FOCUSED FEASIBILITY STUDY ADDENDUM

Former Walker Chevrolet

Prepared for: David Shaw, Successor to Walker Chevrolet

Project No. 080190-004-14 • June 3, 2015 Final

Aspect CONSULTING

earth + water

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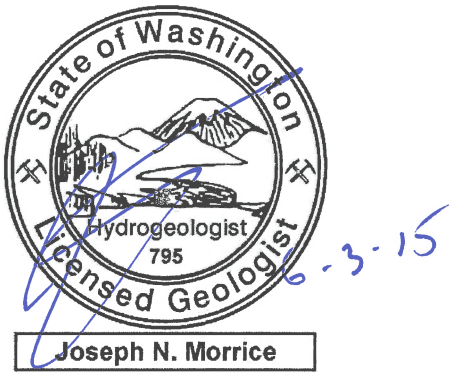

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Acronyms

Aspect	Aspect Consulting, LLC
BTEX	benzene, toluene, ethylbenzene, and xylenes
Bison	Bison Environmental Northwest, Inc.
Ecology	Washington Department of Ecology
FFS	Focused Feasibility Study
HCID	hydrocarbon identification
MCL	maximum contaminant level
µg/m^3	micrograms per cubic meter
mg/kg	milligrams per kilogram
µg/L	micrograms per liter
NFA	no further action
MTCA	Model Toxics Control Act
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	tetrachloroethylene
PCS	petroleum-contaminated soil
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
ROW	right-of-way
Site	Former Walker Chevrolet Site
Stemen	Stemen Environmental, Inc.
SVE	soil vapor extraction
TCE	trichloroethylene
TPH	total petroleum hydrocarbons
TPN	tax parcel number
UST	underground storage tank
VCP	Voluntary Cleanup Program
VOC	volatile organic compound

1 Introduction

The Former Walker Chevrolet (Site) is located at 633 Division Avenue in Tacoma, Washington and is enrolled in the Voluntary Cleanup Program (VCP) with the Washington State Department of Ecology (Ecology) as VCP No. SW1040. Aspect Consulting, LLC (Aspect) submitted a Focused Feasibility Study (FFS) (Aspect, 2014a) for the Site to Ecology for review on May 16, 2014, and Ecology provided an opinion on November 17, 2014. Aspect subsequently met with the Ecology site manager on December 18, 2014 to discuss Ecology's concerns and to develop a plan to identify the remaining investigation data gaps and to identify the path necessary for Ecology to provide property-specific no further action (NFA) determinations for the Site.

This Focused Feasibility Study (FFS) Addendum defines the Site boundary, describes the Site characterization data gaps identified by Ecology, and describes the investigation to address these data gaps. The additional characterization data provided in this FFS Addendum do not impact the development and evaluation of the cleanup action alternatives, the disproportionate cost analysis, and selection of the preferred cleanup alternative presented in the FFS (Aspect, 2014a). Section 4 reviews the preferred cleanup alternative, reevaluates the cleanup action objectives, and describes the components of the preferred cleanup action alternative.

1.1 Site Definition

The Former Walker Chevrolet Site is formally distinguished from the adjacent Morrell's Dry Cleaners Site (VCP No. SW1039) located at 608 North First Street in Tacoma, Washington, as determined by Ecology (Ecology, 2014). The Former Walker Chevrolet Site consists of the following two tax parcels shown in Figure 1.

- Tax Parcel No. (TPN) 2031-13-0025: This 13,491 square foot parcel is owned by Stadium District Properties, LLC. This parcel is currently developed as a parking lot and is used primarily by the Stadium Thriftway grocery store. The north gas station operated on this parcel during the 1940s through circa 1960, and the abandoned underground storage tanks (USTs), product lines, and impacted soil were removed in 1994 (Bison, 1994b). Ecology (2014) determined that TPN 2031-13-0025 could be eligible for an unencumbered, property-specific NFA determination.
- TPN 2030-12-0032: This 29,730 square foot parcel is owned by Stadium District Properties, LLC. This parcel contains a two-story, split-level building that occupies most of the parcel. Stadium Thriftway operates a grocery store on the lower level on the north side of the parcel, CARSTAR Auto Body operates a collision repair service business on the lower level on the south side of the parcel, and Titus-Will Service and Tire operates a tire service center on the upper level of the building. Approximately 1,000 square feet of a parking lot is located at the south end of the parcel, and the remaining, approximately 800 square feet of the parking lot is located in the City of Tacoma right-of-way (ROW). Ecology (2014)

determined that additional Site characterization was necessary for the former south gas station and former paint booth on this parcel. This FFS Addendum includes additional Site characterization on this parcel. We intend to record an environmental covenant for this parcel in concurrence with a NFA determination from Ecology.

1.2 Ecology's Opinions and Objectives of FFS Addendum

This section summarizes Ecology's (2014) opinions and the investigation data gaps.

1.2.1 North Gas Station

Ecology (2014) determined that the total petroleum hydrocarbon (TPH) soil contamination on the former north gas station has been fully delineated and that the contamination was removed in 1994. Ecology concluded that the source of contamination originated on and was limited to this parcel and is not associated with contamination on the nearby parcels. The groundwater table was not encountered in MW-3 on the parcel and Ecology concluded that contamination would have been unlikely to impact groundwater. Ecology (2014) determined that TPN 2031-13-0025 could be eligible for an unencumbered, property-specific NFA separate from the other parcels.

The FFS (Aspect, 2014a) summarizes the remediation and characterization of the former north gas station, and sketches of the remediation area, features, and sample locations are summarized in that report's Appendix A; and retained as Appendix A in this report. This FFS Addendum incorporates TPN 2031-13-0025 into the Site; however, no additional investigation activities were performed for this parcel.

1.2.2 South Gas Station

The south gas station operated in the parking lot on the south side of TPN 2030-12-0032 from around 1925 until sometime in the 1940s. Figure 2 shows the locations of the former USTs, pump islands, and the soil sampling locations. Seven USTs, the pump island, and associated piping were removed in July and August 1994, and the impacted soil was characterized and removed to below the current Method A soil cleanup levels (CULs) (Bison, 1994a). Seven soil borings were sampled in the parking lot on August 31, 2006 during due-diligence sampling. Gasoline-range TPH (TPH-G) were detected above the Method A soil CUL in the 15 and 16 foot below ground surface (bgs) intervals of borings S-1 and S-7 that are respectively in the southeast and southwest corners of the parking lot in the City of Tacoma ROW. In December 2013, Aspect sampled deep soil boring AB-1 near the former pump island and detected TPH-G slightly above the Method A soil CUL at 15 feet bgs and confirmed that TPH contamination attenuates to below the detection limits in the unsaturated till.

Ecology (2014) determined that the full horizontal and vertical extent of petroleum contaminated soil (PCS) was not delineated. In the December 18, 2014 meeting, Ecology agreed that the PCS could be delineated by sampling additional soil borings on the southeast and southwest corners of the parking lot in the City of Tacoma ROW and by sampling an additional soil boring in the triangular median in the street approximately 30 feet south of the parking lot. Ecology agreed that the borings could be advanced to 15 feet deep to evaluate the presence of contamination within the standard point of compliance for the direct contact exposure pathway.

Ecology (2014) determined that groundwater has not been impacted by PCS at the south gas station based on seven rounds of groundwater sampling in MW-1 from August 2007 to January 2014. Ecology (2014) determined that although tetrachloroethylene (PCE) was detected only once, at a concentration below the Method A groundwater CUL in August 2007, and trichloroethylene (TCE) was detected only once, at a concentration below the Method A groundwater CUL in January 2014, chlorinated ethylenes were not detected in soil at the south gas station.

Section 2 of the FFS Addendum describes the additional investigation at the south gas station and Section 4 provides recommendations for well decommissioning and for an NFA with environmental covenant for the residual contamination.

1.2.3 Former Paint Booth

Ecology requested that a detailed map be developed that reconciles the location of the former paint booth, former drains, and former heating oil UST with the current site features, and historical and recent sampling locations. Figure 3 shows the location of the former paint booth and monitoring well MW-11 within the building, and Figure 4 provides greater detail of the current features, former paint booth, and sampling locations.

Ecology (2014) concluded that the soil vapor intrusion exposure pathway was inadequately characterized for the building. Ecology recommended that sub-slab vapor and indoor air be evaluated near floor drains in the produce preparation area on the north side of the produce cooler near the former paint booth. In the December 2014 meeting, the Ecology site manager agreed that the sub-slab vapor and indoor air concentrations should be compared with both Method B and Method C screening levels, and that the Method C screening levels may be appropriate with the current commercial use of the building.

Ecology (2014) determined that monitoring well MW-11 had been sampled three times and recommended that a fourth groundwater sample be collected to conclude Stage 2 monitoring. Ecology (2014) stated that the groundwater sample from MW-11 should be analyzed for gasoline-, diesel-, and oil-range TPH; chlorinated volatile organic compounds (VOCs); ethylene dibromide (EDB); and total metals. Additionally, Ecology (2014) requested that the groundwater sample from MW-11 be evaluated for 1,4-dioxane.

Section 3 of the FFS Addendum describes the additional air and groundwater sampling near the former paint booth, and Section 4 provides recommendations for well decommissioning and for an NFA with environmental covenant for the residual contamination.

1.2.4 Sub-Slab Vapor Intrusion Exposure Pathway near Entry on North End of Building

Although Ecology (2014) referenced the sub-slab vapor intrusion exposure pathway on the north side of the building, the Ecology site manager agreed that this pathway does not need to be further evaluated for the Walker Chevrolet Site. Soil vapor beneath the parking lot on the Morrell's Dry Cleaner site was evaluated by a Gore Survey in February 2010 (Aspect, 2011). The Gore Survey measured the mass of individual VOCs that were absorbed in a resin that was placed beneath the surface and sealed for 7 days. The Gore

Survey showed that VOC contamination in soil and soil vapor attenuates on the Morrell's Dry Cleaners site, and did not extend to the Former Walker Chevrolet Site. Additionally, a soil vapor extraction (SVE) system began removing accessible VOC contamination from beneath the Morrell's Dry Cleaners building and near the source of chlorinated ethylenes in October 2014 (Aspect, 2014b). Based on the December meeting with Ecology, this FFS Addendum does not include any additional evaluation of the sub-slab vapor intrusion exposure pathway on the north side of the building due to contamination on the adjoining Morrell's Dry Cleaners site.

2 South Gas Station

Aspect sampled soil borings AB-1 to AB-4 to delineate the extent of soil contamination at the south gas station. Figures 1 and 2 show the locations of the borings and the boring logs are provided in Appendix B. Soil samples were submitted for the analysis of the potential chemicals of concern for petroleum releases listed in Table 830-1 of the Model Toxics Control Act (MTCA) regulations. The analytical results are summarized in Table 2-1 and the analytical reports are provided in Appendix C. Table 2-1 also summarizes the sample locations and analytical results from the 1994 cleanup action (Bison, 1994a) and the 2006 due-diligence sampling (Aspect, 2009), and compares the analytical results to Method A soil CULs. Figure 2 shows the locations of the former USTs and pump island, excavation confirmation samples S1 to S15 and S17 to S25, due diligence samples S-1 to S-7, and soil borings AB-1 to AB-4. Sample S22 was reported to have been collected from 2 feet bgs beneath the pump island and then over-excavated, and the location was not shown in the report (Bison, 1994a).

The Aspect soil borings were placed in locations where TPH was previously detected above the Method A soil CULs. During the 1994 cleanup action TPH was detected at 39 mg/kg beneath Tank 3 at 10 feet bgs (sample S5) and at 570 mg/kg beneath the former pump island at 2 feet bgs (sample S22). Soil was then excavated to 5 feet bgs beneath the former pump island. TPH was not detected in the three final confirmation samples (S23 to S25) beneath the former pump island.

Stemen Environmental, Inc. (Stemen) sampled soil borings S-1 to S-7 on August 31, 2006 during due-diligence sampling. The analytical results are summarized and compared with Method A soil CULs in Table 2-1. TPH was detected above the Method A soil CUL at 15 feet bgs in S-1 in the southeast corner of the parking lot and at 16 feet bgs in S-7 in the southwest corner of the parking lot. Soil boring logs were not provided to evaluate the presence of contamination above 15 feet bgs. Benzene and xylenes were also detected above the Method A soil CULs at 15 feet bgs in S-1.

Boring AB-1 was advanced within the excavation footprint beneath the former pump island and soil samples were collected from 15, 25, 45, and 61 feet bgs in December 2013. Slightly gravelly sand was encountered from the surface to 15 feet bgs; silty, gravelly, sand was encountered from 15 to 40 feet bgs; and slightly gravelly sand was encountered from 40 to 61 feet bgs. The glacial till and advance outwash intervals are consistent with the monitoring wells at the Former Walker Chevrolet and Morrell's Dry Cleaners site. Although AB-1 was advanced through the excavation footprint beneath the former pump island, backfill could not be distinguished from native soil. Soil samples were collected every 5 feet in AB-1 and screened with a photoionization detector (PID). The PID detected VOCs at 15, 20, and 25 feet bgs. Soil samples submitted for laboratory analysis contained 37 mg/kg of TPH-G in the 15 feet bgs interval and 3 mg/kg of TPH-G in the 25 feet bgs interval. Contamination was not detected in the top 15 feet and was not detected below 25 feet bgs. The water table at nearby MW-1 is about 53 feet bgs. As summarized in Section 1.2.2, Ecology (2014) determined that groundwater was not impacted by petroleum releases.

Aspect sampled boring AB-2 adjacent to former boring S-1 and boring AB-3 adjacent to former boring S-7. The former boring locations were confirmed by the presence of grout in the asphalt surface. The boring logs for AB-2 and AB-3 are consistent with AB-1 and the analytical results are consistent with samples from S-1 and S-7. Soil samples were collected every 2.5 feet and screened with a PID. The PID did not elicit a response in AB-2 or AB-3 until 15 feet bgs, and the highest responses were between 16 and 16.5 feet bgs. Soil samples were collected from 16.5 feet bgs and submitted for analysis. TPH-G was detected at 1,900 mg/kg at 16.5 feet bgs in AB-2, which is comparable to the 920 mg/kg detected in the 15 foot bgs interval of S-1. Similarly, TPH-G was detected at 520 mg/kg at 16.5 feet bgs in AB-3, which is comparable to the 360 mg/kg detected in the 15 foot bgs interval of S-7. The concentration of benzene was below the detection limit in both samples, and ethylbenzene, xylenes, and naphthalene were detected below the Method A soil CULs.

Aspect sampled boring AB-4 in the triangular median south of the parking lot to further delineate the extent of soil contamination. AB-4 was advanced to 16.5 feet bgs and encountered similar lithology as AB-1 to AB-3. No contamination was identified by the PID and no petroleum hydrocarbons were detected in the soil sample collected at 16.5 feet bgs.

3 Former Paint Booth

Aspect collected additional sub-slab and indoor air samples and additional groundwater samples to characterize the former paint booth. Figure 3 shows the location of the former paint booth and MW-11 in the building. Figure 4 shows the location of the former paint booth and decommissioned drains and heating oil UST in the current grocery store and shows the locations of assessment soil borings from 1994, sub-slab vapor samples from 2008, and sub-slab vapor and indoor air samples from 2013 and 2014.

3.1 Soil Contamination

The extent of soil contamination was delineated in 1994, and no additional soil samples have been collected. Table 3-1 summarizes the soil analytical results and compares the results with Method A soil CULs. Samples D-1 and D-2 were collected from drains, and the contents were removed prior to decommissioning the drains by filling them with concrete slurry. Thus, samples D-1 and D-2 were collected from former source contamination. Sample D-1 was collected from the north drain, which received drainage from the paint booth. Several compounds were detected above Method A soil CULs in sample D-1, including benzene, toluene, ehtylbenzene, and xylene (BTEX) compounds, PCE, lead, and cadmium. Sample D-2 was collected from the south drain, which was a 4-foot-deep concrete vault above the heating oil UST. The concentrations of organic compounds were low in D2, but methylene chloride was detected above the Method A soil CUL. Lead and cadmium were detected above the Method A soil CUL in sample D2, but at much lower concentrations than in sample D1.

Soil samples were collected from borings B1 to B4 on August 3, 1994, and additional soil samples were then collected from borings B5 to B9 on September 6, 1994 to delineate the extent of soil contamination. Soil samples were collected from the 5, 7.5, 9, and 10 foot bgs intervals of boring B5. The concentration of TPH attenuated to below the Method A soil CUL at 10 feet bgs, and the TPH appears to be oil-range TPH associated with heating oil. The concentration of PCE was below the detection limit at 5 feet bgs and was 0.053 mg/kg at 10 feet bgs, which slightly exceeds the 0.05 mg/kg Method A soil CUL.

The lateral extent of contamination was delineated by soil borings B2, B3, and B6 to B9. The concentrations of TPH in borings B2 and B3 exceeded the 30 mg/kg Method A soil CUL for TPH-G, but were below the likely applicable 2,000 mg/kg Method A soil CUL for diesel- and oil-range TPH. In boring B5, the concentration of TPH-G and toluene were detected slightly above the Method A soil CULs at 5 feet bgs, but all compounds were well below the Method A soil CULs at 8 feet bgs. No organic compounds were detected in borings B8 and B9.

3.2 Soil Vapor Intrusion Exposure Pathway

The soil vapor intrusion exposure pathway was evaluated during due-diligence sampling in May 2008, during the FFS investigation in January 2014, and for this FFS Addendum in March 2015. Figure 4 shows the locations of the 2014 and 2015 sub-slab vapor and indoor air samples and shows estimated locations of due diligence sub-slab vapor samples GV-1 to GV-3. Additionally, Figure 1 shows the location of the ambient air

sample that was collected on the opposing side of North First Street in the Stadium Thriftway parking lot. Table 3-2 summarizes the indoor air and sub-slab vapor samples and compares the analytical results with Method B and Method C air screening levels, and applicable sub-slab vapor screening levels that are consistent Ecology (2009) guidance. Appendix D contains the analytical results for air sampling performed in March 2015.

The 2008 due diligence sub-slab vapor sampling performed by Stemen is poorly documented and is included in Appendix C of the Site Conditions Summary report (Aspect, 2009). The locations of GV-1 to GV-3 are recorded in an aerial photograph and analytical results are provided in a table. Aspect collected sub-slab vapor samples beneath the sidewalk adjacent to the former paint booth in January 2014, and beneath the slab foundation in the produce preparation area near a floor drain in March 2015.

PCE was detected above the 96.2 $\mu g/m^3$ Method B sub-slab screening level in GV-1 to GV-3 and the sub-slab sample collected beneath the sidewalk, but PCE was not detected beneath the slab in the produce preparation area. PCE only exceeded the 400 $\mu g/m^3$ Method C sub-slab screening level in GV-2. PCE in indoor air was detected at a concentration of 0.61 $\mu g/m^3$ in the produce cooler in January 2014 and at a concentration of 2.78 $\mu g/m^3$ in the produce preparation area in March 2015. These concentrations are below the Method B screening level of 9.62 $\mu g/m^3$ and the Method C screening level of 40 $\mu g/m^3$.

BTEX compounds and aliphatic- and aromatic-range hydrocarbons were detected in sub-slab and indoor air samples collected from the produce preparation area. Benzene exceeded the Method B indoor air screening level, but was below the Method C indoor air screening level. The concentrations of heavier aliphatic (EC9-12) and aromatic (EC9-10) hydrocarbons exceeded the Method C indoor air screening levels. The concentrations of these compounds were lower beneath the sub-slab, which indicates that the petroleum contamination may be due to sources inside the building. The cleanup standards for air quality (173-340-750, WAC) only apply to air originating from contaminated media on the Site. Although BTEX compounds and hydrocarbons were detected beneath the sub-slab, the concentrations did not exceed the Method B sub-slab screening levels. The heavier-range hydrocarbon compounds inside the produce preparation area may be released from cleaning and packaging compounds in the store; however, these products were not inventoried or evaluated.

The sub-slab vapor sample results show that PCE has been present below the slab at concentrations above the Method B and Method C screening levels, but that the indoor air samples are below the Method B and Method C screening levels. Although benzene exceeds the Method B indoor air screening level and aliphatic (EC9-12) and aromatic (EC9-10) hydrocarbons exceed the Method C indoor air screening levels, the concentrations of these compounds are lower beneath the sub-slab and do not exceed Method B sub-slab screening levels.

3.3 Groundwater Contamination

Aspect constructed MW-11 in the former paint booth area of the Site on May 12, 2009 to assess potential impacts to groundwater. The depth to groundwater is about 52 feet bgs at the former paint booth. Samples were collected from MW-11 in May 2009, December 2010, January 2014, and March 2015 and submitted for analysis of VOCs. The January 2014 and March 2015 samples were also analyzed for gasoline- and diesel-range TPH, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and lead. Additionally, the March 2015 sample was analyzed for 1,4-dioxane and Resource Conservation and Recovery Act (RCRA) metals, as requested by Ecology (2014). In response to Ecology's opinion (2014), Aspect requested the laboratory to prepare a supplemental analytical report for the January 2014 sample to report the concentration of 1,4-dioxane. An additional sample was collected in April 2015 to reevaluate the concentration of arsenic; samples were analyzed for total and dissolved RCRA metals. Table 3-3 summarizes the historical water-level measurements at the Former Walker Chevrolet and Morrell's Dry Cleaners sites, Table 3-4 summarizes the historical concentrations of VOCs in monitoring wells at the sites, and Table 3-5 summarizes the historical analytical results for MW-11. Appendix E provides the groundwater analytical data for the FFS Addendum.

No petroleum-related BTEX compounds were detected in MW-11. TCE was detected at concentrations ranging from 1.4 to 4.6 µg/L, which are below the 5 µg/L Method A groundwater CUL. Carbon tetrachloride was detected at a maximum concentration of 2.8 µg/L and chloroform was detected at a maximum concentration of 2 µg/L; Method A groundwater CULs are not established for these constituents, but all concentrations were below the 5 µg/L federal maximum contaminant level (MCL) for carbon tetrachloride and 80 µg/L federal MCL for chloroform. No TPH, PAH, or PCB compounds were detected in the January 2014 and March 2015 samples; and the concentrations of total lead ranged from 2.44 to 6.2 µg/L, which is well below the 15 µg/L Method A groundwater CUL. The concentrations of total arsenic were 5.15 µg/L and 6.29 µg/L in March and April 2015, respectively. However, arsenic was not detected when filtered through a 0.45 micron filter; thus, the concentration of dissolved arsenic was less than 1 µg/L. Although the concentration of total arsenic was detected slightly above the 5 µg/L Method A groundwater CUL, this slight exceedance is consistent with background conditions in the Puget Sound area. The former paint booth is not a source of arsenic, and arsenic was not detected in the sediment samples collected from the former drains in the paint booth or from soil boring B1 adjacent to the decommissioned heating oil UST.

4 Preferred Cleanup Alternative

The FFS (Aspect, 2014a) identified the cleanup action objectives, developed and evaluated cleanup alternatives, and performed a disproportionate cost analysis to recommend the preferred cleanup alternative. The preferred alternative included:

- Soil removal and UST closure actions completed to date;
- Decommissioning MW-1 and MW-11; and
- Institutional controls consisting of an environmental covenant to require maintenance of the existing building and parking lot surface cover as a cap, restrict future disturbance or residual impacted soil, and provide notification requirements to Ecology.

4.1 Reevaluation of Cleanup Action Objectives

4.1.1 Soil

The residual soil contamination beneath the former paint booth and south gas station is currently capped to prevent direct contact exposure and contamination does not pose a threat to groundwater.

Residual soil contamination beneath the former paint booth is limited to an area of less than 100 square feet and the contamination is limited to the top 10 feet. Soil contamination is beneath the slab foundation of the current grocery store and infiltration is limited by impervious cover. Approximately 30 feet of low-permeability till is present between the soil contamination and groundwater at 52 feet bgs. Removal of the residual soil contamination is impracticable and the residual contamination in the till is not readily amenable to soil vapor extraction.

Residual contamination at the south gas station is limited to the TPH contamination that was detected about 15 feet bgs in soil borings AB-1, AB-2, AB-3, S-1, and S-7. No contamination was identified in the 15-foot direct contact exposure pathway based on 23 excavation confirmation samples, 7 due diligence soil borings, and 4 FFS soil borings. Approximately 25 feet of low-permeability unsaturated till is present below the lowest detected depth of contamination, and petroleum contamination has not been detected in groundwater at about 53 feet bgs. The south gas station ceased operations in the 1940s, the residual contamination has effectively adsorbed to the unsaturated till and does not pose a threat to groundwater quality.

4.1.2 Groundwater

Ecology (2014) determined that groundwater had not been impacted by soil contamination at the south gas station and requested that a fourth groundwater sample be collected from MW-11 to confirm that soil contamination has not impacted groundwater beneath the former paint booth. Additionally, Ecology (2014) requested that 1,4-dioxane be evaluated as a chemical of concern and that metals be evaluated. 1,4-dioxane was not detected in the two groundwater samples evaluated. Total arsenic was detected at concentrations of 5.15 µg/L in March 2015 and 6.29 µg/L in April 2015, which slightly exceeded the 5 µg/L Method A groundwater CUL, but dissolved arsenic was not detected

in the April 2015 sample when filtered. Arsenic was not detected in sediment from the decommissioned drains or adjacent to the decommissioned heating oil UST and arsenic is not a chemical of concern for the former paint booth. The low concentrations of arsenic in groundwater are typical of background conditions and are not associated with source contamination.

4.1.3 Indoor Air

The cleanup action objective is to prevent sub-slab vapor from intruding into the building and causing the chemicals of concern in indoor air to exceed screening levels for the current building use.

As shown in Figure 4, the former paint booth was located in the current produce and meat preparation areas and in the produce cooler. The decommissioned drain and cleanout for the former paint booth are in the meat preparation area, and the decommissioned heating oil UST is beneath the meat preparation area. PCE was detected above the Method B sub-slab screening level in three of five sub-slab vapor samples, and above the Method C sub-slab screening level in one sample. No other compounds were detected above the sub-slab screening levels.

The point of compliance is the indoor air within the grocery store, and MTCA regulations only apply to air originating from contaminated media on the Site (i.e., sub-slab soil vapor originating from contamination in soil and groundwater). PCE was detected at concentrations of 0.61 and 2.78 $\mu g/m^3$ in the two indoor air samples, which is below the 9.62 $\mu g/m^3$ Method B screening level and the 40 $\mu g/m^3$ Method C screening level. Although benzene was detected above Method B screening levels and aliphatic (EC9-12) and aromatic (EC9-10) hydrocarbons were detected above Method C screening levels, the concentrations of these compounds were higher in indoor air than in collocated sub-slab vapor. The hydrocarbon compounds inside the produce preparation area may have been released from cleaning and packaging compounds in the store.

4.2 Preferred Cleanup Alternative Components

The new findings in the FFS Addendum do not impact the evaluation or recommendation of the preferred cleanup alternative identified in the FFS. The preferred cleanup alternative includes:

- Previous cleanup actions performed at the south gas station (Bison, 1994a), north gas station (Bison, 1994b), and former paint booth (Bison, 1994c and Bison, 1994d), as summarized in the FFS (Aspect, 2014a).
- Decommissioning of MW-1 and MW-11.
- An environmental covenant, consistent with Section 173-340-440(9), Washington Administrative Code (WAC), will be recorded for TPN 2030-12-0032, in coordination with a NFA determination from Ecology. The covenant will include provisions to:
    - Prohibit activities that may result in the release of hazardous substances that are contained by the foundation above the former paint booth or the

asphalt surface at the south end of the parcel near the former south gas station.

- Require the land owner to restrict leases to commercial uses and activities consistent with the covenant and to notify all lessees of the restrictions on the use of the property.
- Require notification to and approval from Ecology for any change in Site use. Should the property owner redevelop the property for other uses (e.g., mixed-use development), the covenant will require that the design engineer be informed of the locations of residual soil contamination and the potential need to include soil vapor intrusion controls into the redevelopment design.
- Require notification to Ecology of the owner's intent to convey any interest of the parcel.
- Grant access to Ecology to inspect the environmental controls and to collect samples.

- Notify the City of Tacoma Department of Real Property Services of residual soil contamination in the City ROW.
- An environmental covenant is not necessary for Ecology to provide a NFA determination for TPN 2031-13-0025.

References

Aspect Consulting, LLC (Aspect), 2009, Site Conditions Summary, Former Walker Chevrolet Property, Prepared for David Shaw, Successor to Walker Chevrolet, July 14, 2009; Stemen Environmental, Inc. data provided in Appendix C.

Aspect Consulting, LLC (Aspect), 2011, Remedial Investigation Report, Morrell's Dry Cleaners, Prepared for David Shaw, Successor to Walker Chevrolet, February 18, 2011.

Aspect Consulting, LLC (Aspect), 2014a, Focused Feasibility Study, Former Walker Chevrolet, Prepared for David Shaw, Successor to Walker Chevrolet, May 16, 2014.

Aspect Consulting, LLC (Aspect), 2014b, Interim Cleanup Action Construction Completion Report, Morrell's Dry Cleaners, Prepared for David Shaw, Successor to Walker Chevrolet, December 23, 2014.

Bison Environmental Northwest (Bison), 1994a, Underground Storage Tank Removal Site Assessment and Independent Remedial Action Report, Walker Chevrolet (South Gas Station), August 1994.

Bison Environmental Northwest (Bison), 1994b, Underground Storage Tank Removal Site Assessment and Independent Remedial Action Report, Walker Chevrolet (North Gas Station), August 1994.

Bison Environmental Northwest (Bison), 1994c, Phase 2 Studies, Floor Drain and Heating Oil UST Closure, Walker Chevrolet — Paint Booth, August 15, 1994.

Bison Environmental Northwest (Bison), 1994d, Phase 2B Subsurface Sampling, Walker Chevrolet — Paint Booth, September 12, 1994.

Washington State Department of Ecology (Ecology), 2014, Further Action at Bruce Titus Chevrolet, VCP No. SW1040, November 17, 2014.

Washington State Department of Ecology (Ecology), 2009, Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Review Draft, Publication No. 09-09-047, October 2009.

Limitations

Work for this project was performed for David Shaw, Successor to Walker Chevrolet (Client), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

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TABLES

Table 2-1 - Soil Sample Results at South Gas Station

Project No. 080190-004-14, Former Walker Chevrolet Site (VCP No. SW1040)
633 Division Avenue, Tacoma, Washington

Description/Chemical Name	Soil, MTCA Method A, Unrestricted Land Use, Table Value (mg/kg)	AB-1-15 12/20/2013	AB-1-25 12/20/2013	AB-1-45 12/20/2013	AB-1-61.5 12/20/2013	AB-2-16.5 4/6/2015	AB-3-16.5 4/6/2015	AB-4-16.5 4/6/2015	S-1 8/31/2006	S-2 8/31/2006	S-3 8/31/2006	S-4 8/31/2006	S-5 8/31/2006	S-6 8/31/2006	S-7 8/31/2006
Location		Middle of parking lot (Near former pump island)				SE corner of parking lot (5 ft from S-1)	SW corner of parking lot (1 ft from S-7)	Triangular medium south of parking lot	SE corner of parking lot (Near former Tank 5)	East boundary of parking lot (Near former Tank 7)	NE boundary of parking lot (Near former Tank 4)	West boundary of parking lot (Near former Tanks 1-4)	West boundary of parking lot (Near former Tank 1)	Middle of parking lot (Near former pump island)	SW corner of parking lot (Nearest former pump island)
Sample Depth		15 ft	25 ft	45 ft	61.5 ft	16.5 ft	16.5 ft	16.5 ft	15 ft	15 ft	15 ft	15 ft	13 ft	8 ft	16 ft
Total Petroleum Hydrocarbons															
TPH, Gasoline-Range (WTPH-HCID, 418.1) (mg/kg)	30														
TPH, Diesel-Range (WTPH-HCID, 418.1) (mg/kg)	2,000														
TPH, Heavy Oil-Range (WTPH-HCID, 418.1) (mg/kg)	2,000														
TPH, undifferentiated (WTPH-418.1) (mg/kg)	30														
TPH, Gasoline-Range (NWTPH-Gx) (mg/kg)	30	**37**	3	2 U	2 U	**1,900**	**520**	2 U	**920**	ND	ND	ND	ND	ND	**360**
TPH, Diesel-Range (NWTPH-Dx) (mg/kg)	2,000					1,600 X	180 X	50 U	ND	ND	ND	ND	ND	ND	ND
TPH, Oil-Range (NWTPH-Dx) (mg/kg)	2,000					250 U	250 U	250 U	ND	ND	ND	ND	ND	ND	ND
Volatile Petroleum Compounds															
Benzene (mg/kg)	0.03	0.02 U	0.02 U	0.02 U	0.02 U	0.03 U	0.03 U	0.03 U	**6.1**	ND	ND	ND	ND	ND	
Toluene (mg/kg)	7	0.02 U	0.02 U	0.02 U	0.02 U	0.05 U	0.05 U	0.05 U	4.1	ND	ND	ND	ND	ND	
Ethylbenzene (mg/kg)	6	0.02 U	0.02 U	0.02 U	0.02 U	0.24	0.063	0.05 U	6	ND	ND	ND	ND	ND	
Xylenes,total (mg/kg)	9	0.33	0.06 U	0.06 U	0.06 U	1	0.15 U	0.15 U	**12**	ND	ND	ND	ND	ND	
Fuel Additives and Blending Compounds															
1,2-Dibromoethane (EDB; mg/kg)	0.005	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 (EDC; mg/kg)		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.01 U						
Methyl tert-butyl ether (MTBE; mg/kg)	0.1	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U						
Lead (mg/kg)	250	1.49	2.59	2.31	1.90	3.46	7.26	1.85							
Other Petroleum Compounds															
Naphthalene (mg/kg)	5	0.05 U	0.05 U	0.05 U	0.05 U	0.12	0.77	0.01 U	0.05 U						
Isopropylbenzene (mg/kg)						2.4	0.64	0.05 U	5						
n-Propylbenzene (mg/kg)						3.9	1.1	0.05 U	14						
1,2,4-Trimethylbenzene (mg/kg)						22	1.7	0.05 U	71						
1,3,5-Trimethylbenzene (mg/kg)						12	1.8	0.05 U	37						
n-Butylbenzene (mg/kg)						NR	NR	NR	6.2						
sec-Butylbenzene (mg/kg)						0.86	1.1	0.05 U	0.05 U						
tert-Butylbenzene (mg/kg)						0.05 U	0.05 U	0.05 U	0.05 U						
Isopropyltoluene (mg/kg)						NR	NR	NR	2.3						
p-Isopropyltoluene (mg/kg)						1.3	1.5	0.05 U	NR						
Other Compounds															
Chlorinated VOCs (mg/kg)						ND	ND	ND	ND						
PCB mixtures (mg/kg)	1								ND						

Notes:

Bold highlighted font indicates exceedance of most conservative screening level.

