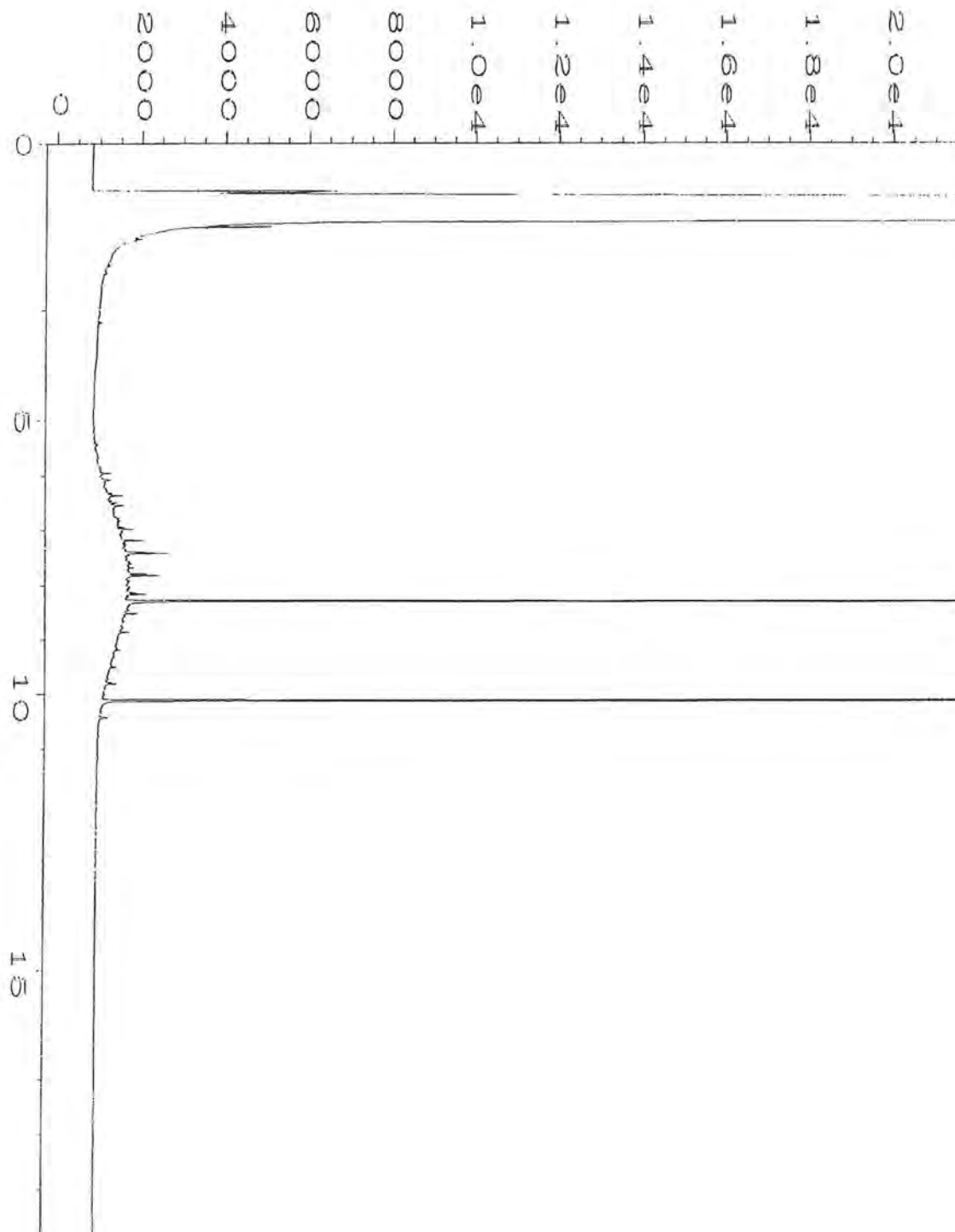
pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

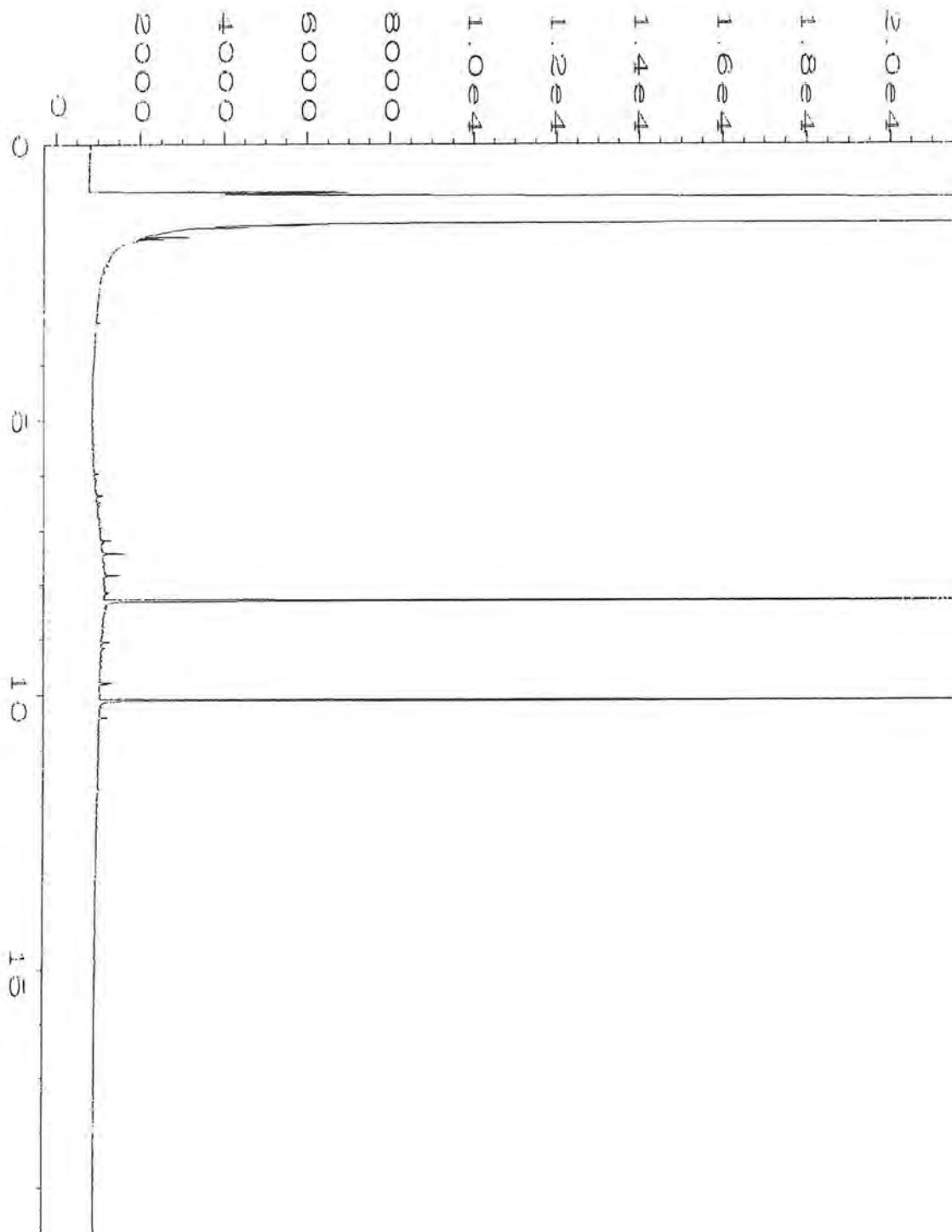
ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

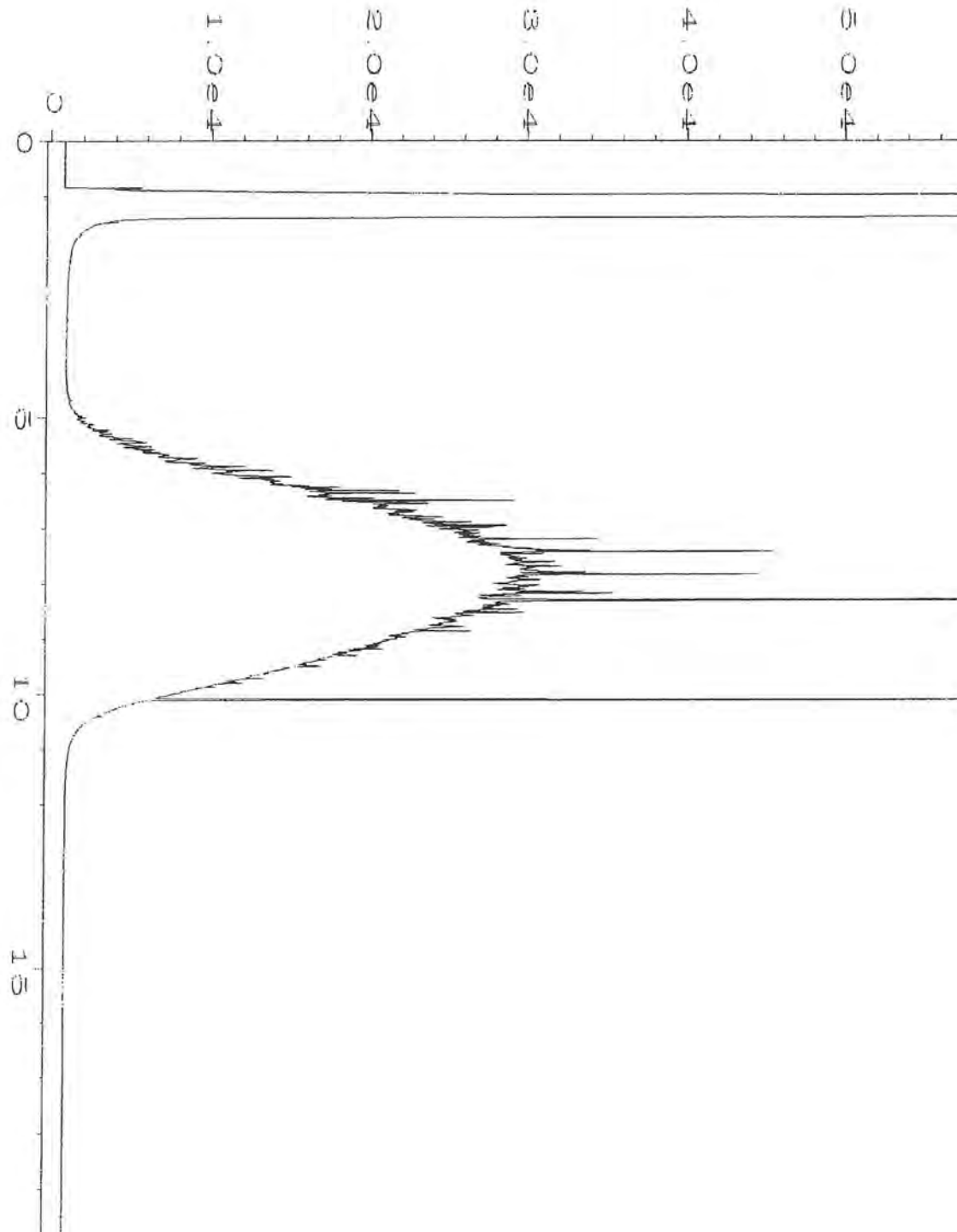
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



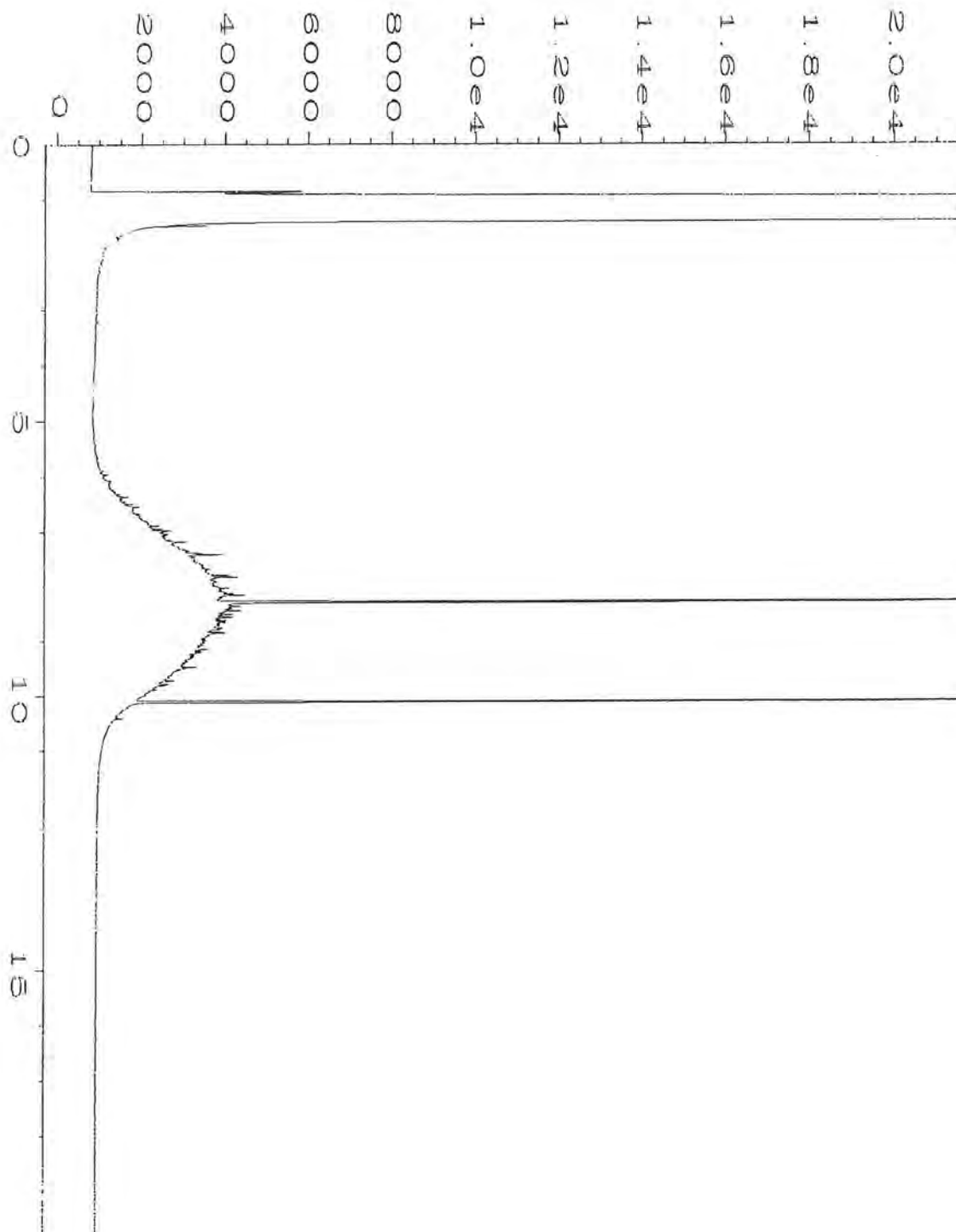
Data File Name	: C:\HPCHEM\4\DATA\04-29-10\016F0701.D	Page Number	: 1
Operator	: ay	Vial Number	: 16
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004308-01	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 29 Apr 10 03:44 PM	Analysis Method	: TPHD.MTH
Report Created on:	30 Apr 10 03:15 PM		



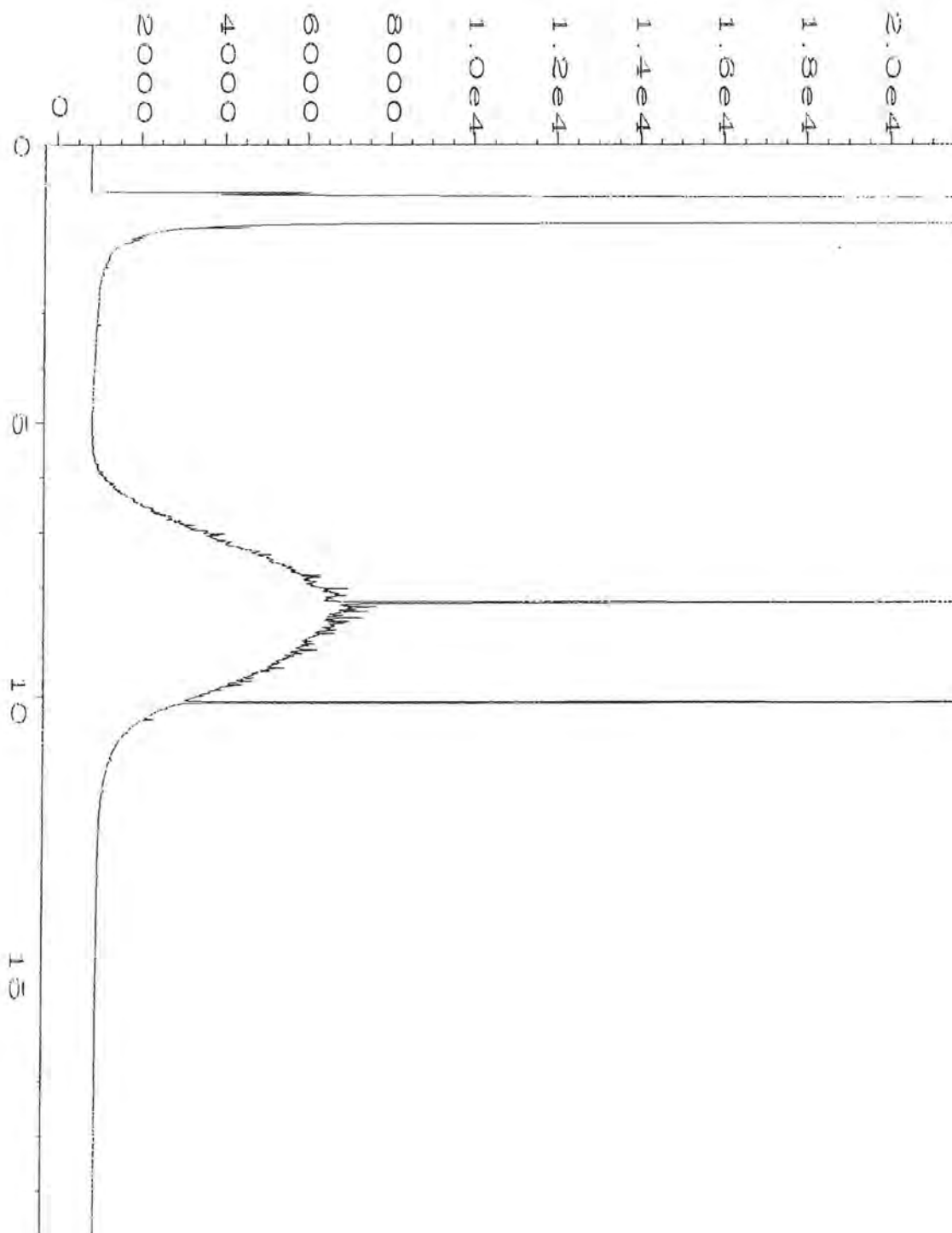
Data File Name	: C:\HPCHEM\4\DATA\04-29-10\017F0701.D	Page Number	: 1
Operator	: ay	Vial Number	: 17
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004308-02	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 29 Apr 10 04:11 PM	Analysis Method	: TPHD.MTH
Report Created on:	30 Apr 10 03:16 PM		



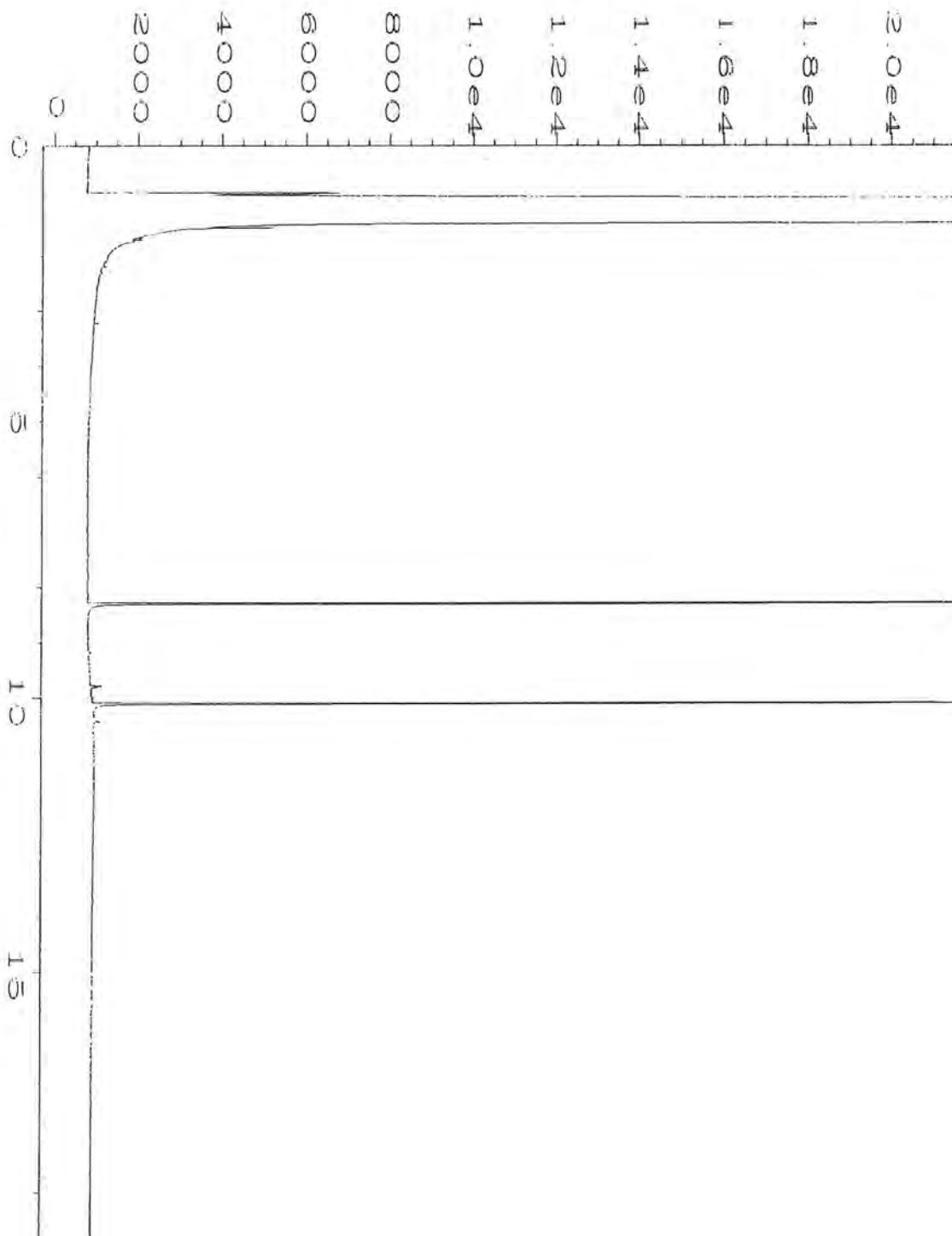
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Operator	: ay	Vial Number	: 18
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004308-03	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 29 Apr 10 04:37 PM	Analysis Method	: TPHD.MTH
Report Created on:	30 Apr 10 03:16 PM		



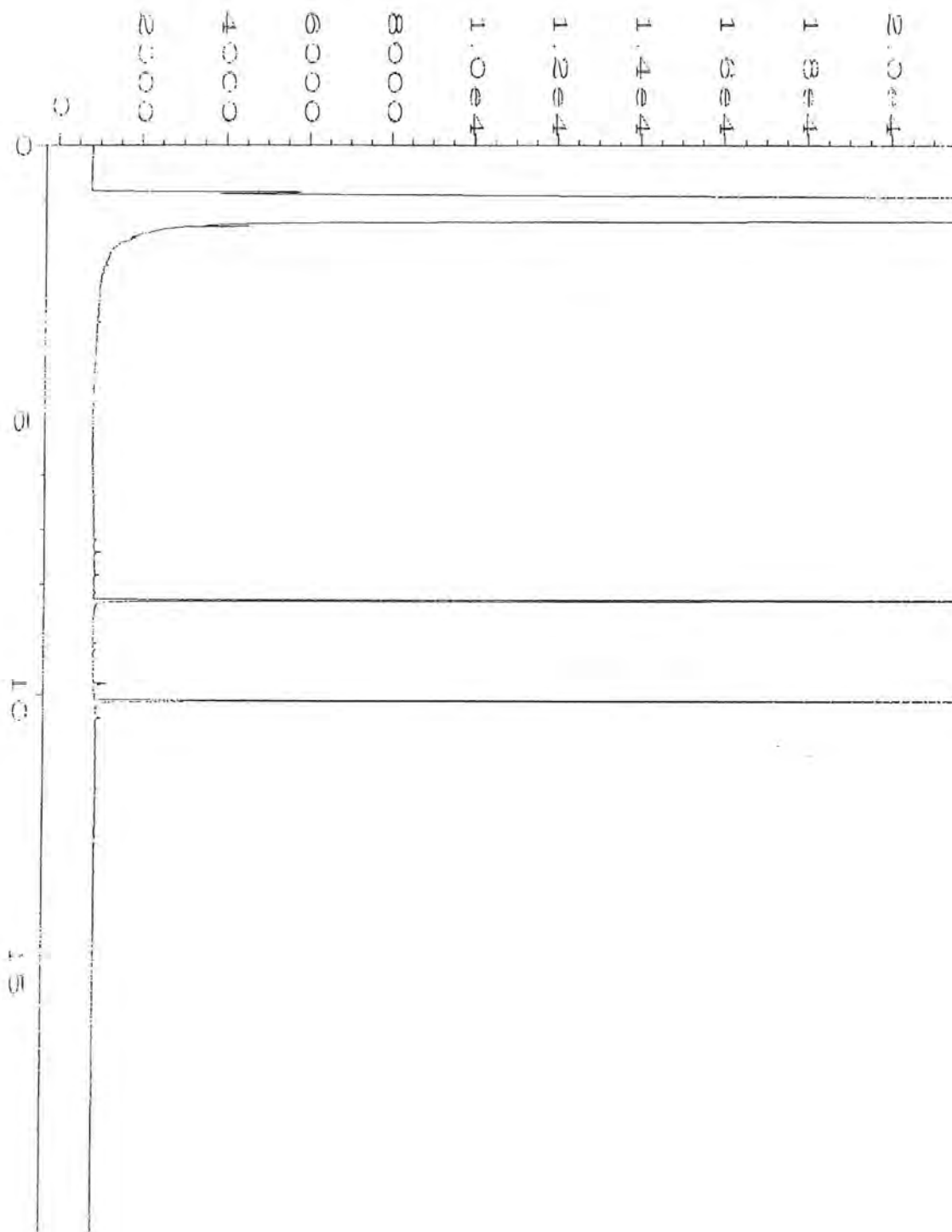
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Operator	: ay	Vial Number	: 19
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004308-04	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 29 Apr 10 05:04 PM	Analysis Method	: TPHD.MTH
Report Created on:	30 Apr 10 03:16 PM		



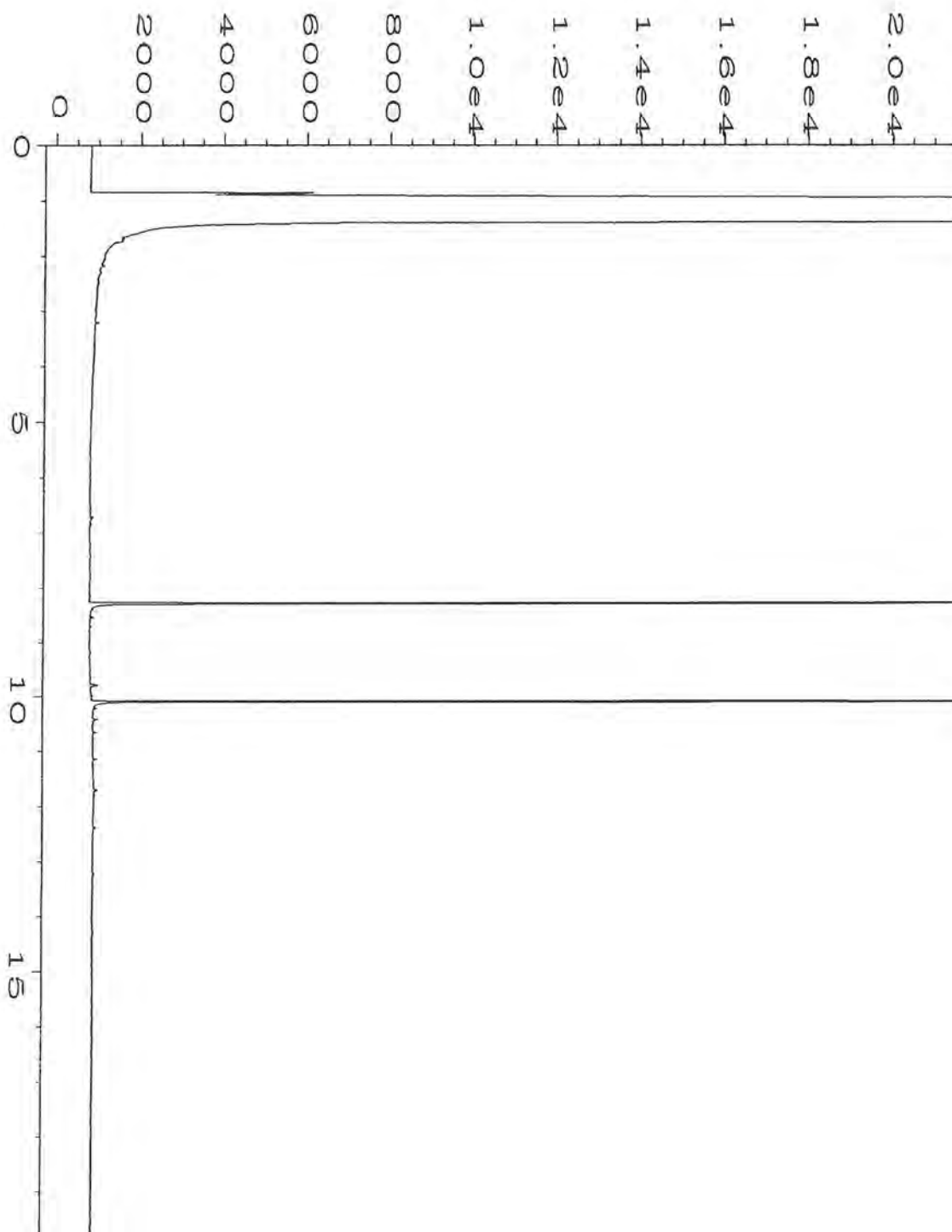
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Operator	: ay	Vial Number	: 20
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004308-05	Sequence Line	: 7
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 29 Apr 10 05:31 PM	Analysis Method	: TPHD.MTH
Report Created on:	30 Apr 10 03:16 PM		



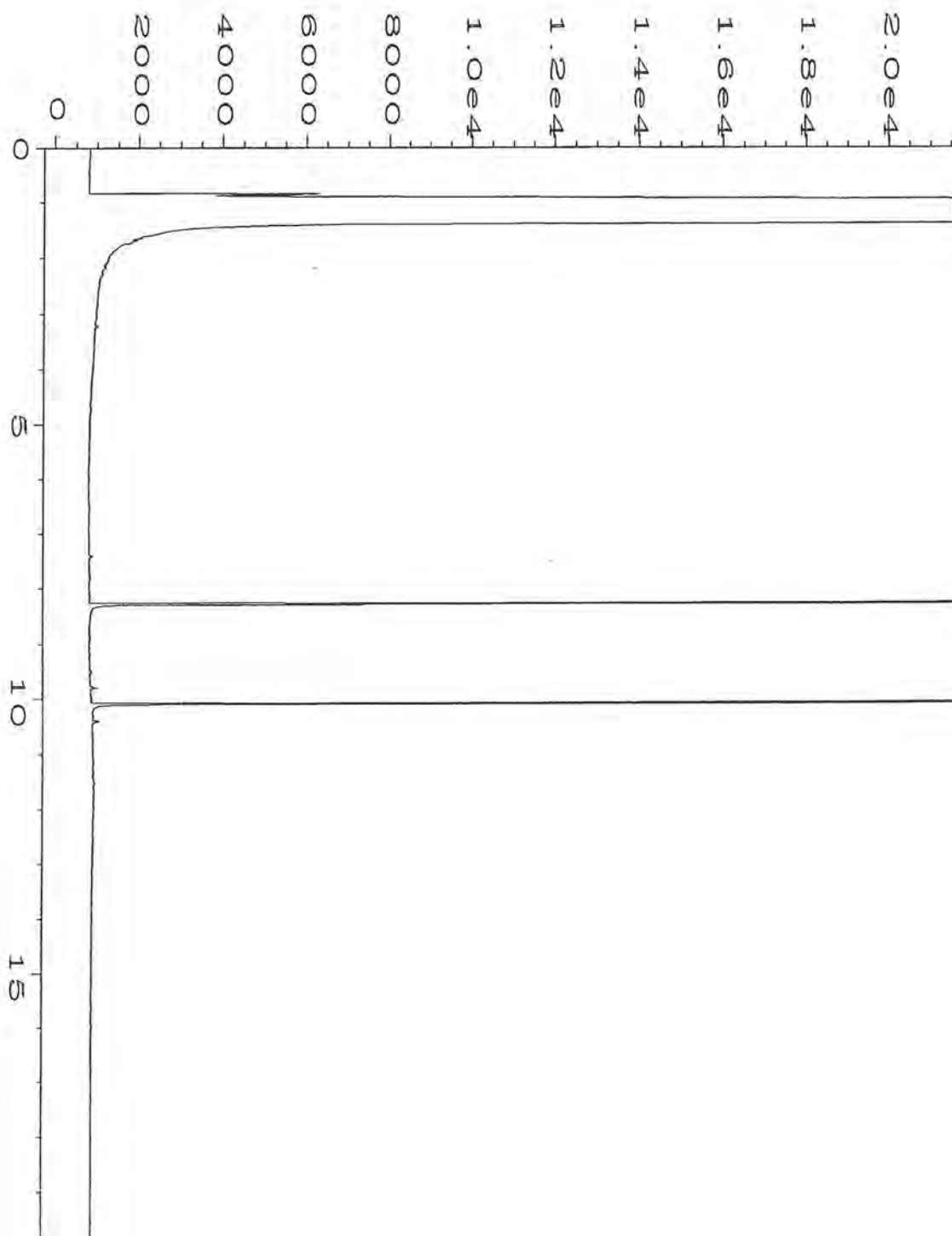
Data File Name	: C:\HPCHEM\4\DATA\04-29-10\021F0901.D	Page Number	: 1
Operator	: ay	Vial Number	: 21
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004308-06	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 29 Apr 10 06:52 PM	Analysis Method	: TPHD.MTH
Report Created on:	30 Apr 10 03:16 PM		



