

June 7, 2016

Steve Dorn insured
Nationwide Insurance Agency
Attn: Jennifer Scarcia

RE: REMEDIAL ACTION FINAL REPORT: REMEDIATION PROJECT • DORN 1809
PROJECT SITE: 1809 13TH AVE, SEATTLE, WASHINGTON 98102

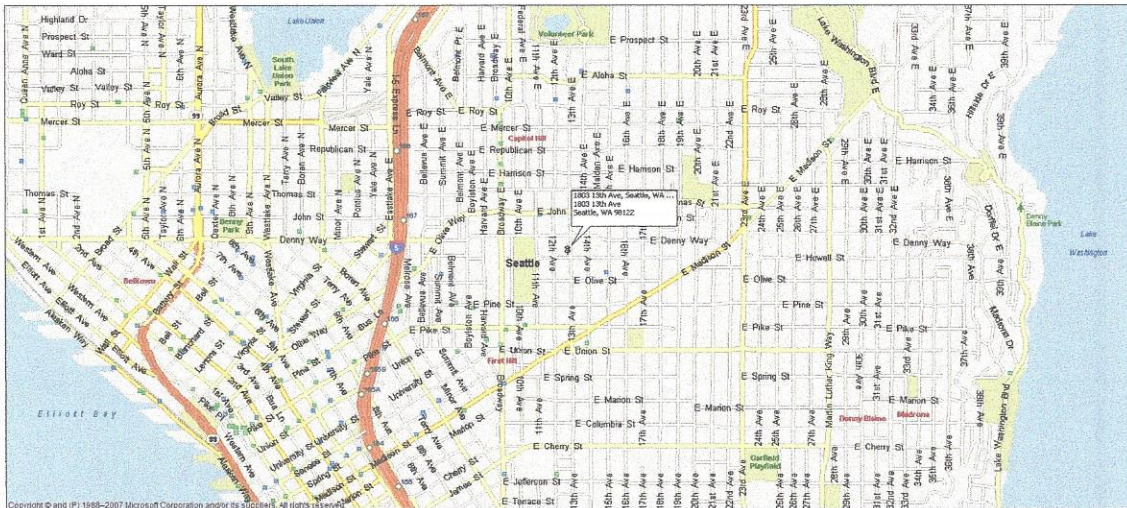
Dear Ms. Scarcia:

1 INTRODUCTION

In accordance with your request, Diane's Tank Removal Services, LLC, a licensed, bonded, and insured environmental construction firm, is pleased to present the results of our Remedial Action Final Report.

This Remedial Action Final Report (RAFR) presents the key findings, objectives, methods, and conclusions of Diane's Tank Removal Services, LLC during the soil remediation activities at the above referenced property shown in the vicinity map below.

FIGURE NO. 1: VICINITY MAP



2 EXECUTIVE SUMMARY

The residential remediation site is located at 1809 13th Ave, Seattle, Washington 98102. The purpose of this report is to present site assessment and remediation data at the above referenced site.

Our initial assessment was based on our understanding of local geology and hydrogeology; the review of various governmental agency data base listings, previous work performed in the subject area and on-site soil sampling and analysis. Relying solely upon the information reviewed, collected and/or available to Diane's Tank Removal Service, LLC during our investigation, it appeared that the residual heating oil contamination from a underground heating oil storage tank, located at 1809 13th Ave, Seattle, Washington 98102, is above cleanup threshold levels governed under the WA-DOE Model Toxics Control Act (MTCA) Method A regulations (Chapter 173-340 WAC).

Our completion of the subsurface investigation and the confirmation of a contaminated soil impact, due to the release of home heating oil (Diesel #2) into the environment from a 300-gallon UST formerly located on the site, reaffirms that the site initially posed a threat to human health and the environment under Washington State law. Due to Diane's Tank Removal Services, LLC's determination that further remedial actions were required at the time of the discovery of the release, our client requested that Diane's Tank Removal Services, LLC conduct an environmental remediation where Diane's Tank Removal Services, LLC utilized excavation remediation techniques at the site identified above.