Potential chemicals of concern include gasoline-range organics from Table 830-1 in Model Toxics Control Act.

ft = feet

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act

NR = not reported

U = analyte was not detected at or above the reported result.

NWTPH = Northwest total petroleum hydrocarbon method

WTPH = Washington total petroleum hydrocarbon method

HCID = hydrocarbon identification analysis

Table 2-1 - Soil Sample Results at South Gas Station

Project No. 080190-004-14, Former Walker Chevrolet Site (VCP No. SW1040)
633 Division Avenue, Tacoma, Washington

Description/Chemical Name	Soil, MTCA Method A, Unrestricted Land Use, Table Value (mg/kg)	S1 8/1/1994	S2 8/1/1994	S3 8/1/1994	S4 8/1/1994	S5 8/1/1994	S6 8/1/1994	S7 8/1/1994	S8 8/1/1994	S9 8/1/1994	S10 8/1/1994	S11 8/1/1994	S12 8/1/1994	S13 8/1/1994	S14 8/1/1994	S15 8/1/1994
Location		Excavation, east wall, Tank 2-4	Excavation, bottom, Tank 2	Excavation, west wall, Tank 2-4	Excavation, south wall, Tank 2-4	Excavation, bottom, Tank 3	Excavation, Tanks 5-7	Excavation, bottom, Tank 5	Excavation, south wall, Tank 5-7	Excavation, east wall, Tank 5-7	Excavation, bottom, Tank 6	Excavation, bottom, Tank 7	Excavation, east wall, Tank 5-7	Excavation, west wall, Tank 5-7	Excavation, bottom, Tank 4	Excavation, north wall, Tank 2-4
Sample Depth		5 ft	10 ft	7 ft	7 ft	10 ft	Surface	9 ft	7 ft	7 ft	8 ft	8 ft	7 ft	5 ft	10 ft	8 ft
Total Petroleum Hydrocarbons																
TPH, Gasoline-Range (WTPH-HCID, 418.1) (mg/kg)	30	20 U		20 U	20 U		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U		20 U
TPH, Diesel-Range (WTPH-HCID, 418.1) (mg/kg)	2,000	50 U		50 U	50 U		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U		50 U
TPH, Heavy Oil-Range (WTPH-HCID, 418.1) (mg/kg)	2,000	100 U		100 U	100 U		100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U		100 U
TPH, undifferentiated (WTPH-418.1) (mg/kg)	30		20 U			**39**									20 U	
TPH, Gasoline-Range (NWTPH-Gx) (mg/kg)	30															
TPH, Diesel-Range (NWTPH-Dx) (mg/kg)	2,000															
TPH, Oil-Range (NWTPH-Dx) (mg/kg)	2,000															
Volatile Petroleum Compounds																
Benzene (mg/kg)	0.03		0.3 U			0.3 U									0.3 U	
Toluene (mg/kg)	7		0.3 U			0.3 U									0.3 U	
Ethylbenzene (mg/kg)	6		0.3 U			0.33									0.3 U	
Xylenes,total (mg/kg)	9		0.3 U			3.3									0.3 U	
Fuel Additives and Blending Compounds																
1,2-Dibromoethane (EDB; mg/kg)	0.005															
1,2-Dichloroethane (EDC; mg/kg)																
Methyl tert-butyl ether (MTBE; mg/kg)	0.1															
Lead (mg/kg)	250		4 U			6										
Other Petroleum Compounds																
Naphthalene (mg/kg)	5															
Isopropylbenzene (mg/kg)																
n-Propylbenzene (mg/kg)																
1,2,4-Trimethylbenzene (mg/kg)																
1,3,5-Trimethylbenzene (mg/kg)																
n-Butylbenzene (mg/kg)																
sec-Butylbenzene (mg/kg)																
tert-Butylbenzene (mg/kg)																
Isopropyltoluene (mg/kg)																
p-Isopropyltoluene (mg/kg)																
Other Compounds																
Chlorinated VOCs (mg/kg)																
PCB mixtures (mg/kg)	1															

Notes:
Bold highlighted font indicates exceedance of most conservative screening level.
Potential chemicals of concern include gasoline-range organics from Table 830-1 in Model Toxics Control Act.
ft = feet
mg/kg = milligrams per kilogram
MTCA = Model Toxics Control Act
NR = not reported
U = analyte was not detected at or above the reported result.
NWTPH = Northwest total petroleum hydrocarbon method
WTPH = Washington total petroleum hydrocarbon method
HCID = hydrocarbon identification analysis

Table 2-1 - Soil Sample Results at South Gas Station

Project No. 080190-004-14, Former Walker Chevrolet Site (VCP No. SW1040)
633 Division Avenue, Tacoma, Washington

Description/Chemical Name	Soil, MTCA Method A, Unrestricted Land Use, Table Value (mg/kg)	S17 8/2/1994	S18 8/2/1994	S19 8/2/1994	S20 8/2/1994	S21 8/2/1994	S22 8/2/1994 (Soil was Excavated)	S23 8/2/1994	S24 8/2/1994	S25 8/2/1994	O1 8/1/1994	O2 8/1/1994	O3 8/1/1994	O4 8/1/1994	O5 8/1/1994	O6 8/2/1994
Location		Excavation, bottom, Tank 1	Excavation, east wall, Tank 1	Excavation, north wall, Tank 1	Excavation, west wall, Tank 1	Excavation, south wall, Tank 1	Excavation, pump island **(Removed)**	Excavation, south wall, pump island	Excavation, west wall, pump island	Excavation, bottom, pump island	Tank 2 overburden	Tank 3 Overburden	Tank 1 Overburden	Tank 5-8 Overburden	Tank 5-8 Overburden	Tank 1 Overburden
Sample Depth		8 ft	6 ft	7 ft	6 ft	7 ft	2 ft	3 ft	3 ft	5 ft						
Total Petroleum Hydrocarbons																
TPH, Gasoline-Range (WTPH-HCID, 418.1) (mg/kg)	30	20 U	20 U	20 U	20 U	20 U		20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
TPH, Diesel-Range (WTPH-HCID, 418.1) (mg/kg)	2,000	50 U	50 U	50 U	50 U	50 U		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
TPH, Heavy Oil-Range (WTPH-HCID, 418.1) (mg/kg)	2,000	100 U	100 U	100 U	100 U	100 U		100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	1,900
TPH, undifferentiated (WTPH-418.1) (mg/kg)	30						**570**					20 U				
TPH, Gasoline-Range (NWTPH-Gx) (mg/kg)	30															
TPH, Diesel-Range (NWTPH-Dx) (mg/kg)	2,000															
TPH, Oil-Range (NWTPH-Dx) (mg/kg)	2,000															
Volatile Petroleum Compounds																
Benzene (mg/kg)	0.03						1.42					0.3 U				0.005 U
Toluene (mg/kg)	7						7.81					0.3 U				0.005 U
Ethylbenzene (mg/kg)	6						11.11					0.3 U				0.005 U
Xylenes,total (mg/kg)	9						84.2					0.3 U				0.005 U
Fuel Additives and Blending Compounds																
1,2-Dibromoethane (EDB; mg/kg)	0.005															0.01 U
1,2-Dichloroethane (EDC; mg/kg)																0.005 U
Methyl tert-butyl ether (MTBE; mg/kg)	0.1															NR
Lead (mg/kg)	250						18									34
Other Petroleum Compounds																
Naphthalene (mg/kg)	5															0.005 U
Isopropylbenzene (mg/kg)																
n-Propylbenzene (mg/kg)																
1,2,4-Trimethylbenzene (mg/kg)																
1,3,5-Trimethylbenzene (mg/kg)																
n-Butylbenzene (mg/kg)																
sec-Butylbenzene (mg/kg)																
tert-Butylbenzene (mg/kg)																
Isopropyltoluene (mg/kg)																
p-Isopropyltoluene (mg/kg)																
Other Compounds																
Chlorinated VOCs (mg/kg)																0.01 U
PCB mixtures (mg/kg)	1															0.1 U

Notes:
Bold highlighted font indicates exceedance of most conservative screening level.
Potential chemicals of concern include gasoline-range organics from Table 830-1 in Model Toxics Control Act.
ft = feet
mg/kg = milligrams per kilogram
MTCA = Model Toxics Control Act
NR = not reported
U = analyte was not detected at or above the reported result.
NWTPH = Northwest total petroleum hydrocarbon method
WTPH = Washington total petroleum hydrocarbon method
HCID = hydrocarbon identification analysis

Table 3-1 - Soil Sample Results near Former Paint Booth

Project No. 080190-004-14, Former Walker Chevrolet Site (VCP No. SW1040)
633 Division Avenue, Tacoma, Washington

Description/Chemical Name	Soil, MTCA Method A, Unrestricted Land Use, Table Value (mg/kg)	D1 7/30/1994	D2 7/30/1994	B1-5.5 8/3/1994	B2-5.5 8/3/1994	B3-2 8/3/1994	B4-3 8/3/1994	B5-5 9/6/1994	B5-7.5 9/6/1994	B5-9 9/6/1994	B5-10 9/6/1994	B6-5 9/6/1994	B6-8 9/6/1994	B7-4 9/6/1994	B8-5 9/6/1994	B9-5 9/6/1994
Sample Depth		Sediment Inside Drain	Sediment Inside Drain	5.5 ft	5.5 ft	2 ft	3 ft	5 ft	7.5 ft	9 ft	10 ft	5 ft	8 ft	4 ft	5 ft	5 ft
Total Petroleum Hydrocarbons (TPH)																
TPH, Gasoline-Range (WTPH-HCID, 418.1) (mg/kg)	30							20 U			20 U	**100**	20 U	20 U	20 U	20 U
TPH, Diesel-Range (WTPH-HCID, 418.1) (mg/kg)	2,000							50 U			50 U	50 U	50 U	50 U	50 U	50 U
TPH, Heavy Oil-Range (WTPH-HCID, 418.1) (mg/kg)	2,000							390			260	100 U	100 U	100 U	100 U	100 U
TPH, undifferentiated (WTPH-418.1) (mg/kg)	30			**8,000**	**79**	**96**	**480**		**2,500**	**4,400**						
Volatile Petroleum Compounds																
Benzene (mg/kg)	0.03	**0.59**	0.025 U	0.23 U		0.005 U	0.005 U	0.005 U			0.024	0.05 U	0.005 U	0.005 U	0.005 U	0.005 U
Toluene (mg/kg)	7	**20**	0.025 U	**85**		0.013	0.007	0.096 B			0.72 B	**8.6**	0.37	0.011 B	0.014 B	0.005 U
Ethylbenzene (mg/kg)	6	**10**	0.025 U	2.2		0.005 U	0.005 U	0.005 U			0.13	0.69	0.012	0.005 U	0.005 U	0.005 U
Xylenes,total (mg/kg)	9	**79**	0.19	**143**		0.005 J	0.006	0.01			0.79	7.1	0.15	0.005 U	0.005 U	0.005 U
Fuel Additives and Blending Compounds																
1,2-Dibromoethane (EDB; mg/kg)	0.005	1 U	0.05 U	0.46 U		0.01 U	0.01 U	0.01 U			0.01 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U
1,2-Dichloroethane (EDC; mg/kg)		0.5 U	0.025 U	0.23 U		0.005 U	0.005 U	0.005 U			0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U
Methyl tert-butyl ether (MTBE; mg/kg)	0.1	NR	NR	NR		NR	NR	NR			NR	NR	NR	NR	NR	NR
Lead (mg/kg)	250	**2,140**	**918**	25												
Other Petroleum Compounds																
n-Butylbenzene (mg/kg)		17	0.025 U	0.45		0.005 U	0.005 U	0.005 U			0.015	0.19	0.005 U	0.005 U	0.005 U	0.005 U
sec-Butylbenzene (mg/kg)		14	0.025 U	0.45		0.005 U	0.005 U	0.005 U			0.022	0.066	0.005 U	0.005 U	0.005 U	0.005 U
Isopropylbenzene (mg/kg)		18	0.025 U	1.6		0.005 U	0.005 U	0.005 U			0.05	0.05 U	0.005 U	0.005 U	0.005 U	0.005 U
p-Isopropyltoluene (mg/kg)		15	0.025 U	0.48		0.005 U	0.005 U	0.005 U			0.015	0.082	0.005 U	0.005 U	0.005 U	0.005 U
Methylene chloride	0.02	2 U	**0.475**	0.92 U		0.02 U	0.02 U	0.026 B			0.028 B	0.2 U	0.039 B	0.041 B	0.048 B	0.02 U
4-Methyl-2-pentanone (MIBK) (mg/kg)		3.8 J	0.025 U	2.3 U		0.05 U	0.05 U	0.05 U			0.05 U	0.5 U	0.05 U	0.05 U	0.05 U	0.05 U
Naphthalene (mg/kg)	5	0.93 B	0.053 B	1.1		0.005 U	0.005 U	0.005 U			0.005 U	0.19	0.005 U	0.005 U	0.005 U	0.005 U
n-Propylbenzene (mg/kg)		54	0.025 U	1.5		0.005 U	0.005 U	0.005 U			0.08	0.099	0.005 U	0.005 U	0.005 U	0.005 U
1,2,4-Trimethylbenzene (mg/kg)		175	0.072	11		0.005 U	0.005 U	0.005 U			0.13	0.79	0.013	0.005 U	0.005 U	0.005 U
1,3,5-Trimethylbenzene (mg/kg)		66	0.064	5		0.005 U	0.005 U	0.005 U			0.07	0.3	0.006	0.005 U	0.005 U	0.005 U
Chlorinated VOCs																
Tetrachloroethylene (mg/kg)	0.05	**2.1**	0.025 U	**0.21 J**		0.005 U	0.005 U	0.005 U			**0.053**	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U
Trichloroethylene (mg/kg)	0.03	0.5 U	0.025 U	0.23 U		0.005 U	0.005 U	0.005 U			0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U
cis-1,2-dichloroethylene (mg/kg)	-	0.5 U	0.025 U	0.23 U		0.005 U	0.005 U	0.005 U			0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U
Vinyl chloride (mg/kg)	-	1 U	0.05 U	0.46 U		0.01 U	0.01 U	0.01 U			0.01 U	0.1 U	0.1 U	0.01 U	0.01 U	0.01 U
Chlorobenzene (mg/kg)		2.1	0.025 U	0.23 U		0.005 U	0.005 U	0.005 U			0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U
1,2-Dichlorobenzene (mg/kg)		103	0.025 U	0.23 U		0.005 U	0.005 U	0.005 U			0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U
1,4-Dichlorobenzene (mg/kg)		82	0.025 U	0.23 U		0.005 U	0.005 U	0.005 U			0.005 U	0.05 U	0.05 U	0.005 U	0.005 U	0.005 U
Metals																
Arsenic (mg/kg)	20	5 U	5 U	5 U												
Barium (mg/kg)	-	422	2,000	43.8												
Cadmium (mg/kg)	2	**50.2**	**4.2**	0.3 U												
Chromium (mg/kg)	2,000	110	927	18.6												
Lead (mg/kg)	250	**2,140**	**918**	25												
Mercury (mg/kg)	2	3 U	3 U	3 U												
Selenium (mg/kg)	-	8 U	8 U	8 U												
Silver (mg/kg)	-	0.7 U	0.7 U	0.7 U												

Notes:

Bold highlighted font indicates exceedance of most conservative screening level.

Potential chemicals of concern include gasoline-range organics from Table 830-1 in Model Toxics Control Act.

Sediment samples from drains D1 and D2 were removed in 1994. Samples results provide an indication of source contamination.

Blank cell indicate that compound was not analyzed.

ft = feet

HCID = Hydrocarbon identification

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act

NR = not reported

TPH = total petroleum hydrocarbon

U = analyte was not detected at or above the reported result.

Table 3-2 - Indoor, Ambient, and Sub-Slab Air Sample Results near Former Paint Booth

Project No. 080190-004-14, Former Walker Chevrolet Site (VCP No. SW1040)
633 Division Avenue, Tacoma, Washington

Description/ Chemical Name	Acceptable Indoor Air Screening Level (SL_{IA}), MTCA Method B, Air, Screening Level	Acceptable Indoor Air Screening Level (SL_{IA}), MTCA Method C, Air, Screening Level	Indoor Air, Above Former Paint Booth	Indoor Air, Above Former Paint Booth	Outdoor Air, Ambient Conditions
Location			In preparation outside and north of produce cooler	Inside current produce cooler and former paint booth area	Parking lot on west side of North 1st Street
Sample ID			IA-FPB-032315	Indoor-012214	Outdoor Air-012214
Sample duration (hours)			8	8	8
Date and time collected			3/23/15 2:21 PM	1/22/14 3:55 PM	1/22/14 4:15 PM
	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
PCE	9.62	40	2.78	0.61	<0.21
TCE	0.37	2	<0.0914	<0.32	<0.17
cis-1,2-DCE	-	-	<0.0793	<0.24	<0.12
trans-1,2-DCE	-	-	<0.0238	<1.2	<0.61
Vinyl chloride	0.28	2.8	<0.217	<0.077	<0.04
1,4-Dioxane	0.5	5	<3.6		
Benzene	0.321	3	**2.29**	NA	NA
Toluene	2,290	5,000	10.9	NA	NA
Ethylbenzene	457	1000	1.77	NA	NA
Xylenes	45.7	100	8.31	NA	NA
Naphthalene	0.0735	0.735	<1.57		
Aliphatic hydrocarbon (EC5-8)	2,700	6,000	194	NA	NA
Aliphatic hydrocarbon (EC9-12)	140	300	**807**	NA	NA
Aromatic hydrocarbon (EC9-10)	180	400	**576**	NA	NA

Notes:

Bold highlighted font indicates exceedance of most conservative screening level.

Dashes indicate no value available.

DCE = dichloroethylene

µg/m^3 = micrograms per cubic meter

NA = not analyzed

PCE = tetrachloroethylene

SL_{IA} = Acceptable indoor air screening level.

SL_{SG} = Screening level in soil gas protective of indoor air.

TCE = trichloroethylene

VAF = Vapor attenuation factor (unitless); default value of 0.1 should be assumed in Tier I Evaluations (Draft Vapor Intrusion Guidance, Ecology, 2009).

SL_{SG} = SL_{IA} / VAF (Equation 2 in Draft Vapor Intrusion Guidance, Ecology, 2009).

Ecology, 2009, Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Publication No. 09-09-047.

Table 3-2 - Indoor, Ambient, and Sub-Slab Air Sample Results near Former Paint Booth

Project No. 080190-004-14, Former Walker Chevrolet Site (VCP No. SW1040)
633 Division Avenue, Tacoma, Washington

Description/ Chemical Name	Screening Level in Soil Gas Protective of Indoor Air (SL_{SG})	Screening Level in Soil Gas Protective of Indoor Air (SL_{SG})	Sub-slab Air, Beneath Former Paint Booth			Sub-slab Air, Adjacent to Former Paint Booth	Sub-slab Air, Beneath Former Paint Booth
Location			East side of paint booth	West side of paint booth	Middle of paint booth	Beneath concrete sidewalk adjacent to building and former roll-up door for paint booth	Beneath concrete flooring in preparation area outside and north of produce cooler
Sample ID			GV-1	GV-2	GV-3	Subslab-012314	SS-FPB-032015
Sample duration (hours)						1	1
Date and time collected			5/8/2008	5/8/2008	5/8/2008	1/23/14 1:15 PM	3/20/15 7:10 AM
	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3	µg/m^3
PCE	96.2	400	**110**	**1,000**	**160**	**270**	<2.03
TCE	3.7	20	<20	<20	<20	1.2	<1.07
cis-1,2-DCE	-	-	<50	<50	<50	<0.27	<0.793
trans-1,2-DCE	-	-	<50	<50	<50	<1.3	<0.793
Vinyl chloride	2.8	28	<200	<200	<200	<0.087	<0.511
1,4-Dioxane	5	50					<3.6
Benzene	3.21	30	<20	<20	<20	NA	2.09
Toluene	22,900	50,000	130	240	160	NA	3.94
Ethylbenzene	4,570	10,000	<100	<100	<100	NA	12.8
Xylenes	457	1000	<100	150	230	NA	132.3
Naphthalene	0.735	7.35					<1.57
Aliphatic hydrocarbon (EC5-8)	27,000	60,000					215
Aliphatic hydrocarbon (EC9-12)	1,400	3,000					311
Aromatic hydrocarbon (EC9-10)	1,800	4,000					221

Notes:

Bold highlighted font indicates exceedance of most conservative screening level.

Dashes indicate no value available.

DCE = dichloroethylene

µg/m^3 = micrograms per cubic meter

NA = not analyzed

PCE = tetrachloroethylene

SL_{IA} = Acceptable indoor air screening level.

SL_{SG} = Screening level in soil gas protective of indoor air.

TCE = trichloroethylene

VAF = Vapor attenuation factor (unitless); default value of 0.1 should be assumed in Tier I Evaluations (Draft Vapor Intrusion Guidance, Ecology, 2009).

$SL_{SG} = SL_{IA}$ / VAF (Equation 2 in Draft Vapor Intrusion Guidance, Ecology, 2009).

Ecology, 2009, Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Publication No. 09-09-047.

Table 3-3 - Groundwater Elevation Data

Project No. 080190-004-14, Former Walker Chevrolet Site (VCP No. SW1040)
633 Division Avenue, Tacoma, Washington

Well ID (Site Located)	Date	Vertical Angle	Screened Interval (feet bgs)	Top of Casing Elevation (feet, site datum)	Depth to Water (feet)	Groundwater Elevation (feet, site datum)
Advance Outwash Wells						
MW-1	2/27/2008	0	50 to 65	275.25	52.32	222.93
Former Walker Chevrolet	10/2/2008				53.09	222.16
	5/11/2009				53.68	221.57
	12/22/2010				53.61	221.64
	2/6/2012				52.93	222.32
	1/10/2014				53.21	222.04
MW-2	2/27/2008	0	50 to 65	273.14	51.50	221.64
Morrell's Dry Cleaners	10/2/2008				51.84	221.30
	5/12/2009				52.42	220.72
	12/22/2010				52.44	220.70
	2/6/2012				51.77	221.37
	12/12/2013				52.74	220.40
	6/24/2014	Injected 500 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)				
	1/21/2015				58	215
MW-3	2/27/2008	0	52 to 67	272.77	dry	dry
Former Walker Chevrolet	10/2/2008				dry	dry
(Decommissioned)	5/11/2009				dry	dry
	10/25/2010				Decommissioned	
MW-4	2/27/2008	0	49 to 64	273.01	dry	dry
Morrell's Dry Cleaners	10/2/2008				dry	dry
(Decommissioned)	5/11/2009				dry	dry
	10/25/2010				Decommissioned	
MW-5	2/27/2008	0	50 to 65	273.13	50.87	222.26
Morrell's Dry Cleaners	10/2/2008				51.65	221.48
	5/11/2009				52.28	220.85
	12/22/2010				52.21	220.92
	2/6/2012				51.60	221.53
	1/9/2014				52.68	220.45
	4/28/2015				51.38	221.75
MW-6	2/27/2008	0	49 to 64	272.55	dry	dry
Morrell's Dry Cleaners	10/2/2008				dry	dry
(Decommissioned)	5/11/2009				dry	dry
	10/25/2010				Decommissioned	
MW-7	2/27/2008	0	50 to 65	274.44	52.90	221.54
Morrell's Dry Cleaners	10/2/2008				53.08	221.36
	5/11/2009				53.69	220.75
	12/22/2010				53.73	220.71
	2/6/2012				52.98	221.46
	1/7/2014				54.10	220.34
MW-8	10/2/2008	0	51 to 61	273.14	52.68	220.46
Morrell's Dry Cleaners	5/12/2009				53.28	219.86
	12/22/2010				53.32	219.82
	2/6/2012				52.58	220.56
	12/7/2013				53.64	219.50
	6/23/2014	Injected 525 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)				
	1/20/2015				58	215

Note:
bgs = below ground surface

Table 3-3 - Groundwater Elevation Data

Project No. 080190-004-14, Former Walker Chevrolet Site (VCP No. SW1040)
633 Division Avenue, Tacoma, Washington

Well ID (Site Located)	Date	Vertical Angle	Screened Interval (feet bgs)	Top of Casing Elevation (feet, site datum)	Depth to Water (feet)	Groundwater Elevation (feet, site datum)
MW-9	5/11/2009	0	60 to 70	273.78	dry	dry
Morrell's Dry Cleaners	12/22/2010				dry	dry
(Decommissioned)	2/6/2012				dry	dry
	12/16/2013				dry	dry
	4/29/2015				Decommissioned	
MW-10	5/11/2009	0	60 to 70	274.45	dry	dry
Morrell's Dry Cleaners	12/22/2010				dry	dry
(Decommissioned)	2/6/2012				dry	dry
	12/16/2013				dry	dry
	4/29/2015				Decommissioned	
MW-11	5/12/2009	0	53 to 63	273.52	52.20	221.32
Former Walker Chevrolet	12/22/2010				52.24	221.28
	1/23/2014				52.69	220.83
	3/20/2015				52.07	221.45
	4/28/2015				51.49	222.03
MW-15	12/17/2013	37	44 to 60	273.84	53	221
Morrell's Dry Cleaners	6/23/2014	Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)				
MW-16	12/13/2013	23	41 to 60	272.88	53	220
Morrell's Dry Cleaners	6/23/2014	Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)				
	1/21/2015				61	212
MW-17	12/13/2013	32	43 to 60	272.97	53	220
Morrell's Dry Cleaners	6/24/2014	Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)				
MW-18	12/12/2013	45	46 to 60	272.80	60	212
Morrell's Dry Cleaners	6/24/2014	Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)				
MW-19	1/8/2014	0	45 to 60	273.15	52.72	220.43
Morrell's Dry Cleaners	6/24/2014	Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)				
	1/21/2015				56	217
MW-20	1/8/2014	0	45 to 60	273.03	52.64	220.39
Morrell's Dry Cleaners	6/24/2014	Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)				
	1/20/2015				55	218
MW-21	12/17/2013	0	45 to 60	274.03	53.66	220.37
Morrell's Dry Cleaners	6/23/2014	Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)				
	1/20/2015				57	217
Interglacial Deposit Wells						
MW-8D	5/11/2009	0	96 to 116	273.11	112.56	160.55
Morrell's Dry Cleaners	12/22/2010				112.58	160.53
	2/6/2012				112.52	160.59
	1/10/2014				112.56	160.55
	4/28/2015				112.45	160.66
MW-12D	12/22/2010	0	113 to 123	272.72	129.96	142.76
Morrell's Dry Cleaners	2/6/2012				129.80	142.92
	1/10/2014				129.94	142.78
	4/29/2015				129.89	142.83
MW-13D	12/22/2010	0	125 to 145	271.96	137.88	134.08
Morrell's Dry Cleaners	2/6/2012				137.43	134.53
	12/16/2013				137.70	134.26
	4/29/2015				137.13	134.83
MW-14D	2/6/2012	0	123 to 143	272.46	134.02	138.44
Morrell's Dry Cleaners	1/10/2014				134.26	138.20
	4/29/2015				133.82	138.64

Note:
bgs = below ground surface

Table 3-4 - Groundwater Volatile Organic Compound Sample Results

Project No. 080190-004-14, Morrell's Dry Cleaners Site (VCP No. SW1039) and Former Walker Chevrolet Site (VCP No. SW1040)
Tacoma, Washington

Well ID	Screen Interval (feet bgs)	Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl Chloride	Carbon Tetrachloride	Chloroform	Chloro-ethane	Naph-thalene
Method A, Groundwater CUL, Table Value (ug/L)			**5**	**5**	-	-	-	**0.2**	-	-	-	**160**
Federal and State Maximum Contaminant Level (ug/L)			**5**	**5**	**70**	**100**	**7**	**2**	**5**	**80**	-	-
Groundwater CUL (ug/L)			**5**	**5**	**70**	**100**	**7**	**0.2**	**5**	**80**	-	**160**
Advance Outwash Wells												
MW-1	50 - 65	8/28/07	1.3	<1	<1	<1	<1	<0.2	<1	<1	<1	<1
Former Walker Chevrolet		1/30/08	<1	<1	<1	<1	<1	<0.2	<1	<1	<1	<1
		10/2/08	<1	<1	<1	<1	<1	<0.2	<1	<1	<1	<1
		5/11/09	<1	<1	<1	<1	<1	<0.2	<1	<1	<1	<1
		12/22/10	<1	<1	<1	<1	<1	<0.2	<1	<1	<1	<1
		2/6/12	<1	<1	<1	<1	<1	<0.2	<1	<1	<1	<1
		1/10/14	<0.2	0.4	<0.2	<0.2	<0.2	<0.2	<0.2	0.39	<0.2	<0.5
MW-2	50 - 65	8/28/07	**2,900**	**1,800**	**7,100**	7.4	<1	**19**	1.0	1	8.1	<1
Morrell's Dry Cleaners		1/30/08	**1,400**	**520**	**2,000**	3	<1	<0.2	<1	2.5	<1	<1
		10/2/08	**1,900**	**880**	**2,300**	5.3	<1	**3.1**	1.0	3.5	1.0	<1
		5/12/09	**1,600**	**930**	**2,400**	5.7	ND	**2.7**	<1	4.0	<1	<1
		12/22/10	**2,100**	**1,100**	**2,100**	4.8	<1	**2.7**	<1	5.0	<1	<1
		2/6/12	**1,600**	**810**	**1,400**	<100	<100	**<20**	<100	<100	<100	<100
		12/12/13	**1,600**	**840**	**1,100**	2.7	<1	**0.84**	<1	3.3	<1	<1
		6/24/14	**Injected 500 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)**									
		1/21/15	**19**	**25**	**150**	<1	<1	**0.77**	<1	<1	<1	<1
MW-5	50 - 65	1/22/08	**67**	3	13	<1	<1	<0.2	3.3	2.1	<1	<1
Morrell's Dry Cleaners		1/30/08	**31**	1.1	4.5	<1	<1	<0.2	2.0	1.8	<1	<1
		10/2/08	**75**	3.2	17	<1	<1	<0.2	1.2	1.9	<1	<1
		5/11/09	**17**	1.1	44	<1	<1	<0.2	<1	<1	<1	<1
		12/22/10	**190**	**14**	41	<1	<1	<0.2	3.2	2.9	<1	<1
		2/6/12	**140**	**8.7**	25	<1	<1	<0.2	<1	<1	<1	<1
		1/9/14	<0.2	0.46	<0.2	<0.2	<0.2	<0.2	<0.2	0.35	<0.2	0.14
		6/24/14	**550 gallons of biostimulant injected into MW-20, located 50 feet downgradient, potentially pushing impacted groundwater upgradient**									
		4/28/15	**67**	**6.2**	6.4	<1	<1	<0.2	2.1	1.1	<1	<1
MW-7	50 - 65	1/22/08	**6.6**	<1	<1	<1	<1	<0.2	<1	<1	<1	<1
Morrell's Dry Cleaners		1/30/08	1.5	<1	<1	<1	<1	<0.2	1.5	<1	<1	<1
		10/2/08	<1	<1	<1	<1	<1	<0.2	1.5	<1	<1	<1
		5/11/09	1.1	<1	<1	<1	<1	<0.2	2.0	<1	<1	<1
		12/22/10	1.4	<1	<1	<1	<1	<0.2	3.3	<1	<1	<1
		2/6/12	<1	<1	<1	<1	<1	<0.2	2.2	<1	<1	<1
		1/7/14	1.4	<1	<1	<1	<1	<0.2	1.6	<1	<1	<1
MW-8	51 - 61	4/22/08	**1,300**	**780**	**2,400**	6.3	<1	**0.2**	<1	2.5	<1	<1
Morrell's Dry Cleaners		10/2/08	**680**	**390**	**3,600**	7.6	**10**	**6.9**	<1	2.5	<1	<1
		5/12/09	**780**	**370**	**2,600**	3.7	ND	**2.0**	<1	2.5	<1	ND
		12/22/10	**470**	**150**	**1,800**	3.3	3.7	**1.4**	<1	2.2	<1	<1
		2/6/12	**960**	**610**	**1,600**	<100	<100	**<20**	<100	<100	<100	<100
		12/17/13	**940**	**560**	**1,300**	<50	<50	**<10**	<50	<50	<50	<50
		6/23/14	**Injected 525 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)**									
		1/20/15	**14**	**8.5**	**1,200**	<5	6.4	**9.4**	<5	<5	<5	<5
MW-11	53 - 63	5/12/09	<1	2.3	<1	<1	<1	<0.2	1.4	1.9	<1	<1
Former Walker Chevrolet		12/22/10	<1	4.6	<1	<1	<1	<0.2	2.8	2.0	<1	<1
		1/23/14	<1	1.4	<1	<1	<1	<0.2	<1	<1	<1	0.15
		3/20/15	<1	3	<1	<1	<1	<0.2	1.2	1.1	<1	<1

Notes:
BOLD Highlighted signifies exceedance of Proposed Groundwater CUL (most stringent of MTCA Method A, Table Value and Federal and State MCL).
All values are in units of milligrams per liter (ug/L).
1,1-DCE = 1,1-dichloroethylene
bgs = below ground surface
cis-1,2-DCE = cis-1,2-dichloroethylene
MCL = maximum contaminant level
MTCA = Model Toxics Control Act
ND = not determined
PCE = tetrachloroethylene
TCE = trichloroethylene
trans-1,2-DCE = trans-1,2-dichloroethylene

Table 3-4 - Groundwater Volatile Organic Compound Sample Results

Project No. 080190-004-14, Morrell's Dry Cleaners Site (VCP No. SW1039) and Former Walker Chevrolet Site (VCP No. SW1040)
Tacoma, Washington