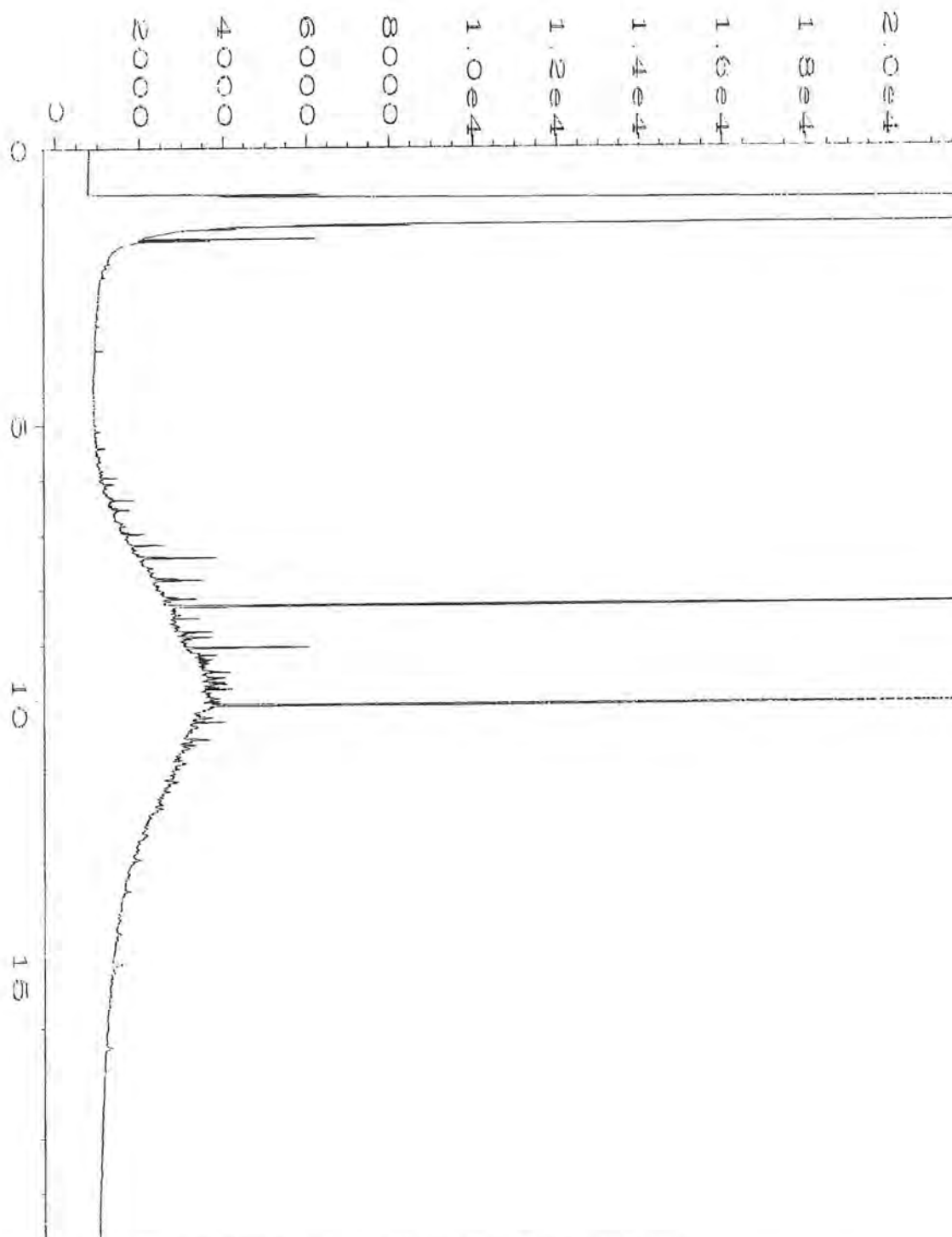
ata File Name	: C:\HPCHEM\4\DATA\04-29-10\022F0901.D	Page Number	: 1
perator	: ay	Vial Number	: 22
nstrument	: GC#4	Injection Number	: 1
ample Name	: 004308-07	Sequence Line	: 9
un Time Bar Code:		Instrument Method:	TPHD.MTH
quired on	: 29 Apr 10 07:19 PM	Analysis Method	: TPHD.MTH
eport Created on:	30 Apr 10 03:16 PM		



Data File Name	: C:\HPCHEM\4\DATA\04-29-10\029F0901.D	Page Number	: 1
Operator	: ay	Vial Number	: 29
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004308-08 sg	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: TPHD.MTH
Acquired on	: 29 Apr 10 10:27 PM	Analysis Method	: TPHD.MTH
Report Created on:	: 06 May 10 01:30 PM		



Data File Name	: C:\HPCHEM\4\DATA\04-29-10\030F0901.D	Page Number	: 1
Operator	: ay	Vial Number	: 30
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004308-09 sg	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 29 Apr 10 10:53 PM	Analysis Method	: TPHD.MTH
Report Created on:	06 May 10 01:30 PM		



Data File Name	: C:\HPCHEM\4\DATA\04-29-10\024F0901.D	Page Number	: 1
Operator	: ay	Vial Number	: 24
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004308-10	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 29 Apr 10 08:13 PM	Analysis Method	: TPHD.MTH
Report Created on:	30 Apr 10 03:17 PM		

08 308

OF CUSTODY

NE 04/28/10

4/28/10

Send Report To Donna Hewitt
Company DLH
Address 2400 NW 80th St PMB #114
City, State, ZIP Seattle, WA 98117
Phone # 206-6323123 Fax #

SAMPLERS (signature)

PROJECT NAME/NO:

James Oil

PO #

REMARKS
Pls Look @ Chromatograms. IF gas/btex
indication please run for gas/btex

Page # of

TURNAROUND TIME

☒ Standard (2 Weeks)

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCS by 8270	HFS	
42810-07	01 A-E	4/28/10	11:50	Soil	5	X						✓ -p-dh 4/25/10 MS
08	02 A-E		12:15			X						29'
09	03 A-E		1:10			X						Composit E-Side w. 2'
10	04 A-E		1:22			X						Bottom - 213'
11	05 A-E		1:27			X						9' NSW
12	06 A-E		1:39			X						9' WSW
13	07 A-E		1:48			X						9' ESW
14	08 A-E		3:44			X					X	Bot-Tp 4'
15	09 A-E		3:49			X					X	East SW 3'
Stack 3	10		3:27			✓						

SIGNATURE		PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	<u>Donna Hewitt</u>	Donna Hewitt	DLH	4/28/10	1820
Received by:	<u>Kortland O'R</u>	Kortland O'R	FABI	4-28-10	1820
Relinquished by:					
Received by:					

Samples received at: 17 °C

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044
FORMS\COC\COC.DOC

004308

Send Report To

Company

Address

City, State, ZIP

Phone #

Donna Hewitt

DCH

2400 NW 80th St PMB#114

Seattle, WA 98117

Fax # 206-632-3123

SAMPLE CHAIN OF CUSTODY

NE 04/28/10

VSZ/DO3

SAMPLERS (signature)

PROJECT NAME/NO.

James Oil

REMARKS
PLS LOOK @ chromatograms. IF gas/btex
indication please run for gas/btex

PO #

Page # of

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCS by 8270	HFPS		Other-Silica
42810-07	01 A-E	4/28/10	11:50	Soil	5	X							✓ -p-dh 4/28/10 MS
08	02 A-E		12:15			X							Bottom - 2'
09	03 A-E		1:20			X							Bottom - 13'
10	04 A-E		1:22			X							9' NSW
11	05 A-E		1:27			X							9' WSW
12	06 A-E		1:39			X							9' ESW
13	07 A-E		1:48			X							9' SSW
14	08 A-E		3:44			X				X			Bottom 4'
15	09 A-E		3:49			X				X			East SW 3'
Stack 3	10		3:27		1	✓							
Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044 FORMS\COC\NOC.DOC						SIGNATURE		PRINT NAME		COMPANY		DATE TIME	
Relinquished by:						Donna Hewitt		DCH		4/28/10		1820	
Received by:						Kortland ON		FABI		4-28-10		1820	
Relinquished by:													
Received by:										Samples received at		17 °C	

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 13, 2010

Donna Hewitt, Project Manager
DLH Environmental Consulting
2400 NW 80th St., 114
Seattle, WA 98117-4449

Dear Ms. Hewitt:

Included are the results from the testing of material submitted on April 28, 2010 from the James Oil, F&BI 004307 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
DLH0513R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 28, 2010 by Friedman & Bruya, Inc. from the DLH Environmental Consulting James Oil, F&BI 004307 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>DLH Environmental Consulting</u>
004307-01	DUP-042810-pgg03
004307-02	DUP-042810-pgg04
004307-03	DUP-042810-pgg05

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/13/10
Date Received: 04/28/10
Project: James Oil, F&BI 004307
Date Extracted: 05/10/10
Date Analyzed: 05/11/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
DUP-042810-pgg03 004307-01	130	310	90
DUP-042810-pgg04 004307-02	240 x	1,400	100
DUP-042810-pgg05 004307-03	500	<250	93
Method Blank 00-681 MB	<50	<250	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/13/10

Date Received: 04/28/10

Project: James Oil, F&BI 004307

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 005060-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	94	96	73-135	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

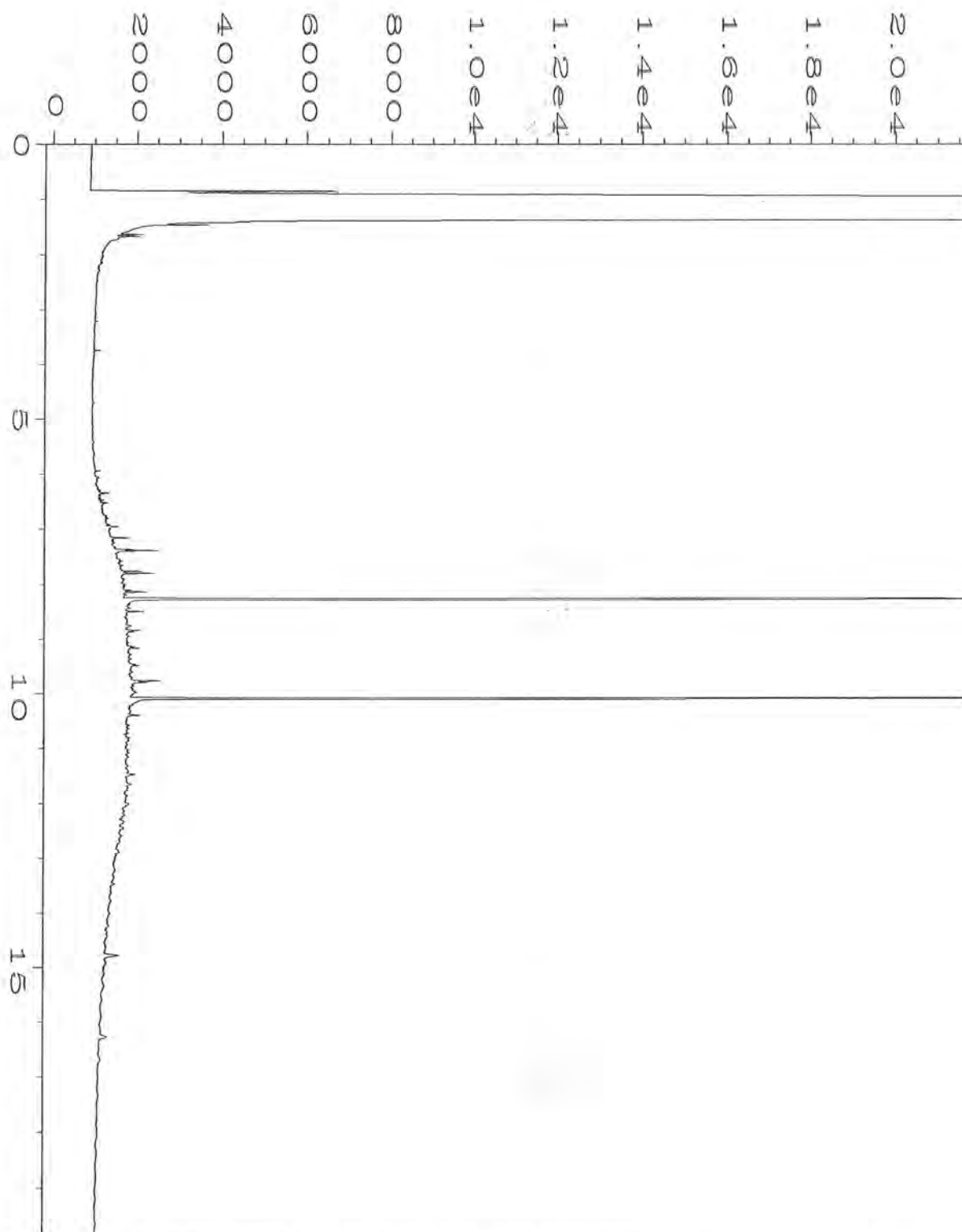
pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

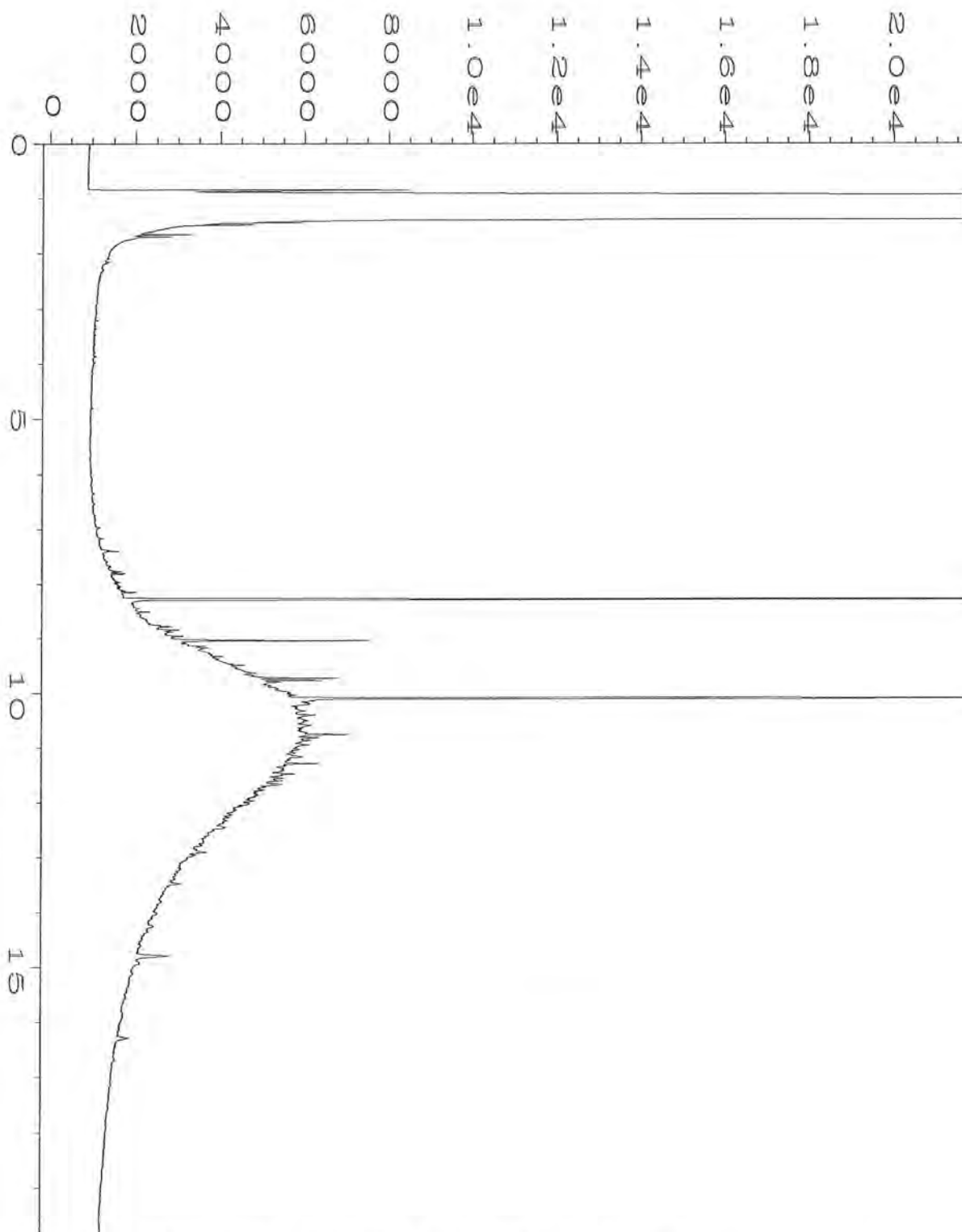
ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

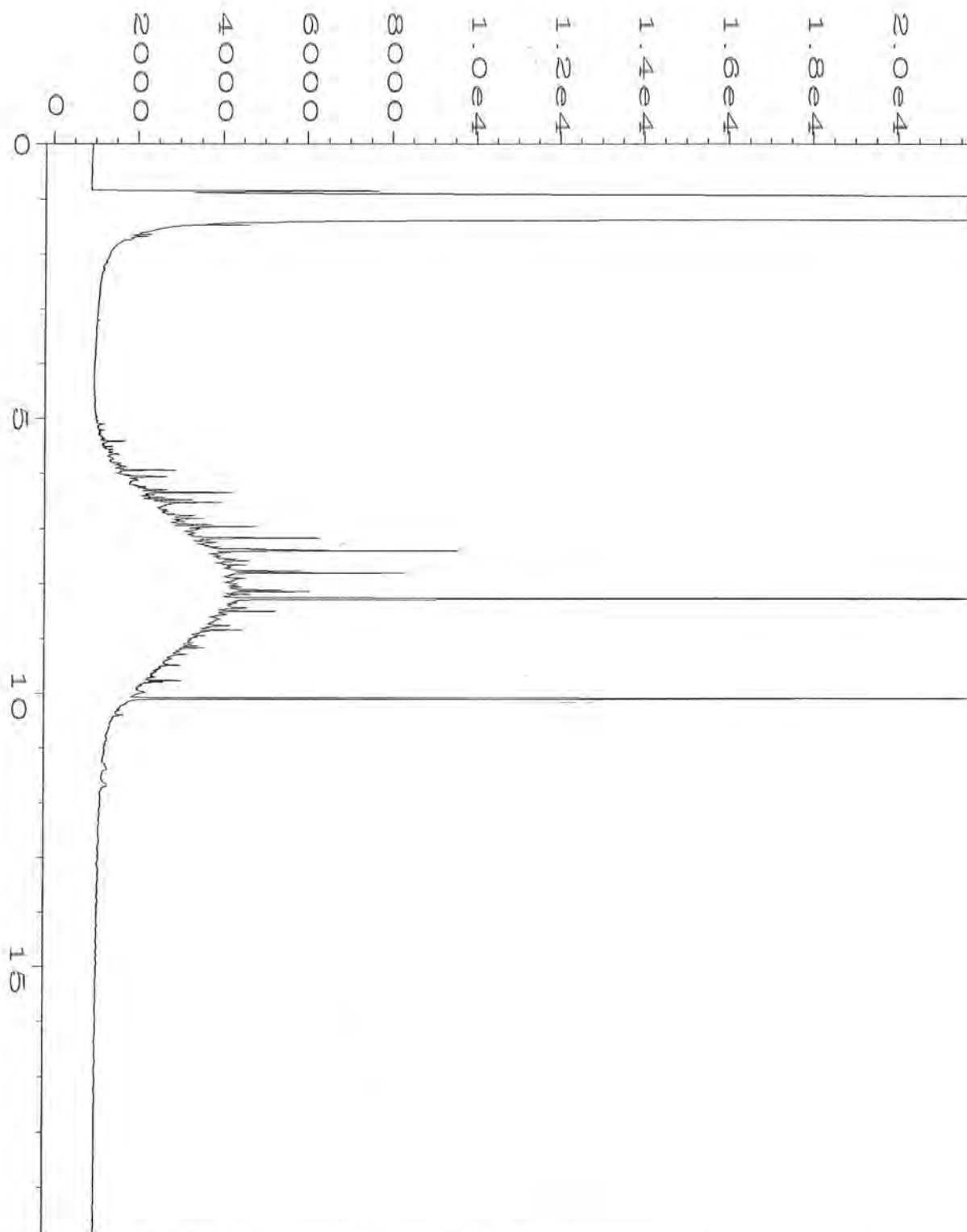
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Data File Name	: C:\HPCHEM\4\DATA\05-10-10\043F0901.D	Page Number	: 1
Operator	: kao	Vial Number	: 43
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004307-01	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 11 May 10 05:20 AM	Analysis Method	: BAKEOUT.MTH
Report Created on:	11 May 10 11:11 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-10-10\044F0901.D	Page Number	: 1
Operator	: kao	Vial Number	: 44
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004307-02	Sequence Line	: 9
Run Time Bar Code:		Instrument Method	: TPHD.MTH
quired on	: 11 May 10 05:47 AM	Analysis Method	: BAKEOUT.MTH
port Created on:	11 May 10 11:11 AM		



Data File Name	: C:\HPCHEM\4\DATA\05-10-10\045F0901.D	Page Number	: 1
Operator	: kao	Vial Number	: 45
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004307-03	Sequence Line	: 9
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 11 May 10 06:13 AM	Analysis Method	: BAKEOUT.MT
Report Created on:	11 May 10 11:11 AM		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 24, 2010

Donna Hewitt, Project Manager
DLH Environmental Consulting
2400 NW 80th St., 114
Seattle, WA 98117-4449

Dear Ms. Hewitt:

Included are the results from the testing of material submitted on May 18, 2010 from the James Oil, F&BI 005157 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
DLH0524R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 18, 2010 by Friedman & Bruya, Inc. from the DLH Environmental Consulting James Oil, F&BI 005157 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>DLH Environmental Consulting</u>
005157-01	51810-16
005157-02	51810-17
005157-03	51810-18
005157-04	51810-19
005157-05	51810-20
005157-06	51810-21
005157-07	51810-22
005157-08	51810-23
005157-09	51810-24
005157-10	51810-25
005157-11	51810-26

No gasoline was seen in the diesel chromatograms. Per the chain of custody, the samples were not analyzed for NWTPH-Gx/8021B.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/10
 Date Received: 05/18/10
 Project: James Oil, F&BI 005157
 Date Extracted: 05/19/10
 Date Analyzed: 05/19/10 and 05/20/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
 FOR TOTAL PETROLEUM HYDROCARBONS AS
 DIESEL AND MOTOR OIL
 USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis
 Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 50-150)
51810-16 005157-01	<50	<250	89
51810-17 005157-02	500	<250	91
51810-18 005157-03	<50	<250	96
51810-19 005157-04	<50	<250	92
51810-20 005157-05	<50	<250	92
51810-21 005157-06	<50	<250	92
51810-22 005157-07	96 x	400	92
51810-23 005157-08	<50	<250	92
51810-24 005157-09	190 x	470	90
51810-25 005157-10	2,700 x	5,600	93
51810-26 005157-11	<50	<250	85
Method Blank 00-0766 MB	<50	<250	89

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/10

Date Received: 05/18/10

Project: James Oil, F&BI 005157

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 005157-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	100	99	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	99	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

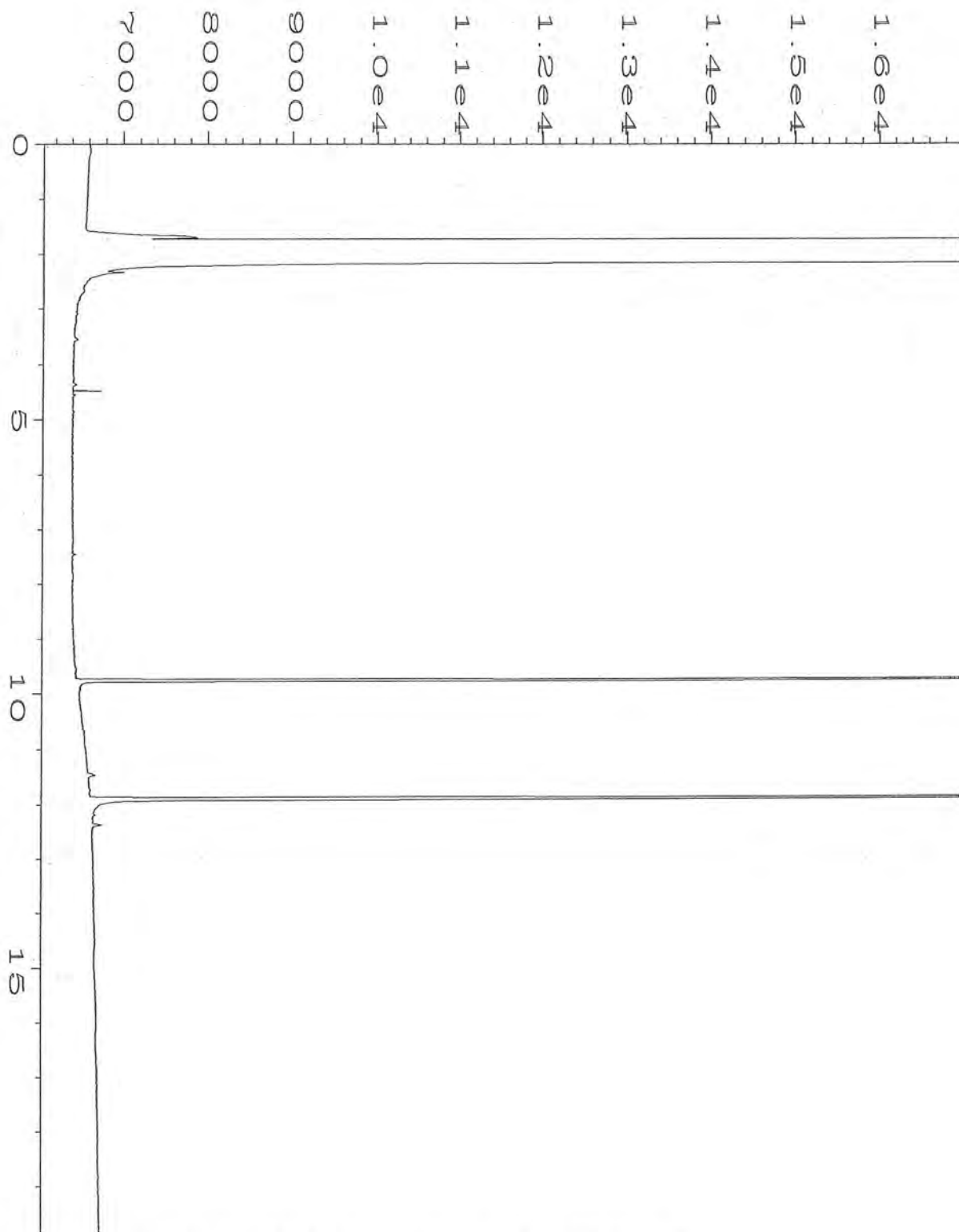
pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

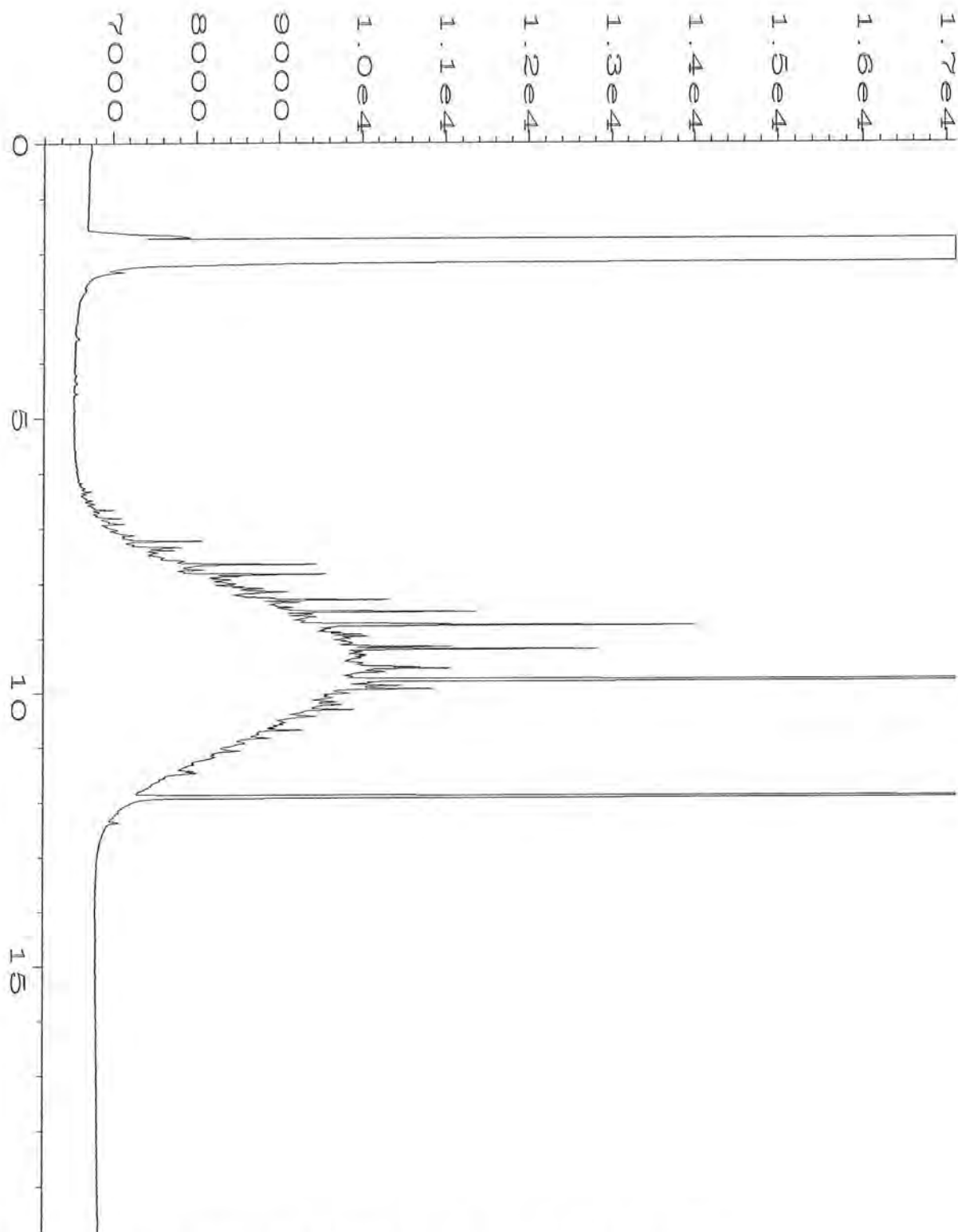
ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

