VCP SITE CLOSURE REPORT

Former Ballard Auto Wrecking

Seattle, Washington

Prepared for: Washington State Dept. of Ecology

Prepared by: RK Environmental

May 2, 2011

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Introduction

This Voluntary Cleanup Program (VCP) Site Closure Report documents the environmental cleanup and confirmation monitoring activities associated with a series of small excavation areas on the former Ballard Auto Wrecking project site (Figure 1). The project site is located at 1515 NW Leary Way in Seattle, Washington. This work, and the preceding independent cleanup work from which this work was based (Aspect, 2004), was performed under the Washington State Department of Ecology's VCP, and in general accordance with Ecology's Model Toxics Control Act (MTCA).

The current owner of the former Ballard Auto Wrecking project site, Mr. Lee Noble of Seattle, is undertaking this independent remedial action at the project site to obtain a "No Further Action" determination from Ecology. Currently, the project site is limited and restricted from certain uses based on Ecology's 'conditional' No Further Action determination letter, dated June 29, 2004 (Attachment A). This NFA letter required that the owner of the property continue to perform groundwater monitoring and file a Restrictive Covenant on the property.

During 2008 and 2009, the property owner performed the requisite groundwater monitoring, and on April 21, 2009, Ecology issued their Opinion pursuant to WAC 173-340-515(5), which stated:

- ***Removal of the existing restrictive covenant is not justified at this time. The restrictive covenant limiting the property to industrial use remains in effect.*** *At the time of the soil excavation, soil with relatively high levels of contamination was left in place based, at least in part, on the fact that the property would see only industrial use. To justify allowing the uses of the property other than industrial uses, you would need to demonstrate that soil on the property has been cleaned up to a more stringent standard,….*

- ***You have satisfied the groundwater monitoring requirement in Ecology's letter of June 29, 2004, that four consecutive quarters of monitoring meet cleanup levels.***

The Environmental Restrictive Covenant required by Ecology was placed on the property on June 17, 2004 (Attachment B). In general, this Restrictive Covenant requires the following:

1) Limit the site use to traditional Industrial only

2) Restrict contact to and protect by cover/cap 3 portions of the property that contain petroleum and lead contaminated soil

3) Provide 30 days written notice to Ecology for any change in site use, including a new lease or a proposal to sell.

4) Notify Ecology for any deviations from the restricted uses of the property, and allow Ecology access to the property to evaluate the Remedial Action, to take samples, or inspect the site.

The continued site use restrictions placed on the property are associated with the only remaining contingency issue on the property – contaminated subsurface soil that complies with Ecology's industrial standards. This report presents the 2011 independent cleanup work performed by the property owner in order to remove any remaining impacted soil, to meet MTCA Methods A soil cleanup levels (CULs) for unrestricted site uses.

Based on the presented data and findings of the independent cleanup work, the current owner, Mr. Lee Noble, requests Ecology's review of this report, and if appropriate (that the site meets unrestricted land uses) your authorization that the 2004 Environmental Restrictive Covenant be terminated and removed from the property title.

Following this introduction, this report is organized into three sections:

- **Previous Cleanup Conditions and Setting.** Presents the subsurface soil environmental conditions following the previous cleanup activities performed by Aspect Consulting.
- **Cleanup Action Plan and Standards.** Presents the selected soil cleanup standards for the contaminants of concern (waste oil, diesel fuel and gasoline), including numerical cleanup standards and points of compliance.
- **Soil Cleanup Results.** Presents a description of the overall soil cleanup activities performed at the project site and the analytical results of the soil confirmation samples.

General Property and Facility Information

The former Ballard Auto Wrecking property is located at 1515 NW Leary Way, in the Ballard neighborhood of Seattle, Washington (Figure 1). The approximately 0.7 acre property, zoned industrial by the City of Seattle, operated as a gasoline service station and then more recently as an auto wrecking yard.

Project Site:	Former Ballard Auto Wrecking
Site Name:	Ballard Auto Wrecking
Street Address:	1515 NW Leary Way, Seattle, WA 98117
Site Contact:	Mr. Lee Noble, Property Owner, (206) 226-6153
Map of Site:	See Figure 1
Ecology VCP #:	NW2346 – Northwest Regional Office

A more detailed presentation of site history, background and physical description is available in the properties Periodic Review (Ecology 2010), Cleanup Action Plan (Aspect 2003), and the Cleanup Construction and First Two Rounds of Post-Construction Groundwater Monitoring (Aspect 2004).

Previous Cleanup Conditions and Setting

The original cleanup construction for impacted soil at the project site was performed by the former owner under Ecology's VCP. Soil cleanup was performed throughout the parcel boundaries of the property using site-specific, calculated soil cleanup levels based on industrial uses (Aspect, 2003). The brief presentation below uses Ecology's MTCA Method A soil cleanup levels (CULs) for unrestricted land use to describe the soil quality conditions that remained on site after this 2003 work. This comparison was used as the starting point to develop the current soil cleanup plan and direct overexcavation efforts. Between September 15 and October 2, 2003, it was reported (Aspect, 2004) that the following cleanup construction activities were performed:

- UST Area: from the eastern side of the property, removal of three Underground Storage Tanks (USTs) associated with a former service station and excavation and off-site disposal of 120 cubic yards (cy) of contaminated soil.
- Area A: from the western side of the property, excavation and off-site disposal of 20 cy of contaminated soil.
- Area B: from the central portion of the property, excavation and off-site disposal of 70 cy of contaminated soil.