Well ID	Screen Interval (feet bgs)	Date	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,1-DCE	Vinyl Chloride	Carbon Tetrachloride	Chloroform	Chloro-ethane	Naph-thalene
Method A, Groundwater CUL, Table Value (ug/L)			**5**	**5**	**-**	**-**	**-**	**0.2**	**-**	**-**	**-**	**160**
Federal and State Maximum Contaminant Level (ug/L)			**5**	**5**	**70**	**100**	**7**	**2**	**5**	**80**	**-**	**-**
Groundwater CUL (ug/L)			**5**	**5**	**70**	**100**	**7**	**0.2**	**5**	**80**	**-**	**160**
MW-15 (angled with 37 degree vertical angle)	44 - 60	12/17/13	**460**	**110**	**380**	<10	<10	**<2**	<10	<10	<10	<10
Morrell's Dry Cleaners		12/17/13	**480**	**110**	**370**	<10	<10	**<2**	<10	<10	<10	<10
		6/23/14	**Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)**									
MW-16 (angled with 23 degree vertical angle)	41 - 60	12/13/13	**490**	**98**	**350**	<1	<1	**0.49**	2.2	2.5	<1	<1
Morrell's Dry Cleaners		6/23/14	**Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)**									
		1/21/15	**14**	**6.3**	**180**	<5	<5	**2.2**	<5	<5	<5	<5
MW-17 (angled with 32 degree vertical angle)	43 - 60	12/13/13	**170**	**24**	**81**	<1	<1	<0.2	3	2.4	<1	<1
Morrell's Dry Cleaners		6/24/14	**Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)**									
MW-18 (angled with 45 degree vertical angle)	46 - 60	12/12/13	**490**	**57**	**350**	<1	<1	**0.53**	<1	1.3	<1	<1
Morrell's Dry Cleaners		6/24/14	**Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)**									
MW-19	45 - 60	1/8/14	**62**	4.8	20	<1	<1	<0.2	**7**	3.8	<1	<1
Morrell's Dry Cleaners		6/24/14	**Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)**									
		1/21/15	**9.7**	<5	45	<5	<5	<1	<5	<5	<5	<5
MW-20	45 - 60	1/8/14	**140**	**16**	43	<1	<1	<0.2	3.6	2.2	<1	<1
Morrell's Dry Cleaners		6/24/14	**Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)**									
		1/20/15	**7.4**	**5.3**	**79**	<1	<1	**1.8**	<1	<1	<1	<1
MW-21	45 - 60	12/17/13	**500**	**130**	**460**	<10	<10	**<2**	<10	<10	<10	<10
Morrell's Dry Cleaners		6/23/14	**Injected 550 gallons of biostimulant (with 400 lbs of 3DMe Factory Emulsified and 30 lbs of HRC Primer)**									
		1/20/15	**15**	**12**	**270**	<5	<5	**<1**	<5	<5	<5	<5
Interglacial Deposit Wells												
MW-8D	96 - 116	5/11/09	<1	<1	11	<1	<1	<0.2	1.9	<1	<1	<1
Morrell's Dry Cleaners		12/22/10	<1	<1	21	<1	<1	<0.2	2.0	<1	<1	<1
		2/6/12	<1	<1	26	<1	<1	<0.2	1.8	<1	<1	<1
		1/10/14	<0.2	<0.2	42	<0.2	<0.2	<0.2	1.7	0.68	<0.2	0.8
		4/28/15	<1	<1	54	<1	<1	<0.2	1.7	<1	<1	<1
MW-12D	113 - 133	12/22/10	**6.1**	<1	22	<1	<1	<0.2	<1	<1	<1	<1
Morrell's Dry Cleaners		2/6/12	<1	<1	17	<1	<1	<0.2	<1	<1	<1	<1
		1/10/14	0.7	0.34	22	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5
		4/29/15	<1	<1	13	<1	<1	<0.2	<1	<1	<1	<1
MW-13D	125 - 145	12/22/10	**14**	3.2	30	<1	<1	<0.2	<1	<1	<1	<1
Morrell's Dry Cleaners		2/6/12	4.2	2.4	28	<1	<1	<0.2	<1	<1	<1	<1
		12/16/13	**5.9**	3.7	32	<1	<1	<0.2	<1	<1	<1	<1
		4/29/15	<1	<1	14	<1	<1	<0.2	<1	<1	<1	<1
MW-14D	123 - 143	2/6/12	4.2	3.3	28	<1	<1	<0.2	<1	<1	<1	<1
Morrell's Dry Cleaners		1/10/14	2.4	1.0	4.5	<1	<1	<0.2	<1	<1	<1	2.0
		4/29/15	2.2	<1	2.5	<1	<1	<0.2	<1	<1	<1	<1

Notes:
BOLD Highlighted signifies exceedance of Proposed Groundwater CUL (most stringent of MTCA Method A, Table Value and Federal and State MCL).
All values are in units of milligrams per liter (ug/L).
1,1-DCE = 1,1-dichloroethylene
bgs = below ground surface
cis-1,2-DCE = cis-1,2-dichloroethylene
MCL = maximum contaminant level
MTCA = Model Toxics Control Act
ND = not determined
PCE = tetrachloroethylene
TCE = trichloroethylene
trans-1,2-DCE = trans-1,2-dichloroethylene

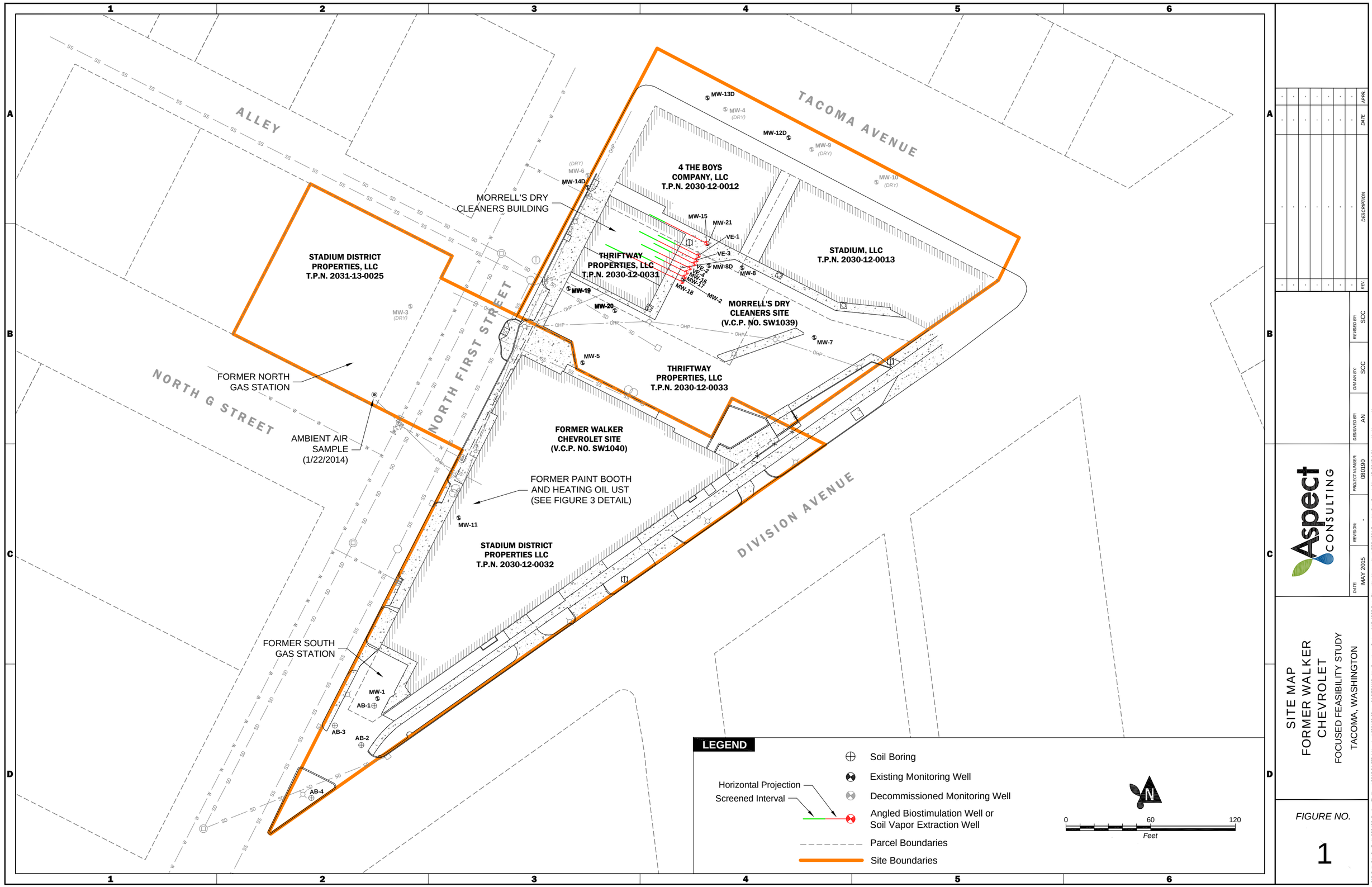
Table 3-5 - Groundwater Sample Results for Chemicals of Potential Concern and Natural Attenuation Parameters

Project No. 080190, Former Walker Chevrolet Site (VCP No. SW1040)
633 Division Avenue, Tacoma, Washington

Chemical Name	Groundwater, Method A, Table Value (µg/L)	Federal and State Maximum Contaminant Level (µg/L)	MW-11 5/12/2009	MW-11 12/22/2010	MW-11 1/23/2014	MW-11 3/20/2015	MW-11 4/28/2015
Site Name			**Former Walker Chevrolet**				
Location Description			**Former Paint Booth Area**				
Total Petroleum Hydrocarbons							
Gasoline-Range Hydrocarbons (µg/L) (no detectable benzene)	1,000				100 U	100 U	
Diesel-Range Hydrocarbons (µg/L)	500				50 U	82 X	
Oil-Range Hydrocarbons (µg/L)	500				250 U	250 U	
Volatile Organic Compounds (COPCs and Other Detected Compounds)							
Benzene (µg/L)	5	5	1 U	0.35 U	0.35 U	0.35 U	
Toluene (µg/L)	1,000	1,000	1 U	1 U	1 U	1 U	
Ethylbenzene (µg/L)	700	700	1 U	1 U	1 U	1 U	
Xylenes, total (µg/L)	1,000	10,000	3 U	3 U	3 U	3 U	
Tetrachloroethylene (µg/L)	5	5	1 U	1 U	1 U	1 U	
Trichloroethylene (µg/L)	5	5	2.3	4.6	1.4	3	
cis-1,2-Dichloroethylene (µg/L)		70	1 U	1 U	1 U	1 U	
trans-1,2-Dichloroethylene (µg/L)		100	1 U	1 U	1 U	1 U	
1,1-Dichloroethylene (µg/L)		7	1 U	1 U	1 U	1 U	
Vinyl Chloride (µg/L)	0.2	2	0.2 U	0.2 U	0.2 U	0.2 U	
Carbon Tetrachloride (µg/L)		5	1.4	2.8	1 U	1.2	
Chloroform (µg/L)		80	1.9	2	1 U	1.1	
1,4-Dioxane					10 U	0.4 U	
Polycyclic Aromatic Hydrocarbons							
Benz(a)anthracene (µg/L)					0.05 U		
Benzo(a)pyrene (µg/L)	0.1	0.2			0.05 U		
Benzo(b)fluoranthene (µg/L)					0.05 U		
Benzo(k)fluoranthene (µg/L)					0.05 U		
Chrysene (µg/L)					0.05 U		
Dibenzo(a,h)anthracene (µg/L)					0.05 U		
Indeno(1,2,3-cd)pyrene (µg/L)					0.05 U		
Total cPAHs TEQ (µg/L; calculated)	0.1				ND		
Naphthalene (µg/L)	160		1 U	1 U	0.15	1 U	
Fuel Additives & RCRA Metals							
1,2-Dibromethane (EDB) (µg/L)	0.01					0.01 U	
Arsenic (µg/L), total	5					**5.15**	**6.29**
Arsenic (µg/L), dissolved	5						1 U
Barium (µg/L), total						57.9	73.2
Barium (µg/L), dissolved							12.5
Cadmium (µg/L), total	5					1 U	1 U
Cadmium (µg/L), dissolved	5						1 U
Chromium (µg/L), total	50					24	26.1
Chromium (µg/L), dissolved	50						1.76
Lead (µg/L), total	15	15			2.44	4.99	6.2
Lead (µg/L), dissolved	15						1 U
Mercury (µg/L), total	2					1 U	1 U
Mercury (µg/L), dissolved	2						1 U
Selenium (µg/L), total						1 U	1 U
Selenium (µg/L), dissolved							1 U
Silver (µg/L), total						1 U	1 U
Silver (µg/L), dissolved							1 U
Polychlorinated Biphenyls (PCBs)							
PCB Mixtures (µg/L)	0.1	0.5			0.1 U		
Natural Attenuation Parameters							
Dissolved oxygen (mg/L)					2.3	2.6	
Oxidation-reduction potential (mV)					73	125	
Nitrate (mg/L)		10					
Nitrite (mg/L)		1					
Sulfate (mg/L)							
Iron, total (mg/L)							
Total organic carbon (TOC; mg/L)							

Notes:
Blank cell = indicate not sampled or no standard exists
COPC = chemical of potential concern
CPAH = carcinogenic polycyclic aromatic hydrocarbon
mg/L = milligrams per liter
MTCA = Model Toxics Control Act
mV = millivolts
TEQ = toxic equivalent quotient
U = analyte was not detected at or above the reported result.
µg/L = micrograms per liter
Dissolved metals were filtered through 0.45 micron filter

FIGURES



REV.	DESCRIPTION	DATE	APPR.
-	-	-	-

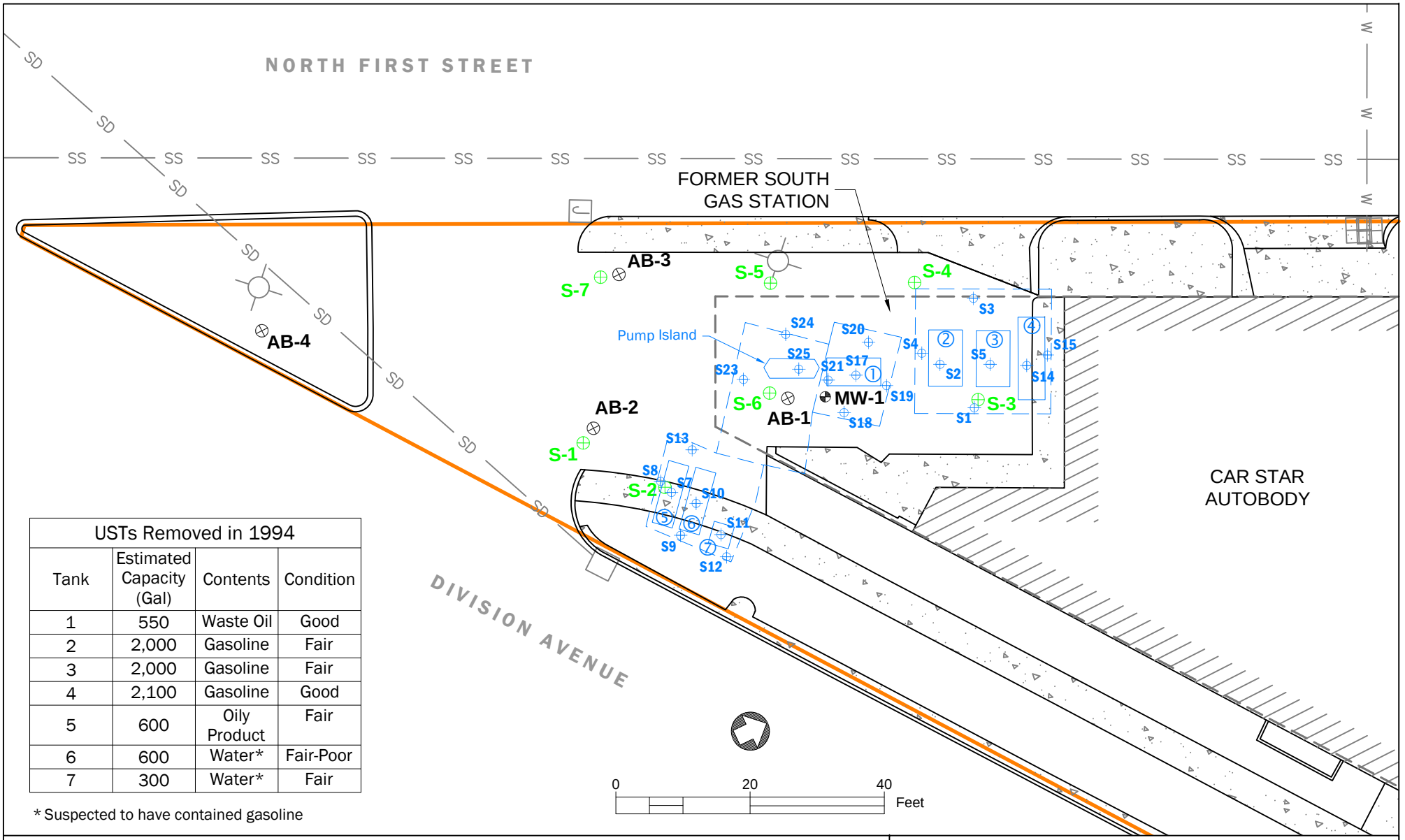
Aspect CONSULTING

DATE: MAY 2015
REVISION: -
PROJECT NUMBER: 080190
DESIGNED BY: AN
DRAWN BY: SCC
REVISED BY: SCC

SITE MAP
FORMER WALKER CHEVROLET
FOCUSED FEASIBILITY STUDY
TACOMA, WASHINGTON

FIGURE NO.
1

CAD Path: Q:_GeoTech\080190 Stadium Thriftway\2015-04 FFS Addendum\080190-03.dwg 01-SITE MAP || Coordinate System: NAD 1983 State Plane Washington North FIPS 4601 Feet || Date Saved: May 15, 2015 4:01pm || User: scudd



USTs Removed in 1994			
Tank	Estimated Capacity (Gal)	Contents	Condition
1	550	Waste Oil	Good
2	2,000	Gasoline	Fair
3	2,000	Gasoline	Fair
4	2,100	Gasoline	Good
5	600	Oily Product	Fair
6	600	Water*	Fair-Poor
7	300	Water*	Fair

* Suspected to have contained gasoline

Legend

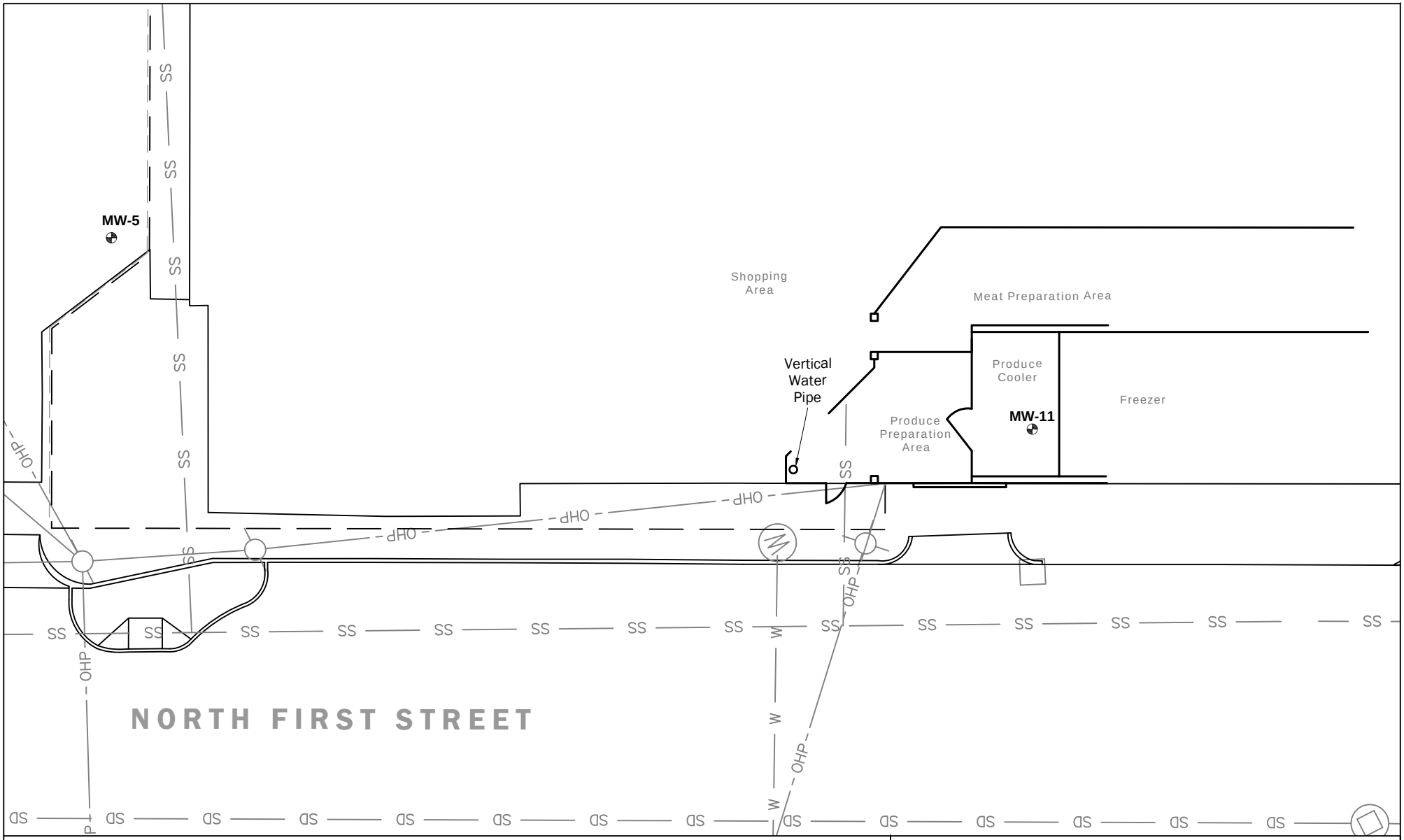
- Soil Boring Location (Aspect, 2013 & 2015)
- Soil Boring Location (Stemen, 2006)
- Monitoring Well Location
- Excavation Confirmation Sample Location (Bison, 1994)
- Excavation Area
- Tank Location and Number

Sample Locations and Details at Former South Gas Station

Focused Feasibility Study

Tacoma, Washington

Aspect Consulting	MAY-2015	BY: AN/SCC	FIGURE NO. 2
	PROJECT NO. 080190	REVISED BY: -	



Legend

Monitoring Well Location

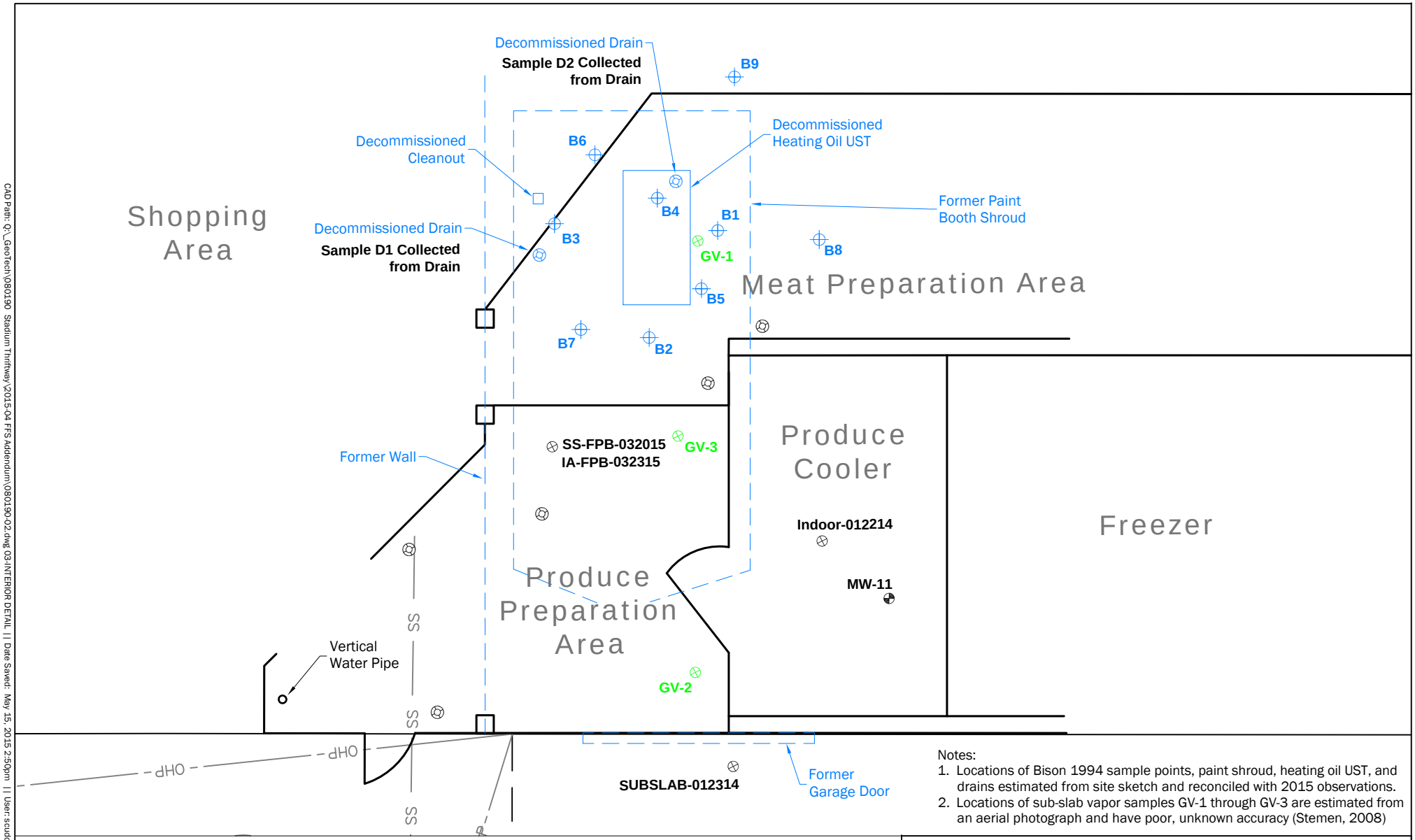
0 20 40 Feet

Current Details of Building Near Former Paint Booth

Focused Feasibility Study

Tacoma, Washington

Aspect Consulting	MAY-2015	BY: AN/SCC	FIGURE NO. 3
	PROJECT NO. 080190	REVISED BY: -	



Notes:
1. Locations of Bison 1994 sample points, paint shroud, heating oil UST, and drains estimated from site sketch and reconciled with 2015 observations.
2. Locations of sub-slab vapor samples GV-1 through GV-3 are estimated from an aerial photograph and have poor, unknown accuracy (Stemen, 2008)

Legend

- Sub-Slab/Indoor Vapor Point Location
- GV-1 Sub-Slab/Indoor Vapor Point Location (Stemen, 2008)
- Monitoring Well Location
- Floor Drain Location
- B2 Test Boring Location (Bison, 1994)

0 8 16 Feet

Interior Details of Building Near Former Paint Booth

Focused Feasibility Study

Tacoma, Washington

Aspect Consulting	MAY-2015	BY: AN/SCC	FIGURE NO. 4
	PROJECT NO. 080190	REVISED BY: -	

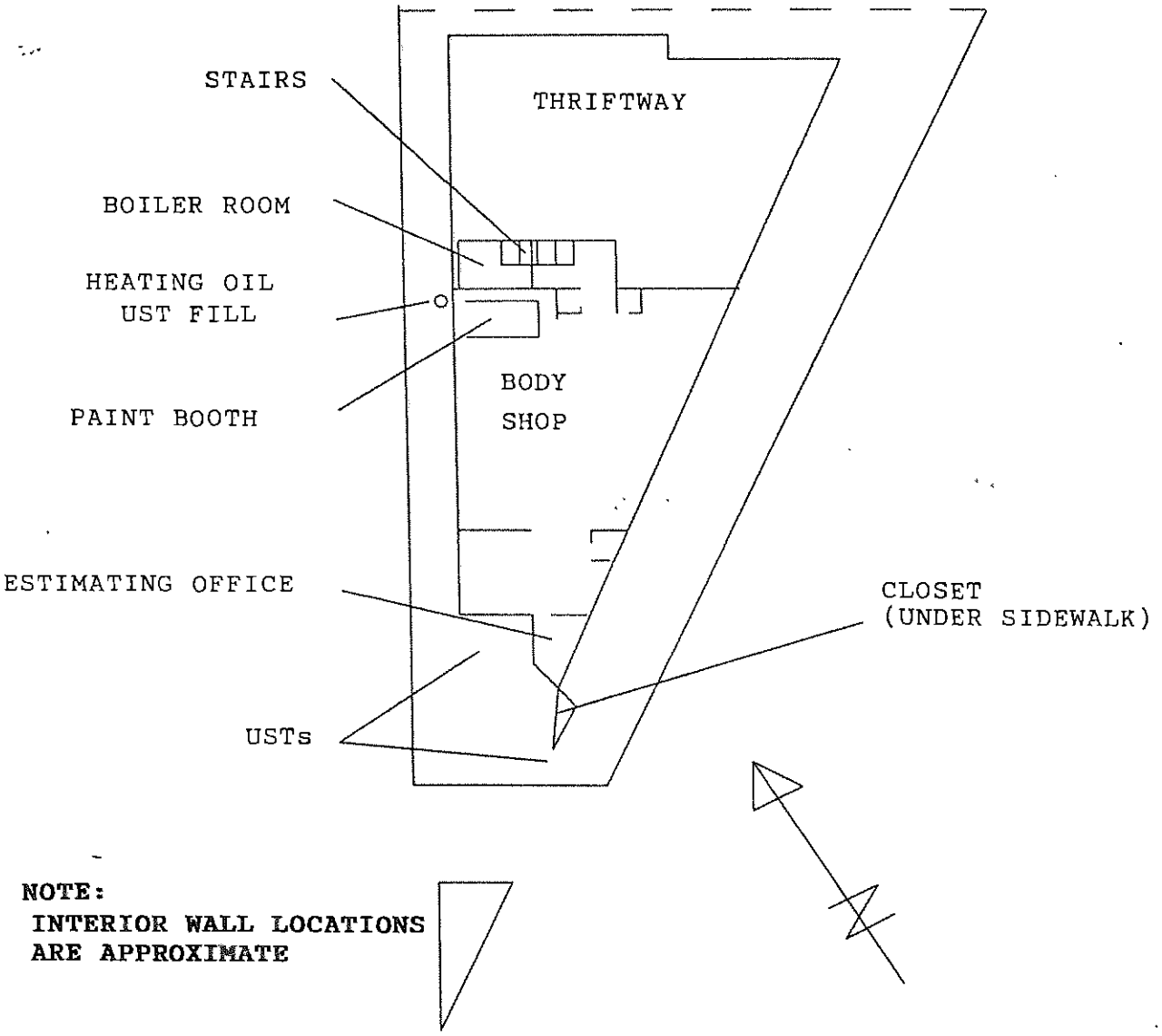
APPENDIX A

Summarized Figures and Data Tables from 1994 Remedial Action Reports and Due Diligence Sampling from 2006 to 2008

South Gas Station -
Figures and Data Tables

UST Removal Site Assessment
and Independent Remedial Action
Report for Walker Chevrolet
633 Division Avenue, Tacoma, WA 98403

Prepared by Bison Environmental Northwest, Inc.
August 1994

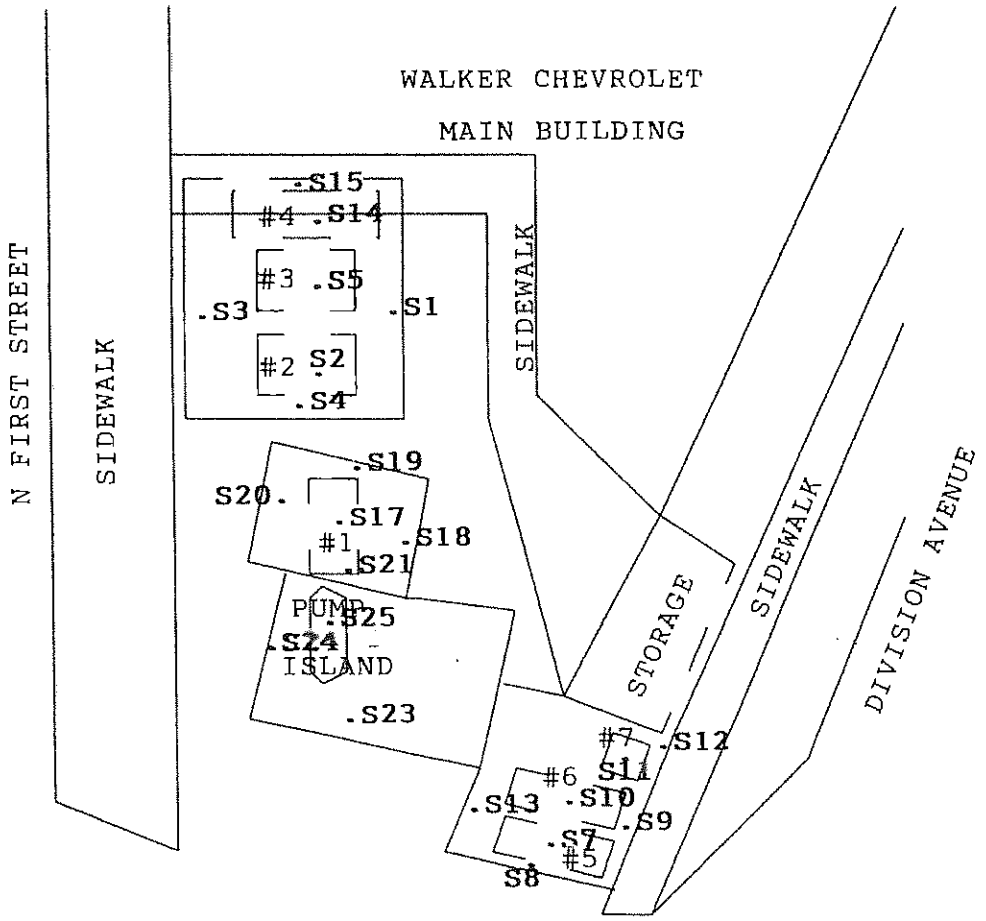


NOTE:
INTERIOR WALL LOCATIONS ARE APPROXIMATE

SCALE

0 50' 100'

SITE PLAN - LOWER FLOOR MAIN BUILDING
BISON ENVIRONMENTAL NORTHWEST, INC.
PROJECT# 94481 AUGUST 1994



SCALE

0 10'

KEY

#2 Tank Number
.S3 Sample Location

SITE PLAN
BISON ENVIRONMENTAL NORTHWEST, INC.
PROJECT# 94481 AUGUST 1994

SAMPLE LOG
WALKER CHEVROLET
PROJECT # 94481

Sample Number	Location	HCID	OTHER ANALYSIS		CLEANUP LEVEL (ppm)
S1	E wall tank 2-4 exc, 5'	ND	-		-
S2	Bottom tank 2, 10'	-	Gasoline	ND	-
			BTEX	ND	-
			Lead	ND	-
S3	W wall tank 2-4 exc, 7'	ND	-		-
S4	S wall tank 2-4 exc, 7'	ND	-		-
S5	Bottom tank 3, 10'	-	Gasoline	39 ppm	100
			B	ND	0.5
			T	ND	40
			E	0.33 ppm	20
			X	3.30 ppm	20
			Lead	6 ppm	250
S6	Tanks 5-7, surface	ND	-		-
S7	Bottom tank 5, 9'	ND	-		-
S8	S wall tank 5-7 exc, 7'	ND	-		-
S9	E wall tank 5-7 exc, 7'	ND	-		-
S10	Bottom tank 6, 8'	ND	-		-
S11	Bottom tank 7, 8'	ND	-		-
S12	E wall tank 5-7 exc, 7'	ND	-		-
S13	W wall tank 5-7 exc, 5'	ND	-		-
S14	Bottom tank 4, 10'	-	Gasoline	ND	-
			BTEX	ND	-
S15	N wall tank 2-4 exc, 8'	ND	-		-
S17	Bottom tank 1 exc, 8'	ND	-		-
S18	E wall tank 1 exc, 6'	ND	-		-
S19	N wall tank 1 exc, 7'	ND	-		-
S20	W wall tank 1 exc, 6'	ND	-		-
S21	S wall tank 1 exc, 7'	ND	-		-
S22	Pump I exc, 2' (removed)	-	Gasoline	570 ppm	100
			B	1.42 ppm	0.5
			T	7.81 ppm	40
			E	11.11 ppm	20
			X	84.20 ppm	20