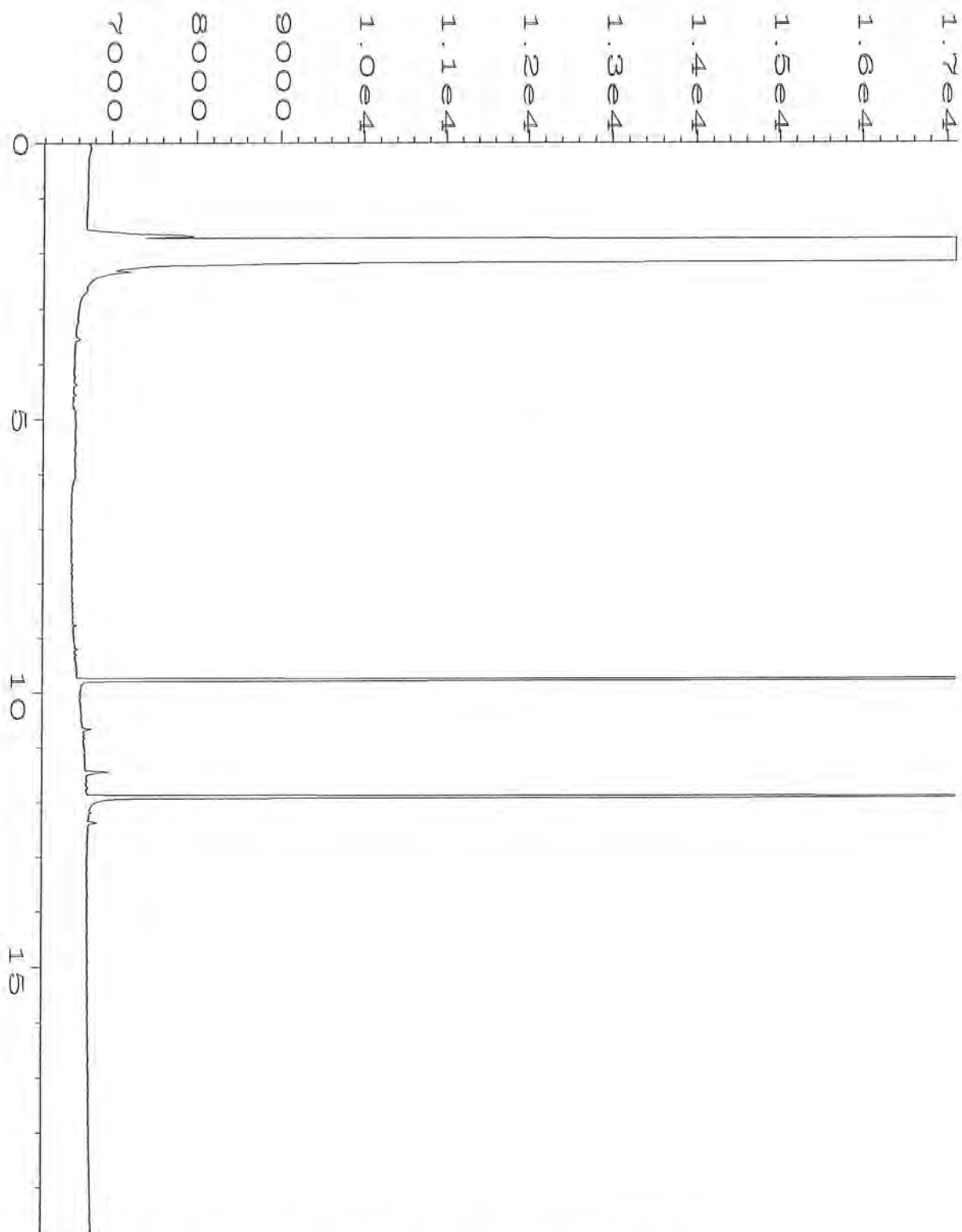
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



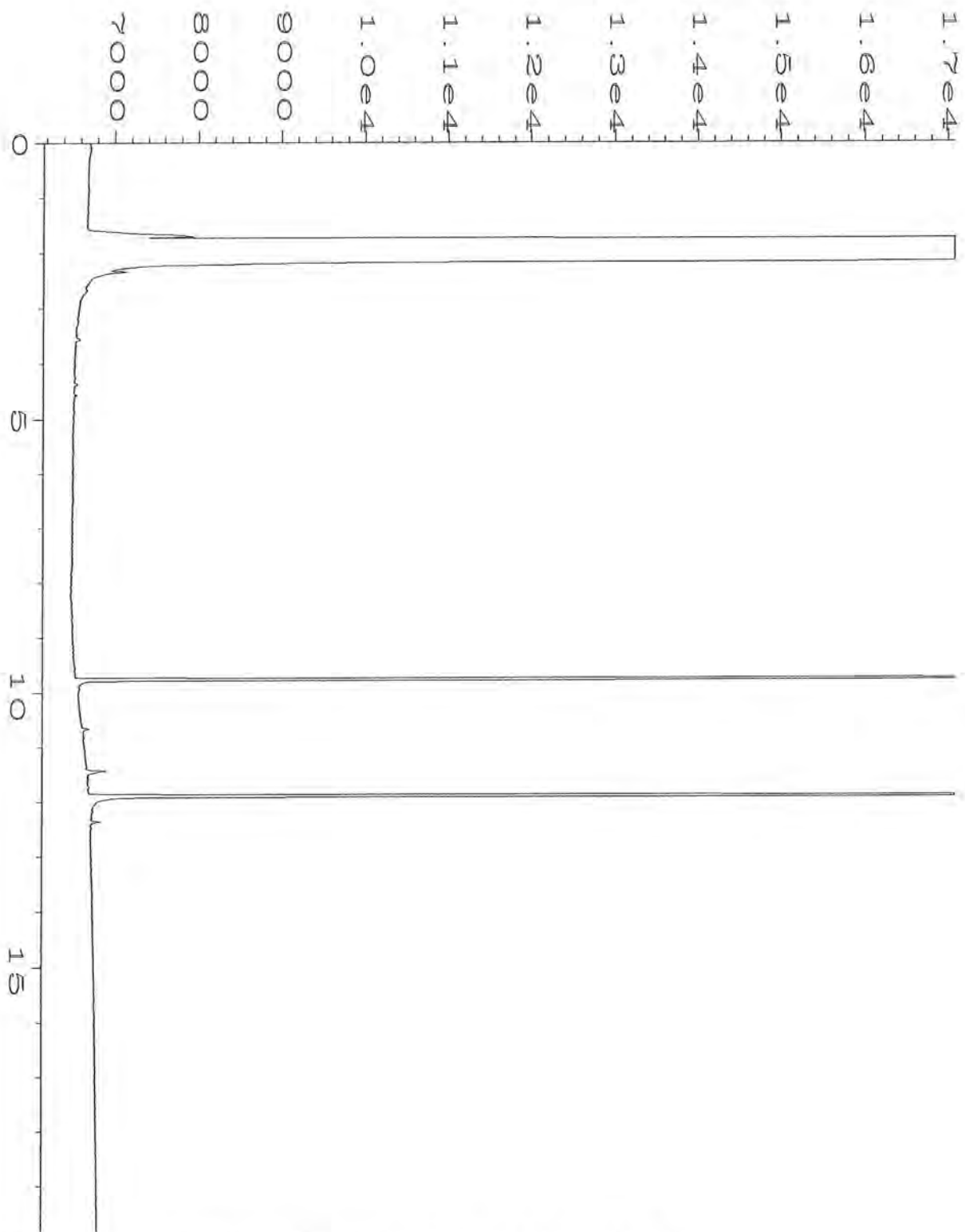
Data File Name	: C:\HPCHEM\1\DATA\05-19-10\014F0301.D	Page Number	: 1
Operator	: KAO	Vial Number	: 14
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-01	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 19 May 10 01:27 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:18 AM		



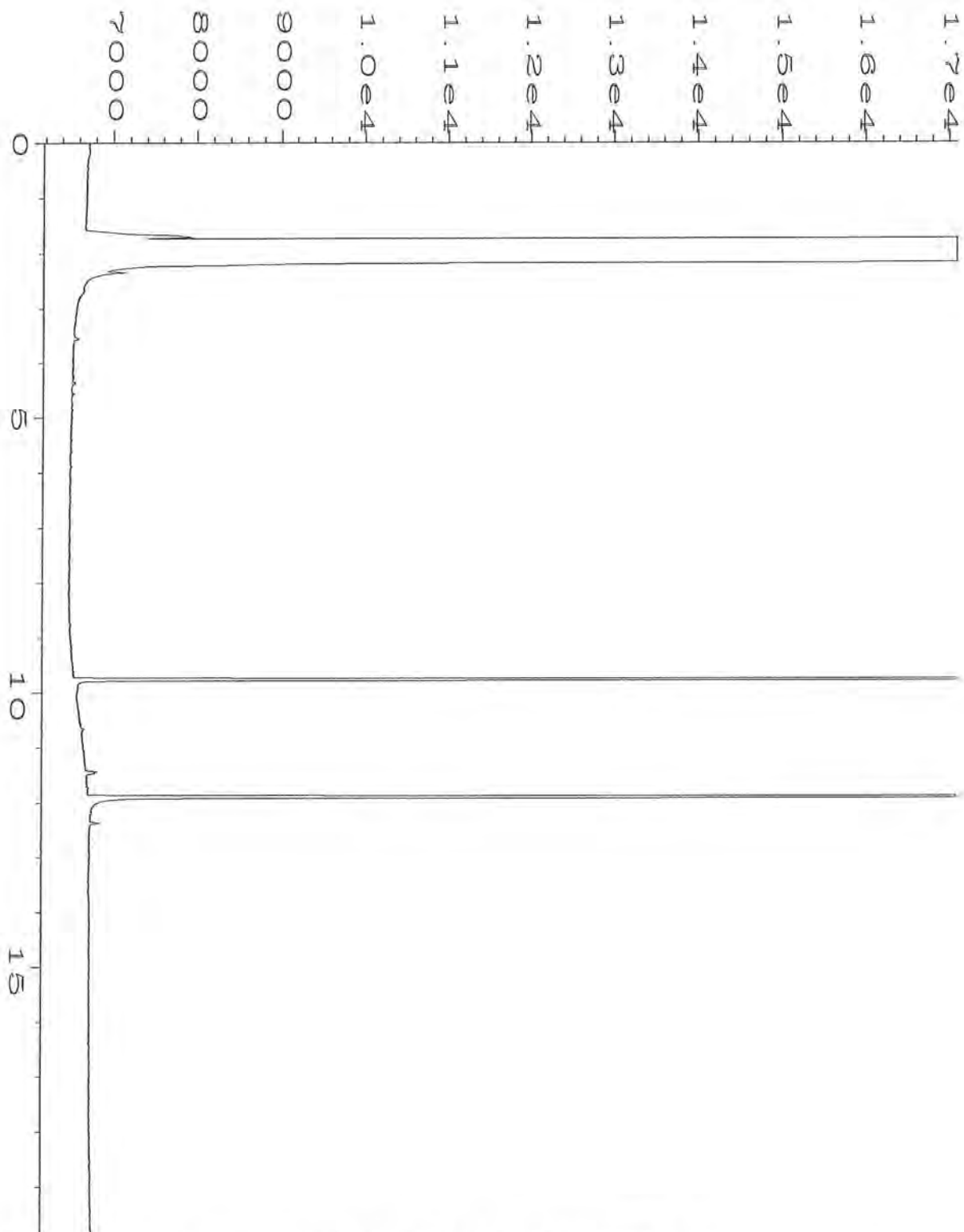
Data File Name	: C:\HPCHEM\1\DATA\05-19-10\017F0501.D	Page Number	: 1
Operator	: KAO	Vial Number	: 17
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-02	Sequence Line	: 5
Print Time Bar Code:		Instrument Method	: TPHD.MTH
Printed on	: 19 May 10 03:40 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:20 AM		



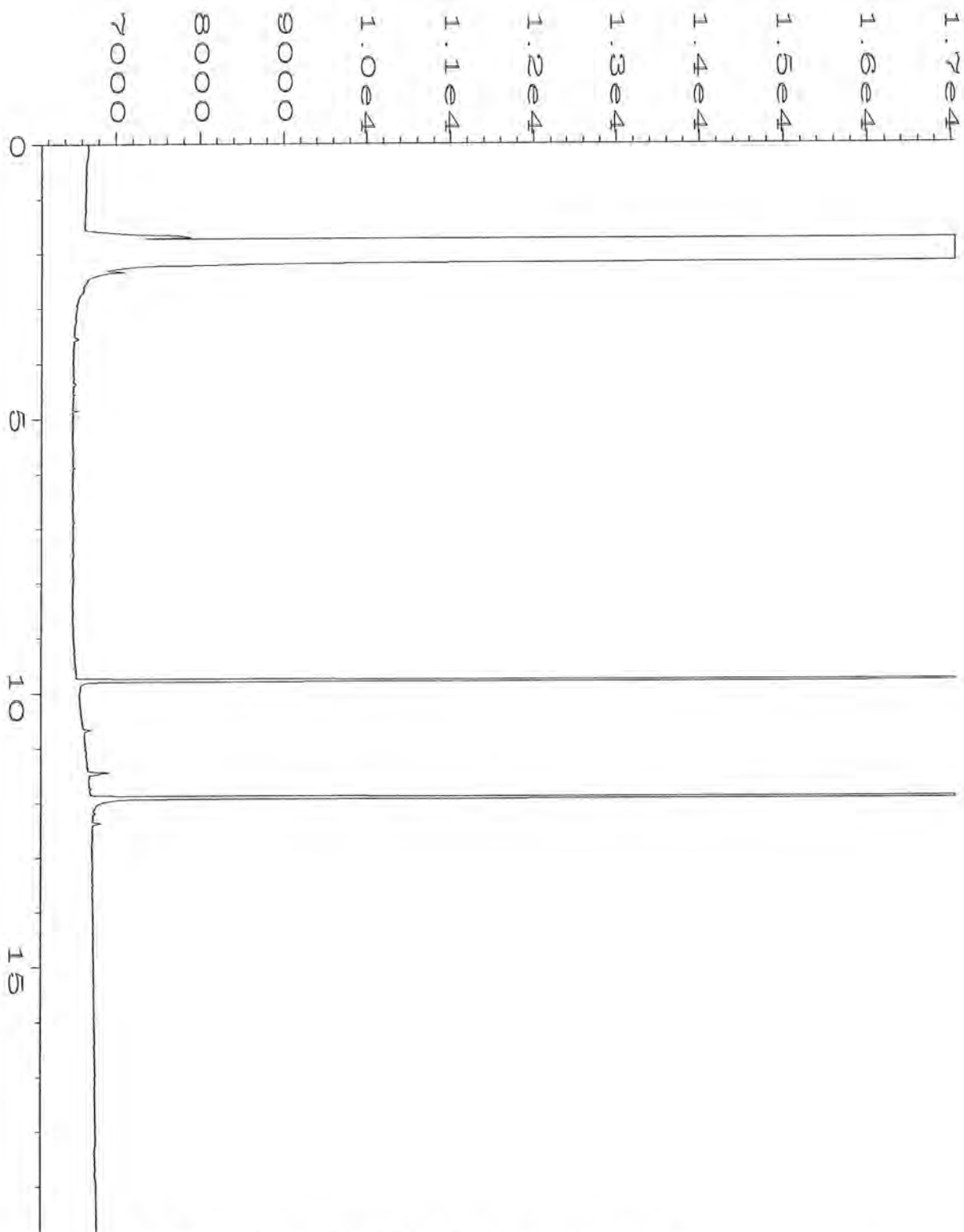
Data File Name	: C:\HPCHEM\1\DATA\05-19-10\018F0501.D	Page Number	: 1
Operator	: KAO	Vial Number	: 18
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-03	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 19 May 10 04:06 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:20 AM		



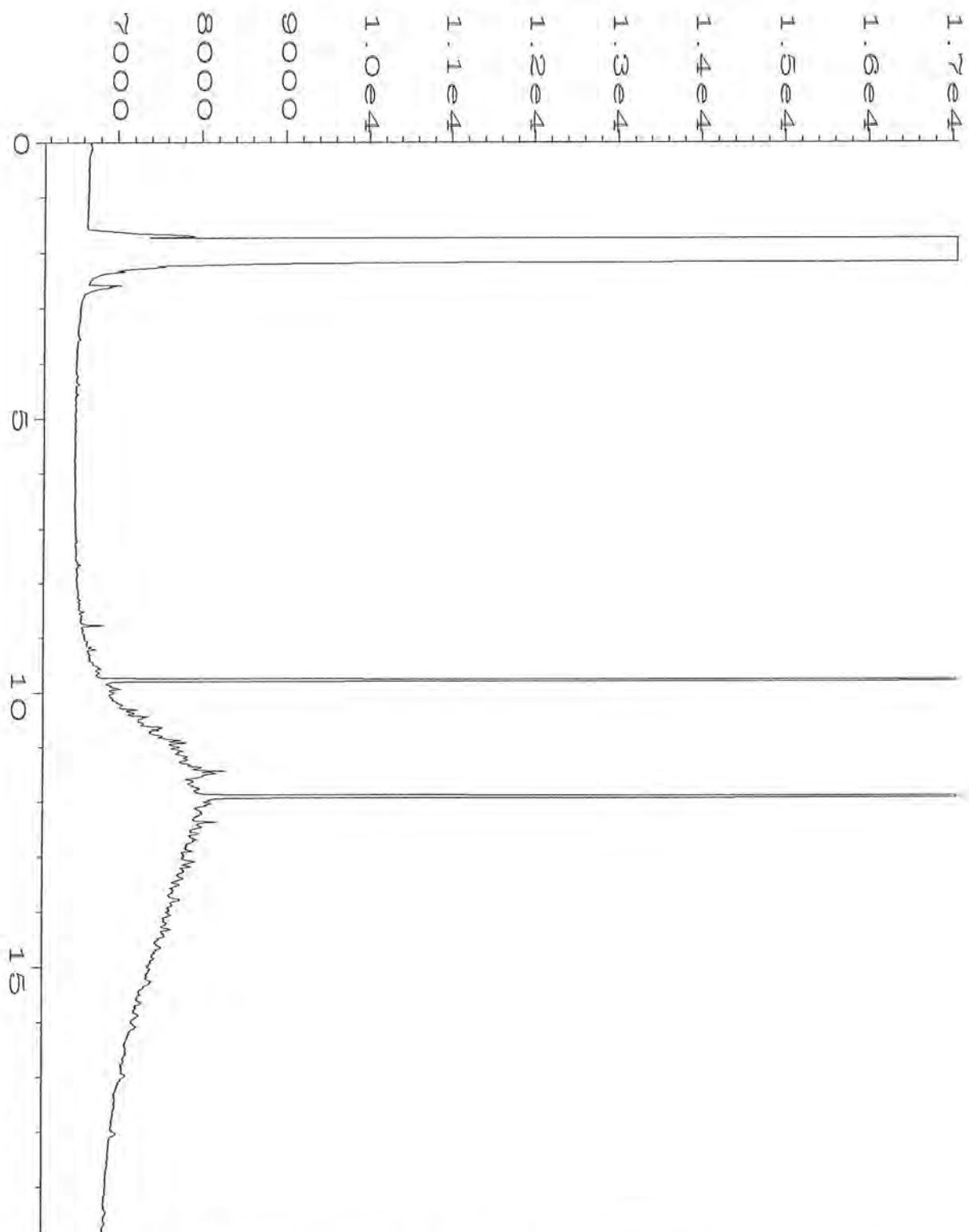
Data File Name	: C:\HPCHEM\1\DATA\05-19-10\019F0501.D	Page Number	: 1
Operator	: KAO	Vial Number	: 19
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-04	Sequence Line	: 5
Print Time Bar Code:		Instrument Method	: TPHD.MTH
Printed on	: 19 May 10 04:33 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:20 AM		



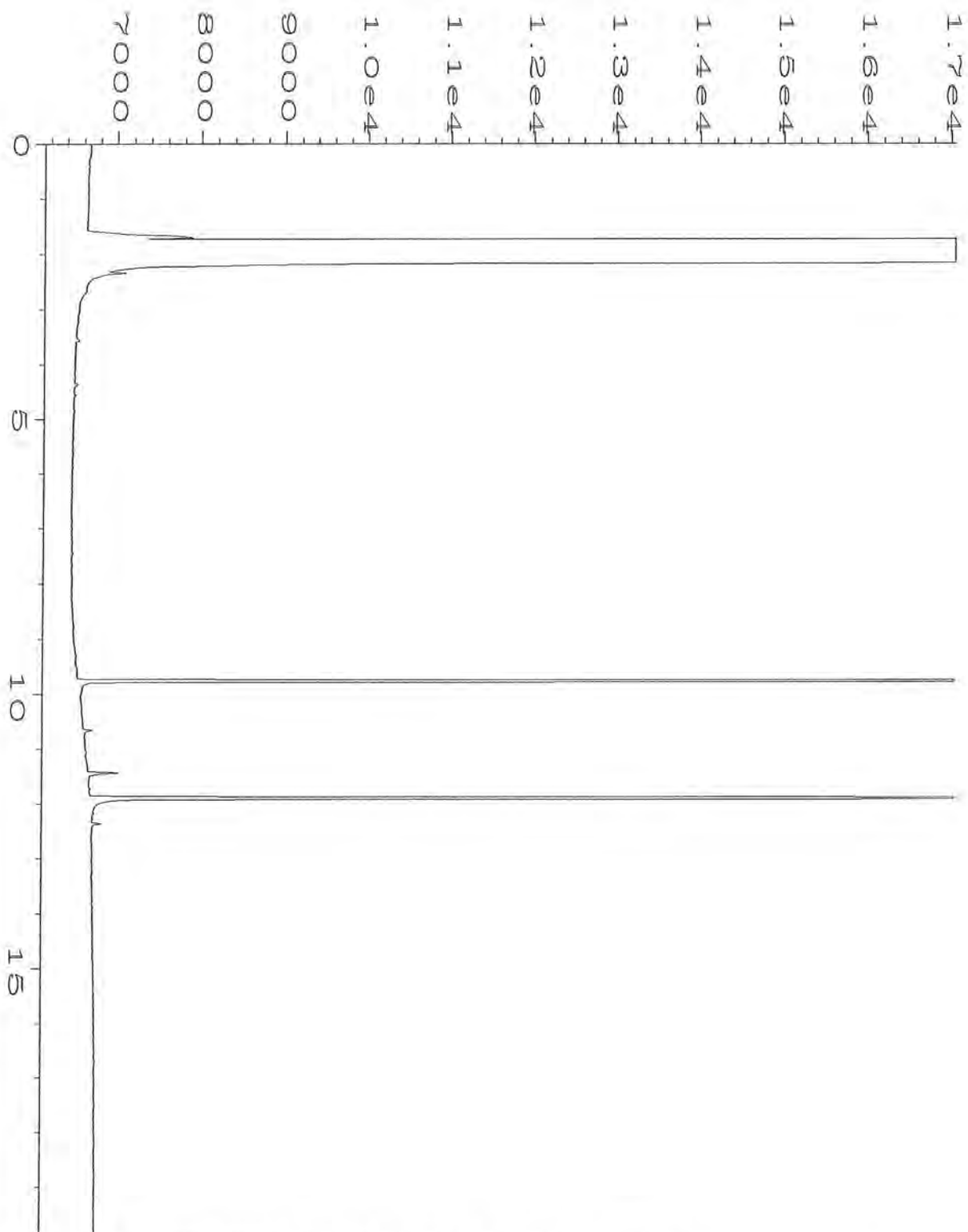
Data File Name	: C:\HPCHEM\1\DATA\05-19-10\020F0501.D	Page Number	: 1
Operator	: KAO	Vial Number	: 20
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-05	Sequence Line	: 5
Run Time Bar Code:		Instrument Method	: TPHD.MTH
Acquired on	: 19 May 10 04:59 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:20 AM		



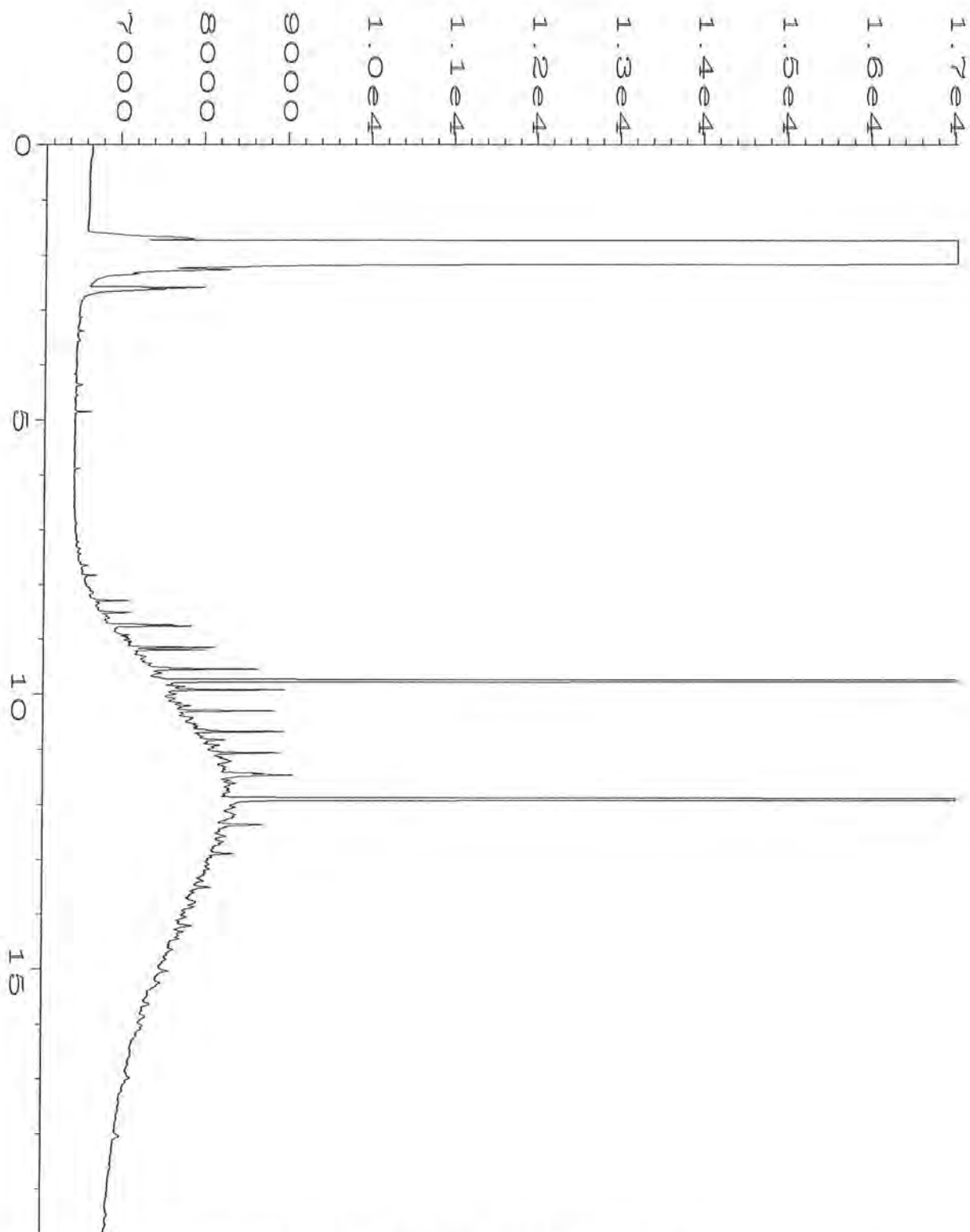
Data File Name	: C:\HPCHEM\1\DATA\05-19-10\021F0501.D	Page Number	: 1
Operator	: KAO	Vial Number	: 21
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-06	Sequence Line	: 5
Time Bar Code:		Instrument Method	: TPHD.MTH
Printed on	: 19 May 10 05:26 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:20 AM		



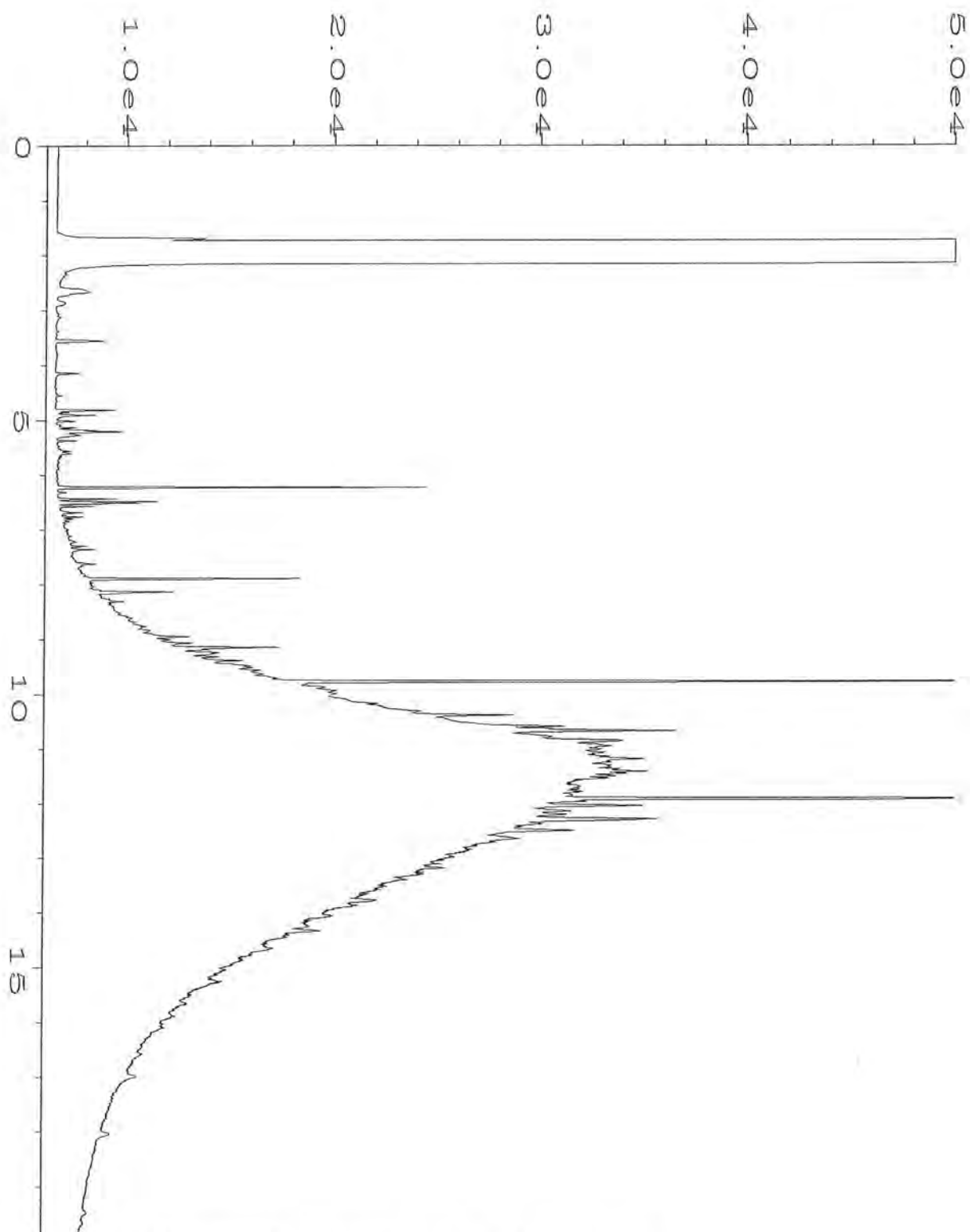
Data File Name	: C:\HPCHEM\1\DATA\05-19-10\022F0501.D	Page Number	: 1
Operator	: KAO	Vial Number	: 22
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-07	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 19 May 10 05:52 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:21 AM		



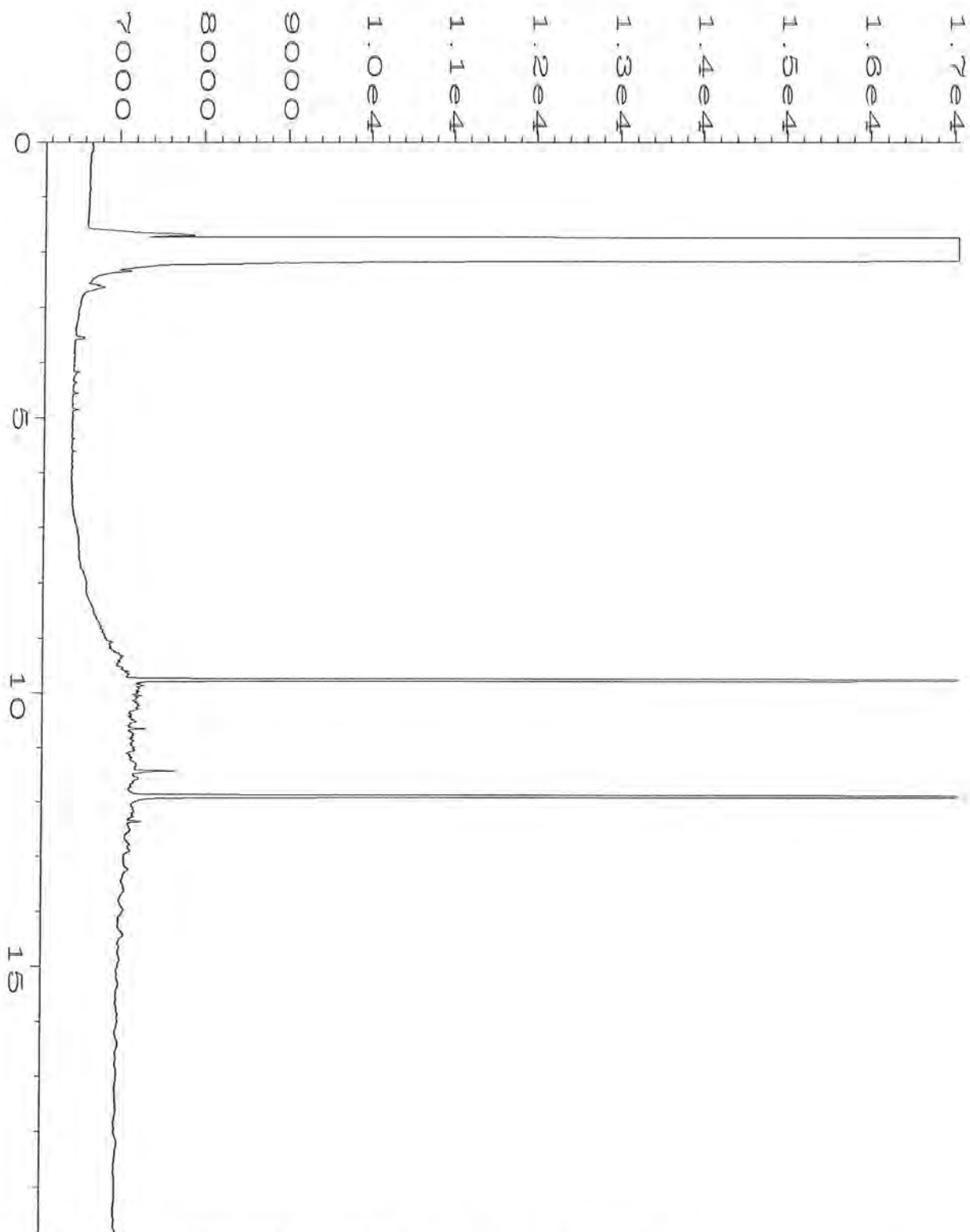
Data File Name	: C:\HPCHEM\1\DATA\05-19-10\023F0501.D	Page Number	: 1
Operator	: KAO	Vial Number	: 23
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-08	Sequence Line	: 5
Print Time Bar Code:		Instrument Method	: TPHD.MTH
Acquired on	: 19 May 10 06:19 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:21 AM		



Data File Name	: C:\HPCHEM\1\DATA\05-19-10\024F0501.D	Page Number	: 1
Operator	: KAO	Vial Number	: 24
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-09	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 19 May 10 06:45 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:21 AM		



Data File Name	: C:\HPCHEM\1\DATA\05-19-10\025F0501.D	Page Number	: 1
Operator	: KAO	Vial Number	: 25
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-10	Sequence Line	: 5
Time Bar Code:		Instrument Method	: TPHD.MTH
Run Time	: 19 May 10 07:12 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:21 AM		



Data File Name	: C:\HPCHEM\1\DATA\05-19-10\026F0501.D	Page Number	: 1
Operator	: KAO	Vial Number	: 26
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005157-11	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 19 May 10 07:39 PM	Analysis Method	: TPHD.MTH
Report Created on:	20 May 10 11:21 AM		

005 -7 005 -7 ME 05/18/10 2 B03

Send Report To Donna Hewitt
Company NH Environmental Consulting
Address 2400 NW 80th St PMB #114
City, State, ZIP Seattle, WA, 98117
Phone # 206-632-3123 2-mail nh@environmental.com

SAMPLES *(Signature)*
PROJECT NAME James Oil
PO #
REMARKS Please provide Chromatograms and note if good/btex present

Page # of
TURNAROUND TIME
☒ Standard (2 Weeks)
☐ Rush charges authorized by:
SAMPLE DISPOSAL
☐ Dispose after 30 days
☒ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
51810-16	01	5/18/10		Soil	1	X						
17	02					X						
18	03					X						
19	04		12:48			X						
20	05		1:13			X						
21	06		1:33			X						
22	07		2:04			X						
23	08		2:12			X						
24	09		2:50			X						
25	10		2:51			X						

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044 FORMS\COC\COC.DOC		SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	<i>(Signature)</i>	Donna Hewitt	DLH		5/18/10	
Received by:	<i>(Signature)</i>	Michael Edsall	PhR		1	
Relinquished by:						
Received by:				Samples received at:		C

BO3

Page # _____ of _____ TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH _____ Rush charges authorized by: _____	SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input checked="" type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions
--	---

[illegible]

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044
FORMS/COC YOC

APPENDIX C

SOIL DISPOSAL DATA

Delivery Ticket Request: 8045979645


**Soil Remediation
Everett, WA 98213**
1876048156

Location: 1876
Customer: 3148688 JAMES OIL COMPANY INC
Order: EVERETT WA 98213
 903 W FIRST ST CLE ELLUM
 TO EVERETT SOILS
Job#:
P.O.: PACIFIC PRIDE
Product: 1192508
 CLASS 2 SOIL DUMPED BY TON

Qty: 37.35 06/18/2010

	LB	MTon	TON
G	113,940	51.68	56.97
T	39,240	17.80	19.62
N	74,700	33.88	37.35

* Predetermined Tare

Today Loads: 1.00
 Today Qty: 37.35

FUEL SURCHARGE APPLIES

Carrier:
Vehicle: 2251255 KS177T, K&S MCGANN

Received:

IN
 OUT 1:18 pm

Credit terms, all amounts owed unless otherwise stated are due and payable within 30 days of the month following the date of purchase. Buyer assumes responsibility for making delivery site clean, free of obstructions, and in a safe condition. The Delivery Ticket represents Buyer's agreement to pay for the product and service, and to accept the Standard Terms and Conditions, Buyer's Quality, if any, and Seller's Order Confirmation. Payment must be made within 30 days of the Delivery Ticket (Agreement). Seller will accept the Standard Terms and Conditions upon request. Buyer agrees that, unless otherwise noted on the order form, all quantities are based on weight and are subject to adjustment upon request. Buyer agrees that, unless otherwise noted on the order form, all quantities are based on weight and are subject to adjustment upon request.

