INTERIM REMEDIAL ACTION COMPLETION REPORT

FORMER TIGER OIL SITE
2312 WEST NOB HILL BOULEVARD
YAKIMA, WASHINGTON

Prepared for
CITY OF YAKIMA
June 17, 2015
Project No. 0818.02.01

MAUL FOSTER ALONGI

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The material and data in this report were prepared under the supervision and direction of the undersigned.

MAUL FOSTER & ALONGI, INC.

This digital seal certifies the signatory and document content.

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ACRONYMS AND ABBREVIATIONS

Anderson	Anderson Rock and Demolition Pits
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	cleanup action plan
the City	City of Yakima, Washington
COC	chemical of concern
CUL	cleanup level
DID	drainage improvement district
Ecology	Washington State Department of Ecology
FBI	Friedman and Bruya, Inc.
FSDS	field sampling data sheet
GWE	groundwater extraction
IHS	indicator hazardous substance
IO	IO Environmental and Infrastructure, Inc.
MFA	Maul Foster & Alongi, Inc.
MTCA	Model Toxics Control Act
New Tiger	Tiger Oil Corporation
ORC	oxygen release compound
ORCa	Regenesis Oxygen Release Compound Advanced
PCS	petroleum-contaminated soil
PID	photoionization detector
the Property	2312 West Nob Hill Boulevard, Yakima, Washington
PVC	polyvinyl chloride
the Site	Ecology Facility Site No. 469, Cleanup Site No. 4919
SVE	soil vapor extraction
TPH	total petroleum hydrocarbons
UIC	underground injection control
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound

1 INTRODUCTION

On behalf of the City of Yakima, Washington (the City), Maul Foster & Alongi, Inc. (MFA) has prepared this report describing the completion of the interim remedial action at the former Tiger Oil facility at 2312 West Nob Hill Boulevard, Yakima, Washington, Washington State Department of Ecology (Ecology) Facility Site No. 469, Cleanup Site No. 4919 (the Site). From February to May 2015, with oversight from MFA and Ecology, IO Environmental and Infrastructure, Inc. (IO) performed structure demolition, soil excavation, and associated tasks supporting environmental remediation of the Site. The interim remedial action was completed in accordance with an Amended Consent Decree between Ecology and the City and with the amended cleanup action plan (CAP) (Ecology, 2014).

2 BACKGROUND

2.1 Site Location

The physical address for the property upon which the former Tiger Oil retail fueling station operated is 2312 West Nob Hill Boulevard in Yakima, Washington (the Property) (see Figure 1). The Property, a 0.52-acre, rectangular parcel (tax assessor parcel number 18132642051), is bordered by West Nob Hill Boulevard to the north, a Safeway Shopping Center parking lot to the east and southeast, the Xochimilco Mexican Restaurant to the east, the One Love Smoke Shop to the south, and South 24th Avenue to the west (see Figure 2). The Property is zoned Local Business District (B-2) and is located in section 26 of township 13 north and range 18 east of the Willamette Meridian.

2.2 Site History

The Property was operated by the Tiger Oil Company as a retail fuel station until it was purchased by Tiger Oil Corporation (New Tiger) in 1987. New Tiger operated an Exxon-branded fuel station and convenience store at the Property from 1987 until 2001. All commercial operations ceased in 2001 and the Property has since remained vacant (TerraGraphics, 2013). The fuel station comprised four underground storage tanks (USTs) (one 20,000-gallon, two 10,000-gallon, and one 8,000-gallon tank) and associated product lines. The system was used for bulk petroleum storage and distribution.

In April 1981, volatilization of petroleum products in a drainage improvement district (DID) storm drain line adjacent to the Property resulted in an explosion and triggered an investigation by the City and Ecology to test the Property's UST system (Ecology, 2014). During the investigation, it was determined that a leak in the product line of the UST system had impacted the surrounding soil and groundwater at the Property and adjoining properties. The leak in the UST line was determined to be the source of the petroleum products found in the nearby DID line. Ecology issued a Notice of

Violation and Enforcement Order, No. DE 82-517, to Tiger Oil Company, requiring recovery of free product from the Site (Ecology, 2014).

It was estimated that, in the early 1980s, approximately 20,000 gallons[1] of petroleum-related product was released from the Property's UST system (Ecology, 2014). Several recovery wells were installed by early 1983 at the Property and on adjacent parcels to the east and south. By March 1984, approximately 16,000 gallons of free product had been extracted from the recovery wells (Kleinfelder, 1994).

In March 1990, Ecology issued Enforcement Order No. DE 90-C140 to New Tiger and Federated Insurance, requiring site stabilization and a remedial investigation and feasibility study for the Site (Ecology, 2014). In 1991, a site hazard assessment was conducted, resulting in a hazard ranking of 1 (with 1 as the highest risk and 5 the lowest risk).

In August 1995, soil vapor extraction (SVE) and groundwater extraction (GWE) systems began operation to collect free product (i.e., gasoline that has not dissolved into groundwater), and impacted groundwater and soil vapor on the Site as well as to mitigate off-site migration of dissolved-phase gasoline-range total petroleum hydrocarbons (TPH) and free product. However, the SVE and GWE systems were limited in scope and did not adequately target areas of free product present on the Site. Ecology concluded that the SVE and GWE systems were not representative of final cleanup actions for the Site (Ecology, 2014

In October 2004, New Tiger and Federated Insurance entered into a Consent Decree with Ecology requiring implementation of Ecology's 2004 amended CAP. In December 2004, the USTs and their associated piping, along with approximately 650 cubic yards of impacted soil around the UST system, were removed from the Site. Two trenches were excavated in the vicinity of the USTs to determine the amount of free product, if present, at the top of the water table at the Site. Free product was encountered, and an additional SVE system was installed to treat the impacted soil vapor at the Site. Appreciable free product was encountered at monitoring wells MW-7 (at 2.34 feet thick, located adjacent east of the Property on the Xochimilco restaurant parking lot) and MW-11 (at 1.46 feet thick, located adjacent southeast of the former USTs on the Property) during the groundwater monitoring event in June 2013 (TerraGraphics, 2013). An approximate delineation of the extent of free product and dissolved-phase gasoline-range petroleum hydrocarbons in groundwater, based on the June 2013 sampling event, is presented in Figure 3.

The City purchased the Property in 2014 and entered into an Amended Consent Decree with Ecology to implement an amended CAP at the Site (Ecology, 2014).

2.3 Environmental Conditions

Historical subsurface investigations and remedial investigations conducted between 1982 and 1994 identified the following chemicals of concern (COCs) in soil and groundwater at the Site: gasoline-range petroleum hydrocarbons and petroleum-fuel-associated volatile organic compounds (VOCs).

[1] Based on remedial actions, Ecology staff believe actual volume of release may have been greater.

These COCs are also confirmed as indicator hazardous substances (IHS), which are defined as chemicals exceeding a cleanup level (CUL) at one or more locations.

Soil and groundwater IHSs confirmed at the Site include:

- Gasoline-range TPH
- Benzene, toluene, ethylbenzene, and xylenes (BTEX)

An interim remedial action was designed to address these soil exceedances.

3 DEMOLITION

3.1 Building Demolition

The former convenience store building was demolished in February 2015 as part of the interim remedial action. Metal salvaged from the building was collected and recycled by Pacific Steel and Recycling. Before demolition of the building, asbestos abatement was completed by All-Safe Abatement. The asbestos abatement report is included as Appendix A. A three-foot high retaining wall running north-south on the west side of the Xochimilco Restaurant, the building footings, and the former concrete pump islands were also removed during building demolition.

Asphalt pavement within the excavation extents was also removed prior to excavation activities. Asphalt and concrete were taken to Anderson Rock and Demolition Pits (Anderson) Recycling facility in Yakima, Washington to be recycled. Remaining materials were disposed at Anderson's Landfill also located in Yakima, Washington.

3.2 Groundwater Monitoring Well Decommissioning

Groundwater monitoring wells MW-8, MW-15, MW-20, KMW-20, and KMW-22 located within the extent of excavation, and MW-12, located outside of the excavation boundary, were decommissioned in accordance with Washington State regulations prior to soil excavation. Well decommissioning logs are included as Appendix B.

3.3 Treatment System Demolition

During completion of excavation activities described in further detail in Section 4, existing SVE piping located within the excavation boundaries was removed. SVE system lines were capped at locations where the piping exited the excavation sidewall and the locations recorded. The treatment system located in the Safeway Shopping Center parking lot east of the Xochimilco restaurant was removed as part of the interim remedial action. Fluids in the system were analyzed for BTEX and gasoline-range TPH to identify appropriate disposal options. Analytical results of the fluids indicated

no contaminants were present above associated detection limits. After receiving analytical results, fluid was discharge to the City sanitary sewer at the direction of Ecology.

4 EXCAVATION OF CONTAMINATED SOIL

The interim remedial action included excavation of soils exceeding Model Toxics Control Act (MTCA) Method A CULS, in situ chemical oxidation and aerobic biodegradation enhancement, backfilling the excavation, and transporting the contaminated material off site for disposal. Photographs showing contaminated-material excavation, in situ treatment, and backfilling activities are presented in Appendix C.

4.1 Site Preparation and Layout

Before excavation, silt fence was installed along the down-gradient perimeter of excavation activities, where stormwater runoff had the potential to migrate offsite. The general excavation limits were laid out by the contractor and approved by the engineer. Underground utilities at the Site were identified by a private utility locating company. Catch basin inserts were installed to protect all storm sewer inlets from debris.

Prior to excavation, the contractor excavated five test pits at the direction of Ecology. The test pits were installed near the former pump islands, which lay outside of the original excavation area. Test pit locations are shown on Figure 4. The test pits were installed to evaluate if any leaks had occurred in these areas in the past. Five test pits were excavated, three of which extended beneath the former pump islands. Each test pit was dug to 9 feet below ground surface (bgs). Stained soil was observed starting at 1.5 feet bgs in Test Pit No. 1, and at 4 feet bgs in Test Pit Nos. 2 through 5, with PID readings ranging from 79 to 920 parts per million. Field screening indicated the presence of PCS, which resulted in expansion of excavation area to encompass these test pits. This extended excavation area is described in Section 4.2.2.

4.2 Excavation

The estimated excavation boundaries were developed as part of the amended CAP and in coordination with Ecology (Ecology, 2014). According to these plans, soils exceeding MTCA Method A CULs were to be disposed of offsite. Shallow soil, from ground surface to approximately 2 feet bgs, was segregated and stockpiled on site for characterization to ensure eligibility for use as backfill. Soil excavated between approximately 2 and 9 feet bgs was continuously assessed through field screening as potential petroleum-contaminated soil (PCS). If screening indicated that the soil was not PCS, the soil was segregated and stockpiled on site for characterization to ensure eligibility for reuse as backfill. Soil stored on site for use as backfill was securely covered with plastic sheeting when not being handled or tested. If field screening indicated that it was PCS, then the soil was loaded directly into haul trucks and transported off site for disposal. Excavation near the building footprints of the Xochimilco Mexican Restaurant and the One Love Smoke Shop were limited in

order to protect the building foundation integrity. Excavations in these areas were offset a two to three feet away from the foundation and were sloped away from the buildings at a stable gradient to ensure building integrity.

Confirmation samples were collected from the floor and walls of the excavation, as outlined in the sampling and analysis plan, which is Appendix A to the Remedial Action Plan and Engineering Design Report (MFA, 2015). Wall samples were collected in areas where soil appeared impacted every 4 to 5 vertical feet. Samples were submitted to Friedman and Bruya, Inc. (FBI) in Seattle, Washington, and were analyzed for gasoline-range TPH by Northwest Method TPH-Gx, and for BTEX by U.S. Environmental Protection Agency (USEPA) Method 8021B. Selected confirmation wall samples were also analyzed for toxicity characteristic leaching procedure lead. Table 1 summarizes laboratory analytical results for confirmation soil samples collected during the interim remedial action. The confirmation sample locations are shown on Figure 4. Confirmation sample PID readings and soil descriptions were recorded on field sampling data sheets (FSDS) for each soil sample. FSDSs are included as Appendix D.

Overburden segregated for use as backfill was stockpiled and sampled in accordance with Chapter 12 of Ecology's Guidance for Remediation of Petroleum Contamination Sites (Pub. No. 10-09-057). Composite samples were collected from soil stockpiles with each sample comprised five subsamples of approximately equal volume. Overburden samples were also submitted to FBI and analyzed for gasoline-range TPH by Northwest Method TPH-Gx, and for BTEX by USEPA Method 8021B. Table 2 summarizes laboratory analytical results for stockpile soil samples collected during the interim remedial action.

Appendix E contains the laboratory reports and the data validation memorandum.

PLSA Engineering and Surveying surveyed the excavation limits upon notification of completion by IO. A comprehensive as-built survey showing the excavation extents is included as Appendix F.

4.2.1 Initial PCS Excavation

PCS was identified through field screening techniques for petroleum hydrocarbons and fuel-associated VOCs; screening included the following:

- Visual
- Olfactory
- Photoionization detector (PID)
- Sheen testing

Initially, soil was excavated to the approximate depths and extents indicated in the remedial action plan design drawings (MFA, 2015). Additional soil was removed in areas where field screening indicated PCS was present. In the southeastern corner of the excavation, PCS was uncovered between 9 and 14 feet bgs. The vertical extent of contamination became shallower as the excavation progressed farther northwest. For this reason, the vertical extents of the entire excavation were extended to a depth of 14 feet bgs. Additional lateral excavation was completed on Property, as

described in Section 4.2.2. Groundwater and free product were encountered at approximately 14 feet bgs in the southeast corner and east sidewall of the excavation. Slight groundwater and free product upwelling was observed at well completion depth in the vicinity of MW-11 and former location of MW-15. Groundwater did not hinder excavation activities and no dewatering was of the excavation was needed.

4.2.2 Extended PCS Excavation

The excavation boundary near Nob Hill Boulevard and the adjoining sidewalk was limited in order to protect the integrity of the roadway and sidewalk. Excavation in these areas was offset a minimum 1 foot away from the property boundary and was sloped away from the property boundary at approximately 1:1.5 slope. The vertical extent of this excavation area was also extended to 14 feet bgs based on field screening.

4.2.3 PCS Disposal

Prior site investigations indicated that contaminated soil was nonhazardous. PCS was loaded directly into haul trucks and transported to Anderson's PCS facility in Yakima, Washington. Loose soil was brushed off truck trailers before the vehicles left the Site to prevent soil from falling off the truck during transit.

4.3 Backfill

Following excavation and confirmation soil sample collection, the excavation was backfilled with a one-foot layer quarry spalls, followed by clean overburden and imported clean fill. Quarry spalls and clean fill were imported from Anderson Rock Quarry. Some large concrete debris from the Property was also placed at the base of the excavation with the quarry spalls to reduce disposal costs. Due to the size of the excavation relative to the overall Property size, once the excavation extent was reached and necessary confirmation samples collected, that portion of the excavation was backfilled while excavation activities proceeded into portions of the Site that had not yet been excavated. A preliminary source evaluation and clean soil statement for import material that originated from the Anderson site are included in Appendix G.

Clean backfill was placed in the excavation areas and compacted in accordance with the project specifications. The base fill course of the excavation was composed of an approximately one-foot layer of 6 to 8-inch least mean diameter quarry spalls. Oxygen-releasing compound (ORC)-amended soil was placed in four lifts of approximately one foot each. The first two lifts were amended with Regenesis RegenOx® oxidizer Part A and B mix, and vibratory- or track-compacted prior to placement of the next lift. Subsequent backfill lifts were amended with Regenesis Oxygen Release Compound Advanced (ORCa®) activator (time released pellets). Additional ORC of both types was placed near the east and south sidewalls where free product was observed. Refer to Section 5 for more detail specific to application of the contaminant bioremediation products.

The final grade was placed to match the existing grade. The area surrounding the former retaining wall was graded to smoothly transition between different elevations. Remaining asphalt pavement

was removed within the Property boundary and re-surfaced with 6 inches of crushed base course. Geotextile road fabric was placed beneath the base course to guard against vegetation. The off-property excavation surface was repaved to match existing asphalt. Parking stops were replaced and striping was added to new pavement to match existing striping.

4.3.1 Sanitary Sewer

An existing 4-inch diameter cast-iron sanitary sewer lateral extending from the east side of the One Love Smoke Shop building to the southeast corner of the Xochimilco Mexican Restaurant was not identified during the utility locate. The portion of the sewer line within the excavation boundary was inadvertently removed during excavation. The damaged line was replaced with 4-inch-diameter D304 polyvinyl chloride (PVC) pipe and connected at each end of the undamaged portion of the existing cast-iron pipe using Fernco flexible couplings. A cleanout was added to the new sewer line near the One Love Smoke Shop building. The alignment of the new sanitary sewer line is included in the as-built survey.

4.4 As-Built

The soil removal was surveyed during and at the conclusion of the excavation activities. Vertical extents were continuously measured by the contractor and were uniform at 14 feet bgs. The lateral extents of the excavation were recorded for final location. The as-built surveys were used to verify that the boundary of the excavation had been met and that the quantity of material removed was sufficient, and to map the locations of all additional excavation. A final as-built plan is included as Appendix F.

5 IN SITU BIOREMEDIATION/ENHANCED AEROBIC BIODEGRADATION

5.1 RegenOx/ORCa Treatment

The in situ bioremediation included chemical oxidation by application of Regenesis RegenOx® oxidizer and Regenesis ORCa® activator to reduce sorbed and soil-matrix-bound petroleum hydrocarbons in the vadose and saturation zone, as well as the dissolved phase in groundwater.

The Regenesis RegenOx was received from the manufacturer in two parts: Part A and Part B. Part A was the oxidizer complex in a dry powder form. Part B was the activator complex in a gel form. Parts A and B were power-mixed together in the excavator bucket. Water was then added to create a slurry, which was applied to clean overburden and mixed using the excavator bucket. Regenesis RegenOx was placed into the excavation pit at approximately 11 to 13 feet bgs.

Regenesis ORCa was received from the manufacturer in the form of dry pellets, which were mixed directly with clean overburden and placed approximately 8 to 12 feet bgs. The Regenesis ORCa and

overburden were placed in 1-foot lifts, with water applied to each lift activate the treatment compound.

6 INFILTRATION GALLERY INSTALLATION

6.1 Infiltration Gallery

Prior to backfill of the excavation, two infiltration galleries were installed to provide avenues for injection of additional bioremediation products as an additional in situ bioremediation option in the future. Each infiltration gallery is constructed of schedule 40 PVC pipe with 0.030-inch slotted manifolds. Plastic sheets were installed consistent with project specification in order to prevent small soil particles from entering the lateral. The cleanout and injection ports were installed with access points in close proximity to the property line to avoid inhibiting future development of the Property while still retaining access to the injection ports and cleanouts. The layout of each infiltration gallery is included in the attached as-built drawing. The infiltration system was registered with Ecology's Underground Injection Control (UIC) program and assigned a UIC site number of 32803. Documentation associated with the registration is provided in Appendix H.

After backfill was completed, each infiltration gallery was hydrated for three hours. Cleanout and injection points were cut to be flush with the existing surface and are protected by a plastic vault.

7 FINAL INSPECTION

The final inspection of the excavation work was completed on May 6, 2015. No unresolved issues or work items remained at that time.

8 POST ACTION MONITORING WELL INSTALLATION

Following completion of the interim remedial action, three groundwater monitoring wells (YMW-1 through YMW-3) were installed within the footprint of the excavation to support monitoring of the effectiveness of the interim remedial action. Each well was installed by hollow-stem auger drilling method to a depth of 20 feet bgs with screens installed from 5 to 20 feet bgs. Well construction logs for each well are provided in Appendix I and the well locations are presented on Figure 5.

LIMITATIONS

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

REFERENCES

Ecology. 2014. Amended cleanup action plan, Tiger Oil facility, 2312 West Nob Hill Boulevard, Yakima, Washington. Washington State Department of Ecology. June.

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MFA. 2015. Final remedial action plan and engineering design report: former Tiger Oil Site. Prepared for the City of Yakima. Maul Foster & Alongi, Inc., Bellingham, Washington. January 23.

TerraGraphics. 2013. Groundwater sampling report, Tiger Oil, Yakima, Washington. Prepared for State of Washington Department of Ecology. TerraGraphics Environmental Engineering, Inc., Boise, Idaho. June 12.

TABLES

Table 1
Confirmation Sample Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

Sample Name	BH-01-S-9.0	BH-01-S-14.0	BH-02-S-9.0	BH-02-S-14.0	BH-03-S-9.0	BH-03-S-14.0	BH-04-S-9.0	BH-04-S-14.0	BH-05-S-9.0	BH-06-S-14.0	BH-07-S-14.0	BH-08-S-14.0	BH-09-S-14.0
Sample Date	03/17/2015	03/17/2015	03/18/2015	03/18/2015	03/18/2015	03/18/2015	03/18/2015	03/18/2015	03/18/2015	03/18/2015	03/19/2015	03/19/2015	03/19/2015
Sample Depth (ft bgs)	9	14	9	14	9	14	9	14	9	14	14	14	14
Total Metals (mg/kg)													
Lead	**497**	**13.4**	--	--	--	--	--	--	--	--	--	--	--
TCLP Metals (mg/L)													
Lead	1 U	1 U	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (mg/kg)													
1,1,1,2-Tetrachloroethane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	0.25 U	0.25 U	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.25 U	0.25 U	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	**55**	**11**	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	**15**	**2.6**	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	**0.92**	**0.19**	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
Acetone	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
Benzene	**0.5**	**0.98**	**0.1**	**0.59**	0.03 U	**3**	**0.25**	**3.5**	**0.051**	**0.35**	**1.8**	**2.4**	**1.7**
Bromobenzene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Bromoform	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--

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Former Tiger Oil Site
City of Yakima
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Sample Name	BH-01-S-9.0	BH-01-S-14.0	BH-02-S-9.0	BH-02-S-14.0	BH-03-S-9.0	BH-03-S-14.0	BH-04-S-9.0	BH-04-S-14.0	BH-05-S-9.0	BH-06-S-14.0	BH-07-S-14.0	BH-08-S-14.0	BH-09-S-14.0
Sample Date	03/17/2015	03/17/2015	03/18/2015	03/18/2015	03/18/2015	03/18/2015	03/18/2015	03/18/2015	03/18/2015	03/18/2015	03/19/2015	03/19/2015	03/19/2015
Sample Depth (ft bgs)	9	14	9	14	9	14	9	14	9	14	14	14	14
Chlorobenzene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
Chloroform	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	**9.3**	**1.2**	**0.2**	**9.9**	0.05 U	**24**	**0.26**	**19**	**0.053**	**6.8**	**0.68**	**4.1**	**38**
Hexachlorobutadiene	0.25 U	0.25 U	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	**1.3**	**0.13**	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	**43**	**5.4**	**0.47**	**43**	0.1 U	**99**	**1.4**	**86**	**0.24**	**30**	**2.8**	**17**	**160**
Methyl tert-butyl ether	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	**40**	**12**	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	**6.5**	**0.81**	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	**16**	**2.5**	**0.15**	**16**	0.05 U	**36**	**0.58**	**31**	**0.075**	**10**	**1.2**	**6.4**	**60**
sec-Butylbenzene	**1.1**	**0.23**	--	--	--	--	--	--	--	--	--	--	--
Styrene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	0.025 U	0.025 U	--	--	--	--	--	--	--	--	--	--	--
Toluene	**5.7**	**3.4**	0.05 U	**9.7**	0.05 U	**34**	0.05 U	**31**	0.05 U	**5.4**	**2.9**	**11**	**43**
trans-1,2-dichloroethene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	0.02 U	0.02 U	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	0.5 U	0.5 U	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	0.05 U	0.05 U	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)													
Gasoline	**690**	**1600**	**83**	**130**	2 U	**340**	**13**	**2300**	**4.3**	**290**	**500**	**400**	**3600**

Table 1
Confirmation Sample Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

Sample Name	BH-10-S-14.0	BH-10-DUP	BH-11-S-14.0	BH-12-S-14.0	BH-13-S-14.0	BH-14-S-14.0	BH-15-S-14.0	BH-16-S-9.0	BH-16-S-14.0	BH-17-S-9.0	BH-17-S-14.0
Sample Date	03/30/2015	03/30/2015	03/30/2015	03/30/2015	03/30/2015	03/31/2015	03/31/2015	04/01/2015	04/01/2015	04/01/2015	04/01/2015
Sample Depth (ft bgs)	14	14	14	14	14	14	14	9	14	9	14
Total Metals (mg/kg)											
Lead	--	--	--	--	--	--	--	--	--	--	--
TCLP Metals (mg/L)											
Lead	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (mg/kg)											
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	--	--	--	--	--
Benzene	0.02 UJ	0.02 UJ	**1.3**	0.4 U	0.02 UJ	**12**	**1.6**	0.02 U	0.02 U	0.02 U	0.02 UJ
Bromobenzene	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--	--	--	--	--	--

Table 1
Confirmation Sample Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

Sample Name	BH-10-S-14.0	BH-10-DUP	BH-11-S-14.0	BH-12-S-14.0	BH-13-S-14.0	BH-14-S-14.0	BH-15-S-14.0	BH-16-S-9.0	BH-16-S-14.0	BH-17-S-9.0	BH-17-S-14.0
Sample Date	03/30/2015	03/30/2015	03/30/2015	03/30/2015	03/30/2015	03/31/2015	03/31/2015	04/01/2015	04/01/2015	04/01/2015	04/01/2015
Sample Depth (ft bgs)	14	14	14	14	14	14	14	9	14	9	14
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	0.1 UJ	**41** J	**57**	**18**	**5.1**	**130**	**95**	0.02 U	**0.84**	0.02 U	**8.6**
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	**350**	**470**	**370**	**85**	**28**	**780**	**580**	0.06 U	**2.3**	0.06 U	**48**
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--
Toluene	**3.7**	**4**	**24**	**1.5**	**0.26**	**160**	**19**	0.02 U	**0.026**	0.02 U	**0.13**
trans-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)											
Gasoline	**6600**	**9700**	**6600**	**1900**	**500**	**8500**	**7100**	2 U	**290**	2 U	**2600**

Table 1
Confirmation Sample Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

NOTES:
Detected results in **bold** font.
-- = not analyzed.
ft bgs = feet below ground surface.
J = estimated.
mg/kg = milligrams per kilogram.
mg/L = milligrams per liter.
TCLP = toxicity characteristic leaching procedure.
U = Analyte not detected at or above method reporting limit.

Table 2
Stockpile and Well Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

Sample Name	SP-1-S1	SP-1-S2	SP-1-S3	SP-1-S4	SP-1-S5	SP-1-S6	SP-1-S7	SP-02-S-01	SP-02-S-02	SP-02-S-03	SP-02-S-04	SP-02-S-05
Sample Date	03/17/2015	03/17/2015	03/17/2015	03/17/2015	03/17/2015	03/17/2015	03/17/2015	03/19/2015	03/19/2015	03/19/2015	03/19/2015	03/19/2015
TCLP Metals (mg/L)												
Lead	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Volatile Organic Compounds (mg/kg)												
1,1,1,2-Tetrachloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,1-Trichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2,2-Tetrachloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloroethene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1-Dichloropropene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,3-Trichlorobenzene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2,4-Trichlorobenzene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.062**	**0.8**	**0.24**
1,2-Dibromo-3-chloropropane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichlorobenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloroethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,2-Dichloropropane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3,5-Trimethylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.24**	**0.075**
1,3-Dichlorobenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichloropropane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2,2-Dichloropropane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Butanone	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Chlorotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
2-Hexanone	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Isopropyltoluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromobenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Table 2
Stockpile and Well Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

Sample Name	SP-1-S1	SP-1-S2	SP-1-S3	SP-1-S4	SP-1-S5	SP-1-S6	SP-1-S7	SP-02-S-01	SP-02-S-02	SP-02-S-03	SP-02-S-04	SP-02-S-05
Sample Date	03/17/2015	03/17/2015	03/17/2015	03/17/2015	03/17/2015	03/17/2015	03/17/2015	03/19/2015	03/19/2015	03/19/2015	03/19/2015	03/19/2015
Chlorobenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,3-Dichloropropene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.15**	0.05 U
Hexachlorobutadiene	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.78**	**0.16**
Methyl tert-butyl ether	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.28**	**0.17**
n-Propylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.11**	0.05 U
o-Xylene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.34**	**0.074**
sec-Butylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Styrene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Tetrachloroethene	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Toluene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.096**	0.05 U
trans-1,2-dichloroethene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
trans-1,3-Dichloropropene	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Trichloroethene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Total Petroleum Hydrocarbons (mg/kg)												
Gasoline	2 U	2 U	2 U	2 U	2 U	**4.2**	2 U	2 U	2 U	2 U	**11**	**6.5**
Hydrocarbon Identification												
Diesel	--	--	--	--	--	--	--	--	--	--	--	--
Gasoline	--	--	--	--	--	--	--	--	--	--	--	--
Heavy-Oil-Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--

Table 2
Stockpile and Well Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

Sample Name	SP-03-S01	SP-03-S02	SP-03-S03	SP-03-S04	SP-03-S05	SP-04-S-01	SP-04-S-02	SP-04-S-03	SP-04-S-04	SP-04-S-05	SP-04-S-06	SP-04-S-07
Sample Date	03/23/2015	03/23/2015	03/23/2015	03/23/2015	03/23/2015	03/30/2015	03/30/2015	03/30/2015	03/30/2015	03/30/2015	03/30/2015	03/30/2015
TCLP Metals (mg/L)												
Lead	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (mg/kg												
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Bromobenzene	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--	--	--	--	--	--	--

Table 2
Stockpile and Well Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

Sample Name	SP-03-S01	SP-03-S02	SP-03-S03	SP-03-S04	SP-03-S05	SP-04-S-01	SP-04-S-02	SP-04-S-03	SP-04-S-04	SP-04-S-05	SP-04-S-06	SP-04-S-07
Sample Date	03/23/2015	03/23/2015	03/23/2015	03/23/2015	03/23/2015	03/30/2015	03/30/2015	03/30/2015	03/30/2015	03/30/2015	03/30/2015	03/30/2015
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--	--
Toluene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
trans-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	--	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg												
Gasoline	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Hydrocarbon Identification												
Diesel	--	--	--	--	--	--	--	--	--	--	--	--
Gasoline	--	--	--	--	--	--	--	--	--	--	--	--
Heavy-Oil-Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--

Table 2
Stockpile and Well Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

Sample Name	SP-05-S-01	SP-05-S-DUP	SP-05-S-02	SP-05-S-03	SP-05-S-04	SP-05-S-05	SP-06-S-01	SP-06-S-02	SP-06-S-03	SP-06-S-04	SP-06-S-05	WELL-01-S
Sample Date	04/07/2015	04/07/2015	04/07/2015	04/07/2015	04/07/2015	04/07/2015	04/14/2015	04/14/2015	04/14/2015	04/14/2015	04/14/2015	04/07/2015
TCLP Metals (mg/L)												
Lead	--	--	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds (mg/kg												
1,1,1,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	0.05 U
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	--	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	0.05 U
1,1-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	0.05 U
1,1-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	--	--	--	--	--	--	--	--	--	--	--	0.05 U
1,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	--	--	--	--	--	--	--	--	--	--	--	--
2-Butanone	--	--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	--	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	--	--	--	--	--	--	--	--	--	--	--	--
Acetone	--	--	--	--	--	--	--	--	--	--	--	--
Benzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	**7.3**
Bromobenzene	--	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	--	--	--	--	--	--	--	--	--	--	--	--
Bromoform	--	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	--	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	--	--	--	--	--	--	--	--	--	--	--	--