SAMPLE LOG (continued)
WALKER CHEVROLET
PROJECT # 94481

Sample Number	Location	HCID	OTHER ANALYSIS			CLEANUP LEVEL (ppm)
S23	S wall pump I exc, 3'	ND	-			-
S24	W wall pump I exc, 3'	ND	-			-
S25	Bottom pump I exc, 5'	ND	-			-
01	Tank 2 overburden	ND	-			-
02	Tank 3 overburden	ND	-			-
03	Tank 1 overburden	ND	-			-
04	Tank 5-8 overburden	ND	-			-
05	Tank 5-8 overburden	ND	-			-
06	Tank 1 overburden	HO	Oils	1,900	ppm	200
			PCBs	ND		-
			VOCs	ND		-
		{metals}	Ba	88.4	ppm	5,600*
			Cd	0.4	ppm	2
			Cr	21.1	ppm	100
			Pb	34	ppm	250
			As,Hg,Se,&Ag	ND		-

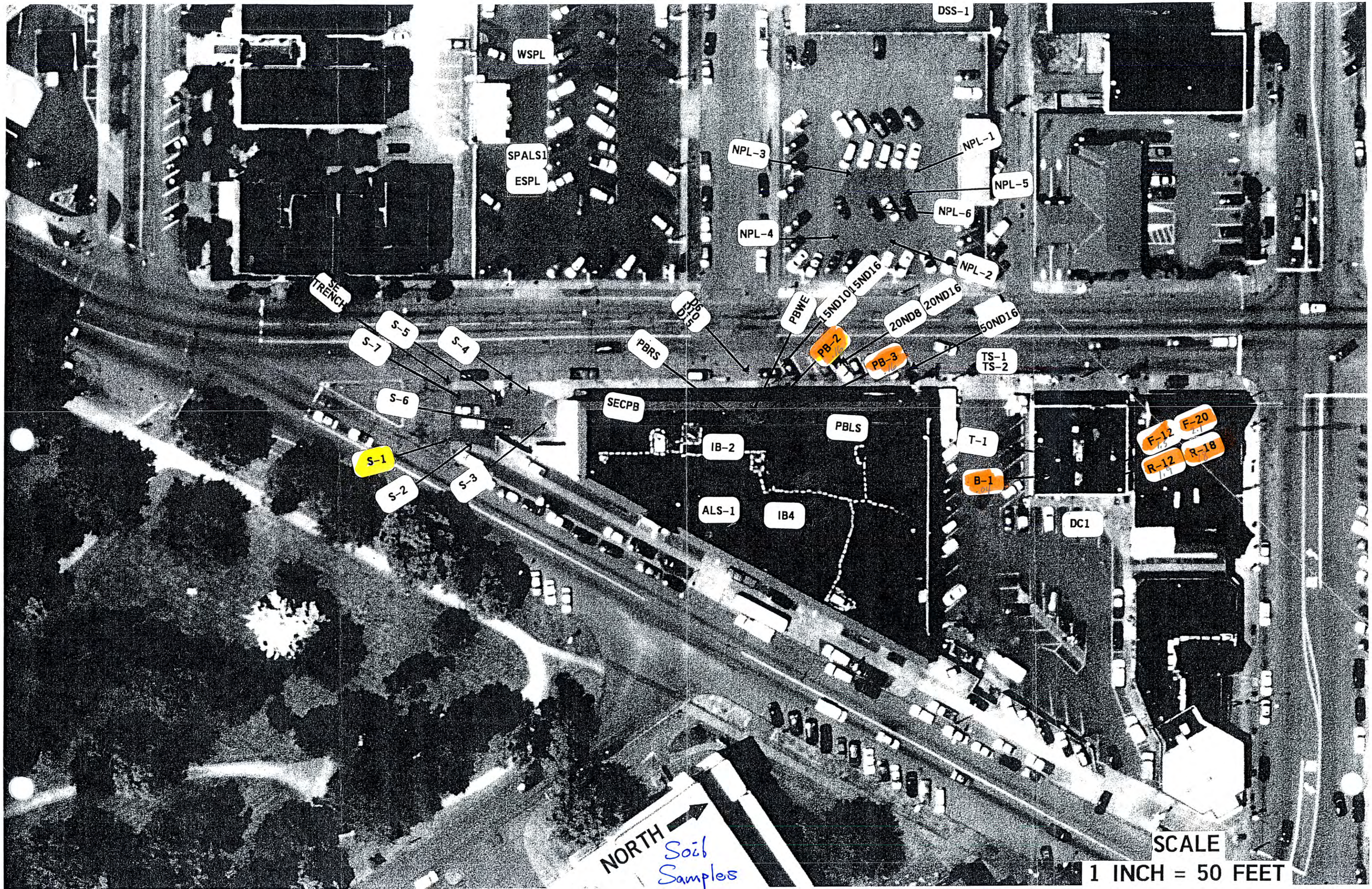
NOTES TO SAMPLE LOG

1) ppm denotes parts per million
2) B, T, E, and X denote benzene, toluene, ethylbenzene, and xylenes, respectively
3) VOCs denote volatile organic compounds
4) ND denotes none detected. Refer to laboratory reports for detection limits.
5) HCID - analysis for petroleum hydrocarbons by WTPH-HCID method. Refer to laboratory reports for other methods used during this project.
6) Unless indicated by asterix, cleanup levels are "Method A" values as specified in the Model Toxics Control Act (MTCA), WAC 173-340. Asterix indicates MTCA Method B value.

South Gas Station - Figures and Data Tables

Due Diligence Sampling for Walker Chevrolet, 633 Division Avenue, Tacoma, WA 98403

Provided by Stemen Environmental, Inc.
August 2006


DSS-1
WSPL
SPALS1
ESPL
NPL-3
NPL-1
NPL-5
NPL-6
NPL-4
NPL-2
SE TRENCH
S-5
S-7
S-4
S-6
S-1
S-2
S-3
PBRS
DF50
PBWE
15ND10
15ND16
20ND8
20ND16
50ND16
PB-2
PB-3
TS-1
TS-2
SECPB
PBLS
IB-2
T-1
B-1
F-20
F-12
R-18
R-12
ALS-1
IB4
DC1
NORTH
Soil Samples
SCALE
1 INCH = 50 FEET

SOIL SEMI-VOLATILE ORGANIC COMPOUNDS BY METHOD 8270

SAMPLE-NUMBER	S-1-15	SOIL REPORTING
SAMPLE DATE	8/31/06	LIMITS
DEPTHS	15	
	mg/kg	mg/kg
ACENAPHTHENE	ND	0.1
ACENAPHTHYLENE	ND	0.1
ANTHRACENE	ND	0.1
BENZO(a)ANTHRACENE	ND	0.1
BENZO(a)PYRENE	ND	0.1
BENZO(ghi)PERYLENE	ND	0.1
BENZO(k)FLUORANTHENE	ND	0.1
CHRYSENE	ND	0.1
DIBENZO(a,h)ANTHRACENE	ND	0.1
FLUORENE	ND	0.1
FLUORANTHENE	ND	0.1
INDENO(1,2,3-cd PYRENE	ND	0.1
ANPHTHALENE	ND	0.1
1-METHYLNAPTHALENE	ND	0.1
2-METHYLNAPTHALENE	ND	0.1
PHENANTHRENE	ND	0.1
PYRENE	ND	0.1

SOIL PCB ANALYSES EPA METHOD 8082

SAMPLE-NUMBER	S-1-15	
SAMPLE DATE	8/31/06	
DEPTHS	15'	
		MDL
PCB-1016	ND	0.2
PCB-1221	ND	0.2
PCB-1232	ND	0.1
PCB-1242	ND	0.1
PCB-1248	ND	0.1
PCB-1254	ND	0.1
PCB-1260	ND	0.1

ANALYSES OF SOIL FOR SPECIFIC HALOGENATED HYDROCARBONS BY EPA 8260 CHLORINATED

SAMPLE-NUMBER		PB-3-8	S-1-15	PB2-4	DC1-8
SAMPLE DATE		8/31/06	8/31/06	8/31/06	8/31/06
DEPTH		8'	15'	4'	8'
	SOIL REPORTING LIMITS	mg/kg	mg/kg	mg/kg	mg/kg
DICHLORODIFLUOROMETHANE	0.05	ND	ND	ND	ND
CHLOROMETHANE	0.05	ND	ND	ND	ND
VINYL CHLORIDE	0.01	ND	ND	ND	ND
BROMOMETHANE	0.05	ND	ND	ND	ND
CHLOROETHANE	0.05	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	0.05	ND	ND	ND	ND
ACETONE	0.5	ND	ND	ND	ND
METHYLENE CHLORIDE	0.5	ND	ND	ND	ND
METHYL-T-BUTY ETHER (MTBE)	0.05	ND	ND	ND	ND
TRANS 1,1 DICHLOROETHENE	0.05	ND	ND	ND	ND
1,1 DICHLOROETHENE	0.5	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	0.05	ND	ND	ND	ND
1,1 DICHLOROETHANE	0.05	ND	ND	ND	ND
CIS-1,2 DICHLOROETHENE	0.05	ND	ND	ND	ND
2,2-DICHLOROPROPANE	0.05	ND	ND	ND	ND
CHLOROFORM	0.05	ND	ND	ND	ND
BROMOCHLOROMETHANE	0.05	ND	ND	ND	ND
1,1,1- TRICHLOROETHANE	0.05	ND	ND	ND	ND
1,2 DICHLOROETHANE	0.05	ND	ND	ND	ND
1,1-DICHLOROPROPENE	0.05	ND	ND	ND	ND
CARBON TETRACHLORIDE	0.05	ND	ND	ND	ND
BENZENE	0.02	ND	ND	ND	ND
TRICHLOROETHENE (TCE)	0.02	ND	ND	ND	ND
1,2-DICHLOROPROPANE	0.05	ND	ND	ND	ND
DIBROMOMETHANE	0.05	ND	ND	ND	ND
BROMODICHLOROMETHANE	0.05	ND	ND	ND	ND
4-METHYL-2-PENANONE	0.05	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	0.05	ND	ND	ND	ND
TOULENE	0.05	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.05	ND	ND	ND	ND
1,1,2,-TRICHLOROETHANE	0.05	ND	ND	ND	ND
2-HEXANONE	0.05	ND	ND	ND	ND
1,3-DICHLOROPROPANE	0.05	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	0.05	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	0.02	0.16	ND	0.16	ND
1,2-DIBROMOETHANE (EDB)(*)	0.01	ND	ND	ND	ND
CHLOROBENZENE	0.05	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.05	ND	ND	ND	ND
ETHYLBENZENE	0.05	ND	ND	ND	ND
XYLENES	0.05	0.13	5.7	0.12	0.16

ANALYSES OF SOIL FOR SPECIFIC HALOGENATED HYDROCARBONS BY EPA 8260 CHLORINATED

SAMPLE-NUMBER		PB-3-8	S-1-15	PB2-4	DC1-8
SAMPLE DATE		8/31/06	8/31/06	8/31/06	8/31/06
DEPTH		8'	15'	4'	8'
	SOIL REPORTING LIMITS	mg/kg	mg/kg	mg/kg	mg/kg
STYRENE	0.05	ND	ND	ND	ND
BROMOFORM	0.05	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	0.05	ND	ND	ND	ND
ISOPROPYLBENZENE	0.05	ND	5	ND	ND
1,2,3-TRICHCHLOROPROPANE	0.05	ND	ND	ND	ND
BROMOBENZENE	0.05	ND	ND	ND	ND
n-PROPYLBENZENE	0.05	ND	14	ND	ND
2-CHLOROTOLUENE	0.05	ND	ND	ND	ND
4-CHLORODOLUENE	0.05	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	0.05	ND	37	ND	ND
TERT-BUTYLBENZENE	0.05	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	0.05	ND	71	ND	ND
SEC-BUTYLBENZENE	0.05	ND	ND	ND	ND
1,3-DICHLOROBENZENE	0.05	ND	ND	ND	ND
1,4-DICHLOROBENZENE	0.05	ND	ND	ND	ND
ISOPROPYLTOLUENE	0.05	ND	2.3	ND	ND
1,2-DICHLOROBENZENE	0.05	ND	ND	ND	ND
n-BUTYLBENZENE	0.05	ND	6.2	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.05	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	0.05	ND	ND	ND	ND
NAPHTHALENE	0.05	ND	ND	ND	ND
HEXACHLORO-1,3-BUTADIENE	0.05	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	0.05	ND	ND	ND	ND

TITUS/THRIFTWAY

ANALYSES OF SOIL FOR TOTAL PETROLEUM HYDROCARBONS EPA METHOD NWTPH-Dx/Dx EXTENDED

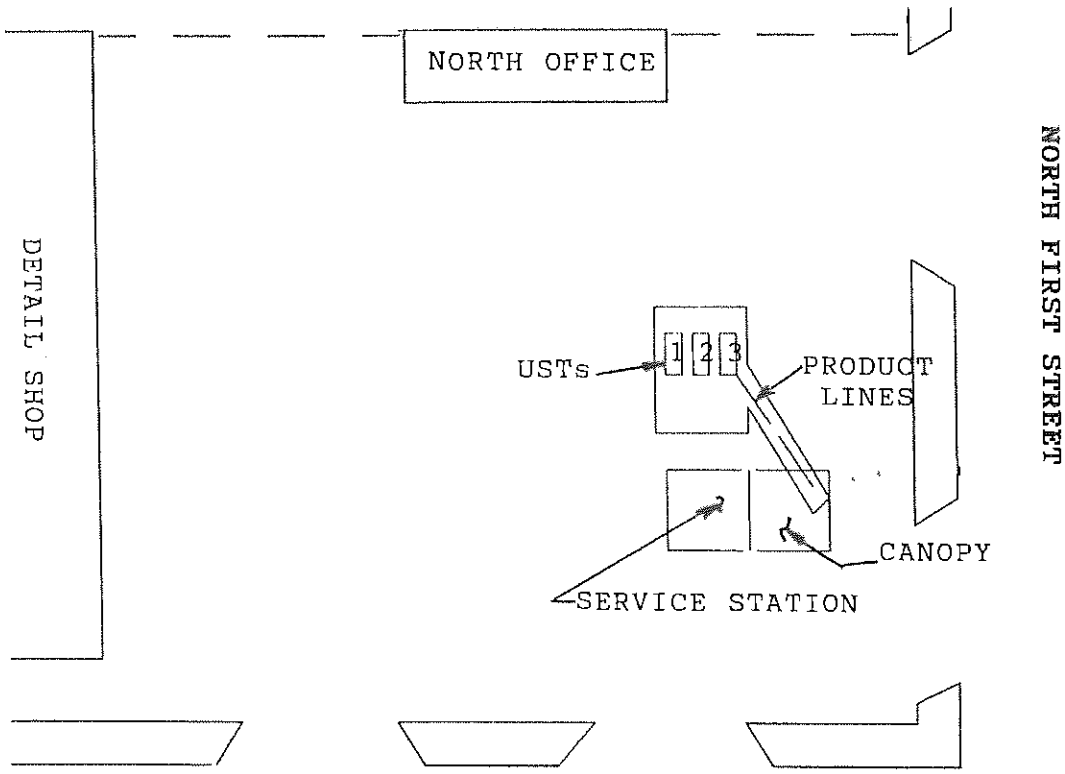
SAMPLE NUMBER	SAMPLE DATE	DEPTH	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	GASOLINE	DIESEL	OIL	MINERAL OIL
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
S-1-15	8/31/06	15'	6.1	4.1	6	12	920	ND	ND	ND
S-2-15	8/31/06	15'	ND	ND	ND	ND	ND	ND	ND	ND
S-7-15	8/31/06	16'					360	ND	ND	ND
S-3-15	8/31/06	15'	ND	ND	ND	ND	ND	ND	ND	ND
S-4-15	8/31/06	15'	ND	ND	ND	ND	ND	ND	ND	ND
S-5-15	8/31/06	13'	ND	ND	ND	ND	ND	ND	ND	ND
S-6-8	8/31/06	8'	ND	ND	ND	ND	ND	ND	ND	ND
PB-3-8	8/31/06	8'	*	*	*	*	30	ND	ND	ND
NPL-6-20	8/31/06	20'	ND	ND	ND	ND	ND	ND	ND	ND
ESPL-24	8/31/06	24	ND	ND	ND	ND	ND	ND	ND	ND
WSPL-20	8/31/06	20'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-1-21	8/31/06	21'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-2-19	8/31/06	19'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-3-19	8/31/06	19'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-4-19	8/31/06	19'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-5-20	8/31/06	20'	ND	ND	ND	ND	ND	ND	ND	ND
IB2-6	8/31/06	6'	ND	ND	ND	ND	ND	ND	94	ND
SECPB-8	8/31/06	8'	ND	ND	ND	ND	ND	ND	ND	ND
S PALS-1	9/18/06	23.5'	*	*	*	*	ND	ND	ND	ND
DC PLAS-2	9/18/06	18.5-20'	*	*	*	*	ND	ND	ND	ND
IB4	10/20/06	60"	*	*	*	*	ND	ND	ND	ND
PBWE	10/20/06	24"	*	*	*	*	ND	ND	87	ND
PBLS-24	10/20/06	24"	*	*	*	*	ND	ND	ND	ND
PBLS-36	10/20/06	36"	*	*	*	*	ND	ND	ND	ND
ALS-1	10/20/06	32"	*	*	*	*	ND	ND	220	ND
DSS-1	10/20/06	36"	*	*	*	*	ND	ND	ND	ND
PBRS	10/20/06	30"	*	*	*	*	ND	ND	ND	ND
MDL			0.02	0.05	0.05	0.05	10	30	40	40

* = Not analyzed

North Gas Station -
Figures and Data Tables

UST Removal Site Assessment and Independent Remedial Action Report for Walker Chevrolet
633 Division Avenue, Tacoma, WA 98403

Prepared by Bison Environmental Northwest, Inc.
August 1994

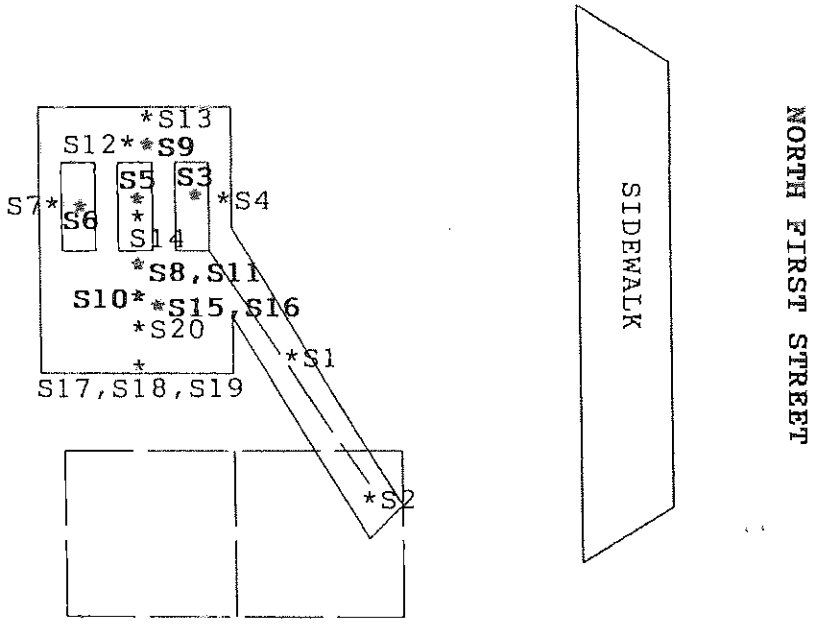


SCALE

0 20'

NOTE: Service Station and Canopy locations are approximate, and based on review of Sanborn Fire Insurance Maps, date 1945

SITE PLAN - WALKER CHEVROLET NORTH PARKING LOT
BISON ENVIRONMENTAL NORTHWEST, INC.
PROJECT# 94481-3 SEPT 1994



SCALE

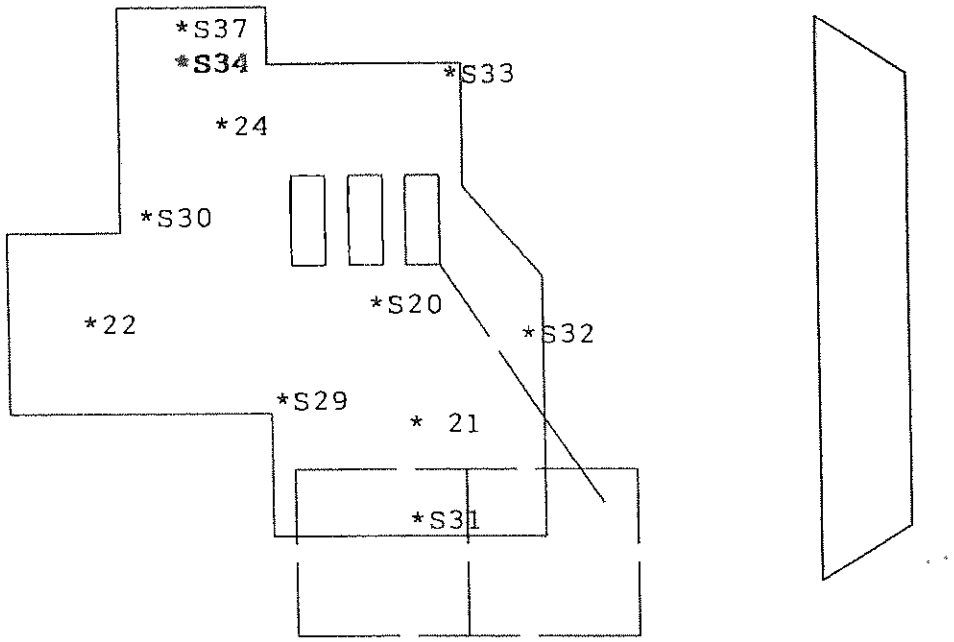
0 10' 20'

KEY

***S3** Sample Location- Contaminated Soil (removed)

*S18 Sample Location- "Clean" Soil

SITE PLAN - NORTH LOT on 9/2/94
BISON ENVIRONMENTAL NORTHWEST, INC.
PROJECT# 94481-3 SEPT 1994



SCALE

0 10' 20'

KEY

***S34** Sample Location- Contaminated Soil (removed)

*S21 Sample Location- "Clean" Soil

SITE PLAN - NORTH LOT on 9/12/94
BISON ENVIRONMENTAL NORTHWEST, INC.
PROJECT# 94481-3 SEPT 1994

SAMPLE LOG
WALKER CHEVROLET - NORTH PARKING LOT
PROJECT # 94481-3

Sample Number	Location	HCID RESULTS	OTHER ANALYSES TYPE	RESULTS		CLEANUP LEVEL (ppm)
S1	Beneath Prod Lines, 3'	ND	-			-
S2	Prob. Pump Isl Loc, 3'	ND	-			-
S3	Bottom tank 1, 5' (8/26)	G,HO	Gasoline	ND		100
			B	ND		0.5
			T	ND		40
			E	ND		20
			X	ND		20
			Lead	30	ppm	250
			Oils	540	ppm	200
S4	E wall, 4'	ND	-			-
S5	Bottom tank 2, 5' (8/26)	HO	Oils	140	ppm	200
S6	Bottom tank 3, 5' (8/26)	G,HO	Gasoline	298	ppm	100
			B	ND		0.5
			T	ND		40
			E	0.52	ppm	20
			X	7.78	ppm	20
			Lead	18	ppm	250
			Oils	18000	ppm	200
S7	W wall, 4'	ND	-			-
S8	S wall, 4' (8/26)	G,HO	Oils	21000	ppm	200
			B	ND		
			T	0.027	ppm	40
			E	0.062	ppm	20
			X	2.5	ppm	20
			sec-Butylbenzene	0.32	ppm	NA
			Isopropylbenzene	0.17	ppm	NA
			p-Isopropyltoluene	0.43	ppm	NA
			Naphthalene	4.4	ppm	320
			n-Propylbenzene	0.73	ppm	NA
			1,2,4 Trimethylbenzene	3.0	ppm	NA
			1,3,5 Trimethylbenzene	4.3	ppm	NA
			Other VOCs	ND		-
			PCBs	ND		-
			(metals) Ba	62	ppm	5,600*
			Cr	21.6	ppm	100
			Pb	27	ppm	250
			Cd,As,Hg,Se,&Ag	ND		-
S9	N wall, 4' (8/26)	HO	Oils	100	ppm	200
O1	Overburden Composite (8/26)	G,HO	Gasoline	173	ppm	100
			B	ND		0.5
			T	ND		40
			E	0.81	ppm	20
			X	2.31	ppm	20
			Lead	28	ppm	250
			Oils	5400	ppm	200
O2	Overburden Composite (8/26)	G,HO	-			-
O3	Overburden Composite (8/26)	G,HO	-			-

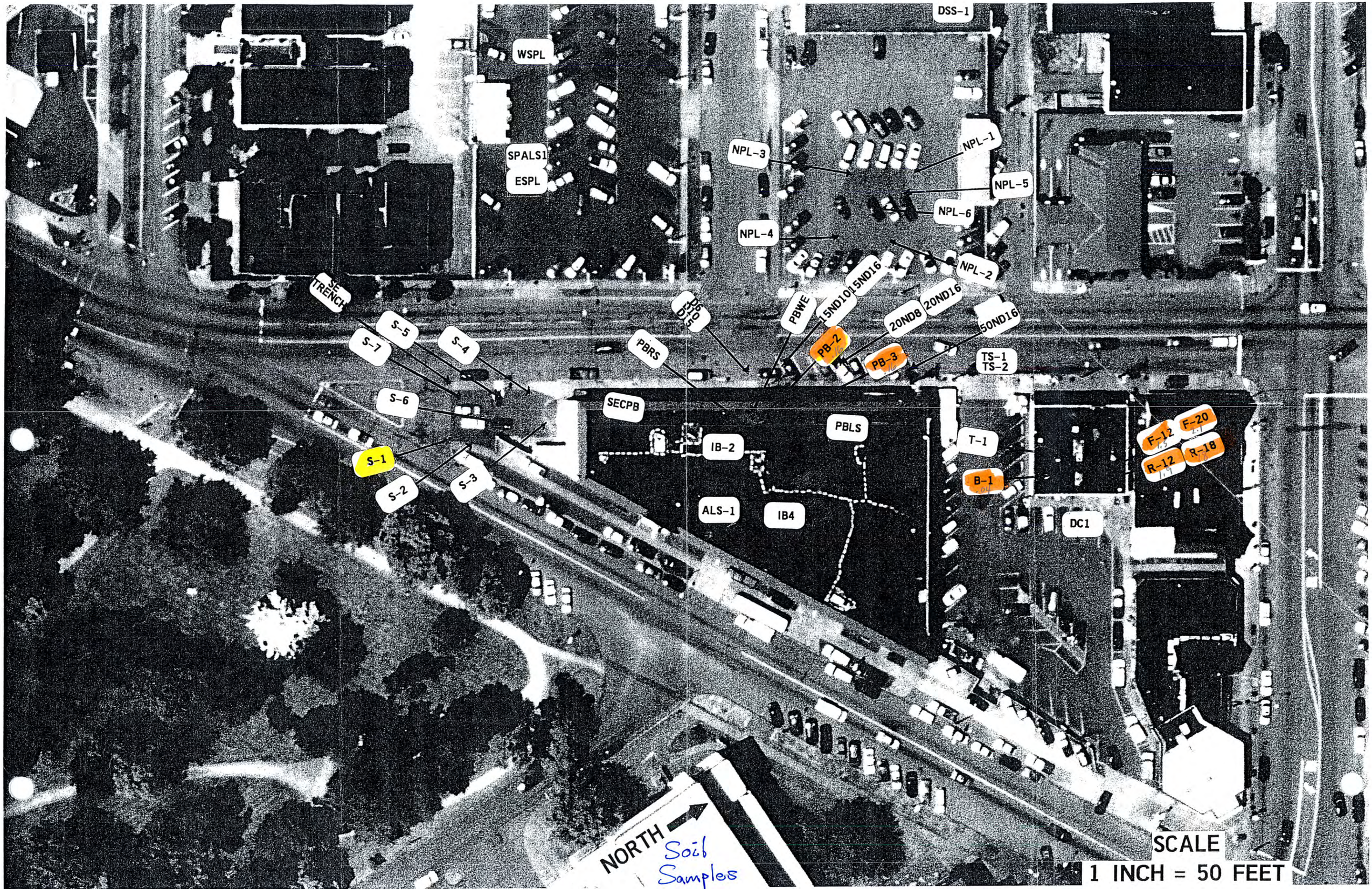
SAMPLE LOG (continued)
WALKER CHEVROLET
PROJECT # 94481-3

Sample Number	Location	HCID	OTHER ANALYSIS		CLEANUP LEVEL (ppm)
S10	S wall, 4' (8/31)	HO	Oils	3400 ppm	200
S11	S Bottom, 8' (8/31)	HO	Oils	880 ppm	200
S12	N Bottom, 8' (8/31)	ND	-		-
S13	N Wall, 4' (8/31)	ND	-		-
S14	Center Bottom, 8' (8/31)	ND	-		-
S15	South Bottom, 12' (9/2)	G,HO	Oils	10000 ppm	200
S16	S Bottom, 15' (9/2)	G,HO	Oils	560 ppm	200
S17	S Wall, 12' (9/2)	ND	Oils	ND	200
S18	S Wall, 8' (9/2)	ND	Oils	ND	200
S19	S Wall, 4' (9/2)	ND	Oils	ND	200
S20	S Bottom, 17' (9/2)	ND	Oils	ND	200
21	Bottom, 16'(9/6)	ND	-		-
22	Bottom W arm, 20' (9/6)	ND	-		-
23	Composite, contam soil	G,HO	-		-
			Naphthalene	1.0 ppm	320
			Other PAHs	ND	-
24	Bottom NWC, 20' (9/7)	ND	-		-
25	Overburden Composite (9/7)	ND	-		-
26	Overburden Composite (9/7)	ND	-		-
27	Overburden Composite (9/7)	ND	-		-
28	Overburden Composite (9/7)	ND	-		-
S29	W wall, 15' (9/8)	ND	-		-
S30	W wall, 16' (9/8)	ND	-		-
S31	SE corner, 15-16' (9/8)	ND	-		-
S32	E wall, 15' (9/8)	ND	-		-
S33	NE corner, 15-16' (9/8)	ND	-		-
S34	N wall, 15-16'(9/8)	G,HO	Oils	2200 ppm	200
			Gasoline	108 ppm	100
			BTEX	ND	-
S35	Bottom NEC, 21' (9/8)	ND	-		-
S36	"Hot Spot" in overburden		Oils	210 ppm	200
			Gasoline	ND	100
			BTEX	ND	-
S37	N Wall, 16' (9/12)	ND	-		-

North Gas Station -
Figures and Data Tables

Due Diligence Sampling for
Walker Chevrolet
633 Division Avenue, Tacoma, WA 98403

Provided by Stemen Environmental, Inc.
August 2006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S-2
S-3
PBRS
DF50
PBWE
15ND10
15ND16
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20ND16
50ND16
PB-2
PB-3
TS-1
TS-2
SECPB
PBLS
IB-2
T-1
B-1
F-20
F-12
R-18
R-12
ALS-1
IB4
DC1
NORTH
Soil Samples
SCALE
1 INCH = 50 FEET

TITUS/THRIFTWAY

ANALYSES OF SOIL FOR TOTAL PETROLEUM HYDROCARBONS EPA METHOD NWTPH-Dx/Dx EXTENDED

SAMPLE NUMBER	SAMPLE DATE	DEPTH	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	GASOLINE	DIESEL	OIL	MINERAL OIL
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
S-1-15	8/31/06	15'	6.1	4.1	6	12	920	ND	ND	ND
S-2-15	8/31/06	15'	ND	ND	ND	ND	ND	ND	ND	ND
S-7-15	8/31/06	16'					360	ND	ND	ND
S-3-15	8/31/06	15'	ND	ND	ND	ND	ND	ND	ND	ND
S-4-15	8/31/06	15'	ND	ND	ND	ND	ND	ND	ND	ND
S-5-15	8/31/06	13'	ND	ND	ND	ND	ND	ND	ND	ND
S-6-8	8/31/06	8'	ND	ND	ND	ND	ND	ND	ND	ND
PB-3-8	8/31/06	8'	*	*	*	*	30	ND	ND	ND
NPL-6-20	8/31/06	20'	ND	ND	ND	ND	ND	ND	ND	ND
ESPL-24	8/31/06	24	ND	ND	ND	ND	ND	ND	ND	ND
WSPL-20	8/31/06	20'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-1-21	8/31/06	21'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-2-19	8/31/06	19'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-3-19	8/31/06	19'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-4-19	8/31/06	19'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-5-20	8/31/06	20'	ND	ND	ND	ND	ND	ND	ND	ND
IB2-6	8/31/06	6'	ND	ND	ND	ND	ND	ND	94	ND
SECPB-8	8/31/06	8'	ND	ND	ND	ND	ND	ND	ND	ND
S PALS-1	9/18/06	23.5'	*	*	*	*	ND	ND	ND	ND
DC PLAS-2	9/18/06	18.5-20'	*	*	*	*	ND	ND	ND	ND
IB4	10/20/06	60"	*	*	*	*	ND	ND	ND	ND
PBWE	10/20/06	24"	*	*	*	*	ND	ND	87	ND
PBLS-24	10/20/06	24"	*	*	*	*	ND	ND	ND	ND
PBLS-36	10/20/06	36"	*	*	*	*	ND	ND	ND	ND
ALS-1	10/20/06	32"	*	*	*	*	ND	ND	220	ND
DSS-1	10/20/06	36"	*	*	*	*	ND	ND	ND	ND
PBRS	10/20/06	30"	*	*	*	*	ND	ND	ND	ND
MDL			0.02	0.05	0.05	0.05	10	30	40	40