Original
SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION

You are viewing ticket #1 of 4 ticket(s) on-line.

If you require further delivery information, please contact your CEMEX representative.

Delivery Ticket Request: 8045979647

~ Total impacted soil
 1066.97 TONS


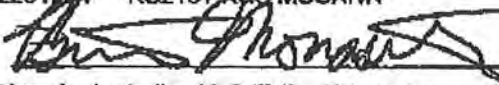
You are viewing ticket #2 of 4 ticket(s) on-line.
If you require further delivery information, please contact your CEMEX representative.

Delivery Ticket Request: 8045979651

http://prdmymcustomers/cgibin/hsrun.hse/PRD_LOCAL/DisplayDelTickets/DisplayDelTickets.htx;start=Tif... 6/8/2010

You are viewing ticket #3 of 4 ticket(s) on-line.
If you require further delivery information, please contact your CEMEX representative.

Delivery Ticket Request: 8045979653

 Soil Remediation Everett, WA 98213		1876048160																
Location:	1876	Qty:	39.08															
Customer:	3148688		05/18/2010															
Order:	JAMES OIL COMPANY INC																	
	EVERETT																	
	903 W FIRST ST CLE ELUM																	
	TO EVERETT SOILS																	
Job#:																		
P.O.:	PACIFIC PRIDE																	
Product:	1192508																	
	CLASS 3 SOIL DUMPED BY TON:																	
		<table border="1"> <thead> <tr> <th></th> <th>LB</th> <th>MTON</th> <th>TON</th> </tr> </thead> <tbody> <tr> <td>G</td> <td>119,200</td> <td>54.07</td> <td>59.60</td> </tr> <tr> <td>T</td> <td>41,040</td> <td>18.62</td> <td>20.52</td> </tr> <tr> <td>N</td> <td>78,160</td> <td>35.45</td> <td>39.08</td> </tr> </tbody> </table>		LB	MTON	TON	G	119,200	54.07	59.60	T	41,040	18.62	20.52	N	78,160	35.45	39.08
	LB	MTON	TON															
G	119,200	54.07	59.60															
T	41,040	18.62	20.52															
N	78,160	35.45	39.08															
		* Predetermined Tare																
		Today Loads: 4.00																
		Today Qty: 156.06																
Carrier:		FUEL SURCHARGE APPLIES																
Vehicle:	2251254 KS215T K8 S MCCANN																	
Received:		IN																
		OUT	4.42 pm															
<small> Credit terms: net 30 days. Payment is due within 15 days of the month following the date of purchase. Goods shipped in accordance with the purchase order and delivery site or, if no delivery site is specified, to the carrier's place of origin. The delivery is subject to inspection by the carrier. Buyer's responsibility for loading, unloading, and securing the goods is assumed by the carrier. Seller's responsibility for loading, unloading, and securing the goods is assumed by the carrier. Seller's responsibility for loading, unloading, and securing the goods is assumed by the carrier. Seller's responsibility for loading, unloading, and securing the goods is assumed by the carrier. </small>																		
Original	SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION																	

You are viewing ticket #4 of 4 ticket(s) on-line.
If you require further delivery information, please contact your CEMEX representative.



**Soil Remediation
Everett, WA 98213**

Location: 1876
Customer: 3148888 JAMES OIL COMPANY INC
Order: EVERETT WA 98213
903 W FIRST ST CLE ELUM
TO EVERETT SOILS
Job# :
P.O. : PACIFIC PRIDE
Product: 1192508
CLASS 3 SOIL DUMPED BY TCM
AFTER 4 HOURS DUMP 05.18.20

	LB	MTon	Ton
G	100.900	45.77	50.45
T	40.660	18.44	20.33
N	60.240	27.32	30.12

Today Leads:	2.00
Today Qty:	57.83

FUEL SURCHARGE APPLIES

After 1 hour's bump 3/18/2010

IN
OUT 7.47 and

[illegible]



SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION

If you require further delivery information, please contact your CEMEX representative.

You are viewing ticket #2 of 5 ticket(s) on-line.

If you require further delivery information, please contact your CEMEX representative.

Delivery Ticket Request: 8045752500

 Soil Remediation Everett, WA 98213		1876047970	
Location:	1876	Qty:	25.83
Customer:	3148668 JAMES OIL COMPANY INC	Date:	04/28/2010
Order:	EVERETT WA 98213		
100 NORTH OAKS AVE CLE EL			
TO EVERETT SOILS			
Job#:			
P.O.:	FAC FIC PRIDE		
Product:	1192508		
SERV. CLASS 3 SOIL DUMPED BY TON!			
STEVE FORD 35			
Carrier:			
Vehicle:	2034263 1876-1.EVERETT SOIL GENERIC		
Received:			
		IN	7.13 am
		OUT	7.29 am
<small> CEMEX is not responsible for any and all claims or damages arising from the use of the product. Buyer assumes responsibility for any and all claims or damages arising from the use of the product. Buyer's use of the product is subject to the terms and conditions of the CEMEX Terms and Conditions. Buyer's use of the product is subject to the terms and conditions of the CEMEX Terms and Conditions. Buyer's use of the product is subject to the terms and conditions of the CEMEX Terms and Conditions. </small>			
Original		SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION	

	LB	MTon	TON
G	92,100	41.78	46.05
T	38,440	17.44	19.22
N	53,660	24.34	26.83

* Manual Weight

Today Loads:	3.00
Today Qty:	94.35

FUEL SURCHARGE APPLIES

Original

SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION

You are viewing ticket #3 of 5 ticket(s) on-line.

If you require further delivery information, please contact your CEMEX representative.

Delivery Ticket Request: 8045752721

Soil Remediation Everett, WA 98213		1876047974																													
Location: 1876 Customer: 3148668 JAMES OIL COMPANY INC Order: EVERETT WA 98213 100 NORTH OAKS AVE CLE EL TO EVERETT SOILS Job#: P.O.: PAC FIC PRIDE Product: 1192508 SERV CLASS 3 SOIL DUMPED BY TON		Qty: 33.34 04/28/2010																													
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>LB</th> <th>MTon</th> <th>TON</th> </tr> </thead> <tbody> <tr> <td>G</td> <td>107.600</td> <td>48.81</td> <td>53.80</td> </tr> <tr> <td>T</td> <td>40.920</td> <td>18.56</td> <td>20.46</td> </tr> <tr> <td>N</td> <td>66.680</td> <td>30.25</td> <td>33.34</td> </tr> <tr> <td colspan="4" style="text-align: center;">* Predetermined Tare</td> </tr> <tr> <td colspan="2">Today Loads:</td> <td colspan="2">4.00</td> </tr> <tr> <td colspan="2">Today Qty:</td> <td colspan="2">127.69</td> </tr> </tbody> </table>			LB	MTon	TON	G	107.600	48.81	53.80	T	40.920	18.56	20.46	N	66.680	30.25	33.34	* Predetermined Tare				Today Loads:		4.00		Today Qty:		127.69	
	LB	MTon	TON																												
G	107.600	48.81	53.80																												
T	40.920	18.56	20.46																												
N	66.680	30.25	33.34																												
* Predetermined Tare																															
Today Loads:		4.00																													
Today Qty:		127.69																													
Carrier: Vehicle: 2251182 K5669T, K&S MCCANN Received:		FUEL SURCHARGE APPLIES IN OUT 1.16 pm																													
<small>Credit terms of all agreements shall apply, accounts are due immediately upon delivery of the goods. Buyer assumes responsibility after truck reaches delivery site as a independent broker, unless it is a direct purchase from the Seller. Buyer's liability for payment shall be limited to the amount of the credit application, if any, Seller's Standard Terms and Conditions, Seller's Catalog, if any, and Seller's Order Confirmation (including conditions of sale), in a duly and validly signed copy of the Delivery Ticket ("Agreement"). Seller will provide the Standard Terms and Conditions upon request. Buyer agrees that, unless otherwise noted on the back hereof, all quantities and dates were delivered as indicated and further agree to accept the same in accordance with the Agreement.</small>																															
Original		SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION																													

You are viewing ticket #4 of 5 ticket(s) on-line.

If you require further delivery information, please contact your CEMEX representative.

Delivery Ticket Request: 8045752725


Soil Remediation Everett, WA 98213		1876047975																													
Location: 1876 Customer: 3148668 JAMES OIL COMPANY INC Order: EVERETT WA 98213 100 NORTH OAKS AVE CLE EL TO EVERETT SOILS Job#: P.O.: PAC FIC PRIDE Product: 1192508 SERV CLASS 3 SOIL DUMPED BY TON		Qty: 27.88 04/28/2010																													
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>LB</th> <th>MTon</th> <th>TON</th> </tr> </thead> <tbody> <tr> <td>G</td> <td>94.600</td> <td>42.91</td> <td>47.30</td> </tr> <tr> <td>T</td> <td>39.240</td> <td>17.80</td> <td>19.62</td> </tr> <tr> <td>N</td> <td>56.360</td> <td>25.11</td> <td>27.68</td> </tr> <tr> <td colspan="4" style="text-align: center;">* Predetermined Tare</td> </tr> <tr> <td colspan="2">Today Loads:</td> <td colspan="2">5.00</td> </tr> <tr> <td colspan="2">Today Qty:</td> <td colspan="2">155.37</td> </tr> </tbody> </table>			LB	MTon	TON	G	94.600	42.91	47.30	T	39.240	17.80	19.62	N	56.360	25.11	27.68	* Predetermined Tare				Today Loads:		5.00		Today Qty:		155.37	
	LB	MTon	TON																												
G	94.600	42.91	47.30																												
T	39.240	17.80	19.62																												
N	56.360	25.11	27.68																												
* Predetermined Tare																															
Today Loads:		5.00																													
Today Qty:		155.37																													
Carrier: Vehicle: 2251255 K5171T, K&S MCCANN Received:		FUEL SURCHARGE APPLIES IN OUT 1.38 pm																													
<small>Credit terms of all agreements shall apply, accounts are due immediately upon delivery of the goods. Buyer assumes responsibility after truck reaches delivery site as a independent broker, unless it is a direct purchase from the Seller. Buyer's liability for payment shall be limited to the amount of the credit application, if any, Seller's Standard Terms and Conditions, Seller's Catalog, if any, and Seller's Order Confirmation (including conditions of sale), in a duly and validly signed copy of the Delivery Ticket ("Agreement"). Seller will provide the Standard Terms and Conditions upon request. Buyer agrees that, unless otherwise noted on the back hereof, all quantities and dates were delivered as indicated and further agree to accept the same in accordance with the Agreement.</small>																															
Original		SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION																													

You are viewing ticket #5 of 5 ticket(s) on-line.

If you require further delivery information, please contact your CEMEX representative.

Original **SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION**

If you require further delivery information, please contact your CEMEX representative.

 Soil Remediation Everett, WA 98213		1876047980																													
Location: 1876																															
Customer: 3148668		JAMES OIL COMPANY INC																													
Order:		EVERETT WA 98213																													
100 NORTH OAKS AVE CLE EL TO EVERETT SOILS																															
Job#:																															
P.O.: PAC FIC PRIDE																															
Product: 1192508																															
SERV GLASS 3 SOIL DUMPED BY TON STEVE FORD 35																															
Carrier:		Qty: 32.06 04/29/2010																													
Vehicle: 2034263 1876-1, EVERETT SOIL GENERIC		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">LB</th> <th style="text-align: center;">MTon</th> <th style="text-align: center;">TON</th> </tr> </thead> <tbody> <tr> <td>G</td> <td style="text-align: right;">102.560</td> <td style="text-align: right;">46.52</td> <td style="text-align: right;">51.28</td> </tr> <tr> <td>T</td> <td style="text-align: right;">36.440</td> <td style="text-align: right;">17.44</td> <td style="text-align: right;">19.22</td> </tr> <tr> <td>N</td> <td style="text-align: right;">64.120</td> <td style="text-align: right;">29.08</td> <td style="text-align: right;">32.06</td> </tr> <tr> <td colspan="4" style="text-align: center;">* Manual Weight *</td> </tr> <tr> <td colspan="3"> Today Loads: </td> <td style="text-align: right;">3.00</td> </tr> <tr> <td colspan="3"> Today Qty: </td> <td style="text-align: right;">79.60</td> </tr> </tbody> </table>			LB	MTon	TON	G	102.560	46.52	51.28	T	36.440	17.44	19.22	N	64.120	29.08	32.06	* Manual Weight *				Today Loads:			3.00	Today Qty:			79.60
	LB	MTon	TON																												
G	102.560	46.52	51.28																												
T	36.440	17.44	19.22																												
N	64.120	29.08	32.06																												
* Manual Weight *																															
Today Loads:			3.00																												
Today Qty:			79.60																												
Received: <i>Jay De Rome</i>		FUEL SURCHARGE APPLIES																													
IN		7.13 am																													
OUT		10:46 am																													

CEMEX warrants to the purchaser that the tonnage actually delivered is not in excess of 5% of the tonnage shown on the bill of lading. Buyer agrees to accept the tonnage shown on the bill of lading as the basis for payment. Buyer agrees to accept the tonnage shown on the bill of lading as the basis for payment. Buyer agrees to accept the tonnage shown on the bill of lading as the basis for payment. Buyer agrees to accept the tonnage shown on the bill of lading as the basis for payment.

Original
SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION

Original **SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION**

You are viewing ticket #3 of 3 ticket(s) on-line.

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APPENDIX D

CONCRETE AND DRUM DISPOSAL DATA

Clean
Concrete

Stampede Sand and Gravel, LLC
PO BOX 1841
Woodinville, WA 98072

20-8689072
Phone 509-686-3160

Stampede Sand and Gravel

Site ID: Y1

Load: 1

RePrint of Ticket: 6839

Account: HARD1 Hardline Construction (HARD1)
Vehicle: HARD1 HARDLINE CONSTRUCTION (Edited)
From: CC Clean Concrete
Material: 18008 Clean Concrete
Job: JAMES OIL
EC#:

Date May 19, 10 14:19 08

Gross	107,580 lb	53.72 tn K
Tare	68,880 lb	34.44 tn K
NET	38,700 lb	19.28 tn


Rate \$ 5.00/TN

Minimum Charge \$ 20.00

MAIN ST CLR BLUM

Material	\$ 96.75
Env Fee (0.00/tn)	\$ 0.00
Env Fee (0.00 ea)	\$ 0.00
Sales Tax (8.0%)	\$ 7.74

Due on Account

Received By: 

GRAND TOTAL \$ 104.49

KITTITAS COUNTY SOLID WASTE
925 INDUSTRIAL WAY
ELLENSBURG, WA 98926
(509)962-7542

R E C E I P T

Bill Acct:000666
HARDLINE CONSTRUCTION, LLC
Haul Acct:000666
HARDLINE CONSTRUCTION, LLC

SITE:RY Ryegrass Landfill
DATE:05/11/10 TICKET#:3000978
TIME IN:12:14 ID IN:MLP
TIME OUT:12:14 ID OUT:MLP
TRUCK:HAR01
PO:

	LBS	TONS
GROSS:	00	0.00
TARE:	00	0.00
NET:	00	0.00

VOL: 6.00

MATERIAL:CDL - Ryegrass
RATE: \$7.00/cy

TIP FEE:	42.00
SPEC FEE:	0.00
TAX FEE:	1.51
TOTAL FEE:	\$43.51



SHANE

NOTE:Job-James Oil

***** REPRINTED TICKET *****

Concrete footing disposal



**INDUSTRIAL
CONTAINER
SERVICES**

**EMPTY CONTAINER
Receiving Record**

45345

DATE: 5-14-10

- ☐ ICS-CA, LLC
1051 Union St., Montebello, CA 90640
Phone: 323-724-8507
- ☐ ICS-CO, LLC (Denver)
640 Baseline, Brighton, CO 80601
Phone: 303-659-5095
- ☐ ICS-CO, LLC (SLC)
2021 N. Redwood Rd., S.L.C., Utah 84116
Phone: 801-322-3529
- ☐ ICS-WA, LLC
7152 1st Avenue South, Seattle, WA 98108
Phone: 206-763-2345

Customer: James Oil

Received From: _____

Address: _____

City: Emmetsburg, IA

Carrier: _____ Freight Bill No.: _____

Driver: <u>Ken</u>
Customer No.: _____
Ref. Doc.: _____
Inv./CM#: _____

55 GAL. CLOSED TOP	
UN 9	10 8 10
17	59
Deheader	Misc
5	

55 GAL. OPEN TOP	
UN HB	OT HB
OT LL	OT LB

OTHER	
CT	30 GAL. OT

MISC. SM. SIZES	

POLY	
CT	OT

IBC	
275	330

PARTS	
LIDS	RINGS

SCRAP	
CT	OT POLY

2	15	10.00	1	10.00
10.00				

Rejects/Returns	
Total Drums	
99	

EMPTY CONTAINER CERTIFICATION

I hereby certify that these containers are "Empty" as required in the California's Title 26, Div 22 Section 66261.7 and 40 CFR 261.7 hazardous material regulations, and that they have been properly prepared for transportation under the regulations of the U.S. Department of Transportation, 49CFR 173.29 ("SEE REVERSE").

Date: 5-14-10 Customer's Signature: [Signature]
Without your signature, we cannot accept your drums.

Please Note: Although our driver has counted and described your containers, these containers will be rechecked at our plant. We will notify you of any changes.

Remarks: _____

Date: 5-14-10 Driver's Signature: [Signature]

Inbound		
Trailer	Leave Customer	Arrive Plant
40		

Outbound		
Trailer	Leave Plant	Arrive Customer
40		

CUSTOMER

APPENDIX E

PREVIOUS REPORT WHITE SHIELD, INC. 8/22/2008

Soil Boring and Sampling Report

Pacific Pride Fueling Station

903 1ST Street West

Cle Elum, Washington 98922

August 22, 2008

Submitted To:

Renee Hill Trustee for
Estate of Wayne A. Hill
P. O. Box 368
Cle Elum, WA 98922

Prepared By:

White Shield, Inc.
1520 140th Ave. NE, Suite 100
Bellevue, WA 98005
425-641-7800 office
425-641-7734 fax
Email: wsib@whiteshield.com
[http: www.whiteshield.com](http://www.whiteshield.com)

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APPENDICES

- Appendix A - Photographs
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1.0 INTRODUCTION

White Shield, Inc. (WSI) has prepared this report for Renee Hill, the Trustee for the Estate of Wayne A Hill, to document activities that occurred during the drilling and sampling of five soil borings located at the Pacific Pride fueling facility located at 903 1st Street West, Cle Elum, Washington (Figure 1). The Estate leases a portion of the property to James Oil Company for use as a commercial fueling facility. The purpose of the investigation was to determine if the soil and groundwater have been impacted by petroleum hydrocarbons from spills and releases at the site.

2.0 SITE LOCATION AND BACKGROUND

According to the Kittitas County Assessor's Office, the site is approximately 3.39-acres in size, located at 903 1st Street West in Cle Elum, Kittitas County, Washington (Figure 1) and is owned by the Estate of Wayne A Hill. The Assessor's Office parcel number for the site is 263835. This address is described as being in the Northeast ¼, Southwest ¼, Section 27, Township 20 North, Range 15 east. The parcel is bordered on the south by the I-90 westbound access road, to the east by a Chevron fueling station, the Cle Elum City Cemetery to the north and a logging company equipment storage yard to the west.

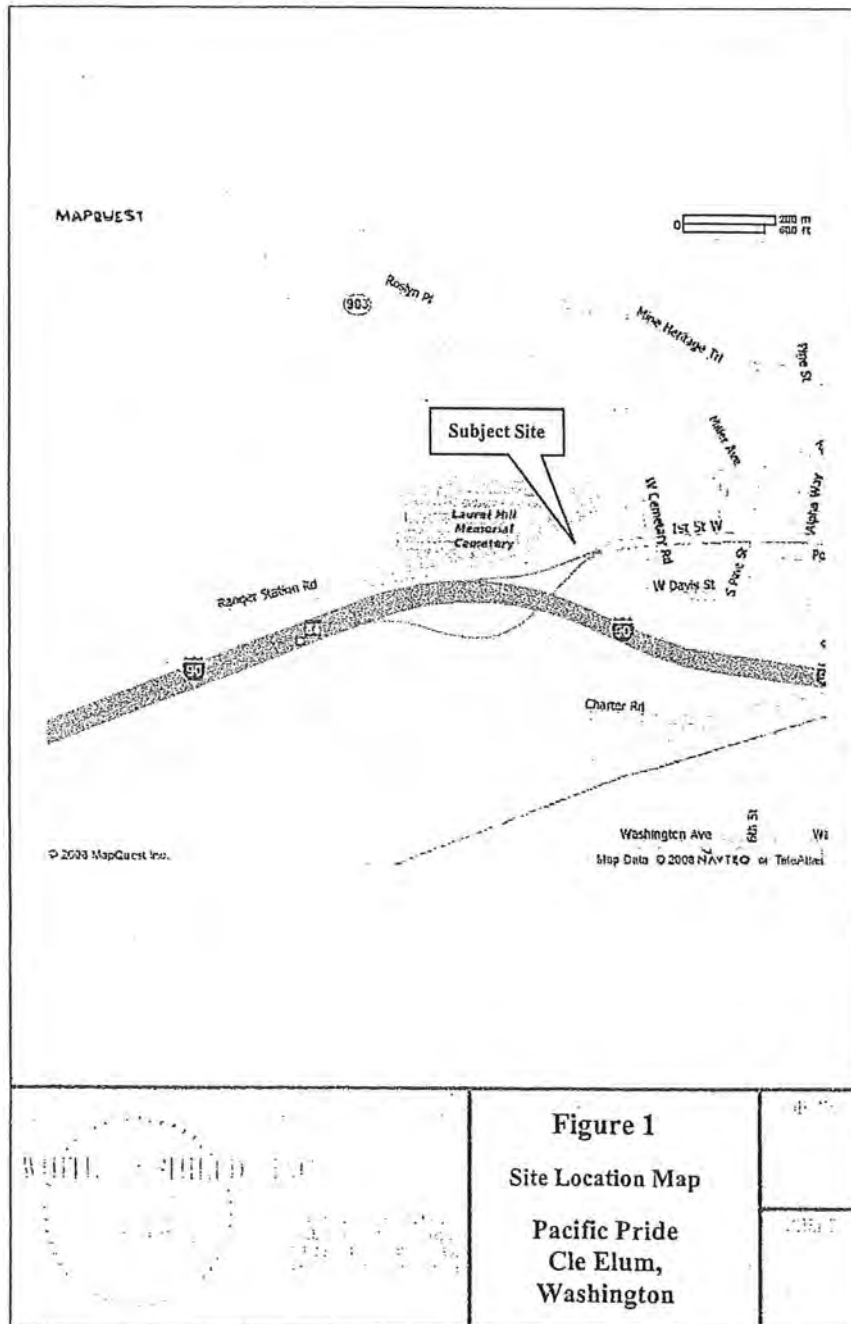
James Oil Company currently leases approximately ½ acre of the parcel in the center of the parcel for the Pacific Pride commercial fueling facility. The leased portion of the site contains three fuel-dispensing islands with two associated satellite fuel nozzles under a canopy and two aboveground fuel storage tanks (Figure 2) (Photograph 1 in Appendix A). The tanks are divided tanks and contain unleaded gasoline, "road" diesel and "off-road" diesel fuel. According to the Assessor's office, the site has been a commercial fueling station for over 20 years. The original station was in the eastern portion of the parcel but was moved to the central portion of the parcel in 1999 when Mr. James leased the property. According to Ms Renee Hill, the original underground storage tanks at the "old" station were decommissioned and given a "No Further Action" determination from the Washington State Department of Ecology.

On November 5, 2007, White Shield met with Ms Hill at the site to discuss her concerns regarding the potential for spills and leaks she had observed to contaminate the soil and/or groundwater beneath the site. At the time of the visit, White Shield observed several areas of stained soil adjacent to the concrete fueling pad as well as areas of staining and cracking on the concrete pad (Photographs 2 through 6 in Appendix A).

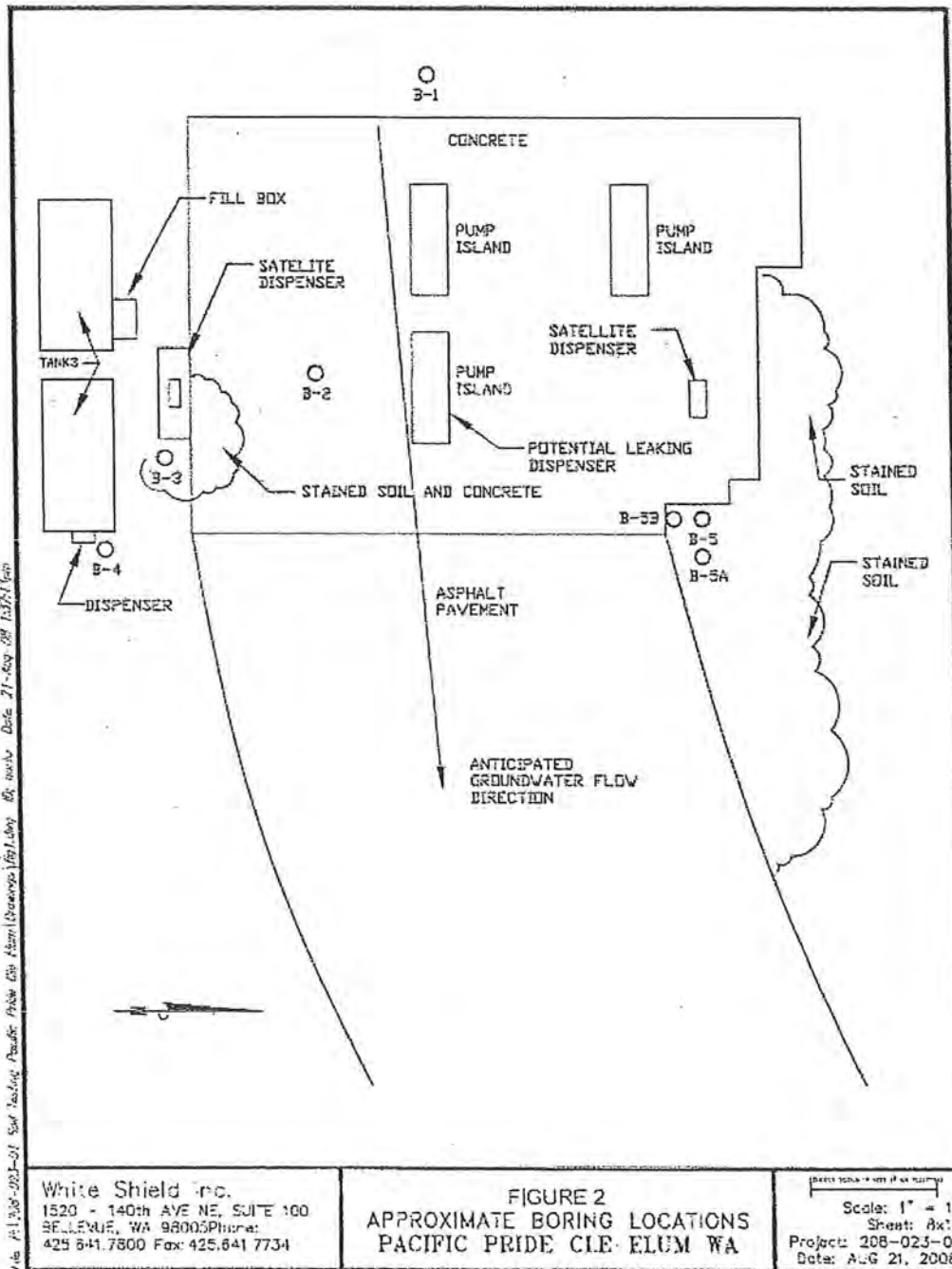
Based on the visual observations made on November 5, 2007, White Shield made the following conclusion:

- The potential for soil and groundwater contamination was high and the best way to determine if there is a problem would be to drill borings and sample both the soil and groundwater.

On April 22, 2008, White Shield received authorization to drill and sample six borings at the site near the current fueling facility pending the Estate reaching an agreement with Mr. James regarding site access.



August 22, 2008



On June 26th and 27th, 2008, White Shield oversaw the drilling and sampling of five boreholes. The number of borings was reduced from six to five because only five borings could be completed in the two days that the access agreement allowed for drilling. The borings were not advanced to groundwater below 20 feet because according to Mr. James, the Access Agreement did not permit drilling more than 20 feet bgs.

3.0 METHODOLOGY

3.1 Utility Location

Prior to any site activity White Shield notified the "one-call" public utility notification service of the planned activities. This free service notifies all of the public and private utility companies in the area as well as Kittitas County and the City of Cle Elum of the planned activities so they can mark the locations of their utilities in the public right-of-ways. White Shield also contracted with Utilities Plus, a private utility locating service, to locate the private utilities on the site and attempt to locate the fuel distribution piping.

3.2 Soil Bore Drilling and Sampling

On June 26 and 27th, 2008, White Shield oversaw the drilling and sampling of five bore holes at the site. The locations of the boreholes (Figure 2) were based on visual observations made during the November 5, 2007 visit, the anticipated direction of groundwater flow (to the south), and the location of utilities and piping (water, electric, sewer, fuel distribution piping). They were also placed in areas anticipated to have the potential for the highest concentration of contaminants.