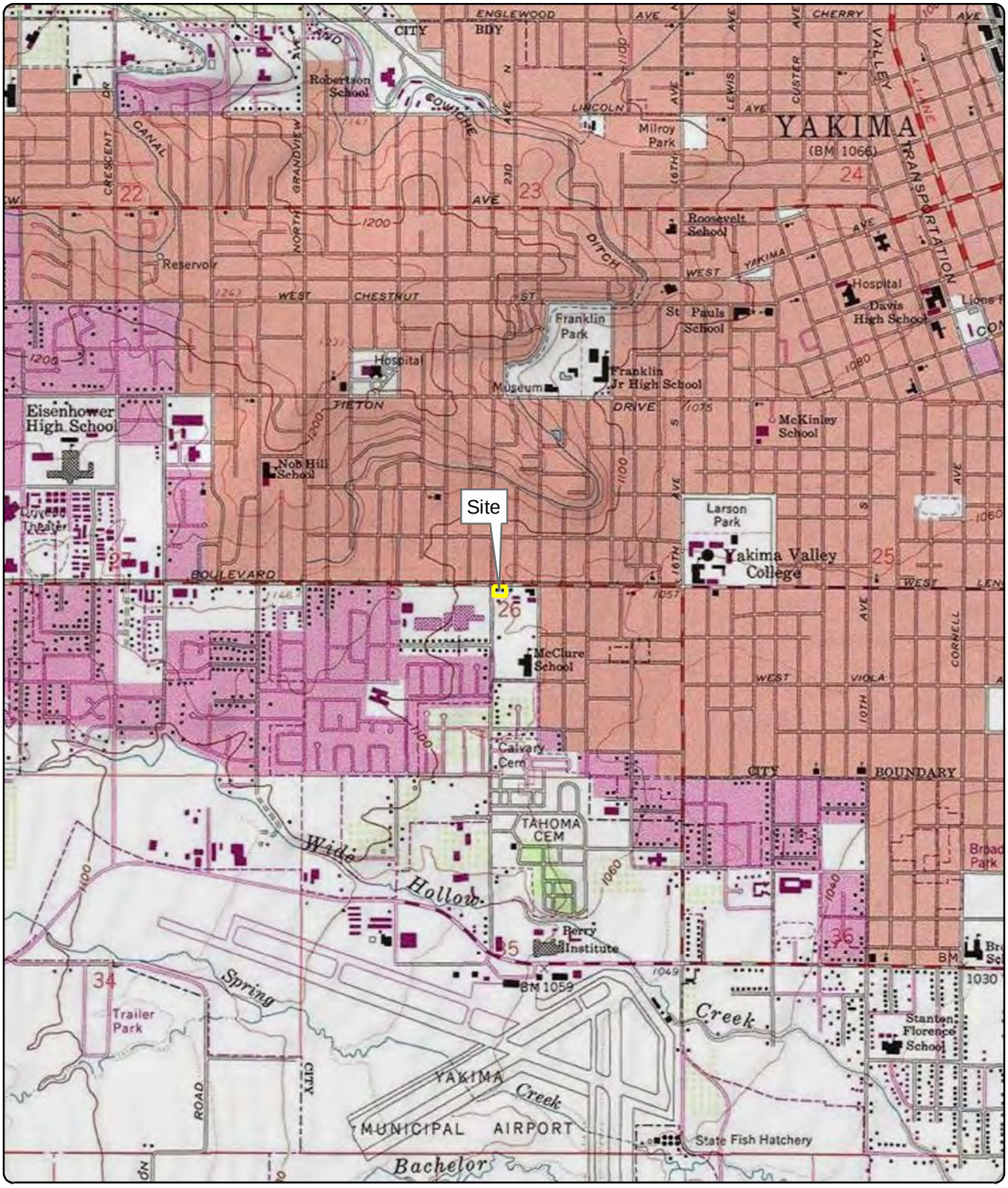
Table 2
Stockpile and Well Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

Sample Name	SP-05-S-01	SP-05-S-DUP	SP-05-S-02	SP-05-S-03	SP-05-S-04	SP-05-S-05	SP-06-S-01	SP-06-S-02	SP-06-S-03	SP-06-S-04	SP-06-S-05	WELL-01-S
Sample Date	04/07/2015	04/07/2015	04/07/2015	04/07/2015	04/07/2015	04/07/2015	04/14/2015	04/14/2015	04/14/2015	04/14/2015	04/14/2015	04/07/2015
Chlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	--	--	--	--	--	--	--	--	--	--	--	0.5 U
Chloroform	--	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	--	--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	--	--	--	--	--	0.05 U
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	--	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	**34**
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
m,p-Xylene	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	**210**
Methyl tert-butyl ether	--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	--	--	--	--	--	--	--	--	--	--	--	0.5 U
Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
Styrene	--	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene	--	--	--	--	--	--	--	--	--	--	--	0.025 U
Toluene	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	**76**
trans-1,2-dichloroethene	--	--	--	--	--	--	--	--	--	--	--	0.05 U
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene	--	--	--	--	--	--	--	--	--	--	--	0.02 U
Trichlorofluoromethane	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	--	--	--	--	--	--	--	--	--	--	--	0.05 U
Total Petroleum Hydrocarbons (mg/kg												
Gasoline	2 U	2 U	2 U	2 U	2 U	2 U	**2.5**	2 U	2 U	2 U	2 U	--
Hydrocarbon Identification												
Diesel	--	--	--	--	--	--	--	--	--	--	--	ND
Gasoline	--	--	--	--	--	--	--	--	--	--	--	**DETECT**
Heavy-Oil-Range Hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	ND

Table 2
Stockpile and Well Analytical Results
Former Tiger Oil Site
City of Yakima
Yakima, Washington

NOTES:
Detected results in **bold** font.
Stockpile samples do not have sample depths.
-- = not analyzed.
mg/kg = milligrams per kilogram.
mg/L = milligrams per liter.
ND = not detected.
TCLP = toxicity characteristic leaching procedure.
U = Analyte not detected at or above method reporting limit.

FIGURES



Site Address: 2312 West Nob Hill Boulevard, Yakima, Washington 98902
Source: Taxlots obtained from City of Yakima GIS,
US Geological Survey (1990) 7.5-minute
topographic quadrangle: Yakima West
Section 26, Township 13 North, Range 18 East

Legend

Site Taxlot

Figure 1
Site Location

Former Tiger Oil
2312 West Nob Hill Boulevard
Yakima, Washington

0 1,000 2,000
Feet

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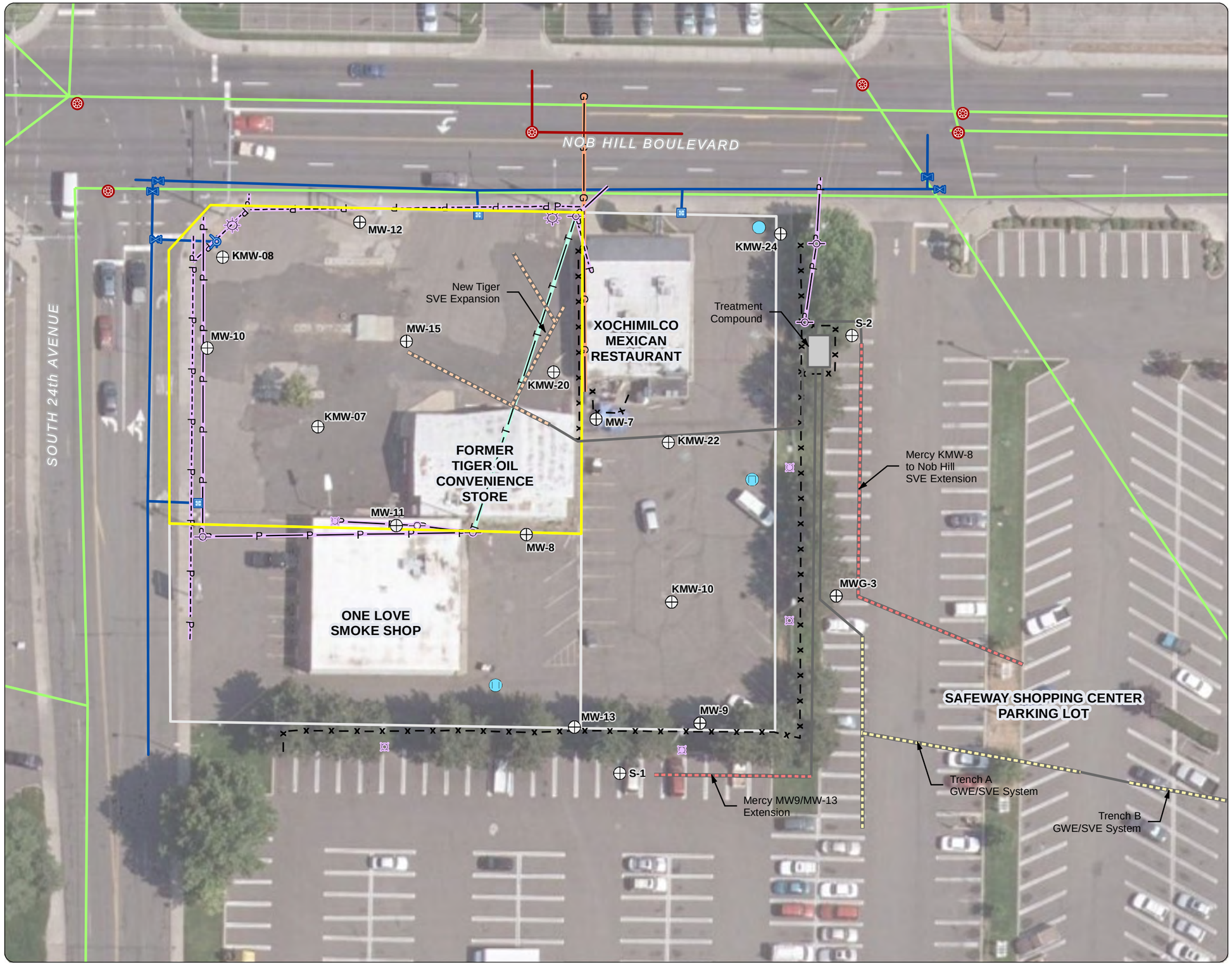
Print Date: 5/29/2015
Approved By: yvan
Produced By: jschane
Project: 0818.02.01-01

Figure 2
Pre-Construction Site Features

Former Tiger Oil
2312 West Nob Hill Boulevard
Yakima, Washington



Legend

- Monitoring Well
- Area/Yard Light
- Street Light
- Power Pole
- Sewer Manhole
- Drywell Manhole
- Fire Hydrant
- Water Valve
- Water Meter
- Stormwater Line
- Sanitary Sewer Line
- Water Line
- Overhead Telephone Line
- Natural Gas Line
- Overhead Power Line
- Underground Power Line
- Fence
- Property Taxlot Boundary
- Adjacent Taxlot Boundaries

0 20 40
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online; all other features except storm-water line and taxlot boundaries (City of Yakima) obtained from PLSA and are approximate.

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Approved By: mstringer
Produced By: jschane
Project: 0818.02.01-01

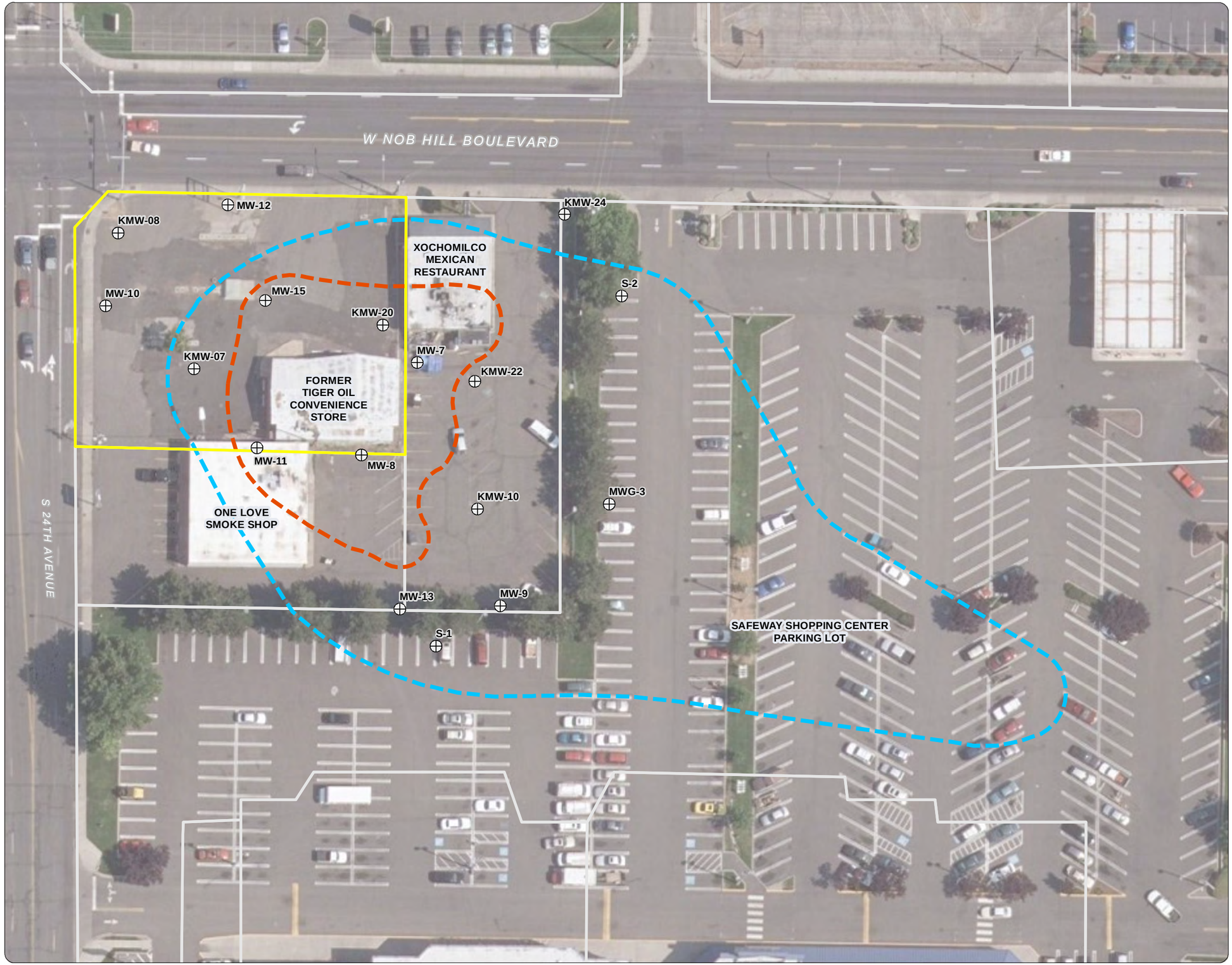

Figure 3
LNAPL and Dissolved-Phase Plumes

Former Tiger Oil
2312 West Nob Hill Boulevard
Yakima, Washington

Legend

- Monitoring Well
- Approximate LNAPL Plume
- Approximate Dissolved-Phase Plume
- Site Taxlot Boundary
- Adjacent Taxlot Boundaries

0 25 50
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online; monitoring wells obtained from PLSA; plumes obtained from TerraGraphics; taxlot boundaries obtained from City of Yakima.

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Print Date: 6/16/2015
Approved By: mstringer
Produced By: jmiller
Project: 0818.02.01-01

Figure 4
Excavation Extent and Confirmation Sample Locations

Former Tiger Oil
2312 West Nob Hill Boulevard
Yakima, Washington

Legend

- Monitoring Well
- Decommissioned Monitoring Well
- Floor Sample
- Sidewall Sample
- Dry Well Location
- Excavation Area
- Pot Holes (Approximate)
- Property Taxlot Boundary

Notes:
1. All features are approximate.
2. GWE = groundwater extraction.
3. LNAPL = light nonaqueous-phase liquid.
4. PVC = polyvinyl chloride.
5. SVE = soil vapor extraction.
6. Monitoring wells located near and within the excavation boundary were protected during interim remedial activities.

0 10 20
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online; monitoring wells obtained from PLSA; plumes obtained from TerraGraphics; taxlot boundaries obtained from City of Yakima.

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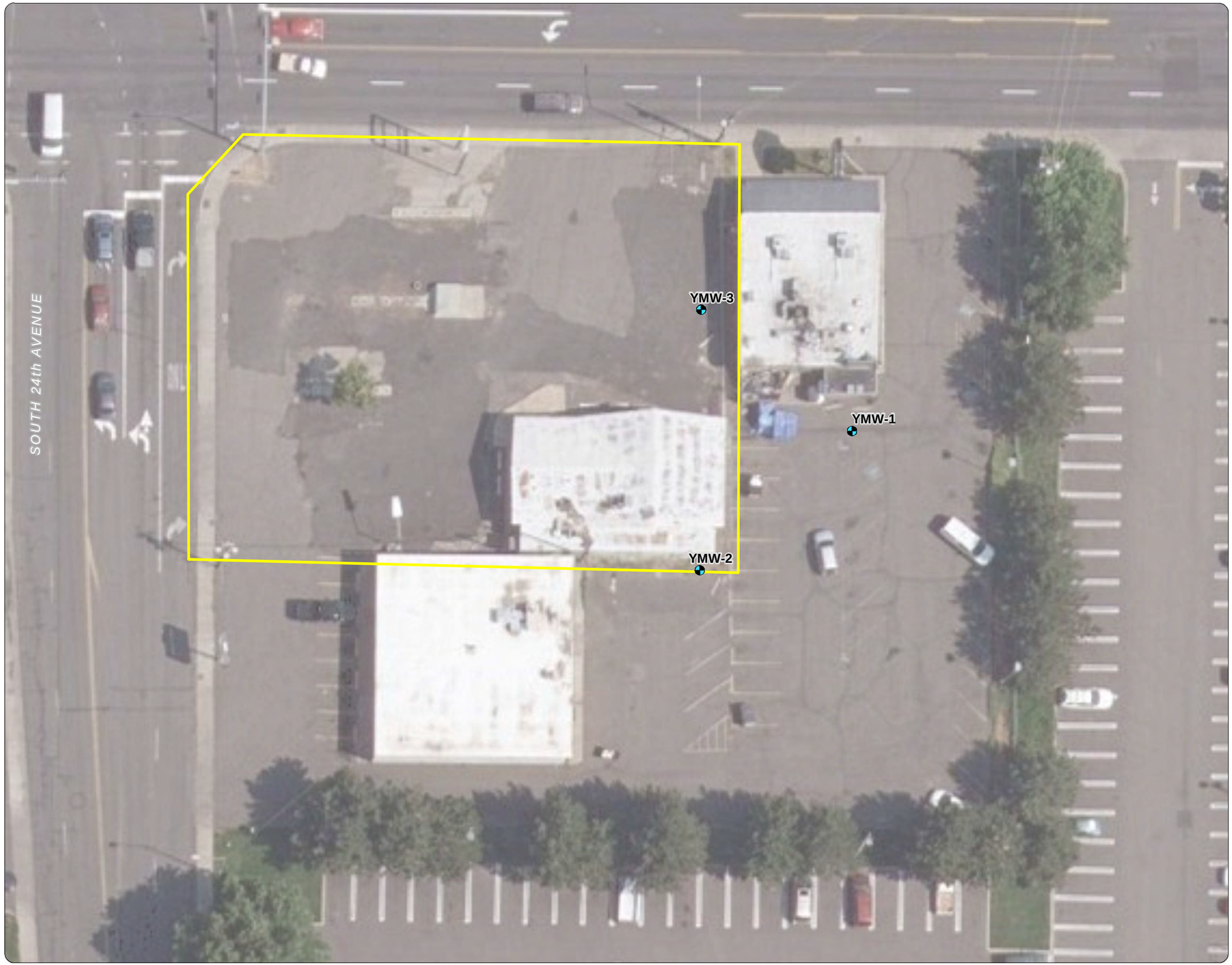

Figure 5
New Monitoring Well Locations

Former Tiger Oil
2312 West Nob Hill Boulevard
Yakima, Washington

Legend

- Monitoring Well Installed on May 26, 2015
- Property Taxlot Boundary

0 15 30
Feet

Source: Aerial photograph obtained from Esri ArcGIS Online; monitoring wells obtained from PLSA; plumes obtained from TerraGraphics; taxlot boundaries obtained from City of Yakima.

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APPENDIX A

ASBESTOS SURVEY

March 9, 2015

To: Jim Decker
IO Environmental & Infrastructure Inc.
2200 1118th Ave.
Bellevue WA 98006

From: Greg McCary, President
All-Safe Abatement
6223 West Deschutes Ave., #316
Kennewick, WA 99336

Re: Asbestos Abatement Closeout Report – Former Tiger Mart, 2312 West Nob Hill Blvd., Yakima, WA – PO # ASA-2015-01
All-Safe Project #15027

1.0 GENERAL INFORMATION:

All-Safe Abatement provided the removal of specified non-friable asbestos-containing mastic beneath non-asbestos 12" x 12" vinyl floor tile for the above referenced project. The asbestos abatement was conducted to facilitate structure demolition. All-Safe conducted the abatement work from March 2, 2015 through March 4, 2015.

2.0 ASBESTOS REGULATIONS:

All-Safe Abatement filed "Notice of Intent" (NOIs) to remove asbestos-containing materials with the Yakima Clean Air Agency and the Washington State Department of Labor and Industries for the project. For further information, please refer to the attached NOIs. The asbestos abatement was conducted in accordance with applicable asbestos regulations as follows:

1. U.S. Department of Ecology Asbestos Regulations, National Emission Standard for Hazardous Air Pollutants (NESHAP).
2. Washington Administrative Code (WAC) Chapter 296-65, WAC, Asbestos Removal & Encapsulation.
3. Washington Administrative Code, Chapter 296-62, WAC, Part I-1, Asbestos, Tremolite, Anthophyllite & Actinolite.
4. U.S. Environmental Protection Agency, Asbestos Hazard Emergency Response Act (AHERA) 40 CFR 763, Final Rule & Notice

5. U.S. Environmental Protection Agency Toxic Substance Control Act, TSCA, (Code of Federal Regulations Title 40, Part 761).
6. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), 40 CFR 1910.1001& 1926.1001.

3.0 SCOPE OF WORK:

All-Safe provided removal of approximately 2,400 SF of asbestos-containing mastic beneath non-asbestos 12" x 12" vinyl floor tile located throughout the main store area at the former Tiger Mart, 2312 West Nob Hill Blvd., Yakima, WA.

4.0 ASBESTOS ABATEMENT:

The abatement of asbestos-containing mastic is a Class II regulated material in accordance with the Department of Labor and Industries asbestos regulations; Chapter 296-62-077 WAC. The removal of non-friable mastic beneath non-asbestos vinyl floor tile was conducted within a regulated work area by installing 6 mil poly critical barriers on all doors, windows, vents and penetrations within the regulated work area. The area was demarcated with asbestos danger tape and warning signs to insure restriction of access of unauthorized personnel. The removal was conducted by wet manual and chemical methods. The final cleaning was conducted by wet wipe and HEPA vacuum methods.

5.0 PCB BALLAST AND MERCURY LAMPS REMOVAL:

All-Safe provided the removal of PCB Ballasts and Mercury Lamps from the lighting fixtures. All-Safe Abatement turned over the subject waste to IO Environmental & Infrastructure for proper transport and disposal.

6.0 CERTIFIED ASBESTOS PERSONNEL

All-Safe employed a Washington State Certified Asbestos Supervisor to oversee the project set up, removal, air monitoring and encapsulation activities. All workers on this project were Washington State Certified Asbestos Workers or 8 hour WISHA specific floor tile trained.

7.0 PERSONAL PROTECTIVE EQUIPMENT:

Each worker entering the regulated work area donned tyvek or equivalent full body suits and proper respiratory protection (i.e. half-face APR respirators) with HEPA filters and general safety equipment.

8.0 VISUAL INSPECTION, AIR MONITORING & ANALYSIS:

A visual inspection was performed by the All-Safe Site Supervisor prior to collection of the final clearance air sample. Final clearance air sampling was performed by the All-Safe Abatement Supervisor. The asbestos clearance air sample was transported via

chain of custody protocol to PBS Engineering and Environmental, Kennewick, WA, for Phase Contrast Microscopy (PCM) NIOSH 7400 analysis. The subject air clearance passed. For further information, please see attached clearance air monitoring results.

9.0 WASTE PACKAGING, TRASPORT & DISPOSAL:

The asbestos waste was packaged in two layers of 6 mil poly (burrito wrapped) in a roll-off dumpster (provided by IO Environmental & Infrastructure), properly labeled and sealed. IO Environmental & Infrastructure was responsible for the proper waste manifesting, waste transport and disposal of asbestos, PCBs and lamp waste for this project.

10.0 REPORT CERTIFICATION:

The person signing this report below certifies that to the best of their knowledge, the above information in this report is a true and accurate representation of project events. If you have any questions or require additional information, please do not hesitate to contact me at (509) 783-1130.

Greg Mc Cary — March 9, 2015

Greg McCary, Project Manager — Date
All-Safe Abatement

Report Attachments: Regulatory Notifications
Supervisor Daily Logs
Clearance Air Sample Laboratory Analysis

Cc: All-Safe Project File #15027

RECEIVED
FEB 17 2015
RCAA

CLEAN AIR

Yakima Regional Clean Air Agency 329 North First Street, Yakima WA 98901
Phone: (509) 834-2050 Fax: (509) 834-2060 http://www.yakimacleanair.org

NOTIFICATION OF DEMOLITION AND RENOVATION

FEE RECEIVED	POSTMARK	DATE RECEIVED	NOTIFICATION #
$164.	Hand Del.	2/17/15	15-908

I. TYPE OF NOTIFICATION: / Original | Revised | Cancelled | Annual | Other

II. OWNER NAME: ~~Mail Foster Mart Inc~~ City of Yakima Email Address Brett.Sheffield@Yakima.Wa.gov
Mailing Address 129 N 2nd Street City Yakima State WA Zip 98901
Contact Brett Sheffield Telephone 509-576-6797 Cell Phone

ABATEMENT CONTRACTOR All-Safe Abatement Email Address
Mailing Address 6223 W. Deschutes Ave #316 City Kennewick State WA Zip 99336
Contact Andy Brandt Telephone 509 783-1130 Cell Phone 727-6889

OTHER OPERATOR IO Environmental & Infrastructure Inc. Email Address Jimdo1054@.com
Mailing Address 2200 116th Ave. City Bellevue State WA Zip 98004
Contact Jim Decker Telephone 425-454-1086 Cell Phone 425-577-1984

III. TYPE OF OPERATION / Demolition | Renovation | Emergency Renovation | House Move | Other

IV. IS ASBESTOS PRESENT? / Yes | No

V. FACILITY DESCRIPTION (Include building name, number & floor/room number):
Building Name Former Tiger Mart
Physical Address 2312 West Nob Hill Blvd. City Yakima State WA Zip 98902
Site Location of Asbestos (basement piping, main floor ceiling, exterior siding, etc.) Main Floor Flooring

Building Size 2400 SF # of Floors 1 Age in Years 37
Present Use Vacant Prior Use Convenience Store

VI. ASBESTOS SURVEY CONDUCTED? / Yes | No By Whom? Fulcrum Environmental
Phone 509-574-0839 Date Conducted 11/20/2014 Location of Report On-Site

VII.

Quantity of Friable ACM To Be Removed		Description of Friable ACM To Be Removed	Quantity of Nonfriable ACM To Be Removed		Description of Nonfriable ACM To Be Removed
Pipes			Category I		
Surface Area			Category II	2,400 SF	Black Mastic
Off Component			Other		

VIII. SCHEDULED DATES ASBESTOS REMOVAL Start 3/2/15 Complete 3/6/15
SCHEDULED WORK WEEK Mon-Fri SCHEDULED WORK HOURS 7:00-3:30

IX. SCHEDULED DATES DEMOLITION OR RENOVATION Start 3/9/15 Complete 3/13/15

X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK & METHODS TO BE USED
(Notice - A Separate Dust Control Plan, in addition to this notification, may be required for demolition work)
IO Environmental & Infrastructure Inc. To Provide Info

XI. DESCRIPTION OF WORK PRACTICES & ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS (Use additional paper if needed)
Critical Barriers, Hepa Neg. Air Exhaust, Wet manual methods Hepa vacuum, Double bagged Properly labeled waste.

CLEAN AIR
Yakima Regional Clean Air Agency 329 North First Street, Yakima WA 98901
Phone: (509) 834-2050 Fax: (509) 834-2060 http://www.yakimacleanair.org

XII. WASTE TRANSPORTER All-Safe Abatement
Address 6233 W. Deschutes Ave. #316 City Kennewick State WA Zip 99336
Contact Andy Brandt Telephone (509) 783-1130

XIII. WASTE DISPOSAL SITE Richland Landfill
Location
City Richland State WA Zip 99336 Telephone (509)

XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW
Agency
Date of Order Date Ordered to Begin

XV. FOR EMERGENCY RENOVATION Date & Hour of the Emergency
Description of the Sudden, Unexpected Event

Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden

XVI. I CERTIFY THAT ALL WORKERS AND SUPERVISORS CONDUCTING ASBESTOS WORK ARE TRAINED IN ACCORDANCE WITH THE PROVISIONS OF 40 CFR, PART 61, SUBPART M, AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED WILL BE AVAILABLE ON SITE FOR INSPECTION DURING NORMAL WORKING HOURS.