Upon the completion of the site investigation, Diane's Tank Removal Services, LLC was authorized to implement a solution plan for the remediation of petroleum contaminated soil (PCS) in the vicinity of the former UST. The remediation plan was ultimately designed around the excavation of 617.32 tons of PCS associated with the areas of the highest environmental impact.

After removal of 192.13 tons of PCS, final soil samples were collected from the subject site. The levels of contamination remaining in the excavation for 6 of the 6 final samples reported by Friedman & Bruya, Inc., a Seattle based Washington State certified laboratory, do meet the WA-DOE MTCA Method A cleanup level for all known and identifiable petroleum hydrocarbons.

3 PROJECT BACKGROUND / SITE DESCRIPTION

3.1 PURPOSE

This investigative report presents the key findings, objectives, methods, and conclusions of Diane's Tank Removal Services, LLC during this residential site characterization and remedial activities performed at the above referenced property. Our findings summarized in this report are based on these field investigations and analytical data. This site characterization and interim remedial action report is prepared in accordance with the WA-DOE publication entitled Guidance for Remediation for Underground Storage Tanks, Guidance on Preparing Independent Remedial Action Reports Under MTCA, Guidance for Site Checks and Site Assessments for Underground Storage Tanks and all regulations listed under the MTCA.

• SITE DESCRIPTION

The residential facility is an improved residential lot located the city limits of Seattle, Washington. The contact name and telephone number onsite is Steve Dorn (insured), phone number 206-954-6871. The subject UST was previously used to store #2 heating fuel oil for consumption on the property, but due to a failure and confirmed release, the UST was removed. The source of the release was from #2 heating fuel oil (for consumption) UST located on the property.

3.2 GEOGRAPHIC LOCATION

Latitude: 47.617896° North; Longitude: -122.315753° West, SE-29-25-4. The subject property is identified as parcel number 6003001481 and is located approximately .760 miles South of Volunteer Park Water Reservoir.

4 SUBSURFACE CONDITIONS

4.1 GEOLOGY

Diane's Tank Removal Services, LLC gathered information on the Project Site's soil types. Diane's Tank Removal Services, LLC reviewed on-site and local geologic data for the area.

The Puget Sound area, including the Seattle Metro region, occupies the central part of a trough where glacially derived sediments were deposited during several episodes, culminating with the Vashon Stade of the Fraser Glaciation which ended roughly 13,500 years ago. The advance of the Vashon Glacier deepened and widened north-south trending valleys. Thick bodies of sand, gravel, and till were deposited over the area, followed by a period of alluvial valley filling, localized peat deposition, minor erosion, and soil development.

4.1.1 USGS Classification

According to the United States Geological Survey (USGS) maps for the area, the geology of the site is classified as advance outwash in the Alderwood Series. Advance outwash is described as "clean, mostly gray, well stratified, unconsolidated sand with some pebbles. Locally silty and oxidized as bar and channel sediment in and along meltwater streams flowing from the advancing Vashon glacier." This association is described as "very deep, somewhat excessively drained soils located on outwash terraces." The soils, found to be a gravelly coarse sandy loam were formed in a mixture of volcanic ash and glacial outwash generally having the characteristics of moderately rapid permeability within surface soils and very rapid permeability in the substratum. Available water capacity is low, runoff is slow, and water erosion hazard is minimal.

4.1.2 USDA Classification

The United States Department of Agriculture Soil Conservation Soil Survey of King County Area, Washington was consulted for information concerning soils and surrounding area. The Survey classifies the soils at the site as Urban Land where identification of the soil types was not feasible due to development.

4.1.3 On-Site Observations

The geology of the soils underlying the former UST location appears to be consistent with USGS data. This soil stratum is located from the surface to approximately 11.0 feet beneath ground surface (bgs) at the location of the previously decommissioned LUST (Leaking Underground Storage Tank). This glacial till is again speculated to be underlain with a very dense layer of sand with sand lenses, pebbles and some cobbles classified as an advance outwash soil matrix that is again characterized as having very rapid permeability and very good seismic stability. There was an area of this stratum off of the northeast corner of the house that was overlain with a layer of cobbles similar to the consistency of river rock.