A more detailed presentation and final conditions of the 2003 cleanup construction work associated with the three excavation areas is provided below.

UST Excavation Area

The former UST area is located on the eastern portion of the property (see Figure 1). In September and October 2003, three USTs – one diesel tank and two gasoline tanks – were removed from the former service station area. UST closure documentation was provided in the 2004 Closure Report.

Approximately 120 cy of soil was excavated from the former UST area to depths of approximately 14 feet below ground surface (bgs) and hauled off-site for disposal. From the resulting open excavation, nine verification soil samples (three bottom and six sidewall samples) were collected and chemically analyzed for gasoline, diesel, BETX, and total lead. Table 1 and Figure 2 of the Cleanup Construction Report (Aspect 2004, Attachment C) summarizes the sample depths and analytical results for the UST excavation verification soil samples.

A total of three verification soil samples from the 2003 UST excavation area contained concentrations of the contaminants of concern (COCs) that exceeded Ecology's MTCA Method A CULs for unrestricted land use: UST-4, -6, and -9. As shown on Table 1 and Figure 2 of this report, these historic verification soil samples contained elevated concentrations of total petroleum hydrocarbons (TPH) quantified as gasoline and diesel. These three samples were thus the focus of this supplemental cleanup effort.

Excavation Areas A and B

The near-surface soil excavation areas known as Excavation Areas A and B are located in the central and western portions of the property (Figure 1). These two locations were impacted by former wrecking yard activities (car storage and disassembly) and contained, primarily, elevated concentrations of diesel and waste oil.

Approximately 90 cy of impacted soil was excavated from these two areas to depths ranging from 2 to 3 feet bgs and hauled off-site for disposal. From the resulting excavations, a total of 9 verification soil samples were collected from Area A and 13 samples from Area B. Each sample was chemically analyzed for TPH quantified as gas and diesel, BETX, and total lead. Table 2 and Figure 1 of the Cleanup Construction Report (Attachment C) summarizes the sample depths and analytical results for the two shallow excavation verification soil samples.

At the conclusion of the Areas A and B excavation and verification sample analyses, a total of three samples from Area A and seven samples from Area B contained concentrations of COCs that exceeded Ecology's MTCA Method A CULs for unrestricted land use. These sample IDs, analytical results, and their relative locations are presented in Tables 2 and 3 and Figures 3 and 4 of this report. These ten (plus three from the UST Area) were thus the focus of this supplemental cleanup effort.

Cleanup Action Plan and Standards

This section discusses the presentation of the appropriate cleanup standards (CULs) for the project site's contaminant of concern, mainly waste oil, diesel fuel and gasoline in site soil. Groundwater was addressed separately and under other cleanup efforts (Ecology 2009, Appendix D).

Cleanup Standards

Site Soil. Originally, the project site performed soil cleanup (excavation and demonstration of compliance through sidewall and bottom sampling) using industrial land use as the standard. This cleanup lead to a conditional NFA that restricted land use to industrial site uses. The current owner of the property is proposing to overexcavate portions of the previous excavation areas in order to meet Ecology's Model Toxics Control Act (MTCA) Method A soil cleanup levels for unrestricted land use throughout the boundary of the property. The target COCs and associated soil cleanup levels are:

- Gasoline-range total petroleum hydrocarbons (TPH) 30 mg/kg
- Diesel-range TPH 2,000 mg/kg
- Benzene 0.03 mg/kg
- Toluene 7 mg/kg
- Ethylbenzene 6 mg/kg
- Total xylenes 9 mg/kg
- Total lead 250 mg/kg

Points of Compliance. The proposed remedial action plan is intended to comply with the selected CULs in soil at the standard points of compliance (POC). For soil, the CUL is based generally on the protection of human direct contact and groundwater for drinking water use, and has a point of compliance throughout the property boundaries and down to 15 feet below ground surface.

Selection of a Site Remediation Plan

The selected site cleanup plan focuses on subsurface soil that exceeds Ecology's MTCA Method A soil CULs for unrestricted land use. The subject soil will be permanently removed from the site through excavation and hauling and off-site disposal at a Subtitle D landfill. Removal efforts will be confirmed by collection of discrete soil samples and chemically analyzed for the above listed COCs.

The three areas selected for excavation and sampling, known as the UST, Area A, and Area B Excavations, were first identified in the preceding cleanup work, performed and reported in 2003/2004 (Aspect, 2004). As detailed earlier in this report, several verification sidewall and bottom samples from each of these excavation areas contained

soil exceeding Ecology's MTCA Method A soil CUL for unrestricted land uses. Figures 2, 3, and 4 provide the precise location of each verification sample (shaded in gray) that exceed the CUL, and was targeted for overexcavation. The following section describes the overexcavation and confirmation soil sampling efforts associated with this supplemental cleanup work.

Soil Cleanup Results

Soil sample locations from each of the three excavation areas that were targeted for overexcavation and resampling were located (dimensioned) on the project site. On February 21 and March 14, the owner performed excavation activities that started with and continued beyond the former 2003 sample locations, until field screening determined that the excavation had reached a 'clean' zone. At that point of excavation, additional sidewall or bottom samples were collected and analyzed for the applicable COCs.