(Signature - Owner/Operator) 2/13/15 Date

XVIII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

(Signature - Owner/Operator) 2/13/15 Date

FEE SCHEDULE

AMOUNT OF ASBESTOS TO BE REMOVED	FEE	TYPE
Over 10,000 L.F. OR Over 50,000 S.F.	$867	Demolition Or Renovation
1,001-10,000 L.F. OR 5,001-50,000 S.F.	$425	Demolition Or Renovation
261 - 1,000 L.F. OR 161 - 5,000 S.F.	$164	Demolition Or Renovation
11 - 260 L.F. OR 49 - 160 S.F.	$ 86	Demolition Or Renovation
0 - 10 L.F. OR 0 - 48 S.F.	$ 44	Demolition Only
Any Amount	$ 77	Renovation Conducted By Owner At An Owner Occupied Single Family Residence
Any Amount	$167	Commercial Flat Built-up Roofs
Up to 260 L.F. OR 160 S.F.	$338	Annual Notice
OTHER CHARGES - ADD TO QUANTITY BASED FEE		
Any Amount	$87	Emergency Demolition or Renovation
Any Amount	$39	Revision of Existing Notification

Comments

Department of Labor and Industries
Asbestos Certification Program
PO Box 44614
Olympia WA 98504-4614

ASBESTOS ABATEMENT PROJECT NOTICE OF INTENT L&I DOSH ASBESTOS PROGRAM

This notice must be received no later than 10 calendar days prior to the start date.
Complete all applicable boxes—incomplete or illegible notices will not be accepted. Circle changes on amended notices.
Mail to the address above or fax to (360) 902-4409.
Submit this form online or get more information at http://www.lni.wa.gov/TradesLicensing/LicensingReq/Asbestos/

Notice date: 2/13/15	Initial ☒ Amended ☐	Site Work Hours	Su Mo Tu We Th Fr Sa
Start date: 3/2/15	On Hold ☐ Off Hold ☐	7:00 am 12:00 am to 12:30 pm 3:30 pm	☐ ■ ■ ■ ■ ■ ☐
Completion: 3/6/15	Emergency ☐		Project Dates and Work Hours must be Exact

CONTRACTOR	PROPERTY OWNER
Company Name: ALL-Safe Abatement	Name: Maul Foster & Alongi, Inc.
Contractor Certification Number: 1407	Owner's Agent: Jim Decker
Signature:	Company: IO Env. & Infrastructure Inc.
Printed Name: Andy Brandt	Address: 2200 1118th AVE.
Phone Number: 509-783-1130	City: Bellevue State: WA ZIP+4: 98006
Job Site C.A.S.: Jake Dobson	Phone number: 425-454-1086

JOB SITE	FACILITY
Address: 2312 West Nob Hill Blvd.	Type: Convenience Store
Building Name: former Tiger Mart Room: Throughout	Age: 31 years Size: 2,400 SF
City: Yakima WA	☐ Remodel ☒ Demolition
ZIP + 4: 98902 County: Yakima	☐ Repair ☐ Maintenance

QUANTITY OF ASBESTOS TO BE: ☒ **REMOVED** ☐ **ENCAPSULATED**

Quantity 2,400 square feet		☒ Indoors	☐ Outdoors
☐ Fireproofing	☐ Boiler insulation	**CONTROL MEASURES**	
☐ Popcorn ceiling	☐ Duct paper	☐ Neg. pres. enclosure	☐ Wrap & cut
☐ CAB	☐ VAT	☐ Glove bag	☒ Wet methods
☐ Sheet vinyl	☐ Roofing	☐ Mini enclosure	☒ HEPA vacuum
☐ Asbestos paper	☒ Other Black Mastic	☒ Critical barriers	☒ Manual methods
Quantity _____ linear feet		☐ Other _____	☐ Other _____
☐ Mag. pipe insulation	☐ Cement asbestos pipe	**RESPIRATORY PROTECTION**	
☐ Air cell pipe insulation	☐ Mudded pipe ins.	☒ ½ mask APR	☐ Type C continuous flow
☐ Ducting/duct insulation	☐ Duct tape	☐ Full face APR	☐ Type C pressure demand
☐ Other _____	☐ Other _____	☐ PAPR	☐ Other _____

LABORATORY SAMPLE CHAIN OF CUSTODY

PBS

PBS Project No: 13600 [illegible]

Client: All-Safe Abatement

Address: 6223 W. Deschutes #316
Kennewick, WA 99336

Send Results to: Andy@all-safeabate.com.

Phone: _____ Fax: _____

Turn Around Time (check one)

Individuals signing this form warrant that the information provided is correct and complete. The Client should keep a copy and send the original to or leave it with PBS. PBS will Complete the form, keep a copy and return the original to the Client. Receiver shall Report damage of package immediately to Sender.

☒ 4-Hour ☐ 24-Hour
☐ 48-Hour ☐ 72-Hour

Signature _____ **Date** 3-4-15

Client/Project ID No.: EO Environmental & Infrastructure Inc. tigermart 15027

Sample ID Name/No.	Lab ID No.	Sample ID Name/No.	Lab ID No.
1. 15027-001		11.	
2.		12.	
3.		13.	
4.		14.	
5.		15.	
6.		16.	
7.		17.	
8.		18.	
9.		19.	
10.		20.	

SPECIAL INSTRUCTIONS

Relinquished by:	Date: 3-4-15	Received by:	Date:
Relinquished by:	Date:	Received by:	Date:
Method of Shipment:	Date:	Sample Condition Upon Receipt:	
		☐ Acceptable ☐ Other (explain)	

320 N. Johnson Street, Suite 700, Kennewick, WA 99336
509.735.2698 Fax 509.735.1867

ALL-SAFE ABATEMENT

ASBESTOS AIR SAMPLE DATA SHEET

CLIENT IO Environmental & Infrastructure Inc DATA RECEIVED _____

PROJECT NAME Tiger Mart PROJECT NUMBER 15027

Date Sampled	3-4-15			
Sampled By	JA			
Analyst (PBS)				
Client Sample ID No.	15027-001			
ID No.				
Code	C			
Worker name. Location,SS#,Activity, Personal prot,etc.	middle of containment t/c 3' mastic			
Pump No.				
Time Started	9:00			
Time Ended	11:00			
Total Minutes	120			
Flow Rate Start	10			
Flow Rate End	10			
Average Flow Rate	10			
Air Volume (L)	1200			
Filter Area (mm^2)	385	385	385	385
Field Area (mm^2)	.00785	.00785	.00785	.00785
Blank Count				
Fiber Count	4			
Field Count	100			
Fibers/cc	LLD			

TWA (To be completed by analyst)

Sample No.'s :	Name:	Minutes:	F/CC:

ALL-SAFE ABATEMENT

ALL-SAFE ABATEMENT
SUPERVISORS DAILY LOG

Date: 3/2/15 All-Safe Project # 15027

Contractor/Client: IO Environmental Project Name: Tiger Mart

Work Area: _____ Scope of Work: VAT

Work Started: 6:30 Lunch Break: 12:00 Work ended: 3:00

Site Contact: Jim Decker

Project Start-up
- X Mobilization
- X Pre-Clean
- X Containment Prep
- X Equipment Set-up
- X Component Demo (non ACM)

Removal Methods:
- X Wet Method
- X Manual Method
- ___ Glovebag
- ___ Mechanical Method
- ___ Terminator
- ___ Bead Blast
- ___ Wrap & Cut
- ___ Other

Engineering Controls:
- X Regulated Area Established
- X Danger Barrier Tape
- X Danger Signs Posted
- X Critical Barriers Established
- ___ Mini Enclosure
- ___ HEPA Negative Air Filtration
- ___ Manometer Installed
- X Water Filtration
- X HEPA Vacuum
- X Amended Water
- X Encapsulation
- X Dust Collection
- ___ HVAC Isolated
- ___ 3 Stage Decontamination Unit
- ___ Two stage Bag
- ___ Negative Pressure Enclosure
- ___ Smoke Testing
- ___ Other

Safety Controls:
- X First Aid Kit
- X Fire Extinguisher
- X Emergency Exits Established
- X Safety Meeting
- X GFCI's
- ___ Safety Check (JSA)
- ___ Additional Equipment
- ___ Other

Personal Protective Equipment:
- ___ Fall Protection
- X Work Boots
- ___ Hard Hats
- ___ Hearing Protection
- X Gloves
- X Half Face/HEPA Filters
- X Disposable Coveralls
- X Eye Protection
- ___ Full Face/HEPA Filters
- ___ PAPR/HEPA Filters
- ___ Type C/HEPA
- ___ Cont. Flow/HEPA Filters

Air Monitoring:
- ___ Pre-Abatement
- X Inside Work Area
- ___ Clearance
- X Excursion
- X Outside Work Area
- ___ Ambient
- X Personal
- ___ Negative Air Exhaust
- ___ Historical Air Data
- ___ Neg. Exp. Assessment
- ___ Other

Compliance Issues:

___ Visual Inspection Conducted by (whom)_____: Pass _____ Fail _____

Corrective Action Taken: _____

___ Air Clearance Testing: Pass _____, Fail _____, Not Required _____, Sample Result _____ f/cc

Air Clearance Conducted by (whom): _____

Waste Disposal:
- ___ 6' x 10' Lined Dump Trailer
- ___ 8' x 14' Lined Dump Trailer
- ___ 6 Mil Poly Bags (Double)
- ___ Material Double Wrapped
- ___ Lined Mega Box's
- X Lined 20 Yard Dumpster
- ___ Lined 30 Yard Dumpster
- X Properly Labeled
- ___ Other:

EPA Approved Landfill:

Waste Manifest Completed: ___ Yes ___ No Waste Transported by: _____

Waste will be transported to:_____ Number of Bags/Boxes/Containers:_____

ALL-SAFE ABATEMENT

ALL-SAFE ABATEMENT
SUPERVISORS DAILY LOG

Date: 3/2/15 All-Safe Project # 15029

Project Supervisor: ☒ Justin Wood ☒ Jason Alefteras ☐ Lance Kirby ☐ Andrew Brandt ☐ Jacob Dobson

Crew: ☒ Clint Hunt ☐ Ray Morrow ☐ Aaron Guerra ☒ Arturo Perez ☒ Eliodoro Diego ☐ Ryan Mortensen

☐ _____ ☐ _____ ☐ _____

Additional Project Comments: (include: project concerns, scope changes, items discussed w/GC/consultant/owner, delays, scope changes, work practices, regulatory inspections etc).

ASA on site at 8:45. Met with Jim Decker to go over the project. Began with prep of critical barriers over doors, windows, & vents. Had a couple guys start removing the lights & ballasts. Began tile removal at 10:30. Double lined the dumpster with 6 mil poly & brought out wash with wheel barrels. Had the front room of tile done by lunch. Began tile removal in the back rooms after lunch. finished tile removal & load out & began detailing & getting ready for mastic removal tomorrow. ASA off site at 2:30

Certification: The individual signing this report certifies that all information above is correct and accurate to the best of his/her knowledge.

Print Name: Justin Wood

Signature: [signature]

ALL-SAFE ABATEMENT

ALL-SAFE ABATEMENT
SUPERVISORS DAILY LOG

Date: 3/3/15 All-Safe Project # 15027

Contractor/Client: FO Environmental Project Name: Tiger Mart

Work Area: _____ Scope of Work: Mastic

Work Started: 6:30 Lunch Break: 12:00 Work ended: 3:00

Site Contact: Jim Decker

Project Start-up
___ Mobilization ___ Pre-Clean ___ Containment Prep ___ Equipment Set-up ___ Component Demo (non ACM)

Removal Methods:
X Wet Method ___ Glovebag ___ Terminator ___ Wrap & Cut
X Manual Method X Mechanical Method ___ Bead Blast ___ Other

Engineering Controls:
X Regulated Area Established ___ Manometer Installed ___ HVAC Isolated
X Danger Barrier Tape ___ Water Filtration ___ 3 Stage Decontamination Unit
X Danger Signs Posted X HEPA Vacuum ___ Two stage Bag
X Critical Barriers Established X Amended Water ___ Negative Pressure Enclosure
___ Mini Enclosure X Encapsulation ___ Smoke Testing
___ HEPA Negative Air Filtration X Dust Collection ___ Other

Safety Controls:
X First Aid Kit X Emergency Exits Established ___ GFCI's ___ Additional Equipment
X Fire Extinguisher ___ Safety Meeting X Safety Check (JSA) ___ Other

Personal Protective Equipment:
___ Fall Protection ___ Hearing Protection X Disposable Coveralls ___ PAPR/HEPA Filters
X Work Boots X Gloves X Eye Protection ___ Type C/HEPA
___ Hard Hats X Half Face/HEPA Filters ___ Full Face/HEPA Filters ___ Cont. Flow/HEPA Filters

Air Monitoring:
___ Pre-Abatement X Excursion X Personal ___ Neg. Exp. Assessment
X Inside Work Area X Outside Work Area ___ Negative Air Exhaust ___ Other
___ Clearance ___ Ambient ___ Historical Air Data

Compliance Issues:
___ Visual Inspection Conducted by (whom)_____: Pass _____ Fail _____
Corrective Action Taken: _____

___ Air Clearance Testing: Pass _____, Fail _____, Not Required _____, Sample Result _____ f/cc
Air Clearance Conducted by (whom): _____

Waste Disposal:
___ 6' x 10' Lined Dump Trailer X Material Double Wrapped ___ Lined 30 Yard Dumpster
___ 8' x 14' Lined Dump Trailer ___ Lined Mega Box's X Properly Labeled
X 6 Mil Poly Bags (Double) ___ Lined 20 Yard Dumpster ___ Other:

EPA Approved Landfill:
Waste Manifest Completed: X Yes ___ No Waste Transported by: _____

Waste will be transported to:_____ Number of Bags/Boxes/Containers:_____

ALL-SAFE ABATEMENT

ALL-SAFE ABATEMENT
SUPERVISORS DAILY LOG

Date: 3/3/15 All-Safe Project # 15027

Project Supervisor: ☒ Justin Wood ☐ Jason Alefteras ☐ Lance Kirby ☐ Andrew Brandt ☐ Jacob Dobson

Crew: ☐ Clint Hunt ☐ Ray Morrow ☐ Aaron Guerra ☒ Arturo Perez ☒ Eliodoro Diego ☐ Ryan Mortensen

☒ Chris Blackketter ☐ _____ ☐ _____

Additional Project Comments: (include: project concerns, scope changes, items discussed w/GC/consultant/owner, delays, scope changes, work practices, regulatory inspections etc).

ASA on site at 8:50. Set up equipment & began removal of mastic starting in the back rooms, & moved out into the front store area, Took lunch at 12:30. Continued mastic removal after lunch. I did the Exterior lights & ballasts while the continued mastic removal. Finished all but half of the front store area by the end of the day. ASA off site at 3:00pm.

Certification: The individual signing this report certifies that all information above is correct and accurate to the best of his/her knowledge.

Print Name: Justin Wood

Signature: [signature]

ALL-SAFE ABATEMENT

ALL-SAFE ABATEMENT
SUPERVISORS DAILY LOG

Date: 3-4-15 All-Safe Project # 1502 7

Contractor/Client: TO Environmental/3 Infrastructure Project Name: Tiger Mart

Work Area: Main area Scope of Work: Mastic

Work Started: 630 Lunch Break: _____ Work ended: 1200

Site Contact: _____

Project Start-up
___ Mobilization ___ Pre-Clean ___ Containment Prep ___ Equipment Set-up ___ Component Demo (non ACM)

Removal Methods:
- ✓ Wet Method
- ✓ Manual Method
- ___ Glovebag
- ✓ Mechanical Method
- ___ Terminator
- ___ Bead Blast
- ___ Wrap & Cut
- ___ Other

Engineering Controls:
- ✓ Regulated Area Established
- ✓ Danger Barrier Tape
- ✓ Danger Signs Posted
- ✓ Critical Barriers Established
- ___ Mini Enclosure
- ___ HEPA Negative Air Filtration
- ___ Manometer Installed
- ___ Water Filtration
- ✓ HEPA Vacuum
- ✓ Amended Water
- ✓ Encapsulation
- ___ Dust Collection
- ✓ HVAC Isolated
- ___ 3 Stage Decontamination Unit
- ___ Two stage Bag
- ___ Negative Pressure Enclosure
- ___ Smoke Testing
- ___ Other

Safety Controls:
- ✓ First Aid Kit
- ✓ Fire Extinguisher
- ✓ Emergency Exits Established
- ✓ Safety Meeting
- ✓ GFCI's
- ___ Safety Check (JSA)
- ___ Additional Equipment
- ___ Other

Personal Protective Equipment:
- ___ Fall Protection
- ✓ Work Boots
- ___ Hard Hats
- ___ Hearing Protection
- ___ Gloves
- ✓ Half Face/HEPA Filters
- ✓ Disposable Coveralls
- ___ Eye Protection
- ___ Full Face/HEPA Filters
- ___ PAPR/HEPA Filters
- ___ Type C/HEPA
- ___ Cont. Flow/HEPA Filters

Air Monitoring:
- ___ Pre-Abatement
- ✓ Inside Work Area
- ✓ Clearance
- ___ Excursion
- ✓ Outside Work Area
- ___ Ambient
- ___ Personal
- ___ Negative Air Exhaust
- ___ Historical Air Data
- ___ Neg. Exp. Assessment
- ___ Other

Compliance Issues:
___ Visual Inspection Conducted by (whom) _____: Pass _____ or Fail _____
Corrective Action Taken: _____

___ Air Clearance Testing: Pass _____, Fail _____, Not Required _____, Sample Result _____ f/cc
Air Clearance Conducted by (whom): _____

Waste Disposal:
- ___ 6' x 10' Lined Dump Trailer
- ___ 8' x 14' Lined Dump Trailer
- ✓ 6 Mil Poly Bags (Double)
- ___ Material Double Wrapped
- ___ Lined Mega Box's
- ___ Lined 20 Yard Dumpster
- ___ Lined 30 Yard Dumpster
- ___ Properly Labeled
- ___ Other:

EPA Approved Landfill:
Waste Manifest Completed: ___ Yes ___ No Waste Transported by: _____

Waste will be transported to: _____ Number of Bags/Boxes/Containers: _____

ALL-SAFE ABATEMENT

ALL-SAFE ABATEMENT
SUPERVISORS DAILY LOG

Date: 3-4-15 All-Safe Project # Tiger Mart

Project Supervisor: ☒ Justin Wood ☐ Jason Alefteras ☐ Lance Kirby ☐ Andrew Brandt ☐ Greg McCary

Crew: ☐ Clint Hunt ☐ Ray Morrow ☐ Jake Dobson ☒ Arturo Perez ☒ Eliodoro Diego

☐ _____ ☐ _____ ☐ _____

Additional Project Comments: (include: project concerns, scope changes, items discussed w/GC/consultant/owner, delays, scope changes, work practices, regulatory inspections etc).

ASA was onsite at 800. Finished working on main area with mastic. Once bulk was cleaned up, detailed edges double bagged all waste. Started clearance for 2 hrs. ASA was off-site at 1100.

Certification: The individual signing this report certifies that all information above is correct and accurate to the best of his/her knowledge.

Print Name: Jason Alefteras

Signature: _____

APPENDIX B

WELL DECOMMISSIONING LOGS

MONITORING WELL REPORT

1 of 6

Well ID#

Start Card # AE 30641

(1) OWNER/PROJECT

WELL NO. MW-15

Name City of Yakima

Address 2312 W Nob Hill BLVD,

City Yakima State WA Zip 98902

(2) TYPE OF WORK

☐ New construction ☐ Alteration (Repair/Recondition)

☐ Conversion ☐ Deepening ☒ Abandonment

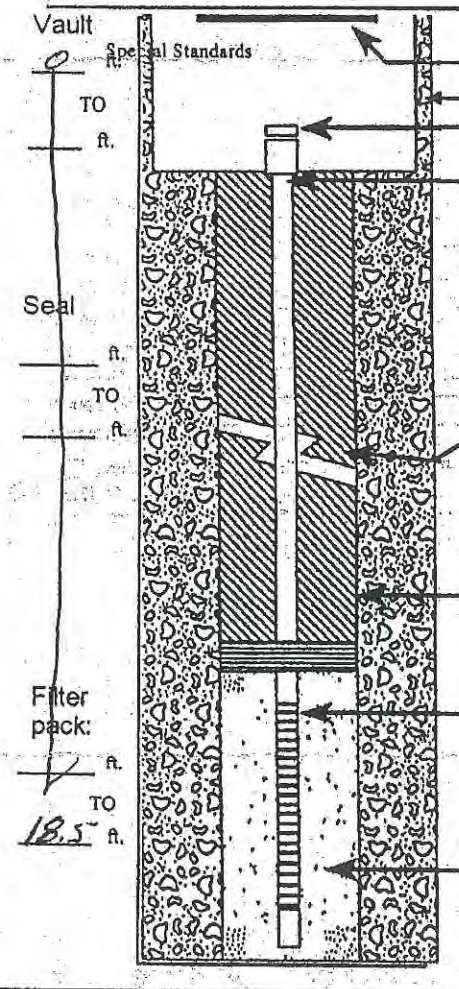
(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Hollow Stein Auger ☐ Other

(4) BORE HOLE CONSTRUCTION:

Special Standards Yes ☐ No ☒ Depth of Completed Well 18.5 ft.



Water-tight cover

Surface flush vault

Locking cap

Casing diameter 2"

Material PVC

Welded ☐ Threaded ☐ Glued ☐

Well Seal:

Material Bentinite Chip

Amount 1/4 bag

Grout weight

Borehole diameter:

in. from ft. to ft.

in. from ft. to ft.

Bentonite plug at least 3 ft. thick

Screen:

Material

From ft. to

Slot size in.

Filter pack:

Material

Size

(5) WELL TESTS:

☐ Pump ☐ Baller ☐ Air ☐ Flowing Artesian

Permeability Yield GPM

Conductivity PH

Temperature of water OF/C Depth artesian flow found ft.

Was water analysis done? ☐ Yes ☐ No

By whom?

Depth of strata to be analyzed. From ft. to ft.

Remarks:

Name Of Supervising Geologist/Engineer

(6) LOCATION OF WELL By *legal description:*

County Yakima Latitude Longitude

Township 13 (N or S) Range 18 (E or W) Section 26

NW 1/4 of NW 1/4 of above section.

Street address of well location Same

Tax lot number of well location

(7) STATIC WATER LEVEL:

Ft. below land surface. Date

Artesian Pressure lb/sq. in. Date

(8) WATER BEARING ZONES:

Depth at which water was first found -5-1

From	To	Est. Flow Rate	SWL

(9) WELL LOG:

Ground Elevation

Material	From	To	SWL
Abandon	0	18.5	
Chip up To Surface	0	18.5	

Date started 2-24-15 Completed 2-24-15

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name THOMAS J. ADAMS License No. 2684

Trainee Name License No.

Drilling Company ENVIRONMENTAL DRILLING INC

(Signed) Thomas J Adams License No. 2684

Address 10918 159th AVE SE SNO. WA.

Registration No. ENVIRDI093M6 Date 3-12-15

MONITORING WELL REPORT

2 of 6

Well ID# _____

Start Card # AE 30841

(1) OWNER/PROJECT WELL NO. MW-12

Name City of Yakima

Address 2312 W Nob Hill Blvd.

City Yakima State WA Zip 98902

(2) TYPE OF WORK

☐ New construction ☐ Alteration (Repair/Recondition)

☐ Conversion ☐ Deepening ☒ Abandonment

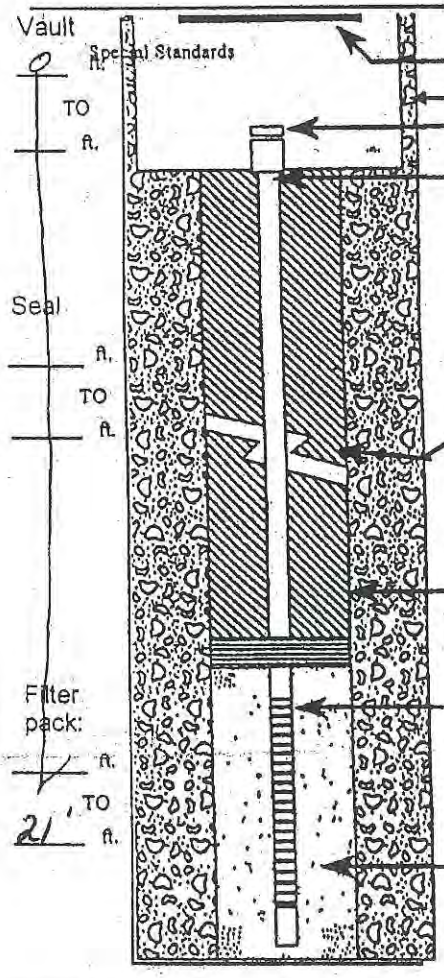
(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Hollow Stein Auger ☐ Other _____

(4) BORE HOLE CONSTRUCTION:

Special Standards Yes ☐ No ☒ Depth of Completed Well 21' ft.



Water-tight cover

Surface flush vault

Locking cap

Casing diameter 2"

Material PVC

Welded ☐ Threaded ☐ Glued ☐

Well Seal:

Material Bentinite chip

Amount 1/4 bag

Grout weight _____

Borehole diameter:

___ in. from ___ ft. to ___ ft.

___ in. from ___ ft. to ___ ft.

Bentonite plug at least 3 ft. thick

Screen:

Material _____

From ___ ft. to ___

Slot size ___ in.

Filter pack:

Material _____

Size _____

(5) WELL TESTS:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Permeability _____ Yield _____ GPM

Conductivity _____ PH _____

Temperature of water _____ OF/C Depth artesian flow found _____ ft.

Was water analysis done? ☐ Yes ☐ No

By whom? _____

Depth of strata to be analyzed. From _____ ft. to _____ ft.

Remarks: _____

Name Of Supervising Geologist/Engineer _____

(6) LOCATION OF WELL By *legal description:*

County Yakima Latitude _____ Longitude _____

Township 13 (N or S) Range 18 (E or W) Section 26

NW 1/4 of NW 1/4 of above section.

Street address of well location Same

Tax lot number of well location _____

(7) STATIC WATER LEVEL:

_____ Ft. below land surface. Date _____

Artesian Pressure _____ lb/sq. in. Date _____

(8) WATER BEARING ZONES:

Depth at which water was first found -7'

From	To	Est. Flow Rate	SWL

(9) WELL LOG:

Ground Elevation _____

Material	From	To	SWL
Abandon	0	21'	
Chipped up To Surface	0	21'	

Date started 2-24-15 Completed 2-24-15

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name THOMAS J. ADAMS License No. 2684

Trainee Name _____ License No. _____

Drilling Company ENVIRONMENTAL DRILLING IN.

(Signed) Thomas J Adams License No. 2684

Address 10918 159th Ave SE Sno. WA.

Registration No. ENVIRDI093M6 Date 3-12-15

MONITORING WELL REPORT

3 of 6

Well ID# _____

Start Card # AE 30841

(1) OWNER/PROJECT WELL NO. KMW-20

Name City of Yakima

Address 2312 W Nob Hill BLVD.

City Yakima State WA Zip 98902

(2) TYPE OF WORK

☐ New construction ☐ Alteration (Repair/Recondition)

☐ Conversion ☐ Deepening ☒ Abandonment

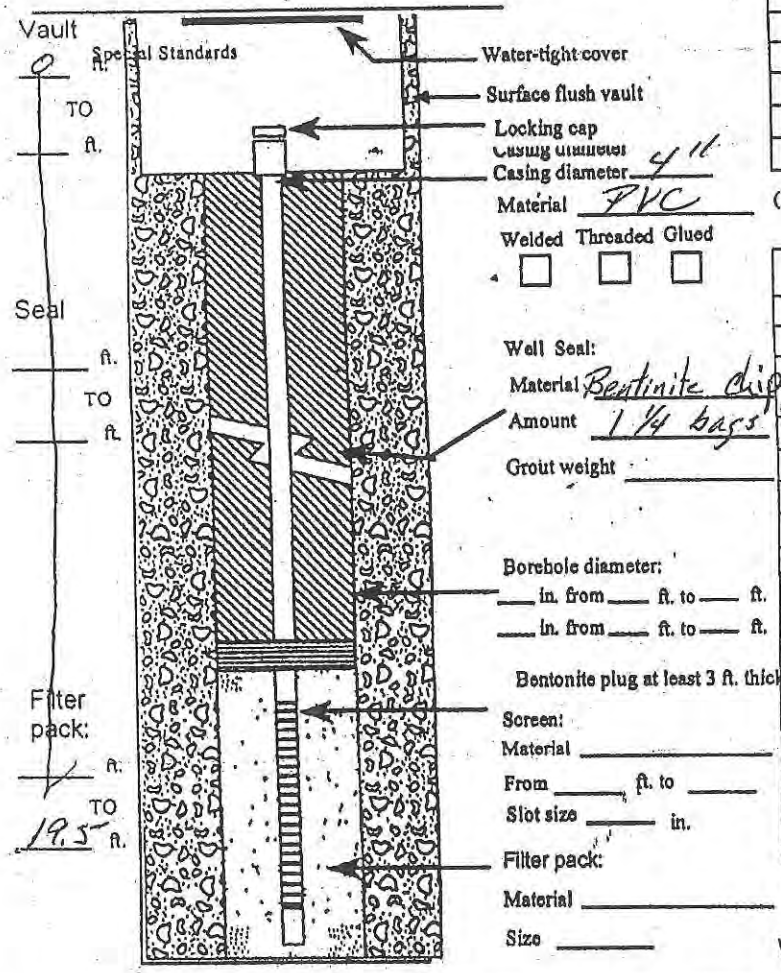
(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Hollow Stein Auger ☐ Other _____

(4) BORE HOLE CONSTRUCTION:

Special Standards Yes ☐ No ☒ Depth of Completed Well 19.5 ft.



(5) WELL TESTS:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Permeability _____ Yield _____ GPM

Conductivity _____ PH _____

Temperature of water _____ OF/C Depth artesian flow found _____ ft.

Was water analysis done? ☐ Yes ☐ No

By whom? _____

Depth of strata to be analyzed. From _____ ft. to _____ ft.

Remarks: _____

Name Of Supervising Geologist/Engineer _____

(6) LOCATION OF WELL By *legal description:*

County Yakima Latitude _____ Longitude _____

Township 13 (N or S) Range 18 (E or W) Section 26

NW 1/4 of NW 1/4 of above section.

Street address of well location Same

Tax lot number of well location _____

(7) STATIC WATER LEVEL:

_____ Ft. below land surface. Date _____

Artesian Pressure _____ lb/sq. in. Date

(8) WATER BEARING ZONES:

Depth at which water was first found -6'

From	To	Est. Flow Rate	SWL

(9) WELL LOG:

Ground Elevation _____

Material	From	To	SWL
Abandon	0	19.5	
Chipped up to Surface	0	19.5	

Date started 2-24-15 Completed 2-24-15

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name THOMAS J. ADAMS License No. 2684

Trainee Name _____ License No. _____

Drilling Company ENVIRONMENTAL DRILLING IN

(Signed) Thomas J Adams License No. 2684

Address 10918 159th AVE SE SNO. WA.

Registration No. ENVIRDI093M6 Date 3-12-15

MONITORING WELL REPORT

4 of 6

Well ID# _____

Start Card # AE 30841

(1) OWNER/PROJECT WELL NO. MW-20

Name City of Yakima

Address 2312 W Nob Hill BLVD.

City Yakima State WA Zip 98902

(2) TYPE OF WORK

☐ New construction ☐ Alteration (Repair/Recondition)

☐ Conversion ☐ Deepening ☒ Abandonment

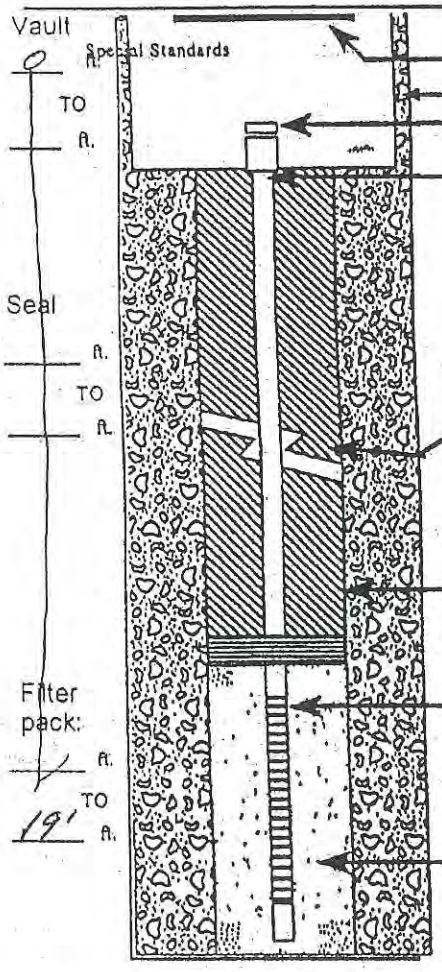
(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Hollow Stem Auger ☐ Other _____

(4) BORE HOLE CONSTRUCTION:

Special Standards Yes ☐ No ☒ Depth of Completed Well 19' ft.