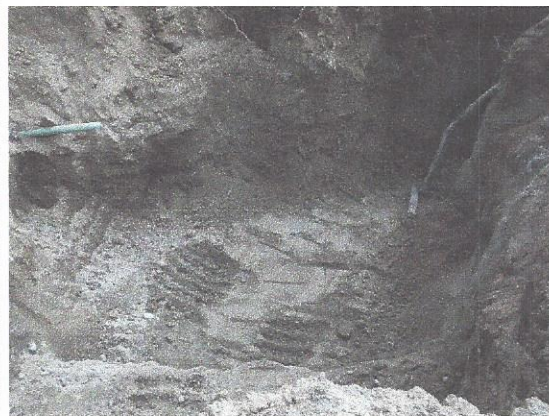


Photograph's above depict the 300 gallon heating oil UST and petroleum impacted soils from beneath the UST.

Figure No. 4, 5, 6, 7 & 8.



East wall of excavation pit



South wall of excavation pit



West wall of excavation pit



Bottom of excavation pit



North wall of excavation pit

**photograph's above (4-8) depict the excavation pit after the removal of 192.13 tons of PCS*

4.2 HYDROGEOLOGY

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. Since no such data was reasonably ascertainable, it was necessary to rely on other sources of information, including well data collected on nearby properties, regional groundwater flow information (from deep aquifers) and surface topography. Although groundwater flow direction is difficult to predict without subsurface exploration data, an estimate of probable near-surface groundwater flow direction is provided to help evaluate potential on-site and off-site contaminant impacts. Groundwater flow direction is the path along which dissolved contaminants might migrate if present in groundwater supplies. Typically, the near-surface groundwater flow direction follows topography. For example, if a parcel slopes down to the south, then near-surface groundwater flow direction is likely towards the south. However, variations in this assumed flow direction may exist that would remain uncharacterized without performing subsurface exploration beyond the scope of this type of study.

Based on these assumptions, the hydrogeologic gradient for this report has been determined using the depth to water table information available for the area. Where available, the closest well in each quadrant has been identified (up to a radius of .5 miles around the target property) and used in the gradient calculation. While an attempt has been made to segregate shallow from deep aquifers, this cannot always be assured.

The WA-DOE water and monitoring well files for the area indicate groundwater was undetermined in the immediate area. Based on the surrounding gradient, documented groundwater depth in the area, groundwater is expected to flow to the West following the general surface grade.

5 RELEASE INFORMATION

5.1 GENERAL INFORMATION

In May 14, 2015, Diane's Tank Removal Services, LLC reviewed sampling data from soil samples from the Project Site. Soil sampling data collected from the vicinity of the UST indicated that concentrations of fuel hydrocarbons, with characteristics similar to the laboratory standard for #2 heating fuel were identified

5 RELEASE INFORMATION

5.1 GENERAL INFORMATION

In May 14, 2015, Diane's Tank Removal Services, LLC reviewed sampling data from soil samples from the Project Site. Soil sampling data collected from the vicinity of the UST indicated that concentrations of fuel hydrocarbons, with characteristics similar to the laboratory standard for #2 heating fuel were identified at the site. The Site map identifies the locations of all samples collected during this ongoing investigation process. On May 23, 2016 the 300-gallon heating oil UST was excavated and removed from the site. Soil sample analysis, again, identified petroleum hydrocarbons underneath the tank.

5.2 IDENTIFICATION OF CONTAMINANTS

Based on site investigations conducted by Diane's Tank Removal Services, LLC, the following contaminants have been identified as the "contaminant of concern."