The drilling was conducted by using a hollow-stem auger drill rig operated by Cascade Drilling of Woodinville, Washington at the locations shown in Figure 2 (Photographs 7 and 8 in Appendix A). Because boring B-2 was located adjacent to the fuel distribution piping beneath the concrete pad, the first four feet of the boring was advanced using a vacuum truck operated by Cascade Drilling to remove the soil (Photograph 9 in Appendix A). Once a depth below the fuel distribution piping was reached, the hollow stem auger completed the boring. All White Shield borings were advanced to a maximum depth of 20 feet below ground surface (bgs).

During site activities, Mr. Jeff James was present to observe the drilling and sampling. In addition, Mr. James contracted with Kennedy Jenks Consultants to have a representative on site to observe the drilling and to collect select split samples of the soils White Shield collected for chemical analysis. The representative from Kennedy Jenks Consultants was Mr. Dean Malte.

Because the White Shield sample from borehole B-5 at 2.5 feet bgs contained TPH-Dx greater than the MTCA Method A cleanup level, Mr. James decided to excavate a second hole approximately one foot away to the south and collect a sample at 2.5 feet bgs (Figure 2). Mr. James also decided to collect samples from a third location, B-5B, approximately one foot west of Boring B-5 (Figure 2) at both the surface and at 2.5 feet

bgs (Photographs 10 and 11 in Appendix A). In addition, White Shield also collected a sample of the composited soils removed from Mr. James excavation (Sample B-5-Pile).

3.2.1 Soil Sampling Methods

During drilling, the soils were sampled every 2½ feet using a two-inch diameter split-spoon sampler driven ahead of the auger (Photograph 12 in Appendix A). The samples were field screened using an organic vapor analyzer with a flame ionization detector to estimate the concentration of organic vapors, as well as visual, and olfactory observations. Based on the field screening, a minimum of two samples were collected from each borehole for chemical analysis.

At each sample location within the borings, samples were collected using EPA Method 5035 for volatile samples. For this method a disposable "EasyDraw Syringe®" was used to collect approximately 5 grams of soil for transfer into a pre-weighed 40-milliliter (ml) sample vial. One 125 ml sample jar was also collected at each location for analysis of moisture content and diesel Range Organics (DRO). Each sample was labeled with the borehole number, the sample depth, and the date and time the sample was collected. The samples were then placed in a cooler with ice for delivery to an onsite mobile laboratory operated by Libby Environmental Chemistry of Olympia, Washington for analysis.

All samples were analyzed for gasoline range organics (GRO) including benzene, toluene, ethylbenzene and xylenes (BTEX) and/or for diesel range organics (DRO). The samples for GRO and BTEX were analyzed by Method NWTPH-Gx and EPA Method 8021B, respectively. Samples for DRO were analyzed by Method NWTPH-Dx.

A geologist licensed in the State of Washington was present at the drill rig for the purposes of logging samples, monitoring drilling operations, recording soil and groundwater data, preparing boring logs and collecting soil samples.

The geologist maintained a field log and/or drilling logs during field activities. The field log was maintained on weather-resistant log forms. All data generated during the investigation and any comments or other notes were entered directly into the field log or on drilling logs.

The lithologic log recorded by the geologist during the advancement of each of the boreholes was based on visual inspection of the soil samples supplemented by comments and observations of the driller. The boring logs are presented in Appendix B. Materials were classified using the Unified Soil Classification System and described according to the American Society for Testing and Materials D2488-69, "Description of Soils (Visual Manual Procedure)".

The following information was logged for each boring:

- Boring identification number;
- Name of Driller;
- Name of Geologist;
- Method of Drilling;

- Sampling method, depth, time, and date;
- Organic Vapor Analyzer (OVA) readings (where taken);
- Borehole location;
- Detailed soil descriptions using the Unified Soil Classification System, including soil moisture/saturation condition;
- Depth at which each distinct stratum was encountered (where discernable);
- Depth at which groundwater was first encountered while drilling;
- Depth of static water level (where discernable);
- Depth of the completed soil borings;
- Date started and finished
- Project number; and
- Record of Sample interval.

3.2.2 Decontamination Methods

Before drilling, all drill pipe was steam cleaned to remove potential contaminants. All non-disposable sampling tools were cleaned using an Alcolnox® soap solution and rinsed with de-ionized water after each sample was taken.

3.3 Quality Control

Samples were collected according to industry protocols for the collection, documentation, and handling of samples. Descriptions of soils and sampling depths were carefully logged in the field, and the drillers and geologist confirmed sample depth as each sample was collected. Boring location maps were completed prior to leaving the site to document sampling locations.

Soil samples were placed into pre-cleaned laboratory provided sample containers. The sealed containers were then placed in "Zip-Loc" bags to protect the labels and to prevent potential contamination of the ice chests. Upon sampling, all samples were placed immediately into ice chests containing ice.

All sample labels were checked for accuracy and compared with the Chain-of-Custody documentation, to provide sample documentation QC. Samples were transported and submitted under standard Chain-of-Custody protocols, and were kept refrigerated until delivery to the project laboratory (Libby Environmental Chemistry Laboratory). The laboratory provided standard QA/QC, which included: surrogate recoveries for each sample, method blank results, duplicate analyses, matrix or blank spiked analyses, and duplicate spiked analyses.

3.4 Investigation Derived Waste

Investigation derived waste for this project consisted of excess soil removed from the borings, and rinsate from decontamination. These wastes were separated and placed into fifty five-gallon drums. The drums were stored on site in a locked building not part of the leased property until laboratory results were received from the laboratory. Once the results were received, White Shield, Inc. will arrange for disposal.

4.0 RESULTS AND CONCLUSIONS

The following sections of this report present the results and conclusions from the sampling of soil borehole drillings at Pacific Pride Fueling Station Property located at 903 1st Street West in Cle Elum, Washington. Field activities were completed at the subject site on June 26th and 27th 2008. These activities consisted of:

- Drilling, five soil boreholes at the site (Figure 2),
- Collecting soil samples from the boreholes.
- Collecting split samples from additional samples collected by Kennedy Jenks at Boring locations B-5A and B-5B.

4.1 Site Geologic and Hydrogeologic Conditions

The site is at an elevation of approximately 2000 feet. The topography slopes gently to the south and southeast toward the Yakima River approximately three eighths of a mile to the south and southeast. Based on the topography, it is anticipated that the groundwater flow direction is to south and southeast toward the river. The soils encountered in the borings typically consisted of sandy gravel and cobbles with some silt. Groundwater was not encountered in the borings, although the soil was very damp to wet at approximately 17 to 20 feet bgs (Appendix B).

4.2 Soil and Groundwater Sampling

4.2.1 Soil Sample Results

Ten soil samples were collected from the borings drilled with the auger. Four additional samples were collected as split samples from samples collected by Kennedy Jenks in the vicinity of Boring B-5. Table 1 shows the results of the analyses. The complete laboratory data sheets are attached in Appendix C. TPH-G, benzene and toluene were not detected in any of the samples analyzed. Total xylenes were detected in sample B-5-2.5 at a level of 0.49 mg/kg, well below the State of Washington Model Toxics Control Act (MTCA) Method A cleanup standard of 9 mg/kg (Table 1).

TPH-Dx compounds were detected below the MTCA cleanup standard of 2,000 mg/kg in samples B-3-15 (197 mg/kg), B-5-15 (947 mg/kg) and S-5B-PILE (854 mg/kg) (Table 1). The TPH-DX compounds in samples B-5-2.5 and B-5B-SUR were detected above the MTCA Method A cleanup standard at 11,900 mg/kg and 5,680 mg/kg respectively. Sample B-5B-SUR was a sample of soil collected from the surface at the location of Boring B-5B dug by Mr. James with a posthole digger and a hand auger. This hole and an additional hole B-5A were dug by Mr. James because he did not have a split sample from the White Shield borehole B-5 at 2.5 feet bgs.

Table 1 – Soil Analysis Results

Sample Number	Soil Sample Location	Date Analyzed	Sample Depth	NW TPH-Gx	Volatile Aromatic Hydrocarbons				NWTPH-Dx	
				Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Diesel (mg/kg)	Oil (mg/kg)
B-1-2	Bore Hole B-1	6/27/2008	2'	ND	ND	ND	ND	ND	ND	ND
B-1-17.5	Bore Hole B-1	6/27/2008	17.5'	ND	ND	ND	ND	ND	ND	ND
B-2-5	Bore Hole B-2	6/27/2008	5'	ND	ND	ND	ND	ND	ND	ND
B-2-20	Bore Hole B-2	6/27/2008	20'	ND	ND	ND	ND	ND	ND	ND
B-3-2	Bore Hole B-3	6/27/2008	2'	ND	ND	ND	ND	ND	ND	ND
B-3-15	Bore Hole B-3	6/27/2008	15'	ND	ND	ND	ND	ND	197	ND
B-4-7.5	Bore Hole B-4	6/27/2008	7.5'	ND	ND	ND	ND	ND	ND	ND
B-4-17.5	Bore Hole B-4	6/27/2008	17.5'	ND	ND	ND	ND	ND	ND	ND
B-5-2.5	Bore Hole B-5	6/27/2008	2.5'	ND	ND	ND	ND	0.49	11900*	ND
B-5-15	Bore Hole B-5	6/27/2008	15'	ND	ND	ND	ND	ND	947	ND
B-5A-2.5**	Bore Hole B-5A	6/27/2008	2.5'	ND	ND	ND	ND	ND	ND	ND
B-5B-SUR**	Bore Hole B-5B	6/30/2008	Surface	ND	ND	ND	ND	ND	5630*	ND
S-5B-2.5**	Bore Hole B-5B	6/30/2008	2.5'	NA	NA	NA	NA	NA	ND	ND
S-5B-Pile**	Bore Hole B-5B	6/30/2008	Pile	NA	NA	NA	NA	NA	854	ND
MTCA Method A Cleanup Standards				30	0.03	7	6	9	2000	Heavy Oil 2000/Mineral Oil 4000
Practical Quantitation Limit				10	0.02	0.1	0.05	0.15	25	40

* Note: Product appears to be weathered Diesel.

** Samples are split samples from holes dug and sampled by Mr. Jeff James

ND: Indicates not detected

NA: Indicates not analyzed

The soils in the vicinity of borehole B-5 at 2.5 feet bgs were varied in composition. In Boring B-5 at 2.5 feet bgs, the soil was a brown sandy gravel with wood fragments. In excavation B-5A the soil at 2.5 feet bgs was a brown sandy gravel without the wood fragments. In excavation B-5B, the soil at the surface was a dark gray sandy gravel with a strong diesel odor. This changed to a reddish brown coarse sand with brick fragments at 2.5 feet bgs. The variation in the soils in this area is to be expected since it was reported that the area was filled with wood and construction debris when the site was constructed.

4.3 Conclusions

A minimum of two discrete soil samples were collected from each soil boring at the Pacific Pride Fueling Station in Cle Elum, Washington. With the exception of the area near Boring B-5, the results of the soil samples did not reveal the presence of gasoline or diesel range organics above the MTCA Method A cleanup levels.

The sample results from Boring B-5 and the nearby-excavated holes revealed that diesel contamination above the MTCA Method A cleanup levels is present to at least 2.5 feet bgs. The sample collected from borehole B-5 at 15 feet revealed the presence of diesel range organics but below the MTCA cleanup levels. Because samples collected by Mr. James and split by White Shield did not detect DRO at 2.5 feet bgs but did detect DRO at the surface, and because the soil material at each sample location was varied in composition, White Shield concludes that the contamination most likely is heterogeneously distributed in the soils.

Groundwater was not encountered and therefore not sampled in any of the borings drilled at the site. However, because the soil was very damp to wet at approximately 17 to 20 feet bgs, groundwater is anticipated to be located above 25 to 30 feet bgs.

5.0 RECOMMENDATIONS

Based on the conclusions, White Shield makes the following recommendations:

- **Notify the Washington State Department of Ecology of the Sample Results**
Because at least one of the soil samples at boring B-5 contained levels of diesel range organics above the MTCA Method A Cleanup Levels, the Washington State Department of Ecology needs to be notified of the findings within 90 days per WAC 173-340-300 (2)(a). Submittal of this report to Ecology's Central Regional Office will satisfy the notification requirements.
- **Clean Up the Contaminated Soil in the Vicinity of Boring B-5**
White Shield recommends that the soil in the vicinity of Boring B-5 that is above the MTCA Cleanup Levels be excavated and disposed of. It is not anticipated that the volume of soils to be removed would be very large. Upon excavation the remaining soils on the sidewalls and base of the excavation should be re-sampled and analyzed for diesel range and gasoline range organics.
- **Obtain Groundwater Samples at the Site.**
Because groundwater samples could not be obtained and the soils near the base of Borings B-5 and B-3 were wet and contained Diesel Range Organics, it is recommended that additional borings be installed to sample groundwater. At least three borings should be drilled in order to determine groundwater flow direction and gradient. One well should be in the anticipated up gradient direction and two borings in the down gradient direction.

August 22, 2008

6.0 LIMITATIONS

In performing our professional services, WSI uses a degree of care ordinarily exercised under similar circumstances by members of our profession. No warranty, expressed or implied, is made or intended. Our conclusions and recommendations, developed from our field and laboratory investigation reported herein, are based upon this firm's understanding of the project and are in concurrence with generally accepted practice. Should questions arise from this report please contact White Shield Inc. at 425-641-7800 or 503-547-0100.

David R. Polivka

David R. Polivka P.G./ P.H.G.
Environmental Services Manager

Stuart W. Fricke

Stuart Fricke
Principal-in-Charge



DAVID R. POLIVKA

APPENDIX A

Photographs



Photograph 1 – Cle Elum Pacific Pride Site Overview Looking Southwest



Photograph 2 – Staining in Soil Southeast of Fueling Pad, November 5, 2007
(South of Boring Location B-5)



Photograph 3 – Staining and Spillage on Soil and Concrete, November 5, 2007 (Near Boring Location B-3)



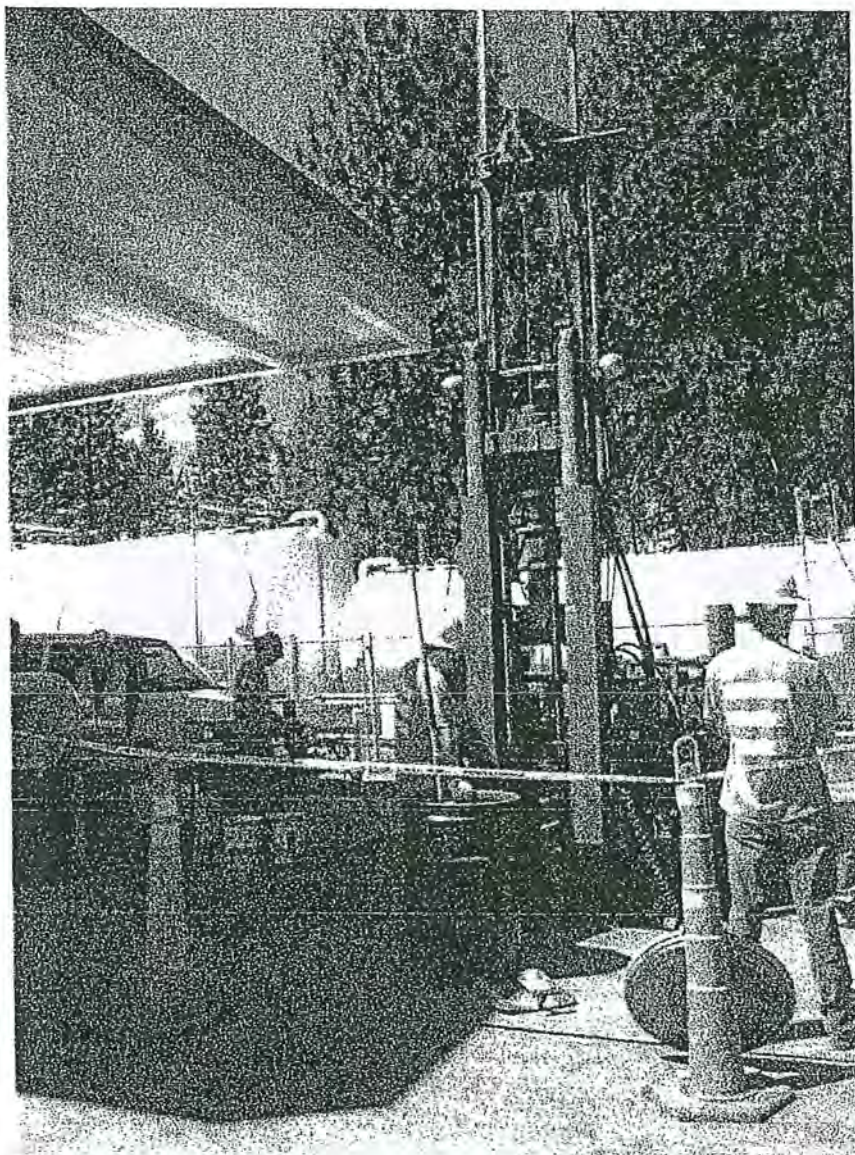
Photograph 4 – Staining and Cracking in Concrete November 5, 2007 (West side of Pump Islands Near Boring Location B-2)



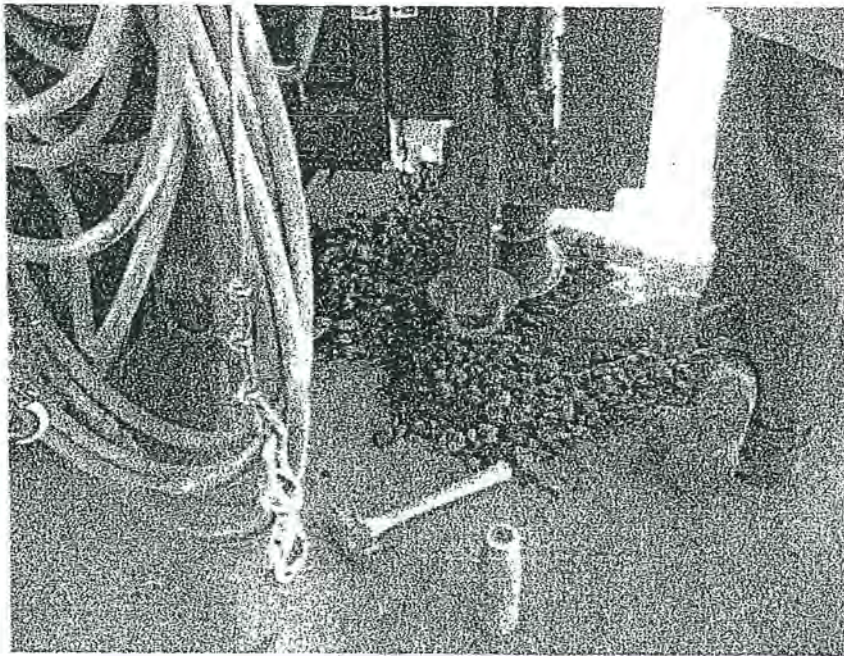
Photograph 5 – Staining in Soil, November 5, 2007 (Boring location B-5)



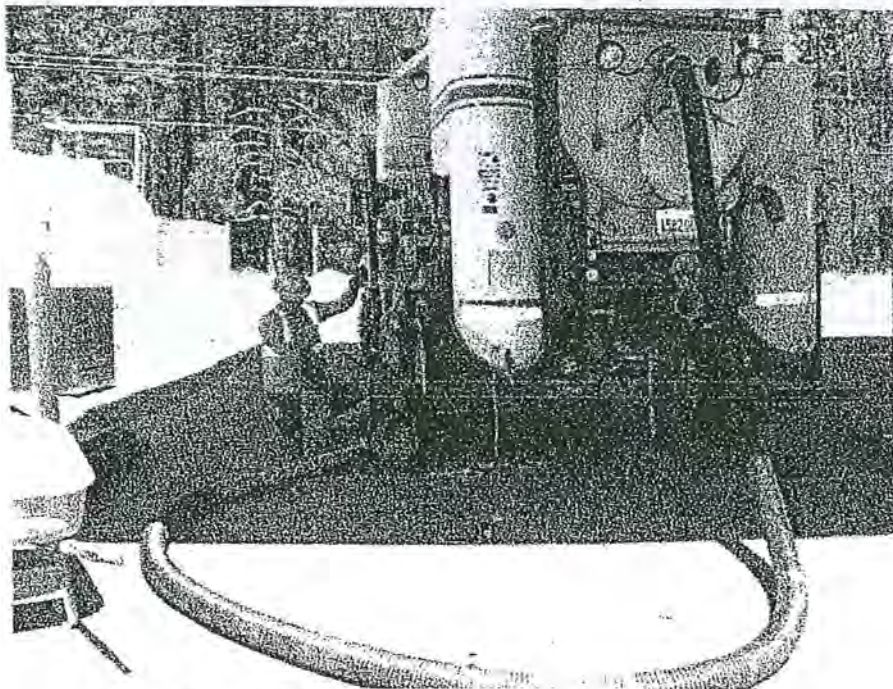
Photograph 6 – Staining and Cracking in Concrete, November 5, 2007 on East Side of the Pump Islands



Photograph 7 – Hollow Stem Auger Drilling at Boring B - 1



Photograph 8 – Hollow stem Auger Drilling at Boring B-1



Photograph 9 – Vacuum Truck Drilling at Boring B-2



Photograph 10 – Mr. James excavating Borehole B-5A



Photograph 11 – Mr. James excavating Borehole B-5B



Photograph 12 – Split Spoon Sampler with Soil from Boring B-1

APPENDIX A

Boring Logs

LOG OF BOREHOLE

Project No.: 208-023-01

Project: Cle Elum Pacific Pride

Location: Cle Elum, WA

Drilling Method: Auger

Sampling Method: 2" Split Spoon

Client: Renee Hill

Driller: Cascade Drilling

Borehole No.: B-1

Date: 6/26/2008

Logged By: DRP

Reference Elevation: Ground Surface

Groundwater Level: NA

D E P T H (ft)	T I M E	S S A M P L E S	S S A M P L E S No.	Blow Count (blows per 1/2 foot)	Graphic Log/	GEOLOGICAL DESCRIPTION AND CLASSIFICATION	O D O R	OVA (ppm)
1047						Asphalt Driveway		
						Brown Sandy Silt (moist-dry), some gravel, some black rock fragments	none	0
1058			B-1-2	10/20/30		3" Brown fine and sandy gravel - gravelly sand		
5								
						Brown sandy gravel (dry) (some fine silt)	none	0
				50 for 6"				
				50 for 6"		Same	none	0
10								
				50 for 6"		Same		
				50 for 6"		Brown sandy gravel (some silt) (moist)	none	0
15								
				50 for 4"		Brown sandy gravel (some fine silt) (moist)	none	0
1120								
				50 for 6"		Brown sand - coarse, sandy gravel, (some silt) (wet)		
1139			B-1-17.5			Kennedy Jenks Environmental Consulting Splits Sample B-1-17.5		
20								
				50 for 6"		Boring Terminated at 20.5' and backfilled with Bentonite		
25								

Project No.:208-023-01
Project: Cle Elum Pacific Pride
Location: Cle Elum, WA
Drilling Method: Auger
Sampling Method: 2" Split Spoon

Bolehole No.: B-2
Date: 6/27/2008
Logged By: DRP
Reference Elevation: Ground Surface
Groundwater Level: NA

HILL 0053

LOG OF BOREHOLE

Project No.:208-023-01
 Project: Cle Elum Pacific Pride
 Location: Cle Elum, WA
 Drilling Method: Auger
 Sampling Method: 2" Split Spoon

Client: Renee Hill
 Driller: Cascade Drilling

Borehole No.: B-3
 Date: 6/27/2008
 Logged By: DRP
 Reference Elevation: Ground Surface
 Groundwater Level: NA

D E P T H (ft)	T I M E	S S A M P L E S	Blow Count (blows per 1/2 foot)	Graphic Log/	GEOLOGICAL DESCRIPTION AND CLASSIFICATION	O D O R	OVA (ppm)
					1" Minus Gravel and fine Sand		
1143		B-3-2	10/10/50 for 6"		Brown clayey silt (moist), (some roots)	none	0
5			30/50 for 6"		Brown sandy gravel	none	0
			50 for 6"		Brown coarse sandy gravel, some (quartz gravel and some silt)	none	0
10			50 for 6"		1" Recovery (moist to wet)		
			50 for 6"		Brown coarse sandy gravel (some silt) (wet)	none	0
15		B-3-15	50 for 5"		Less silt (wet)	none	0.6
			50 for 5"			none	0.4
20		B-2-20	No Recovery				
1219					Boring Terminated at 21 feet and backfilled with bentonite		
25							

Project No.:208-023-01
Project: Cle Elum Pacific Pride
Location: Cle Elum, WA
Drilling Method: Auger
Sampling Method: 2" Split Spoon

Driller: Cascade Drilling

Groundwater Level: NA

HILL 0055

LOG OF BOREHOLE

Project No.: 208-023-01
 Project: Cle Elum Pacific Pride
 Location: Cle Elum, WA
 Drilling Method: Auger
 Sampling Method: 2" Split Spoon

Client: Renee Hill
 Driller: Cascade Drilling

Borehole No.: B-5
 Date: 6/27/2008
 Logged By: DRP
 Reference Elevation: Ground Surface
 Groundwater Level: NA

D E P T H (ft)	T I M E	S S A M P L E N O.	Blow Count (blows per 1/2 foot)	Graphic Log	GEOLOGICAL DESCRIPTION AND CLASSIFICATION	O D O R	OVA (ppm)
					3/8 Minus gravel with sand (dry)		
1011	X	B-5-2.5	3/2/1		Brown sandy gravel with wood fragments	slight	0
5	X		17/20/22		Brown sandy gravel (gravel to 2" diameter) (dry)	slight	0
	X		50 for 6"		Brown sandy gravel (moist)	none	0
10	X		50 for 6"		Brown coarse sandy gravel (wet)	none	0
	X		50 for 6"			none	0
15	X	B-5-15	50 for 3"		Brown sandy gravel (some gray silt layers) (cobbles to 2" diameter)	slight	4
	X		50 for 6"		Brown sandy gravel (some brown silt) (wet) Driller says no water in hole	none	0
20	X	1045	50 for 6"		Brown coarse sandy gravel (gravel to 2" diameter) (Wet) No water in hole		
					Boring terminated at 21' and backfilled with bentonite		
25							

APPENDIX A

Laboratory Data Sheets



Libby Environmental, Inc.

4139 Libby Road N.E., Olympia, WA 98506-2518

July 2, 2008

Dave Polivka
Whiteshield, Inc.
1520 140TH Avenue NE
Bellevue, WA 98005

Dear Mr. Polivka:

Please find enclosed the analytical data report for the Cle Elum Pacific Pride Project located in Cle Elum, Washington. Mobile Lab Services were conducted on June 27, 2008. Soil samples were analyzed for BTEX by EPA Method 8021B, Gasoline by NWTPH-Gx, and Diesel & Oil by NWTPH-Dx/Dx Extended.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed. All soil samples are reported on a dry weight basis.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
President
Libby Environmental, Inc.

Phone (360) 352-2110 Fax (360) 352-4154 • libbyenv@aol.com

HILL 0058

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

CLE ELUM PACIFIC PRIDE PROJECT

Cle Elum, Washington

Whiteshield Environmental, Inc.

Client Project #208-023-01

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	6/27/08	nd	nd	nd	nd	nd	117
I.C.S	6/27/08	97%	117%				113
B-4-7.5	6/27/08	nd	nd	nd	nd	nd	74
B-4-17.5	6/27/08	nd	nd	nd	nd	nd	75
B-4-17.5 Dup	6/27/08	nd	nd	nd	nd	nd	80
B-1-2	6/27/08	nd	nd	nd	nd	nd	84
B-1-17.5	6/27/08	nd	nd	nd	nd	nd	80
B-5-2.5	6/27/08	nd	nd	nd	0.49	nd	67
B-5-15	6/27/08	nd	nd	nd	nd	nd	81
B-3-2	6/27/08	nd	nd	nd	nd	nd	130
B-3-15	6/27/08	nd	nd	nd	nd	nd	73
B-2-5	6/27/08	nd	nd	nd	nd	nd	82
B-2-20	6/27/08	nd	nd	nd	nd	nd	78
B-5A-2.5	6/27/08	nd	nd	nd	nd	nd	73
B-5B-SUR	6/27/08	nd	nd	nd	nd	nd	74
B-4-17.5 MS	6/27/08	115%	132%				123
Practical Quantitation Limit		0.02	0.10	0.05	0.15	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

CLE ELUM PACIFIC PRIDE PROJECT

Cle Elum, Washington

Whiteshield Environmental, Inc.

Client Project #208-023-01

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Mineral Oil (mg/kg)	Oil (mg/kg)
Method Blank	6/27/2008	89	nd	nd	nd
B-4-7.5	6/27/2008	99	nd	nd	nd
B-4-17.5	6/27/2008	92	nd	nd	nd
B-1-2	6/27/2008	92	nd	nd	nd
B-1-2 Dup	6/27/2008	103	nd	nd	nd
B-1-17.5	6/27/2008	98	nd	nd	nd
B-5-2.5	6/27/2008	int	11900 *	nd	nd
B-5-15	6/27/2008	int	947 *	nd	nd
B-3-2	6/27/2008	135	nd	nd	nd
B-3-15	6/27/2008	126	197 *	nd	nd
B-2-5	6/27/2008	107	nd	nd	nd
B-2-20	6/27/2008	100	nd	nd	nd
B-5A-2.5	6/27/2008	91	nd	nd	nd
Practical Quantitation Limit			25	40	40
* Product appears to be weathered Diesel.					
"nd" Indicates not detected at the listed detection limits.					
"int" Indicates that interference prevents determination.					

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

CLE ELUM PACIFIC PRIDE PROJECT
Cle Elum, Washington
Whiteshield Environmental, Inc.
Client Project #208-023-01

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Mineral Oil (mg/kg)	Oil (mg/kg)
Method Blank	6/30/2008	93	nd	nd	nd
B-5B-SUR	6/30/2008	int	5680 *	nd	nd
B-5B-SUR Dup	6/30/2008	int	6810 E *	nd	nd
S-5B-2.5	6/30/2008	83	nd	nd	nd
S-SB-Pile	6/30/2008	int	854 *	nd	nd
Practical Quantitation Limit			25	40	40

* Product appears to be weathered Diesel.

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

E Concentration is above linear calibration range and is an estimate

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

APPENDIX F

PREVIOUS GROUNDWATER REPORT WHITE SHIELD, INC. 11/30/2009

Soil Boring and Groundwater Sampling Report

Former Pacific Pride Fueling Station

903 1ST Street West

Cle Elum, Washington 98922

November 30, 2009

Submitted To:

Renee Hill Trustee for
Estate of Wayne A. Hill
P. O. Box 368
Cle Elum, WA 98922

White Shield Project # 208-023-03

Prepared By:



White Shield, Inc.
23412 68th Avenue
Kent, Washington 98032
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- Figure 1 – Site Location Map
Figure 2 – Approximate Boring Location Map

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- Appendix A- Laboratory Data Sheets

1.0 INTRODUCTION

White Shield, Inc. (WSI) has prepared this report for Renee Hill, the Trustee for the Estate of Wayne A. Hill, to document activities that occurred during the attempted drilling of four borings and the sampling of groundwater from those borings at the former Pacific Pride fueling facility located at 903 1st Street West, Cle Elum, Washington (Figure 1). The Estate formerly leased a portion of the property to James Oil Company for use as a commercial fueling facility. The purpose of the investigation was to determine if the groundwater beneath the site has been impacted by petroleum hydrocarbons from spills and releases at the site. A previous investigation by White Shield in June 2008 revealed the presence of petroleum hydrocarbons in the soil above the State of Washington Model Toxics Control Act (MTCA) Method A cleanup levels in a portion of the site.

2.0 SITE LOCATION AND BACKGROUND

According to the Kittitas County Assessor's Office, the site is approximately 3.39-acres in size, located at 903 1st Street West in Cle Elum, Kittitas County, Washington (Figure 1) and is owned by the Estate of Wayne A. Hill. The Assessor's Office parcel number for the site is 263835. This address is described as being in the Northeast ¼, Southwest ¼, Section 27, Township 20 North, Range 15 East. The parcel is bordered on the south by the I-90 westbound access road, to the east by a Chevron fueling station, the Cle Elum City Cemetery to the north and a logging company equipment storage yard to the west.

Until September 30, 2009, James Oil Company leased approximately ½ acre of the parcel in the center of the parcel for a Pacific Pride commercial fueling facility. The leased portion of the site contained three fuel-dispensing islands with two associated satellite fuel nozzles under a canopy and two aboveground fuel storage tanks (Figure 2). The tanks were "divided" tanks and contained unleaded gasoline, "road" diesel, and "off-road" diesel fuel. According to the Assessor's office, the site has been a commercial fueling station for over 20 years. The original station was in the eastern portion of the parcel but was moved to the central portion of the parcel in 1999 when Mr. James leased the property. According to Ms. Renee Hill, the original underground storage tanks at the "old" station were decommissioned and given a "No Further Action" determination from the Washington State Department of Ecology.