Water-tight cover

Surface flush vault

Locking cap

Casing diameter 1 "

Material steel

Welded ☐ Threaded ☐ Glued ☐

Well Seal:

Material Volclay Grout

Amount 1/4 bag

Grout weight _____

Borehole diameter:

___ in. from ___ ft. to ___ ft.

___ in. from ___ ft. to ___ ft.

Bentonite plug at least 3 ft. thick

Screen:

Material _____

From ___ ft. to ___

Slot size ___ in.

Filter pack:

Material _____

Size _____

(5) WELL TESTS:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Permeability _____ Yield _____ GPM

Conductivity _____ PH _____

Temperature of water _____ OF/C Depth artesian flow found _____ ft.

Was water analysis done? ☐ Yes ☐ No

By whom? _____

Depth of strata to be analyzed, From _____ ft. to _____ ft.

Remarks: _____

Name Of Supervising Geologist/Engineer _____

(6) LOCATION OF WELL By *legal description:*

County Yakima Latitude _____ Longitude _____

Township 13 (N or S) Range 18 (E or W) Section 26

NW 1/4 of NW 1/4 of above section.

Street address of well location Same

Tax lot number of well location _____

(7) STATIC WATER LEVEL:

_____ Ft. below land surface. Date _____

Artesian Pressure _____ lb/sq. in. Date

(8) WATER BEARING ZONES:

Depth at which water was first found -6'

From	To	Est. Flow Rate	SWL

(9) WELL LOG:

Ground Elevation _____

Material	From	To	SWL
Abandon	0	19'	
pressure Grout	0	19'	

Date started 2-24-15 Completed 2-24-15

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name THOMAS J. ADAMS License No. 2684

Trainee Name _____ License No. _____

Drilling Company ENVIRONMENTAL DRILLING IN.

(Signed) Thomas J Adams License No. 2684

Address 10918 159th AVE SE SNO. WA.

Registration No. ENVIRDI093M6 Date 3-12-15

MONITORING WELL REPORT

5 of 6

Well ID# _____

Start Card # AE 30841

(1) OWNER/PROJECT WELL NO. KMW-22

Name City of Yakima

Address 2312 W Nob Hill BLVD.

City Yakima State WA Zip 98902

(2) TYPE OF WORK

☐ New construction ☐ Alteration (Repair/Recondition)

☐ Conversion ☐ Deepening ☒ Abandonment

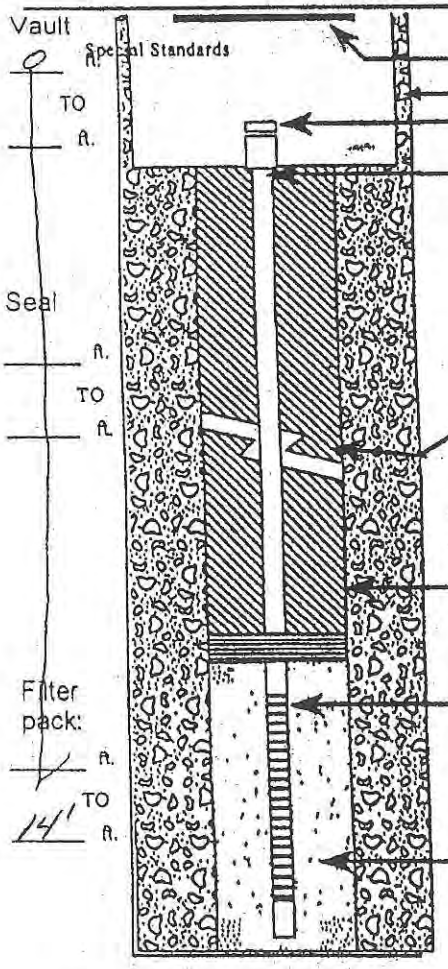
(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Hollow Stein Auger ☐ Other _____

(4) BORE HOLE CONSTRUCTION:

Special Standards Yes ☐ No ☒ Depth of Completed Well 14' ft.



(5) WELL TESTS:

☐ Pump ☐ Baller ☐ Air ☐ Flowing Artesian

Permeability _____ Yield _____ GPM

Conductivity _____ PH _____

Temperature of water _____ OF/C Depth artesian flow found _____ ft.

Was water analysis done? ☐ Yes ☐ No

By whom? _____

Depth of strata to be analyzed. From _____ ft. to _____ ft.

Remarks: _____

Name Of Supervising Geologist/Engineer _____

(6) LOCATION OF WELL By *legal description:*

County Yakima Latitude _____ Longitude _____

Township 13 (N or S) Range 18 (E or W) Section 26

NW 1/4 of NW 1/4 of above section.

Street address of well location Same

Tax lot number of well location _____

(7) STATIC WATER LEVEL:

_____ Ft. below land surface. Date _____

Artesian Pressure _____ lb/sq. in. Date _____

(8) WATER BEARING ZONES:

Depth at which water was first found _____

From	To	Est. Flow Rate	SWL

(9) WELL LOG:

Ground Elevation _____

Material	From	To	SWL
Abandon	0	14'	
Chipped up To Surface	0	14'	

Date started 2-24-15 Completed 2-24-15

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name THOMAS J. ADAMS License No. 2684

Trainee Name _____ License No. _____

Drilling Company ENVIRONMENTAL DRILLING IN

(Signed) Thomas J Adams License No. 2684

Address 10918 159th AVE SE SNO. WA.

Registration No. ENVIRDI093M6 Date 3-12-15

MONITORING WELL REPORT

6 of 6

Well ID#

Start Card # AE 30841

(1) OWNER/PROJECT WELL NO. MW-8

Name City of Yakima

Address 2312 W Nob Hill BLVD,

City Yakima State WA Zip 98902

(2) TYPE OF WORK

☐ New construction ☐ Alteration (Repair/Recondition)

☐ Conversion ☐ Deepening ☒ Abandonment

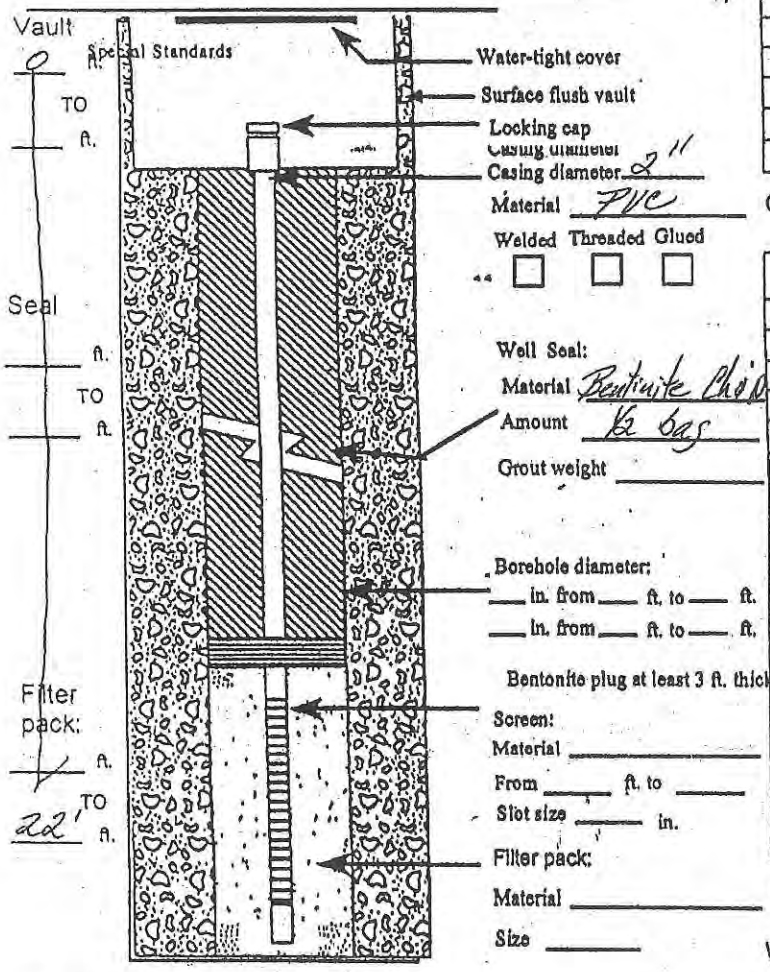
(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Hollow Stein Auger ☐ Other

(4) BORE HOLE CONSTRUCTION:

Special Standards Yes ☐ No ☒ Depth of Completed Well 22' ft.



(5) WELL TESTS:

☐ Pump ☐ Baller ☐ Air ☐ Flowing Artesian

Permeability Yield GPM

Conductivity PH

Temperature of water OF/C Depth artesian flow found ft.

Was water analysis done? ☐ Yes ☐ No

By whom?

Depth of strata to be analyzed. From ft. to ft.

Remarks:

Name Of Supervising Geologist/Engineer

(6) LOCATION OF WELL By *legal description:*

County Yakima Latitude Longitude

Township 13 (N or S) Range 18 (E or W) Section 26

NW 1/4 of NW 1/4 of above section.

Street address of well location Same

Tax lot number of well location

(7) STATIC WATER LEVEL:

Ft. below land surface. Date

Artesian Pressure lb/sq. in. Date

(8) WATER BEARING ZONES:

Depth at which water was first found -9'

From	To	Est. Flow Rate	SWL

(9) WELL LOG:

Ground Elevation

Material	From	To
Abandon	0	22'
Chipped up To Surface	0	22'

Date started 2-24-15 Completed 2-24-15

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name THOMAS J. ADAMS License No. 2608-4

Trainee Name License No.

Drilling Company ENVIRONMENTAL DRILLING IN.

(Signed) Thomas J Adams License No. 2608-4

Address 10918 159th AVE SE SNO. WA.

Registration No. ENVIRDI093M6 Date 3-12-15

APPENDIX C
PHOTOGRAPHS

PHOTOGRAPHS

Project Name: Tiger Oil West Nob Hill
Project Number: 0818.02.01
Location: 2312 West Nob Hill Blvd.
Yakima, Washington

Photo No.
1

Description
Looking south, demolition of existing building

Photo No.
2

Description
Looking west, pavement removal

PHOTOGRAPHS

Project Name: Tiger Oil West Nob Hill
Project Number: 0818.02.01
Location: 2312 West Nob Hill Blvd.
Yakima, Washington

Photo No.
3

Description
Looking east, impacted-soil removal and free product

Photo No.
4

Description
Mixing Regenesis Regenox®

PHOTOGRAPHS

Project Name: Tiger Oil West Nob Hill
Project Number: 0818.02.01
Location: 2312 West Nob Hill Blvd.
Yakima, Washington

Photo No.
5

Description
Looking south, mixing Regenesis Regenox® with clean overburden

Photo No.
6

Description
Looking east, installation of infiltration gallery

PHOTOGRAPHS

Project Name: Tiger Oil West Nob Hill
Project Number: 0818.02.01
Location: 2312 West Nob Hill Blvd.
Yakima, Washington

Photo No.
7

Description
Looking northeast, backfilling and compacting clean fill material

Photo No.
8

Description
Looking north, fabric placement prior to gravel finish

PHOTOGRAPHS

Project Name: Tiger Oil West Nob Hill
Project Number: 0818.02.01
Location: 2312 West Nob Hill Blvd.
Yakima, Washington

Photo No.
9

Description
Looking west, gravel finish course

Photo No.
10

Description
Looking north, asphalt pavement surface

APPENDIX D

FIELD SAMPLING DATA SHEETS

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	SE Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/17/2015				
Sampling Event		**Sample Name**	BH-01-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	215	2:15:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, sandy soil. Heavy petroleum-like odor.

General Sampling Comment Soil saturated with free-product. Sampled also for TCLP lead for landfill documentation.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/17/2015				
Sampling Event		**Sample Name**	BH-01-S-9.0				
Sub Area		**Sample Depth**	9				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	500	2:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, clay soil. Strong petroleum-like odor.

General Sampling Comment Sample collected from SE corner of excavation; 9.0 feet depth impacted soil was observed. Sampled also for TCLP lead for landfill documentation.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	BH-02				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/18/2015				
Sampling Event		**Sample Name**	BH-02-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	598	8:05:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, silty soil. Semi-saturated. Very strong petroleum-like odor.

General Sampling Comment Sample collected from SE corner of excavation; top of visible contamination.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Southeast corner of Excavation
Project Number	0818.02.01	**Sampler**	JGC
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/18/2015
Sampling Event		**Sample Name**	BH-02-S-9.0
Sub Area		**Sample Depth**	9
FSDS QA:	LSC	**Easting**	**Northing**	**TOC**

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	163	8:00:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, clay soil with some silty sand. Strong petroleum-like odor.

General Sampling Comment Sample collected from SE corner of excavation; top of visible contamination.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	SE Excavation				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/18/2015				
Sampling Event		**Sample Name**	BH-03-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	927	8:10:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray silty soil. Semi-saturated. Petroleum-like odor.

General Sampling Comment Sample collected from SE corner of excavation.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	SE Excavation
Project Number	0818.02.01	**Sampler**	JGC
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/18/2015
Sampling Event		**Sample Name**	BH-03-S-9.0
Sub Area		**Sample Depth**	9
FSDS QA:	LSC	**Easting**	**Northing**	**TOC**

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	72	8:15:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Soil varies from brown, gray and black clay with some silts. Petroleum-like odor.

General Sampling Comment Sample collected from southeast corner of excavation.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	South Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/18/2015				
Sampling Event		**Sample Name**	BH-04-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	700	12:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sandy soil. Strong petroleum-like odor.

General Sampling Comment Sample collected from south edge of excavation at the bottom of excavation.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	South Excavation				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/18/2015				
Sampling Event		**Sample Name**	BH-04-S-9.0				
Sub Area		**Sample Depth**	9				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	212	9:40:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray clay. Petroleum-like odor.

General Sampling Comment Sample collected from south wall of excavation; at beginning of where staining was observed.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	South Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/18/2015				
Sampling Event		**Sample Name**	BH-05-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	710	12:10:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sandy soil. Strong petroleum-like odor.

General Sampling Comment Sample collected from south wall of excavation.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	South Excavation				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/18/2015				
Sampling Event		**Sample Name**	BH-05-S-9.0				
Sub Area		**Sample Depth**	9				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation		9:45:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray clay with black streaking. Petroleum-like odor.

General Sampling Comment Sample collected from south wall of excavation; 9 feet below ground surface is beginning of where staining was observed.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	South Excavation				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/18/2015				
Sampling Event		**Sample Name**	BH-06-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	750	11:10:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, sandy soil. Strong petroleum-like odor.

General Sampling Comment Sample collected from SW wall behind One Love Smoke Shop building. Slope at approximately 1:1.5.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	South Excavation				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/19/2015				
Sampling Event		**Sample Name**	BH-07-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	488	8:50:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sandy soil. Nearly saturated. Strong petroleum-like odor.

General Sampling Comment Sample collected at toe of 1:1.5 slope away from restaurant building in SE corner.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	South of Mexican Restaurant
Project Number	0818.02.01	**Sampler**	JGC
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/19/2015
Sampling Event		**Sample Name**	BH-08-S-14.0
Sub Area		**Sample Depth**	14
FSDS QA:	LSC	**Easting**	**Northing**	**TOC**

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	710	10:00:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sand. Saturated. Petroleum-like odor.

General Sampling Comment Sample collected from SE corner of excavation at toe of 1:1.5 slope on south side of restaurant.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Excavation				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/19/2015				
Sampling Event		**Sample Name**	BH-09-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	717	10:10:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, clay soil. Nearly saturated. Strong petroleum-like odor.

General Sampling Comment Sample collected from wall directly south of southwest corner of Mexican Restaurant.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	southeast/east of Mexican Restaurant
Project Number	0818.02.01	**Sampler**	JGC
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/30/2015
Sampling Event		**Sample Name**	BH-10-S-14.0
Sub Area		**Sample Depth**	14
FSDS QA:	LSC	**Easting**	**Northing**	**TOC**

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	376	11:00:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Graysand. Strong petroleum-like odor.

General Sampling Comment Sample collected fromwest side of SW corner of mexican restaurant.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	east/southeast of Mexican Restaurant				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/30/2015				
Sampling Event		**Sample Name**	BH-10-S-DUP				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	466	11:00:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sand. Strong petroleum-like odor.

General Sampling Comment DUPLICATE. Sample collected fromwest side of SW corner of mexican restaurant.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	East of Mexican Restaurant				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/30/2015				
Sampling Event		**Sample Name**	BH-11-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	394	11:30:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sand. Strong petroleum-like odor.

General Sampling Comment Sample collected 20 feet north of BH-10.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North of east of One Love				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/30/2015				
Sampling Event		**Sample Name**	BH-12-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	640	2:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sand with streaks of dark gray. Strong petroleum-like odor.

General Sampling Comment Sample collected 20 feet west of toe of bank from NE corner of original excavation extension.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	BH-13				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/30/2015				
Sampling Event		**Sample Name**	BH-13-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	770	2:30:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sand. Strong petroleum-like odor.

General Sampling Comment Sample collected 20 feet west of toe of bank from NE corner of original excavation extension. South of BH-12.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Center of original Excavation				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/31/2015				
Sampling Event		**Sample Name**	BH-14-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	500	8:45:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray silty sand. Storng petroleum-like odor.

General Sampling Comment Sample collected between two toes of slopes where infiltration on gallery will sit.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	N or E corner of One Love				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	03/31/2015				
Sampling Event		**Sample Name**	BH-15-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	550	9:00:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray to dark gray clay. Strong petroleum-like odor.

General Sampling Comment Sample collected from toe of slope from NE corner of One Love shop, near power pole.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	BH-16				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/01/2015				
Sampling Event		**Sample Name**	BH-16-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	250	8:15:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray to brown sand with silt. Rocky.

General Sampling Comment Sample collected north of One Love Smoke Shop, west extended excavation corner.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	W corner of Excavation				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/01/2015				
Sampling Event		**Sample Name**	BH-16-S-9.0				
Sub Area		**Sample Depth**	9				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	5	8:00:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Brown silty clay with sand. No odor.

General Sampling Comment Sample collected north of One Love Smoke Shop, west extended excavation corner.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	West edge of Excavation				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/01/2015				
Sampling Event		**Sample Name**	BH-17-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	400	12:30:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sand. Petroleum-like odor.

General Sampling Comment Sample collected 40 feet north of One Love Smoke Shop, west extended excavation.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	West edge of Excavation				
Project Number	0818.02.01	**Sampler**	JGC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/01/2015				
Sampling Event		**Sample Name**	BH-17-S-9.0				
Sub Area		**Sample Depth**	9				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	1	12:45:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Brown silty clay. No odor.

General Sampling Comment Sample collected 40 feet north of One Love Smoke Shop, west extended excavation.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Northest corner of Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/07/2015				
Sampling Event		**Sample Name**	BH-18-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	780	9:00:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Dark gray, sandy soil with silt. Heavy petroleum-like odor. Wet.

General Sampling Comment Sample collected at NE corner of extended excavation along restaurant property at toe of 1:1.5 slope.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Northeast corner of Excavation
Project Number	0818.02.01	**Sampler**	LSC
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/07/2015
Sampling Event		**Sample Name**	BH-19-S-14.0
Sub Area		**Sample Depth**	14
FSDS QA:	LSC	**Easting**	**Northing**	**TOC**

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	398	11:00:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray clay soil with. Heavy petroleum-like odor. Wet.

General Sampling Comment Sample collected at NE corner of extended excavation at the property corner. Sample collected at toe of 1:1.5 slope.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Northeast corner of Excavation
Project Number	0818.02.01	**Sampler**	LSC
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/07/2015
Sampling Event		**Sample Name**	BH-20-S-14.0
Sub Area		**Sample Depth**	14
FSDS QA:	LSC	**Easting**	**Northing**	**TOC**

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	760	11:45:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sand. Strong petroleum-like odor. Moist.

General Sampling Comment Sample collected along northern property boundary at toe of 1:1.5 slope.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Norhteast Corner of Excavatio				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/07/2015				
Sampling Event		**Sample Name**	BH-21-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	422	1:15:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sand. Strong petroleum-like odor. Moist.

General Sampling Comment Sample collected on floor of extended excavation in NE corner -- across from sample locations BH-18 and BH-20.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/08/2015				
Sampling Event		**Sample Name**	BH-22-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	550	7:30:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, sandy-clay soil. Strong petroleum-like odor. Moist.

General Sampling Comment Sample collected at toe of 1:1.5 slope along north property boundary in extended excavation. Sample collected on east side of discovered dry well.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/08/2015				
Sampling Event		**Sample Name**	BH-23-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:		**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	881	9:30:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, sandy-clay soil. Strong petroleum-like odor. Saturated. Visible sheen on soil.

General Sampling Comment Sample collected on floor of extended excavation along northern peroty boundary. Sample collected in-line with BH-18 and BH-22 sample locations.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/08/2015				
Sampling Event		**Sample Name**	BH-24-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	764	2:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, sandy-clay soil. Visible sheen. Strong petroleum-like odor. Saturated.

General Sampling Comment Sample collected on floor of extended excavation along northern property boundary. Sample approximately 60 linear feet west of sample location BH-18.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/09/2015				
Sampling Event		**Sample Name**	BH-25-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	908	8:30:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, sandy-clay soil. Strong petroleum-like odor. Wet.

General Sampling Comment Sample collected at toe of 1:1.5 slope along north property boundary in extended excavation area.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/14/2015				
Sampling Event		**Sample Name**	BH-26-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	695	8:15:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sandy-clay soil. Strong petroleum-like odor. Wet.

General Sampling Comment Sample collected at bottom of extended excavation wall along north property boundary.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/14/2015				
Sampling Event		**Sample Name**	BH-26-S-8.0				
Sub Area		**Sample Depth**	8				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	162	8:20:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Grayish-brown, sandy soil. Mild petroleum-like odor.

General Sampling Comment Sample collected near middle of extended excavation wall where impacted soil was observed.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/14/2015				
Sampling Event		**Sample Name**	BH-27-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	592	9:00:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, sandy-clay soil. Strong petroleum-like odor. Wet.

General Sampling Comment Sample collected from floor of northern extended excavation. Collected in line with BH-26 and BH-18.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/14/2015				
Sampling Event		**Sample Name**	BH-28-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	14.55	1:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Grayish-brown sandy clay soil. Mild petroleum-like odor.

General Sampling Comment Sample collected at base of extended excavation sidewall at northwest corner of extended excavation boundary. Impacted soil observed from 12-14 feet below ground surface in this area.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/14/2015				
Sampling Event		**Sample Name**	BH-29-S-10.0				
Sub Area		**Sample Depth**	10				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	10.55	2:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray-brown, sandy soil. Mild petroleum-like odor.

General Sampling Comment Sample collected along excavation wall at northern extended excavatation boundary. Impacted soil here observed from 10-13 feet below ground surface.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	North Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/14/2015				
Sampling Event		**Sample Name**	BH-29-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	1.05	2:10:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Brown clay. Little to no odor. Moist.

General Sampling Comment Sample collected at base of extened excavation boundary along north property boundary. Soil looks clean below 13 feet below ground surface (ft bgs). Impacted soil observed 10-13 ft bgs.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	West Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/15/2015				
Sampling Event		**Sample Name**	BH-30-S-10.0				
Sub Area		**Sample Depth**	10				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	0.15	10:15:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Brown, sandy soil with some gray color. No odor.

General Sampling Comment Sample collected 10 feet below ground surface (ft bgs) along western extended excavation wall. Some soil staining observed around 10-14 ft bgs but appeared mostly clean.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	West Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/15/2015				
Sampling Event		**Sample Name**	BH-30-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	1.75	10:00:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Brown, sandy soil with some gray color. No odor. Moist.

General Sampling Comment Sample collected at base of western extended excavatation wall. Some gray color observed from 10-14 feet below ground surface but appeared mostly clean.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Northwest Excavation
Project Number	0818.02.01	**Sampler**	LSC
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/16/2015
Sampling Event		**Sample Name**	BH-31-S-14.0
Sub Area		**Sample Depth**	14
FSDS QA:	LSC	**Easting**	**Northing**	**TOC**

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	216	7:30:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Brownish-gray clay soil. Moderate Petroleum-like odor. Moist.

General Sampling Comment Collected on floor of northwest corner of extended excavation in-line with sample points BH-29 and BH-30.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	West Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/16/2015				
Sampling Event		**Sample Name**	BH-32-S-10.0				
Sub Area		**Sample Depth**	10				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	1.6	11:15:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Brown, sandy soil with small gravel. No odor.

General Sampling Comment Collectd at sidewall of west extended excavation wall. Collected at top of observed contamination (smear zone).

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Northwwest Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/16/2015				
Sampling Event		**Sample Name**	BH-32-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	339	11:10:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray sandy-clay soil with small gravels. Strong Petroleum-like odor. Wet.

General Sampling Comment Sample collected from base of west extended excavation wall.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	West Excation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/16/2015				
Sampling Event		**Sample Name**	BH-33-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	202	12:30:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, sandy clay soil. Moderate Petroleum-like odor. Wet.

General Sampling Comment Collected on floor of extended excavation in-line with sample points BH-32 and BH-29.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Southwest Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/16/2015				
Sampling Event		**Sample Name**	BH-34-S-10.0				
Sub Area		**Sample Depth**	10				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	0.05	1:30:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Brown, sandy soil. No odor.

General Sampling Comment Collected at sideslope of extended excavation at west/south corner. Collected above smear zone.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Southwest Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/16/2015				
Sampling Event		**Sample Name**	BH-34-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	167	1:45:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, silty-clay Moderate petroleum-like odor. Wet.

General Sampling Comment Sample collected at base of SW extended excavation.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Southwest Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/16/2015				
Sampling Event		**Sample Name**	BH-34-S-Dup				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	167	1:45:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, silty-clay Moderate petroleum-like odor. Wet.

General Sampling Comment Duplicate sample of BH-34-S-14.0. Sample collected at base of SW extended excavation.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Southwest Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/20/2015				
Sampling Event		**Sample Name**	BH-35-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	61	11:50:00 AM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, silty clay. Strong petroleum-like odor. Wet.

General Sampling Comment Sample collected at base of wall of SW extended excavation. Sample 11 feet west and 4 feet north of KMW-7.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Southwest Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/20/2015				
Sampling Event		**Sample Name**	BH-35-S-9.0				
Sub Area		**Sample Depth**	9				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	480	12:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Brownish-gray sand. Moderate petroleum-like odor.

General Sampling Comment Sample collected alongside slope of wall of SW extended excavation. Sample 11 feet west and 4 feet north of KMW-7.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	West Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/20/2015				
Sampling Event		**Sample Name**	BH-36-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	418	1:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, silty clay. Strong petroleum-like odor. Wet.

General Sampling Comment Collected on floor of western extended excavation. In-line with sample locations BH-26 & BH-32.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	West Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/20/2015				
Sampling Event		**Sample Name**	BH-36-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	418	1:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, silty clay. Strong petroleum-like odor. Wet.

General Sampling Comment Collected on floor of western extended excavation. In-line with sample locations BH-26 & BH-32.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Southwest Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil- West Nobhill	**Sampling Date**	04/21/2015				
Sampling Event		**Sample Name**	BH-37-S-14.0				
Sub Area		**Sample Depth**	14				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	313	2:40:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, silty clay. Strong petroleum-like odor. Wet.

General Sampling Comment Collect at base of south extended excavation wall, 3' SE of KMW-7.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Yakima	**Sample Location**	Southwest Excavation				
Project Number	0818.02.01	**Sampler**	LSC				
Project Name	Tiger Oil - West Nobhill	**Sampling Date**	04/21/2015				
Sampling Event		**Sample Name**	BH-37-S-9.0				
Sub Area		**Sample Depth**	9				
FSDS QA:	LSC	**Easting**		**Northing**		**TOC**	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(1) Backhoe	Soil	Confirmation	281	2:30:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	
					Other	4
					Total Containers	5

Sample Description: Gray, sandy, soil. Strong petroleum-like odor.

General Sampling Comment Collect on south extended excavation wall, 3' SE of KMW-7.

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelbey Tube, (7) Grab, (8) Other (Specify)

Signature _____

APPENDIX E

LABORATORY REPORTS AND DATA VALIDATION MEMORANDUM

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

April 1, 2015

Justin Clary, Project Manager
Maul Foster Alongi
411 1st Ave S, Suite 610
Seattle, WA 98104

Dear Mr. Clary:

Included are the results from the testing of material submitted on March 31, 2015 from the Tiger 0818.02.01, F&BI 503580 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0401R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 31, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger 0818.02.01, F&BI 503580 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
503580 -01	SP-04-S-01
503580 -02	SP-04-S-02
503580 -03	SP-04-S-03
503580 -04	SP-04-S-04
503580 -05	SP-04-S-05
503580 -06	SP-04-S-06
503580 -07	SP-04-S-07

All quality control requirements were acceptable.

Date of Report: 04/01/15
Date Received: 03/31/15
Project: Tiger 0818.02.01, F&BI 503580
Date Extracted: 03/31/15
Date Analyzed: 03/31/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SP-04-S-01 503580-01	<0.02	<0.02	<0.02	<0.06	<2	90
SP-04-S-02 503580-02	<0.02	<0.02	<0.02	<0.06	<2	91
SP-04-S-03 503580-03	<0.02	<0.02	<0.02	<0.06	<2	91
SP-04-S-04 503580-04	<0.02	<0.02	<0.02	<0.06	<2	91
SP-04-S-05 503580-05	<0.02	<0.02	<0.02	<0.06	<2	90
SP-04-S-06 503580-06	<0.02	<0.02	<0.02	<0.06	<2	91
SP-04-S-07 503580-07	<0.02	<0.02	<0.02	<0.06	<2	92
Method Blank 05-0657 MB	<0.02	<0.02	<0.02	<0.06	<2	89

Date of Report: 04/01/15
Date Received: 03/31/15
Project: Tiger 0818.02.01, F&BI 503580

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: 503417-04 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	80	69-120
Toluene	mg/kg (ppm)	0.5	96	70-117
Ethylbenzene	mg/kg (ppm)	0.5	95	65-123
Xylenes	mg/kg (ppm)	1.5	93	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

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.