5.2.1 SUMMARY: FUEL OIL NUMBER 2 - HEATING OIL: CAS NUMBER 68476-34-6

[Diesel fuels, and typical home heating oil and high aromatic content home heating oil, are forms of no. 2 fuel oil. Specifications for both middle distillate heating fuels and transportation fuels are similar. The final products may be treated as required for their particular use, but they are otherwise virtually indistinguishable on the basis of their gross physical or chemical properties. Diesel oil 2 is similar in chemical composition to Fuel oil 2, with the exception of additives. Several references do not explicitly state which form of Number 2 oil they were testing. To alleviate some of the confusion, information that specifically listed "heating oil" is presented in this entry. The various kinds of fuel oils are obtained by distilling crude oil, and removing the different fractions. In terms of refining crude oil, typical heating oil is a middle distillate. The middle distillates include kerosene, aviation fuels, diesel fuels, and fuel oil #1 and 2. These fuels contain paraffins (alkenes), cycloparaffins (cycloalkanes), aromatics, and olefins from approximately C9 to C20. Aromatic compounds of concern included alkylbenzenes, toluene, naphthalenes, and polycyclic aromatic hydrocarbons (PAHs). Heating oil contains a higher percentage by volume of benzenes and naphthalenes relative to kerosene or diesel fuels. Most middle distillates contain some benzene, alkylbenzenes, toluene, ethylbenzene, xylenes, and cumenes, but in much lower percentage than gasoline. Fuel oil no. 2 spans the carbon number range from about C11 to C20. Fuel oil no. 2 products, consisting predominantly of atmospheric distillate streams, contain less than 5% three- to seven-ring polycyclic aromatic hydrocarbons (PAHs). If high proportions of heavy atmospheric, vacuum or light cracked distillates are present, the level may be as high as 10%. According to the U.S. Coast Guard Emergency Response Notification System (ERNS), no. 2 fuel oil is one of the most commonly spilled petroleum products in the U.S. Major U.S. spills involving no. 2 heating oil include: Bouchard #65 tanker incident off Buzzards Bay, Massachusetts, 1977; Exxon Bayway Refinery pipeline incident, in the Arthur Kill waterway, New York, 1990; and the World Prodigy tanker incident off Newport, Rhode Island, 1989.

5.2.2 HAZARD/TOXICITY SUMMARY:

Short-term hazards of the some of the lighter, more volatile and water soluble compounds (such as toluene, ethylbenzene, and xylenes) in heating oil no. 2 include potential acute toxicity to aquatic life in the water column (especially in relatively confined areas) as well as potential inhalation hazards. Heating oil no. 2 has moderate volatility and moderate solubility. Heating oil no. 2 possesses moderate to high acute toxicity to biota with product-specific toxicity related to the type and concentration of aromatic compounds. Heating oil no. 2 spills could result in potential acute toxicity to some forms of aquatic life. Oil coating of birds, sea otters, or other aquatic life which come in direct contact with the spilled oil is another potential short-term hazard. In the short term, spilled oil will tend to float on the surface; water uses threatened by spills include: recreation; fisheries; industrial, potable supply; and irrigation. Long-term potential hazards of some of the lighter, more volatile and water soluble compounds (such as toluene and xylenes) in heating oil no. 2 include contamination of groundwater. Long-term water uses threatened by spills include potable (ground) water supply. Chronic effects associated with middle distillates are mainly due to exposure to aromatic compounds. Long-term effects are also associated with PAHs, alkyl PAHs, and alkyl benzene (such as xylene) constituents of heating oil no. 2. Although PAHs, particularly heavy PAHs, do not make up a large percentage of heating oil no. 2 by weight, there are some PAHs in heating oil no. 2, including naphthalene, alkyl naphthalenes, phenanthrene, and alkyl phenanthrenes. Due to their relative persistence and potential for various chronic effects, PAHs (particularly the alkyl PAHs) can contribute to long-term (chronic) hazards of heating oil no. 2 products in contaminated soils, sediments, and groundwater. Chronic effects of some of the constituents in heating oil no. 2 (toluene, xylene, naphthalenes, alkyl benzenes, and various alkyl PAHs) include changes in the liver and harmful effects on the kidneys, heart, lungs, and nervous system. Increased rates of cancer, immunological, reproductive, fetotoxic, genotoxic effects have also been associated with some of the compounds found in heating oil no. 2 (see entries on individual compounds for more details). Since Diesel oil 2 is similar in chemical composition to Fuel oil 2, with the exception of additives [962], studies on diesel toxicity are of some interest related to this product (see the Diesel Oil, General and Diesel Oil #2 entries). Many of the PAHs found in this product (see Chem.Detail section below) are more toxic in sunlight or other UV source than elsewhere (see PAHs as a group entry). See also: ATSDR toxicological profile on fuels oils in general, including this product.]