* = Not analyzed

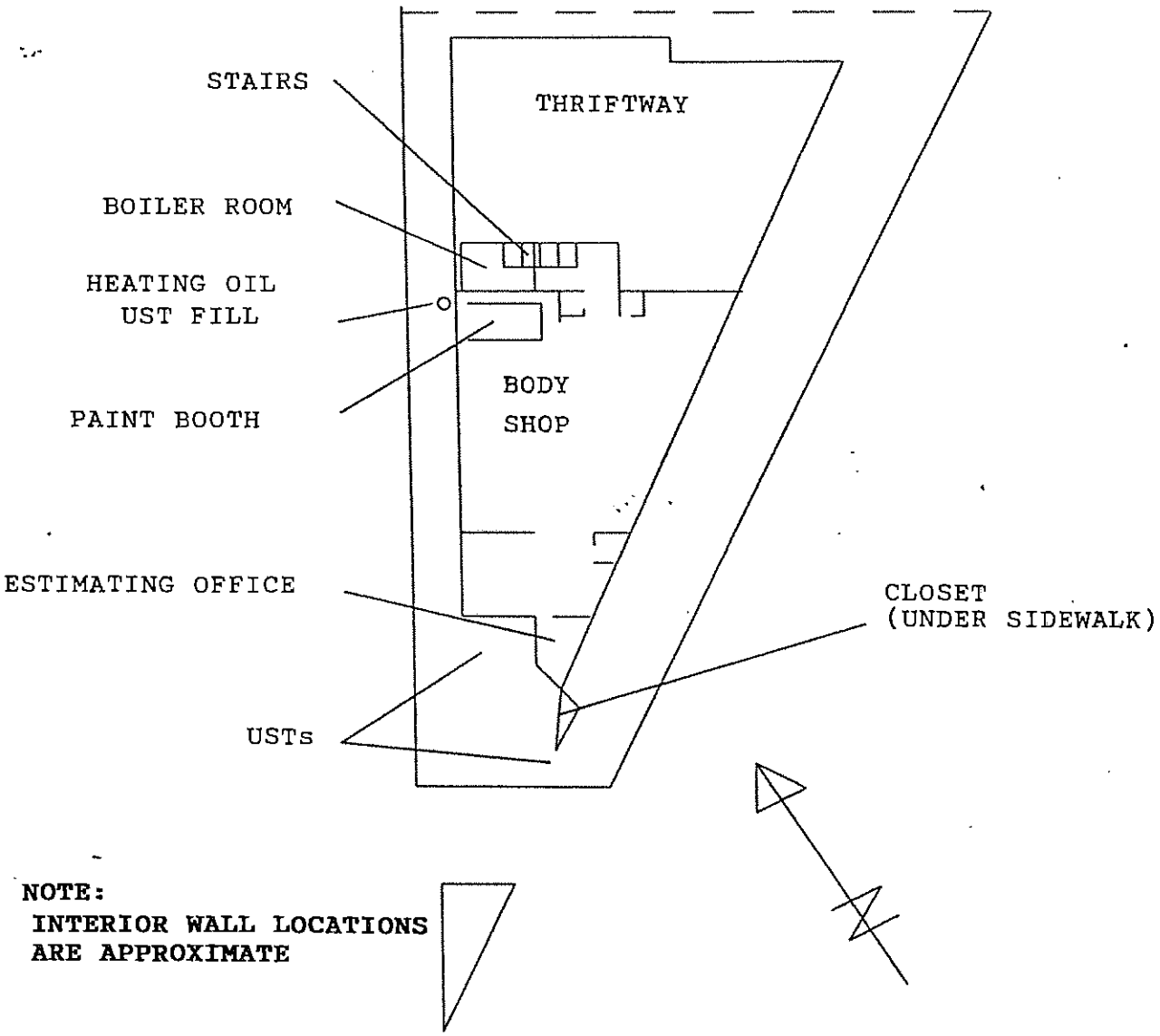
Former Paint Booth and Heating Oil UST - Figures and Data Tables

Phase 2 Studies, Floor Drain and Heating Oil UST Closure Walker Chevrolet Paint Booth 633 Division Avenue, Tacoma, WA 98403

Prepared by Bison Environmental Northwest, Inc.
August 15, 1994

Phase 2B Subsurface Sampling, Walker Chevrolet Paint Booth, 633 Division Avenue, Tacoma, WA 98403

Prepared by Bison Environmental Northwest, Inc.
September 12, 1994

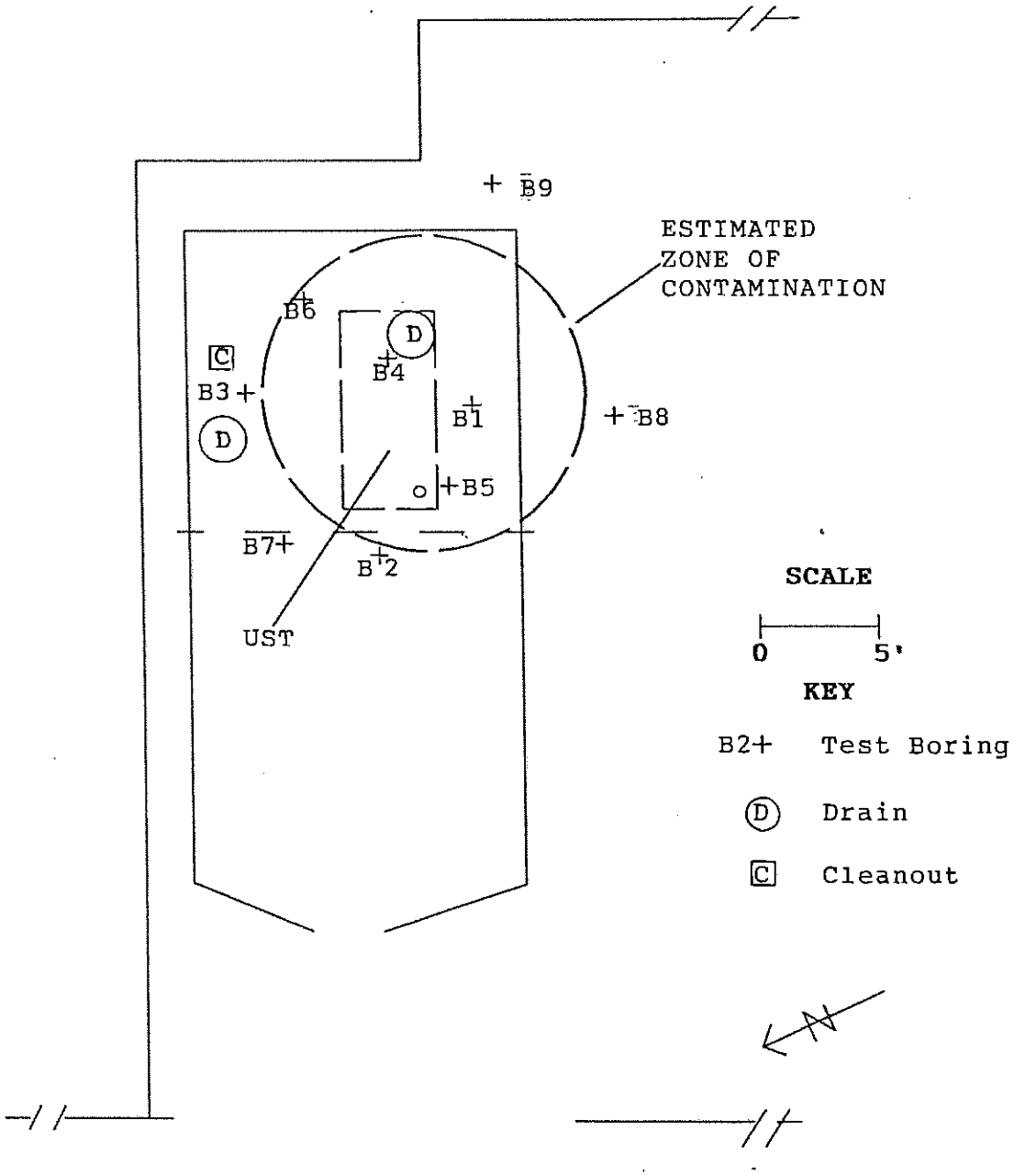


NOTE:
INTERIOR WALL LOCATIONS ARE APPROXIMATE

SCALE

0 50' 100'

SITE PLAN - LOWER FLOOR MAIN BUILDING
BISON ENVIRONMENTAL NORTHWEST, INC.
PROJECT# 94481 AUGUST 1994



SITE PLAN - WALKER CHEVROLET PAINT BOOTH
BISON ENVIRONMENTAL NORTHWEST, INC.
PROJECT# 94481-2 SEPTEMBER 1994

TABLE A:
LABORATORY RESULTS - PREVIOUS STUDY

Sample No./ Location	Analysis	Analyte	Results	Cleanup Level
B1-5.5'	WTPH-418.1	TPH	8,000 ppm	200 ppm
Sediment Sample D1 Inside Pipe Removed During Decommissioning	Total Metals	Barium	43.8 ppm	5,600 ppm*
		Cadmium	50.2 ppm	2 ppm
		Chromium	110 ppm	100 ppm
		Lead	2140 ppm	250 ppm
		As, Cd, SE, & Ag	ND	-
	EPA 8240	Ethylbenzene	2,200 ppb	20,000 ppb
		Isopropylbenzene	1,600 ppb	NA
		p-Isopropyltoluene	480 ppb	NA
		Tetrachloroethene	210 ppb	500 ppb
		Naphthalene	1,100 ppb	320,000 ppb*
		n-Propylbenzne	1,500 ppb	NA
		Toluene	85,000 ppb	40,000 ppb
		1,2,4 Trimethylbenzene	11,000 ppb	NA
		1,3,5 Trimethylbenzene	5,000 ppb	NA
		Total Xylenes	143,000 ppb	20,000 ppb
		Other VOCs		
B2-5.5'	WTPH-418.1	TPH	79 ppm	200 ppm
B3-2'	WTPH-418.1	TPH	96 ppm	200 ppm
	EPA 8240	Toluene	13 ppb	40,000 ppb
		Total Xylenes	5 ppb	20,000 ppb
		Other VOCs	ND	-
B4-3'	WTPH-418.1	TPH	480 ppm	200 ppm
	EPA 8240	Toluene	7 ppb	40,000 ppb
		Total Xylenes	6 ppb	20,000 ppb
		Other VOCs	ND	-

TABLE B:
LABORATORY RESULTS - TEST BORINGS

Sample No./ Location	Analysis	Analyte	Results	Cleanup Level
B5-5'	WTPH-HCID	Hydrocarbons	Gasoline - ND Diesel - ND Oil - Detected	
	WTPH-418.1	TPH	390 ppm	200 ppm
	EPA 8240	Methylene Chloride	26 ppb+	500 ppb
		Toluene	96 ppb+	40,000 ppb
		Total Xylenes	10 ppb	20,000 ppb
		Other VOCs	ND	
B5-7.5'	WTPH-418.1	TPH	2500 ppm	200 ppm
B5-9'	WTPH-418.1	TPH	4400 ppm	200 ppm
B5-10'	WTPH-HCID	Hydrocarbons	Gasoline - ND Diesel - ND Oil - Detected	
	WTPH-418.1	TPH	260 ppm	200 ppm
	EPA 8240	Benzene	24 ppb	500 ppb
		n-Butylbenzene	15 ppb	NA
		sec-Butylbenzene	22 ppb	NA
		Ethylbenzene	130 ppb	20,000 ppb
		Isopropylbenzene	50 ppb	NA
		p-Isopropyltoluene	15 ppb	NA
		Tetrachloroethene	53 ppb	500 ppb
		Methylene Chloride	28 ppb+	500 ppb
		n-Propylbenzene	80 ppb	NA
		Toluene	720 ppb+	40,000 ppb
		1,2,4 Trimethylbenzene	130 ppb	NA
		1,3,5 Trimethylbenzene	170 ppb	NA
		Total Xylenes	790 ppb	20,000 ppb
		Other VOCs	ND	
B6-5'	WTPH-HCID	Hydrocarbons	Gas - Detected Diesel - ND Oil - ND	
	WTPH-G	Gasoline	100 ppm	100 ppm
	EPA 8240	n-Butylbenzene	15 ppb	NA
		sec-Butylbenzene	22 ppb	NA
		Ethylbenzene	690 ppb	20,000 ppb
		p-Isopropyltoluene	83 ppb	NA
		Naphthalene	190 ppb	320,000 ppb
		n-Propylbenzne	99 ppb	NA
		Toluene	8,600 ppb+	40,000 ppb
		1,2,4 Trimethylbenzene	790 ppb	NA
		1,3,5 Trimethylbenzene	300 ppb	NA
		Total Xylenes	7,100 ppb	20,000 ppb
		Other VOCs		

TABLE B (continued)

Sample No./ Location	Analysis	Analyte	Results	Cleanup Level
B6-8'	WTPH-HCID	Hydrocarbons	ND	
	EPA 8240	Ethylbenzene	12 ppb	20,000 ppb
		Toluene	370 ppb+	40,000 ppb
		Total Xylenes	150 ppb	20,000 ppb
		Methylene Chloride	39 ppb+	500 ppb
		1,2,4 Trimethylbenzene	13 ppb	NA
		1,3,5 Trimethylbenzene	6 ppb	NA
		Other VOCs	ND	
B7-4'	WTPH-HCID	Hydrocarbons	ND	
	EPA 8240	Toluene	11 ppb+	40,000 ppb
		Methylene Chloride	41 ppb+	500 ppb
		Other VOCs	ND	
B8-5'	WTPH-HCID	Hydrocarbons	ND	
	EPA 8240	Toluene	14 ppb+	40,000 ppb
		Methylene Chloride	48 ppb+	500 ppb
B9-5'	WTPH-HCID	Hydrocarbons	ND	
	EPA 8240	VOCs	ND	

NOTES:

+ Compound also appeared in laboratory blank, suggesting cross-contamination in laboratory.
1) ppm indicates parts per million.
2) ppb indicates parts per billion.
3) TPH indicates total petroleum hydrocarbons. The 418.1 analysis is designed for heavy oils, but also reports lighter hydrocarbon fractions.
4) ND denotes none detected. Refer to laboratory reports for detection limits.
5) Unless indicated by asterix, cleanup levels are "Method A" values as specified in the Model Toxics Control Act (MTCA), WAC 173-340. Asterix indicates MTCA Method B value.
6) NA indicates a published MTCA cleanup level for this compound is not currently available.

SPECTRA Laboratories, Inc.
2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

August 2, 1994

Bonneville, Viert, Morton & McGoldrick
P.O. Box 1533
Tacoma, WA 98401

Attn: Dale Schuman

Sample ID: D1
Project: Walker 94481
Sample Matrix: Sediment
Date Sampled: 7-30-94
Date Received: 8-1-94
Spectra Project: S408-003
Spectra #8709
RUSH

WTPH-HCID
Sample contains gasoline, diesel and heavier than diesel range hydrocarbons.

Total Metals, mg/Kg

Arsenic	(As)	<5
Barium	(Ba)	422
Cadmium	(Cd)	50.2
Chromium	(Cr)	110
Lead	(Pb)	2,140
Mercury	(Hg)	<3
Selenium	(Se)	<8
Silver	(Ag)	<0.7

Total Metals testing performed by EPA Method 6010

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Chemist

SPECTRA Laboratories, Inc.

2221 Ross Way • Tacoma, WA 98421 • (206) 272-4850

August 2, 1994

Bonneville, Viert, Morton & McGoldrick
P.O. Box 1533
Tacoma, WA 98401

Attn: Dale Schuman

Sample ID: D2
Project: Walker 94481
Sample Matrix: Sediment
Date Sampled: 7-30-94
Date Received: 8-1-94
Spectra Project: S408-003
Spectra #8710
RUSH

WTPH-HCID

Sample contains gasoline and heavier than diesel range hydrocarbons.

Total Metals, mg/Kg

Arsenic	(As)	<5
Barium	(Ba)	2,000
Cadmium	(Cd)	4.2
Chromium	(Cr)	927
Lead	(Pb)	918
Mercury	(Hg)	<3
Selenium	(Se)	<8
Silver	(Ag)	<0.7

Total Metals testing performed by EPA Method 6010

SPECTRA LABORATORIES, INC.

Steven G. Hibbs, Chemist

Boring logs are presented below. Depth measurements should be considered accurate to the nearest 0.5 foot.

Boring 1

Date: 08-03-94
Location: West of South Drain and UST
No groundwater encountered

Depth (feet)	Soils	Comments
0-1	8" concrete slab, +/- 6" gravel fill	
1-5.5	Light brown, fine-grained sand, moist	Solvent-like odors and black staining, 3-5.5 feet
Auger refusal at 6 feet		Hard object or dense gravel at 6 feet

Boring 2

Date: 08-03-94
Location: Northwest of South Drain and UST
No groundwater encountered

Depth (feet)	Soils	Comments
0-1	8" concrete slab, +/- 6" gravel fill	
1-5.5	Light brown, fine-grained sand, moist	No odors or staining noted
Auger refusal at 6 feet		Hard object or dense gravel at 6 feet

Boring 3

Date: 08-03-94
Location: South of North Drain
No groundwater encountered

Depth (feet)	Soils	Comments
0-1	8" concrete slab, +/- 6" gravel fill	
1-3	Light brown, fine-grained sand with pieces of brick, moist	No odors or staining noted
Boring terminated at 3 feet		

Boring 4

Date: 08-03-94
Location: North of South Drain
No groundwater encountered

Depth (feet)	Soils	Comments
0-1	8" concrete slab, +/- 6" gravel fill	
1-3	Light brown, fine-grained sand, moist	Faint solvent-like odor noted 1-3 feet
Boring terminated at 3 feet		

BISON ENVIRONMENTAL NORTHWEST, INC.
SOIL LOGS - TEST BORINGS

Site Walker Chevrolet - Paint Booth
Project Number 94481-2 Date 09/08/94
Driller Burlington Environmental Logged by Henry Perrin
Boring# B5
Location 11' W, 3' N, of SEC Paint Booth

Sample #	Depth	Group Symbol	Soil Description
	0-1.5'	FILL	8" Concrete Slab +/- 6" Gravel Subgrade
	1.5-4'	SP-SM	Light Brown, gravelly, slightly silty SAND, moist, medium dense to very dense
B5-5'	4-10'	SP-SM	Dark Brown, gravelly, slightly silty SAND, moist, very dense **Faint Hydrocarbon Odors**
B5-7.5'	"	"	"
B5-9'	"	"	"
B5-10'	"	"	"

Groundwater encountered? No Depth
Monitoring Well? No ft screen/blank
Comments Refusal at 10 feet. Boring plugged with bentonite.

BISON ENVIRONMENTAL NORTHWEST, INC.
SOIL LOGS - TEST BORINGS

Site Walker Chevrolet - Paint Booth
Project Number 94481-2 Date 09/08/94
Driller Burlington Environmental Logged by Henry Perrin
Boring# B6
Location 3' W, 5' S, of NEC Paint Booth

Sample #	Depth	Group Symbol	Soil Description
	0-1.5'	FILL	8" Concrete Slab +/- 6" Gravel Subgrade
	1.5-4'	SP-SM	Light Brown, gravelly, silty SAND, moist, medium dense to very dense
B6-5'	4-6'	SP-SM	Blue-gray, gravelly, silty SAND, moist, very dense **Moderate hydrocarbon odors**
B6-8'	6-8'	"	Light Brown, gravelly, slightly silt SAND, moist, very dense

Groundwater encountered? No Depth
Monitoring Well? No ft screen/blank
Comments Refusal at 8 feet. Boring plugged with bentonite.

BISON ENVIRONMENTAL NORTHWEST, INC.
SOIL LOGS - TEST BORINGS

Site Walker Chevrolet - Paint Booth
Project Number 94481-2 Date 09/08/94
Driller Burlington Environmental Logged by Henry Perrin
Boring# B7
Location 13.5' W, 4' S, of NEC Paint Booth

Sample #	Depth	Group Symbol	Soil Description
	0-1.5'	FILL	8" Concrete Slab +/- 6" Gravel Subgrade
B7-4'	1.5-4'	SP-SM	Light Brown, gravelly, slightly silty SAND, moist, very dense

Groundwater encountered? No Depth
Monitoring Well? No ft screen/blank
Comments Refusal at 4 feet. Boring plugged with bentonite.

BISON ENVIRONMENTAL NORTHWEST, INC.
SOIL LOGS - TEST BORINGS

Site Walker Chevrolet - Paint Booth
Project Number 94481-2 Date 09/08/94
Driller Burlington Environmental Logged by Henry Perrin
Boring# B8
Location 8' W, 4' S, of SEC Paint Booth

Sample #	Depth	Group Symbol	Soil Description
	0-1.5'	FILL	6" Concrete Slab +/- 6" Gravel Subgrade
B8-5'	1.5-5'	SP	Light Brown, gravelly, SAND, moist, medium dense to very dense
B8-8'	5-8'	SP-SM	Light Brown, gravelly, silty SAND, moist, very dense

Groundwater encountered? No Depth
Monitoring Well? No ft screen/blank
Comments Refusal at 8 feet. Boring plugged with bentonite.

BISON ENVIRONMENTAL NORTHWEST, INC.
SOIL LOGS - TEST BORINGS

Site Walker Chevrolet - Paint Booth
Project Number 94481-2 Date 09/08/94
Driller Burlington Environmental Logged by Henry Perrin
Boring# B9
Location 2' E, 1' N, of SEC Paint Booth

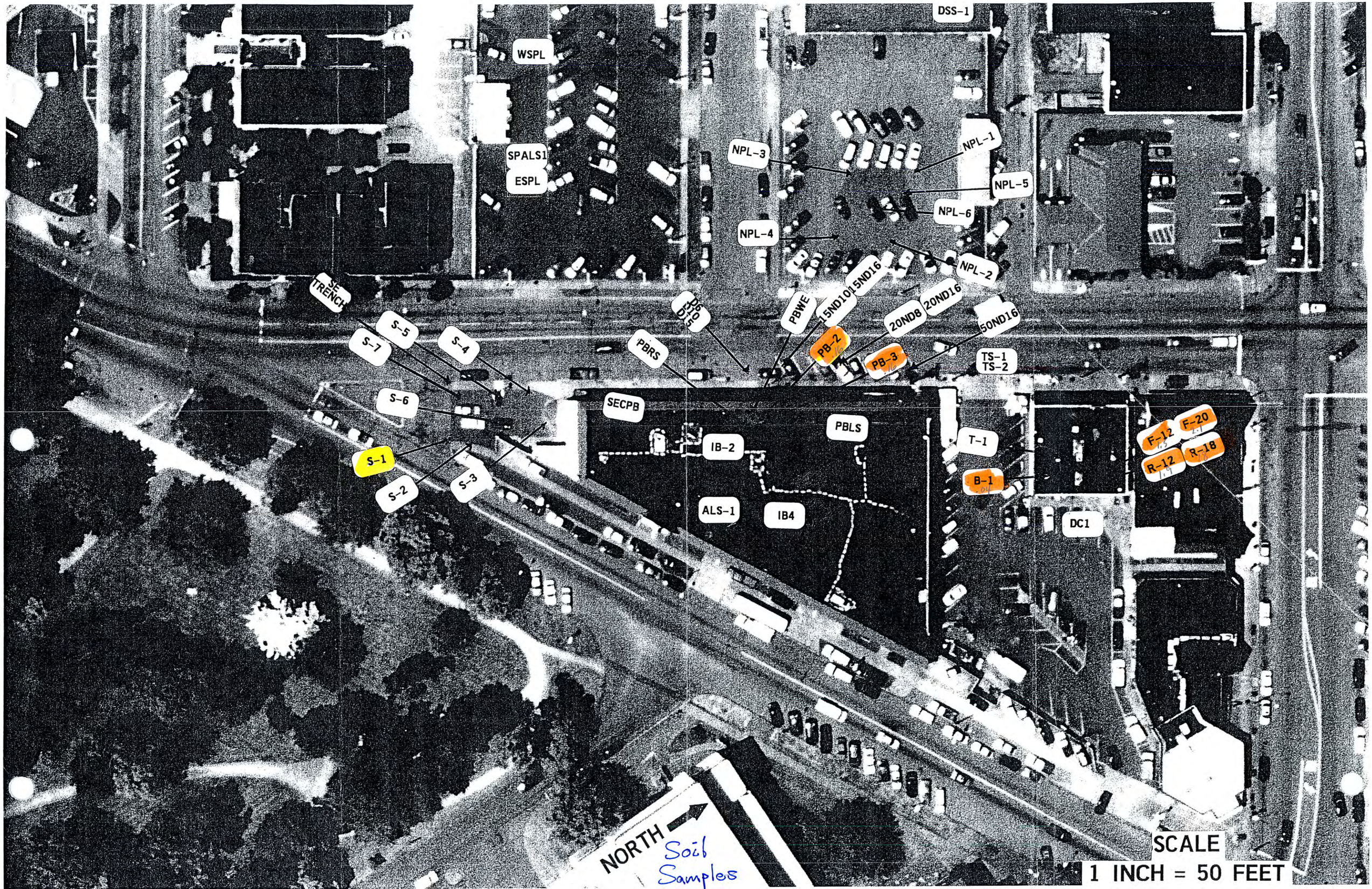
Sample #	Depth	Group Symbol	Soil Description
	0-1.5'	FILL	6" Concrete Slab +/- 6" Gravel Subgrade
B9-5'	1.5-5'	SP	Light Brown, gravelly, SAND, moist, medium dense to very dense
B9-8'	5-8'	SP-SM	Grayish Brown, gravelly, slightly silty SAND, moist, very dense

Groundwater encountered? No Depth
Monitoring Well? No ft screen/blank
Comments Refusal at 8 feet. Boring plugged with bentonite.

Former Paint Booth and Heating Oil UST - Figures and Data Tables

Due Diligence Sampling for Walker Chevrolet 633 Division Avenue, Tacoma, WA 98403

Provided by Stemen Environmental, Inc.
August 2006 and May 2008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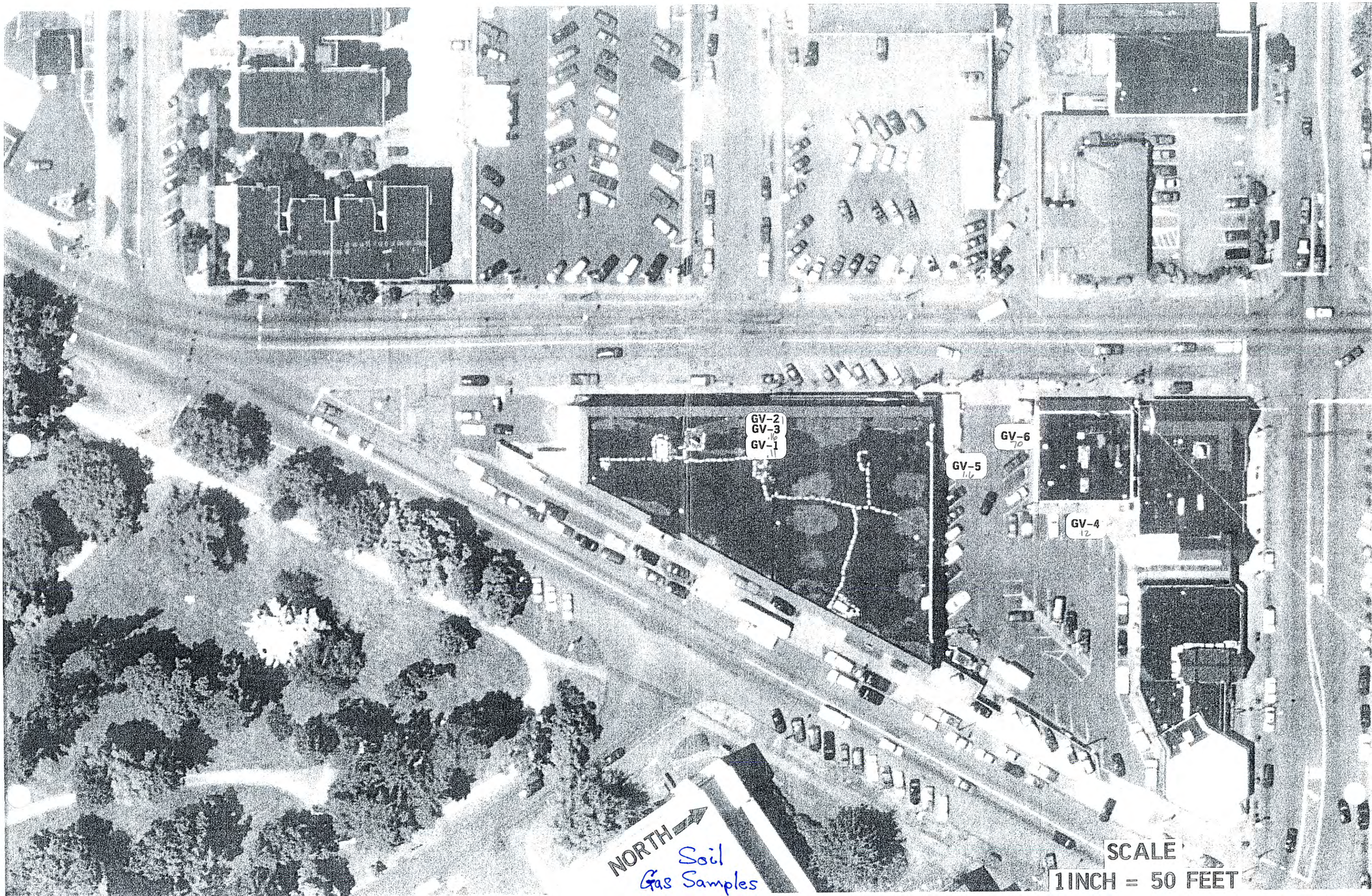
WSPL
SPALS1
ESPL
NPL-3
NPL-1
NPL-5
NPL-6
NPL-4
NPL-2
SE TRENCH
S-5
S-7
S-4
S-6
S-1
S-2
S-3
PBRS
DF50
PBWE
15ND10
15ND16
20ND8
20ND16
50ND16
PB-2
PB-3
TS-1
TS-2
SECPB
PBLS
IB-2
T-1
B-1
F-20
F-12
R-18
R-12
ALS-1
IB4
DC1
NORTH
Soil Samples
SCALE
1 INCH = 50 FEET


GV-2
GV-3
GV-1
GV-6
GV-5
GV-4
NORTH
Soil
Gas Samples
SCALE
1 INCH = 50 FEET

$1 L = 1{,}000\ cm^3$

$1\ m^3 = (100\ cm)^3 = 1{,}000{,}000\ cm^3 = 1{,}000\ L$

∴ Multiply µg/L by 1,000 to get µg/m³.