503580

SAMPLE CHAIN OF CUSTODY

ME 03/31/15

US3/CE2

Page # 1 of 1

Send Report To JUSTIN CLARY/YEN VI-VAN

Company MFA

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature) JCawley

PROJECT NAME/NO. TIGER 0818.02.01

PO#

REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☑ RUSH 24 hour
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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
SP-04-S-01	01 E	3/30/15	1300	S	5		✓	✓										
SP-04-S-02	02		1315															
SP-04-S-03	03		1330															
SP-04-S-04	04		1345															
SP-04-S-05	05		1460															
SP-04-S-06	06		1415															
SP-04-S-07	07		1430															

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: JCawley	JESSICA CAWLEY	MFA	3/30/15	1500
Received by: MCaw	Nhan Pham	FCBI	3/30/15	1030
Relinquished by:				
Received by:		Samples received at 2 °C		

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

April 9, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 8, 2015 from the Tiger Oil 0818.02.01, F&BI 504136 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0409R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 8, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818.02.01 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504136 -01	SP-05-S-01
504136 -02	SP-05-S-Dup
504136 -03	SP-05-S-02
504136 -04	SP-05-S-03
504136 -05	SP-05-S-04
504136 -06	SP-05-S-05

All quality control requirements were acceptable.

Date of Report: 04/09/15
Date Received: 04/08/15
Project: Tiger Oil 0818.02.01, F&BI 504136
Date Extracted: 04/08/15
Date Analyzed: 04/08/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
SP-05-S-01 504136-01	<0.02	<0.02	<0.02	<0.06	<2	91
SP-05-S-Dup 504136-02	<0.02	<0.02	<0.02	<0.06	<2	91
SP-05-S-02 504136-03	<0.02	<0.02	<0.02	<0.06	<2	93
SP-05-S-03 504136-04	<0.02	<0.02	<0.02	<0.06	<2	97
SP-05-S-04 504136-05	<0.02	<0.02	<0.02	<0.06	<2	94
SP-05-S-05 504136-06	<0.02	<0.02	<0.02	<0.06	<2	93
Method Blank 05-0695 MB2	<0.02	<0.02	<0.02	<0.06	<2	87

Date of Report: 04/09/15
Date Received: 04/08/15
Project: Tiger Oil 0818.02.01, F&BI 504136

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: 504119-03 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	87	69-120
Toluene	mg/kg (ppm)	0.5	87	70-117
Ethylbenzene	mg/kg (ppm)	0.5	86	65-123
Xylenes	mg/kg (ppm)	1.5	85	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

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.

504136

SAMPLE CHAIN OF CUSTODY · ME 04/08/15 VS2/CI2

Send Report To Justin Clorey / Yen-Vy Van
Company MFA
Address 400 East Mill Plain
City, State, ZIP Vancouver, WA 98660
Phone # _____ Fax # _____

SAMPLERS (signature)
PROJECT NAME/NO. Tiger Oil 0818.02.01
PO#
REMARKS

Page # _____ of _____

TURNAROUND TIME
☐ Standard (2 Weeks)
☒ RUSH 24-Hr
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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS								Notes
SP-05-S-01	01 A-E	4/7/15	0730	S	5		X	X											
SP-05-S-DUP	02		0730																
SP-05-S-02	03		0750																
SP-05-S-03	04		0805																
SP-05-S-04	05		0810																
SP-05-S-05	06		0830																
															Samples received at 3 °C				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Lindsey Crosby	MFA	4/7/15	1500
Received by:	Nhan Phan	FEBT	4/8/15	1030
Relinquished by:				
Received by:				

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

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

April 16, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 15, 2015 from the Tiger Oil 0818-02-01, F&BI 504267 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0416R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 15, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818-02-01, F&BI 504267 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504267 -01	SP-06-S-01
504267 -02	SP-06-S-02
504267 -03	SP-06-S-03
504267 -04	SP-06-S-04
504267 -05	SP-06-S-05

All quality control requirements were acceptable.

Date of Report: 04/16/15
Date Received: 04/15/15
Project: Tiger Oil 0818-02-01, F&BI 504267
Date Extracted: 04/15/15
Date Analyzed: 04/15/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
SP-06-S-01 504267-01	<0.02	<0.02	<0.02	<0.06	2.5	98
SP-06-S-02 504267-02	<0.02	<0.02	<0.02	<0.06	<2	103
SP-06-S-03 504267-03	<0.02	<0.02	<0.02	<0.06	<2	100
SP-06-S-04 504267-04	<0.02	<0.02	<0.02	<0.06	<2	95
SP-06-S-05 504267-05	<0.02	<0.02	<0.02	<0.06	<2	98
Method Blank 05-0752 MB	<0.02	<0.02	<0.02	<0.06	<2	86

Date of Report: 04/16/15
Date Received: 04/15/15
Project: Tiger Oil 0818-02-01, F&BI 504267

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: 504262-06 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	86	69-120
Toluene	mg/kg (ppm)	0.5	86	70-117
Ethylbenzene	mg/kg (ppm)	0.5	86	65-123
Xylenes	mg/kg (ppm)	1.5	85	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

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.

504267

SAMPLE CHAIN OF CUSTODY

ME 04/15/15 051/052

Send Report To JUSTIN CLARK / VEN-VY VAN

Company MFA

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. PO#

TIGER OIL 0818.02.01

REMARKS

Page # of

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 24-HR
- 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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
SP-06-S-01	01	4/14/15	1200	S	5		X	X										
SP-06-S-02	02		1210															
SP-06-S-03	03		1220															
SP-06-S-04	04		1230															
SP-06-S-05	05		1240															

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Lindsey Crosby	MFA	4/14/15	1500
Received by:	Nhan Phan	FCBI	4/15/15	1430
Relinquished by:				
Received by:		Samples received at 3 °C		

FORMS\COC\COC.DOC

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

April 16, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 9, 2015 from the Tiger Oil 0818.02.01, F&BI 504167 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0416R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 9, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818.02.01, F&BI 504167 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504167 -01	BH-22-S-14.0
504167 -02	BH-23-S-14.0
504167 -03	BH-24-S-14.0

All quality control requirements were acceptable.

Date of Report: 04/16/15
Date Received: 04/09/15
Project: Tiger Oil 0818.02.01, F&BI 504167
Date Extracted: 04/10/15
Date Analyzed: 04/10/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
BH-22-S-14.0 504167-01 1/100	78	480	150	910	11,000	107
BH-23-S-14.0 504167-02	0.19	0.92	1.7	11	200	116
BH-24-S-14.0 504167-03	0.28	1.2	1.0	6.5	49	111
Method Blank 05-0698 MB	<0.02	<0.02	<0.02	<0.06	<2	92

Date of Report: 04/16/15
Date Received: 04/09/15
Project: Tiger Oil 0818.02.01, F&BI 504167

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: 504171-01 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	84	66-121
Toluene	mg/kg (ppm)	0.5	87	72-128
Ethylbenzene	mg/kg (ppm)	0.5	88	69-132
Xylenes	mg/kg (ppm)	1.5	89	69-131
Gasoline	mg/kg (ppm)	20	105	61-153

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.

504167

SAMPLE CHAIN OF CUSTODY

ME 04/09/15 VSI/CTI

Send Report To JUSTIN CROSBY / YEN-VY VAN

Company MAUL FOSTER & ALONGI

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. PO#

TIGER OIL
0818.02.01

REMARKS

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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
BH-22-S-14.0	01A-E	4/8/15	0730	S	5		X	X										
BH-23-S-14.0	02	"	0930	"	"		"	"										
BH-24-S-14.0	03	"	1400	"	"		"	"										

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	LINDSEY CROSBY	MFA	4/8/15	1500
Received by:	Nhan Phan	FEBI	4/9/15	1515
Relinquished by:				
Received by:		Samples received at 3 °C		

FORMS\COC\COC.DOC

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

April 28, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 17, 2015 from the Tiger Oil 0818.02.01, F&BI 504314 project. There are 10 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0428R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 17, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818.02.01, F&BI 504314 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504314 -01	BH-31-S-14.0
504314 -02	BH-32-S-14.0
504314 -03	BH-32-S-10.0
504314 -04	BH-33-S-14.0
504314 -05	BH-34-S-10.0
504314 -06	BH-34-S-14.0
504314 -07	BH-34-S-DUP

All quality control requirements were acceptable.

Date of Report: 04/28/15
Date Received: 04/17/15
Project: Tiger Oil 0818.02.01, F&BI 504314
Date Extracted: 04/17/15
Date Analyzed: 04/17/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
BH-31-S-14.0 504314-01	<0.02	0.036	0.060	0.14	14	86
BH-32-S-14.0 504314-02	<0.02	0.59	0.094	0.28	65	91
BH-32-S-10.0 504314-03	<0.02	<0.02	<0.02	<0.06	<2	85
BH-33-S-14.0 504314-04	0.21	0.032	0.16	0.84	6.2	75
BH-34-S-10.0 504314-05	<0.02	<0.02	<0.02	<0.06	<2	86
BH-34-S-14.0 504314-06	<0.02	0.37	0.087	0.36	55	87
BH-34-S-DUP 504314-07	<0.02	0.24	0.055	0.22	34	87
Method Blank 05-0757 MB	<0.02	<0.02	<0.02	<0.06	<2	85

Analysis For Total Metals By EPA Method 200.8

Client ID:	BH-32-S-14.0	Client:	Maul Foster Alongi
Date Received:	04/17/15	Project:	Tiger Oil 0818.02.01, F&BI 504314
Date Extracted:	04/20/15	Lab ID:	504314-02
Date Analyzed:	04/21/15	Data File:	504314-02.099
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	97	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	4.71

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	Tiger Oil 0818.02.01, F&BI 504314
Date Extracted:	04/20/15	Lab ID:	I5-229 mb
Date Analyzed:	04/21/15	Data File:	I5-229 mb.098
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	<1

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	BH-32-S-14.0	Client:	Maul Foster Alongi
Date Received:	04/17/15	Project:	Tiger Oil 0818.02.01, F&BI 504314
Date Extracted:	04/23/15	Lab ID:	504314-02
Date Analyzed:	04/24/15	Data File:	504314-02.049
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	88	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	Tiger Oil 0818.02.01, F&BI 504314
Date Extracted:	04/23/15	Lab ID:	I5-246 mb
Date Analyzed:	04/24/15	Data File:	I5-246 mb.047
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	91	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Date of Report: 04/28/15
Date Received: 04/17/15
Project: Tiger Oil 0818.02.01, F&BI 504314

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: 504313-02 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	77	69-120
Toluene	mg/kg (ppm)	0.5	86	70-117
Ethylbenzene	mg/kg (ppm)	0.5	85	65-123
Xylenes	mg/kg (ppm)	1.5	83	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 04/28/15
Date Received: 04/17/15
Project: Tiger Oil 0818.02.01, F&BI 504314

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 504331-01 (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	<1	101	101	59-148	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	102	80-120

Date of Report: 04/28/15
Date Received: 04/17/15
Project: Tiger Oil 0818.02.01, F&BI 504314

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS USING EPA METHOD 200.8 AND 40 CFR PART 261

Laboratory Code: 504314-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	<1	97	97	50-150	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	96	70-130

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.

504314

SAMPLE CHAIN OF CUSTODY

ME 04/17/15 VS3/BT2

Send Report To Justin Clarry / Yen-Vy Van

Company MFA

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. PO#

TIGER OIL 0818.02.01

REMARKS

Page # of

TURNAROUND TIME
- [x] 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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Lead (6010)	TCLP Lead (1311)					Notes
BH-31-S-14.0	01	4/16/15	0730	S	5		X	X										
BH-32-S-14.0	02		11:10				X	X				X	X					
BH-32-S-10.0	03		11:15				X	X										
BH-33-S-14.0	04		12:30				X	X										
BH-34-S-10.0	05		13:30				X	X										
BH-34-S-14.0	06		13:45				X	X										
BH-34-S-DUP	07		13:45				X	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:		Lindsey Crosby	MFA	4/16/15	1430
Received by:		Nhan Phan	FEBT	4/17/15	1220
Relinquished by:					
Received by:			Samples received at 2 °C		

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

April 28, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 22, 2015 from the Tiger Oil 0818.02.01, F&BI 504405 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0428R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 22, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818.02.01, F&BI 504405 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504405 -01	BH-37_S-9.0
504405 -02	BH-37-S-14.0

All quality control requirements were acceptable.

Date of Report: 04/28/15
Date Received: 04/22/15
Project: Tiger Oil 0818.02.01, F&BI 504405
Date Extracted: 04/23/15
Date Analyzed: 04/23/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
BH-37_S-9.0 504405-01	<0.02	0.062	0.19	1.7	69	99
BH-37-S-14.0 504405-02	0.27	0.24	2.0	7.3	160	104
Method Blank 05-0815 MB2	<0.02	<0.02	<0.02	<0.06	<2	97

Date of Report: 04/28/15
Date Received: 04/22/15
Project: Tiger Oil 0818.02.01, F&BI 504405

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: 504395-04 (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)	<2	<2	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	95	70-117
Ethylbenzene	mg/kg (ppm)	0.5	96	65-123
Xylenes	mg/kg (ppm)	1.5	95	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

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.

504405

SAMPLE CHAIN OF CUSTODY

MG 04/22/15 VSI/ET

Send Report To Justin Clary/ Yen-Vy Van

Company Maul Foster and Alongi

Address

City, State, ZIP

Phone # Fax #

Email Address

SAMPLERS *(signature)*

PROJECT NAME/NO. | PO #

Tiger Oil 0818.02.01

PROJECT ADDRESS

• ELECTRONIC DATA REQUESTED

Page # of

TURNAROUND TIME

(Standard Turnaround)

• RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

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

Samples Received at ____ °C

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
BH-37_S-9.0	01 A-E	4/21/15	14:30	S	5		X	X									
BH-37-S-14.0	02 V	4/21/15	14:40	S	5		X	X									
											Samples received at						0 °C

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:					
Received by:	[signature]	Nhan Phan	FEBT	4/22/15	1530
Relinquished by:					
Received by:					

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

March 24, 2015

Justin Clary, Project Manager
Maul Foster Alongi
411 1st Ave S, Suite 610
Seattle, WA 98104

Dear Mr. Clary:

Included are the results from the testing of material submitted on March 20, 2015 from the Tiger Oil West Nob Hill 0818, F&BI 503385 project. There are 19 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
c: Yen-Vy Van, Lindsey Crosby
MFA0324R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 20, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil West Nob Hill 0818, F&BI 503385 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
503385 -01	SP-02-S-01
503385 -02	SP-02-S-02
503385 -03	SP-02-S-03
503385 -04	SP-02-S-04
503385 -05	SP-02-S-05

cis-1,2-Dichloroethene in the 8260C laboratory control sample exceeded the acceptance criteria. The analyte was not detected in the sample, therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 03/24/15
Date Received: 03/20/15
Project: Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted: 03/20/15
Date Analyzed: 03/20/15

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

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SP-02-S-01 503385-01	<2	103
SP-02-S-02 503385-02	<2	102
SP-02-S-03 503385-03	<2	102
SP-02-S-04 503385-04	11	105
SP-02-S-05 503385-05	6.5	103
Method Blank 05-0563 MB	<2	101

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-02-S-01	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/20/15	Lab ID:	503385-01
Date Analyzed:	03/20/15	Data File:	032026.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	104	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-02-S-02	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/20/15	Lab ID:	503385-02
Date Analyzed:	03/20/15	Data File:	032027.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	104	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-02-S-03	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/20/15	Lab ID:	503385-03
Date Analyzed:	03/20/15	Data File:	032028.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	105	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	0.062
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-02-S-04	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/20/15	Lab ID:	503385-04
Date Analyzed:	03/20/15	Data File:	032029.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	0.15
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	0.78
Methylene chloride	<0.5	o-Xylene	0.34
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	0.11
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	0.24
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	0.80
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	0.096	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	0.28
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-02-S-05	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/20/15	Lab ID:	503385-05
Date Analyzed:	03/20/15	Data File:	032030.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	0.16
Methylene chloride	<0.5	o-Xylene	0.074
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	0.075
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	0.24
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	0.17
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/20/15	Lab ID:	05-0546 mb
Date Analyzed:	03/20/15	Data File:	032010.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-02-S-01	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/23/15	Lab ID:	503385-01
Date Analyzed:	03/24/15	Data File:	503385-01.036
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	91	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-02-S-02	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/23/15	Lab ID:	503385-02
Date Analyzed:	03/24/15	Data File:	503385-02.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	92	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-02-S-03	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/23/15	Lab ID:	503385-03
Date Analyzed:	03/24/15	Data File:	503385-03.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	91	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-02-S-04	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/23/15	Lab ID:	503385-04
Date Analyzed:	03/24/15	Data File:	503385-04.042
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	93	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-02-S-05	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/23/15	Lab ID:	503385-05
Date Analyzed:	03/24/15	Data File:	503385-05.043
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	94	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	Tiger Oil West Nob Hill 0818, F&BI 503385
Date Extracted:	03/23/15	Lab ID:	I5-173 mb
Date Analyzed:	03/24/15	Data File:	I5-173 mb.034
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	91	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Date of Report: 03/24/15
Date Received: 03/20/15
Project: Tiger Oil West Nob Hill 0818, F&BI 503385

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 503366-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	90	71-131

Date of Report: 03/24/15
Date Received: 03/20/15
Project: Tiger Oil West Nob Hill 0818, F&BI 503385

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

Laboratory Code: 503366-09 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	21	18	10-142	15
Chloromethane	mg/kg (ppm)	2.5	<0.5	55	52	10-126	6
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	51	49	10-138	4
Bromomethane	mg/kg (ppm)	2.5	<0.5	60	55	10-163	9
Chloroethane	mg/kg (ppm)	2.5	<0.5	65	64	10-176	2
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	49	46	10-176	6
Acetone	mg/kg (ppm)	12.5	<0.5	90	88	10-163	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	66	67	10-160	2
Methylene chloride	mg/kg (ppm)	2.5	<0.5	66	65	10-156	2
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	82	81	21-145	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	74	70	14-137	6
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	77	77	19-140	0
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	68	66	10-158	3
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	83	81	25-135	2
Chloroform	mg/kg (ppm)	2.5	<0.05	78	77	21-145	1
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	89	94	19-147	5
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	79	76	12-160	4
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	72	69	10-156	4
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	77	77	17-140	0
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	70	69	9-164	1
Benzene	mg/kg (ppm)	2.5	0.21	85	84	29-129	1
Trichloroethene	mg/kg (ppm)	2.5	<0.02	84	82	21-139	2
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	84	82	30-135	2
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	81	80	23-155	1
Dibromomethane	mg/kg (ppm)	2.5	<0.05	82	83	23-145	1
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	96	99	24-155	3
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	86	84	28-144	2
Toluene	mg/kg (ppm)	2.5	<0.05	80	81	35-130	1
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	79	79	26-149	0
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	81	84	10-205	4
2-Hexanone	mg/kg (ppm)	12.5	<0.5	82	85	15-166	4
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	84	85	31-137	1
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	80	80	20-133	0
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	78	77	28-150	1
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	83	84	28-142	1
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	83	81	32-129	2
Ethylbenzene	mg/kg (ppm)	2.5	0.22	82	83	32-137	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	80	81	31-143	1
m,p-Xylene	mg/kg (ppm)	5	1.2	86 b	90 b	34-136	5 b
o-Xylene	mg/kg (ppm)	2.5	0.50	87	89	33-134	2
Styrene	mg/kg (ppm)	2.5	<0.05	84	83	35-137	1
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	80	79	31-142	1
Bromoform	mg/kg (ppm)	2.5	<0.05	74	73	21-156	1
n-Propylbenzene	mg/kg (ppm)	2.5	0.061	79	79	23-146	0
Bromobenzene	mg/kg (ppm)	2.5	<0.05	83	83	34-130	0
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	0.18	82	83	18-149	1
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	82	81	28-140	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	79	80	25-144	1
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	78	78	31-134	0
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	77	76	31-136	1
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	82	81	30-137	1
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	0.58	86 b	92 b	10-182	7 b
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	80	79	23-145	1
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	80	79	21-149	1
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	81	81	30-131	0
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	81	81	29-129	0
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	84	82	31-132	2
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	69	69	11-161	0
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	81	81	22-142	0
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	79	80	10-142	1
Naphthalene	mg/kg (ppm)	2.5	0.26	87	90	14-157	3
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	82	82	20-144	0

Date of Report: 03/24/15
Date Received: 03/20/15
Project: Tiger Oil West Nob Hill 0818, F&BI 503385

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	62	10-146
Chloromethane	mg/kg (ppm)	2.5	93	27-133
Vinyl chloride	mg/kg (ppm)	2.5	97	22-139
Bromomethane	mg/kg (ppm)	2.5	96	38-114
Chloroethane	mg/kg (ppm)	2.5	106	10-163
Trichlorofluoromethane	mg/kg (ppm)	2.5	99	10-196
Acetone	mg/kg (ppm)	12.5	120	52-141
1,1-Dichloroethene	mg/kg (ppm)	2.5	111	47-128
Methylene chloride	mg/kg (ppm)	2.5	103	42-132
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	110	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	108	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	110	68-115
2,2-Dichloropropane	mg/kg (ppm)	2.5	103	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	115 vo	72-113
Chloroform	mg/kg (ppm)	2.5	108	66-120
2-Butanone (MEK)	mg/kg (ppm)	12.5	110	57-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	106	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	104	62-131
1,1-Dichloropropene	mg/kg (ppm)	2.5	113	69-128
Carbon tetrachloride	mg/kg (ppm)	2.5	103	60-139
Benzene	mg/kg (ppm)	2.5	111	68-114
Trichloroethene	mg/kg (ppm)	2.5	115	64-117
1,2-Dichloropropane	mg/kg (ppm)	2.5	112	72-127
Bromodichloromethane	mg/kg (ppm)	2.5	108	72-130
Dibromomethane	mg/kg (ppm)	2.5	110	70-120
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	124	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	115	75-136
Toluene	mg/kg (ppm)	2.5	107	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	104	72-132
1,1,2-Trichloroethane	mg/kg(ppm)	2.5	107	75-113
2-Hexanone	mg/kg (ppm)	12.5	106	33-152
1,3-Dichloropropane	mg/kg (ppm)	2.5	110	72-130
Tetrachloroethene	mg/kg (ppm)	2.5	110	72-114
Dibromochloromethane	mg/kg (ppm)	2.5	104	74-125
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	109	74-132
Chlorobenzene	mg/kg (ppm)	2.5	108	76-111
Ethylbenzene	mg/kg (ppm)	2.5	105	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	106	69-135
m,p-Xylene	mg/kg (ppm)	5	106	78-122
o-Xylene	mg/kg (ppm)	2.5	107	77-124
Styrene	mg/kg (ppm)	2.5	110	74-126
Isopropylbenzene	mg/kg (ppm)	2.5	104	76-127
Bromoform	mg/kg (ppm)	2.5	97	56-132
n-Propylbenzene	mg/kg (ppm)	2.5	103	74-124
Bromobenzene	mg/kg (ppm)	2.5	108	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	105	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	104	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	103	61-137
2-Chlorotoluene	mg/kg (ppm)	2.5	102	74-121
4-Chlorotoluene	mg/kg (ppm)	2.5	100	75-122
tert-Butylbenzene	mg/kg (ppm)	2.5	106	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	103	76-125
sec-Butylbenzene	mg/kg (ppm)	2.5	104	71-130
p-Isopropyltoluene	mg/kg (ppm)	2.5	103	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	106	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	105	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	109	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	92	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	106	64-135
Hexachlorobutadiene	mg/kg (ppm)	2.5	103	50-153
Naphthalene	mg/kg (ppm)	2.5	109	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	109	63-138

Date of Report: 03/24/15
Date Received: 03/20/15
Project: Tiger Oil West Nob Hill 0818, F&BI 503385

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TCLP METALS USING EPA METHOD 200.8 AND 40 CFR PART 261

Laboratory Code: 503385-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	<1	102	100	50-150	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	101	70-130

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.

503385

SAMPLE CHAIN OF CUSTODY

ME 03/20/15 VS2 / BI

Page # 1 of 1

Send Report To JUSTIN CLARY / YEN-VY VAN

Company MAUL FOSTER & ALONGI

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. TIGER OIL / 0818 WEST NOB HILL

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☑ RUSH 48 hour

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	LEAD (1311) TCLP						Notes
						ANALYSES REQUESTED												
SP-02-S-01	01 A-E	3/19/15	1130	S	5		✓		✓			✓						
SP-02-S-02	02		1145		5													
SP-02-S-03	03		1200		5													
SP-02-S-04	04		1215		5													
SP-02-S-05	05 ✓		1220		5													
													Samples received at					3 °

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		JESSICA CAWLEY	MFA	3/19/15	1430
Received by:		Nhan Phan	FBI	3/20/15	1100
Relinquished by:					
Received by:					

FORMS\COC\COC.DOC

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

March 24, 2015

Justin Clary, Project Manager
Maul Foster Alongi
411 1st Ave S, Suite 610
Seattle, WA 98104

Dear Mr. Clary:

Included are the results from the testing of material submitted on March 18, 2015 from the Tiger Oil, F&BI 503342 project. There are 18 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
c: Yen-Vy Van, Lindsey Crosby
MFA0324R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 18, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil, F&BI 503342 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
503342 -01	BH-01-S-9.0
503342 -02	BH-01-S-14.0

All quality control requirements were acceptable.

Date of Report: 03/24/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503342
Date Extracted: 03/19/15
Date Analyzed: 03/19/15

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

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
BH-01-S-9.0 503342-01 1/5	690	123
BH-01-S-14.0 503342-02 1/20	1,600	124
Method Blank 05-0557 MB2	<2	82

Analysis For Total Metals By EPA Method 200.8

Client ID:	BH-01-S-9.0	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503342
Date Extracted:	03/19/15	Lab ID:	503342-01
Date Analyzed:	03/19/15	Data File:	503342-01.086
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	103	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	497

Analysis For Total Metals By EPA Method 200.8

Client ID:	BH-01-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503342
Date Extracted:	03/19/15	Lab ID:	503342-02
Date Analyzed:	03/19/15	Data File:	503342-02.087
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	101	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	13.4

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	Tiger Oil, F&BI 503342
Date Extracted:	03/19/15	Lab ID:	I5-162 mb2
Date Analyzed:	03/19/15	Data File:	I5-162 mb2.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-01-S-9.0	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503342
Date Extracted:	03/18/15	Lab ID:	503342-01
Date Analyzed:	03/18/15	Data File:	031841.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	99	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	Tetrachloroethene	<0.025
Chloromethane	<0.5	Dibromochloromethane	<0.05
Vinyl chloride	<0.05	1,2-Dibromoethane (EDB)	<0.05
Bromomethane	<0.5	Chlorobenzene	<0.05
Chloroethane	<0.5	Ethylbenzene	9.3
Trichlorofluoromethane	<0.5	1,1,1,2-Tetrachloroethane	<0.05
Acetone	<0.5	m,p-Xylene	40 ve
1,1-Dichloroethene	<0.05	o-Xylene	16
Methylene chloride	<0.5	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	1.3
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	6.5
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	15
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon Tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	0.50	1,2,4-Trimethylbenzene	51 ve
Trichloroethene	<0.02	sec-Butylbenzene	1.1
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	0.92
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	5.7	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	34 ve
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25
1,3-Dichloropropane	<0.05		

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-01-S-9.0	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503342
Date Extracted:	03/18/15	Lab ID:	503342-01 1/10
Date Analyzed:	03/19/15	Data File:	031910.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<5	1,3-Dichloropropane	<0.5
Chloromethane	<5	Tetrachloroethene	<0.25
Vinyl chloride	<0.5	Dibromochloromethane	<0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	<0.5
Chloroethane	<5	Chlorobenzene	<0.5
Trichlorofluoromethane	<5	Ethylbenzene	10
Acetone	<5	1,1,1,2-Tetrachloroethane	<0.5
1,1-Dichloroethene	<0.5	m,p-Xylene	43
Methylene chloride	<5	o-Xylene	18
Methyl t-butyl ether (MTBE)	<0.5	Styrene	<0.5
trans-1,2-Dichloroethene	<0.5	Isopropylbenzene	1.4
1,1-Dichloroethane	<0.5	Bromoform	<0.5
2,2-Dichloropropane	<0.5	n-Propylbenzene	6.7
cis-1,2-Dichloroethene	<0.5	Bromobenzene	<0.5
Chloroform	<0.5	1,3,5-Trimethylbenzene	15
2-Butanone (MEK)	<5	1,1,2,2-Tetrachloroethane	<0.5
1,2-Dichloroethane (EDC)	<0.5	1,2,3-Trichloropropane	<0.5
1,1,1-Trichloroethane	<0.5	2-Chlorotoluene	<0.5
1,1-Dichloropropene	<0.5	4-Chlorotoluene	<0.5
Carbon tetrachloride	<0.5	tert-Butylbenzene	<0.5
Benzene	0.60	1,2,4-Trimethylbenzene	55
Trichloroethene	<0.2	sec-Butylbenzene	1.4
1,2-Dichloropropane	<0.5	p-Isopropyltoluene	1.1
Bromodichloromethane	<0.5	1,3-Dichlorobenzene	<0.5
Dibromomethane	<0.5	1,4-Dichlorobenzene	<0.5
4-Methyl-2-pentanone	<5	1,2-Dichlorobenzene	<0.5
cis-1,3-Dichloropropene	<0.5	1,2-Dibromo-3-chloropropane	<5
Toluene	6.7	1,2,4-Trichlorobenzene	<2.5
trans-1,3-Dichloropropene	<0.5	Hexachlorobutadiene	<2.5
1,1,2-Trichloroethane	<0.5	Naphthalene	40
2-Hexanone	<5	1,2,3-Trichlorobenzene	<2.5

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-01-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503342
Date Extracted:	03/18/15	Lab ID:	503342-02
Date Analyzed:	03/18/15	Data File:	031840.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	Tetrachloroethene	<0.025
Chloromethane	<0.5	Dibromochloromethane	<0.05
Vinyl chloride	<0.05	1,2-Dibromoethane (EDB)	<0.05
Bromomethane	<0.5	Chlorobenzene	<0.05
Chloroethane	<0.5	Ethylbenzene	1.2
Trichlorofluoromethane	<0.5	1,1,1,2-Tetrachloroethane	<0.05
Acetone	<0.5	m,p-Xylene	5.4
1,1-Dichloroethene	<0.05	o-Xylene	2.5
Methylene chloride	<0.5	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	0.13
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	0.81
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	2.6
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon Tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	0.98	1,2,4-Trimethylbenzene	11
Trichloroethene	<0.02	sec-Butylbenzene	0.23
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	0.19
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	3.4	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	12
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25
1,3-Dichloropropane	<0.05		

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Tiger Oil, F&BI 503342
Date Extracted:	03/18/15	Lab ID:	05-0544 mb
Date Analyzed:	03/18/15	Data File:	031826.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	BH-01-S-9.0	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503342
Date Extracted:	03/19/15	Lab ID:	503342-01
Date Analyzed:	03/20/15	Data File:	503342-01.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	96	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	BH-01-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503342
Date Extracted:	03/19/15	Lab ID:	503342-02
Date Analyzed:	03/20/15	Data File:	503342-02.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	95	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	Tiger Oil, F&BI 503342
Date Extracted:	03/19/15	Lab ID:	I5-166 mb
Date Analyzed:	03/20/15	Data File:	I5-166 mb.009
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	93	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Date of Report: 03/24/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503342

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 503283-21 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	95	71-131

Date of Report: 03/24/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503342