UST Excavation Area

Deep soil samples that continued to contain concentrations of the site COCs in excess of the unrestricted CULs were targeted for overexcavation and resampling. As shown in Figure 2, the former UST Excavation Area had three remaining verification samples that required overexcavation. Overexcavation in this area was guided primarily by PID readings and faint odors of residual gasoline product in soil. No signs of soil staining or sheen were evident during the excavation efforts.

A total of approximately 320 cy of soil was excavated from this area – of this total, approximately 100 cy was hauled off site for disposal; the remaining soil was segregated, chemically profiled, then returned to the excavation as backfill. After the nearly 320 cy of soil, reaching depths of 14 feet bgs, were excavated, confirmation sidewall and bottom samples were collected from the overexcavation. Figure 2 shows that of these samples, 8 were sidewall samples and 2 were bottom confirmation soil samples. Figure 2 shows the final confirmation soil sample locations, including the 3 former samples that were overexcavated. Table 1 summarizes sample depths and analytical results, along with the site soil CUL for each analyte. Laboratory certificates of analysis are provided in Appendix E.

As shown in Table 2, all 10 confirmation soil samples collected as part of the former UST Excavation Area overexcavation effort contained concentrations of the site-specific COCs below the unrestricted CULs. As a result, this excavation area was deemed complete and the data demonstrate that soil cleanup efforts at the former UST storage area has been achieved.

Excavation Areas A and B

Near-surface soil samples that continued to contain concentrations of the site COCs in excess of the unrestricted CULs were targeted for overexcavation and resampling at Excavation Areas A and B. As shown in Figures 3 and 4, the former Excavation Areas A and B had three and seven, respectively, remaining verification samples that required overexcavation. Overexcavation in Areas A and B, both a former car storage area, was guided primarily by visual indications of waste oil staining. No significant PID readings or odors were noted.

At Excavation Area A, after a total of nearly 75 cy of soil was excavated (approximately 35 cy were disposed off site and the remaining used as backfill), reaching depths of approximately 3 feet bgs, confirmation sidewall and bottom samples were collected. Figure 4 shows that of these samples, 2 were sidewall samples and 4 were bottom confirmation soil samples. Figure 4 shows the final confirmation soil sample locations, including the 3 former samples that were overexcavated. Table 3 summarizes sample depths and analytical results, along with the site soil CUL for each analyte.

At Excavation Area B, after a total of nearly 130 cy of soil was excavated (approximately 40 cy were disposed off site and the remaining used as backfill), reaching depths of up to 4 feet bgs, confirmation sidewall and bottom samples were collected. Figure 3 shows the final, overexcavation confirmation sidewall and bottom samples that comprise of this final excavation area. Table 3 summarizes sample depths and analytical results, along with the site soil CUL for each analyte. Note that Excavation Area B required two rounds of overexcavation and sampling efforts. The final overexcavation event occurred on March 14, 2011.

As shown in Tables 3 and 4, all Area A and B final, confirmation soil samples contained concentrations of the site-specific COCs below the unrestricted CULs. As a result, these two excavation areas are deemed complete and the data demonstrate that soil cleanup efforts at the former Excavation Areas A and B have been achieved. Laboratory certificates of analysis are provided in Appendix E.

Soil Disposal and Site Restoration Activities

Contaminated Soil Handling and Disposal. During soil excavation activities, 'clean' overburden soil, as determined through field screening, was stockpiled on the north end of the property. A total of approximately 360 cy of 'clean' overburden was temporarily stockpiled and chemically profiled. Two composite, stockpile soil samples (BF-1 and BF-2) were collected and chemically analyzed for the target COCs. Results indicate that the stockpile soil was chemically 'clean' (i.e., did not contain any detectable concentrations of the target COCs, including total lead at 5.25 and 16.8 mg/kg) and was therefore returned to the excavation areas as backfill. Table 1 provides the analytical results for both stockpile soil samples.

During soil excavation activities, soil that was deemed impacted or contaminated, as determined through field screening, was placed directly into dump trucks and hauled off site and to the owner's East Marginal Way property for temporary stockpiling and storage. A total of 175 cy of petroleum-contaminated soil was eventually hauled to this location on February 19 and March 14, 2011, placed on a paved surface, and covered with plastic. Since the soil overexcavation and handling work was performed primarily on the weekend, the temporary stockpiling step was necessary until the transfer station reopened during the week. The stockpiled contaminated soil was eventually hauled to Waste Management's (WM) Alaska Street Reload and Recycling center, where it was eventually hauled by rail to their Subtitle D landfill in Arlington, Oregon. Available records for waste handling and disposal are available in Appendix F, including WM's approved non-hazardous waste profile and trip tickets (from March 14, 2011) for Carstens LLC, the project site owner's holding company.

Final Conditions for Site Closure

Request for Termination of Restrictive Covenant

A comprehensive soil cleanup plan was completed on the former Ballard Auto Wrecking project site in February and March 2011. Working from the results of the previous cleanup construction activities (Aspect 2004), the owner performed additional overexcavation and confirmation soil sampling activities in order to comply with Ecology's MTCA Method A soil CULs for unrestricted land use throughout the boundaries of the property. The overexcavation activities were completed on February 19 and March 14, 2011 and analytical data results for all recent confirmation soil samples indicate that this soil cleanup effort effectively: (a) removed any remaining impacted site soil that contained COCs in excess of the site CULs (meeting for the site unrestricted land use); and, (b) replaced all former samples that met industrial CULs with samples that meet unrestricted land use CULs. Based on this effort and the final data results, the quality of the project site's subsurface soil now meets the standards for an unrestricted land use designation. Therefore, we request Ecology's authorization to terminate and remove the project site's Environmental Restrictive Covenant (Appendix B).