TITUS/THRIFTWAY

ALYSES OF SOIL GAS VAPORS FOR SPECIFIC HALOGENATED
DROCARBONS BY EPA 8260

SAMPLE-NUMBER		GV-1	GV-2	GV-3	GV-4	GV-5	GV-6
SAMPLE DATE	SOIL GAS VAPORS	5/8/08	5/8/08	5/8/08	5/8/08	5/8/08	5/8/08
	REPORTING LIMITS	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
DICHLORODIFLUOROMETHANE	0.1	ND	ND	ND	ND	ND	ND
CHLOROMETHANE	0.1	ND	ND	ND	ND	ND	ND
VINYL CHLORIDE	0.2	ND	ND	ND	0.54	ND	ND
BROMOMETHANE	0.1	ND	ND	ND	ND	ND	ND
CHLOROETHANE	0.1	ND	ND	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	0.1	ND	ND	ND	ND	ND	ND
ACETONE	1	ND	ND	ND	ND	ND	ND
METHYLENE CHLORIDE	1	ND	ND	ND	ND	ND	ND
1,1 DICHLOROETHENE	0.1	ND	ND	ND	ND	ND	ND
METHYL-T-BUTYL ETHER (MTBE)	0.1	ND	ND	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	0.05	ND	ND	ND	ND	ND	ND
1,1 DICHLOROETHANE	0.1	ND	ND	ND	ND	ND	ND
2-BUTANONE (MEK)	0.1	ND	ND	ND	ND	ND	ND
CIS-1,2 DICHLOROETHENE	0.05	ND	ND	ND	16	0.32	2.5
2,2-DICHLOROPROPANE	0.1	ND	ND	ND	ND	ND	ND
CHLOROFORM	0.05	ND	ND	ND	ND	ND	ND
BROMOCHLOROMETHANE	0.1	ND	ND	ND	ND	ND	ND
1,1,1- TRICHLOROETHANE	0.1	ND	ND	ND	ND	ND	ND
1,2 DICHLOROETHANE (EDC)	0.1	ND	ND	ND	ND	ND	ND
1,1-DICHLOROPROPENE	0.1	ND	ND	ND	ND	ND	ND
CARBON TETRACHLORIDE	0.1	ND	ND	ND	ND	ND	ND
BENZENE	0.02	ND	ND	ND	0.14	0.39	0.23
TRICHLOROETHENE (TCE)	0.02	ND	ND	ND	ND	2.7	7.8
1,2-DICHLOROPROPANE	0.1	ND	ND	ND	ND	ND	ND
DIBROMOMETHANE	0.1	ND	ND	ND	ND	ND	ND
BROMODICHLOROMETHANE	0.1	ND	ND	ND	ND	ND	ND
4-METHYL-2-PENTANONE (MIBK)	0.1	ND	ND	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	0.1	ND	ND	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.1	ND	ND	ND	ND	ND	ND
TOULENE	0.1	0.13	0.24	0.16	0.1	0.27	0.2
TRANS-1,3-DICHLOROPROPENE	0.1	ND	ND	ND	ND	ND	ND
1,1,2,-TRICHLOROETHANE	0.1	ND	ND	ND	ND	ND	ND
2-HEXANONE	0.1	ND	ND	ND	ND	ND	ND

ANALYSES OF SOIL GAS VAPORS FOR SPECIFIC HALOGENATED HYDROCARBONS BY EPA 8260

SAMPLE-NUMBER		GV-1	GV-2	GV-3	GV-4	GV-5	GV-6
SAMPLE DATE	SOIL GAS VAPORS REPORTING LIMITS	5/8/08	5/8/08	5/8/08	5/8/08	5/8/08	5/8/08
		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,3-DICHLOROPROPANE	0.1	ND	ND	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	0.1	ND	ND	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	0.02	0.11	1	0.16	12	1.6	70
1,2-DIBROMOETHANE	0.1	ND	ND	ND	ND	ND	ND
CHLOROBENZENE	0.1	ND	ND	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.1	ND	ND	ND	ND	ND	ND
ETHYLBENZENE	0.1	ND	ND	ND	ND	ND	ND
XYLENES	0.1	ND	0.15	0.23	ND	ND	ND
STYRENE	0.1	ND	ND	ND	ND	ND	ND
BROMOFORM	0.1	ND	ND	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	0.1	ND	ND	ND	ND	ND	ND
ISOPROPYLBENZENE	0.1	ND	ND	ND	ND	ND	ND
,2,3-TRICHCHLOROPROPANE	0.1	ND	ND	ND	ND	ND	ND
BROMOBENZENE	0.1	ND	ND	ND	ND	ND	ND
N-PROPYLBENZE	0.1	ND	ND	ND	ND	ND	ND
2-CHLOROTOLUENE	0.1	ND	ND	ND	ND	ND	ND
4-CHLORODOLUENE	0.1	ND	ND	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZE	0.1	ND	ND	ND	ND	ND	ND
TERT-BUTYLBENZENE	0.1	ND	ND	ND	ND	ND	ND
1,2,4-TRIMETHYBENZENE	0.1	ND	ND	ND	ND	ND	ND
SEC-BUTYLBENZENE	0.1	ND	ND	ND	ND	ND	ND
1,3-DICHLOROBENZENE	0.1	ND	ND	ND	ND	ND	ND
1,4-DICHLOROBENZENE	0.1	ND	ND	ND	ND	ND	ND
ISOPROPYLTOULENE	0.1	ND	ND	ND	ND	ND	ND
1,2-DICHLOROBENZENE	0.1	ND	ND	ND	ND	ND	ND
N-BUTYLBENZENE	0.1	ND	ND	ND	ND	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.1	ND	ND	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	0.1	ND	ND	ND	ND	ND	ND
NAPHTHALENE	0.1	ND	ND	ND	ND	ND	ND
HEXACHLORO-1,3-BUTADIENE	0.1	ND	ND	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	0.1	ND	ND	ND	ND	ND	ND

ANALYSES OF SOIL FOR SPECIFIC HALOGENATED HYDROCARBONS BY EPA 8260 CHLORINATED

SAMPLE-NUMBER		PB-3-8	S-1-15	PB2-4	DC1-8
SAMPLE DATE		8/31/06	8/31/06	8/31/06	8/31/06
DEPTH		8'	15'	4'	8'
	SOIL REPORTING LIMITS	mg/kg	mg/kg	mg/kg	mg/kg
DICHLORODIFLUOROMETHANE	0.05	ND	ND	ND	ND
CHLOROMETHANE	0.05	ND	ND	ND	ND
VINYL CHLORIDE	0.01	ND	ND	ND	ND
BROMOMETHANE	0.05	ND	ND	ND	ND
CHLOROETHANE	0.05	ND	ND	ND	ND
TRICHLOROFLUOROMETHANE	0.05	ND	ND	ND	ND
ACETONE	0.5	ND	ND	ND	ND
METHYLENE CHLORIDE	0.5	ND	ND	ND	ND
METHYL-T-BUTY ETHER (MTBE)	0.05	ND	ND	ND	ND
TRANS 1,1 DICHLOROETHENE	0.05	ND	ND	ND	ND
1,1 DICHLOROETHENE	0.5	ND	ND	ND	ND
TRANS-1,2-DICHLOROETHENE	0.05	ND	ND	ND	ND
1,1 DICHLOROETHANE	0.05	ND	ND	ND	ND
CIS-1,2 DICHLOROETHENE	0.05	ND	ND	ND	ND
2,2-DICHLOROPROPANE	0.05	ND	ND	ND	ND
CHLOROFORM	0.05	ND	ND	ND	ND
BROMOCHLOROMETHANE	0.05	ND	ND	ND	ND
1,1,1- TRICHLOROETHANE	0.05	ND	ND	ND	ND
1,2 DICHLOROETHANE	0.05	ND	ND	ND	ND
1,1-DICHLOROPROPENE	0.05	ND	ND	ND	ND
CARBON TETRACHLORIDE	0.05	ND	ND	ND	ND
BENZENE	0.02	ND	ND	ND	ND
TRICHLOROETHENE (TCE)	0.02	ND	ND	ND	ND
1,2-DICHLOROPROPANE	0.05	ND	ND	ND	ND
DIBROMOMETHANE	0.05	ND	ND	ND	ND
BROMODICHLOROMETHANE	0.05	ND	ND	ND	ND
4-METHYL-2-PENANONE	0.05	ND	ND	ND	ND
CIS-1,3-DICHLOROPROPENE	0.05	ND	ND	ND	ND
TOULENE	0.05	ND	ND	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.05	ND	ND	ND	ND
1,1,2,-TRICHLOROETHANE	0.05	ND	ND	ND	ND
2-HEXANONE	0.05	ND	ND	ND	ND
1,3-DICHLOROPROPANE	0.05	ND	ND	ND	ND
DIBROMOCHLOROMETHANE	0.05	ND	ND	ND	ND
TETRACHLOROETHENE (PCE)	0.02	0.16	ND	0.16	ND
1,2-DIBROMOETHANE (EDB)(*)	0.01	ND	ND	ND	ND
CHLOROBENZENE	0.05	ND	ND	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.05	ND	ND	ND	ND
ETHYLBENZENE	0.05	ND	ND	ND	ND
XYLENES	0.05	0.13	5.7	0.12	0.16

ANALYSES OF SOIL FOR SPECIFIC HALOGENATED HYDROCARBONS BY EPA 8260 CHLORINATED

SAMPLE-NUMBER		PB-3-8	S-1-15	PB2-4	DC1-8
SAMPLE DATE		8/31/06	8/31/06	8/31/06	8/31/06
DEPTH		8'	15'	4'	8'
	SOIL REPORTING LIMITS	mg/kg	mg/kg	mg/kg	mg/kg
STYRENE	0.05	ND	ND	ND	ND
BROMOFORM	0.05	ND	ND	ND	ND
1,1,2,2-TETRACHLOROETHANE	0.05	ND	ND	ND	ND
ISOPROPYLBENZENE	0.05	ND	5	ND	ND
1,2,3-TRICHCHLOROPROPANE	0.05	ND	ND	ND	ND
BROMOBENZENE	0.05	ND	ND	ND	ND
n-PROPYLBENZENE	0.05	ND	14	ND	ND
2-CHLOROTOLUENE	0.05	ND	ND	ND	ND
4-CHLORODOLUENE	0.05	ND	ND	ND	ND
1,3,5-TRIMETHYLBENZENE	0.05	ND	37	ND	ND
TERT-BUTYLBENZENE	0.05	ND	ND	ND	ND
1,2,4-TRIMETHYLBENZENE	0.05	ND	71	ND	ND
SEC-BUTYLBENZENE	0.05	ND	ND	ND	ND
1,3-DICHLOROBENZENE	0.05	ND	ND	ND	ND
1,4-DICHLOROBENZENE	0.05	ND	ND	ND	ND
ISOPROPYLTOLUENE	0.05	ND	2.3	ND	ND
1,2-DICHLOROBENZENE	0.05	ND	ND	ND	ND
n-BUTYLBENZENE	0.05	ND	6.2	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.05	ND	ND	ND	ND
1,2,4-TRICHLOROBENZENE	0.05	ND	ND	ND	ND
NAPHTHALENE	0.05	ND	ND	ND	ND
HEXACHLORO-1,3-BUTADIENE	0.05	ND	ND	ND	ND
1,2,3-TRICHLOROBENZENE	0.05	ND	ND	ND	ND

TITUS/THRIFTWAY

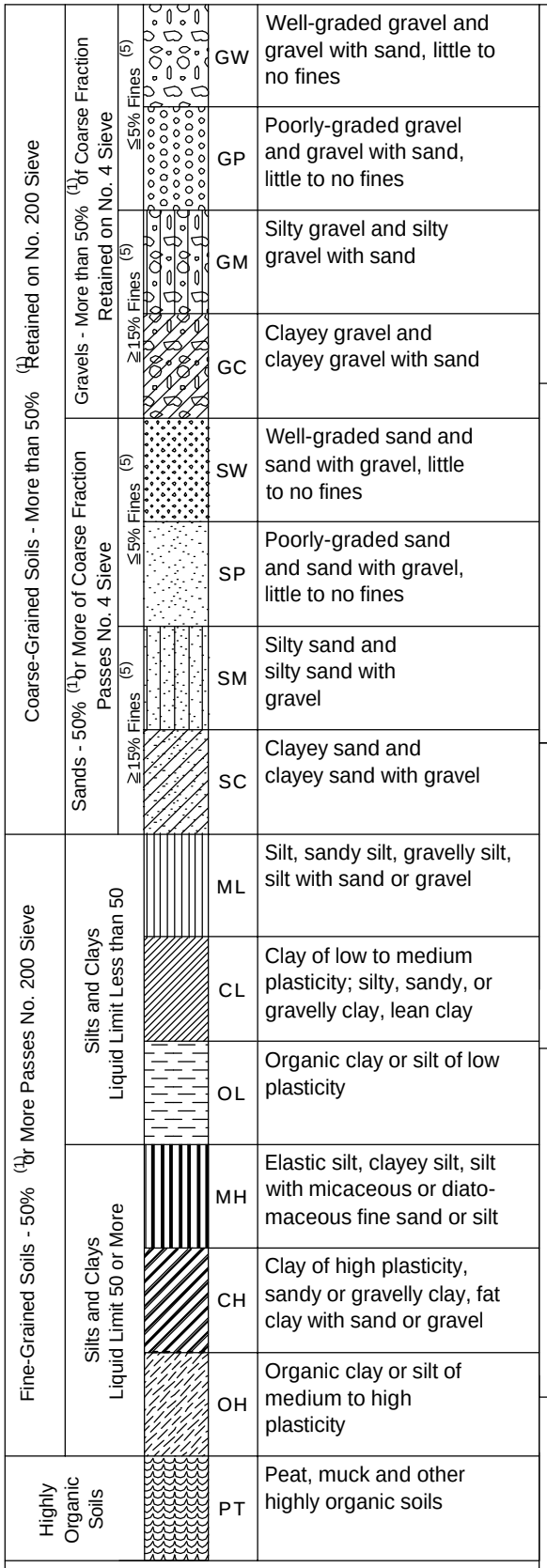
ANALYSES OF SOIL FOR TOTAL PETROLEUM HYDROCARBONS EPA METHOD NWTPH-Dx/Dx EXTENDED

SAMPLE NUMBER	SAMPLE DATE	DEPTH	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	GASOLINE	DIESEL	OIL	MINERAL OIL
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
S-1-15	8/31/06	15'	6.1	4.1	6	12	920	ND	ND	ND
S-2-15	8/31/06	15'	ND	ND	ND	ND	ND	ND	ND	ND
S-7-15	8/31/06	16'					360	ND	ND	ND
S-3-15	8/31/06	15'	ND	ND	ND	ND	ND	ND	ND	ND
S-4-15	8/31/06	15'	ND	ND	ND	ND	ND	ND	ND	ND
S-5-15	8/31/06	13'	ND	ND	ND	ND	ND	ND	ND	ND
S-6-8	8/31/06	8'	ND	ND	ND	ND	ND	ND	ND	ND
PB-3-8	8/31/06	8'	*	*	*	*	30	ND	ND	ND
NPL-6-20	8/31/06	20'	ND	ND	ND	ND	ND	ND	ND	ND
ESPL-24	8/31/06	24	ND	ND	ND	ND	ND	ND	ND	ND
WSPL-20	8/31/06	20'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-1-21	8/31/06	21'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-2-19	8/31/06	19'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-3-19	8/31/06	19'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-4-19	8/31/06	19'	ND	ND	ND	ND	ND	ND	ND	ND
NPL-5-20	8/31/06	20'	ND	ND	ND	ND	ND	ND	ND	ND
IB2-6	8/31/06	6'	ND	ND	ND	ND	ND	ND	94	ND
SECPB-8	8/31/06	8'	ND	ND	ND	ND	ND	ND	ND	ND
S PALS-1	9/18/06	23.5'	*	*	*	*	ND	ND	ND	ND
DC PLAS-2	9/18/06	18.5-20'	*	*	*	*	ND	ND	ND	ND
IB4	10/20/06	60"	*	*	*	*	ND	ND	ND	ND
PBWE	10/20/06	24"	*	*	*	*	ND	ND	87	ND
PBLS-24	10/20/06	24"	*	*	*	*	ND	ND	ND	ND
PBLS-36	10/20/06	36"	*	*	*	*	ND	ND	ND	ND
ALS-1	10/20/06	32"	*	*	*	*	ND	ND	220	ND
DSS-1	10/20/06	36"	*	*	*	*	ND	ND	ND	ND
PBRS	10/20/06	30"	*	*	*	*	ND	ND	ND	ND
MDL			0.02	0.05	0.05	0.05	10	30	40	40

* = Not analyzed

APPENDIX B

Soil Boring Logs from South Gas Station



Terms Describing Relative Density and Consistency

	Density	SPT (2) blows/foot
Coarse-Grained Soils	Very Loose	0 to 4
	Loose	4 to 10
	Medium Dense	10 to 30
	Dense	30 to 50
	Very Dense	>50

	Consistency	SPT (2) blows/foot
Fine-Grained Soils	Very Soft	0 to 2
	Soft	2 to 4
	Medium Stiff	4 to 8
	Stiff	8 to 15
	Very Stiff	15 to 30
	Hard	>30

Test Symbols

FC = Fines Content
G = Grain Size
M = Moisture Content
A = Atterberg Limits
C = Consolidation
DD = Dry Density
K = Permeability
Str = Shear Strength
Env = Environmental
PiD = Photoionization Detector

Component Definitions

Descriptive Term	Size Range and Sieve Number
Boulders	Larger than 12"
Cobbles	3" to 12"
Gravel	3" to No. 4 (4.75 mm)
Coarse Gravel	3" to 3/4"
Fine Gravel	3/4" to No. 4 (4.75 mm)
Sand	No. 4 (4.75 mm) to No. 200 (0.075 mm)
Coarse Sand	No. 4 (4.75 mm) to No. 10 (2.00 mm)
Medium Sand	No. 10 (2.00 mm) to No. 40 (0.425 mm)
Fine Sand	No. 40 (0.425 mm) to No. 200 (0.075 mm)
Silt and Clay	Smaller than No. 200 (0.075 mm)

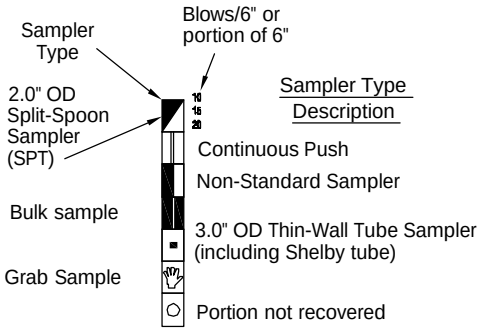
(3) Estimated Percentage

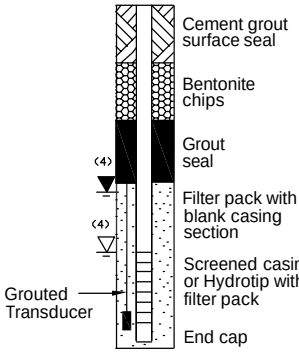
Percentage by Weight	Modifier
<5	Trace
5 to 15	Slightly (sandy, silty, clayey, gravelly)
15 to 30	Sandy, silty, clayey, gravelly)
30 to 49	Very (sandy, silty, clayey, gravelly)

Moisture Content

Dry - Absence of moisture, dusty, dry to the touch
Slightly Moist - Perceptible moisture
Moist - Damp but no visible water
Very Moist - Water visible but not free draining
Wet - Visible free water, usually from below water table

Symbols





(1) Percentage by dry weight
(2) (SPT) Standard Penetration Test (ASTM D-1586)
(3) In General Accordance with Standard Practice for Description and Identification of Soils (ASTM D-2488)
(4) Depth of groundwater — ATD = At time of drilling; Static water level (date); BGS = below ground surface
(5) Combined USCS symbols used for fines between 5% and 15% as estimated in General Accordance with Standard Practice for Description and Identification of Soils (ASTM D-2488)

Classifications of soils in this report are based on visual field and/or laboratory observations, which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field or laboratory testing unless presented herein. Visual-manual and/or laboratory classification methods of ASTM D-2487 and D-2488 were used as an identification guide for the Unified Soil Classification System.

Aspect CONSULTING

Exploration Log Key

DATE:
DESIGNED BY:
DRAWN BY:
REVISED BY:

PROJECT NO.

FIGURE NO.
B-1

Q:_ACAD Standards\Standard Details\Exploration Log Key B1.dwg

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
080190	AB-1	1 of 3

Project Name: Walker Chevrolet
Location: Tacoma, WA
Driller/Method: Holt Drilling / Hollow Stem Auger
Sampling Method: SPT

Ground Surface Elev.:
Depth to Water:
Start/Finish Date: 12/20/2013

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
	Asphalt patch						Asphalt.	
							Medium dense, moist, brown, very gravelly SAND (SP); fine to medium sand.	
5				0.0	4 10 8			5
10	Hydrated bentonite chip backfill			0.0	10 30 36		Very dense, moist, gray with iron staining, gravelly SAND (SP); fine to medium sand.	10
15			AB-1-15	96.1	20 32 50/5		Very dense, moist, gray and brown mottled, silty, gravelly SAND (SM); fine to medium sand, diamict fabric.	15
20				21.1	19 50/3			20

Sampler Type:
- No Recovery
- Standard Penetration Test (ASTM D1586)

PID - Photoionization Detector (Headspace Measurement)

- Static Water Level
- Water Level (ATD)

Logged by: AET

Approved by: ALN

Figure No.

_ENV BORING LOG_STADIUM THRIFTWAY.GPJ April 17, 2015

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
080190	AB-1	2 of 3

Project Name: Walker Chevrolet
Location: Tacoma, WA
Driller/Method: Holt Drilling / Hollow Stem Auger
Sampling Method: SPT

Ground Surface Elev.:
Depth to Water:
Start/Finish Date: 12/20/2013

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
			AB-1-25	4.4	35 50/4			
30				0.0	33 50/4		Hard, gray brown, sandy, gravelly SILT (ML); diamict fabric.	30
35				0.0	21 33 50/5		Very dense, moist, red brown, slightly silty, gravelly SAND (SP-SM); diamict fabric.	35
40				0.0	23 50/6		Very dense, moist, red brown, slightly gravelly SAND (SP); fine to medium sand, trace silt.	40
45			AB-1-45	0.0	14 30 37			45

Sampler Type:
- No Recovery
- Standard Penetration Test (ASTM D1586)

PID - Photoionization Detector (Headspace Measurement)

- Static Water Level
- Water Level (ATD)

Logged by: AET

Approved by: ALN

Figure No.

_ENV BORING LOG_STADIUM THRIFTWAY.GPJ April 17, 2015

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
080190	AB-1	3 of 3

Project Name: Walker Chevrolet
Location: Tacoma, WA
Driller/Method: Holt Drilling / Hollow Stem Auger
Sampling Method: SPT

Ground Surface Elev.:
Depth to Water:
Start/Finish Date: 12/20/2013

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
				0.0	22 40 41			
55				0.0	22 33 47		Trace gravel.	55
60			AB-1-61.5	0.0	38 44 50/5		Wet.	60
							Bottom of boring is 61.5 feet below ground surface.	
65								65
70								70

Sampler Type:
- ◯ No Recovery
- ◩ Standard Penetration Test (ASTM D1586)

PID - Photoionization Detector (Headspace Measurement)
- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: ALN
Figure No.

_ENV BORING LOG_STADIUM THRIFTWAY.GPJ April 17, 2015

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
080190	AB-2	1 of 1

Project Name: Walker Chevrolet
Location: Tacoma, WA
Driller/Method: Holt Drilling / Hollow Stem Auger
Sampling Method: SPT
Ground Surface Elev.:
Depth to Water:
Start/Finish Date: 4/6/2015

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
	Concrete patch			0	9 9 8		Asphalt	
5				0	2 2 2		Very loose, moist, brown, slightly silty, very gravelly SAND (SP-SM); fine to medium sand, fine gravel	5
				0	2 2 2			
10	Cement/bentonite grout			0	2 2 5		Becomes loose, slightly gravelly	10
				0	5 12 16		Medium dense, moist, slightly gravelly, silty SAND (SM); fine to medium sand, fine gravel	
15				2.1	6			15
			AB-2-16.5	75.8	25 26		Very dense, wet, gray to blue gray, slighly silty, slightly gravelly SAND (SP-SM); petroleum-like odor	
				1724			Very dense, moist, gray to blue gray, slightly gravelly, silty SAND (SP-SM); petroleum-like odor	
							Bottom of boring 16.5ft below ground surface.	

Sampler Type:
- ○ No Recovery
- ◪ Standard Penetration Test (ASTM D1586)

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET

Approved by: ALN

Figure No.

_ENV BORING LOG_STADIUM THRIFTWAY.GPJ April 17, 2015

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
080190	AB-3	1 of 1

Project Name: Walker Chevrolet
Location: Tacoma, WA
Driller/Method: Holt Drilling / Hollow Stem Auger
Sampling Method: SPT

Ground Surface Elev.:
Depth to Water:
Start/Finish Date: 4/6/2015

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
	Concrete patch						Asphalt	
				1.0	4 6 6		Medium dense, moist, brown, slightly silty, gravelly SAND (SP-SM); fine to medium sand, fine gravel	
5				0	3 4 3		Loose, moist, gray brown, gravelly, silty SAND (SM); fine to medium sand	5
				0	0 1 4		becomes very silty with iron staining 2-inch wet sand lens	
10	Cement/bentonite grout			0	0 1 1			10
				0	11 50/5		Very dense, moist, brown, gravelly, very sandy SILT (ML) to very silty SAND (SM); fine sand	
15				0.3 74.1	4		Medium dense, moist, gray, slightly gravelly, very sandy SILT (ML); petroleum-like odor	15
			AB-3-16.5	316.2 664	4 8			
							Bottom of boring 16.5ft below ground surface.	

Sampler Type:
- ○ No Recovery
- ◩ Standard Penetration Test (ASTM D1586)

PID - Photoionization Detector (Headspace Measurement)

- ▼ Static Water Level
- ▽ Water Level (ATD)

Logged by: AET
Approved by: ALN
Figure No.

_ENV BORING LOG_STADIUM THRIFTWAY.GPJ April 17, 2015

Boring Log

Aspect CONSULTING

Project Number	Boring Number	Sheet
080190	AB-4	1 of 1

Project Name: Walker Chevrolet
Location: Tacoma, WA
Driller/Method: Holt Drilling / Hollow Stem Auger
Sampling Method: SPT

Ground Surface Elev.:
Depth to Water:
Start/Finish Date: 4/6/2015

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
	Concrete patch						Asphalt	
				0	1 1 0		Very loose, moist, brown with iron staining, slightly silty SAND (SP-SM)	
5				0	1 1 1			5
				0	0 0 1			
10	Cement/bentonite grout			0	5 3 2		Solid wood	10
				0	3 3 5		Medium stiff, moist, green gray with iron staining, sandy SILT (ML); trace fine gravel	
15			AB-4-16.5	0	5 5 13		Medium dense/very stiff, very moist, green gray, very silty SAND (SM); fine sand	15
							Bottom of boring 16.5ft below ground surface.	

Sampler Type:
- No Recovery
- Standard Penetration Test (ASTM D1586)

PID - Photoionization Detector (Headspace Measurement)
- Static Water Level
- Water Level (ATD)

Logged by: AET
Approved by: ALN
Figure No.

_ENV BORING LOG_STADIUM THRIFTWAY.GPJ April 17, 2015

APPENDIX C

Soil Analytical Results from South Gas Station

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 14, 2015

Alan Noell, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Noell:

Included are the results from the testing of material submitted on April 7, 2015 from the Walker Chevrolet PO 080190, F&BI 504119 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman, Eric Geissinger
ASP0414R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 7, 2015 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Walker Chevrolet PO 080190, F&BI 504119 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
504119 -01	AB-2-16.5
504119 -02	AB-3-16.5
504119 -03	AB-4-16.5

All quality control requirements were acceptable.

Date of Report: 04/14/15
Date Received: 04/07/15
Project: Walker Chevrolet PO 080190, F&BI 504119
Date Extracted: 04/07/15
Date Analyzed: 04/07/15

**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)
AB-2-16.5 504119-01 1/20	1,900	ip
AB-3-16.5 504119-02 1/10	520	142
AB-4-16.5 504119-03	<2	106
Method Blank 05-0695 MB	<2	106

Date of Report: 04/14/15
Date Received: 04/07/15
Project: Walker Chevrolet PO 080190, F&BI 504119
Date Extracted: 04/07/15
Date Analyzed: 04/07/15

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
AB-2-16.5 504119-01	1,600 x	<250	116
AB-3-16.5 504119-02	180 x	<250	112
AB-4-16.5 504119-03	<50	<250	101
Method Blank 05-711 MB	<50	<250	83

Analysis For Total Metals By EPA Method 200.8

Client ID:	AB-2-16.5	Client:	Aspect Consulting, LLC
Date Received:	04/07/15	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/09/15	Lab ID:	504119-01
Date Analyzed:	04/10/15	Data File:	504119-01.052
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	ML

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	3.46

Analysis For Total Metals By EPA Method 200.8

Client ID:	AB-3-16.5	Client:	Aspect Consulting, LLC
Date Received:	04/07/15	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/09/15	Lab ID:	504119-02
Date Analyzed:	04/10/15	Data File:	504119-02.053
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	ML

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

Analyte:	Concentration mg/kg (ppm)
Lead	7.26

Analysis For Total Metals By EPA Method 200.8

Client ID:	AB-4-16.5	Client:	Aspect Consulting, LLC
Date Received:	04/07/15	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/09/15	Lab ID:	504119-03
Date Analyzed:	04/10/15	Data File:	504119-03.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	ML

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	1.85

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/09/15	Lab ID:	I5-209 mb2
Date Analyzed:	04/10/15	Data File:	I5-209 mb2.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	ML

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

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

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	AB-2-16.5	Client:	Aspect Consulting, LLC
Date Received:	04/07/15	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/08/15	Lab ID:	504119-01 1/5
Date Analyzed:	04/08/15	Data File:	040805.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	95	31	163
Benzo(a)anthracene-d12	115	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	AB-3-16.5	Client:	Aspect Consulting, LLC
Date Received:	04/07/15	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/08/15	Lab ID:	504119-02 1/5
Date Analyzed:	04/08/15	Data File:	040806.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	99	31	163
Benzo(a)anthracene-d12	115	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.64
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	AB-4-16.5	Client:	Aspect Consulting, LLC
Date Received:	04/07/15	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/08/15	Lab ID:	504119-03 1/5
Date Analyzed:	04/08/15	Data File:	040807.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	31	163
Benzo(a)anthracene-d12	115	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/08/15	Lab ID:	05-723 mb 1/5
Date Analyzed:	04/08/15	Data File:	040804.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	95	31	163
Benzo(a)anthracene-d12	117	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	AB-2-16.5	Client:	Aspect Consulting, LLC
Date Received:	04/07/15	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/08/15	Lab ID:	504119-01
Date Analyzed:	04/08/15	Data File:	040819.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	89	113
Toluene-d8	111	64	137
4-Bromofluorobenzene	95	81	119

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	0.24
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	1.0
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	2.4
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	3.9
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	12
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	24 ve
Trichloroethene	<0.02	sec-Butylbenzene	0.86
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	1.3
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	0.12
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	AB-2-16.5	Client:	Aspect Consulting, LLC
Date Received:	04/07/15	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/08/15	Lab ID:	504119-01 1/10
Date Analyzed:	04/08/15	Data File:	040824.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	89	113
Toluene-d8	102	64	137
4-Bromofluorobenzene	104	81	119

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	<0.5
Acetone	<5	1,1,1,2-Tetrachloroethane	<0.5
1,1-Dichloroethene	<0.5	m,p-Xylene	1.0
Methylene chloride	<5	o-Xylene	<0.5
Methyl t-butyl ether (MTBE)	<0.5	Styrene	<0.5
trans-1,2-Dichloroethene	<0.5	Isopropylbenzene	2.2
1,1-Dichloroethane	<0.5	Bromoform	<0.5
2,2-Dichloropropane	<0.5	n-Propylbenzene	3.4
cis-1,2-Dichloroethene	<0.5	Bromobenzene	<0.5
Chloroform	<0.5	1,3,5-Trimethylbenzene	10
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	1.1
Carbon tetrachloride	<0.5	tert-Butylbenzene	<0.5
Benzene	<0.3	1,2,4-Trimethylbenzene	22
Trichloroethene	<0.2	sec-Butylbenzene	0.67
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	<0.5	1,2,4-Trichlorobenzene	<2.5
trans-1,3-Dichloropropene	<0.5	Hexachlorobutadiene	<2.5
1,1,2-Trichloroethane	<0.5	Naphthalene	<0.5
2-Hexanone	<5	1,2,3-Trichlorobenzene	<2.5

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	AB-3-16.5	Client:	Aspect Consulting, LLC
Date Received:	04/07/15	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/08/15	Lab ID:	504119-02
Date Analyzed:	04/08/15	Data File:	040818.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	104	64	137
4-Bromofluorobenzene	98	81	119

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	0.063
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	0.64
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	1.1
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	1.8
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	1.7
Trichloroethene	<0.02	sec-Butylbenzene	1.1
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	1.5
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	0.77
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

FRIEDMAN & BRUYA, INC.

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Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	AB-4-16.5	Client:	Aspect Consulting, LLC
Date Received:	04/07/15	Project:	Walker Chevrolet PO 080190
Date Extracted:	04/08/15	Lab ID:	504119-03
Date Analyzed:	04/08/15	Data File:	040817.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	89	113
Toluene-d8	99	64	137
4-Bromofluorobenzene	100	81	119

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:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Walker Chevrolet PO 080190
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)	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

Date of Report: 04/14/15
Date Received: 04/07/15
Project: Walker Chevrolet PO 080190, F&BI 504119

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

Laboratory Code: 504119-03 (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	100	71-131

Date of Report: 04/14/15
Date Received: 04/07/15
Project: Walker Chevrolet PO 080190, F&BI 504119

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

Laboratory Code: 504022-07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	108	97	64-133	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	107	58-147

Date of Report: 04/14/15
Date Received: 04/07/15
Project: Walker Chevrolet PO 080190, F&BI 504119

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

Laboratory Code: 504050-04 (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	9.90	95	95	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: 04/14/15
Date Received: 04/07/15
Project: Walker Chevrolet PO 080190, F&BI 504119

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: 504119-03 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	<0.01	87	87	44-129	0
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	90	90	52-121	0
Acenaphthene	mg/kg (ppm)	0.17	<0.01	90	90	51-123	0
Fluorene	mg/kg (ppm)	0.17	<0.01	92	92	37-137	0
Phenanthrene	mg/kg (ppm)	0.17	<0.01	89	89	34-141	0
Anthracene	mg/kg (ppm)	0.17	<0.01	88	89	32-124	1
Fluoranthene	mg/kg (ppm)	0.17	<0.01	94	94	16-160	0
Pyrene	mg/kg (ppm)	0.17	<0.01	92	92	10-180	0
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	95	96	23-144	1
Chrysene	mg/kg (ppm)	0.17	<0.01	93	94	32-149	1
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	109	108	23-176	1
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	110	111	42-139	1
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	102	104	21-163	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	115	114	23-170	1
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	108	109	31-146	1
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	103	103	37-133	0

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	92	58-121
Acenaphthylene	mg/kg (ppm)	0.17	95	54-121
Acenaphthene	mg/kg (ppm)	0.17	94	54-123
Fluorene	mg/kg (ppm)	0.17	99	56-127
Phenanthrene	mg/kg (ppm)	0.17	93	55-122
Anthracene	mg/kg (ppm)	0.17	94	50-120
Fluoranthene	mg/kg (ppm)	0.17	100	54-129
Pyrene	mg/kg (ppm)	0.17	96	53-127
Benz(a)anthracene	mg/kg (ppm)	0.17	104	51-115
Chrysene	mg/kg (ppm)	0.17	99	55-129
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	119	56-123
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	112	54-131
Benzo(a)pyrene	mg/kg (ppm)	0.17	110	51-118
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	129	49-148
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	123	50-141
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	116	52-131

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Date Received: 04/07/15
Project: Walker Chevrolet PO 080190, F&BI 504119

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)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	21	23	10-56	9
Chloromethane	mg/kg (ppm)	2.5	<0.5	48	52	10-90	8
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	48	50	10-91	4
Bromomethane	mg/kg (ppm)	2.5	<0.5	56	62	10-110	10
Chloroethane	mg/kg (ppm)	2.5	<0.5	59	63	10-101	7
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	56	59	10-95	5
Acetone	mg/kg (ppm)	12.5	<0.5	88	86	11-141	2
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
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	81	84	17-134	4
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
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	75	79	18-117	5
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	81	83	25-120	2
Chloroform	mg/kg (ppm)	2.5	<0.05	80	82	29-117	2
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	96	91	20-133	5
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
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	78	79	26-107	1
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	78	81	22-115	4
Benzene	mg/kg (ppm)	2.5	<0.03	76	78	26-114	3
Trichloroethene	mg/kg (ppm)	2.5	<0.02	79	80	30-112	1
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	83	83	31-119	0
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	84	83	31-131	1
Dibromomethane	mg/kg (ppm)	2.5	<0.05	83	83	27-124	0
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	95	92	16-147	3
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	87	87	28-137	0
Toluene	mg/kg (ppm)	2.5	<0.05	80	81	34-112	1
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	84	84	30-136	0
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	84	82	32-126	2
2-Hexanone	mg/kg (ppm)	12.5	<0.5	88	86	17-147	2
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	87	84	29-125	4
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	79	79	25-114	0
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	84	83	32-143	1
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	87	85	32-126	2
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	82	83	37-113	1
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	81	84	34-115	4
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	83	86	35-126	4
m,p-Xylene	mg/kg (ppm)	5	<0.1	84	87	25-125	4
o-Xylene	mg/kg (ppm)	2.5	<0.05	84	87	27-126	4
Styrene	mg/kg (ppm)	2.5	<0.05	87	89	39-121	2
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	86	89	34-123	3
Bromoform	mg/kg (ppm)	2.5	<0.05	78	81	18-155	4
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	83	85	31-120	2
Bromobenzene	mg/kg (ppm)	2.5	<0.05	81	81	40-115	0
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	86	86	24-130	0
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	89	88	27-148	1
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	82	84	33-123	2
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	83	84	39-110	1
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	84	84	39-111	0
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	89	92	36-116	3
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	85	87	35-116	2
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	84	88	33-118	5
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	85	88	32-119	3
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	80	82	38-111	2
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	78	81	39-109	4
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	80	83	40-111	4
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	89	88	37-122	1
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	82	86	31-121	5
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	81	83	24-128	2
Naphthalene	mg/kg (ppm)	2.5	<0.05	86	90	24-139	5
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	83	85	35-117	2

Date of Report: 04/14/15
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Project: Walker Chevrolet PO 080190, F&BI 504119

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	58	10-76
Chloromethane	mg/kg (ppm)	2.5	76	34-98
Vinyl chloride	mg/kg (ppm)	2.5	81	42-107
Bromomethane	mg/kg (ppm)	2.5	79	46-113
Chloroethane	mg/kg (ppm)	2.5	89	47-115
Trichlorofluoromethane	mg/kg (ppm)	2.5	91	53-112
Acetone	mg/kg (ppm)	12.5	110	39-147
1,1-Dichloroethene	mg/kg (ppm)	2.5	93	65-110
Methylene chloride	mg/kg (ppm)	2.5	104	50-127
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	102	72-122
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	100	71-113
1,1-Dichloroethane	mg/kg (ppm)	2.5	99	74-109
2,2-Dichloropropane	mg/kg (ppm)	2.5	100	64-151
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	103	73-110
Chloroform	mg/kg (ppm)	2.5	100	76-110
2-Butanone (MEK)	mg/kg (ppm)	12.5	115	60-121
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	100	73-111
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	103	72-116
1,1-Dichloropropene	mg/kg (ppm)	2.5	101	72-112
Carbon tetrachloride	mg/kg (ppm)	2.5	101	67-123
Benzene	mg/kg (ppm)	2.5	97	72-106
Trichloroethene	mg/kg (ppm)	2.5	101	72-107
1,2-Dichloropropane	mg/kg (ppm)	2.5	104	74-115
Bromodichloromethane	mg/kg (ppm)	2.5	103	75-126
Dibromomethane	mg/kg (ppm)	2.5	102	76-116
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	113	80-128
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	108	71-138
Toluene	mg/kg (ppm)	2.5	102	74-111
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	106	77-135
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	102	77-116
2-Hexanone	mg/kg (ppm)	12.5	109	70-129
1,3-Dichloropropane	mg/kg (ppm)	2.5	108	75-115
Tetrachloroethene	mg/kg (ppm)	2.5	103	73-111
Dibromochloromethane	mg/kg (ppm)	2.5	105	64-152
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	108	77-117
Chlorobenzene	mg/kg (ppm)	2.5	102	76-109
Ethylbenzene	mg/kg (ppm)	2.5	103	75-112
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	104	76-125
m,p-Xylene	mg/kg (ppm)	5	107	77-115
o-Xylene	mg/kg (ppm)	2.5	107	76-115
Styrene	mg/kg (ppm)	2.5	109	76-119
Isopropylbenzene	mg/kg (ppm)	2.5	110	76-120
Bromoform	mg/kg (ppm)	2.5	101	50-174
n-Propylbenzene	mg/kg (ppm)	2.5	106	77-115
Bromobenzene	mg/kg (ppm)	2.5	100	76-112
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	107	77-121
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	109	74-121
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	103	74-116
2-Chlorotoluene	mg/kg (ppm)	2.5	104	75-113
4-Chlorotoluene	mg/kg (ppm)	2.5	104	77-115
tert-Butylbenzene	mg/kg (ppm)	2.5	112	77-123
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	107	77-119
sec-Butylbenzene	mg/kg (ppm)	2.5	107	78-120
p-Isopropyltoluene	mg/kg (ppm)	2.5	108	77-120
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	99	76-112
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	98	74-109
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	101	75-114
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	105	68-122
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	104	75-122
Hexachlorobutadiene	mg/kg (ppm)	2.5	102	74-130
Naphthalene	mg/kg (ppm)	2.5	108	73-122
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	102	75-117

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.