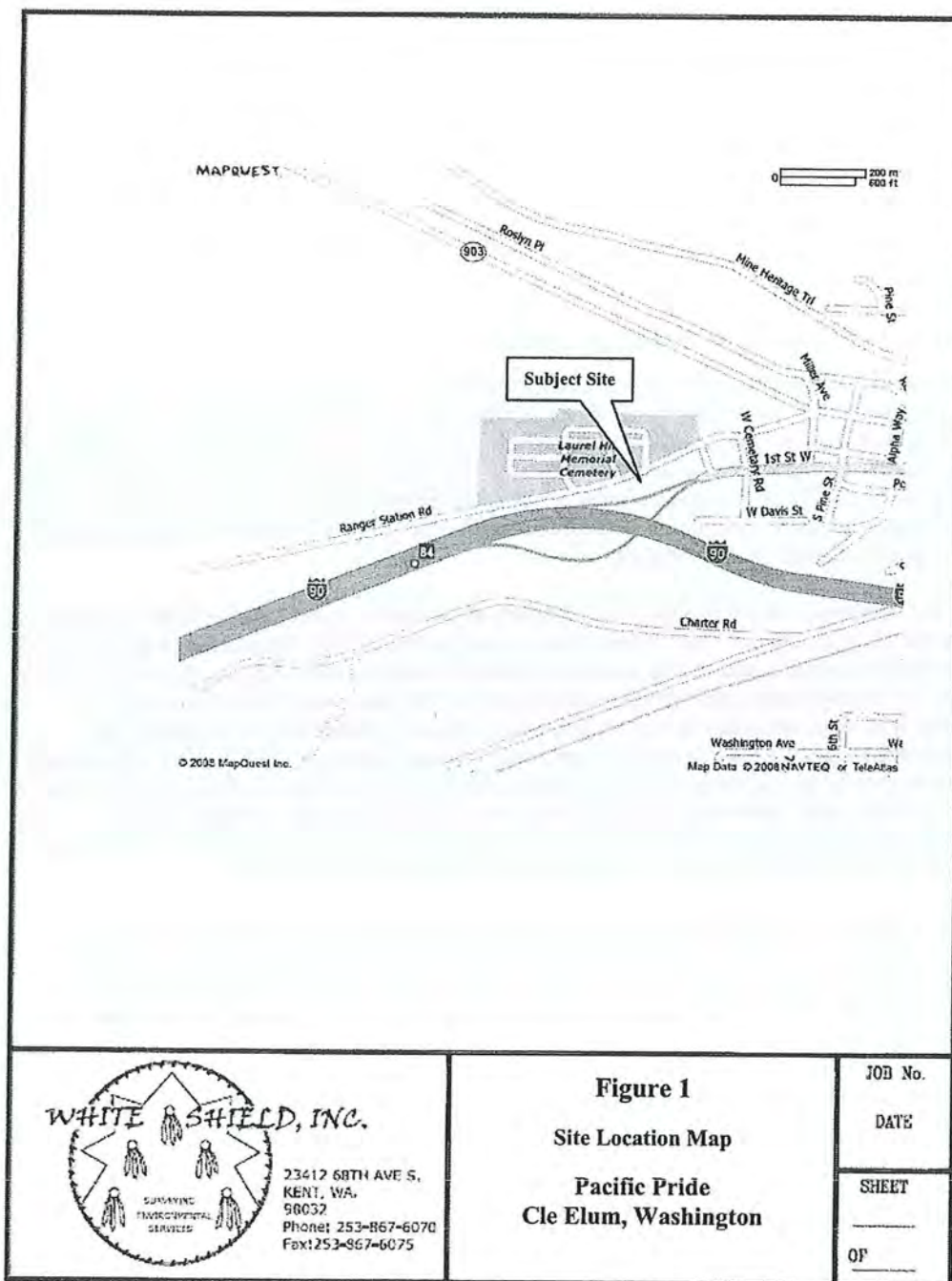
On November 5, 2007, White Shield met with Ms. Hill at the site to discuss her concerns regarding the potential for spills and leaks she had observed to contaminate the soil and/or groundwater beneath the site. At the time of the visit, White Shield observed several areas of stained soil adjacent to the concrete fueling pad as well as areas of staining and cracking on the concrete pad.

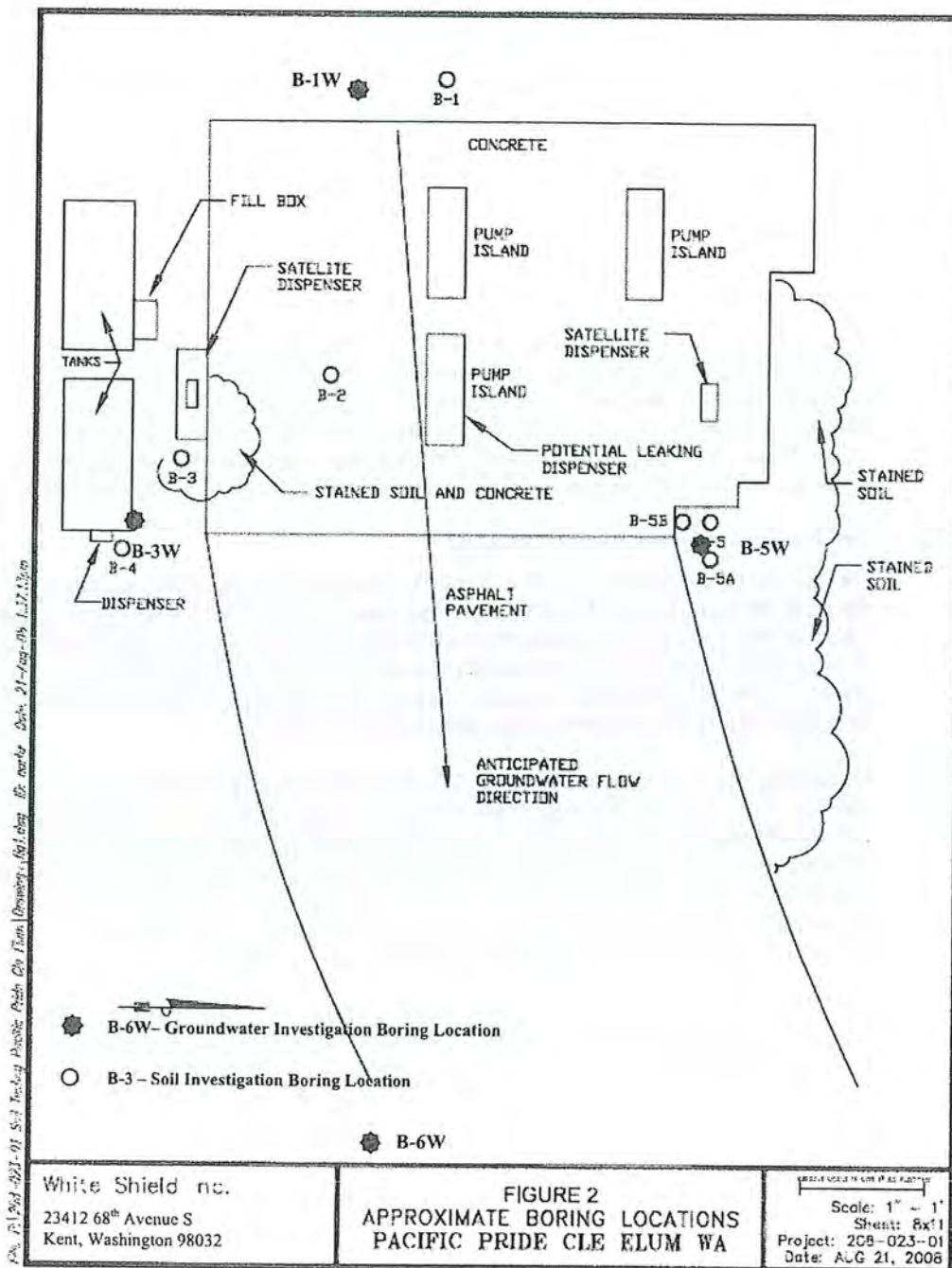
Based on the visual observations made on November 5, 2007, White Shield made the following conclusion:

- The potential for soil and groundwater contamination was high and the best way to determine if there is a problem would be to drill borings and sample both the soil and groundwater.

**Soil Boring and Groundwater Sampling Report
Former Pacific Pride Fueling Station
Cle Elum, Washington**

November 30, 2009





On June 26 and 27, 2008, White Shield oversaw the drilling and sampling of five boreholes. The borings were not advanced to groundwater below 20 feet because according to Mr. James, the Access Agreement did not permit drilling more than 20 feet bgs.

On October 28, 2008, White Shield submitted a proposal to drill four additional borings at the site to the depth of groundwater and sample the groundwater beneath the site. For various reasons related to legal actions being taken by the Estate and Mr. James, the soil boring and the sampling of the groundwater did not take place until October 29, 2009.

3.0 METHODOLOGY

3.1 Utility Location

Prior to any site activity White Shield notified the "one-call" public utility notification service of the planned activities. This free service notifies all of the public and private utility companies in the area as well as Kittitas County and the City of Cle Elum of the planned activities so they can mark the locations of their utilities in the public right-of-ways. White Shield also contracted with Utilities Plus, a private utility locating service, to locate the private utilities on the site and attempt to locate the fuel distribution piping.

3.2 Soil Boring and Groundwater Sampling

On October 29, 2009, White Shield oversaw the attempted drilling of four borings and the groundwater sampling of two borings. The locations of the boreholes (Figure 2) were based on observations made during the June 2008 investigation, the anticipated direction of groundwater flow (to the south), and the location of utilities and piping (water, electric, sewer, fuel distribution piping). They were also placed in areas anticipated to have the potential for the highest concentration of contaminants.

The drilling was conducted by using a hollow-stem auger drill rig operated by Cascade Drilling of Woodinville, Washington at the locations shown in Figure 2. At boring B-6W, located at the southern edge of the property, groundwater was encountered at a depth of approximately 30 feet bgs. Because of the gravel encountered beneath the site, drilling was difficult. At boring locations B-1W, B-5W, the boreholes could not be advanced to groundwater at the target depth of 30 feet bgs. Several attempts were made at each of those two locations and the deepest depth obtainable was 17 feet bgs.

During site activities, Mr. Jeff James was present to observe the drilling and sampling. In addition, Mr. James contracted with DLH Environmental to have a representative on site to observe the drilling and to collect duplicate samples of the water White Shield collected for chemical analysis. The representative from DLH Environmental was Ms Donna Hewitt.

3.2.1 Water Sampling Methods

At borings B-6 W and B-1W, the soils were sampled for lithologic description every 2½ feet using a two-inch diameter split-spoon sampler driven ahead of the auger. The soil at borings B-3W and B-5W were not sampled because the nature

of the soils was consistent across the site and because the borings were adjacent to previous soil borings where soils had been sampled for chemical analysis.

At each location where groundwater was encountered, a temporary PVC well was constructed within the auger and the auger pulled up slightly to reveal the well screen. The well was constructed of 2-inch diameter PVC 0.010-inch slot screen and solid riser pipe. To assist with the filtering of suspended solids within the temporary well sand was placed around the outside of the screen. In an attempt to remove silt, the influence of drilling, and yield a representative sample of the groundwater, each well was initially purged using a disposable bailer. This was followed by purging using a peristaltic pump and tubing lowered down the well casing. The water in boring B-6W appeared to clear during purging; however, the water in boring B-3W did not. This may be a result of a differing amount of finer grained soils at that location. Based on the analytical results discussed below, the suspended sediment in the water from the well did not have an effect on the representativeness sample.

After purging, the groundwater from each of the two borings was sampled by filling clean laboratory provided bottles using the peristaltic pump and polyethylene tubing that was dedicated to each boring. The sample bottles consisted of one 1-liter amber bottle and two 40-milliliter vials for each sample.

Each sample was labeled with the borehole number and the date and the time, the sample was collected. After sampling, the samples were placed in a cooler with ice for delivery to the analytical laboratory (Libby Environmental Chemistry of Olympia, Washington) for analysis. At boring B-6W a second set of sample bottles were collected as a "blind" duplicate sample and labeled B-2W.

All samples were analyzed for gasoline range organics (GRO) including Benzene, Toluene, Ethylbenzene And Xylenes (BTEX) and/or for diesel range organics (DRO). The samples for GRO and BTEX were analyzed by Method NWTPH-Gx and EPA Method 8021B, respectively. Samples for DRO were analyzed by Method NWTPH-Dx.

A geologist licensed in the State of Washington was present at the drill rig for the purposes of logging samples, monitoring drilling operations, recording soil and groundwater data, preparing boring logs, and collecting water samples. The geologist maintained a field log and/or drilling logs during field activities.

The lithologic log recorded by the geologist during the advancement of each of the boreholes was based on visual inspection of the soil samples supplemented by comments and observations of the driller.

3.2.2 Decontamination Methods

Prior to drilling, all drill pipe was steam cleaned to remove potential contaminants. All non-disposable sampling tools were cleaned using an Alcolnox® soap solution and rinsed with de-ionized water.

3.3 Quality Control

Samples were collected according to industry protocols for the collection, documentation, and handling of samples. In the field:

- Each boring was purged in an attempt to remove silt, the influence of drilling, and yield a representative sample of the groundwater
- Samples were collected using dedicated tubing to prevent potential cross-contamination.
- Samples were placed into pre-cleaned laboratory provided sample containers.
- A "blind" duplicate sample was collected to check laboratory precision. Boring location maps were completed prior to leaving the site to document sampling locations.
- Samples were placed immediately into ice chests containing ice.

All sample labels were checked for accuracy and compared with the Chain-of-Custody documentation to provide sample documentation QC. Samples were transported and submitted under standard Chain-of-Custody protocols, and were kept refrigerated until delivery to the project laboratory (Libby Environmental Chemistry Laboratory). The laboratory provided standard QA/QC, which included: surrogate recoveries for each sample, method blank results, duplicate analyses, matrix or blank spiked analyses, and duplicate spiked analyses.

3.4 Investigation Derived Waste

Investigation derived waste for this project consisted of excess soil removed from the borings, purge water from purging the borings, and rinsate from decontamination. These wastes were separated and placed into fifty-five gallon drums. The drums were stored on site until laboratory results were received from the laboratory. Once the results were received, White Shield, Inc. arranged for disposal.

4.0 RESULTS AND CONCLUSIONS

The following sections of this report present the results and conclusions from the sampling of groundwater from two borings at the former Pacific Pride Fueling Station Property located at 903 1st Street West in Cle Elum, Washington. Field activities were completed at the subject site on October 29, 2009. These activities consisted of:

- Attempting to drill, four boreholes to groundwater at the site (Figure 2),
- Collecting water samples from two of the boreholes.

4.1 Site Geologic and Hydrogeologic Conditions

The site is at an elevation of approximately 2000 feet. The topography slopes gently to the south and southeast toward the Yakima River approximately three eighths of a mile to the south and southeast. Based on the topography, it is anticipated that the groundwater flow direction is to south and southeast toward the river. The soils encountered in the borings typically consisted of sandy gravel and cobbles with some silt. Because of the gravel and cobbles, and the difficult drilling two borings could be advanced to

groundwater (borings B-3W and B-6W). Groundwater was measured at 29.31 feet bgs in boring B-6W and at 27.40 feet bgs in boring B-3W.

4.2 Soil and Groundwater Sampling

4.2.1 Groundwater Sample Results

Three groundwater samples were collected from the borings drilled with the auger. One sample was a "blind" duplicate at boring B-6W. One sample was collected from near the southern most portion of the property in what was anticipated to be in a direction down-gradient from the former activities at the site. The second sample was collected near a former satellite fueling station and the aboveground fuel storage tanks (Figure 2). Table 1 shows the results of the analyses. The complete laboratory data sheets are attached in Appendix A. Petroleum hydrocarbons were not detected in any of the samples analyzed.

Table 1 – Groundwater Analysis Results

Sample Number	Soil Sample Location	Date Analyzed	Sample Depth	NW TPH-Gx	Volatile Aromatic Hydrocarbons				NWTPH-Dx
				Gasoline (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylene (ug/l)	Diesel (ug/l)
B-6W	Borehole B-6W	11/02/2009	30'	ND	ND	ND	ND	ND	ND
B-2W	Borehole B-6W	11/02/2009	30'	ND	ND	ND	ND	ND	ND
B-3W	Borehole B-3W	11/02/2009	30'	ND	ND	ND	ND	ND	ND
MTCA Method A Cleanup Standards				800/1000*	5	1,000	700	1,000	500
Practical Quantitation Limit				100	1	2	1	3	200

Sample B-2W is a blind duplicate of Sample B-6W
ND: Indicates not detected

For TPH Gasoline, 800 ug/l is the cleanup standard if benzene is present; 1000 ug/l is the standard if benzene is not present

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this investigation, White Shield concludes that groundwater beneath the former Pacific Pride Fueling Station in Cle Elum, Washington occurs at a depth of approximately 30 feet bgs with an apparent flow direction to the south. Groundwater samples collected from two locations where contamination was most likely to be found at the site (down-gradient of the activities at the site and near the former aboveground fuel storage tanks) did not reveal the presence of gasoline or diesel range organics in the groundwater beneath the site.

November 30, 2009

Based on the sample results, it is White Shield's opinion that unless additional information is discovered indicating potential groundwater contamination, no further action is needed regarding groundwater at the site.

6.0 LIMITATIONS

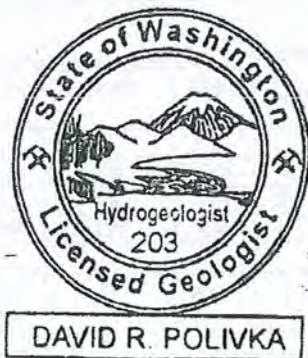
In performing our professional services, WSI uses a degree of care ordinarily exercised under similar circumstances by members of our profession. No warranty, expressed or implied, is made or intended. Our conclusions and recommendations, developed from our field and laboratory investigation reported herein, are based upon this firm's understanding of the project and are in concurrence with generally accepted practice. Should questions arise from this report please contact White Shield Inc. at 253-867-6070 or 503-547-0100.

David R. Polivka

David R. Polivka P.G./ P.H.G.
Environmental Services Manager


Stuart W. Fricke

Stuart Fricke
Principal-in-Charge



APPENDIX A

Laboratory Data Sheets



Libby Environmental, Inc.

4139 Libby Road N.E., Olympia, WA 98506-2518

November 5, 2009

Dave Polivka
White Shield, Inc.
23412 68th Avenue South
Kent, WA 98032

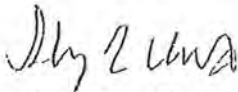
Dear Mr. Polivka:

Please find enclosed the analytical data report for the Pacific Pride Project located in Cle Elum, Washington. Water samples were analyzed for Gasoline by NWTPH-Gx and BTEX by EPA Method 8260B and Diesel by NWTPH-Dx on November 2, 2009.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is included.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Sherry L. Chilcutt
President
Libby Environmental, Inc.

Phone (360) 352-2110 Fax (360) 352-4154 • libbyenv@aol.com

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

PACIFIC PRIDE PROJECT
Cle Elum, WA
Whiteshield
Client Project #208-023-02
Libby Project No.L091031-1

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Water

Sample Number	Date Analyzed	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	Gasoline (ug/l)	Surrogate Recovery (%)
Method Blank	11/2/09	nd	nd	nd	nd	nd	105
LCS	11/2/09	98%	102%				109
B-6W	11/2/09	nd	nd	nd	nd	nd	108
B-2W	11/2/09	nd	nd	nd	nd	nd	109
B-3W	11/2/09	nd	nd	nd	nd	nd	117
Trip Blank	11/2/09	nd	nd	nd	nd	nd	125
Trip Blank dup	11/2/09	nd	nd	nd	nd	nd	112
MS	11/2/09	98%	102%				107
Practical Quantitation Limit		1	2	1	3	100	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Deanna M. Donovan

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

PACIFIC PRIDE PROJECT

Cle Elum, Washington

White Shield Inc.

Client Project #208-023-02

Libby Project No.L091031-1

Analyses of Diesel (NWTPH-Dx) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (ug/l)
Method Blank	11/2/2009	102	nd
B-6W	11/2/2009	100	nd
B-2W	11/2/2009	97	nd
B-3W	11/2/2009	101	nd
Trip Blank	11/2/2009	106	nd
B-6W Dup.	11/2/2009	95	nd
Practical Quantitation Limit			200

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Athanasius Shaw

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

Date: 10-29-04 Page: 1 of 1

Project Manager: J. Delisio

Project Name: Upper Te Anak

Location: C-10 Elmer

Collector: J. Delisio Date of Collection: 10-29-04

Address: _____

Phone: _____

Fax: _____

Client Project # 2003-022-02

Sample Number	Depth	Time	Sample Type	Container Type	VOL 8021B	VOL 8021B BTEX ONLY	SEMI VOL 8270	NWTPH-HCID	NWTPH-GX	NWTPH-DX	PAH 8270	PCBS 8082	MTCA 5 Metals	Field Note# Containers
1 3-4-03		1:27 P	W	W										
2 3-4-03		1:30 P	W	W										
3 3-4-03		5:15 P	W	W										
4 3-4-03			W	W										
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														

Relinquished by: _____	Date / Time: 10/29/04	Received by: _____	Date / Time: 10/29/04	Remarks: Std.
Relinquished by: _____	Date / Time: 10/29/04	Received by: _____	Date / Time: 10/29/04	
Relinquished by: _____	Date / Time: 10/29/04	Received by: _____	Date / Time: 10/29/04	
Total Number of Containers				TAT 24HR 48HR 5-Day

APPENDIX G

PACIFIC GROUNDWATER GROUP SAMPLING, ANALYSIS AND SUPPLEMENTAL DATA 2010

Subj: **FW: James Oil results**
Date: 5/26/2010 2:16:17 P.M. Pacific Daylight Time
From: janet@PGWG.COM
To: Dlhenvironmental@aol.com, jamesoil.jeff@skynetbb.com
CC: inger@PGWG.COM

Hi, Donna.

Please find attached our analytical results for the most recent cleanup at James Oil. According to Inger, sample PGG-07 is the split sample for your sample 51810-25. I understand that the sample is primarily hard-packed gravel, roadbase. So, it makes sense that sample variability is high because only the fines can be collected as sample and, further, only fines are analyzed by the lab. It is likely a nonissue because the PGG result illustrates that the roadbase material does not exceed, even if it was considered "soil" and therefore subject to the cleanup level. On other sites, my Ecology site managers have stated that soil cleanup levels do not apply to roadbase.

The reason we called Mike Erdahl was to find out if 51810-25 would benefit from silica gel cleanup to remove biogenic hydrocarbons. Based on a visual look, he thinks not. So, I am wondering how to handle your one exceedance. You could consider referring to our sample and state the following logic:

1. the material is roadbase, so MTCA soil cleanup levels may not apply
2. the material is compacted gravel, so any analysis of it is biased low because only fines could be sampled or analyzed
3. the second sample of the same material does not exceed the cleanup level indicating the exceeding concentration is not confirmed

The above logic is probably sufficient to address the analytical result. We could, though, do more such as:

1. do silica gel cleanup and reanalyze
2. analyze another aliquot of the sample to re-confirm

Your thoughts? I know your conceptual model is that this sample was collected outside of James Oil's fueling, traffic, and parking areas, but I was wondering how you intend to address this exceedance in your report.

I look forward to hearing from you.

Kind regards,

Janet Knox LG | Principal Environmental Geochemist | Pacific Groundwater Group | (206) 329-0141 | www.pgwg.com

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 24, 2010

Janet Knox, Project Manager
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

Dear Ms. Knox:

Included are the results from the testing of material submitted on May 20, 2010 from the James Oil, F&BI 005188 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PGG0524R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 20, 2010 by Friedman & Bruya, Inc. from the Pacific Groundwater Group James Oil, F&BI 005188 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Pacific Groundwater Group</u>
005188-01	051810-PGG06
005188-02	051810-PGG07
005188-03	051810-PGG08

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/10
Date Received: 05/20/10
Project: James Oil, F&BI 005188
Date Extracted: 05/21/10
Date Analyzed: 05/21/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
051810-PGG07 005188-02	130 x	380	97
Method Blank 00-0788 MB2	<50	<250	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/10

Date Received: 05/20/10

Project: James Oil, F&BI 005188

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 005186-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	96	105	63-146	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

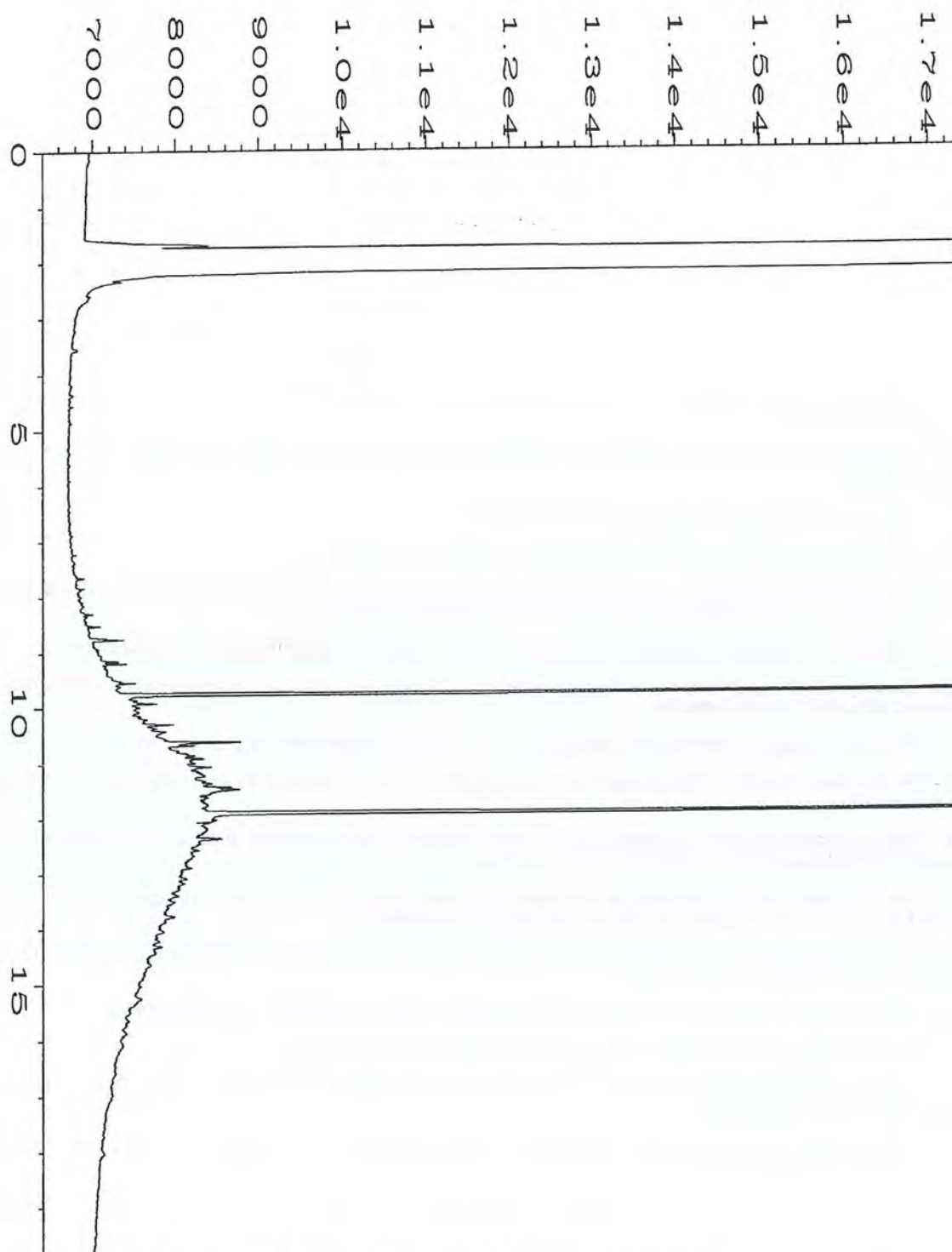
pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Data File Name	: C:\HPCHEM\1\DATA\05-21-10\008F0201.D	Page Number	: 1
Operator	: KAO	Vial Number	: 8
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005188-02	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 21 May 10 01:15 PM	Analysis Method	: SIMDNEW.MTH
Report Created on:	24 May 10 12:44 PM		

DRAFT

Date of Report: 05/25/10
Date Received: 05/20/10
Project: James Oil, F&BI 005188
Date Extracted: 05/25/10
Date Analyzed: 05/25/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery) (Limit 50-150)
051810-PGG06 005188-01	<50	<250	92
051810-PGG08 005188-03	<50	<250	87
Method Blank 00-0798 MB2	<50	<250	92

Subj: **James Oil - PGG related figure/lab reports.**
 Date: 6/7/2010 4:03:34 P.M. Pacific Daylight Time
 From: inger@PGWG.COM
 To: Dlhenviromental@aol.com
 CC: janet@PGWG.COM, jamesoil.jeff@skynetbb.com

Hi Donna –

Janet asked me to email you an internal figure we've generated, brief descriptions of sample locations (I think this is a repeat of information you already have), and copies of our analytical results (which I believe you also already have). Regardless, here it is in one package.

The following bullets summarize analytical results of the soil samples collected by PGG at the James Oil site. All samples were "splits" with DLH samples with the exception of sample 42810-PGG01. Analytical results are attached. A draft site figure that presents the approximate sample locations is also attached.

Donna – for my reference I've included DLH sample locations (from a figure you provided earlier on plus observations on May 18, 2010) – but I think I may be missing one floor sample location from the south-east corner. On the figure "Phase 1 Excavation" is the excavation in April; Phase 2 is the excavation in May 2010.

Sample 42810-PGG01

- Soil sample collected near the south canopy piling at a depth of about 3 feet BEFORE further soil was excavated in this area. This sample represents soil that was observed to "flow" out of the side of the partial excavation at the end of April 27, 2010 site work. Further soil was excavated from this area on April 28, 2010 and May 18, 2010.

Sample 42810-PGG02 (split with DLH)

- Sample collected from the south canopy piling excavation after the limits of excavation in this area had been reached on April 28, 2010. Specifically, soil sample collected near the bottom of the east sidewall of the excavation in this area. Further excavation did not occur in this area after the sample was collected on April 28, 2010; however, the excavation was deepened and re-sampled on May 18, 2010.

Sample 42810-PGG03 (split with DLH)

- Soil sample collected near the "B5 area" where stained soil had been observed and documented in earlier White Shield reports. Specifically, this soil sample was collected from the floor of the excavation in the unpaved area south-east of the former concrete slab. Further excavation did not occur in this area after the sample was collected on April 28, 2010.

Sample 42810-PGG04 (split with DLH)

- Soil sample collected near the "B5 area" where stained soil had been observed and documented in earlier White Shield reports. Specifically, this soil sample was collected from the south sidewall of the excavation in the unpaved area south-east of the former concrete slab. Further excavation did not occur in this area after the sample was collected on April 28, 2010; however additional excavation and re-sampling in this area occurred on May 18, 2010.

Sample 42810-PGG05 (split with DLH)

- Soil sample collected near the south-western area of the former concrete pad in an area where the former concrete pad met the asphalt driveway. Stained soil was visible when concrete and asphalt were removed from this area so additional soil was removed. The soil sample was collected from the floor of the excavation. Further excavation did not occur in this area after the sample was collected on April 28, 2010.

Sample 051810-PGG06 (split with DLH)

- Soil sample collected from the north-east sidewall following re-excavation in the vicinity of DLH#3 on May 18, 2010. Specifically, the soil sample was collected from soil underlying the asphalt.

Sample 051810-PGG07 (split with DLH)

- Soil sample collected from the north-east sidewall following re-excavation in the vicinity of DLH#3 on May 18, 2010. Specifically, the soil sample was collected from the gray layer.

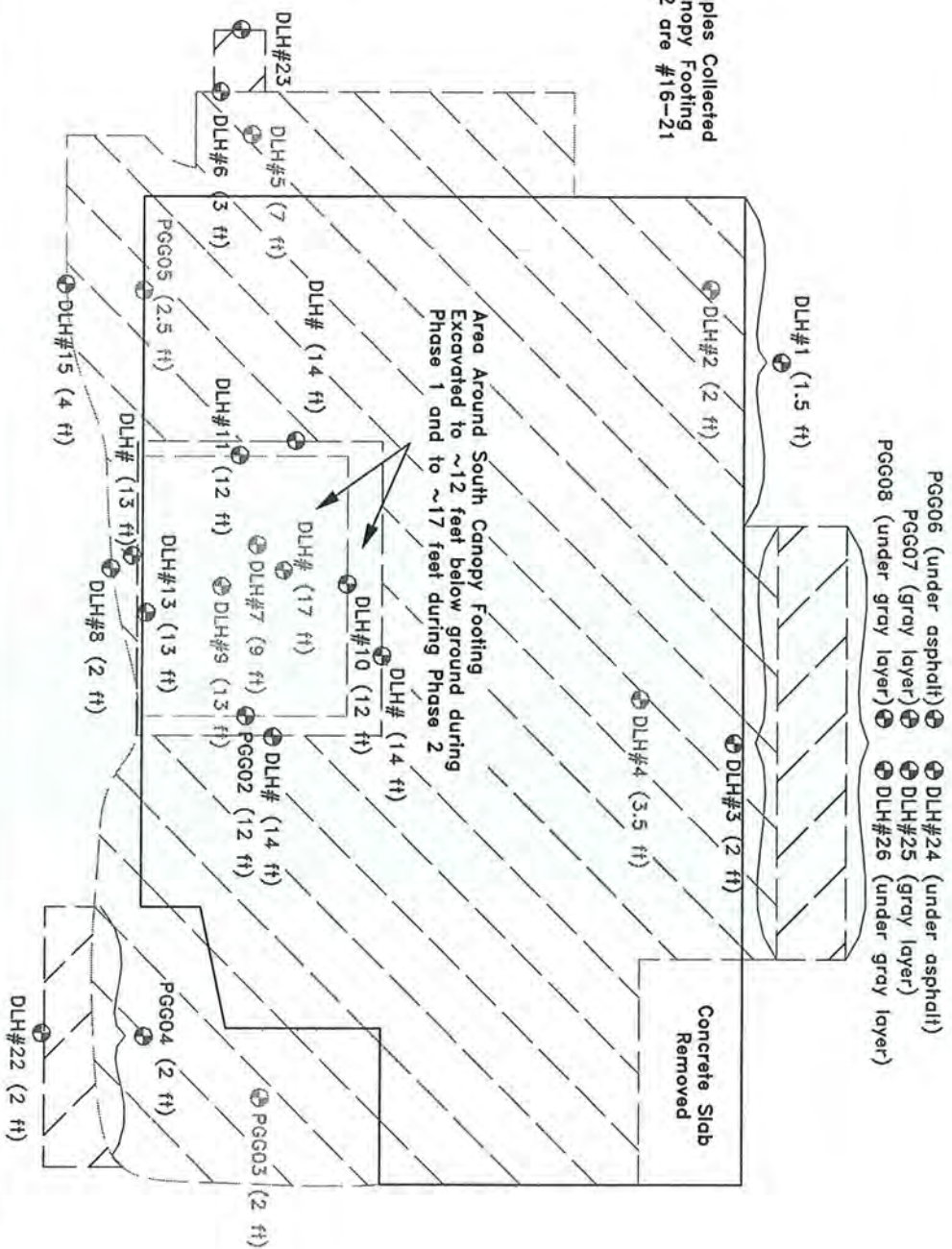
Sample 051810-PGG08 (split with DLH)

- Soil sample collected from the north-east sidewall following re-excavation in the vicinity of DLH#3 on May 18, 2010. Specifically, the soil sample was collected beneath the gray layer.