Limitations

Work for this project was performed, and this report prepared, in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. It is intended for the exclusive use of Mr. Lee Noble for specific application to the referenced property. This report is not meant to represent a legal opinion. No other warranty, express or implied, is made.

It should be noted that RK Environmental relied on information provided by Aspect Consulting and Friedman & Bruya, Inc. as represented above. We can only relay this information and cannot be responsible for its accuracy or completeness.

References

Aspect, 2003. Cleanup Action Plan, Ballard Auto Wrecking. March 13, 2003.

Aspect, 2004. Cleanup Construction and First Two Rounds of Post-Construction Groundwater Monitoring, Prepared for Demco Law Firm. March 2004.

Ecology, 2004. Independent Remedial Action and Determination of No Further Action, Ballard Auto Wrecking Site. June 29, 2004.

Ecology 2009. Opinion pursuant to WAC 173-340-515(5) on Environmental Covenant, Ballard Auto Wrecking. April 21, 2009.

Ecology, 2010. Periodic Review, Ballard Auto Wrecking, Facility ID#: 2346. October 2010.

Table 1 - Summary of Confirmation Soil Sample Analytical Results
Former UST Excavation Area
Former Ballard Auto Wrecking, Seattle Washington

Sample ID	Confirmation Sample Location	Approx. Sample Depth (feet)	Sample Date	TPH by Methods NWTPH-G and NWTPH-DX (mg/kg)			BTEX by EPA Method 8021 (mg/kg)				Total Lead by EPA Method 6010 (mg/kg)
				Gasoline	Diesel	Oil	Benzene	Toluene	Ethyl-benzene	Total Xylenes	
Former UST Excavation											
UST-4	Center Bottom	12	9/16/03	**88**	940	150	**0.04**	0.04	0.14	0.68	71
UST-6	East Bottom	14	9/16/03	**520**	**4,700**	<500	<0.2	0.50	1.90	7.80	4.60
UST-9	South Wall - East	10	9/16/03	**1,700**	**3,100**	<500	**1.80**	0.96	**8.10**	**23**	4.90
X1-1	Southeast Sidewall	12	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	<1
X1-2	Southwest Sidewall	11	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	<1
X1-3	West Wall - South	11	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.08
X1-4	Southern Bottom	12	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.06
X1-5	Eastwall South	14	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.01
X1-6	Eastwall North	14	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.30
X1-7	Northeast Sidewall	14	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	<1
X1-8	Northern Bottom	14	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	<1
X1-9	Northwest Sidewall	14	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.96
X1-10	Northwest Sidewall	12	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	14.50
Backfill Stockpile Profile Samples											
BF-1	4-point composite	varies	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	5.25
BF-2	4-point composite	varies	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	16.80
MTCA Method A Soil Cleanup Level (for Unrestricted Land Uses)				30/100*	2,000	2,000	0.03	7	6	9	250

Notes:
< = Not detected above the laboratory detection limit indicated
Bolded value indicates exceedance of the corresponding soil cleanup level
Shading indicates that soil at sampling location was removed by additional excavation
* Use 100 mg/kg with mixtures without benzene and the total ETX is less than the gasoline mixture

Table 2 - Summary of Confirmation Soil Sample Analytical Results
Former Excavation Area A
Former Ballard Auto Wrecking, Seattle Washington

Sample ID	Confirmation Sample Location	Approx. Sample Depth (feet)	Sample Date	TPH by Methods NWTPH-G and NWTPH-DX (mg/kg)			BTEX by EPA Method 8021 (mg/kg)				Total Lead by EPA Method 6010 (mg/kg)
				Gasoline	Diesel	Oil	Benzene	Toluene	Ethyl-benzene	Total Xylenes	
Near-Surface Excavation A:											
EX-A2	Sidewall	0 - 1	9/15/03	27	**3,000**	**4,400**	<0.02	<0.02	<0.02	0.27	**530**
EX-A6	Bottom	1	9/15/03	13	**2,800**	**2,600**	<0.02	<0.02	<0.02	0.15	**180**
EX-A9	Sidewall	0 - 1	9/15/03	<10	**3,800**	**5,300**	<0.2	<0.2	<0.2	<0.2	**620**
X3-1	South bottom	2.5	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	76
X3-2	Center bottom	2.5	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	94
X3-3	North bottom	2.5	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	3
X3-4	West sidewall	2.5	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	11
X3-5	North sidewall	2.5	2/21/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	3
MTCA Method A Soil Cleanup Level (for Unrestricted Land Uses)				30	2,000	2,000	0.03	7	6	9	250

Notes:
< = Not detected above the laboratory detection limit indicated
Bolded value indicates exceedance of the corresponding soil cleanup level
Shading indicates that soil at sampling location was removed by additional excavation

Table 3 - Summary of Confirmation Soil Sample Analytical Results
Former Excavation Area B
Former Ballard Auto Wrecking, Seattle Washington