504119 Alan Noell + MF 04/07/15 BI/VSI

SAMPLE CHAIN OF CUSTODY

Page # 1 of 1

Send Report To Eric Geissinger
Company Aspect
Address 401 2nd Ave S, Suite 201
City, State, ZIP Seattle, WA 98104
Phone # _____ Fax # _____

SAMPLERS (signature)
PROJECT NAME/NO. Walker Chevrolet
PO# 080190
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	PAHs	Lead					Notes
AB-2-16.5	01 A-E	4/6/15	950	Soil	5	X	X		X			X	X					
AB-3-16.5	02	↓	1100	↓	5	X	X		X			X	X					
AB-4-16.5	03	↓	1200	↓	5	X	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:	Delia Massey	Aspect	4/7/15	830
Received by:	D Sams	Fedex SOC	4/7/15	9:05
Relinquished by:				
Received by:	Dhan Phan	FcBI	4/7/15	1100.

APPENDIX D

Air Analytical Results from Former Paint Booth

Air Chain of Custody Record - Whole Air Sample

Fremont Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 3/23/15

Laboratory Project No (Internal): _____

Page: 1 of: 1

Client: **Aspect Consulting**

Address: _____

City, State, Zip: _____ Tel: _____

Reports To (PM): Alan Noell / Eric Geissinger Email: anoell@aspectconsulting.com

Project Name: Walker Chevrolet

Location: Tacoma, WA

Collected by: Eric Geissinger

Project No: 080190

* Gas Matrix Codes: I = Indoor SS = Subslab L = Landfill SG = Soil Gas M = Plume Mapping Q = Fuel Gas Quality L = LEED (Consult Client Services)

** Container Codes: 6L = Six Liter Canister (Summa) TB = Tedlar Bag BV = 1 Liter Bottle Vac MC = 1 Liter MiniCan HP = High Pressure Cylinder HJ = Glass Headspace Jar

							Internal						Internal	
Sample Name	Canister / Flow Reg Serial #	Sample Date & Time	Gas Matrix Code *	Anticipated Fill Time	Sample Volume	Container Type **	Evacuation Pressure (mtorr)	Pressure at Time of Pick-up (" Hg)	Equipment Certificaton Code	Field Initial Sample Pressure (" Hg)	Field Final Sample Pressure (" Hg)	Analysis Requested	Receipt Date	Final (psi)
1	17649 Canister / FR70-05 Flow Reg	3/20/15 Date / 0700 Time	SS	70min	6L	Summa	10mtorr Pressure / 3/19/15 9:00 Date	Pressure / Date/Time	Container / Regulator	-30 Pressure / 0610 Time	-5 Pressure / 0710 Time	- Full TO-15 - MAAPH - ~~He~~ He - 3C	03/24/2015	-5
2	12668 Canister / FR8-24 Flow Reg	3/23/15 Date / 1400 Time	I	8hr	6L	Summa	10mtorr Pressure / 3/19/15 9:00 Date	Pressure / Date/Time	Container / Regulator	-30 Pressure / 0723 Time	-5 Pressure / 1421 Time	- Full TO-15 SIM - MAAPH - He by 3C	03/24/2015	-6
3	Canister / Flow Reg	Date / Time					Pressure / Date	Pressure / Date/Time	Container / Regulator	Pressure / Time	Pressure / Time			
4	Canister / Flow Reg	Date / Time					Pressure / Date	Pressure / Date/Time	Container / Regulator	Pressure / Time	Pressure / Time			
5	Canister / Flow Reg	Date / Time					Pressure / Date	Pressure / Date/Time	Container / Regulator	Pressure / Time	Pressure / Time			

Rental Equipment (Circle all that apply): Manifold Mini-Pump Fittings Tedlar Bags Canisters Flow Controllers Helium Cylinder Flouridated Tubing Wrench

Condition: | Seals Intact: Y N N/A | Client Consult: Y ( ) N ( )

Special Remarks:

Relinquished	Date/Time	Relinquished	Date/Time
x [signature]	3/23/15	x	
Relinquished	Date/Time	Relinquished	Date/Time
x		x [signature]	3/24/15 1018

TAT --> STD Rush (specify)

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Aspect Consulting
Alan Noell
401 2nd Ave S. #201
Seattle, WA 98104

RE: Walker Chevrolet
Lab ID: 1503256

April 23, 2015

Attention Alan Noell:

Fremont Analytical, Inc. received 2 sample(s) on 3/24/2015 for the analyses presented in the following report.

Helium by GC/TCD
Petroleum Fractionation by EPA Method TO-15
Volatile Organic Compounds by EPA Method TO-15
Volatile Organic Compounds-EPA Method TO-15 (SIM)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President

CC:
Eric Geissinger

Date: *04/23/2015*

CLIENT: Aspect Consulting
Project: Walker Chevrolet
Lab Order: 1503256

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1503256-001	SS-FPB-032015	03/20/2015 7:00 AM	03/24/2015 11:18 AM
1503256-002	IA-FPB-032315	03/23/2015 2:00 PM	03/24/2015 11:18 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1503256**
Date: **4/23/2015**

CLIENT: Aspect Consulting
Project: Walker Chevrolet

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Air samples are reported in ppbv and ug/m3.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below LOQ
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1503256**
Date Reported: **4/23/2015**

CLIENT: Aspect Consulting
Project: Walker Chevrolet

Lab ID: 1503256-001 **Collection Date:** 3/20/2015 7:00:00 AM
Client Sample ID: **SS-FPB-032015** **Matrix:** Air

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Helium by GC/TCD				Batch ID: R21574		Analyst: JY
Helium	ND	32.4		ppmv	1	3/31/2015 3:52:00 PM
Petroleum Fractionation by EPA Method TO-15				Batch ID: R21569		Analyst: JY
Aliphatic Hydrocarbon (EC5-8)	215	147		µg/m³	1	3/31/2015 5:43:00 AM
Aliphatic Hydrocarbon (EC9-12)	311	94.2		µg/m³	1	3/31/2015 5:43:00 AM
Aromatic Hydrocarbon (EC9-10)	221	4.54		µg/m³	1	3/31/2015 5:43:00 AM
Surr: 4-Bromofluorobenzene	98.6	70-130		%REC	1	3/31/2015 5:43:00 AM

Lab ID: 1503256-002 **Collection Date:** 3/23/2015 2:00:00 PM
Client Sample ID: **IA-FPB-032315** **Matrix:** Indoor Air

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Helium by GC/TCD				Batch ID: R21574		Analyst: JY
Helium	ND	32.7		ppmv	1	3/31/2015 3:59:00 PM
Petroleum Fractionation by EPA Method TO-15				Batch ID: R21569		Analyst: JY
Aliphatic Hydrocarbon (EC5-8)	194	147		µg/m³	1	3/31/2015 1:07:00 AM
Aliphatic Hydrocarbon (EC9-12)	807	754		µg/m³	1	3/31/2015 12:26:00 AM
Aromatic Hydrocarbon (EC9-10)	576	36.3		µg/m³	1	3/31/2015 12:26:00 AM
Surr: 4-Bromofluorobenzene	90.0	70-130		%REC	1	3/31/2015 1:07:00 AM

Client: **Aspect Consulting**
WorkOrder: 1503256
Project: Walker Chevrolet

Client Sample ID: SS-FPB-032015
Lab ID: 1503256-001A
Sample Type: Summa Canister

Date Sampled: 3/20/2015
Date Received: 3/24/2015

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
1,1,1-Trichloroethane	<0.200	<1.09	0.200	1.09		TO-15	03/31/2015	JY
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06		TO-15	03/31/2015	JY
CFC-113	<0.500	<3.83	0.500	3.83		TO-15	03/31/2015	JY
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73		TO-15	03/31/2015	JY
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810		TO-15	03/31/2015	JY
1,1-Dichloroethene (DCE)	<0.200	<0.793	0.200	0.793		TO-15	03/31/2015	JY
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23		TO-15	03/31/2015	JY
1,2,4-Trimethylbenzene	14.8	72.5	2.40	11.8		TO-15	03/31/2015	JY
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54		TO-15	03/31/2015	JY
1,2-Dichlorobenzene	<0.300	<1.80	0.300	1.80		TO-15	03/31/2015	JY
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809		TO-15	03/31/2015	JY
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31		TO-15	03/31/2015	JY
1,3,5-Trimethylbenzene	9.85	48.4	0.300	1.47		TO-15	03/31/2015	JY
1,3-Butadiene	<0.500	<1.11	0.500	1.11		TO-15	03/31/2015	JY
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80		TO-15	03/31/2015	JY
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80		TO-15	03/31/2015	JY
1,4-Dioxane	<1.00	<3.60	1.00	3.60		TO-15	03/31/2015	JY
(MEK) 2-Butanone	1.36	4.00	0.500	1.47		TO-15	03/31/2015	JY
2-Hexanone	<1.00	<4.10	1.00	4.10		TO-15	03/31/2015	JY
Isopropyl Alcohol	8.02	19.7	8.00	19.7		TO-15	03/31/2015	JY
4-Methyl-2-pentanone (MIBK)	2.67	11.0	1.00	4.10		TO-15	03/31/2015	JY
Acetone	87.3	207	8.00	19.0		TO-15	03/31/2015	JY
Acrolein	<0.500	<1.15	0.500	1.15		TO-15	03/31/2015	JY
Benzene	0.654	2.09	0.200	0.639		TO-15	03/31/2015	JY
Benzyl chloride	<0.500	<2.59	0.500	2.59		TO-15	03/31/2015	JY
Dichlorobromomethane	<0.300	<2.01	0.300	2.01		TO-15	03/31/2015	JY
Bromoform	<0.200	<2.07	0.200	2.07		TO-15	03/31/2015	JY
Bromomethane	<0.500	<1.94	0.500	1.94		TO-15	03/31/2015	JY
Carbon disulfide	<1.50	<4.67	1.50	4.67		TO-15	03/31/2015	JY
Carbon tetrachloride	<0.200	<1.26	0.200	1.26		TO-15	03/31/2015	JY

Client: **Aspect Consulting**
WorkOrder: 1503256
Project: Walker Chevrolet

Client Sample ID: SS-FPB-032015
Lab ID: 1503256-001A
Sample Type: Summa Canister

Date Sampled: 3/20/2015
Date Received: 3/24/2015

Volatile Organic Compounds by EPA Method TO-15

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
Chlorobenzene	<0.200	<0.921	0.200	0.921		TO-15	03/31/2015	JY
Dibromochloromethane	<0.500	<4.26	0.500	4.26		TO-15	03/31/2015	JY
Chloroethane	<0.500	<1.32	0.500	1.32		TO-15	03/31/2015	JY
Chloroform	1.15	5.61	0.200	0.977		TO-15	03/31/2015	JY
Chloromethane	<0.500	<1.03	0.500	1.03		TO-15	03/31/2015	JY
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		TO-15	03/31/2015	JY
cis-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		TO-15	03/31/2015	JY
Cyclohexane	<0.200	<0.688	0.200	0.688		TO-15	03/31/2015	JY
Dichlorodifluoromethane (CFC-12)	0.426	2.11	0.300	1.48		TO-15	03/31/2015	JY
Dichlorotetrafluoroethane (CFC-114)	<0.500	<3.50	0.500	3.50		TO-15	03/31/2015	JY
Ethyl acetate	<1.00	<3.60	1.00	3.60		TO-15	03/31/2015	JY
Ethylbenzene	2.94	12.8	0.300	1.30		TO-15	03/31/2015	JY
Heptane	<0.500	<2.01	0.500	2.01		TO-15	03/31/2015	JY
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		TO-15	03/31/2015	JY
m,p-Xylene	20.7	90.0	0.200	0.868		TO-15	03/31/2015	JY
Methyl methacrylate	<0.300	<1.23	0.300	1.23		TO-15	03/31/2015	JY
Methylene chloride	<1.50	<5.21	1.50	5.21		TO-15	03/31/2015	JY
Naphthalene	<0.300	<1.57	0.300	1.57		TO-15	03/31/2015	JY
Hexane	0.853	3.01	0.200	0.705		TO-15	03/31/2015	JY
o-Xylene	9.75	42.3	1.60	6.95		TO-15	03/31/2015	JY
4-Ethyltoluene	2.56	12.6	0.300	1.47		TO-15	03/31/2015	JY
Propylene	6.61	11.4	0.500	0.861		TO-15	03/31/2015	JY
Styrene	<0.300	<1.28	0.300	1.28		TO-15	03/31/2015	JY
Methyl tert-butyl ether (MTBE)	<0.200	<0.721	0.200	0.721		TO-15	03/31/2015	JY
Tetrachloroethene (PCE)	<0.300	<2.03	0.300	2.03		TO-15	03/31/2015	JY
Tetrahydrofuran	<0.500	<1.47	0.500	1.47		TO-15	03/31/2015	JY
Toluene	1.05	3.94	0.200	0.754		TO-15	03/31/2015	JY
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	0.793		TO-15	03/31/2015	JY
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		TO-15	03/31/2015	JY
Trichloroethene (TCE)	<0.200	<1.07	0.200	1.07		TO-15	03/31/2015	JY

Client: **Aspect Consulting**
WorkOrder: 1503256
Project: Walker Chevrolet

Client Sample ID: SS-FPB-032015
Lab ID: 1503256-001A
Sample Type: Summa Canister

Date Sampled: 3/20/2015
Date Received: 3/24/2015

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Volatile Organic Compounds by EPA Method TO-15								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Trichlorofluoromethane (CFC-11)	<0.300	<1.69	0.300	1.69		TO-15	03/31/2015	JY
Vinyl acetate	<1.00	<3.52	1.00	3.52		TO-15	03/31/2015	JY
Vinyl chloride	<0.200	<0.511	0.200	0.511		TO-15	03/31/2015	JY
Surr: 4-Bromofluorobenzene	98.0 %Rec	--	70-130	--		TO-15	03/31/2015	JY

Client: **Aspect Consulting**
WorkOrder: 1503256
Project: Walker Chevrolet

Client Sample ID: IA-FPB-032315
Lab ID: 1503256-002A
Sample Type: Summa Canister

Date Sampled: 3/23/2015
Date Received: 3/24/2015

Volatile Organic Compounds-EPA Method TO-15 (SIM)

Analyte	Concentration (ppbv)	Concentration (ug/m³)	Reporting Limit (ppbv)	Reporting Limit (ug/m³)	Qual	Method	Date/Analyst	
1,1,1-Trichloroethane	<0.00500	<0.0273	0.00500	0.0273		TO-15	03/30/2015	JY
1,1,2,2-Tetrachloroethane	<0.00620	<0.0426	0.00620	0.0426		TO-15	03/30/2015	JY
1,1,2-Trichloroethane (TCA)	<0.0200	<0.109	0.0200	0.109		TO-15	03/30/2015	JY
1,1-Dichloroethane	<0.00800	<0.0324	0.00800	0.0324		TO-15	03/30/2015	JY
1,1-Dichloroethene (DCE)	<0.00900	<0.0357	0.00900	0.0357		TO-15	03/30/2015	JY
1,2,4-Trichlorobenzene	<0.0500	<0.371	0.0500	0.371		TO-15	03/30/2015	JY
1,2,4-Trimethylbenzene	<0.0730	<0.359	0.0730	0.359		TO-15	03/30/2015	JY
1,2-Dibromoethane (EDB)	<0.0200	<0.154	0.0200	0.154		TO-15	03/30/2015	JY
1,2-Dichloroethane	1.54	6.24	0.0200	0.0809		TO-15	03/30/2015	JY
1,4-Dioxane	<1.00	<3.60	1.00	3.60	*	TO-15	03/30/2015	JY
Benzene	0.716	2.29	0.0400	0.128		TO-15	03/30/2015	JY
Carbon tetrachloride	0.104	0.657	0.0200	0.126		TO-15	03/30/2015	JY
Chlorobenzene	<0.0700	<0.322	0.0700	0.322		TO-15	03/30/2015	JY
Chloroethane	<0.0980	<0.259	0.0980	0.259		TO-15	03/30/2015	JY
Chloroform	0.447	2.18	0.0200	0.0977		TO-15	03/30/2015	JY
Chloromethane	1.06	2.18	0.400	0.826		TO-15	03/30/2015	JY
cis-1,2-Dichloroethene	<0.0200	<0.0793	0.0200	0.0793		TO-15	03/30/2015	JY
Ethylbenzene	0.407	1.77	0.0500	0.217		TO-15	03/30/2015	JY
Hexachlorobutadiene	0.136	1.45	0.0166	0.177		TO-15	03/30/2015	JY
m,p-Xylene	1.48	6.44	0.0600	0.261		TO-15	03/30/2015	JY
Methylene chloride	0.462	1.61	0.0600	0.208		TO-15	03/30/2015	JY
Naphthalene	<0.300	<1.57	0.300	1.57		TO-15	03/30/2015	JY
Hexane	0.802	2.83	0.0700	0.247		TO-15	03/30/2015	JY
o-Xylene	0.431	1.87	0.0400	0.174		TO-15	03/30/2015	JY
Methyl tert-butyl ether (MTBE)	<0.00900	<0.0324	0.00900	0.0324		TO-15	03/30/2015	JY
Tetrachloroethene (PCE)	0.410	2.78	0.0500	0.339		TO-15	03/30/2015	JY
Toluene	2.88	10.9	0.0500	0.188		TO-15	03/30/2015	JY
trans-1,2-Dichloroethene	<0.00600	<0.0238	0.00600	0.0238		TO-15	03/30/2015	JY
Trichloroethene (TCE)	<0.0170	<0.0914	0.0170	0.0914		TO-15	03/30/2015	JY
Vinyl chloride	<0.0850	<0.217	0.0850	0.217		TO-15	03/30/2015	JY

Client: **Aspect Consulting**
WorkOrder: 1503256
Project: Walker Chevrolet

Client Sample ID: IA-FPB-032315
Lab ID: 1503256-002A
Sample Type: Summa Canister

Date Sampled: 3/23/2015
Date Received: 3/24/2015

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Volatile Organic Compounds-EPA Method TO-15 (SIM)								
	(ppbv)	**(ug/m³)**	**(ppbv)**	**(ug/m³)**				
Surr: 4-Bromofluorobenzene	95.0 %Rec	--	70-130	--		TO-15	03/30/2015	JY

NOTES:
* - Flagged value is not within established control limits.

Date: *4/23/2015*

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Petroleum Fractionation by EPA Method TO-15

Sample ID **1503255-001AREP**	SampType: **REP**			Units: **µg/m³**		Prep Date: **3/31/2015**		RunNo: **21569**		
Client ID: **BATCH**	Batch ID: **R21569**					Analysis Date: **3/31/2015**		SeqNo: **409203**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	229	147						240.7	5.09	30	
Aliphatic Hydrocarbon (EC9-12)	214	94.2						209.1	2.20	30	
Aromatic Hydrocarbon (EC9-10)	153	4.54						149.1	2.27	30	
Surr: 4-Bromofluorobenzene	10.2		10.00		102	70	130		0	30	

Sample ID **LCS-R21569**	SampType: **LCS**			Units: **µg/m³**		Prep Date: **3/30/2015**		RunNo: **21569**		
Client ID: **LCSW**	Batch ID: **R21569**					Analysis Date: **3/30/2015**		SeqNo: **409210**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	114	147	113.9	0	99.8	70	130				
Aliphatic Hydrocarbon (EC9-12)	167	94.2	177.0	0	94.3	70	130				
Aromatic Hydrocarbon (EC9-10)	119	4.54	125.8	0	94.5	70	130				
Surr: 4-Bromofluorobenzene	10.1		10.00		101	70	130				

Sample ID **MB-R21569**	SampType: **MBLK**			Units: **µg/m³**		Prep Date: **3/30/2015**		RunNo: **21569**		
Client ID: **MBLKW**	Batch ID: **R21569**					Analysis Date: **3/30/2015**		SeqNo: **409211**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (EC5-8)	ND	147									
Aliphatic Hydrocarbon (EC9-12)	ND	94.2									
Aromatic Hydrocarbon (EC9-10)	ND	4.54									
Surr: 4-Bromofluorobenzene	9.28		10.00		92.8	70	130				

Date: *4/23/2015*

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Helium by GC/TCD

Sample ID	**1503255-001AREP**	SampType:	**REP**		Units:	**ppmv**	Prep Date:	**3/31/2015**	RunNo:	**21574**	
Client ID:	**BATCH**	Batch ID:	**R21574**				Analysis Date:	**3/31/2015**	SeqNo:	**409291**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Helium	ND	30.2						0		30	

Sample ID	**LCS-R21574**	SampType:	**LCS**		Units:	**ppmv**	Prep Date:	**3/31/2015**	RunNo:	**21574**	
Client ID:	**LCSW**	Batch ID:	**R21574**				Analysis Date:	**3/31/2015**	SeqNo:	**409295**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Helium	176,000	100	200,000	0	88.2	80	120				

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **1503255-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **3/31/2015** RunNo: **21559**
Client ID: **BATCH** Batch ID: **R21559** Analysis Date: **3/31/2015** SeqNo: **409019**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	1.18	0.500						1.228	3.79	30	
Dichlorodifluoromethane (CFC-12)	0.494	0.300						0.5186	4.88	30	
Chloromethane	ND	0.500						0		30	
Dichlorotetrafluoroethane (CFC-114)	ND	0.500						0		30	
Vinyl chloride	ND	0.200						0		30	
1,3-Butadiene	ND	0.500						0		30	
Bromomethane	ND	0.500						0		30	
Trichlorofluoromethane (CFC-11)	1.69	0.300						1.705	0.990	30	
Chloroethane	ND	0.500						0		30	
Acrolein	ND	0.500						0		30	
1,1-Dichloroethene (DCE)	ND	0.200						0		30	
Acetone	315	1.00						315.0	0.0766	30	E
Isopropyl Alcohol	15.0	1.00						13.06	13.6	30	E
Methylene chloride	ND	1.50						0		30	
Carbon disulfide	ND	1.50						0		30	
trans-1,2-Dichloroethene	ND	0.200						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.200						0		30	
Hexane	0.670	0.200						0.6649	0.824	30	
1,1-Dichloroethane	ND	0.200						0		30	
Vinyl acetate	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	0.200						0		30	
(MEK) 2-Butanone	3.35	0.500						3.677	9.31	30	
Ethyl acetate	ND	1.00						0		30	
Chloroform	0.252	0.200						0.2530	0.436	30	
Tetrahydrofuran	ND	0.500						0		30	
1,1,1-Trichloroethane	ND	0.200						0		30	
Carbon tetrachloride	ND	0.200						0		30	
1,2-Dichloroethane	ND	0.200						0		30	
Benzene	0.350	0.200						0.3556	1.47	30	
Cyclohexane	ND	0.200						0		30	
Trichloroethene (TCE)	ND	0.200						0		30	

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **1503255-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **3/31/2015** RunNo: **21559**
Client ID: **BATCH** Batch ID: **R21559** Analysis Date: **3/31/2015** SeqNo: **409019**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	0.500						0		30	
Methyl methacrylate	ND	0.300						0		30	
Dichlorobromomethane	ND	0.300						0		30	
1,4-Dioxane	ND	1.00						0		30	
cis-1,3-dichloropropene	ND	0.500						0		30	
Toluene	3.09	0.200						3.178	2.87	30	
trans-1,3-dichloropropene	ND	0.500						0		30	
1,1,2-Trichloroethane (TCA)	ND	0.500						0		30	
Tetrachloroethene (PCE)	ND	0.300						0		30	
Dibromochloromethane	ND	0.500						0		30	
1,2-Dibromoethane (EDB)	ND	0.200						0		30	
Chlorobenzene	ND	0.200						0		30	
Ethylbenzene	0.553	0.300						0.5490	0.726	30	
m,p-Xylene	3.00	0.200						3.025	0.657	30	
o-Xylene	0.518	0.200						0.5104	1.38	30	
Styrene	ND	0.300						0		30	
Bromoform	ND	0.200						0		30	
1,1,2,2-Tetrachloroethane	ND	0.300						0		30	
1,3,5-Trimethylbenzene	ND	0.300						0		30	
1,2,4-Trimethylbenzene	1.25	0.300						1.252	0.160	30	
Benzyl chloride	ND	0.500						0		30	
4-Ethyltoluene	0.854	0.300						0.8546	0.0234	30	
1,3-Dichlorobenzene	ND	0.300						0		30	
1,4-Dichlorobenzene	ND	0.300						0		30	
1,2-Dichlorobenzene	ND	0.300						0		30	
1,2,4-Trichlorobenzene	ND	0.300						0		30	
Hexachlorobutadiene	ND	1.00						0		30	
Naphthalene	2.56	0.300						2.480	2.98	30	
2-Hexanone	ND	1.00						0		30	
4-Methyl-2-pentanone (MIBK)	ND	1.00						0		30	
CFC-113	ND	0.500						0		30	

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **1503255-001AREP** SampType: **REP** Units: **ppbv** Prep Date: **3/31/2015** RunNo: **21559**
Client ID: **BATCH** Batch ID: **R21559** Analysis Date: **3/31/2015** SeqNo: **409019**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Heptane	ND	0.500						0		30	
Surr: 4-Bromofluorobenzene	10.1		10.00		101	70	130		0		

Sample ID **LCS-R21559** SampType: **LCS** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21559**
Client ID: **LCSW** Batch ID: **R21559** Analysis Date: **3/30/2015** SeqNo: **409025**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	4.95	0.500	5.000	0	99.1	70	130				
Dichlorodifluoromethane (CFC-12)	5.10	0.300	5.000	0	102	70	130				
Chloromethane	3.79	0.500	5.000	0	75.8	70	130				
Dichlorotetrafluoroethane (CFC-114)	3.78	0.500	5.000	0	75.6	70	130				
Vinyl chloride	3.70	0.200	5.000	0	73.9	70	130				
1,3-Butadiene	5.73	0.500	5.000	0	115	70	130				
Bromomethane	4.68	0.500	5.000	0	93.6	70	130				
Trichlorofluoromethane (CFC-11)	4.65	0.300	5.000	0	93.0	70	130				
Chloroethane	4.75	0.500	5.000	0	95.1	70	130				
Acrolein	5.47	0.500	5.000	0	109	70	130				
1,1-Dichloroethene (DCE)	5.06	0.200	5.000	0	101	70	130				
Acetone	5.16	1.00	5.000	0	103	70	130				
Isopropyl Alcohol	5.59	1.00	5.000	0	112	70	130				
Methylene chloride	4.99	1.50	5.000	0	99.7	70	130				
Carbon disulfide	4.73	1.50	5.000	0	94.6	70	130				
trans-1,2-Dichloroethene	5.02	0.200	5.000	0	100	70	130				
Methyl tert-butyl ether (MTBE)	5.49	0.200	5.000	0	110	70	130				
Hexane	5.05	0.200	5.000	0	101	70	130				
1,1-Dichloroethane	4.85	0.200	5.000	0	97.0	70	130				
Vinyl acetate	5.51	1.00	5.000	0	110	70	130				
cis-1,2-Dichloroethene	5.18	0.200	5.000	0	104	70	130				
(MEK) 2-Butanone	5.83	0.500	5.000	0	117	70	130				
Ethyl acetate	5.57	1.00	5.000	0	111	70	130				
Chloroform	4.75	0.200	5.000	0	95.1	70	130				

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **LCS-R21559** SampType: **LCS** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21559**
Client ID: **LCSW** Batch ID: **R21559** Analysis Date: **3/30/2015** SeqNo: **409025**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrahydrofuran	5.07	0.500	5.000	0	101	70	130				
1,1,1-Trichloroethane	4.80	0.200	5.000	0	96.0	70	130				
Carbon tetrachloride	4.79	0.200	5.000	0	95.8	70	130				
1,2-Dichloroethane	4.88	0.200	5.000	0	97.5	70	130				
Benzene	5.13	0.200	5.000	0	103	70	130				
Cyclohexane	5.07	0.200	5.000	0	101	70	130				
Trichloroethene (TCE)	5.18	0.200	5.000	0	104	70	130				
1,2-Dichloropropane	5.11	0.500	5.000	0	102	70	130				
Methyl methacrylate	6.05	0.300	5.000	0	121	70	130				
Dichlorobromomethane	5.04	0.300	5.000	0	101	70	130				
1,4-Dioxane	6.08	1.00	5.000	0	122	70	130				
cis-1,3-dichloropropene	5.59	0.500	5.000	0	112	70	130				
Toluene	5.70	0.200	5.000	0	114	70	130				
trans-1,3-dichloropropene	5.81	0.500	5.000	0	116	70	130				
1,1,2-Trichloroethane (TCA)	5.18	0.500	5.000	0	104	70	130				
Tetrachloroethene (PCE)	5.50	0.300	5.000	0	110	70	130				
Dibromochloromethane	5.26	0.500	5.000	0	105	70	130				
1,2-Dibromoethane (EDB)	5.43	0.200	5.000	0	109	70	130				
Chlorobenzene	5.34	0.200	5.000	0	107	70	130				
Ethylbenzene	5.88	0.300	5.000	0	118	70	130				
m,p-Xylene	11.2	0.200	10.00	0	112	70	130				
o-Xylene	5.65	0.200	5.000	0	113	70	130				
Styrene	5.13	0.300	5.000	0	103	70	130				
Bromoform	5.44	0.200	5.000	0	109	70	130				
1,1,2,2-Tetrachloroethane	5.29	0.300	5.000	0	106	70	130				
1,3,5-Trimethylbenzene	5.69	0.300	5.000	0	114	70	130				
1,2,4-Trimethylbenzene	4.95	0.300	5.000	0	99.0	70	130				
Benzyl chloride	4.96	0.500	5.000	0	99.2	70	130				
4-Ethyltoluene	5.00	0.300	5.000	0	100	70	130				
1,3-Dichlorobenzene	5.23	0.300	5.000	0	105	70	130				
1,4-Dichlorobenzene	5.46	0.300	5.000	0	109	70	130				

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **LCS-R21559** SampType: **LCS** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21559**
Client ID: **LCSW** Batch ID: **R21559** Analysis Date: **3/30/2015** SeqNo: **409025**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichlorobenzene	5.86	0.300	5.000	0	117	70	130				
1,2,4-Trichlorobenzene	5.55	0.300	5.000	0	111	70	130				
Hexachlorobutadiene	5.12	1.00	5.000	0	103	70	130				
Naphthalene	5.24	0.300	5.000	0	105	70	130				
2-Hexanone	5.36	1.00	5.000	0	107	70	130				
4-Methyl-2-pentanone (MIBK)	5.96	1.00	5.000	0	119	70	130				
CFC-113	4.65	0.500	5.000	0	92.9	70	130				
Heptane	5.33	0.500	5.000	0	107	70	130				
Surr: 4-Bromofluorobenzene	10.3		10.00		103	70	130				

Sample ID **MB-R21559** SampType: **MBLK** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21559**
Client ID: **MBLKW** Batch ID: **R21559** Analysis Date: **3/30/2015** SeqNo: **409026**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	ND	0.500									
Dichlorodifluoromethane (CFC-12)	ND	0.300									
Chloromethane	ND	0.500									
Dichlorotetrafluoroethane (CFC-114)	ND	0.500									
Vinyl chloride	ND	0.200									
1,3-Butadiene	ND	0.500									
Bromomethane	ND	0.500									
Trichlorofluoromethane (CFC-11)	ND	0.300									
Chloroethane	ND	0.500									
Acrolein	ND	0.500									
1,1-Dichloroethene (DCE)	ND	0.200									
Acetone	ND	1.00									
Isopropyl Alcohol	ND	1.00									
Methylene chloride	ND	1.50									
Carbon disulfide	ND	1.50									
trans-1,2-Dichloroethene	ND	0.200									
Methyl tert-butyl ether (MTBE)	ND	0.200									

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **MB-R21559** SampType: **MBLK** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21559**
Client ID: **MBLKW** Batch ID: **R21559** Analysis Date: **3/30/2015** SeqNo: **409026**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexane	ND	0.200									
1,1-Dichloroethane	ND	0.200									
Vinyl acetate	ND	1.00									
cis-1,2-Dichloroethene	ND	0.200									
(MEK) 2-Butanone	ND	0.500									
Ethyl acetate	ND	1.00									
Chloroform	ND	0.200									
Tetrahydrofuran	ND	0.500									
1,1,1-Trichloroethane	ND	0.200									
Carbon tetrachloride	ND	0.200									
1,2-Dichloroethane	ND	0.200									
Benzene	ND	0.200									
Cyclohexane	ND	0.200									
Trichloroethene (TCE)	ND	0.200									
1,2-Dichloropropane	ND	0.500									
Methyl methacrylate	ND	0.300									
Dichlorobromomethane	ND	0.300									
1,4-Dioxane	ND	1.00									
cis-1,3-dichloropropene	ND	0.500									
Toluene	ND	0.200									
trans-1,3-dichloropropene	ND	0.500									
1,1,2-Trichloroethane (TCA)	ND	0.500									
Tetrachloroethene (PCE)	ND	0.300									
Dibromochloromethane	ND	0.500									
1,2-Dibromoethane (EDB)	ND	0.200									
Chlorobenzene	ND	0.200									
Ethylbenzene	ND	0.300									
m,p-Xylene	ND	0.200									
o-Xylene	ND	0.200									
Styrene	ND	0.300									
Bromoform	ND	0.200									

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method TO-15

Sample ID **MB-R21559** SampType: **MBLK** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21559**
Client ID: **MBLKW** Batch ID: **R21559** Analysis Date: **3/30/2015** SeqNo: **409026**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	0.300									
1,3,5-Trimethylbenzene	ND	0.300									
1,2,4-Trimethylbenzene	ND	0.300									
Benzyl chloride	ND	0.500									
4-Ethyltoluene	ND	0.300									
1,3-Dichlorobenzene	ND	0.300									
1,4-Dichlorobenzene	ND	0.300									
1,2-Dichlorobenzene	ND	0.300									
1,2,4-Trichlorobenzene	ND	0.300									
Hexachlorobutadiene	ND	1.00									
Naphthalene	ND	0.300									
2-Hexanone	ND	1.00									
4-Methyl-2-pentanone (MIBK)	ND	1.00									
CFC-113	ND	0.500									
Heptane	ND	0.500									
Surr: 4-Bromofluorobenzene	9.21		10.00		92.1	70	130				

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds-EPA Method TO-15 (SIM)

Sample ID **1503256-002AREP** SampType: **REP** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21551**
Client ID: **IA-FPB-032315** Batch ID: **R21551** Analysis Date: **3/30/2015** SeqNo: **408832**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	1.16	0.400						1.056	9.21	30	
Vinyl chloride	ND	0.0850						0		30	
Chloroethane	ND	0.0980						0		30	
1,1-Dichloroethene (DCE)	ND	0.00900						0		30	
Methylene chloride	0.461	0.0600						0.4620	0.130	30	
trans-1,2-Dichloroethene	ND	0.00600						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.00900						0		30	
Hexane	0.802	0.0700						0.8025	0.0623	30	
1,1-Dichloroethane	ND	0.00800						0		30	
cis-1,2-Dichloroethene	ND	0.0200						0		30	
Chloroform	0.437	0.0200						0.4470	2.22	30	
1,1,1-Trichloroethane	ND	0.00500						0		30	
Carbon tetrachloride	0.102	0.0200						0.1044	2.33	30	
1,2-Dichloroethane	1.49	0.0200						1.542	3.70	30	
Benzene	0.714	0.0400						0.7164	0.406	30	
Trichloroethene (TCE)	ND	0.0170						0		30	
1,4-Dioxane	ND	1.00						0		30	*
Toluene	2.96	0.0500						2.882	2.66	30	
1,1,2-Trichloroethane (TCA)	ND	0.0200						0		30	
Tetrachloroethene (PCE)	0.412	0.0500						0.4100	0.559	30	
1,2-Dibromoethane (EDB)	ND	0.0200						0		30	
Chlorobenzene	ND	0.0700						0		30	
Ethylbenzene	0.434	0.0500						0.4068	6.42	30	
m,p-Xylene	1.45	0.0600						1.482	2.48	30	
o-Xylene	0.427	0.0400						0.4314	1.10	30	
1,1,2,2-Tetrachloroethane	ND	0.00620						0		30	
1,2,4-Trimethylbenzene	ND	0.0730						0		30	
1,2,4-Trichlorobenzene	ND	0.0500						0		30	
Hexachlorobutadiene	0.130	0.0166						0.1359	4.05	30	
Naphthalene	ND	0.300						0		30	
Surr: 4-Bromofluorobenzene	9.39		10.00		93.9	70	130		0		

Date: *4/23/2015*

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds-EPA Method TO-15 (SIM)

Sample ID **1503256-002AREP** SampType: **REP** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21551**
Client ID: **IA-FPB-032315** Batch ID: **R21551** Analysis Date: **3/30/2015** SeqNo: **408832**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
* - Flagged value is not within established control limits.