Inger

Inger Jackson | Hydrogeologist | Pacific Groundwater Group | (206) 329-0141

Note: DLH Samples Collected from South Canopy Footing During Phase 2 are #16-21



LEGEND

Former Concrete Slab (Removed Phase 1)

Approximate Limits of Phase 1 Excavation (various depths)

Approximate Limits of Phase 2 Excavation (various depths)

DLH#6: Approximate Location Sidewall Soil Sample (DLH = Donna Hewitt sample, PGG = PGG sample)

PGG05: Approximate Location Floor Soil Sample (DLH = Donna Hewitt sample, PGG = PGG sample)

0 5 10
Scale In Feet

DRAFT FIGURE 1

James Oil Pacific Pride Site Map and Sample Locations, Cle Elum WA

JK1001, James Oil Pacific Pride

PGG

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 24, 2010

Janet Knox, Project Manger
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

Dear Ms. Knox:

Included are the results from the testing of material submitted on May 20, 2010 from the James Oil, F&BI 005188 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PGG0524R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 20, 2010 by Friedman & Bruya, Inc. from the Pacific Groundwater Group James Oil, F&BI 005188 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Pacific Groundwater Group</u>
005188-01	051810-PGG06
005188-02	051810-PGG07
005188-03	051810-PGG08

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/10
Date Received: 05/20/10
Project: James Oil, F&BI 005188
Date Extracted: 05/21/10
Date Analyzed: 05/21/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 50-150)
051810-PGG07	130 x	380	97
005188-02			
Method Blank	<50	<250	91
00-0788 MB2			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/24/10

Date Received: 05/20/10

Project: James Oil, F&BI 005188

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 005186-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	96	105	63-146	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

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js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

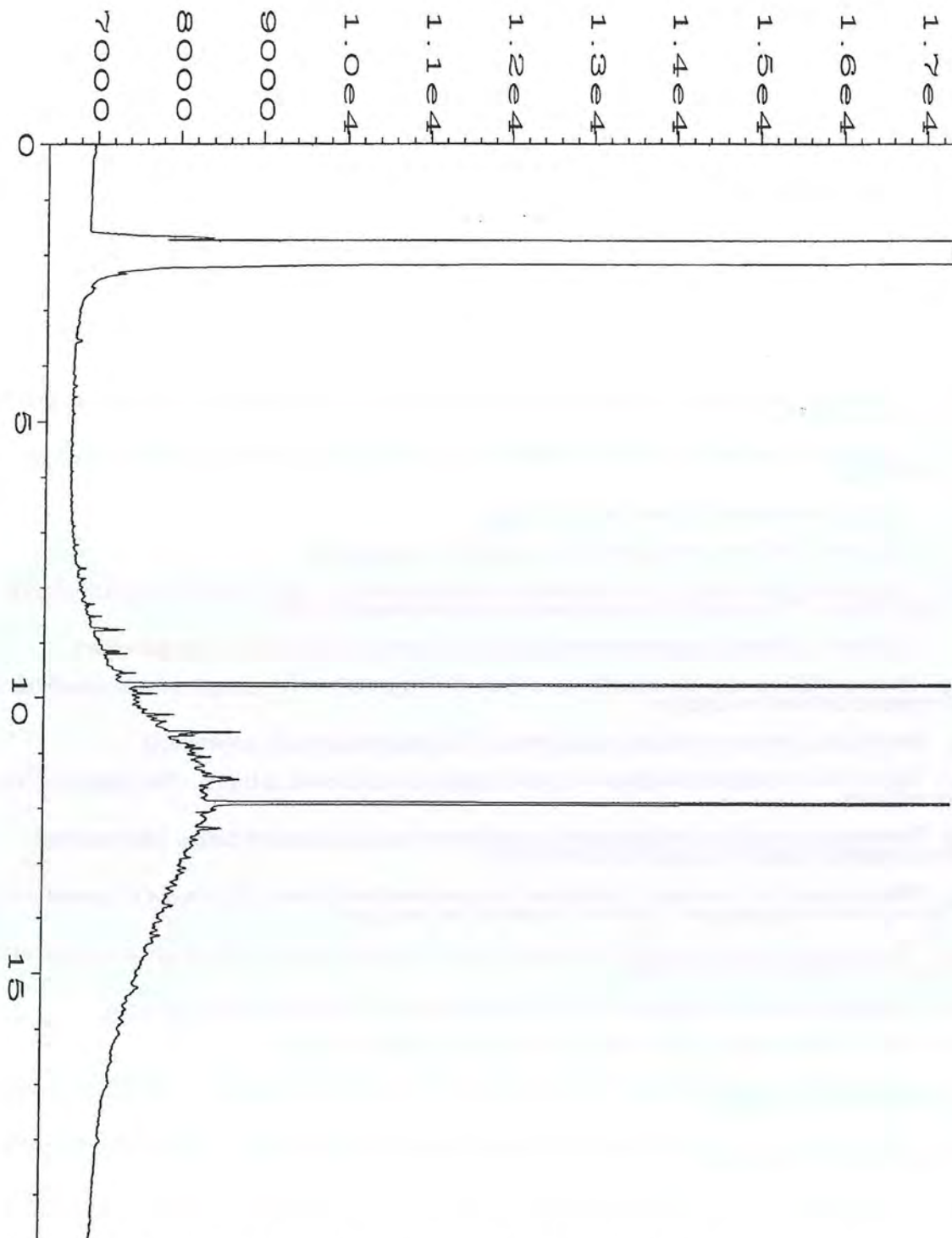
pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Data File Name	: C:\HPCHEM\1\DATA\05-21-10\008F0201.D	Page Number	: 1
Operator	: KAO	Vial Number	: 8
Instrument	: GC1	Injection Number	: 1
Sample Name	: 005188-02	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 21 May 10 01:15 PM	Analysis Method	: SIMDNEW.MTH
Report Created on:	24 May 10 12:44 PM		

US/BO

Page # of

TURNAROUND TIME
Standard (2 Weeks)

☐ RUSH _____
Rush charges authorized by:

SAMPLE DISPOSAL

1 Dispose after 30 days
2 Return samples
3 Will call with instructions

ME 05/20/10

Page # of

PO #

Rush charges authorized by:

SAMPLE DISPOSAL

1 Dispose after 30 days
2 Return samples
3 Will call with instructions

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
 Rush charges authorized by: _____

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

TIME

5

1015

100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 26, 2010

Janet Knox, Project Manger
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

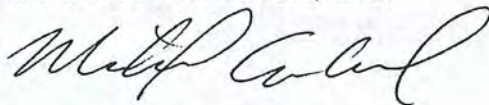
Dear Ms. Knox:

Included are the additional results from the testing of material submitted on May 20, 2010 from the James Oil, F&BI 005188 project. There are 4 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Inger Jackson
PGG0526R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

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005188-01	051810-PGG06
005188-02	051810-PGG07
005188-03	051810-PGG08

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/26/10
Date Received: 05/20/10
Project: James Oil, F&BI 005188
Date Extracted: 05/25/10
Date Analyzed: 05/25/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 50-150)
051810-PGG06 005188-01	<50	<250	92
051810-PGG08 005188-03	<50	<250	87
Method Blank 00-0798 MB2	<50	<250	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/26/10

Date Received: 05/20/10

Project: James Oil, F&BI 005188

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 005194-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	97	98	73-135	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

VS1/ B01

Phone # 206

Fax # 206 329 0141

James Dill

REMARKS
D.

These hold 11/17/75 / 80113 analysis
unless gas is given in diesel chromatogram

TURNAROUND TIME

Standard (2 Weeks)

HSH

charges authorized by

SAMPLE DISPOSAL

dispose after 30 days

Call with instructions

FORMS\COC\COC.DOC

TIME

[Signature]

Relinquished by:

Received by:

Kortland ON

42

S-20-10

1643

Rede 40

[illegible]

V. dense, gravelly soil -
difficult to collect soil.
Too coarse/dense to
collect 2/35.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 7, 2010

Janet Knox, Project Manger
Pacific Groundwater Group
2377 Eastlake Ave East
Seattle, WA 98102

Dear Ms. Knox:

Included are the results from the testing of material submitted on April 29, 2010 from the James Oil JK1001.02, F&BI 004318 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
PGG0507R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 29, 2010 by Friedman & Bruya, Inc. from the Pacific Groundwater Group James Oil JK1001.02, F&BI 004318 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Pacific Groundwater Group</u>
004318-01	42810-PGG01
004318-02	42810-PGG02
004318-03	42810-PGG03
004318-04	42810-PGG04
004318-05	42810-PGG05

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/10
Date Received: 04/29/10
Project: James Oil JK1001.02, F&BI 004318
Date Extracted: 04/30/10
Date Analyzed: 05/03/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
42810-PGG01 004318-01	4,000	900	98
42810-PGG02 004318-02	<50	<250	95
42810-PGG05 004318-05	<50	<250	95
Method Blank 00-0627 MB2	<50	<250	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/10
Date Received: 04/29/10
Project: James Oil JK1001.02, F&BI 004318
Date Extracted: 04/30/10
Date Analyzed: 05/03/10

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

**Sample Extracts Passed Through a
Silica Gel Column Prior to Analysis**

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
42810-PGG03 004318-03	540	1,400	86
42810-PGG04 004318-04	380 x	2,200	89
Method Blank 00-0627 MB2	<50	<250	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/10

Date Received: 04/29/10

Project: James Oil JK1001.02, F&BI 004318

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 004274-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	96	92	63-146	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/10

Date Received: 04/29/10

Project: James Oil JK1001.02, F&BI 004318

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 004274-06 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	98	99	73-135	1

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

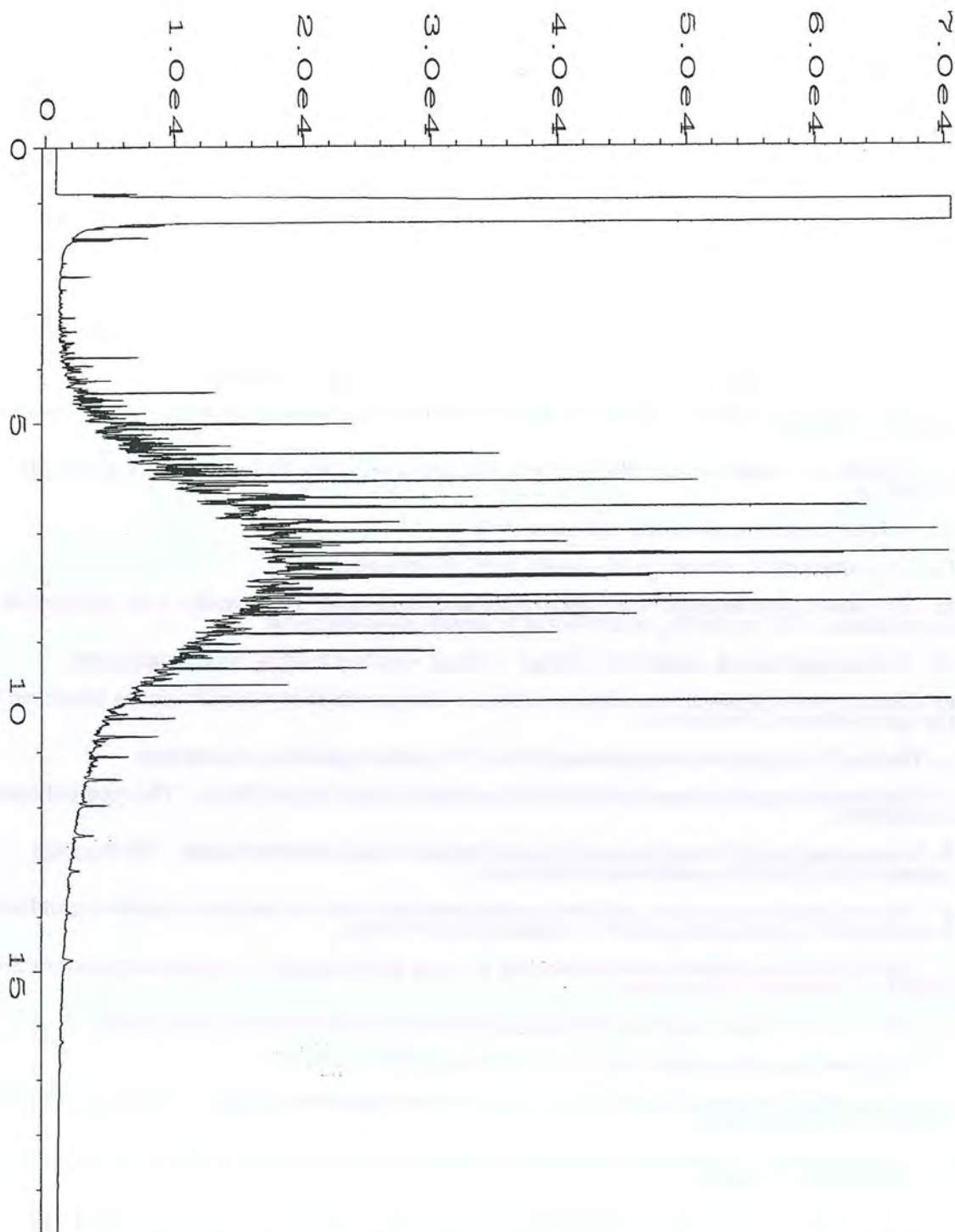
pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

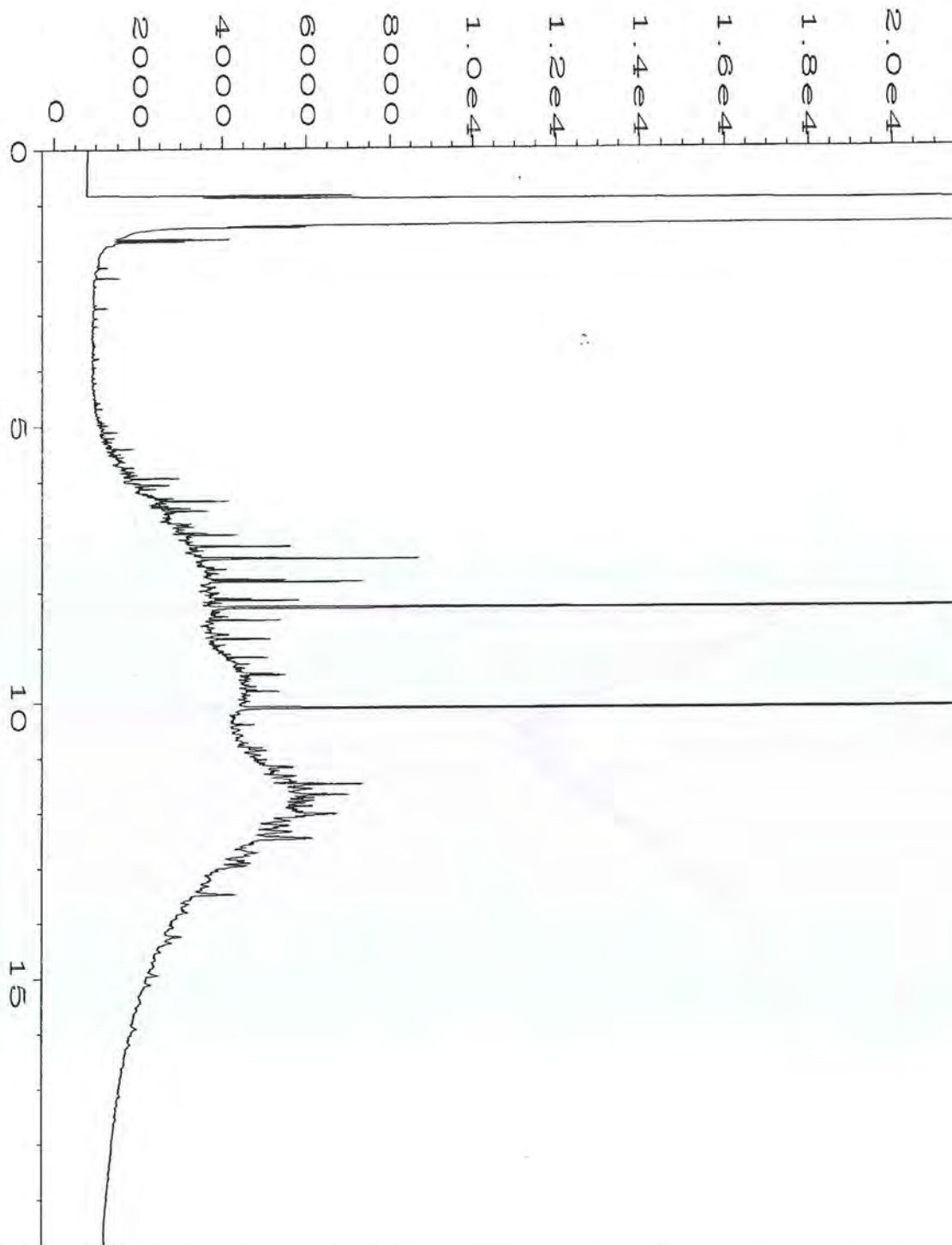
ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

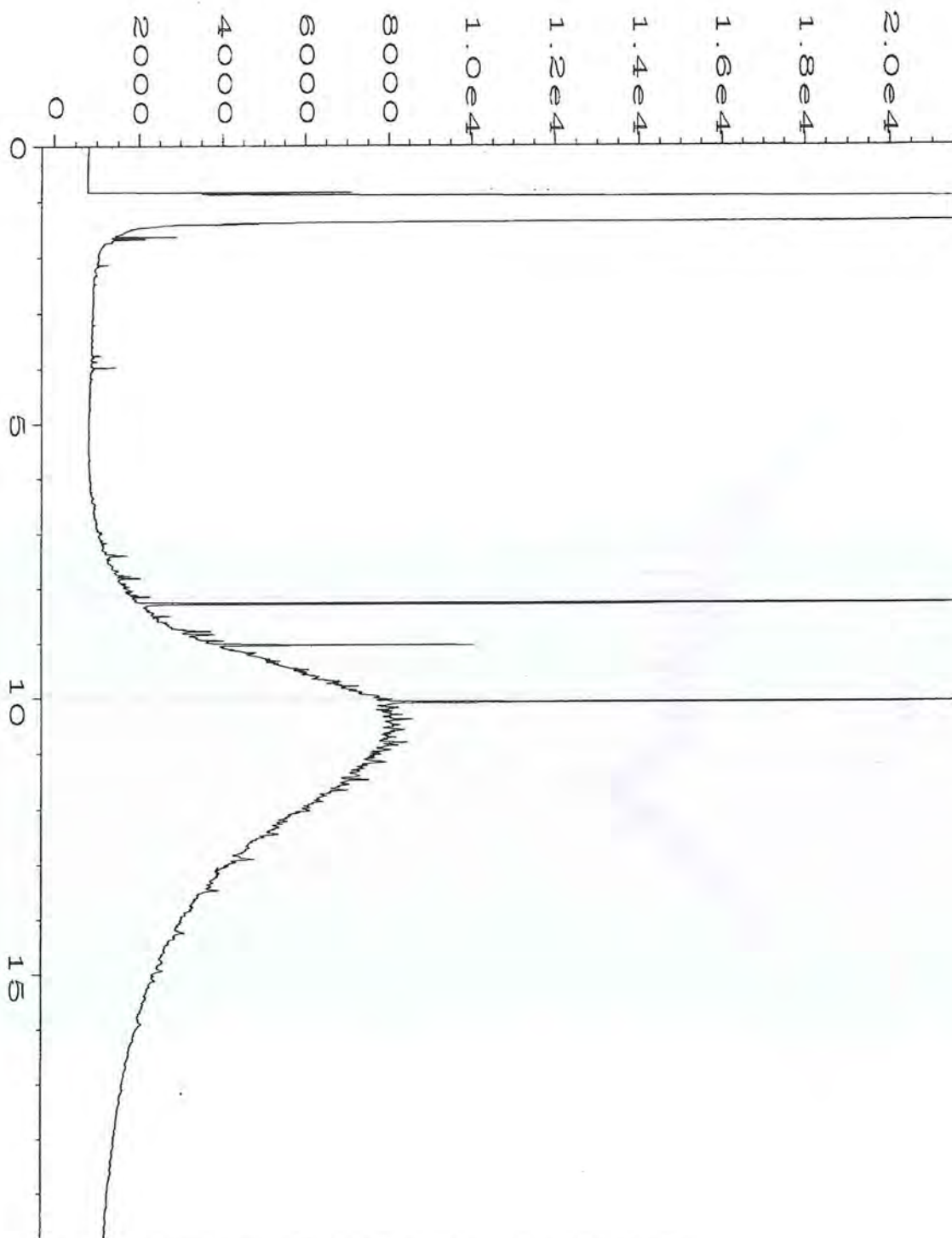
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Data File Name	: C:\HPCHEM\4\DATA\05-03-10\026F0501.D	Page Number	: 1
Operator	: ay	Vial Number	: 26
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004318-01	Sequence Line	: 5
Run Time Bar Code:		Instrument Method	: TPHD.MTH
Acquired on	: 03 May 10 08:14 PM	Analysis Method	: TPHD.MTH
Report Created on:	04 May 10 01:25 PM		



Data File Name	: C:\HPCHEM\4\DATA\05-03-10\029F0501.D	Page Number	: 1
Operator	: ay	Vial Number	: 29
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004318-03 sg	Sequence Line	: 5
Run Time Bar Code:		Instrument Method	: TPHD.MTH
Acquired on	: 03 May 10 09:34 PM	Analysis Method	: TPHD.MTH
Report Created on:	: 04 May 10 01:25 PM		



Data File Name	: C:\HPCHEM\4\DATA\05-03-10\030F0501.D	Page Number	: 1
Operator	: ay	Vial Number	: 30
Instrument	: GC#4	Injection Number	: 1
Sample Name	: 004318-04 sg	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	TPHD.MTH
Acquired on	: 03 May 10 10:01 PM	Analysis Method	: TPHD.MTH
Report Created on:	04 May 10 01:25 PM		

004318

SAMPLE CHAIN OF CUSTODY

ME 04/29/10

152/ D01

Send Report To Janet KnoxCompany Pacific Groundwater GroupAddress 2377 Eastlake Ave ECity, State, ZIP Seattle, WA 98102Phone # 339 0141 Fax # 339 6968SAMPLES (signature) [Signature]PROJECT NAME/NO. James OilJK1001.02PO # JK1001.02

REMARKS

Hold analysis until contacted by PGG. (Jackson or J. Knox) 4/30/10 me

Page #

of

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED							Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Silica Gel	
42810-PC601	01 A-E	4/28/10	1040	Soil	5	X	X-X						* Diesel-extended
42810-PC602	02 A-E	4/28/10	1315	Soil	5	X	X	X					✓ per JT
42810-PC603	03 A-E	4/28/10	1550	Soil	5	X	X	X					4/30/10
42810-PC604	04 A-E	4/28/10	1610	Soil	5	X	X	X					MG
42810-PC605	05 A-E	4/28/10	1630	Soil	5	X	X	X					* hold sample unless seen in diesel drums
													per JT me.

Relinquished by: [Signature] SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029

Pl. (206) 285-8282

Fax (206) 283-5044

FORMS\COG\COG.DOC

Received by: [Signature]

Inner Jackson

PGG

4/29/10

1358

Relinquished by: [Signature]

E. Sandquist

PGG

4/29/10

1358

Received by:

Samples received at 3

00

**Site Assessment Report:
Underground Storage Tank Removal & Soil Remediation
Pacific Pride Facility (G&W Oil and Wood, Inc.)
903 West First Street, Cle Elum, WA
Assessment and Remediation Consulting Services (ARCS)
June 28, 1999**



ARCS

Site Assessment Report:
**Underground Storage Tank Removal
&
Soil Remediation**

Prepared for:

**Pacific Pride Facility
(G&W Oil and Wood, Inc.)
903 West First Street
Cle Elum, Washington 98922**

#100082
U 8107

On Behalf of:

**James Oil Company, Inc.
666 Griffin Avenue
Enumclaw, Washington 98022**

Date:

June 28, 1999

Prepared By:

Assessment and Remediation Consulting Services (ARCS)
475 SE Sycamore Lane
Issaquah, Washington 98027
(425) 837-0220 443-7130

Eric K. Chapman, CHMM
Principal / Environmental Scientist

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Attachments

Attachment A – Ecology Notifications and Local Permits

Attachment B – Tank Cleaning Certificate

Attachment C – Laboratory Data Sheets with Chain-of Custody Documentation

Attachment D - Photographs

EXECUTIVE SUMMARY

This report documents the closure of four USTs at the Pacific Pride card lock fueling facility in Cle Elum, Washington. Two of the USTs were removed and the other two were closed in-place due to their location beneath an existing building.

Visual and olfactory indications of contamination were present in soils surrounding the diesel UST and beneath the fuel island area. Contaminated soils were excavated from these areas and stockpiled on site for treatment using landfarming and bioremediation techniques.

Analytical results of soil samples collected from the gasoline UST excavation, piping trench, and fuel island found that concentrations of gasoline-range TPH and BTEX were not detected. Diesel-range TPH was detected in the diesel UST excavation, but at concentrations that were below the Ecology clean up levels. Heavy oil was identified in soils collected from the base of the diesel UST excavation at concentrations that slightly exceed the Ecology cleanup levels.

The majority of contamination has been removed from the affected areas of the site. Ground water was not encountered in any of the excavations, the deepest of which was advanced to 12 feet bsg. Any remaining petroleum hydrocarbons in the soil will naturally attenuate, and should not pose any adverse risk to human health or the environment.

1.0 INTRODUCTION

This report documents the closure of four underground storage tanks (USTs) at the Pacific Pride facility located at 903 West 1st Street in Cle Elum, Washington. The USTs included two 6,000-gallon gasoline storage tanks, a 2,000-gallon gasoline storage tank, a 12,000-gallon diesel fuel tank. The site has been used as a card lock fueling facility for the past several years.

Presented in this report is a description of the methods used to remove the USTs, sample collection procedures, a summary of laboratory analytical results, and conclusions and recommendations. Included as attachments to this report are site diagrams, tank cleaning certificates, laboratory data sheets, and photographs.

1.1 Site Information

The subject site is located at 903 West 1st Street in Cle Elum, Washington (see Vicinity Map). The site is a Pacific Pride card lock fueling station operated by James Oil Company. The owner of the property is Mr. Wayne Hill, P.O. Box 369, Cle Elum, WA 98932.

Existing structures on the site at the time of the UST closures included an automotive garage/office building, a storage building, and a new card lock fueling facility with aboveground storage tanks. The property consists of several acres of land located on the north side of West 1st Street. The local topography slopes to the south/southeast toward the Yakima River.

One of the 6,000-gallon gasoline USTs and the 12,000-gallon diesel UST were located on the south side of the property, near the existing fence line. The other two USTs were located beneath the garage/office building, as indicated on the Site Diagram. The two USTs located beneath the building were closed in-place, and the other two tanks were removed. Each tank was connected to piping that lead to a central fueling island as indicated on the Site Diagram. Pumps and piping were removed as part of the UST closures.

1.2 UST Contractor and Site Assessor Information

Gator Foaming of Sumner, Washington supervised the UST closure activities. Ms. Elizabeth Carter of Gator Foaming was the on-site UST Decommissioning Supervisor. Eric Chapman of Assessment and Remediation Consulting Services (ARCS) conducted the UST site assessment activities and prepared this report (IFCI Certification # 32-US-32003003).

2.0 FIELD ACTIVITIES

This section describes the UST closure and site assessment activities conducted at the site. Notification to remove the tanks was sent to the Department of Ecology in December 1998. Permits to remove the tanks were obtained from the Kittitas County Department of Building and Fire Safety. Copies of the Ecology notification and local permits are presented in Attachment A.

2.1 Diesel and Gasoline UST Removals

The UST closures were conducted on May 18, 1999. Residual fuel remaining in the tanks was removed by Pacific Pride and then tanks were cleaned and rinsed by Coastal Tank Cleaning, Inc. A tank cleaning certificate is present in Attachment B. The two tanks scheduled for removal were then inerted using solid carbon dioxide (dry ice). Once the vapors inside of the tank were below the lower explosive limit, the tanks were removed.

The 6,000-gallon gasoline tank and 12,000-gallon diesel tank were both partially exposed, with approximately 2/3 of the tank buried below surface grade (see photographs). A track-mounted excavator was used to excavate soil from the north side of each tank to allow for removal. As soils were excavated, a photo-ionization detector (PID) was used to monitor organic vapors. No organic vapors were detected in soils excavated from the sides of the gasoline or diesel USTs. In addition, no staining or petroleum odors were observed in the excavated soils.

The USTs were removed using the excavator and placed on a level area near the excavations. The exteriors of the USTs were visually inspected for indications of holes or corrosion that may have allowed a release of product. No holes or excessive corrosion were observed on the exterior of either UST. The tanks were cut on site and the metal was later taken off-site for disposal.

Soil samples were collected from the base and sidewalls of the UST excavations as described in a later section of this report. No visual or olfactory indications of contamination were observed in the gasoline UST excavation. There were, however, indications of petroleum-contamination in the diesel UST excavation. A further discussion of the extent of contamination is discussed in a separate section of this report.

2.2 In-Place Closure of Gasoline USTs

The two gasoline USTs located beneath the west building were closed in-place by filling them with concrete slurry. Before the tanks were filled, residual fuel was removed and the tanks were cleaned and rinsed as described previously. Concrete slurry was then pumped into the tanks until they were completely filled. The fill neck and surrounding box of each tank were also filled with slurry. Site assessment activities conducted in support the in-place closures are described in Section 2.5.

2.3 Removal of Piping and Fuel Island

Each UST was connected to the former fuel island via underground piping. The piping from the gasoline UST located in the south side of the property was constructed of fiberglass. Piping connected to the other USTs was constructed of single-wall steel. All accessible piping was removed.

Piping from the two USTs that were closed in place was directed through an area that contained a septic drain field and underground utilities (electricity and water). The piping in this area was cut and left in place.

The fueling area consisted of a central island that included three pumps; two pumps for diesel and one for gasoline. There were also two satellite diesel pumps located on either side of the fueling pad (see Site Diagram). The ground surface in the fueling area was covered with asphalt and concrete.

Soils beneath the center island pumps and satellite pumps exhibited petroleum odors and staining. The contamination appeared to be limited to the area immediately surrounding and beneath the central fuel island, and directly beneath the satellite pumps. The contaminated material was excavated and stockpiled at a separate location on the property for remediation. Soil remediation activities are described in Section 2.4. Site assessment activities associated with the fuel island are described in section 2.5.

2.4 Soil Remediation Activities

Soils from the diesel fuel UST area and the fuel island were excavated until indications of contamination diminished. Excavated soils were monitored using a PID and visual observations. Once the limits of contamination were achieved, soil samples were collected from the affected areas and submitted for laboratory analysis, as described in Section 2.5.

The excavated soils were loaded into dump trucks and then stockpiled on plastic sheeting at a separate location on the property. Soils will be treated with a bioremediation material and land-farmed until contaminant concentrations meet the appropriate Model Toxics Control Act (MTCA) soil cleanup levels. ✓

2.5 Site Assessment Activities

2.5.1 Gasoline Diesel UST Removals

ARCS personnel monitored soils excavated from around the gasoline and diesel USTs for organic vapors using a photo ionization detector (PID) calibrated to an isobutylene standard. Headspace readings of selected samples were measured by placing a portion of the sample into a resealable plastic bag and allowing the sample to warm for approximately 15 minutes. The probe of the PID was then inserted into the headspace of the plastic bag to measure vapors that accumulated above the soil. The PID measurements were recorded in a field notebook.

Headspace measurements of soil samples collected from the base and sidewalls of the excavation were also recorded. Based on PID measurements, no organic vapors were present in soil samples collected from the gasoline UST area.

Soils encountered in the excavations were characterized as gravelly sand with cobbles. The soil was dry to a depth of 6 to 7 feet, then became moist with finer-grained sands and some silt present. Ground water was not encountered at the final excavated depth of 12 feet bsg.