5.2.3 Exposure Media – Receptor

<i>Exposure Media</i>	<i>On-Site</i>	<i>Off-Site</i>
• Soil (dermal contact and ingestion)	Residential	Residential
• Outside Air (Inhalation of vapor)	Residential	Residential
• Inside Air (Inhalation of vapor)	Residential	Residential
• Groundwater (Potable water ingestion)	Residential	Residential
• Surface Water (Swim/Fish)	Swim/Fish	Swim/Fish

5.2.4 Soil (dermal contact and ingestion)

Soil contact and ingestion were expected to be a completed pathway for a threat to human health due to the following facts:

- Subsurface soils exposed to surface conditions have been identified as being impacted by this release above the WA-DOE MTCA Method A regulated cleanup levels.

5.2.5 Outside Air (Inhalation of vapor and or particles)

Outside air inhalation of hydrocarbon vapors or particles were not expected to be a completed pathway for a threat to human health due to the following facts:

- The release was of middle to heavy petroleum product, known as Diesel #2 or heating oil, which would not provide levels of hydrocarbon vapor sufficient to cause long-term health effects through inhalation.
- The identified source of the petroleum contamination, the aged 300-gallon heating oil UST was removed from the site thus removing the source of the free product identified at the site.

5.2.6 Inside Air (Inhalation of vapor and or particles)

Inside air inhalation of hydrocarbon vapors or particles were not expected to be a pathway for a threat to human health due to the following facts:

- The identified source of the petroleum contamination, the 300-gallon aged heating oil UST was removed from the site thus removing the source of the free product identified at the site.

5.2.7 Groundwater (Potable water ingestion)

Groundwater ingestion of residual hydrocarbons was not expected to be a completed pathway for a threat to human health due to the following facts:

- Ground water was not encountered in the excavation at the Project Site.

5.2.8 Surface Water (Swimming/Fish consumption)

Surface water contamination and exposure were not expected to be a completed pathway for a threat to human health due to the following facts:

- Ground water was not encountered at the Project Site which could interact with down gradient surface water.

5.2.9 Soil/Water Sampling Results Summary

Soil Sample No. B-1-7 and B-1-5 represents past soil conditions with TPH concentrations both samples above the WA-DOE MTCA Method A cleanup level that were eventually removed from the site. Soil samples F-1 through F-6 reflect current soil conditions where six of the six soil samples showed TPH concentrations below the WA-DOE MTCA Method A cleanup level.

Soil samples having a B prefix are base samples taken during the Site Characterization to determine the base level of contaminants. Soil samples having a F prefix are final samples taken at the conclusion of excavation/remediation activities.

The soil sample results for the Project Site are presented as follows:

<i>Number</i>	<i>Matrix</i>	<i>Depth (ft)</i>	<i>ppm</i>
B-1-7-050815	Soil	7.0	5,400
B-1-5-052316	Soil	5.0	12,000
F-1-11-052516	Soil	11.0	<50
F-2-10-052516	Soil	10.0	<50
F-3-10-052516	Soil	10.0	<50
F-4-10-052516	Soil	10.0	<50
F-5-10-052516	Soil	10.0	<50
F-6-10-052516	Soil	10.0	<50

5.3 SELECTION OF CLEANUP STANDARDS

5.3.1 Cleanup level Selection

As previously noted, the former property condition is the result of a 300-gallon residential UST releasing #2 grade heating fuel into the surrounding soil strata. The goal of the remediation plan was to find a permanent solution that would eliminate and restrict the migration of any contaminants from the affected areas of the properties to off-site properties and impact new construction at the site.

To protect the groundwater and accessible surface water associated with seasonal rainfall in the vicinity of the site, WA-DOE MTCA Method A was selected as the most appropriate cleanup level based on the site conditions and overall risk of the contaminants identified. The following information is provided as additional backup for the selection of Method A as the appropriate cleanup standard for the site.

5.3.2 Method A: WAC 173-340-700(3)(a):

The Method A cleanup levels are conservative values used for routine cleanup actions. Cleanup levels under Method A are generally based on conservative risk-based calculations by WA-DOE which take into account applicable or relevant and appropriate requirements (ARARs) under state and federal law.

6 SITE REMEDIATION PLAN

6.1 STATEMENT OF UNDERSTANDING OF REGULATIONS

The objective of this remediation program described herein is to remediate the all known contaminants identified at the above referenced properties to the MTCA Method A standards identified under WAC-173-340-740.