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 503253-02 (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	2.95	111	107	59-148	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	109	80-120

Date of Report: 03/24/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503342

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

Laboratory Code: 503341-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	29	27	10-142	7
Chloromethane	mg/kg (ppm)	2.5	<0.5	65	66	10-126	2
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	65	67	10-138	3
Bromomethane	mg/kg (ppm)	2.5	<0.5	63	64	10-163	2
Chloroethane	mg/kg (ppm)	2.5	<0.5	77	78	10-176	1
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	63	64	10-176	2
Acetone	mg/kg (ppm)	12.5	<0.5	88	91	10-163	3
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	80	84	10-160	5
Methylene chloride	mg/kg (ppm)	2.5	<0.5	74	79	10-156	7
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	89	90	21-145	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	83	83	14-137	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	86	87	19-140	1
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	78	79	10-158	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	89	90	25-135	1
Chloroform	mg/kg (ppm)	2.5	<0.05	88	89	21-145	1
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	97	102	19-147	5
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	87	87	12-160	0
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	81	82	10-156	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	88	90	17-140	2
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	83	82	9-164	1
Benzene	mg/kg (ppm)	2.5	<0.03	90	91	29-129	1
Trichloroethene	mg/kg (ppm)	2.5	<0.02	94	94	21-139	0
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	94	93	30-135	1
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	90	89	23-155	1
Dibromomethane	mg/kg (ppm)	2.5	<0.05	90	89	23-145	1
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	101	103	24-155	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	93	93	28-144	0
Toluene	mg/kg (ppm)	2.5	<0.05	90	92	35-130	2
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	88	87	26-149	1
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	91	91	10-205	0
2-Hexanone	mg/kg (ppm)	12.5	<0.5	91	93	15-166	2
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	94	94	31-137	0
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	92	92	20-133	0
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	88	88	28-150	0
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	92	93	28-142	1
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	93	93	32-129	0
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	91	92	32-137	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	91	91	31-143	0
m,p-Xylene	mg/kg (ppm)	5	<0.1	91	92	34-136	1
o-Xylene	mg/kg (ppm)	2.5	<0.05	91	92	33-134	1
Styrene	mg/kg (ppm)	2.5	<0.05	93	94	35-137	1
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	90	90	31-142	0
Bromoform	mg/kg (ppm)	2.5	<0.05	82	81	21-156	1
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	90	89	23-146	1
Bromobenzene	mg/kg (ppm)	2.5	<0.05	94	93	34-130	1
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	90	90	18-149	0
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	89	88	28-140	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	88	89	25-144	1
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	86	86	31-134	0
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	86	86	31-136	0
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	91	92	30-137	1
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	88	88	10-182	0
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	91	90	23-145	1
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	90	89	21-149	1
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	91	90	30-131	1
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	89	90	29-129	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	92	92	31-132	0
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	72	75	11-161	4
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	89	89	22-142	0
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	89	90	10-142	1
Naphthalene	mg/kg (ppm)	2.5	<0.05	88	90	14-157	2
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	91	92	20-144	1

Date of Report: 03/24/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503342

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	61	10-146
Chloromethane	mg/kg (ppm)	2.5	89	27-133
Vinyl chloride	mg/kg (ppm)	2.5	92	22-139
Bromomethane	mg/kg (ppm)	2.5	85	38-114
Chloroethane	mg/kg (ppm)	2.5	102	10-163
Trichlorofluoromethane	mg/kg (ppm)	2.5	89	10-196
Acetone	mg/kg (ppm)	12.5	102	52-141
1,1-Dichloroethene	mg/kg (ppm)	2.5	104	47-128
Methylene chloride	mg/kg (ppm)	2.5	92	42-132
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	99	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	102	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	101	68-115
2,2-Dichloropropane	mg/kg (ppm)	2.5	88	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	105	72-113
Chloroform	mg/kg (ppm)	2.5	101	66-120
2-Butanone (MEK)	mg/kg (ppm)	12.5	112	57-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	97	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	95	62-131
1,1-Dichloropropene	mg/kg (ppm)	2.5	106	69-128
Carbon tetrachloride	mg/kg (ppm)	2.5	97	60-139
Benzene	mg/kg (ppm)	2.5	104	68-114
Trichloroethene	mg/kg (ppm)	2.5	108	64-117
1,2-Dichloropropane	mg/kg (ppm)	2.5	106	72-127
Bromodichloromethane	mg/kg (ppm)	2.5	101	72-130
Dibromomethane	mg/kg (ppm)	2.5	104	70-120
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	113	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	106	75-136
Toluene	mg/kg (ppm)	2.5	104	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	100	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	103	75-113
2-Hexanone	mg/kg (ppm)	12.5	102	33-152
1,3-Dichloropropane	mg/kg (ppm)	2.5	108	72-130
Tetrachloroethene	mg/kg (ppm)	2.5	106	72-114
Dibromochloromethane	mg/kg (ppm)	2.5	101	74-125
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	104	74-132
Chlorobenzene	mg/kg (ppm)	2.5	105	76-111
Ethylbenzene	mg/kg (ppm)	2.5	103	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	102	69-135
m,p-Xylene	mg/kg (ppm)	5	103	78-122
o-Xylene	mg/kg (ppm)	2.5	103	77-124
Styrene	mg/kg (ppm)	2.5	105	74-126
Isopropylbenzene	mg/kg (ppm)	2.5	101	76-127
Bromoform	mg/kg (ppm)	2.5	93	56-132
n-Propylbenzene	mg/kg (ppm)	2.5	103	74-124
Bromobenzene	mg/kg (ppm)	2.5	108	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	102	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	100	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	101	61-137
2-Chlorotoluene	mg/kg (ppm)	2.5	100	74-121
4-Chlorotoluene	mg/kg (ppm)	2.5	99	75-122
tert-Butylbenzene	mg/kg (ppm)	2.5	103	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	101	76-125
sec-Butylbenzene	mg/kg (ppm)	2.5	102	71-130
p-Isopropyltoluene	mg/kg (ppm)	2.5	100	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	104	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	103	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	105	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	88	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	103	64-135
Hexachlorobutadiene	mg/kg (ppm)	2.5	99	50-153
Naphthalene	mg/kg (ppm)	2.5	103	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	105	63-138

Date of Report: 03/24/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503342

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS USING EPA METHOD 200.8 AND 40 CFR PART 261

Laboratory Code: 503265-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	<1	87	97	50-150	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	96	70-130

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.

503342

SAMPLE CHAIN OF CUSTODY

ME 03-18-15 VSI/BTI

Page # _____ of _____

Send Report To JUSTIN CLARY

Company MFA

Address _____

City, State, ZIP _____

Phone # _____ Fax # _____

SAMPLERS (signature) [signature]

PROJECT NAME/NO: TIGER OIL — PO#:

REMARKS

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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	LEAD (6010)	TCLP Pb (1311)					Notes
BH-01-S-9.0	01 A-E	3/17/15	1400	S	6		X		X			X	X					
BH-01-S-14.0	02 A-E	3/17/15	1415	S	6		X		X			X	X					
																		Samples received at 3 °C

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: [signature]	LINDSEY CRESSY	MFA	3/17/15	1515
Received by: [signature]	Nhan Phan	FEB_I	3/18/15	1500
Relinquished by:				
Received by:				

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

March 25, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Blvd
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on March 24, 2015 from the Tiger Oil 0818-01, F&BI 503448 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
c: Yen-Vy Van, Lindsey Crosby
MFA0325R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 24, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818-01, F&BI 503448 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
503448 -01	SP-03-S01
503448 -02	SP-03-S02
503448 -03	SP-03-S03
503448 -04	SP-03-S04
503448 -05	SP-03-S05

All quality control requirements were acceptable.

Date of Report: 03/25/15
Date Received: 03/24/15
Project: Tiger Oil 0818-01, F&BI 503448
Date Extracted: 03/24/15
Date Analyzed: 03/24/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
SP-03-S01 503448-01	<0.02	<0.02	<0.02	<0.06	<2	90
SP-03-S02 503448-02	<0.02	<0.02	<0.02	<0.06	<2	90
SP-03-S03 503448-03	<0.02	<0.02	<0.02	<0.06	<2	89
SP-03-S04 503448-04	<0.02	<0.02	<0.02	<0.06	<2	90
SP-03-S05 503448-05	<0.02	<0.02	<0.02	<0.06	<2	89
Method Blank 05-0567 MB	<0.02	<0.02	<0.02	<0.06	<2	89

Date of Report: 03/25/15
Date Received: 03/24/15
Project: Tiger Oil 0818-01, F&BI 503448

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: 503426-01 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	85	69-120
Toluene	mg/kg (ppm)	0.5	87	70-117
Ethylbenzene	mg/kg (ppm)	0.5	87	65-123
Xylenes	mg/kg (ppm)	1.5	86	66-120
Gasoline	mg/kg (ppm)	20	110	71-131

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.

448
503 447 (NP)

SAMPLE CHAIN OF CUSTODY

ME 03-24-15

B01/VS1

Page # 1 of 1

Send Report To JUSTIN CLARY / VEN-VY

Company MFA

Address 4100 EAST MILL PLAIN BLVD.

City, State, ZIP VANCOUVER, WA, 98660

Phone # _____ Fax # _____

SAMPLERS (signature) [signature]

PROJECT NAME/NO. TIGER OIL / 0515-01

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH 24 Hr
- Rush charges authorized by LINDSEY CROSBY

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS						Notes
						ANALYSES REQUESTED											
SP-03-S-01	01A-E	3/23	1325	S	5		X	X									
SP-03-S-02	02T		1330				X	X									
SP-03-S-03	03		1345				X	X									analyze per LC 3/24/15 MA.
SP-03-S-04	04		1355				X	X									
SP-03-S-05	05		1410				X	X									
																	Samples received at 3 °C

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

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	LINDSEY CROSBY	MFA	3/23/15	15:40
Received by:	[signature]	Nhan Phan	FCT	3/24/15	1435
Relinquished by:					
Received by:					

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.

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Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

March 26, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Blvd
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on March 19, 2015 from the Tiger Oil Nob Hill 0818, F&BI 503366 project. There are 15 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
c: Yen-Vy Van, Lindsey Crosby
MFA0326R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 19, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil Nob Hill 0818, F&BI 503366 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
503366 -01	BH-03-S-9.0
503366 -02	BH-03-S-14.0
503366 -03	BH-02-S-9.0
503366 -04	BH-02-S-14.0
503366 -05	BH-05-S-14.0
503366 -06	BH-04-S-14.0
503366 -07	BH-06-S-14.0
503366 -08	BH-05-S-9.0
503366 -09	BH-04-S-9.0

All quality control requirements were acceptable.

Date of Report: 03/26/15
Date Received: 03/19/15
Project: Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted: 03/20/15
Date Analyzed: 03/20/15

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

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
BH-03-S-9.0 503366-01	<2	101
BH-03-S-14.0 503366-02 1/5	340	122
BH-02-S-9.0 503366-03	83	119
BH-02-S-14.0 503366-04 1/5	130	106
BH-05-S-14.0 503366-05 1/10	2,200	ip
BH-04-S-14.0 503366-06 1/20	2,300	133
BH-06-S-14.0 503366-07 1/10	290	116
BH-05-S-9.0 503366-08	4.3	102
BH-04-S-9.0 503366-09	13	105
Method Blank 05-0563 MB	<2	101

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-03-S-9.0	Client:	Maul Foster Alongi
Date Received:	03/19/15	Project:	Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted:	03/20/15	Lab ID:	503366-01
Date Analyzed:	03/20/15	Data File:	032012.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-03-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/19/15	Project:	Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted:	03/20/15	Lab ID:	503366-02 1/25
Date Analyzed:	03/20/15	Data File:	032035.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	62	142
Toluene-d8	104	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	3.0
Toluene	34
Ethylbenzene	24
m,p-Xylene	99
o-Xylene	36

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-02-S-9.0	Client:	Maul Foster Alongi
Date Received:	03/19/15	Project:	Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted:	03/20/15	Lab ID:	503366-03
Date Analyzed:	03/20/15	Data File:	032013.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	97	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	0.10
Toluene	<0.05
Ethylbenzene	0.20
m,p-Xylene	0.47
o-Xylene	0.15

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-02-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/19/15	Project:	Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted:	03/20/15	Lab ID:	503366-04
Date Analyzed:	03/20/15	Data File:	032016.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	104	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	0.59
Toluene	9.7
Ethylbenzene	9.9
m,p-Xylene	43
o-Xylene	16

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-05-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/19/15	Project:	Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted:	03/20/15	Lab ID:	503366-05 1/25
Date Analyzed:	03/21/15	Data File:	032038.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	104	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	0.79
Toluene	24
Ethylbenzene	28
m,p-Xylene	130
o-Xylene	46

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-04-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/19/15	Project:	Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted:	03/20/15	Lab ID:	503366-06 1/25
Date Analyzed:	03/20/15	Data File:	032036.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	3.5
Toluene	31
Ethylbenzene	19
m,p-Xylene	86
o-Xylene	31

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-06-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/19/15	Project:	Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted:	03/20/15	Lab ID:	503366-07
Date Analyzed:	03/20/15	Data File:	032019.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	104	51	121
4-Bromofluorobenzene	99	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	0.35
Toluene	5.4
Ethylbenzene	6.8
m,p-Xylene	30
o-Xylene	10

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-05-S-9.0	Client:	Maul Foster Alongi
Date Received:	03/19/15	Project:	Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted:	03/20/15	Lab ID:	503366-08
Date Analyzed:	03/20/15	Data File:	032014.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	104	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	0.051
Toluene	<0.05
Ethylbenzene	0.053
m,p-Xylene	0.24
o-Xylene	0.075

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-04-S-9.0	Client:	Maul Foster Alongi
Date Received:	03/19/15	Project:	Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted:	03/20/15	Lab ID:	503366-09
Date Analyzed:	03/20/15	Data File:	032015.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	0.25
Toluene	<0.05
Ethylbenzene	0.26
m,p-Xylene	1.4
o-Xylene	0.58

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Tiger Oil Nob Hill 0818, F&BI 503366
Date Extracted:	03/20/15	Lab ID:	05-0546 mb
Date Analyzed:	03/20/15	Data File:	032010.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Date of Report: 03/26/15
Date Received: 03/19/15
Project: Tiger Oil Nob Hill 0818, F&BI 503366

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 503366-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	90	71-131

Date of Report: 03/26/15
Date Received: 03/19/15
Project: Tiger Oil Nob Hill 0818, F&BI 503366

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

Laboratory Code: 503366-09 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	2.5	0.20	77	76	29-129	1
Toluene	mg/kg (ppm)	2.5	<0.05	79	79	35-130	0
Ethylbenzene	mg/kg (ppm)	2.5	0.21	73	74	32-137	1
m,p-Xylene	mg/kg (ppm)	5	1.2	62 b	66 b	34-136	6 b
o-Xylene	mg/kg (ppm)	2.5	0.48	67	69	33-134	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	2.5	111	68-114
Toluene	mg/kg (ppm)	2.5	107	66-126
Ethylbenzene	mg/kg (ppm)	2.5	105	64-123
m,p-Xylene	mg/kg (ppm)	5	106	78-122
o-Xylene	mg/kg (ppm)	2.5	107	77-124

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.

503366

SAMPLE CHAIN OF CUSTODY

ME 03-19-15 BI2 / VS2

Page # _____ of _____

Send Report To JUSTIN . CLARY / YEN-VY

Company MFA

Address 400 EAST MILL PLAIN BLVD

City, State, ZIP VANCOUVER, WA 98660

Phone # _____ Fax # _____

SAMPLERS (signature) Jessica Cawley

PROJECT NAME/NO. TIGER OIL NOB HILL 0818

PO#

REMARKS

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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	LEAD (6010)						Notes
BH-03-S-9.0	01 A-E	3/18/15	0815	S	5		X		X			X						
BH-03-S-14.0	02		0810															
BH-02-S-9.0	03		0800															
BH-02-S-14.0	04		0805															
BH-05-S-14.0	05		1210															
BH-04-S-14.0	06		1200															
BH-06-S-14.0	07		1110															
BH-05-S-9.0	08		0945															
BH-04-S-9.0	09		0940															
BH-0																		

Samples received at 2 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Jessica Cawley	JESSICA CAWLEY	MAUL FOSTER ALONGI	03/18/15	1430
Received by: DDVO	DDVO	FBI	3-19-15	14:50
Relinquished by:				
Received by:				

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

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

March 27, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Blvd
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on March 20, 2015 from the Tiger Oil 0818.01, F&BI 503386 project. There are 9 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
c: Yen-Vy Van, Lindsey Crosby
MFA0327R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 20, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818.01, F&BI 503386 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
503386 -01	BH-09-S-14.0
503386 -02	BH-08-S-14.0
503386 -03	BH-07-S-14.0

All quality control requirements were acceptable.

Date of Report: 03/27/15
Date Received: 03/20/15
Project: Tiger Oil 0818.01, F&BI 503386
Date Extracted: 03/20/15
Date Analyzed: 03/20/15

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

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
BH-09-S-14.0 503386-01 1/100	3,600	94
BH-08-S-14.0 503386-02 1/10	400	112
BH-07-S-14.0 503386-03 1/10	500	114
Method Blank 05-0563 MB	<2	101

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-09-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil 0818.01, F&BI 503386
Date Extracted:	03/20/15	Lab ID:	503386-01 1/50
Date Analyzed:	03/23/15	Data File:	032310.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	104	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	1.7
Toluene	43
Ethylbenzene	38
m,p-Xylene	160
o-Xylene	60

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-08-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil 0818.01, F&BI 503386
Date Extracted:	03/20/15	Lab ID:	503386-02
Date Analyzed:	03/20/15	Data File:	032031.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	2.4
Toluene	11
Ethylbenzene	4.1
m,p-Xylene	17
o-Xylene	6.4

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	BH-07-S-14.0	Client:	Maul Foster Alongi
Date Received:	03/20/15	Project:	Tiger Oil 0818.01, F&BI 503386
Date Extracted:	03/20/15	Lab ID:	503386-03
Date Analyzed:	03/20/15	Data File:	032032.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	104	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	1.8
Toluene	2.9
Ethylbenzene	0.68
m,p-Xylene	2.8
o-Xylene	1.2

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Tiger Oil 0818.01, F&BI 503386
Date Extracted:	03/20/15	Lab ID:	05-0546 mb
Date Analyzed:	03/20/15	Data File:	032010.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05

Date of Report: 03/27/15
Date Received: 03/20/15
Project: Tiger Oil 0818.01, F&BI 503386

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 503366-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	90	71-131

Date of Report: 03/27/15
Date Received: 03/20/15
Project: Tiger Oil 0818.01, F&BI 503386

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

Laboratory Code: 503366-09 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	2.5	0.21	85	84	29-129	1
Toluene	mg/kg (ppm)	2.5	<0.05	80	81	35-130	1
Ethylbenzene	mg/kg (ppm)	2.5	0.22	82	83	32-137	1
m,p-Xylene	mg/kg (ppm)	5	1.2	86 b	90 b	34-136	5 b
o-Xylene	mg/kg (ppm)	2.5	0.50	87	89	33-134	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	2.5	111	68-114
Toluene	mg/kg (ppm)	2.5	107	66-126
Ethylbenzene	mg/kg (ppm)	2.5	105	64-123
m,p-Xylene	mg/kg (ppm)	5	106	78-122
o-Xylene	mg/kg (ppm)	2.5	107	77-124

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

503386 ME 03/20/15 VS2/BI

Send Report To JUSTIN CLARY / KEN-VY VAN

Company MAUL FOSTER & ALONGI

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature) JCawley

PROJECT NAME/NO. TIGER OIL / 0818.01

PO#

REMARKS

Page # 1 of 1

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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	~~EDB by~~ VOCs by 8260	SVOCs by 8270	HFS	LEAD (6010) Canceled per JHC 3/20/15	MS	Notes
BH-09-S-14.0	01	3/19/15	1010	S	5		✓		✓			✓		
BH-08-S-14.0	02	"	1000	"	5		"		"			"		
BH-07-S-14.0	03	"	0850	"	5		"		"			"		
												Samples received at 3 °C		

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: JCawley	JESSICA CAWLEY	MAUL FOSTER & ALONGI	3/19/15	14:30
Received by:	Nhan Phan	FEBI	3/20/15	11:00
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

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

April 7, 2015

Justin Clary, Project Manager
Maul Foster Alongi
411 1st Ave S, Suite 610
Seattle, WA 98104

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 1, 2015 from the Tiger Oil/0818.02.01, F&BI 504024 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0407R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 1, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil/0818.02.01 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504024 -01	BH-14-S-14.0
504024 -02	BH-15-S-14.0

All quality control requirements were acceptable.

Date of Report: 04/07/15
Date Received: 04/01/15
Project: Tiger Oil/0818.02.01, F&BI 504024
Date Extracted: 04/02/15
Date Analyzed: 04/02/15 and 04/03/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
BH-14-S-14.0 504024-01 1/1000	12	160	130	780	8,500	97
BH-15-S-14.0 504024-02 1/20	1.6	19	95	580	7,100	ip
Method Blank 05-0661 MB	<0.02	<0.02	<0.02	<0.06	<2	98

Date of Report: 04/07/15
Date Received: 04/01/15
Project: Tiger Oil/0818.02.01, F&BI 504024

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

Laboratory Code: 503539-01 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	91	66-121
Toluene	mg/kg (ppm)	0.5	94	72-128
Ethylbenzene	mg/kg (ppm)	0.5	96	69-132
Xylenes	mg/kg (ppm)	1.5	96	69-131
Gasoline	mg/kg (ppm)	20	110	61-153

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.

504024

SAMPLE CHAIN OF CUSTODY

ME 04-01-15

USI / 1 CT

Page # 1 of 1

Send Report To JUSTIN CLARY / YEN VY VAN

Company MFA

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature) J Cawley

PROJECT NAME/NO. TIGER OIL / 0818.02.01

PO#

REMARKS

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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
BH-14-S-14.0	01 A-E	3/31/15	0845	S	5		✓	✓										
BH-15-S-14.0	02 A-E	3/31/15	0900	S	5		✓	✓										
																		Samples received at 2 °C

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: J Cawley	Jessica Cawley	MFA	3/31/15	1500
Received by:	Nhan Phan	FEBT	4/1/15	10:45
Relinquished by:				
Received by:				

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

April 7, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 E Mill Plain Boulevard, Suite 400
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on March 31, 2015 from the Tiger 0818.02.01, F&BI 503581 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0407R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 31, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger 0818.02.01, F&BI 503581 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
503581 -01	BH-10-S-14.0
503581 -02	BH-10-DUP
503581 -03	BH-11-S-14.0
503581 -04	BH-12-S-14.0
503581 -05	BH-13-S-14.0

All quality control requirements were acceptable.

Date of Report: 04/07/15
Date Received: 03/31/15
Project: Tiger 0818.02.01, F&BI 503581
Date Extracted: 04/02/15
Date Analyzed: 04/02/15 and 04/03/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
BH-10-S-14.0 503581-01 1/5	<0.02 j	3.7	<0.1	350	6,600	ip
BH-10-DUP 503581-02 1/100	<0.02 j	4.0	41	470	9,700	116
BH-11-S-14.0 503581-03 1/20	1.3	24	57	370	6,600	ip
BH-12-S-14.0 503581-04 1/20	<0.4	1.5	18	85	1,900	120
BH-13-S-14.0 503581-05 1/5	<0.02 j	0.26	5.1	28	500	121
Method Blank 05-0661 MB	<0.02	<0.02	<0.02	<0.06	<2	98

Date of Report: 04/07/15
Date Received: 03/31/15
Project: Tiger 0818.02.01, F&BI 503581

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

Laboratory Code: 503539-01 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	91	66-121
Toluene	mg/kg (ppm)	0.5	94	72-128
Ethylbenzene	mg/kg (ppm)	0.5	96	69-132
Xylenes	mg/kg (ppm)	1.5	96	69-131
Gasoline	mg/kg (ppm)	20	110	61-153

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.

503581

SAMPLE CHAIN OF CUSTODY

ME 03/31/15 V52/EI2

Page # 1 of 1

Send Report To JUSTIN CLARY / YANYY VAN

Company MFA

Address 400 E MILL PLAIN

City, State, ZIP VANCOUVER, WA

Phone # _____ Fax # _____

SAMPLERS (signature) JCawley

PROJECT NAME/NO. TIGER 0818.07.01

PO#

REMARKS

TURNAROUND TIME
- [x] 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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
						ANALYSES REQUESTED												
BH-10-S-14.0	01A-E	3/30/15	1100	S	5		✓	✓										
BH-10-DUP	02	"	1100	S	"		"	"										
BH-11-S-14.0	03	"	1130	S	"		"	"										
BH-12-S-14.0	04	"	1400	S	"		"	"										FLOOR
BH-13-S-14.0	05	"	1430	S	"		"	"										FLOOR
												Samples received at 2 °C						

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: JCawley	JESSICA CAWLEY	MFA	3/30/15	1500
Received by: Nhan Phan	NHAN PHAN	FEBI	3/30/15	1030
Relinquished by:				
Received by:				

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

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

April 9, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 2, 2015 from the Tiger Oil/0818.02.01, F&BI 504060 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0409R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 2, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil/0818.02.01, F&BI 504060 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504060 -01	BH-16-S-9.0
504060 -02	BH-16-S-14.0
504060 -03	BH-17-S-9.0
504060 -04	BH-17-S-14.0

All quality control requirements were acceptable.

Date of Report: 04/09/15
Date Received: 04/02/15
Project: Tiger Oil/0818.02.01, F&BI 504060
Date Extracted: 04/06/15
Date Analyzed: 04/06/15 and 04/07/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
BH-16-S-9.0 504060-01	<0.02	<0.02	<0.02	<0.06	<2	89
BH-16-S-14.0 504060-02	<0.02	0.026	0.84	2.3	290	108
BH-17-S-9.0 504060-03	<0.02	<0.02	<0.02	<0.06	<2	89
BH-17-S-14.0 504060-04 1/5	<0.02 j	0.13	8.6	48	2,600	102
Method Blank 05-0692 MB	<0.02	<0.02	<0.02	<0.06	<2	88

Date of Report: 04/09/15
Date Received: 04/02/15
Project: Tiger Oil/0818.02.01, F&BI 504060

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

Laboratory Code: 504053-01 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	83	69-120
Toluene	mg/kg (ppm)	0.5	94	70-117
Ethylbenzene	mg/kg (ppm)	0.5	92	65-123
Xylenes	mg/kg (ppm)	1.5	90	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

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.

504060

SAMPLE CHAIN OF CUSTODY

ME 04-02-15

COI / VSI

Page # 1 of 1

Send Report To Justin Clary / Yen Vy Van

Company Maul Foster & Alongi

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature) J Cawley

PROJECT NAME/NO. Tiger Oil / 0818.02.01

PO#

REMARKS

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
						ANALYSES REQUESTED												
BH-16-S-9.0	01A-E	4/1/15	0800	S	5		✓	✓										
BH-16-S-14.0	02		0815	S			✓	✓										
BH-17-S-9.0	03		1245	S			✓	✓										
BH-17-S-14.0	04		1250	S			✓	✓										
																		Sample received at 1 °C

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: J Cawley	J. Cawley	MFA	4/1/15	1330
Received by: Nhan Phan	Nhan Phan	FEBT	4/2/15	1530
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

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

April 13, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 8, 2015 from the Tiger Oil Nob Hill 0818.02.01, F&BI 504135 project. There are 10 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0413R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 8, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil Nob Hill 0818.02.01, F&BI 504135 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504135 -01	BH-18-S-14.0
504135 -02	BH-19-S-14.0
504135 -03	BH-20-S-14.0
504135 -04	BH-21-S-14.0
504135 -05	WELL-01-S

All quality control requirements were acceptable.

Date of Report: 04/13/15
Date Received: 04/08/15
Project: Tiger Oil Nob Hill 0818.02.01, F&BI 504135
Date Extracted: 04/08/15
Date Analyzed: 04/08/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (Limit 53-144)
WELL-01-S 504135-05	D	ND	ND	88
Method Blank 05-727 MB	ND	ND	ND	102

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

Date of Report: 04/13/15
Date Received: 04/08/15
Project: Tiger Oil Nob Hill 0818.02.01, F&BI 504135
Date Extracted: 04/08/15
Date Analyzed: 04/08/15

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES
USING METHOD 8021B**

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Surrogate (% Recovery) (Limit 50-132)
WELL-01-S 504135-05 1/5	7.3	76	34	210	101
Method Blank 05-0695 MB2	<0.02	<0.02	<0.02	<0.06	87

Date of Report: 04/13/15
Date Received: 04/08/15
Project: Tiger Oil Nob Hill 0818.02.01, F&BI 504135
Date Extracted: 04/08/15
Date Analyzed: 04/08/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
BH-18-S-14.0 504135-01 1/5	0.29	1.1	0.75	5.4	120	88
BH-19-S-14.0 504135-02 1/5	0.29	1.8	2.9	15	630	97
BH-20-S-14.0 504135-03 1/10	1.1	35	21	290	4,200	101
BH-21-S-14.0 504135-04 1/20	7.7	160	61	430	6,500	95
Method Blank 05-0695 MB2	<0.02	<0.02	<0.02	<0.06	<2	87

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	WELL-01-S	Client:	Maul Foster Alongi
Date Received:	04/08/15	Project:	Tiger Oil Nob Hill 0818.02.01
Date Extracted:	04/08/15	Lab ID:	504135-05
Date Analyzed:	04/08/15	Data File:	040810.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	89	113
Toluene-d8	104	64	137
4-Bromofluorobenzene	104	81	119

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Tiger Oil Nob Hill 0818.02.01
Date Extracted:	04/08/15	Lab ID:	05-0713 mb
Date Analyzed:	04/08/15	Data File:	040808.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	89	113
Toluene-d8	99	64	137
4-Bromofluorobenzene	99	81	119

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.02
Tetrachloroethene	<0.025

Date of Report: 04/13/15
Date Received: 04/08/15
Project: Tiger Oil Nob Hill 0818.02.01, F&BI 504135

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: 504119-03 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	87	69-120
Toluene	mg/kg (ppm)	0.5	87	70-117
Ethylbenzene	mg/kg (ppm)	0.5	86	65-123
Xylenes	mg/kg (ppm)	1.5	85	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 04/13/15
Date Received: 04/08/15
Project: Tiger Oil Nob Hill 0818.02.01, F&BI 504135

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

Laboratory Code: 504123-09 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	48	50	10-91	4
Chloroethane	mg/kg (ppm)	2.5	<0.5	59	63	10-101	7
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	65	67	11-103	3
Methylene chloride	mg/kg (ppm)	2.5	<0.5	80	82	14-128	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	73	77	13-112	5
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	77	79	23-115	3
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	81	83	25-120	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	80	80	22-124	0
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	79	81	27-112	2
Trichloroethene	mg/kg (ppm)	2.5	<0.02	79	80	30-112	1
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	79	79	25-114	0

Date of Report: 04/13/15
Date Received: 04/08/15
Project: Tiger Oil Nob Hill 0818.02.01, F&BI 504135

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	81	42-107
Chloroethane	mg/kg (ppm)	2.5	89	47-115
1,1-Dichloroethene	mg/kg (ppm)	2.5	93	65-110
Methylene chloride	mg/kg (ppm)	2.5	104	50-127
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	100	71-113
1,1-Dichloroethane	mg/kg (ppm)	2.5	99	74-109
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	103	73-110
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	100	73-111
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	103	72-116
Trichloroethene	mg/kg (ppm)	2.5	101	72-107
Tetrachloroethene	mg/kg (ppm)	2.5	103	73-111

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.