Low-level organic vapor concentrations were detected in soil samples collected from the base and south sidewall of the diesel UST excavation. Because diesel fuel has a lower volatility than gasoline, PID measurements are not as accurate for field screening. In addition, the contamination present in the soils exhibited odors more like used motor oil. There were also several used oil filters and oil containers observed discarded behind the tank, indicating that used motor oil may have been dumped in this area. Soils were excavated from the south sidewall and base of the excavation until petroleum odors and staining diminished. Ground water was not encountered in the excavation at the final depth of 12 feet bsg.

Discreet soil samples were collected from the base and sidewalls of each excavation. Samples were collected directly from the bucket of the excavator by pushing the laboratory-supplied sample container into the soil until it was filled. The sample container was then sealed, labeled and placed in an ice-filled cooler pending transport for analysis. Soil sampling locations are indicated on the Site Diagram. Laboratory methods and results are presented in Section 3.0.

2.5.2 In-Place Closure of Gasoline USTs

Soils near the in-place USTs closures were assessed by advancing test pits near the tanks. The test pits were completed using a track-mounted excavator. Soil samples collected from the test pits were screened for organic vapors using a PID and submitted for laboratory analysis.

The first test pit was advanced on the east side of the USTs, as indicated on the Site Diagram. At approximately 4 feet below surface grade (bsg), the excavator encountered an immovable object that may have been an underground utility, boulder, or one of the USTs. Because of known utilities located south and further east of the tanks, it was not possible to complete another test pit in the area.

The second test pit (GT2-TP) was completed on the north side of the USTs, approximately 2 feet from the fill tubes. The test pit was advanced to a depth of 8 feet bsg. A discreet soil sample was collected from between 7 and 8 feet bsg. No organic vapors were detected in the sample. One sample (GT2-TP-7) was submitted for laboratory analysis. The soil sample was collected following the procedure described previously. Laboratory analytical methods and results are presented in Section 3.0.

3.0 LABORATORY ANALYTICAL METHODS AND RESULTS

3.1 Laboratory Analytical Methods

Soil samples collected during the UST closures were analyzed by TEG Northwest of Bellevue, Washington. Samples collected from the gasoline UST excavation, piping trenches, fuel pump areas, and test pit were analyzed for gasoline-range total petroleum hydrocarbons (TPH-G) and benzene, toluene, ethyl benzene, and xylenes (BTEX) using Washington State Method WTPH-G and EPA Method 8021B, respectively.

Samples collected from the diesel UST excavation, piping trench, and beneath the fuel pumps were analyzed for diesel-range total petroleum hydrocarbons (TPH-D) using Washington State Method WTPH-D extended. Method WTPH-D extended identifies kerosene, jet fuel, diesel, fuel oil, and heavy oil. Soil analytical results are summarized in the following section. Laboratory data sheets and chain-of-custody documentation are presented in Attachment C.

3.2 Analytical Results

Analytical results of soil samples collected during the UST closures are summarized in the Table 1.

Table 1
Soil Analytical Results – James Oil

Sample ID	Description	Analysis Parameter (mg/kg)					
		TPH-D	TPH-G	Benzene	Toluene	Ethyl Benzene	Xylenes
GT1-Base-6	Gasoline tank 1 – excavation base at 6 feet bsg.	-- ⁴	nd ³	nd	nd	nd	nd
GT1-SSW-5	Gasoline tank 1 – excavation south sidewall at 5 feet bsg.	--	nd	nd	nd	nd	nd
GT1-NSW-5	Gasoline tank 1 – excavation north sidewall at 5 feet bsg.	--	nd	nd	nd	nd	nd
GT1-ESW-5	Gasoline tank 1 – excavation east sidewall at 5 feet bsg.	--	nd	nd	nd	nd	nd
GDISP-8	Gasoline dispenser at 8 feet bsg.	--	nd	nd	nd	nd	nd
D1-DISP-8	Diesel dispenser #1 at 8 feet bsg.	nd	--	--	--	--	--

Table 1 – continued -

Sample ID	Description	TPH-D	TPH-G	Benzene	Toluene	Ethyl Benzene	Xylenes
D2-DISP-8	Diesel dispenser #2 at 8 feet bsg.	--	nd	nd	nd	nd	nd
DSDISP1-3	Diesel satellite dispenser #1 at 3 feet bsg.	--	nd	nd	nd	nd	nd
DSISP2-3	Diesel satellite dispenser #2 at 3 feet bsg.	nd	nd	nd	nd	nd	nd
DTWBASE-10	Diesel UST excavation west base at 10 feet bsg.	93	--	--	--	--	--
DTEBASE-10	Diesel UST excavation east base at 10 feet bsg.	67	--	--	--	--	--
DTESW-7	Diesel UST excavation east sidewall at 10 feet bsg.	nd	--	--	--	--	--
DTSSW-7	Diesel UST excavation south sidewall at 10 feet bsg.	160 / 360 ⁵	--	--	--	--	--
DTNSW-7	Diesel UST excavation north sidewall at 10 feet bsg.	58 / 86	--	--	--	--	--
DT-Trench-3	Diesel piping trench at 3 feet bsg.	nd	--	--	--	--	--
GT-Trench-3	Gasoline piping trench at 3 feet bsg.	--	nd	nd	nd	nd	nd
GT2-TP-7	Gasoline tank (in- place closures) test pit at 7 feet bsg.	--	nd	nd	nd	nd	nd
Laboratory Method Detection Limits ¹		20	5	0.05	0.05	0.05	0.05
Ecology Cleanup Levels ²		200	100	0.5	40	20	20

Notes:

- 1 Laboratory method detection limits. See laboratory data sheets for additional information.
- 2 Ecology Model Toxics Control Act (MTCA) Method A Cleanup Levels – Soil (Chapter 173-360-740(2)(a)(i) WAC.
- 3 ND = Not detected at or above the laboratory method detection limits. See laboratory data sheets for detection limits.
- 4 -- = Not analyzed for specified parameter.
- 5 Results indicate concentrations of diesel (first number) and heavy oil identified in sample.

The laboratory analysis results indicate that gasoline-range TPH and BTEX was not detected in any of the samples submitted for analysis. Diesel-range TPH was detected in samples collected from the diesel UST excavation, but not above the Ecology Method A soil cleanup levels. However, heavy oil-range TPH was detected above the Method A cleanup levels in the sample collected from the south sidewall of the diesel UST excavation.

4.0 CONCLUSIONS AND RECOMMENDATIONS

This report documents the closure of four USTs at the Pacific Pride card lock fueling facility in Cle Elum, Washington. Two of the USTs were removed and the other two were closed in-place due to their location beneath an existing building.

Visual and olfactory indications of contamination were present in soils surrounding the diesel UST and beneath the fuel island area. Contaminated soils were excavated from these areas and stockpiled on site for treatment using landfarming and bioremediation techniques.

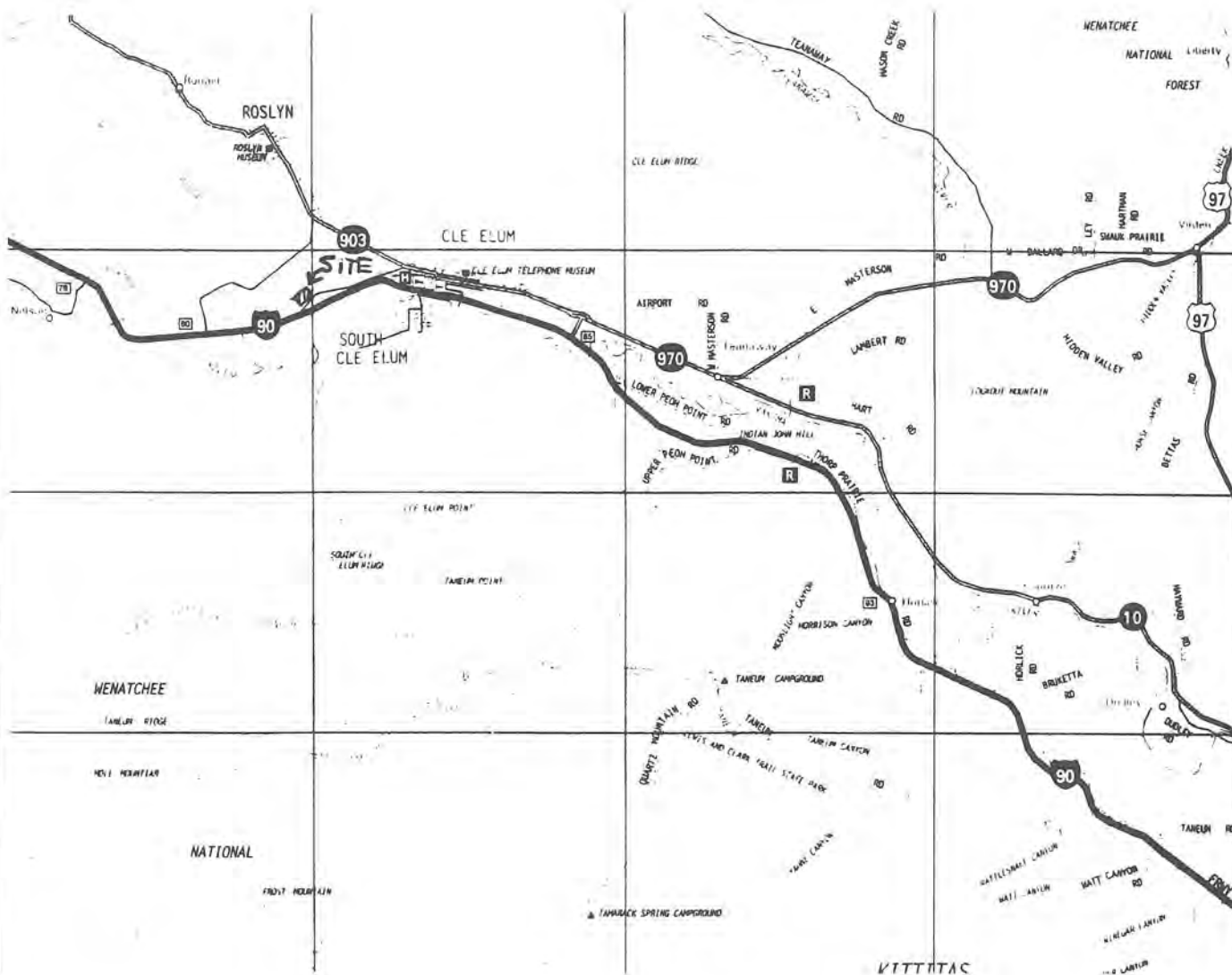
Analytical results of soil samples collected from the gasoline UST excavation, piping trench, and fuel island found that concentrations of gasoline-range TPH and BTEX were not detected. Diesel-range TPH was detected in the diesel UST excavation, but at concentrations that were below the Ecology clean up levels. Heavy oil was identified in soils collected from the base of the diesel UST excavation at concentrations that slightly exceed the Ecology cleanup levels.

The majority of contamination has been removed from the affected areas of the site. Ground water was not encountered in any of the excavations, the deepest of which was advanced to 12 feet bsg. Any remaining petroleum hydrocarbons in the soil will naturally attenuate with time, and should not pose any adverse risk to human health or the environment.

Contaminated soils removed from the excavation areas have been stockpiled and will be treated with a commercial bioremediation material and then landfarmed to reduce contaminant levels. The soils should be sampled in approximately three to six months to document the contaminant concentrations and determine if any further actions are necessary.

5.0 STANDARD LIMITATIONS

The work completed by ARCS in support of this project was conducted in accordance with professional standards applicable in the industry today. ARCS is not responsible for the methods or means utilized by the site owner or contractor, and we assume no liability for existing conditions at the site. With underground storage tank systems there is always the possibility of differing conditions outside of the areas investigated. The conclusions made in this report are based on the data collected at the time of the UST closures. This information should not be construed as legal advice.



Date: June 28, 1999

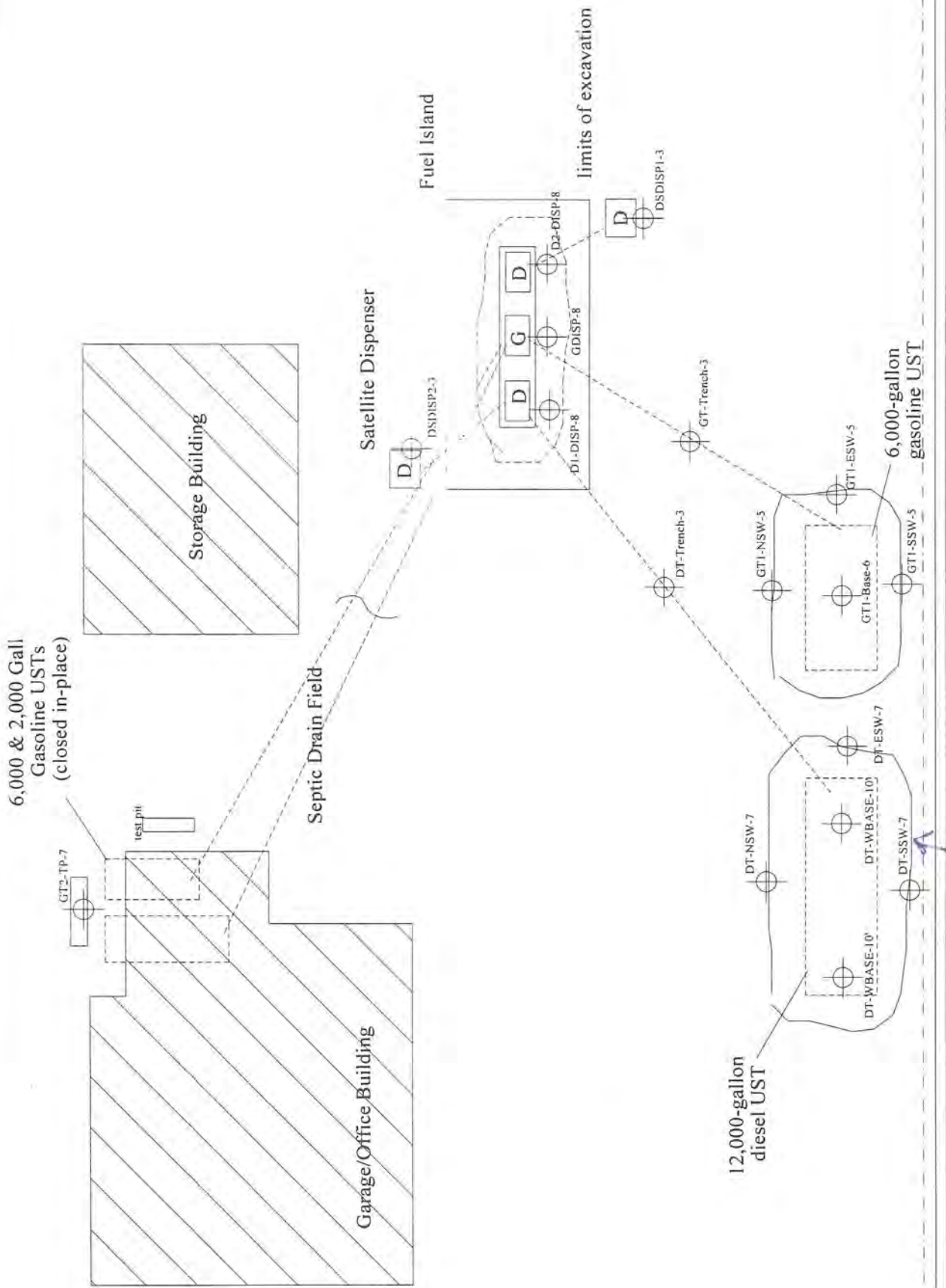
Assessment and Remediation
Consulting Services

Source:

Vicinity Map

James Oil Company
930 West First Street
Cle Elum, Washington

Thomas Brothers Map Company
Pacific Northwest Road Atlas
and Drivers Guide
1998



Site Diagram

James Oil Company
930 West First Street
Cle Elum, Washington

Legend:



GT1-ESW-5

Soil sampling location

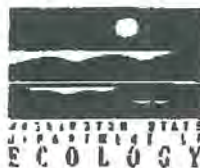
Date: June 28, 1999

Assessment and Remediation
Consulting Services (ARCS)

Not Drawn to Scale

ATTACHMENT A

1-800-826-7716 DUE - DALE JENSEN



UNDERGROUND STORAGE TANK

30 DAY NOTICE

See back of form for instructions
Please ☒ the appropriate box

☐ Intent to Install

☒ Intent to Close

For Office Use Only

Owner # 48107

Site # 100002

Both

SITE INFORMATION

Site ID Number (on invoice or available from Ecology if the tank is registered)

100002

Site/Business Name: G & W OIL & WOOD, INC.

Site Address: 2400 E. Main St., PO Box 368

Owner/Operator Telephone:

CLE ELUM

City

WA

State

98922

Zip Code

TANK INFORMATION

TANKS TO BE CLOSED

This section to be filled out ONLY if tanks are being removed

Tank ID	Projected Closure Date	Tank Capacity	Substance Stored	Date Tank last used	Is there product in the tank? (yes/no)	If not, date tank was emptied
1	12/22/98	12,000	DIESEL	12/22/98	YES	12/22/98
2	12/22/98	6000	WAL GAS	12/22/98	YES	12/22/98
3	12/22/98	6000	WAL GAS	12/22/98	YES	12/22/98
4	12/22/98	6000	WAL GAS	12/22/98	YES	12/22/98

TANKS TO BE INSTALLED

This section to be filled out ONLY if tanks are being installed

Tank ID: App. or Initial Date

TANK INSTALLATION TO BE PERFORMED BY (if known)

This section to be filled out ONLY if tanks are being installed

Service Provider:

Contract Name:

Telephone: ()

Address:

City:

State:

Zip Code:

DEC 21 1998

ECOLOGY

TANK PERMANENT CLOSURE TO BE PERFORMED BY (if known)

This section to be filled out ONLY if tanks are being removed

Service Provider:

Contact Name:

Telephone:

Address:

City:

State:

Zip Code:

This form is valid for 30 days from date of completion

LAST OWNER/OPERATOR: MR. WAYNE KILL

MAILING ADDRESS: P.O. Box 368

CLE ELUM

City

WA

State

98922

Zip Code

Please type or print information

Once validated by Ecology, this form serves as a temporary permit for the tanks listed above.

MAY 27 1999 12:44 PM MILL JENSEN CO.

P.01

KITITAS COUNTY DEPARTMENT OF BUILDING & FIRE SAFETY

507 NORTH STREET, ROOM 2, PLEASANT, WA 99020
Phone (509) 884-7004 Fax (509) 884-7002

Plan Review Number

APPLICATION FOR PERMIT

PERMIT NUMBER

K.99-02048

OWNER OF RECORD W. J. Hill
 MAIL ADDRESS 903 W. 15th
1126 6th Ave. W. 98922
 PHONE NUMBER _____
 SITE ADDRESS Same as above
 CONTRACTOR G. F. Hill LICENSE # _____
 CONTRACT NAME _____ PHONE _____
 PERMITS PD 2
 SPECIFIC USE OF STRUCTURE Gas Station
 DESCRIBING WORK Remove 2 fuel tanks
 SQ. FT. OF PROJECT _____ PROJECT HEIGHT _____
 HEATING SYSTEM TYPE _____ LOCATION _____

WORK SHALL COMMENCE WITHIN 90 DAYS FROM ISSUANCE OF PERMIT.
 WORK STOPPAGE FOR A PERIOD OF 180 DAYS OR MORE WILL REQUIRE
 PERMIT RENEWAL AT THE HALF THE COST OF THE ORIGINAL PERMIT.

NOTE: THE PROPERTY OWNER OR AGENT IS REQUIRED TO PAY FOR
 THE FULL PLAN REVIEW FEE REGARDLESS OF PERMIT ISSUANCE.
 ADDITIONAL PLAN REVISIONS & PLAN REVIEW WILL BE CHARGED AT
 THE CURRENT HOURLY RATE UNLESS OTHERWISE NOTED.

PLEASE CHECK ONLY ONE BELOW

☐ I AM THE OWNER OF THE ABOVE PROPERTY AND WILL PERSONALLY
 PERFORM THE ABOVE WORK.

☐ I AM THE LICENSED CONTRACTOR FOR THE ABOVE PROPERTY AND
 I WILL CONTRACT TO HAVE ALL OF THE ABOVE WORK PERFORMED
 BY LICENSED CONTRACTORS.

☐ I CERTIFY THAT IN THE PERFORMANCE OF THE WORK FOR WHICH
 THIS PERMIT IS ISSUED I SHALL NOT EMPLOY ANY PERSON IN ANY
 MANNER SO AS TO BECOME SUBJECT TO THE WORKER'S
 COMPENSATION LAWS OF THE STATE OF WASHINGTON.

I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE
 IN THE ABOVE TO CORRECTLY. I AGREE TO COMPLY WITH ALL COUNTY
 ORDINANCES, STATE AND FEDERAL LAWS REGULATING BUILDING
 CONSTRUCTION AND USE. I FURTHER AGREE TO, AND HEREBY IN CONSENT TO
 THE BUILDING DEPARTMENT IS THE EMPLOYER, AGENTS OR ANY
 OTHER PERSON PROPERLY DESIGNATED BY THE BUILDING OFFICIAL, A RIGHT
 TO ENTER ON THE PREMISES AT ANYTIME FOR THE PERMIT APPLICATION,
 FOR THE PURPOSE OF INSURING SUCH INSPECTIONS AND TESTS AS MAY BE
 REQUIRED TO ASSURE FULL COMPLIANCE WITH THE ORDINANCES OF
 THE BUILDING DEPARTMENT AND LAWS OF THE STATE OF WASHINGTON.

SIGNATURE OF PERMIT APPLICANT / AGENT _____
 I AM THE ☐ OWNER ☐ CONTRACTOR ☐ ARCHITECT ☐ ENGINEER ☐ CONTRACTOR

FOR BUILDING DEPARTMENT USE ONLY

SITE PLAN SUBMITTED TO PLANNING (DATE) _____

APPROVED CRITICAL AREAS ATTACHED ☐ YES DATE _____

SEWER/STORM SEWER ATTACHED ☐ YES DATE _____

AIRTEL AVAILABLE ATTACHED ☐ YES DATE _____

ACCESS PERMIT APPROVAL ATTACHED ☐ YES DATE _____

OTHER PERMITTING DEPARTMENT APPROVAL YES ☐ NO ☐ (SEE PERMIT APPROVAL)

VARIOUS ☐ YES ☐ ATTACHED ☐ NO
 PLUMBING PERMIT ☐ YES ☐ ATTACHED ☐ NO
 CONDITIONAL USE PERMIT ☐ YES ☐ ATTACHED ☐ NO

AIRPORT LIGHT ZONE IS THE PROPOSED STRUCTURE TO BE LOCATED
 WITHIN THE KITITAS COUNTY AIRPORT RESTRICTION ZONE? ☐ YES ☐ NO

DRINKING WATER ☐ YES ☐ NO ☐ CA ☐ PO

PLUMBING PERMIT FEES

FUTURE/TRAFFIC	
WATER HEATING	
DRAIN/VENT REPAIR	
BACKFLOW PREVENTERS	
RAINWATER DRAIN SYSTEM	
MISC.	
TOTAL	

MECHANICAL PERMIT FEES

FURNACE	
REPAIR HEATING/COOLING	
SEPARATE AIR HANDLING	
FRIED AIR COOLING	
VENT HOODS/VENTS	
GAS SERVICE OUTLET	
BOILERS	
MISC.	
TOTAL	

FIRE SAFETY PERMIT FEES

TANK - 500 (8) REMOVAL	120	-
FIRE SAFETY PLAN REVIEW		
FIRE PLACE OR APPLIANCE		
MISC.		
TOTAL	120	-

OTHER FEES

WA STATE BUILDING CODE FEE		
INVESTIGATION FEE		
PERMIT ISSUANCE FEE	20	-
MISC.		
TOTAL	20	-

BUILDING PERMIT FEES

BUILDING PERMIT		
PLAN REVIEW		
ADDITIONAL PLAN REVIEW		
MISC.		
TOTAL		

TOTAL PERMIT FEES 140

<DEPOSIT> 0

BALANCE DUE 140

TAX PANCELL # 20-15-27031-0006

LIC. VALLAURIN 8

ADDITIONAL COMMENTS

ATTACHMENT B

May 17-99 12:33P Coastal Tank Cleaning

206 684 4766

P.01

223 07-CO-AS-71-2022E

Phone (206) 624-9843
Fax No (206) 624-9766**Coastal Tank Cleaning, Inc.**

3801 7th Avenue South, Seattle, Washington 98108

TO: James Oil Company

THIS LETTER IS TO CERTIFY THAT COASTAL TANK CLEANING, INC. HAS STRIPPED
AND RINSED WITH SOAPY WATER THE BELOW LISTED TANKS IN ORDER TO ALLOW THE
TANKS TO BE INERTED.

DATED THIS 16th DAY OF February, 1999

AUTHORIZED SIGNATURE:


Office Manager

- 1- 12,000 gallon diesel tank
- 2- 6,000 gallon gasoline tanks
- 1- 2,000 gallon gasoline tank

ATTACHMENT C

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: (360) 459-4670
Fax: (360) 459-3432

June 2, 1999

Eric Chapman
ARCS
Assessment and Remediation Construction
475 SE Sycamore Lane
Issaquah, WA 98027

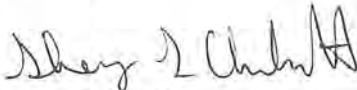
Dear Mr. Chapman:

Please find enclosed the analytical data report for the James Oil Project in Cle Ellum, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, and BTEX by Method 8021B on May 19, 1999.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to ARCS for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Sherry L. Chilcutt
Vice President

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4⁰ C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

TPH-Gasoline, TPH-Diesel

(Gasoline and/or Diesel, Modified EPA 8015, NWTPH-Gx and NWTPH-Dx)

A check standard is run at the beginning of the day. 1) A close standard is run at the end of the day. 2) Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. A duplicate sample is run at a rate of 1 per 10 samples. At least 1 method blank is run per 20 samples analyzed.

Purgeable Volatile Aromatics
(BTEX, EPA 602/8020)

A check standard is run at the beginning of the day. The check standard is run at the end of the day. Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. At least 1 method blank is run per day.

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S90519-2
Client: ARCS
Client Job Name: James Oil
Client Job Number: 99-27

Analytical Results

NWTPH-Gx / BTEX (8020)		MTH BLK	LCS	GT1-BASE-6	GT1-SSW-5	GT1-NSW-5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	05/19/99	05/19/99	05/19/99	05/19/99	05/19/99
Date analyzed	Limits	05/20/99	05/20/99	05/20/99	05/20/99	05/20/99

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard solvent	5.0	nd		nd	nd	nd
Gasoline	5.0	nd		nd	nd	nd

BTEX (8020), µg/kg

Benzene	50	nd	86%	nd	nd	nd
Toluene	50	nd	86%	nd	nd	nd
Ethylbenzene	50	nd		nd	nd	nd
Xylenes	50	nd		nd	nd	nd

Surrogate recoveries:

Trifluorotoluene	86%	87%	95%	94%	98%
Bromofluorobenzene	89%	96%	95%	93%	97%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S90519-2
Client: ARCS
Client Job Name: James Oil
Client Job Number: 99-27

Analytical Results

DUPL

NWTPH-Gx / BTEX (8020)		GT1ESW-5	GDISP-8	DSDISP2-3	DSDISP2-3	GTTRENCH-3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	05/19/99	05/19/99	05/19/99	05/19/99	05/19/99
Date analyzed	Limits	05/20/99	05/20/99	05/20/99	05/20/99	05/20/99

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard solvent	5.0	nd	nd	nd	nd	nd
Gasoline	5.0	nd	nd	nd	nd	nd

BTEX (8020), µg/kg

Benzene	50	nd	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	nd	nd	nd
Xylenes	50	nd	nd	nd	nd	nd

Surrogate recoveries:

Trifluorotoluene	87%	87%	98%	94%	95%
Bromofluorobenzene	90%	85%	98%	99%	99%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S90519-2
Client: ARCS
Client Job Name: James Oil
Client Job Number: 99-27

Analytical Results		MS		MSD	RPD
NWTPH-Gx / BTEX (8020)		GT2-TP-7	GT2-TP-7	GT2-TP-7	GT2-TP-7
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	05/19/99	05/19/99	05/19/99	05/19/99
Date analyzed	Limits	05/20/99	05/20/99	05/20/99	05/20/99

NWTPH-Gx, mg/kg

Mineral spirits/Stoddard solvent	5.0	nd			
Gasoline	5.0	nd			

BTEX (8020), µg/kg

Benzene	50	nd	103%	105%	2%
Toluene	50	nd	104%	109%	5%
Ethylbenzene	50	nd			
Xylenes	50	nd			

Surrogate recoveries:

Trifluorotoluene	95%	101%	94%	
Bromofluorobenzene	101%	99%	96%	

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S90519-2
Client: ARCS
Client Job Name: James Oil
Client Job Number: 99-27

Analytical Results

DUPL

NWTPH-Dx, mg/kg		MTH BLK	D1DISP-8	D2DISP-8	DSDISP1-3	DSDISP2-3	DSDISP2-3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	05/19/99	05/19/99	05/19/99	05/19/99	05/19/99	05/19/99
Date analyzed	Limits	05/19/99	05/19/99	05/19/99	05/19/99	05/19/99	05/19/99
Moisture, %							
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	93%	96%	96%	96%	97%	97%
o-Terphenyl	102%	101%	104%	108%	109%	110%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S90519-2
Client: ARCS
Client Job Name: James Oil
Client Job Number: 99-27

Analytical Results

NWTPH-Dx, mg/kg		DTWBASE-10	DTEBASE-10	DTESW-7	DTSSW-7	DTNSW-7
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	05/19/99	05/19/99	05/19/99	05/19/99	05/19/99
Date analyzed	Limits	05/19/99	05/19/99	05/19/99	05/19/99	05/19/99
Moisture, %		12%	12%	7%	12%	11%
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	93	67	nd	160	58
Heavy oil	50	nd	nd	nd	360	86

Surrogate recoveries:

Fluorobiphenyl	96%	93%	92%	94%	93%
o-Terphenyl	115%	114%	113%	119%	117%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

TEG NW SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

TEG Job Number: S90519-2
Client: ARCS
Client Job Name: James Oil
Client Job Number: 99-27

Analytical Results

NWTPH-Dx, mg/kg		TTRENCH-3
Matrix	Soil	Soil
Date extracted	Reporting	05/19/99
Date analyzed	Limits	05/19/99
Moisture, %		9%
Kerosene/Jet fuel	20	nd
Diesel/Fuel oil	20	nd
Heavy oil	50	nd

Surrogate recoveries:

Fluorobiphenyl	98%
o-Terphenyl	114%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%



TRANSGLOBAL
ENVIRONMENTAL
GEOSCIENCES

CHAIN-OF-CUSTODY RECORD

570519-2

CLIENT: <u>ARC S</u>		DATE: <u>5-17-99</u> PAGE <u>1</u> OF <u>1</u>																			
ADDRESS: <u>475 SE SYCAMORE LN ISSAQUAH, WA 98027</u>		PROJECT NAME: <u>JAMES O.I</u>																			
PHONE <u>(425) 837-0220</u> FAX: <u>- same -</u>		LOCATION: <u>Cle Ellen, WA</u>																			
CLIENT PROJECT #: <u>99-27</u>		PROJECT MANAGER: <u>Eric Chapman</u> DATE OF COLLECTION <u>5/15/99</u>																			
Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES	VOA 6018010	VOA 6028020	VOA 6248240	Semi Vol 62518270	TPH 418.1	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 610/8100	HEX CHROME	ORGANIC LEAD	TOTAL LEAD	PH	ASBESTOS	FIELD NOTES	Total Number of Containers	Laboratory Note Number
GT1-BASE-L	6'		S																		
GT1-SSW-S	5'		S																		
GT1-NSW-S	5'		S																		
GT1-ESW-S	5'		S																		
CDISP-E*	8'		S																		
D1DISP-E	8'		S																		
D2DISP-E	5'		S																		
DSDISP1-3	3'		S																		
DSDISP2-3	3'		S																		
DTWBASE-10	10'		S																		
DTBASE-10	10'		S																		
DTESW-7	7'		S																		
DTSSW-7	7'		S																		
DTNSW-7	7'		S																		
DT-TRENCH-3	3'		S																		
GT-TRENCH-3	3'		S																		
GT2-TP-7	7'		S																		

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	SAMPLE RECEIPT	
<u>Arc S</u>	<u>5/15/99</u>	<u>135 Val Chapman</u>	<u>5/19/99</u>	TOTAL NUMBER OF CONTAINERS	<u>400 HR T/A</u>
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	CHAIN OF CUSTODY SEALS Y/N/NA	<u>5 Days</u>
				SEALS INTACT? Y/N/NA	
				RECEIVED GOOD COND./COLD	
				NOTES:	

SAMPLE DISPOSAL INSTRUCTIONS	
<input type="checkbox"/> TEG DISPOSAL @ \$2.00 each	<input type="checkbox"/> Return <input type="checkbox"/> Pickup

ATTACHMENT D



Photograph 1: View of gasoline and diesel USTs located on the east side of the property, looking west.



Photograph 2: View of the 6,000-gallon gasoline UST being removed from the excavation, looking west.



Photograph 3: View of the gasoline UST excavation after removal of the tank.



Photograph 4: View of the 12,000-gallon diesel UST after removal from the excavation, looking southwest.



Photograph 5: View of the fueling area looking northeast.



Photograph 6: View of the pump island, looking west..



Photograph 7: View of area excavated beneath the pump island, looking northwest.



Photograph 8: View of the area excavated beneath the pump island, looking east.



Photograph 9: View of the piping trenches for the gasoline and diesel USTs, looking southwest.



Photograph 10: View of the test pit completed near the in-place UST closures.