Sample ID	Confirmation Sample Location	Approx. Sample Depth (feet)	Sample Date	TPH by NWTPH-G and NWTPH-DX (mg/kg)			BTEX by EPA Method 8021 (mg/kg)				Total Lead by EPA Method 6010 (mg/kg)
				Gasoline	Diesel	Oil	Benzene	Toluene	Ethyl-benzene	Total Xylenes	
Near-Surface Excavation B:											
EX-B2	Sidewall	0 - 1	9/15/03	60	**2,600**	**2,000**	<0.02	<0.02	0.05	0.36	350
EX-B3	Sidewall	0 - 1	9/15/03	3	**1,500**	**2,900**	<0.02	<0.02	<0.02	<0.02	480
EX-B6	Sidewall	0 - 1	9/15/03	<1	**1,700**	**2,100**	<0.02	<0.02	<0.02	<0.02	150
EX-B8	Bottom	2	9/15/03	8	**2,600**	**3,800**	<0.02	<0.02	<0.02	0.06	63
EX-B10	Sidewall	0 - 1	9/25/03	<10	**2,600**	**4,100**	<0.2	<0.2	<0.2	<0.2	230
EX-B12	Sidewall	0 - 1	9/25/03	<20	**2,800**	**4,400**	<0.4	<0.4	<0.4	<0.4	11
EX-B13	Sidewall	0 - 1	9/25/03	<10	**2,600**	**5,000**	<0.2	<0.2	<0.2	<0.2	**860**
X2-1	North sidewall	2	2/21/11	86	<50	<250	<0.02	<0.02	<0.02	<0.06	3.42
X2-2	West sidewall	2	2/21/11	**145**	360	700	<0.02	0.90	0.85	0.68	7.30
X2-3	West sidewall	2	2/21/11	94	490	1,200	<0.02	<0.02	0.22	0.19	8.20
X2-4	South sidewall	2	2/21/11	**126**	240	670	<0.02	<0.02	0.48	0.55	7.97
X2-5	Southeast sidewall	2	2/21/11	78	<50	<250	<0.02	<0.02	<0.02	<0.06	5.36
X2-6	East sidewall	2	2/21/11	88	<50	<250	<0.02	<0.02	<0.02	<0.06	7.91
X2-7	East sidewall	2	2/21/11	81	110	<250	<0.02	<0.02	<0.02	<0.06	88
X2-8	Center Bottom	2.5	2/21/11	86	160	770	<0.02	<0.02	<0.02	<0.06	**285**
X2-9	Center Bottom	2.5	2/21/11	100	<50	<250	<0.02	<0.02	<0.02	<0.06	9
X4-1	West sidewall north	4	3/14/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.32
X4-2	West sidewall south	4	3/14/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.39
X4-3	West bottom	4	3/14/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.34
X4-4	North sidewall	4	3/14/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.32
X4-5	North bottom	4	3/14/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.34
X4-6	South bottom	4	3/14/11	<2	<50	<250	<0.02	<0.02	<0.02	<0.06	1.38
MTCA Method A Soil Cleanup Level (for Unrestricted Land Uses)				30/100*	2,000	2,000	0.03	7	6	9	250

Notes:
< = Not detected above the laboratory detection limit indicated
Bolded value indicates exceedance of the corresponding soil cleanup level
Shading indicates that soil at sampling location was removed by additional excavation
* Use 100 mg/kg with mixtures without benzene and the total ETX is less than the gasoline mixture

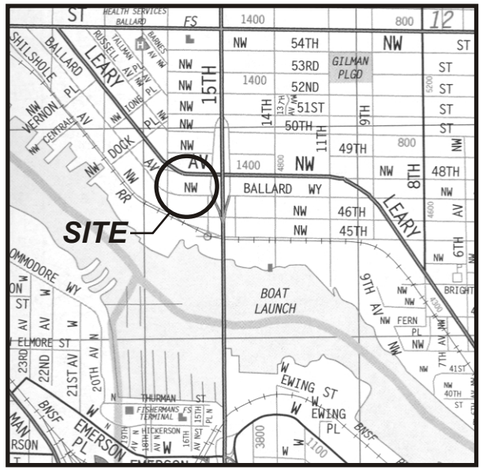
Legend

Property Boundary

2003 Cleanup, Soil Removal Limits

Note: Basemap and removal limits provided by *Cleanup Construction* report dated March 2004, by Aspect Consulting