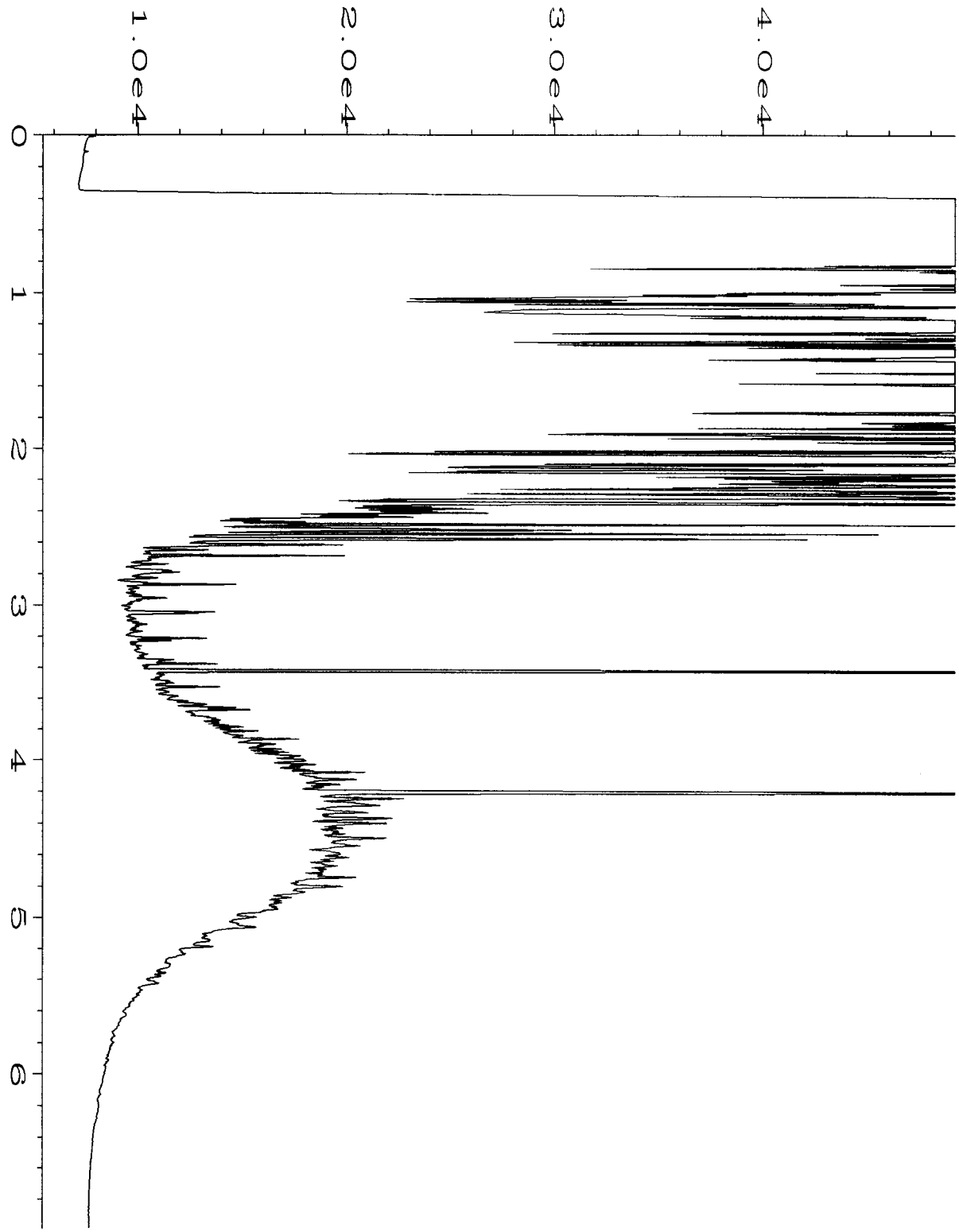
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

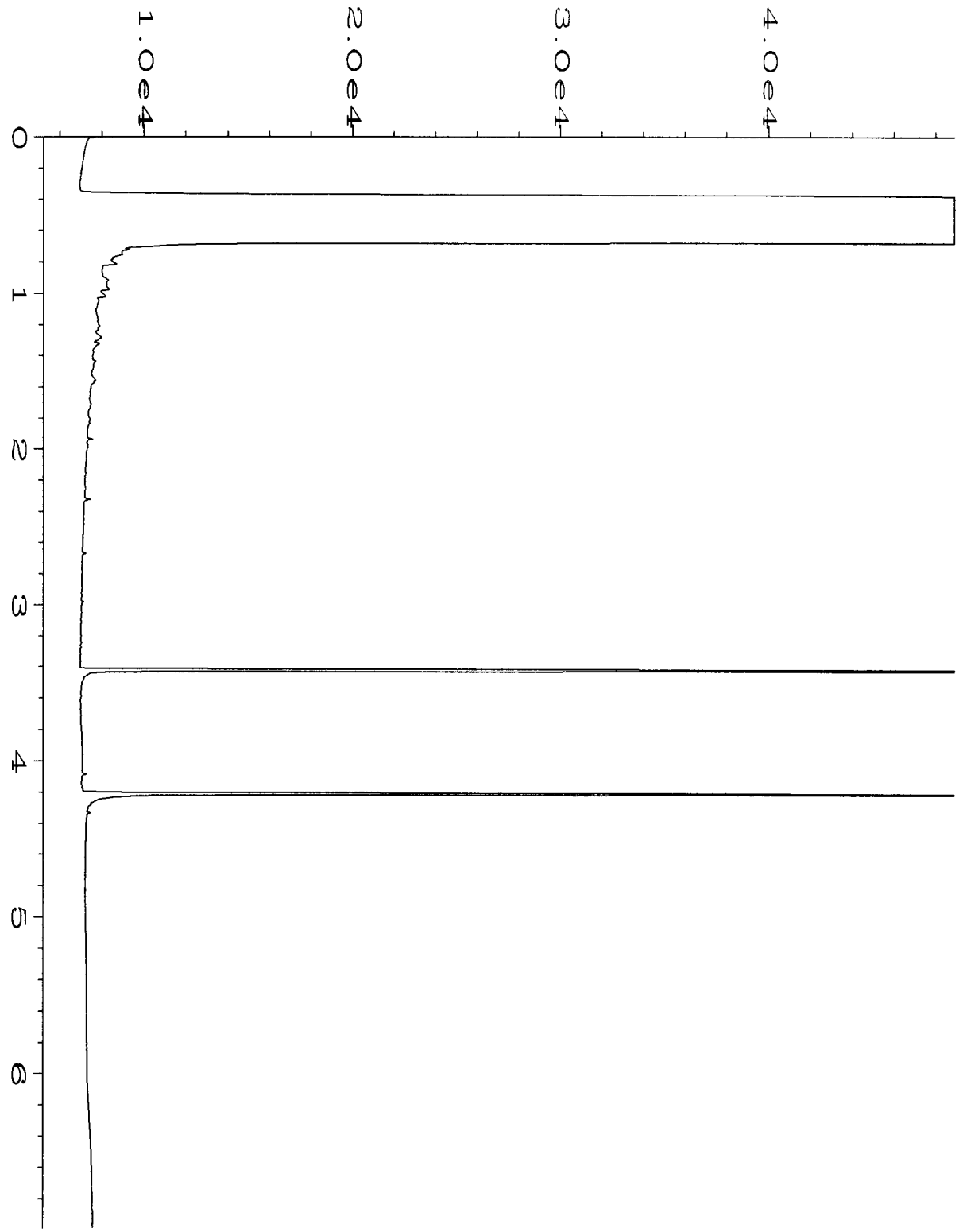
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.

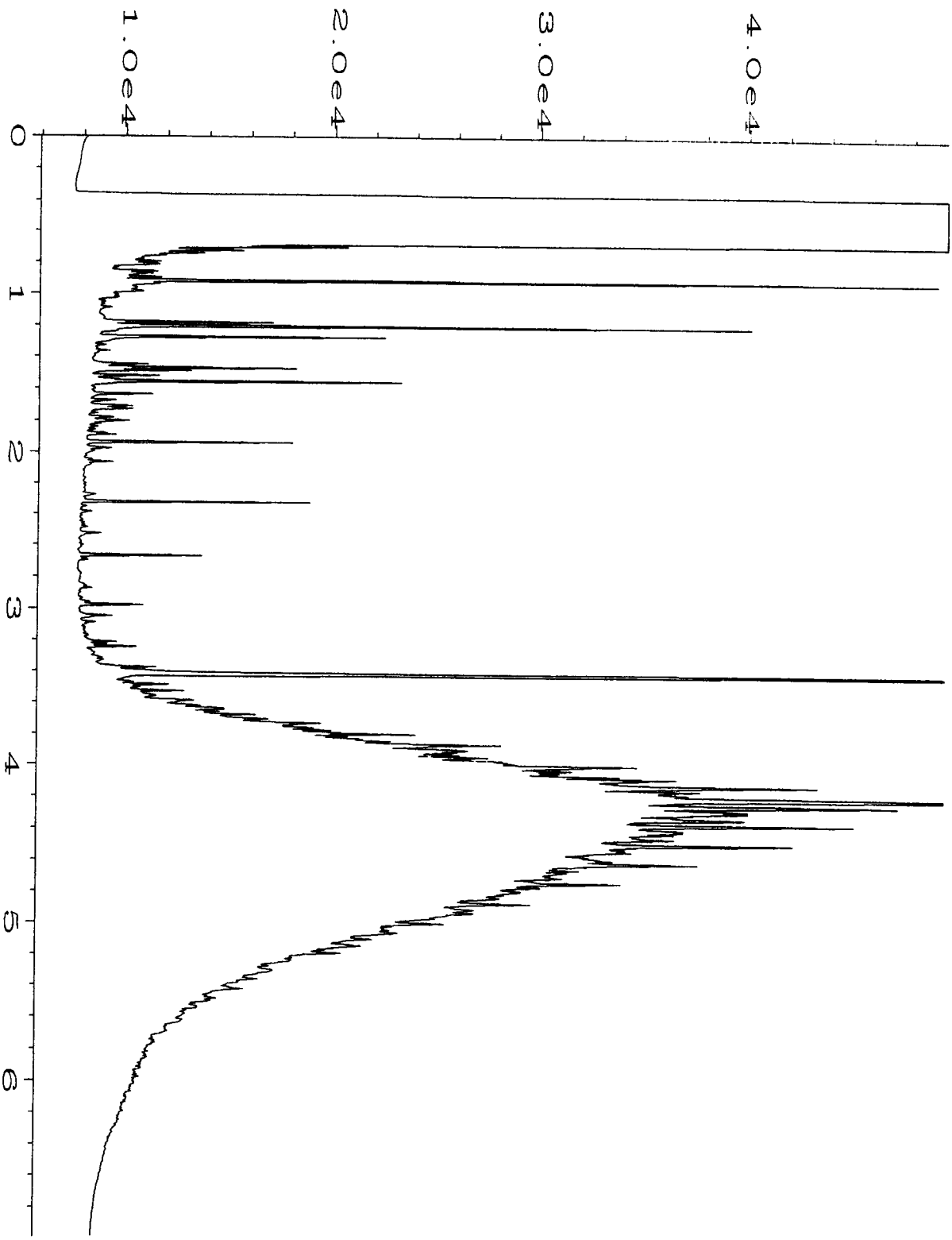


Data File Name	: C:\HPCHEM\6\DATA\04-08-15\013F0501.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC #6	Vial Number	: 13
Sample Name	: 504135-05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 08 Apr 15 11:55 AM	Instrument Method:	DX.MTH
Report Created on:	08 Apr 15 12:36 PM	Analysis Method	: END.MTH



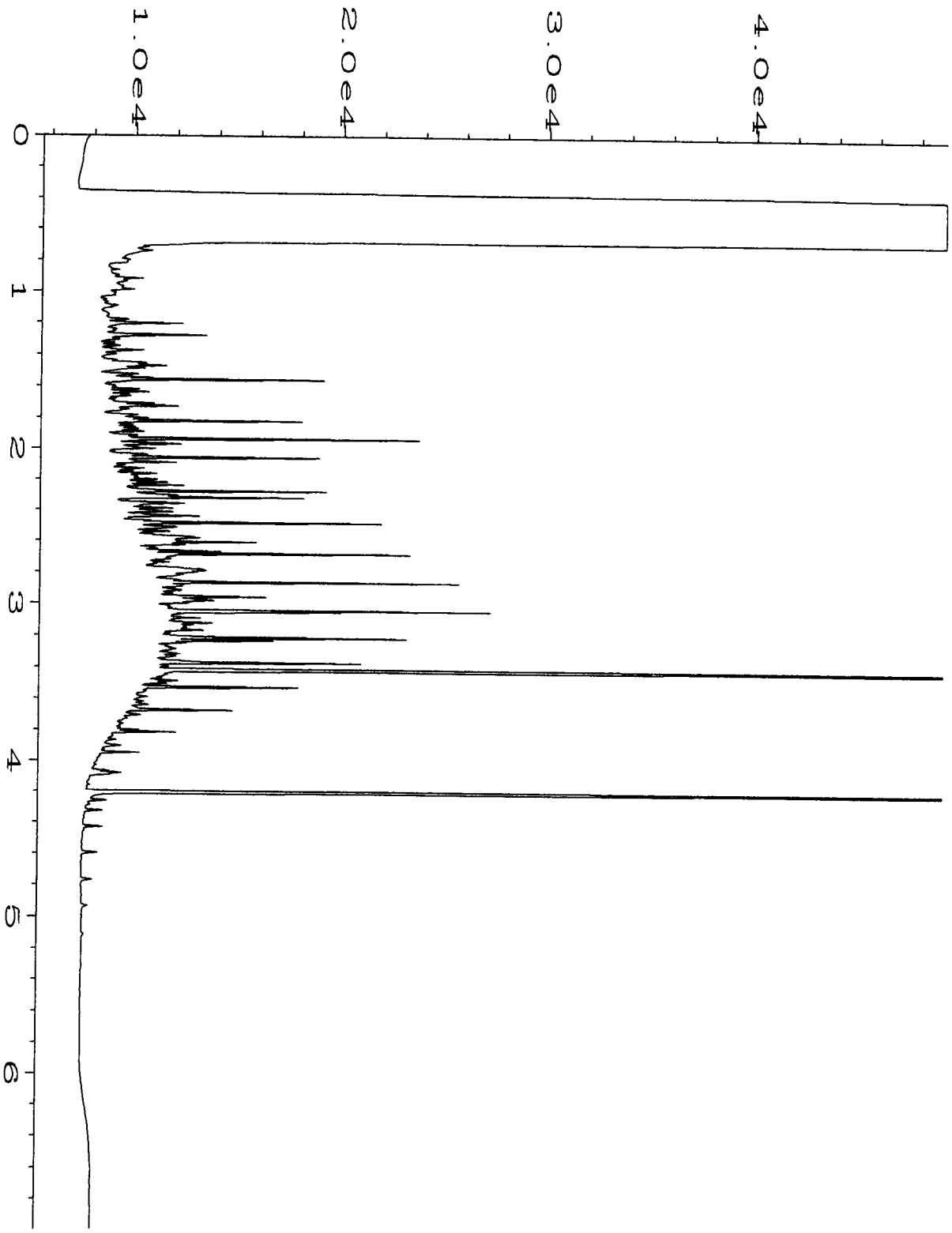
Data File Name : C:\HPCHEM\6\DATA\04-08-15\012F0501.D
Operator : mwdl
Instrument : GC #6
Sample Name : 05-727 mb
Run Time Bar Code:
Acquired on : 08 Apr 15 11:46 AM
Report Created on: 08 Apr 15 12:36 PM

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : END.MTH



Data File Name : C:\HPCHEM\6\DATA\04-09-15\096F0501.D
Operator : mwdl
Instrument : GC #6
Sample Name : HCIDs G/M 39-144
Run Time Bar Code:
Acquired on : 09 Apr 15 02:07 PM
Report Created on: 13 Apr 15 10:25 AM

Page Number : 1
Vial Number : 96
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DX.MTH



Data File Name : C:\HPCHEM\6\DATA\04-09-15\097F0501.D
Operator : mwdl
Instrument : GC #6
Sample Name : HCIDs Dx 39-46
Run Time Bar Code:
Acquired on : 09 Apr 15 02:18 PM
Report Created on: 13 Apr 15 10:25 AM

Page Number : 1
Vial Number : 97
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DX.MTH

504135

SAMPLE CHAIN OF CUSTODY

ME 04/08/15 VS2/C03

Page # 1 of 1

Send Report To Justin Clary / Yen-Vy Van

Company MFA

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. 0818 02.01 PO#

Tiger Oil Nob Hill

REMARKS

ONLY Rush Sample Well-01-S

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH ~~SAME DAY~~
- 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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	NWTPH-HCID	HVOC 8260B					Notes
BH-18-S-14.0	01E	4/7/15	0900	S	5		X	X										STANDARD TAT
BH-19-S-14.0	02	"	1100	"	"		"	"										STANDARD TAT
BH-20-S-14.0	03	"	11:45	"	"		"	"										STANDARD TAT
BH-21-S-14.0	04	"	13:15	"	"		"	"										STANDARD TAT
WELL-01-S	05H	"	1420	"	8			X				X	X					SAME DAY TAT

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:		Lindsay Crosby	MFA	4/7/15	1500
Received by:		Nhan Phan	FEBT	4/8/15	1030
Relinquished by:					
Received by:			Samples received at 3 °C		

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

April 16, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 10, 2015 from the Tiger Oil 0818-02-11, F&BI 504184 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0416R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 10, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818-02-11, F&BI 504184 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504184-01	BH-25-S-14.0

All quality control requirements were acceptable.

Date of Report: 04/16/15
Date Received: 04/10/15
Project: Tiger Oil 0818-02-11, F&BI 504184
Date Extracted: 04/10/15
Date Analyzed: 04/10/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
BH-25-S-14.0 504184-01 1/50	1.6	16	13	91	960	96
Method Blank 05-0698 MB	<0.02	<0.02	<0.02	<0.06	<2	92

Date of Report: 04/16/15
Date Received: 04/10/15
Project: Tiger Oil 0818-02-11, F&BI 504184

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: 504171-01 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	84	66-121
Toluene	mg/kg (ppm)	0.5	87	72-128
Ethylbenzene	mg/kg (ppm)	0.5	88	69-132
Xylenes	mg/kg (ppm)	1.5	89	69-131
Gasoline	mg/kg (ppm)	20	105	61-153

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.

504184

SAMPLE CHAIN OF CUSTODY

MT 04-10-15

VS1/C01

Send Report To: Justin Clary / Yen-Vy Van
Company: Maul Foster & Alongi
Address: 400 East Mill Plain Blvd.
City, State, ZIP: Vancouver, WA 98660
Phone #: _____ Fax #: _____

SAMPLERS (signature): Lindsey Crosby
PROJECT NAME/NO.: Tiger Oil 0518.02.11
PO#:
REMARKS:

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
BH-25-S 14.0	01 A-E	4/9/15	0830	S	5		X	X										
																		at 4 °C

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Lindsey Crosby	MFA	4/9/15	1400
Received by:		Jon Strumsky	FBT	4/10/15	12:00
Relinquished by:					
Received by:					

FORMS\COC\COC.DOC

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

March 19, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Blvd
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on March 18, 2015 from the Tiger Oil, F&BI 503341 project. There are 23 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
c: Yen-Vy Van, Lindsey Crosby
MFA0319R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 18, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Maul Foster Alongi Tiger Oil, F&BI 503341 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
503341 -01	SP-1-S1
503341 -02	SP-1-S2
503341 -03	SP-1-S3
503341 -04	SP-1-S4
503341 -05	SP-1-S5
503341 -06	SP-1-S6
503341 -07	SP-1-S7

All quality control requirements were acceptable.

Date of Report: 03/19/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503341
Date Extracted: 03/18/15
Date Analyzed: 03/18/15 and 03/19/15

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

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
SP-1-S1 503341-01	<2	96
SP-1-S2 503341-02	<2	98
SP-1-S3 503341-03	<2	95
SP-1-S4 503341-04	<2	94
SP-1-S5 503341-05	<2	100
SP-1-S6 503341-06	4.2	101
SP-1-S7 503341-07	<2	99
Method Blank 05-0557 MB	<2	104

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-1-S1	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-01
Date Analyzed:	03/18/15	Data File:	031833.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	101	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-1-S2	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-02
Date Analyzed:	03/18/15	Data File:	031834.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	97	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-1-S3	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-03
Date Analyzed:	03/18/15	Data File:	031835.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-1-S4	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-04
Date Analyzed:	03/18/15	Data File:	031836.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-1-S5	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-05
Date Analyzed:	03/18/15	Data File:	031837.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-1-S6	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-06
Date Analyzed:	03/18/15	Data File:	031838.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	94	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP-1-S7	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-07
Date Analyzed:	03/18/15	Data File:	031839.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	103	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	05-0544 mb
Date Analyzed:	03/18/15	Data File:	031826.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	102	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.02	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-1-S1	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-01
Date Analyzed:	03/19/15	Data File:	503341-01.011
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	100	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-1-S2	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-02
Date Analyzed:	03/19/15	Data File:	503341-02.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	102	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-1-S3	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-03
Date Analyzed:	03/19/15	Data File:	503341-03.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	105	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-1-S4	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-04
Date Analyzed:	03/19/15	Data File:	503341-04.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	103	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-1-S5	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-05
Date Analyzed:	03/19/15	Data File:	503341-05.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	102	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-1-S6	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-06
Date Analyzed:	03/19/15	Data File:	503341-06.018
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	104	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	SP-1-S7	Client:	Maul Foster Alongi
Date Received:	03/18/15	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	503341-07
Date Analyzed:	03/19/15	Data File:	503341-07.020
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	103	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Analysis for TCLP Metals By EPA Method 200.8 and 40 CFR PART 261

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	Tiger Oil, F&BI 503341
Date Extracted:	03/18/15	Lab ID:	I5-164 mb
Date Analyzed:	03/19/15	Data File:	I5-164 mb.009
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	98	60	125

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

Date of Report: 03/19/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503341

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 503283-21 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	95	71-131

Date of Report: 03/19/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503341

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

Laboratory Code: 503341-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	29	27	10-142	7
Chloromethane	mg/kg (ppm)	2.5	<0.5	65	66	10-126	2
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	65	67	10-138	3
Bromomethane	mg/kg (ppm)	2.5	<0.5	63	64	10-163	2
Chloroethane	mg/kg (ppm)	2.5	<0.5	77	78	10-176	1
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	63	64	10-176	2
Acetone	mg/kg (ppm)	12.5	<0.5	88	91	10-163	3
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	80	84	10-160	5
Methylene chloride	mg/kg (ppm)	2.5	<0.5	74	79	10-156	7
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	89	90	21-145	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	83	83	14-137	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	86	87	19-140	1
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	78	79	10-158	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	89	90	25-135	1
Chloroform	mg/kg (ppm)	2.5	<0.05	88	89	21-145	1
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	97	102	19-147	5
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	87	87	12-160	0
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	81	82	10-156	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	88	90	17-140	2
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	83	82	9-164	1
Benzene	mg/kg (ppm)	2.5	<0.03	90	91	29-129	1
Trichloroethene	mg/kg (ppm)	2.5	<0.02	94	94	21-139	0
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	94	93	30-135	1
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	90	89	23-155	1
Dibromomethane	mg/kg (ppm)	2.5	<0.05	90	89	23-145	1
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	101	103	24-155	2
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	93	93	28-144	0
Toluene	mg/kg (ppm)	2.5	<0.05	90	92	35-130	2
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	88	87	26-149	1
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	91	91	10-205	0
2-Hexanone	mg/kg (ppm)	12.5	<0.5	91	93	15-166	2
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	94	94	31-137	0
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	92	92	20-133	0
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	88	88	28-150	0
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	92	93	28-142	1
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	93	93	32-129	0
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	91	92	32-137	1
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	91	91	31-143	0
m,p-Xylene	mg/kg (ppm)	5	<0.1	91	92	34-136	1
o-Xylene	mg/kg (ppm)	2.5	<0.05	91	92	33-134	1
Styrene	mg/kg (ppm)	2.5	<0.05	93	94	35-137	1
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	90	90	31-142	0
Bromoform	mg/kg (ppm)	2.5	<0.05	82	81	21-156	1
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	90	89	23-146	1
Bromobenzene	mg/kg (ppm)	2.5	<0.05	94	93	34-130	1
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	90	90	18-149	0
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	89	88	28-140	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	88	89	25-144	1
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	86	86	31-134	0
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	86	86	31-136	0
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	91	92	30-137	1
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	88	88	10-182	0
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	91	90	23-145	1
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	90	89	21-149	1
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	91	90	30-131	1
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	89	90	29-129	1
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	92	92	31-132	0
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	72	75	11-161	4
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	89	89	22-142	0
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	89	90	10-142	1
Naphthalene	mg/kg (ppm)	2.5	<0.05	88	90	14-157	2
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	91	92	20-144	1

Date of Report: 03/19/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503341

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	61	10-146
Chloromethane	mg/kg (ppm)	2.5	89	27-133
Vinyl chloride	mg/kg (ppm)	2.5	92	22-139
Bromomethane	mg/kg (ppm)	2.5	85	38-114
Chloroethane	mg/kg (ppm)	2.5	102	10-163
Trichlorofluoromethane	mg/kg (ppm)	2.5	89	10-196
Acetone	mg/kg (ppm)	12.5	102	52-141
1,1-Dichloroethene	mg/kg (ppm)	2.5	104	47-128
Methylene chloride	mg/kg (ppm)	2.5	92	42-132
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	99	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	102	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	101	68-115
2,2-Dichloropropane	mg/kg (ppm)	2.5	88	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	105	72-113
Chloroform	mg/kg (ppm)	2.5	101	66-120
2-Butanone (MEK)	mg/kg (ppm)	12.5	112	57-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	97	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	95	62-131
1,1-Dichloropropene	mg/kg (ppm)	2.5	106	69-128
Carbon tetrachloride	mg/kg (ppm)	2.5	97	60-139
Benzene	mg/kg (ppm)	2.5	104	68-114
Trichloroethene	mg/kg (ppm)	2.5	108	64-117
1,2-Dichloropropane	mg/kg (ppm)	2.5	106	72-127
Bromodichloromethane	mg/kg (ppm)	2.5	101	72-130
Dibromomethane	mg/kg (ppm)	2.5	104	70-120
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	113	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	106	75-136
Toluene	mg/kg (ppm)	2.5	104	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	100	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	103	75-113
2-Hexanone	mg/kg (ppm)	12.5	102	33-152
1,3-Dichloropropane	mg/kg (ppm)	2.5	108	72-130
Tetrachloroethene	mg/kg (ppm)	2.5	106	72-114
Dibromochloromethane	mg/kg (ppm)	2.5	101	74-125
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	104	74-132
Chlorobenzene	mg/kg (ppm)	2.5	105	76-111
Ethylbenzene	mg/kg (ppm)	2.5	103	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	102	69-135
m,p-Xylene	mg/kg (ppm)	5	103	78-122
o-Xylene	mg/kg (ppm)	2.5	103	77-124
Styrene	mg/kg (ppm)	2.5	105	74-126
Isopropylbenzene	mg/kg (ppm)	2.5	101	76-127
Bromoform	mg/kg (ppm)	2.5	93	56-132
n-Propylbenzene	mg/kg (ppm)	2.5	103	74-124
Bromobenzene	mg/kg (ppm)	2.5	108	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	102	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	100	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	101	61-137
2-Chlorotoluene	mg/kg (ppm)	2.5	100	74-121
4-Chlorotoluene	mg/kg (ppm)	2.5	99	75-122
tert-Butylbenzene	mg/kg (ppm)	2.5	103	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	101	76-125
sec-Butylbenzene	mg/kg (ppm)	2.5	102	71-130
p-Isopropyltoluene	mg/kg (ppm)	2.5	100	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	104	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	103	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	105	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	88	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	103	64-135
Hexachlorobutadiene	mg/kg (ppm)	2.5	99	50-153
Naphthalene	mg/kg (ppm)	2.5	103	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	105	63-138

Date of Report: 03/19/15
Date Received: 03/18/15
Project: Tiger Oil, F&BI 503341

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TCLP METALS USING EPA METHOD 200.8 AND 40 CFR PART 261

Laboratory Code: 503341-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	<1	97	96	50-150	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	96	70-130

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.

503341

SAMPLE CHAIN OF CUSTODY

ME 03-18-15 VS1/BT2

Send Report To Justin Clary
Company MFA
Address 400 East Mill Plain Blvd
City, State, ZIP Vancouver, WA 98660
Phone # 360 694 2691 Fax #

SAMPLERS (signature)
PROJECT NAME/NO. Tilex Oil
PO#
REMARKS

Page # 1 of 1

TURNAROUND TIME
☐ Standard (2 Weeks)
☒ RUSH 24-Hr.
Rush charges authorized by LSC

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	Tcup Pb 1311					Notes
SP-1-S-1	01 A-E	3/17/15	1330	S	5		X		X			X					
SP-1-S-2	02		1345														
SP-1-S-3	03		1415														
SP-1-S-4	04		1430														
SP-1-S-5	05		1440														
SP-1-S-6	06		1445														
SP-1-S-7	07		1450														

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Lindsey Crosby	MFA	3/17/15	1515
Received by:	Nhan Phan	FEBI	3/18/15	1500
Relinquished by:				
Received by:				

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

FORMS\COC\COC.DOC

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

April 21, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 16, 2015 from the Tiger Oil 0818-02-01, F&BI 504291 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0421R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 16, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818-02-01, F&BI 504291 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504291 -01	BH-30-S-14.0
504291 -02	BH-30-S-10.0

All quality control requirements were acceptable.

Date of Report: 04/21/15
Date Received: 04/16/15
Project: Tiger Oil 0818-02-01, F&BI 504291
Date Extracted: 04/16/15
Date Analyzed: 04/16/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
BH-30-S-14.0 504291-01	<0.02	<0.02	<0.02	<0.06	<2	87
BH-30-S-10.0 504291-02	<0.02	<0.02	<0.02	<0.06	<2	87
Method Blank 05-0754 MB	<0.02	<0.02	<0.02	<0.06	<2	88

Date of Report: 04/21/15
Date Received: 04/16/15
Project: Tiger Oil 0818-02-01, F&BI 504291

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: 504291-01 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	80	69-120
Toluene	mg/kg (ppm)	0.5	90	70-117
Ethylbenzene	mg/kg (ppm)	0.5	89	65-123
Xylenes	mg/kg (ppm)	1.5	87	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

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.