6.2 SCOPE OF WORK

6.2.1 The remediation plan is designed to accomplish the following goals of the project.

- Prevent off-site migration of petroleum released product.
- Recovery of on-site petroleum released product.
- Reduce soil contamination levels to below WA-DOE MTCA Method A cleanup levels.

6.2.2 The scope of our services included:

- Excavation of 192.13 tons of diesel contaminated soil from the Project Site (1809 13th Ave, Seattle, Washington 98102).
- Sampling as necessary to close site to MTCA Method A standards based on NWTPH-Dx analysis
- Arrange for all permits as required by State and Local authorities.
- Preparation of this Remedial Action Final Report (RAFR).

6.3 PROJECT OVERVIEW

An independent hazardous substance remedial action was undertaken by Diane's Tank Removal Services, LLC upon the approval of our proposal to design and implement a permanent solution plan for the remediation of all known, identifiable and accessible petroleum contaminated soil in the vicinity and down-gradient of the former UST to the WA-DOE MTCA Method A cleanup standards. The remediation plan was ultimately designed to excavate 192.13 tons of diesel contaminated soil exceeding WA-DOE MTCA A cleanup standards located at the project site.

The excavation of diesel contaminated soil was completed by Diane's Tank Removal Services, LLC in May 25, 2016. Contaminated soils were excavated by machine and removed from the subject property and delivered to Regional Disposal Company of Seattle, Washington as Petroleum Contaminated Soils (PCS). The excavation of the project concluded with the property having had 192.13 tons of contaminated soil removed from the Project Site.

7 CONCLUSION

Diane's Tank Removal Services, LLC conducted a site remediation at the above referenced property based on information collected by or presented to us. This site remediation was designed to treat, by excavation, all known contaminated soils associated with the former leaking heating oil tank system to the WA-DOE MTCA Method A cleanup standards.

To protect against the possible contamination of groundwater and surface water located in the vicinity of the site, WA-DOE MTCA Method A was selected as the most appropriate cleanup level based on the site conditions and overall risk of the contaminants identified.

Constituent

Soil/Water Cleanup Standard (ppm)

Method A TPH-Dx (diesel)

2,000 / .5

The current property condition is the result of several days of remediation activities that culminated in this RAFR. The current soil conditions do comply with WA-DOE MTCA Method A cleanup standard for the known and identified contaminants in all reasonably attainable areas. The remediation project was concluded with the point of compliance being reached on 6 of the 6 final samples at or below MTCA Method A cleanup levels for all extracted samples.

8 LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

8.1 QUALITY ASSURANCE

A quality assurance program is designed to assess the adherence of the analytical laboratory's procedures to standards established by state and/or federal regulations. Diane's Tank Removal Services, LLC implements quality control on its projects through establishing company goals and implementing standard company policies. When selecting subcontractors, Diane's Tank Removal Services, LLC examines the subcontractor's quality assurance program to assess if the data/services they provide also conform to the standard of quality we demand. In terms of laboratories, Diane's Tank Removal Services, LLC insists on a quality control package which demonstrates reliability, accuracy, and reproducibility. The laboratory through a variety of methods including surrogates, blanks, duplicate samples, and matrix spikes can document these standards.

Surrogates are utilized to identify a standard of laboratory performance on individual samples. Samples, blanks, and standards are spiked with surrogate compounds prior to preparation and analysis. During analysis, the concentration of the surrogate compound is measured and the percent recoveries are calculated. This provides a measure of the laboratory's accuracy. For the purpose of this study, all associated surrogate recoveries were within an acceptable range as identified on the laboratory data provided herein.

Matrix spikes are samples to which a known amount of analyte is added prior to beginning an analytical procedure. These samples are utilized to determine a measure of precision and accuracy of an analytical method on various sample matrices. It should be noted that the data provided by this quality control method could not be used as the sole criteria to evaluate the precision/accuracy of individual samples. Matrix spikes must be used in conjunction with all quality control data in order to provide a meaningful measure of the precision and accuracy of an analytical method. All matrix spike results were within acceptable quality control parameters. All of the quality assurance/quality control (QA/QC) data associated with the soil samples collected during this phase of work were within acceptable parameters as defined in the EPA document "Test Methods for Evaluating Solid Waste" (SW-846).