Site Vicinity Map



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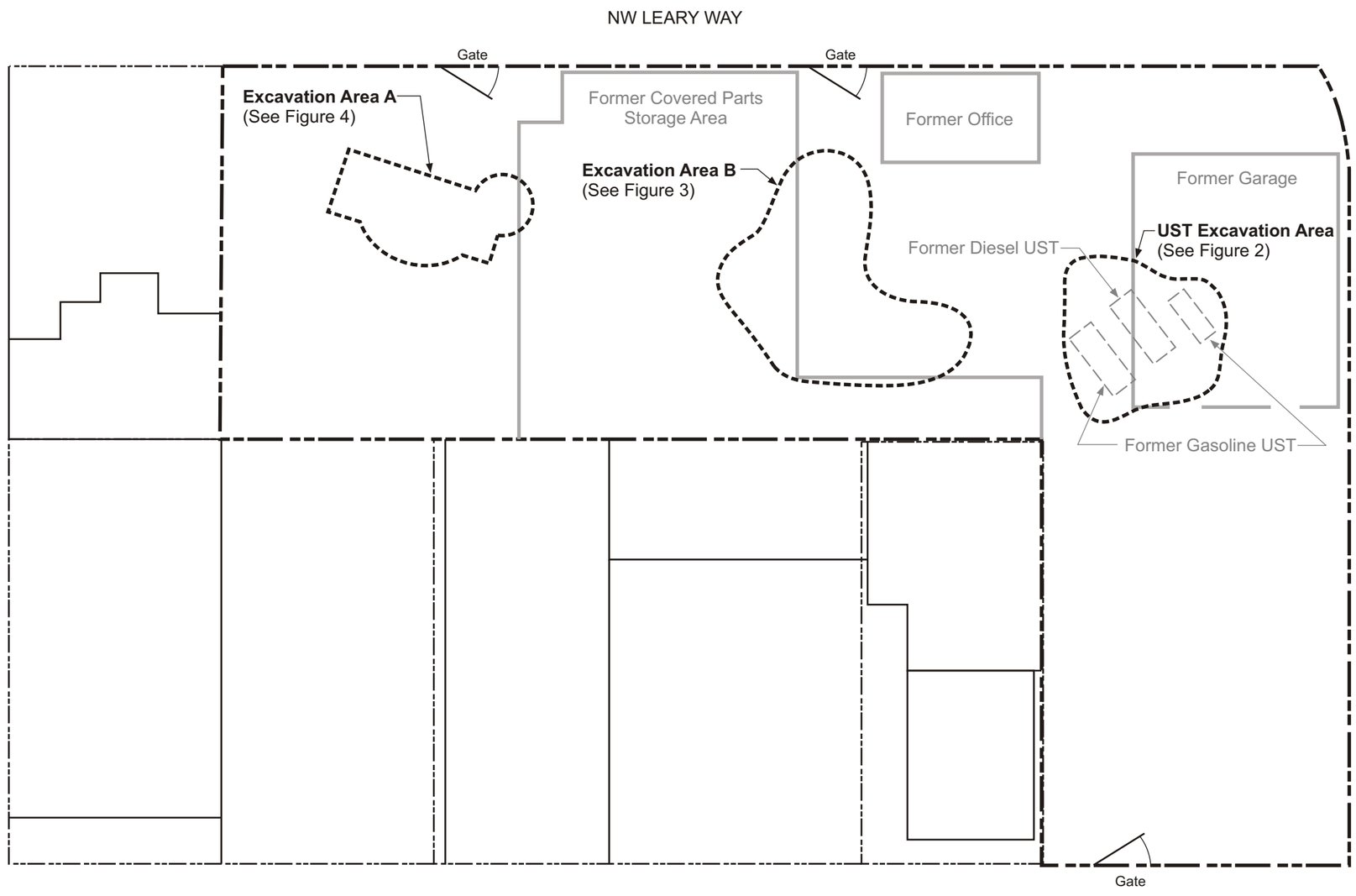
Scale in Feet