504291

SAMPLE CHAIN OF CUSTODY

ME 04-16-15 C01 / V8)

Send Report To JUSTIN CLEARY / VEN-VIVIAN

Company MFA

Address

City, State, ZIP

Phone # Fax #

SAMPLERS *(signature)*

PROJECT NAME/NO. PO#

TIGER OIL 0515 02-01

REMARKS

Page # of

TURNAROUND TIME
- [x] 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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS						Notes
BH-30-S-14.0	01A-E	4/15/15	1000	S	5		X	X									
BH-30-S-10.0	02T	4/15/15	1005	S	5		X	X									
																	Samples received at 2 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Lindsey Cleary	MFA	4/15/15	1450
Received by:	Khan Phan	FEBI	4/16/15	1205
Relinquished by:				
Received by:				

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Arina Podnozova, B.S.
Eric Young, B.S.

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fbi@isomedia.com
www.friedmanandbruya.com

April 21, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 15, 2015 from the Tiger Oil 0818.02.01, F&BI 504268 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0421R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 15, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818.02.01, F&BI 504268 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504268 -01	BH-26-S-14.0
504268 -02	BH-26-S-8.0
504268 -03	BH-27-S-14.0
504268 -04	BH-28-S-14.0
504268 -05	BH-29-S-10.0
504268 -06	BH-29-S-14.0

All quality control requirements were acceptable.

Date of Report: 04/21/15
Date Received: 04/15/15
Project: Tiger Oil 0818.02.01, F&BI 504268
Date Extracted: 04/15/15
Date Analyzed: 04/15/15 and 04/16/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
BH-26-S-14.0 504268-01 1/5	<0.02	0.44	2.8	17	220	107
BH-26-S-8.0 504268-02	<0.02	<0.02	0.022	0.13	3.9	99
BH-27-S-14.0 504268-03 1/5	0.043	0.45	4.9	23	420	109
BH-28-S-14.0 504268-04	<0.02	0.042	<0.02	<0.06	<2	99
BH-29-S-10.0 504268-05	<0.02	<0.02	<0.02	<0.06	<2	98
BH-29-S-14.0 504268-06	<0.02	<0.02	<0.02	<0.06	<2	101
Method Blank 05-0752 MB	<0.02	<0.02	<0.02	<0.06	<2	86

Date of Report: 04/21/15
Date Received: 04/15/15
Project: Tiger Oil 0818.02.01, F&BI 504268

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

Laboratory Code: 504262-06 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	86	69-120
Toluene	mg/kg (ppm)	0.5	86	70-117
Ethylbenzene	mg/kg (ppm)	0.5	86	65-123
Xylenes	mg/kg (ppm)	1.5	85	66-120
Gasoline	mg/kg (ppm)	20	105	71-131

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.

504268

SAMPLE CHAIN OF CUSTODY

ME 04/15/15 VSI/CD2

Send Report To JUSTIN CLARK / VEN-VI VAN

Company MFA

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. PO#

TIGER OIL 0818.02.01

REMARKS

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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
BH-26-S-14.0	01 A-E	4/14/15	0815	S	5		X	X										
BH-26-S-8.0	02		0820															
BH-27-S-14.0	03		0900															
BH-28-S-14.0	04		1300															
BH-29-S-10.0	05		1400															
BH-29-S-14.0	06		1410															

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	LINDSEY CROSBY	MFA	4/14/15	1500
Received by:	Nhan Phan	FEB_T	4/15/14	1420
Relinquished by:				
Received by:		Samples received at 2 °C		

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

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

April 24, 2015

Justin Clary, Project Manager
Maul Foster Alongi
400 East Mill Plain Boulevard
Vancouver, WA 98660

Dear Mr. Clary:

Included are the results from the testing of material submitted on April 21, 2015 from the Tiger Oil 0818 02.01, F&BI 504374 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
c: Yen-Vy Van, Lindsey Crosby, Jessica Cawley
MFA0424R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 21, 2015 by Friedman & Bruya, Inc. from the Maul Foster Alongi Tiger Oil 0818 02.01 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Maul Foster Alongi
504374 -01	BH-35-S-14.0
504374 -02	BH-35-S-9.0
504374 -03	BH-36-S-14.0

All quality control requirements were acceptable.

Date of Report: 04/24/15
Date Received: 04/21/15
Project: Tiger Oil 0818 02.01, F&BI 504374
Date Extracted: 04/21/15
Date Analyzed: 04/21/15 and 04/22/15

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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
BH-35-S-14.0 504374-01	0.035	0.066	0.53	1.2	25	106
BH-35-S-9.0 504374-02 1/5	0.02 j	1.2	5.5	48	960	129
BH-36-S-14.0 504374-03 1/5	0.43	1.5	15	110	930	124
Method Blank 05-0813 MB	<0.02	<0.02	<0.02	<0.06	<2	73

Date of Report: 04/24/15
Date Received: 04/21/15
Project: Tiger Oil 0818 02.01, F&BI 504374

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

Laboratory Code: 504356-01 (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)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	87	69-120
Toluene	mg/kg (ppm)	0.5	87	70-117
Ethylbenzene	mg/kg (ppm)	0.5	86	65-123
Xylenes	mg/kg (ppm)	1.5	83	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

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.

504374

SAMPLE CHAIN OF CUSTODY

ME 04/21/15 VSI

Page # 1 of 1

Send Report To Justin Curry / Yen Vi Vo

Company MFA

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. PO#

Tiger Oil 0818 02.01

REMARKS

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: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS						Notes
BH-35-S-14.0	01 A-E	4/20/15	11:50	S	5		X	X									
BH-35-S-9.0	02	"	12:00	"	"		"	"									
BH-36-S-14.0	03	"	13:00	"	"		"	"									
																	Samples received at 2 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Lindsay Curry	MFA	4/20/15	1500
Received by:	Nhan Phan	FEBS	4/21/15	1250
Relinquished by:				
Received by:				

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

This report reviews the analytical results for soil samples collected at the former Tiger Oil site at West Nob Hill Boulevard and 24th Avenue in Yakima, Washington. The samples were collected in March and April 2015.

Friedman and Bruya, Inc. (FBI) in Seattle, Washington, performed the analyses. FBI report numbers 503341, 503342, 503366, 503385, 503386, 503448, 503580, 503581, 504024, 504060, 504135, 504136, 504167, 504184, 504267, 504268, 504291 504314, 504374, and 504405 were reviewed. Not all analyses were performed on all samples submitted to the laboratory. The analyses reviewed listed below.

Analysis	Reference
BTEX	USEPA 8021B
Diesel and Heavy Oil	NWTPH-Dx
Gasoline	NWTPH-Gx
Hydrocarbon Identification	NWTPH-HCID
TCLP and Total Metals	USEPA 1311/ 200.8
Volatile Organic Compounds	USEPA 8260C

BTEX = benzene, toluene, ethylbenzene, xylenes.
HCID = Hydrocarbon Identification.
NWTPH = Northwest Total Petroleum Hydrocarbons.
TCLP = toxicity characteristic leaching procedure.
USEPA = U.S. Environmental Protection Agency.

DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA; 2014a,b) and appropriate laboratory and method-specific guidelines (FBI, 2014; USEPA, 1986).

Data validation procedures were modified, as appropriate, to accommodate quality-control requirements for methods not specifically addressed by the functional guidelines (e.g., NWTPH-Dx).

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

Preservation and Sample Storage

In report 504405, the laboratory indicated that samples arrived at 0°C. This exceedance is considered minor; thus, no results were qualified. All remaining samples were preserved and stored appropriately.

BLANKS

Method Blanks

Laboratory method blank analyses were performed at the required frequencies. All laboratory method blanks results were non-detect for target analytes.

Trip Blanks

No trip blanks were collected for any reports.

Continuing Calibration Blanks

Continuing calibration blank results were not reported for this sampling event.

Equipment Rinsate Blanks

Equipment rinsate blanks were not required for this sampling event.

SURROGATE RECOVERY RESULTS

The samples were spiked with surrogate compounds to evaluate laboratory performance on individual samples. The laboratory appropriately documented and qualified surrogate outliers. For samples with surrogate outliers, associated batch quality assurance/quality control were within acceptance limits. The reviewer took no action based on surrogate percent recoveries that were outside acceptance limits because of dilutions necessary to quantify high concentrations of target analytes present in the samples.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Matrix spike/matrix spike duplicate (MS/MSD) results are used to evaluate laboratory precision and accuracy. All MS/MSD samples were extracted and analyzed at the required frequency. MS/MSD results were not always reported for NWTPH analytes. MS/MSD results are not required by NWTPH methods. All reported MS/MSD results were within acceptance limits for percent recovery and relative percent difference (RPD).

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. Laboratory duplicate results were reported for some analytes. All reported results were with acceptable limits for RPD.

LABORATORY CONTROL SAMPLE RESULTS

A laboratory control sample (LCS) is spiked with target analytes to provide information on laboratory precision and accuracy. LCS samples were extracted and analyzed at the required frequency.

In report 503385, the USEPA Method 8260C LCS result for cis-1,2-dichloroethene exceeded the upper acceptance criteria. Sample results were all non-detect for cis-1,2-dichloroethene; thus no results were qualified.

All remaining recoveries were within acceptance limits for percent recovery.

FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. A field duplicate associated with report 504314 was submitted and analyzed (BH-34-S-14.0/BH-34-S-DUP). An additional field duplicate was submitted with report 503581 and analyzed (BH-10-S-14.0/BH-10-DUP). A third field duplicate was submitted and analyzed with report 504136 (SP-05-S-01/SP-05-S-DUP). MFA uses acceptance criteria of 100 percent RPD for results that are less than five times the method reporting limit (MRL), or 50 percent RPD for results that are greater than five times the MRL. Non-detect data are not usually used in the evaluation of field duplicate results; however, in report 503581 the USEPA 8021B ethylbenzene field duplicate result for BH-10-DUP was approximately 400 times the reporting limit; thus, the reviewer qualified the results as follows:

Report	Sample	Component	Original Result (mg/kg)	Field Duplicate Result (mg/kg)	RPD
503581	BH-10-S-14.0	Ethylbenzene	0.1 U	0.1 UJ	199%
503581	BH-10-DUP	Ethylbenzene	41	41 J	

J = estimated.
mg/kg = milligrams per kilogram.
U = not detected.

All remaining results were within acceptance limits for RPD.

REPORTING LIMITS

FBI used routine reporting limits for non-detect results, except when samples required dilutions because of high analyte concentration and/or matrix interferences.

DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies. In report 504405, the chain of custody (COC) does not have a "Relinquished by" signature. No update is necessary.

In report 503366, 8260 volumes were requested on the COC. In the lab report, only BTEX analytes were reported. The reviewer confirmed with the sampler that the correct analytes (BTEX only) were reported; no update is necessary.

No additional issues were found.

REFERENCES

FBI. 2014. Quality assurance manual. Friedman and Bruya, Inc., Seattle, Washington.

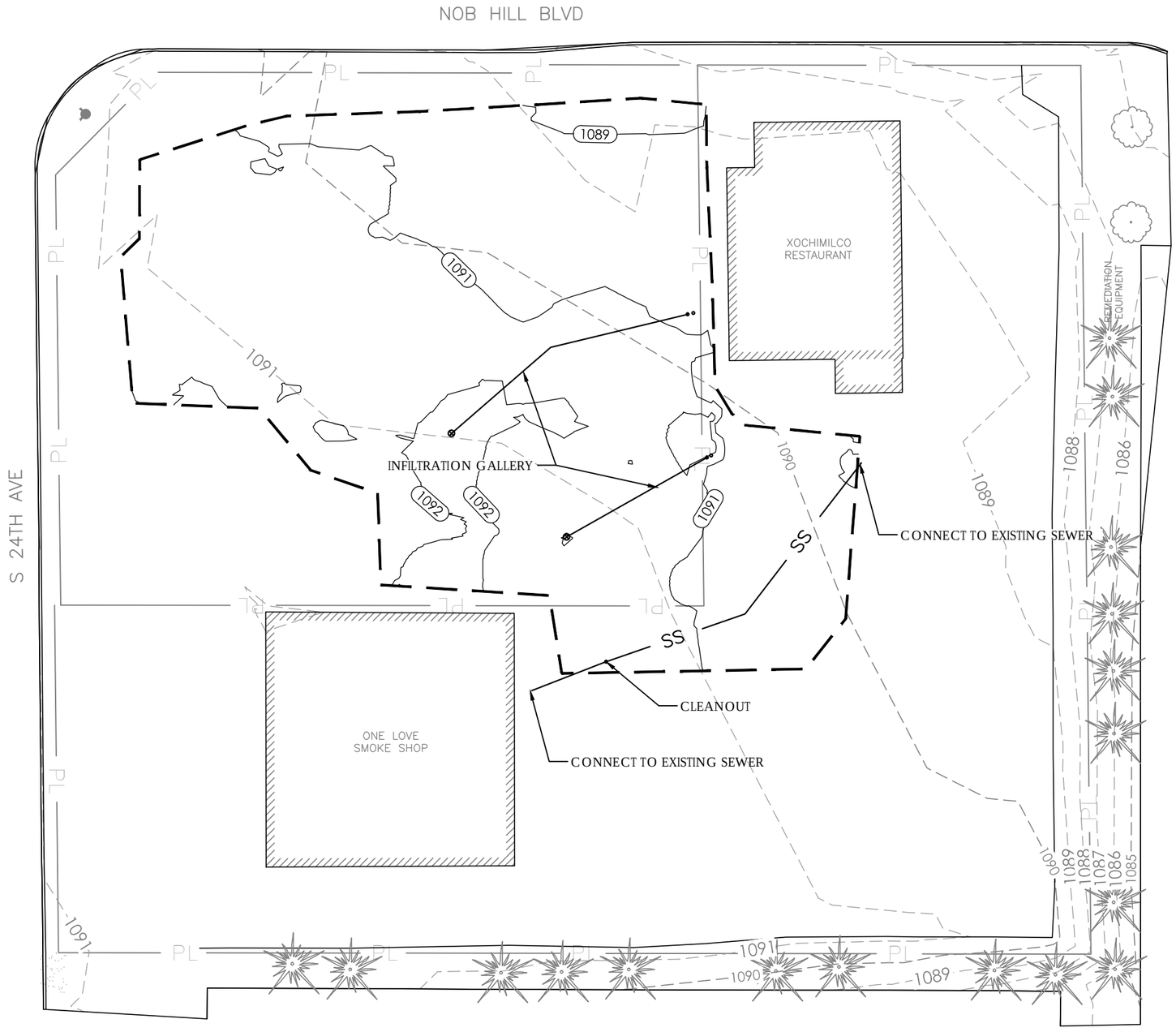
USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (revision 6, February 2007).

USEPA. 2014a. USEPA contract laboratory program, national functional guidelines for inorganic superfund data review. EPA 540/R-013/001. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. August.

USEPA. 2014b. USEPA contract laboratory program, national functional guidelines for Superfund organic methods data review. EPA 540/R-014/002. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. August.

APPENDIX F

AS-BUILT SURVEY



LEGEND

- PROPERTY BOUNDARY
- EXISTING CONTOUR
- ASBUILT CONTOUR
- EXCAVATION EXTENTS
- INFILTRATION GALLERY
- SANITARY SEWER LINE
- EXISTING BUILDING

0 30' 60'

NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

MFA JOB #:	0818.01.02
ISSUE DATE:	5/26/15
CHECKED:	J. CLARY
DRAWN:	L. CROSBY

MAUL FOSTER ALONGI
400 E Mill Plain Blvd., Suite 400
Vancouver, WA 98660
360.694.2691 (p) 360.906.1958 (f)
www.maulfoster.com

ASBUILT: INTERIM ACTION
FORMER TIGER OIL SITE

CITY OF YAKIMA
YAKIMA, WASHINGTON

JUSTIN LEE CLARY
STATE OF WASHINGTON
37246
REGISTERED
PROFESSIONAL ENGINEER

This digital seal certifies the signatory and document content.

06-17-2015

ASBUILT
C1.0

APPENDIX G

PRELIMINARY SOURCE EVALUATION AND CLEAN SOIL STATEMENT

ANDERSON
ROCK & DEMOLITION PITS

May 5, 2015

RE: Tiger Oil 24th & Nob Hill

To Whom It May Concern:

We here at Anderson Rock & Demolition Pits, believe our products to be free of any contaminants of any kind.

Thank you

Wendy McConnell

Wendy McConnell – Office Manager

Anderson Rock & Demolition Pits

41 Rocky Top Road • Yakima, WA 98908
Bus. 509-965-3621 • Fax 509-965-8656
E-mail: andersonrock1@live.com • www.andersonrock.com

Washington State Department of Transportation

Lynn Peterson
Secretary of Transportation

State Materials Laboratory
PO Box 47365
Olympia, WA 98504-7365
360-709-5400 / FAX: 360-709-5585
TTY: 1-800-833-6388
www.wsdot.wa.gov

December 4, 2013

Ron Anderson
Anderson Rock & Demolition Pits
41 Rocky Top Road
Yakima, WA 98908
(509) 965-3621

Re: Preliminary Source Evaluation, ASA2013125

Dear Mr. Anderson:

This letter is to inform you that preliminary testing for Mineral Aggregate applications has been completed on the sample taken from the site designated as QS-E-344, also known as Anderson Pit, in Yakima County, Washington. The sample tested passed the requirements for the Riprap, Quarry Spalls and Rock for Rock Wall applications as indicated in Section 9-13 of the Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction (2012).

The enclosed Aggregate Source Approval (ASA) Report lists specific approved uses for the aggregate from this site. The Aggregate Source Approval database is available on the Internet at: http://www.wsdot.wa.gov/biz/mats/asa/asaSearch.cfm

The reports and all backup data will remain on file at the WSDOT Materials Laboratory. If there are any questions concerning this matter, please contact Garrett Webster at (360) 709-5442.

Sincerely,

Rob Molohon
Materials Quality Assurance Engineer

RM: gsw
Enclosure

cc via e-mail: K. Williams – Construction Materials Engineer
B. Briggs – Assistant Construction Materials Engineer – Admin
M. Polodna – Structural Materials Engineer
P. Gonseth – South Central Region Materials Engineer
R. Anderson – Anderson Rock & Demolition Pits
(andersonrock1@live.com)

Washington State Department of Transportation

WSDOT MATERIALS LAB 12/04/2013

Aggregate Source Approval Report

Owner: Anderson Rock and Demolition Pits
Lessee:
Located in: SW1/4 NW1/4 Section 10 T13N R17E

Aggregate Source: QS-E-344
Known as: Anderson Pit
County: Yakima

Remarks:
Results for Riprap, Quarry Spalls and Rock for Rock Wall: Bulk Sp. G (SSD): 2.855, Bulk Sp G: 2.817, App Sp G: 2.927, Abs(%): 1.33, LA: 16, Deg: 75. Expires 12/04/2014 (gsw)

Pit Run Materials:
At the discretion of the Project Engineer, preliminary samples for Gradation and Sand Equivalent tests may be performed to determine if the material does in fact meet the specification for the intended use:

Backfill for Rock Wall	Backfill for Sand Drains	Bedding Material for Rigid Pipe
Bedding Material for Thermoplastic Pipe	Blending Sand	Foundation Material for Classes A, B or C
Gravel Backfill for Drains and Drywells	Gravel Backfill for Foundation Class B	Gravel Backfill for Pipe Zone Bedding
Gravel Backfill for Walls	Gravel Borrow	Sand Drainage Blanket
Select or Common Borrow		

No Preliminary Tests are required to be performed by the State Materials Lab

Gravel Base: Test Date: Expiration Date:
Drainage: R Value: Swell Pressure:

Contact the Regional Materials Office to request PRELIMINARY SAMPLES be acquired. Evaluation and approval of this site as a source of GRAVEL BASE is required prior to use.

Mineral Agg. and Surfacing: Test Date: 04/18/2011 Expiration Date: 04/18/2016
Absorption: Apparent Sp. G.: Bulk Sp. G. (SSD): 2.882 Bulk Sp. G.:
Deg: 76 LA: 17

Currently approved as a source of aggregate for:

ATB	Ballast	BST Crushed Cover Stone
BST Crushed Screenings	Crushed Surfacing Base Course	Crushed Surfacing Key Stone
Crushed Surfacing Top Course	Gravel Backfill for Foundation Class A	HMA Other Courses
HMA Wearing Course	Maintenance Rock	Permeable Ballast

Acceptance tests need to be performed as necessary.

Portland Cement Concrete Aggregates: Test Date: Expiration Date:

ASR - 14 Day :	ASR - One Year:	CCA Absorption:	CCA Sp.G:
FCA Absorption:	FCA Organics:	FCA Sp. G:	LA:
Mortar Strength:	Petrographic Analysis:		

Contact the Regional Materials Office to request PRELIMINARY SAMPLES be acquired. Evaluation and approval of this site as a source of AGGREGATES for PCC is required prior to use.

Riprap and Quarry Spalls: Test Date: Expiration Date:

Please see Remarks for Riprap and Quarry Spalls results.

Contact the Regional Materials Office to request PRELIMINARY SAMPLES be acquired. Evaluation and approval of this site as a source of RIP RAP AND QUARRY SPALLS is required prior to use.

Distribution: Physical Testing_____ Project Engineer_____ Region Operations_____ Region Materials_____

Aggregate Source Approval System

Washington State Department of Transportation

WSDOT MATERIALS LAB 12/22/2014

Aggregate Source Approval Report

Owner: Anderson Rock and Demolition Pits
Lessee:
Located in: SW1/4 NW1/4 Section 10 T13N R17E

Aggregate Source: QS-E-344
Known as: Anderson Pit
County: Yakima

Remarks:
Results for Riprap, Quarry Spalls and Rock for Rock Wall: Bulk Sp. G (SSD): 2.842 Bulk Sp G:2.800, App Sp G: 2.923, Abs(%): 1.50, LA: 16, Deg: 72. Expires 12/22/2015 (MEJ)

Pit Run Materials:
At the discretion of the Project Engineer, preliminary samples for Gradation and Sand Equivalent tests may be performed to determine if the material does in fact meet the specification for the intended use:

Backfill for Rock Wall	Backfill for Sand Drains	Bedding Material for Rigid Pipe
Bedding Material for Thermoplastic Pipe	Foundation Material for Classes A, B or C	Gravel Backfill for Drains and Drywells
Gravel Backfill for Foundation Class B	Gravel Backfill for Pipe Zone Bedding	Gravel Backfill for Walls
Gravel Borrow	Sand Drainage Blanket	Select or Common Borrow

No Preliminary Tests are required to be performed by the State Materials Lab

Gravel Base: Test Date: Expiration Date:
Drainage: R Value: Swell Pressure:

Contact the Regional Materials Office to request PRELIMINARY SAMPLES be acquired. Evaluation and approval of this site as a source of GRAVEL BASE is required prior to use.

Mineral Agg. and Surfacing: Test Date: 04/18/2011 Expiration Date: 04/18/2016
Absorption: Apparent Sp. G.: Bulk Sp. G. (SSD): 2.882 Bulk Sp. G.:
Deg: 76 LA: 17

Currently approved as a source of aggregate for:

ATB	Ballast	BST Crushed Cover Stone
BST Crushed Screenings	Crushed Surfacing Base Course	Crushed Surfacing Key Stone
Crushed Surfacing Top Course	Gravel Backfill for Foundation Class A	HMA Other Courses
HMA Wearing Course	Maintenance Rock	Permeable Ballast

Acceptance tests need to be performed as necessary.

Portland Cement Concrete Aggregates: Test Date: Expiration Date:

ASR - 14 Day :	ASR - One Year:	CCA Absorption:	CCA Sp.G:
FCA Absorption:	FCA Organics:	FCA Sp. G:	LA:
Mortar Strength:	Petrographic Analysis:		

Contact the Regional Materials Office to request PRELIMINARY SAMPLES be acquired. Evaluation and approval of this site as a source of AGGREGATES for PCC is required prior to use.

Riprap and Quarry Spalls: Test Date: Expiration Date:

Please see Remarks for Riprap and Quarry Spalls results.

Contact the Regional Materials Office to request PRELIMINARY SAMPLES be acquired. Evaluation and approval of this site as a source of RIP RAP AND QUARRY SPALLS is required prior to use.

Distribution: Physical Testing_____ Project Engineer_____ Region Operations_____ Region Materials_____

Aggregate Source Approval System

APPENDIX H

UNDERGROUND INJECTION CONTROL PROGRAM DOCUMENTATION

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

June 8, 2015

Mr. Brett Sheffield
City of Yakima
129 N. 2nd Street
Yakima, WA 98901

RE: Registration with the Underground Injection Control (UIC) Program, Former Tiger Oil Site, 2312 West Nob Hill Blvd., Yakima, WA

Dear Mr. Sheffield:

This letter is to acknowledge receipt of your registration form to register the above-mentioned site with the UIC program. The UIC wells are rule authorized and do not need a State Waste Discharge Permit to operate. The UIC site number is 32803.

The City of Yakima is working with Ecology's Toxic Cleanup Program under a Model Toxic Control Program (MTCA) Consent Decree, MTCA 02-2-00956, to remediate the contamination at the site. Remediation projects under a MTCA legal agreement have to meet the substantive requirements of other laws which groundwater protection is one. Meeting the substantive requirements will fulfill the groundwater protection requirement of the UIC Program.

Please refer to the UIC site number in all correspondence concerning this site. Also contact us if the property owner changes or the use of the well.

Please call me at (360) 407-6143 if you have any questions. Additional information can also be found at our website http://www.ecy.wa.gov/programs/wq/grndwtr/uic/index.html.

Sincerely,

Mary Shaleen-Hansen
UIC Coordinator
Water Quality Program

APPENDIX I

MONITORING WELL CONSTRUCTION LOGS

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0818.02.01	**YMW-1**	**1 of 1**

Project Name	**Tiger Oil - West Nob Hill Blvd.**	TOC Elevation (feet)	**1089.05**
Project Location	**2312 West Nob Hill Blvd., Yakima, Washington**	Surface Elevation (feet)	**1089.4**
Start/End Date	**5/26/15 to 5/26/15**	Northing	**456449.8**
Driller/Equipment	**Holt Drilling/Hollow Stem Auger**	Easting	**1630364.6**
Geologist/Engineer	**C. Wise**	Hole Depth	**20.0-feet**
Sample Method	**None**	Outer Hole Diam	**4-inch**

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1									0.0 to 0.3 feet: ASPHALT; black; dry. (FILL) 0.3 to 1.0 feet: GRAVEL (GW); gray; 10% fines; 30% sand, coarse, angular; 60% gravel, fine, angular; dry. (FILL)
2									1.0 to 13.0 feet: GRAVELLY SAND WITH SILT (SW-SM); reddish brown; 15% fines; 60% sand, fine to coarse, angular; 25% gravel, fine, angular; dry to moist. (FILL)
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									13.0 to 20.0 feet: SILTY SAND (SM); blue gray; 40% fines; 60% sand, very fine to fine, subangular to angular; soft; very strong hydrocarbon-like odor; moist.
14									
15									
16									
17									
18									
19									
20									

Total Depth = 20.0 feet below ground surface.
Well Completion Details =
2.0 inch well casing.
2.0 inch well cap.
0.01 inch slotted screen.
Well Permit No. BIQ055.

NOTES: *No samples collected.*

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Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0818.02.01	**YMW-2**	**1 of 1**

Project Name	**Tiger Oil - West Nob Hill Blvd.**	TOC Elevation (feet)	**1090.86**
Project Location	**2312 West Nob Hill Blvd., Yakima, Washington**	Surface Elevation (feet)	**1091.2**
Start/End Date	**5/26/15 to 5/26/15**	Northing	**456406.2**
Driller/Equipment	**Holt Drilling/Hollow Stem Auger**	Easting	**1630317.0**
Geologist/Engineer	**C. Wise**	Hole Depth	**20.0-feet**
Sample Method	**None**	Outer Hole Diam	**4-inch**

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1									0.0 to 0.3 feet: ASPHALT; black; dry. (FILL) 0.3 to 1.0 feet: GRAVEL (GW); gray; 10% fines; 30% sand, coarse, angular; 60% gravel, fine, angular; dry. (FILL)
2									1.0 to 13.5 feet: GRAVELLY SAND WITH SILT (SW-SM); reddish brown; 15% fines; 60% sand, fine to coarse, angular; 25% gravel, fine, angular; dry to moist. (FILL)
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									14.0 to 20.0 feet: SILTY SAND (SM); blue gray; 40% fines; 60% sand, very fine to fine, subangular to angular; soft; very strong hydrocarbon-like odor; moist.
15									
16									
17									
18									
19									
20									

Total Depth = 20.0 feet below ground surface.
Well Completion Details =
2.0 inch well casing.
2.0 inch well cap.
0.01 inch slotted screen.
Well Permit No. BIQ056.

NOTES: *No samples collected.*

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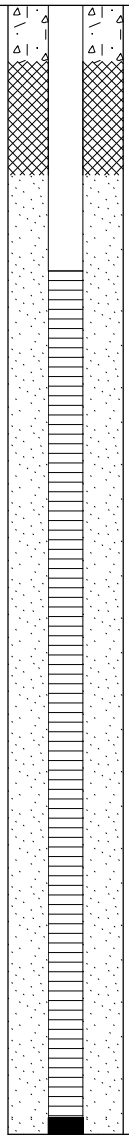
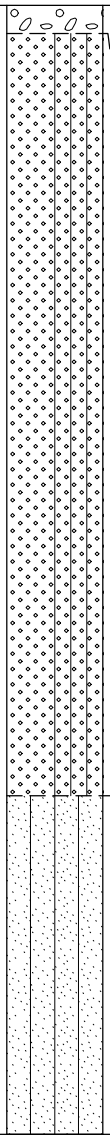
Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number	Well Number	Sheet
0818.02.01	**YMW-3**	**1 of 1**

Project Name	**Tiger Oil - West Nob Hill Blvd.**	TOC Elevation (feet)	**1089.53**
Project Location	**2312 West Nob Hill Blvd., Yakima, Washington**	Surface Elevation (feet)	**1090.2**
Start/End Date	**5/26/15 to 5/26/15**	Northing	**456487.7**
Driller/Equipment	**Holt Drilling/Hollow Stem Auger**	Easting	**1630317.4**
Geologist/Engineer	**C. Wise**	Hole Depth	**20.0-feet**
Sample Method	**None**	Outer Hole Diam	**4-inch**

Depth (feet, BGS)	Well Details	Sample Data: Interval	Percent Recovery	Collection Method	Number	Name (Type)	Blows/6"	Lithologic Column	Soil Description
1–20									0.0 to 0.5 feet: GRAVEL (GP); reddish gray; 100% gravel, angular, coarse; dry. (FILL) 0.5 to 14.0 feet: GRAVELLY SAND WITH SILT (SW-SM); reddish brown; 15% fines; 55% sand, fine to coarse, subangular to angular; 30% gravel, fine, subangular to angular; dry to moist. (FILL) 14.0 to 20.0 feet: SILTY SAND (SM); blue gray; 40% fines; 60% sand, very fine to fine, subangular to angular; soft; very strong hydrocarbon-like odor; moist.

Total Depth = 20.0 feet below ground surface.
Well Completion Details =
2.0 inch well casing.
2.0 inch well cap.
0.01 inch slotted screen.
Well Permit No. BIQ057.

NOTES: *No samples collected.*

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