Sample ID **LCS-R21551** SampType: **LCS** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21551**
Client ID: **LCSW** Batch ID: **R21551** Analysis Date: **3/30/2015** SeqNo: **408834**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	10.1	0.400	10.00	0	101	70	130				
Vinyl chloride	10.7	0.0850	10.00	0	107	70	130				
Chloroethane	9.04	0.0980	10.00	0	90.4	70	130				
1,1-Dichloroethene (DCE)	9.58	0.00900	10.00	0	95.8	70	130				
Methylene chloride	10.6	0.0600	10.00	0	106	70	130				
trans-1,2-Dichloroethene	9.01	0.00600	10.00	0	90.1	70	130				
Methyl tert-butyl ether (MTBE)	9.73	0.00900	10.00	0	97.3	70	130				
Hexane	10.0	0.0700	10.00	0	100	70	130				
1,1-Dichloroethane	9.97	0.00800	10.00	0	99.7	70	130				
cis-1,2-Dichloroethene	9.83	0.0200	10.00	0	98.3	70	130				
Chloroform	10.5	0.0200	10.00	0	105	70	130				
1,1,1-Trichloroethane	10.3	0.00500	10.00	0	103	70	130				
Carbon tetrachloride	10.6	0.0200	10.00	0	106	70	130				
1,2-Dichloroethane	10.7	0.0200	10.00	0	107	70	130				
Benzene	9.51	0.0400	10.00	0	95.1	70	130				
Trichloroethene (TCE)	10.5	0.0170	10.00	0	105	70	130				
1,4-Dioxane	11.2	1.00	20.00	0	55.8	70	130				S
Toluene	10.4	0.0500	10.00	0	104	70	130				
1,1,2-Trichloroethane (TCA)	10.4	0.0200	10.00	0	104	70	130				
Tetrachloroethene (PCE)	10.1	0.0500	10.00	0	101	70	130				
1,2-Dibromoethane (EDB)	10.4	0.0200	10.00	0	104	70	130				
Chlorobenzene	10.2	0.0700	10.00	0	102	70	130				
Ethylbenzene	10.6	0.0500	10.00	0	106	70	130				
m,p-Xylene	21.6	0.0600	20.00	0	108	70	130				
o-Xylene	11.0	0.0400	10.00	0	110	70	130				

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds-EPA Method TO-15 (SIM)

Sample ID **LCS-R21551** SampType: **LCS** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21551**
Client ID: **LCSW** Batch ID: **R21551** Analysis Date: **3/30/2015** SeqNo: **408834**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	10.4	0.0500	10.00	0	104	70	130				
Hexachlorobutadiene	9.93	0.0166	10.00	0	99.3	70	130				
Surr: 4-Bromofluorobenzene	42.7		40.00		107	70	130				

NOTES:
S - Outlying spike recovery observed for 1,4-Dioxane (low bias). Sample will be qualified with an *.

Sample ID **MB-R21551** SampType: **MBLK** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21551**
Client ID: **MBLKW** Batch ID: **R21551** Analysis Date: **3/30/2015** SeqNo: **408835**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	ND	0.400									
Vinyl chloride	ND	0.0850									
Chloroethane	ND	0.0980									
1,1-Dichloroethene (DCE)	ND	0.00900									
Methylene chloride	ND	0.0600									
trans-1,2-Dichloroethene	ND	0.00600									
Methyl tert-butyl ether (MTBE)	ND	0.00900									
Hexane	ND	0.0700									
1,1-Dichloroethane	ND	0.00800									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane	ND	0.00500									
Carbon tetrachloride	ND	0.0200									
1,2-Dichloroethane	ND	0.0200									
Benzene	ND	0.0400									
Trichloroethene (TCE)	ND	0.0170									
1,4-Dioxane	ND	1.00									*
Toluene	ND	0.0500									
1,1,2-Trichloroethane (TCA)	ND	0.0200									
Tetrachloroethene (PCE)	ND	0.0500									
1,2-Dibromoethane (EDB)	ND	0.0200									
Chlorobenzene	ND	0.0700									

Date: *4/23/2015*

Work Order: 1503256
CLIENT: Aspect Consulting
Project: Walker Chevrolet

QC SUMMARY REPORT

Volatile Organic Compounds-EPA Method TO-15 (SIM)

Sample ID **MB-R21551** SampType: **MBLK** Units: **ppbv** Prep Date: **3/30/2015** RunNo: **21551**
Client ID: **MBLKW** Batch ID: **R21551** Analysis Date: **3/30/2015** SeqNo: **408835**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	ND	0.0500									
m,p-Xylene	ND	0.0600									
o-Xylene	ND	0.0400									
1,2,4-Trichlorobenzene	ND	0.0500									
Hexachlorobutadiene	ND	0.0166									
Surr: 4-Bromofluorobenzene	9.86		10.00		98.6	70	130				

NOTES:
* - Flagged value is not within established control limits.

Sample Log-In Check List

Client Name:	**AC**	Work Order Number:	**1503256**
Logged by:	**Clare Griggs**	Date Received:	**3/24/2015 11:18:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☐	No ☑	NA ☐
		Air Samples		
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☑
7.	Were all coolers received at a temperature of >0°C to 10.0°C	Yes ☐	No ☐	NA ☑
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is the headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Per client request, analyte 1,4 Dioxane added to TO15 SIM analysis.

Item Information

Fremont Analytical

3600 Fremont Ave N.
Seattle, WA 98103

Tel: 206-352-3790
Fax: 206-352-7178

Air Chain of Custody Record - Whole Air Sample

Date: 3/24/15

Laboratory Project No (internal): 1503256

Page: 1 of: 1

Client: Aspect Consulting

Address:

City, State, Zip:

Tel:

Project Name: Wilbur Chevrolet

Location: Tacoma, WA

Collected by: Eric Grassinger

Reports To (PM): Alan Noell / Eric Grassinger

Email: anoell@aspectconsulting.com

Project No: 080190

* Gas Matrix Codes: I = Indoor SS = Subslab L = Landfill SG = Soil Gas M = Plume Mapping Q = Fuel Gas Quality L = LEED (Consult Client Services)

** Container Codes: 6L = Six Liter Canister (Summa) TB = Tedlar Bag BV = 1 Liter Bottle Vac MC = 1 Liter MiniCan HP = High Pressure Cylinder HJ = Glass Headspace Jar

	Sample Name	Canister / Flow Reg Serial #	Sample Date & Time	Gas Matrix Code *	Anticipated Fill Time	Sample Volume	Container Type **	Evacuation Pressure (mtorr) (Internal)	Pressure at Time of Pick-up ("Hg) (Internal)	Equipment Certification Code (Internal)	Field Initial Sample Pressure ("Hg)	Field Final Sample Pressure ("Hg)	Analysis Requested	Receipt Date (Internal)	Final (psi) (Internal)
1	SS-FPB-032015	17649 FR70-06	3/20/15 0700	SS	70min	6L	Summa	10mtorr 3/19/15 9:00			-30 0640	-5 0710	- Full TO-15 - MAPH - He - 3C	3/24/15	-5
2	IA-FPB-032315	12668 FR8-24	3/23/15 1465	I	8hr	6L	Summa	10mtorr 3/19/15 9:00			-30 0723	-5 1421	- Full TO-15 SIM - MAPH - He by 3C	3/24/15	-6
3															
4															
5															

Rental Equipment (Circle all that apply): Manifold Mini-Pump Fittings Tedlar Bags Canisters Flow Controllers Helium Cylinder Flouridated Tubing Wrench

Condition: Seals Intact: Y N N/A Client Consult: Y ( ) N ( )

Special Remarks:

Relinquished	Date/Time	Relinquished	Date/Time
x [signature]	3/23/15	x	
Relinquished	Date/Time	Relinquished	Date/Time
x		x [signature]	3/24/15 1118

TAT --> STD Rush (specify)

Per Eric G. 3/26

APPENDIX E

Groundwater Analytical Results

Aspect CONSULTING

Sample number MW-11-032015

GROUNDWATER SAMPLING RECORD

WELL NUMBER: MW-11 Page:___ of ___

Project Name: Walker Chevrolet
Date: 3/20/15
Sampled by: ELS
Measuring Point of Well: TOC
Screened Interval (ft. TOC)
Filter Pack Interval (ft. TOC)

Project Number:
Starting Water Level (ft TOC): 52.07
Casing Stickup (ft):
Total Depth (ft TOC):
Casing Diameter (inches):

Casing Volume _____ (ft Water) x _____ (Lpfv)(gpf) = _____ (L)(gal)
Casing volumes: 3/4"= 0.02 gpf 2" = 0.16 gpf 4" = 0.65 gpf 6" = 1.47 gpf
3/4"= 0.09 Lpf 2" = 0.62 Lpf 4" = 2.46 Lpf 6" = 5.56 Lpf

Sample Intake Depth (ft TOC):

PURGING MEASUREMENTS

Criteria:		Typical 0.1-0.5 Lpm	Stable	na	± 3%	± 10%	± 0.1	± 10 mV	± 10%	
Time	Cumul. Volume (gal or L)	Purge Rate (gpm or Lpm)	Water Level (ft)	Temp. (°C)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	pH	ORP (mv)	Turbidity (NTU)	Comments
0802		0.30	52.07							Start.
0807				12.8	368.7	3.02	6.17	125.2		
0812				12.9	368.0	2.63	6.21	121.3		
0817				13.0	366.2	2.58	6.26	122.1		
0822				13.0	364.6	2.54	6.29	124.8	244	Sampled

Total Gallons Purged: _____ Total Casing Volumes Removed: _____

Ending Water Level (ft TOC): _____ Ending Total Depth (ft TOC): _____

SAMPLE INVENTORY

Time	Volume	Bottle Type	Quantity	Filtration	Preservation	Appearance		Remarks
						Color	Turbidity & Sediment	
0825	40mL	VOA	8	N	HCl			
	40mL	VOA	2	N	N			
	500mL	Poly	2	N	N			
	500mL	Amber	1	N	N			

METHODS

Parameters measured with (instrument model & serial number): YSI Pro+ 12K101171
Purging Equipment: QED Decon Equipment: alconox wash
Disposal of Discharged Water: drum
Observations/Comments:

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 3, 2015

Alan Noell, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Noell:

Included are the results from the testing of material submitted on March 20, 2015 from the Walker Chevrolet 080190, F&BI 503392 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0403R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 20, 2015 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Walker Chevrolet 080190, F&BI 503392 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
503392 -01	MW-11-032015

Chromium in the 200.8 matrix spike and the associated relative percent difference exceeded the acceptance criteria. The laboratory control sample passed the acceptance criteria, therefore the results are likely due to matrix effect.

All other quality control requirements were acceptable.

Date of Report: 04/03/15
Date Received: 03/20/15
Project: Walker Chevrolet 080190, F&BI 503392
Date Extracted: 03/23/15
Date Analyzed: 03/23/15

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
MW-11-032015 503392-01	<100	100
Method Blank 05-564 MB	<100	93

Date of Report: 04/03/15
Date Received: 03/20/15
Project: Walker Chevrolet 080190, F&BI 503392
Date Extracted: 03/25/15
Date Analyzed: 03/25/15

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
MW-11-032015 503392-01	82 x	<250	86
Method Blank 05-616 MB	<50	<250	98

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-032015	Client:	Aspect Consulting, LLC
Date Received:	03/20/15	Project:	Walker Chevrolet 080190, F&BI 503392
Date Extracted:	03/24/15	Lab ID:	503392-01
Date Analyzed:	03/25/15	Data File:	503392-01.028
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	107	60	125
Indium	92	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	5.15
Barium	57.9
Cadmium	<1
Chromium	24.0
Lead	4.99
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Walker Chevrolet 080190, F&BI 503392
Date Extracted:	03/24/15	Lab ID:	I5-176 mb
Date Analyzed:	03/25/15	Data File:	I5-176 mb.023
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	91	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C SIM

Client Sample ID:	MW-11-032015	Client:	Aspect Consulting, LLC
Date Received:	03/20/15	Project:	Walker Chevrolet 080190, F&BI 503392
Date Extracted:	03/31/15	Lab ID:	503392-01
Date Analyzed:	03/31/15	Data File:	033118.D
Matrix:	Water	Instrument:	GCMS7
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	65	50	150
Toluene-d8	65	50	150
4-Bromofluorobenzene	64	50	150

Compounds:	Concentration ug/L (ppb)
1,4-dioxane	<0.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Walker Chevrolet 080190, F&BI 503392
Date Extracted:	03/31/15	Lab ID:	05-0643 mb
Date Analyzed:	03/31/15	Data File:	033117.D
Matrix:	Water	Instrument:	GCMS7
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	75	50	150
Toluene-d8	75	50	150
4-Bromofluorobenzene	73	50	150

Compounds:	Concentration ug/L (ppb)
1,4-dioxane	<0.4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-032015	Client:	Aspect Consulting, LLC
Date Received:	03/20/15	Project:	Walker Chevrolet 080190, F&BI 503392
Date Extracted:	03/23/15	Lab ID:	503392-01
Date Analyzed:	03/23/15	Data File:	032324.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	105	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	1.1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	1.2	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	3.0	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Walker Chevrolet 080190, F&BI 503392
Date Extracted:	03/23/15	Lab ID:	05-0548 mb
Date Analyzed:	03/23/15	Data File:	032308.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Date of Report: 04/03/15
Date Received: 03/20/15
Project: Walker Chevrolet 080190, F&BI 503392
Date Extracted: 03/23/15
Date Analyzed: 03/23/15

RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR 1,2-DIBROMOETHANE BY EPA METHOD 8011 MODIFIED
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	EDB
MW-11-032015 503392-01	<0.01
Method Blank	<0.01

Date of Report: 04/03/15
Date Received: 03/20/15
Project: Walker Chevrolet 080190, F&BI 503392

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

Laboratory Code: 503389-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	97	69-134

Date of Report: 04/03/15
Date Received: 03/20/15
Project: Walker Chevrolet 080190, F&BI 503392

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	87	93	63-142	7

Date of Report: 04/03/15
Date Received: 03/20/15
Project: Walker Chevrolet 080190, F&BI 503392

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

Laboratory Code: 503418-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	15.5	94	88	60-150	7
Barium	ug/L (ppb)	50	68.2	99	94	79-126	5
Cadmium	ug/L (ppb)	5	<1	93	92	80-124	1
Chromium	ug/L (ppb)	20	<1	189 vo	107	64-132	55 vo
Lead	ug/L (ppb)	10	<1	93	91	79-121	2
Mercury	ug/L (ppb)	10	<1	92	91	50-150	1
Selenium	ug/L (ppb)	5	1.35	97	98	68-142	1
Silver	ug/L (ppb)	5	<1	92	90	60-121	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	95	80-111
Barium	ug/L (ppb)	50	93	83-117
Cadmium	ug/L (ppb)	5	92	83-113
Chromium	ug/L (ppb)	20	96	80-119
Lead	ug/L (ppb)	10	98	83-115
Mercury	ug/L (ppb)	10	95	70-130
Selenium	ug/L (ppb)	5	96	81-119
Silver	ug/L (ppb)	5	98	75-120

Date of Report: 04/03/15
Date Received: 03/20/15
Project: Walker Chevrolet 080190, F&BI 503392

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

Laboratory Code: 503392-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,4-dioxane	ug/L (ppb)	2	<0.4	105	50-150

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,4-dioxane	ug/L (ppb)	2	99	105	70-130	6

Date of Report: 04/03/15
Date Received: 03/20/15
Project: Walker Chevrolet 080190, F&BI 503392

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

Laboratory Code: 503392-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	113	10-172
Chloromethane	ug/L (ppb)	50	<10	117	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	123	36-166
Bromomethane	ug/L (ppb)	50	<1	108	47-169
Chloroethane	ug/L (ppb)	50	<1	121	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	114	44-165
Acetone	ug/L (ppb)	250	<10	116	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	119	60-136
Methylene chloride	ug/L (ppb)	50	<5	114	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	108	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	110	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	110	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	101	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	113	71-127
Chloroform	ug/L (ppb)	50	1.1	106	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	127	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	105	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	114	69-133
Carbon tetrachloride	ug/L (ppb)	50	1.2	107	56-152
Benzene	ug/L (ppb)	50	<0.35	111	76-125
Trichloroethene	ug/L (ppb)	50	3.0	115	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	114	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	111	61-150
Dibromomethane	ug/L (ppb)	50	<1	110	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	128	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	116	72-132
Toluene	ug/L (ppb)	50	<1	105	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	105	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	104	68-131
2-Hexanone	ug/L (ppb)	250	<10	108	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	108	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	107	10-226
Dibromochloromethane	ug/L (ppb)	50	<1	105	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	106	69-134
Chlorobenzene	ug/L (ppb)	50	<1	104	77-122
Ethylbenzene	ug/L (ppb)	50	<1	102	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	104	73-137
m,p-Xylene	ug/L (ppb)	100	<2	102	69-135
o-Xylene	ug/L (ppb)	50	<1	103	60-140
Styrene	ug/L (ppb)	50	<1	105	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	99	65-142
Bromoform	ug/L (ppb)	50	<1	102	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	100	58-144
Bromobenzene	ug/L (ppb)	50	<1	106	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	100	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	101	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	101	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	98	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	96	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	101	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	97	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	100	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	98	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	100	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	100	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	102	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	94	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	99	66-136
Hexachlorobutadiene	ug/L (ppb)	50	<1	96	60-143
Naphthalene	ug/L (ppb)	50	<1	105	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	102	69-148

Date of Report: 04/03/15
Date Received: 03/20/15
Project: Walker Chevrolet 080190, F&BI 503392

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	119	123	25-158	3
Chloromethane	ug/L (ppb)	50	122	119	45-156	2
Vinyl chloride	ug/L (ppb)	50	121	120	50-154	1
Bromomethane	ug/L (ppb)	50	112	115	55-143	3
Chloroethane	ug/L (ppb)	50	120	123	58-146	2
Trichlorofluoromethane	ug/L (ppb)	250	118	117	50-150	1
Acetone	ug/L (ppb)	250	117	116	53-131	1
1,1-Dichloroethene	ug/L (ppb)	50	115	118	67-136	3
Methylene chloride	ug/L (ppb)	50	108	109	39-148	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	108	109	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	110	111	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	108	109	79-121	1
2,2-Dichloropropane	ug/L (ppb)	50	107	110	55-143	3
cis-1,2-Dichloroethene	ug/L (ppb)	50	110	111	80-123	1
Chloroform	ug/L (ppb)	50	104	104	80-121	0
2-Butanone (MEK)	ug/L (ppb)	250	115	116	57-149	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	104	103	73-132	1
1,1,1-Trichloroethane	ug/L (ppb)	50	105	105	83-130	0
1,1-Dichloropropene	ug/L (ppb)	50	111	110	77-129	1
Carbon tetrachloride	ug/L (ppb)	50	108	108	75-158	0
Benzene	ug/L (ppb)	50	108	108	69-134	0
Trichloroethene	ug/L (ppb)	50	112	112	80-120	0
1,2-Dichloropropane	ug/L (ppb)	50	111	111	77-123	0
Bromodichloromethane	ug/L (ppb)	50	110	110	81-133	0
Dibromomethane	ug/L (ppb)	50	109	107	82-125	2
4-Methyl-2-pentanone	ug/L (ppb)	250	126	122	65-138	3
cis-1,3-Dichloropropene	ug/L (ppb)	50	114	112	82-132	2
Toluene	ug/L (ppb)	50	101	101	72-122	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	102	101	80-136	1
1,1,2-Trichloroethane	ug/L (ppb)	50	100	100	75-124	0
2-Hexanone	ug/L (ppb)	250	104	103	60-136	1
1,3-Dichloropropane	ug/L (ppb)	50	103	104	76-126	1
Tetrachloroethene	ug/L (ppb)	50	103	103	76-121	0
Dibromochloromethane	ug/L (ppb)	50	104	105	84-133	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	103	102	82-125	1
Chlorobenzene	ug/L (ppb)	50	101	101	83-114	0
Ethylbenzene	ug/L (ppb)	50	98	100	77-124	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	103	105	84-127	2
m,p-Xylene	ug/L (ppb)	100	100	102	83-125	2
o-Xylene	ug/L (ppb)	50	100	102	81-121	2
Styrene	ug/L (ppb)	50	102	102	84-119	0
Isopropylbenzene	ug/L (ppb)	50	98	99	85-117	1
Bromoform	ug/L (ppb)	50	103	103	74-136	0
n-Propylbenzene	ug/L (ppb)	50	98	96	74-126	2
Bromobenzene	ug/L (ppb)	50	103	101	80-121	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	100	97	78-123	3
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	99	97	66-126	2
1,2,3-Trichloropropane	ug/L (ppb)	50	100	96	67-124	4
2-Chlorotoluene	ug/L (ppb)	50	96	94	77-127	2
4-Chlorotoluene	ug/L (ppb)	50	94	93	78-128	1
tert-Butylbenzene	ug/L (ppb)	50	100	99	80-123	1
1,2,4-Trimethylbenzene	ug/L (ppb)	50	97	95	79-122	2
sec-Butylbenzene	ug/L (ppb)	50	99	97	80-125	2
p-Isopropyltoluene	ug/L (ppb)	50	98	96	81-123	2
1,3-Dichlorobenzene	ug/L (ppb)	50	99	97	85-116	2
1,4-Dichlorobenzene	ug/L (ppb)	50	99	97	84-121	2
1,2-Dichlorobenzene	ug/L (ppb)	50	102	101	85-116	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	97	96	57-141	1
1,2,4-Trichlorobenzene	ug/L (ppb)	50	101	98	72-130	3
Hexachlorobutadiene	ug/L (ppb)	50	101	97	53-141	4
Naphthalene	ug/L (ppb)	50	105	104	64-133	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	102	102	65-136	0

Date of Report: 04/03/15
Date Received: 03/20/15
Project: Walker Chevrolet 080190, F&BI 503392

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR 1,2-DIBROMOETHANE BY EPA METHOD 8011 MODIFIED

Laboratory Code: 503392-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 10)
1,2-Dibromoethane	ug/L (ppb)	<0.01	<0.01	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
1,2-Dibromoethane	ug/L (ppb)	0.10	98	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.

503392

SAMPLE CHAIN OF CUSTODY

ME 03-20-15

B04 / AI2 / V2

Page # 1 of 1

Send Report To Alan Noell / Eric Geissinger

Company Aspect Consulting

Address 401 2nd Ave S. #201

City, State, ZIP Seattle, WA 98104

Phone # _____ Fax # _____

SAMPLERS (signature)

PROJECT NAME/NO. Walker Chevrolet

PO# 080190

REMARKS

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH _____
- Rush charges authorized by _____

SAMPLE DISPOSAL
- [x] 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	1,4 dioxane 8260C SIM	1,2 dibromoethane 8011	RCRA Metals				Notes
MW-11-032015	01A-M	3/20/15	0825	Water	13	X	X		X			X	X	X				

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Eric Geissinger	Aspect	3/20/15	
Received by:	Jason Kobs	FedEx	3/20/15	1:45pm
Relinquished by:				
Received by:	D O VO	F&BI	11	14:20

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

January 14, 2015

Alan Noell, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Noell:

Included are the additional results from the testing of material submitted on January 23, 2014 from the Walker Chevrolet 080190-004-11, F&BI 401273 project. There are 5 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0114R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 23, 2015 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Walker Chevrolet 080190-004-11, F&BI 401273 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
401273 -01	MW-11-012314
401273 -02	MW14D-012314

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-012314	Client:	Aspect Consulting, LLC
Date Received:	01/23/14	Project:	Walker Chevrolet 080190-004-11
Date Extracted:	01/24/14	Lab ID:	401273-01
Date Analyzed:	01/24/14	Data File:	012412.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	94	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)
1,4-Dioxane	<10 L

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW14D-012314	Client:	Aspect Consulting, LLC
Date Received:	01/23/14	Project:	Walker Chevrolet 080190-004-11
Date Extracted:	01/24/14	Lab ID:	401273-02
Date Analyzed:	01/24/14	Data File:	012413.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	95	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)
1,4-Dioxane	<10 L

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Walker Chevrolet 080190-004-11
Date Extracted:	01/24/14	Lab ID:	04-0055 mb
Date Analyzed:	01/24/14	Data File:	012407.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	95	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)
1,4-Dioxane	<10 L

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.

401273

SAMPLE CHAIN OF CUSTODY

ME 01/23/14 AIS / V2

Page 1 of

Send Report To Alan Noell
Company Aspect Consulting
Address 401 2nd Ave. S., Ste. 201
City, State, ZIP Seattle, WA 98104
Phone #(206) 328-7443 Fax #(206) 838-5853

SAMPLERS (signature)
PROJECT NAME/NO. Walker Chevrolet
PO# 080190-004-11
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 by 8260	PAHs by 8270	HFS	Pb-total (200.8)	PCBs (8082)	1,4 Dioxane				Notes
MW-11-012314	01 A-L	1/23/14	10:10	water	12	X	X		X	X		X	X	0				0 - per AN
MW-14D-012314	02 A-D	1/23/14	11:55	water	4				X					0				~~1/16/15~~ 1/8/15 MG
														Sample 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:	Judy Oleson	Aspect	1/23/14	1:45
Received by:	DO VD	FedEx	1/	15:45
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

May 8, 2015

Alan Noell, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Mr. Noell:

Included are the results from the testing of material submitted on April 30, 2015 from the Walker Chevrolet, PO 080190, F&BI 504573 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Parker Wittman
ASP0508R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 30, 2015 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Walker Chevrolet, PO 080190, F&BI 504573 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
504573 -01	MW-11-042815

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-042815	Client:	Aspect Consulting, LLC
Date Received:	04/30/15	Project:	Walker Chevrolet, PO 080190
Date Extracted:	05/04/15	Lab ID:	5045763-01
Date Analyzed:	05/04/15	Data File:	5045763-01.059
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	98	60	125
Indium	81	60	125
Holmium	90	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	6.29
Barium	73.2
Cadmium	<1
Chromium	26.1
Lead	6.20
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Walker Chevrolet, PO 080190
Date Extracted:	05/04/15	Lab ID:	I5-274 mb
Date Analyzed:	05/04/15	Data File:	I5-274 mb.010
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Indium	94	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-042815	Client:	Aspect Consulting, LLC
Date Received:	04/30/15	Project:	Walker Chevrolet, PO 080190
Date Extracted:	05/06/15	Lab ID:	504573-01
Date Analyzed:	05/06/15	Data File:	504573-01.065
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	84	60	125
Indium	83	60	125
Holmium	88	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	12.5
Cadmium	<1
Chromium	1.76
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Walker Chevrolet, PO 080190
Date Extracted:	05/06/15	Lab ID:	I5-282 mb
Date Analyzed:	05/06/15	Data File:	I5-282 mb.056
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	91	60	125
Holmium	93	60	125

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Date of Report: 05/08/15
Date Received: 04/30/15
Project: Walker Chevrolet, PO 080190, F&BI 504573

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

Laboratory Code: 504568-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	<1	104	106	60-150	2
Barium	ug/L (ppb)	50	3.72	101	102	79-126	1
Cadmium	ug/L (ppb)	5	<1	100	101	80-124	1
Chromium	ug/L (ppb)	20	4.97	91	91	64-132	0
Lead	ug/L (ppb)	10	<1	98	99	79-121	1
Mercury	ug/L (ppb)	10	<1	102	102	50-150	0
Selenium	ug/L (ppb)	5	<1	106	106	68-142	0
Silver	ug/L (ppb)	5	<1	99	101	60-121	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	110	80-111
Barium	ug/L (ppb)	50	96	83-117
Cadmium	ug/L (ppb)	5	111	83-113
Chromium	ug/L (ppb)	20	91	80-119
Lead	ug/L (ppb)	10	99	83-115
Mercury	ug/L (ppb)	10	112	70-130
Selenium	ug/L (ppb)	5	143 vo	81-119
Silver	ug/L (ppb)	5	96	75-120

Date of Report: 05/08/15
Date Received: 04/30/15
Project: Walker Chevrolet, PO 080190, F&BI 504573

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 505058-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	3.71	97	100	60-150	3
Barium	ug/L (ppb)	50	55.9	101	103	79-126	2
Cadmium	ug/L (ppb)	5	<1	99	103	80-124	4
Chromium	ug/L (ppb)	20	<1	86	88	64-132	2
Lead	ug/L (ppb)	10	<1	97	97	79-121	0
Mercury	ug/L (ppb)	10	<1	100	100	50-150	0
Selenium	ug/L (ppb)	5	2.63	100	101	68-142	1
Silver	ug/L (ppb)	5	<1	94	96	60-121	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	100	80-111
Barium	ug/L (ppb)	50	102	83-117
Cadmium	ug/L (ppb)	5	104	83-113
Chromium	ug/L (ppb)	20	100	80-119
Lead	ug/L (ppb)	10	102	83-115
Mercury	ug/L (ppb)	10	102	70-130
Selenium	ug/L (ppb)	5	102	81-119
Silver	ug/L (ppb)	5	100	75-120

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.

504573

SAMPLE CHAIN OF CUSTODY

ME 04/30/15

AI2

Page # 1 of 1

Send Report To Alan Noell
Company Aspect Consulting
Address 401 and Ave S, Ste. 201
City, State, ZIP Seattle WA 98104
Phone #206-838-6592 Fax #206-838-5853

SAMPLERS (signature) Enyeart
PROJECT NAME/NO. Walker Chevrolet
PO# 080190
REMARKS e-mail results to anoell@aspectconsulting.com

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	Total RCRA Metals	Diss. RCRA Metals					Notes
MW-11-042815	01B	4/28/15	09:40	groundwater	2							X	X					Diss. sample field filtered

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Enyeart	Judy Enyeart	Aspect	4/30/15	14:00
Received by: Nhan Pham for IB	Nhan Pham	FCBI	4/30	1400
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
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