0 30 60

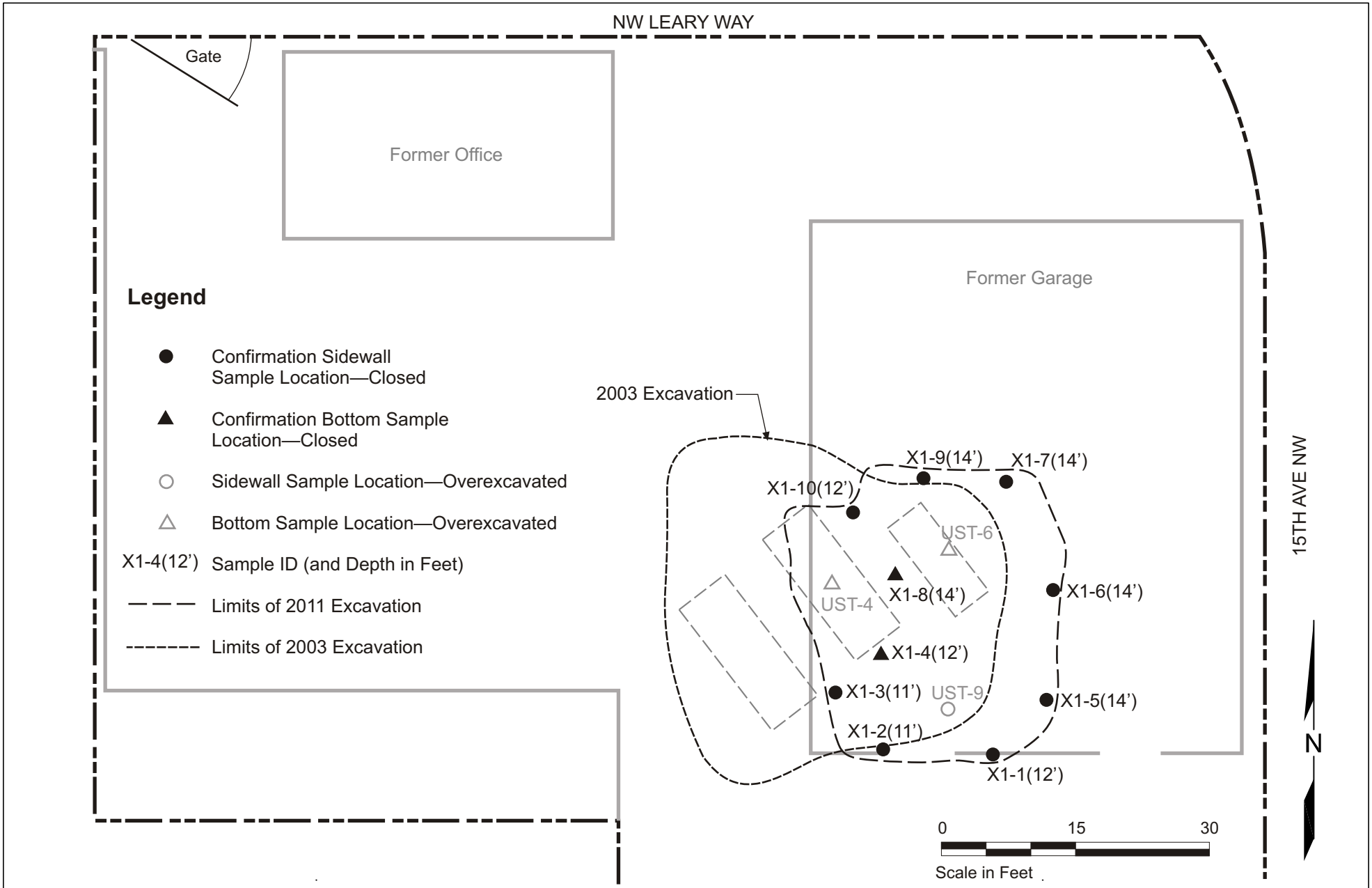
Scale in Feet

RK Environmental

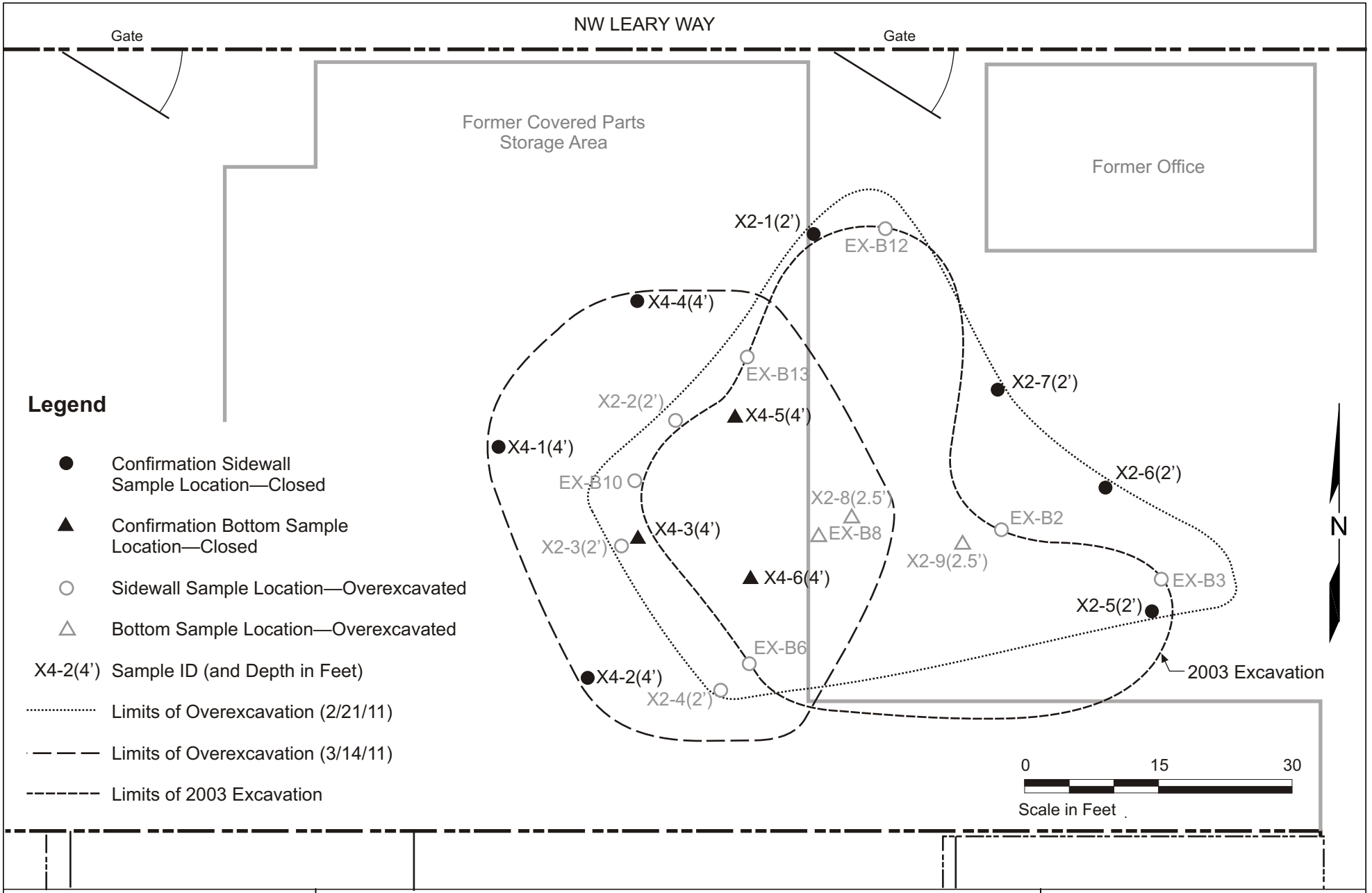
Former Wrecking Facility & Cleanup Construction Results