8.2 ANALYTICAL METHODS

8.2.1 NWTPH-Dx

NWTPH-Dx is the qualitative and quantitative method (extended) for semi-volatile ("diesel") petroleum products in soil and water. Petroleum products applicable for this analytical method include jet fuels, kerosene, diesel oils, hydraulic fluids, mineral oils, lubricating oils and fuel oils.

9 CONTRACTOR INFORMATION

Name:	Diane's Tank Removal Services, LLC
Address:	18720 Sound view Pl, Edmonds, WA 98020
Contractor WA License Number:	DIANETR906LM
UBI Number:	603-022-938
Fed Tax ID Number:	27-2815834

10 LIMITATIONS

This report has been prepared in accordance with the terms of our contract, Washington State, Department of Ecology cleanup guidelines and in compliance with generally accepted environmental assessment practices, governed under the ASTM standards. Diane's Tank Removal Services, LLC has prepared this report for the exclusive use of the property owners, our clients, and their agents for the specific application to the project site. Diane's Tank Removal Services, LLC has performed all requested services in a manner consistent with the level of care normally exercised by members of the environmental sciences profession currently practicing under similar conditions in the area.

This report represents Diane's Tank Removal Services, LLC's professional opinion and is based on the data collected and reviewed by our professional staff to the level and effort authorized. Environmental impairment of a property as a result of activities such as illicit or unreported dumping or spilling of hazardous or deleterious materials may not be readily apparent. No investigation is thorough enough to exclude the presence of all hazardous materials on a given site. This report does not include a comprehensive investigation for all possible substances subject to regulation or potentially detrimental to human health and/or the environment. Findings and conclusions are our professional opinion and are not a warranty (express or implied), guarantee or positive assertion as to the presence, absence or extent of hazardous substances at the above referenced subject property.

We appreciate the opportunity of providing these services. If you have any questions regarding the material covered in this report, please call us at (206) 206-510-9497.

Sincerely,



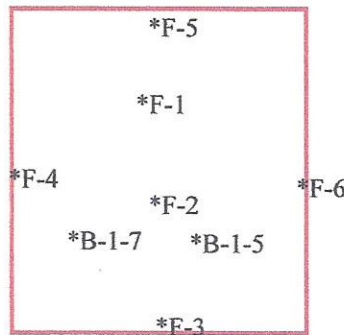
DIANE'S TANK REMOVAL SERVICES, LLC

By: Diane Kamacho
Site Assessor
Project Coordinator
International Code Council UST Decommissioner

Enclosures

SOIL SAMPLE LOCATIONS AND RESULTS

<u>Sample Location</u>	<u>Depth (ft)</u>	<u>Distance from Point of Reference</u>	<u>POR</u>	<u>Results</u>
B-1-7-050815	7'	47.5' South, 37' West		5,400 ppm
B-1-5-052316	5'	37' South, 37' West		12,000 ppm
F-1-11-052516	11'	40' South, 35' West		<50 ppm
F-2-10-052516	10'	39.5' South, 29' West		<50 ppm
F-3-10-052516	10'	39.5' South, 20' West		<50 ppm
F-4-10-052516	10'	49' South, 30' West		<50 ppm
F-5-10-052516	10'	39.5' South, 40' West		<50 ppm
F-6-10-052516	10'	30' South, 30' West		< 50 ppm



Sidewalk

13th Ave



Point of Reference—NE Corner of Property Line

	Steve Dorn Project	June 8 2016 Drawing Not To Scale
Diane's Tank Removal Services, LLC P.O. Box 77738 Seattle, WA 98177	1809 13th Ave Seattle, Washington	

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

June 1, 2016

Diane Kamacho, Project Manager
Dianes Tank Removal Services
PO Box 77738
Seattle, WA 98177

Dear Ms. Kamacho:

Included are the results from the testing of material submitted on May 26, 2016 from the 1809 13th Ave, F&BI 605503 project. There are 3 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.



Matthew Langston
Project Manager

Enclosures
DTS0601R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/01/16
Date Received: 05/26/16
Project: 1809 13th Ave, F&BI 605503
Date Extracted: 05/27/16
Date Analyzed: 05/27/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL
USING METHOD NWTPH-Dx
Extended to Include Motor Oil Range Compounds
Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)**

<u>Sample ID</u> Laboratory ID	<u>Diesel Extended</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
F-1-11-052516 605503-01	<50	109
F-2-10-052516 605503-02	<50	102
F-3-10-052516 605503-03	<50	99
F-4-10-052516 605503-04	<50	99
F-5-10-052516 605503-05	<50	116
F-6-10-052516 605503-06	<50	99
Method Blank 06-1074 MB2	<50	105

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/01/16

Date Received: 05/26/16

Project: 1809 13th Ave, F&BI 605503

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

Laboratory Code: 605496-03 (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	121	105	73-135	14

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

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 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. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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

01/02/57M
MLS/26/16

203

Send Report To Diane Kamacho

Company
Dianes Tank Removal Services

Address 18720 Sound View Pl

City, State, ZIP Edmonds, WA 98020

Phone # (206) 510-9497 Fax # (206) 420-1789

SAMPLERS (signature)

PROJECT NAME/NO.

1809 13th Ave

REMARKS Per DK
MC 5/31

TURNAROUND TIME

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	BTKX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
F-1-11-052514	01	5/25/14	4pm	Soil	1	✓						Bottom
F-2-10-052514	02		4:10p		1	✓						"
F-3-10-052514	03		4:05p		1	✓						East.
F-4-10-052514	04		4:05p		1	✓						South
F-5-10-052514	05		4:08p		1	✓						West.
F-6-10-052514	06		4:08p		1	✓						Norhty
												Samples received at -2 °C

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE

Relinquished by:

Received by: A.

Relinquished by:

Received by:

PRINT NAME _____

Diane Kamacho

Phen

COMPANY

Digoxin Tank Removal
COMPANY

Feb 27

TIME

THAT

$$\frac{51:6}{2:14}$$

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

May 27, 2016

Diane Kamacho, Project Manager
Dianes Tank Removal Services
PO Box 77738
Seattle, WA 98177

Dear Ms. Kamacho:

Included are the results from the testing of material submitted on May 23, 2016 from the 1809 13 Ave, F&BI 605410 project. There are 3 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.



Matthew Langston
Project Manager

Enclosures
DTS0527R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16
Date Received: 05/23/16
Project: 1809 13 Ave, F&BI 605410
Date Extracted: 05/24/16
Date Analyzed: 05/24/16

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

Extended to Include Motor Oil Range Compounds

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Extended</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 56-165)
B-1-5-052316 605410-01	12,000	150
Method Blank 06-1044 MB	<50	120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/16

Date Received: 05/23/16

Project: 1809 13 Ave, F&BI 605410

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

Laboratory Code: 605419-01 (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	103	103	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	101	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.

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 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. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

May 14, 2015

Diane Kamacho, Project Manager
Dianes Tank Removal Services
PO Box 77738
Seattle, WA 98177

Dear Ms. Kamacho:

Included are the results from the testing of material submitted on May 11, 2015 from the 1809 13 Ave, F&BI 505164 project. There are 3 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.



Matthew Langston
Project Manager

Enclosures
DTS0514R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/14/15
Date Received: 05/11/15
Project: 1809 13 Ave, F&BI 505164
Date Extracted: 05/12/15
Date Analyzed: 05/12/15

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

Extended to Include Motor Oil Range Compounds

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Extended</u> (C ₁₀ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 48-168)
B-1-7-050815 505164-01	5,400	120
Method Blank 05-954 MB2	<50	109

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/14/15

Date Received: 05/11/15

Project: 1809 13 Ave, F&BI 505164

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

Laboratory Code: 505150-17 (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	97	95	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	101	58-147

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 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. 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. Compounds in the sample matrix interfered with the quantitation of the analyte.
- 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.

23

Fax # (206) 420-1789

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 type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>Diane Kamacho</i>	Diane Kamacho	Dianes Tank Removal	5/8/15	4:30p
Received by: <i>Diane</i>	DO VO	FE 32	"	4:30p
Relinquished by:				
Received by:				

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