Ballard Auto Wrecking
Seattle, Washington

Figure 1
Site Plan



RK Environmental	Former Wrecking Facility & Cleanup Construction Results Ballard Auto Wrecking Seattle, Washington	Figure 2 UST Excavation

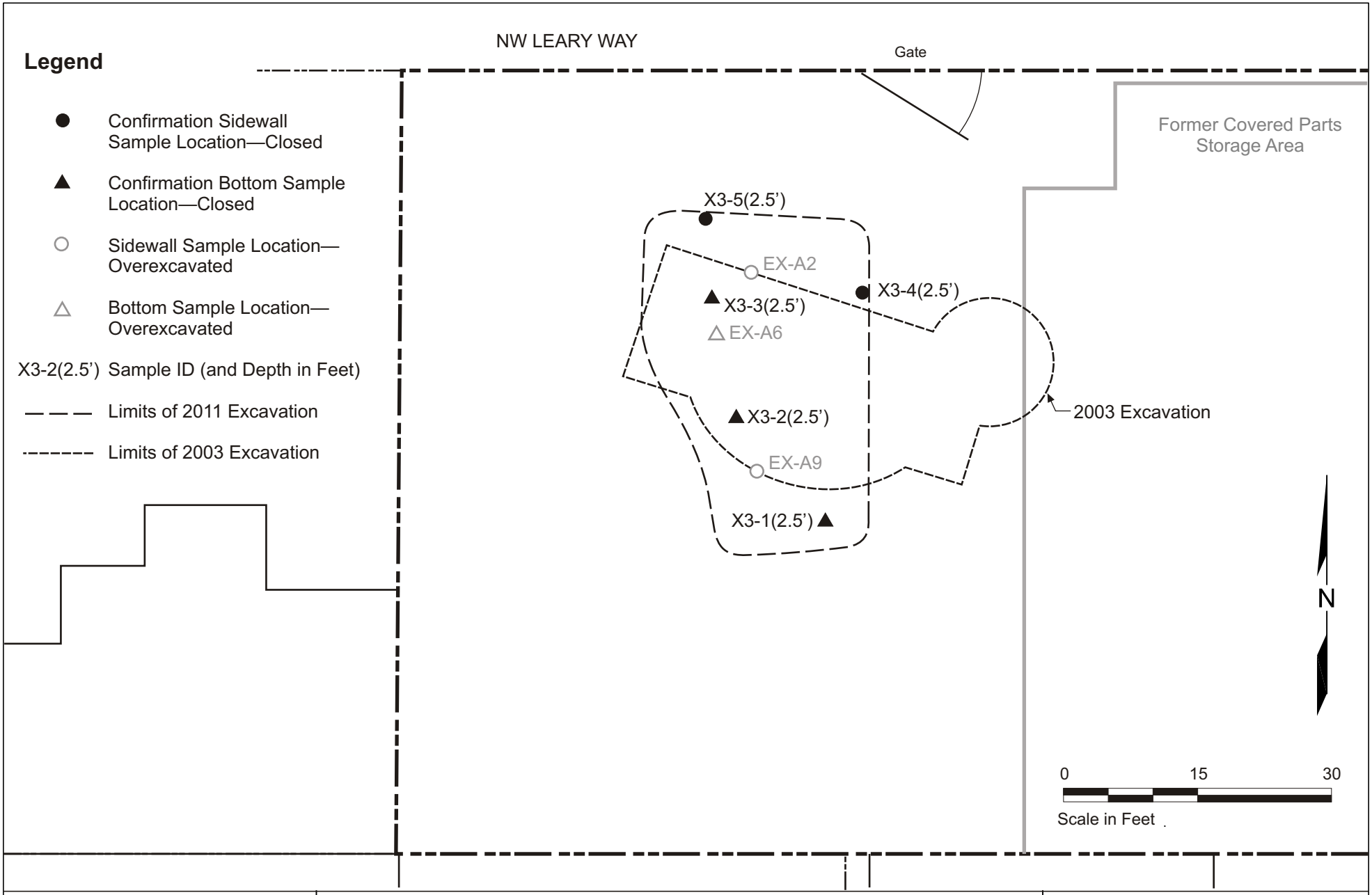


RK Environmental

Former Wrecking Facility & Cleanup Construction Results

Ballard Auto Wrecking
Seattle, Washington

Figure 3
Excavation Area B



RK Environmental	Former Wrecking Facility & Cleanup Construction Results Ballard Auto Wrecking Seattle, Washington	Figure 4 Excavation Area A

APPENDIX A

Ecology's 2004 No Further Action Determination

APPENDIX B

Restrictive Covenant

APPENDIX C

Cleanup Construction Report
Ballard Auto Wrecking, March 2004

APPENDIX D

Ecology's 2009 Opinion pursuant to WAC 173-340-515(5) – Groundwater Determination

APPENDIX E

Copy of Laboratory Analytical Reports, Friedman & Bruya, Inc.

APPENDIX F

Non-Hazardous Waste Profile and
Trip Tickets
Waste Management, Inc.

APPENDIX A

Ecology's 2004 No Further Action Determination

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

June 29, 2004

Mr. Doug Hillman
Aspect Consulting
811 First Avenue, Suite 480
Seattle, WA 98104

Dear Mr. Hillman

Re: Independent Remedial Action
Ballard Auto Wrecking Site
1515 NW Leary Way
Seattle, Washington
Site ID No. NW1078

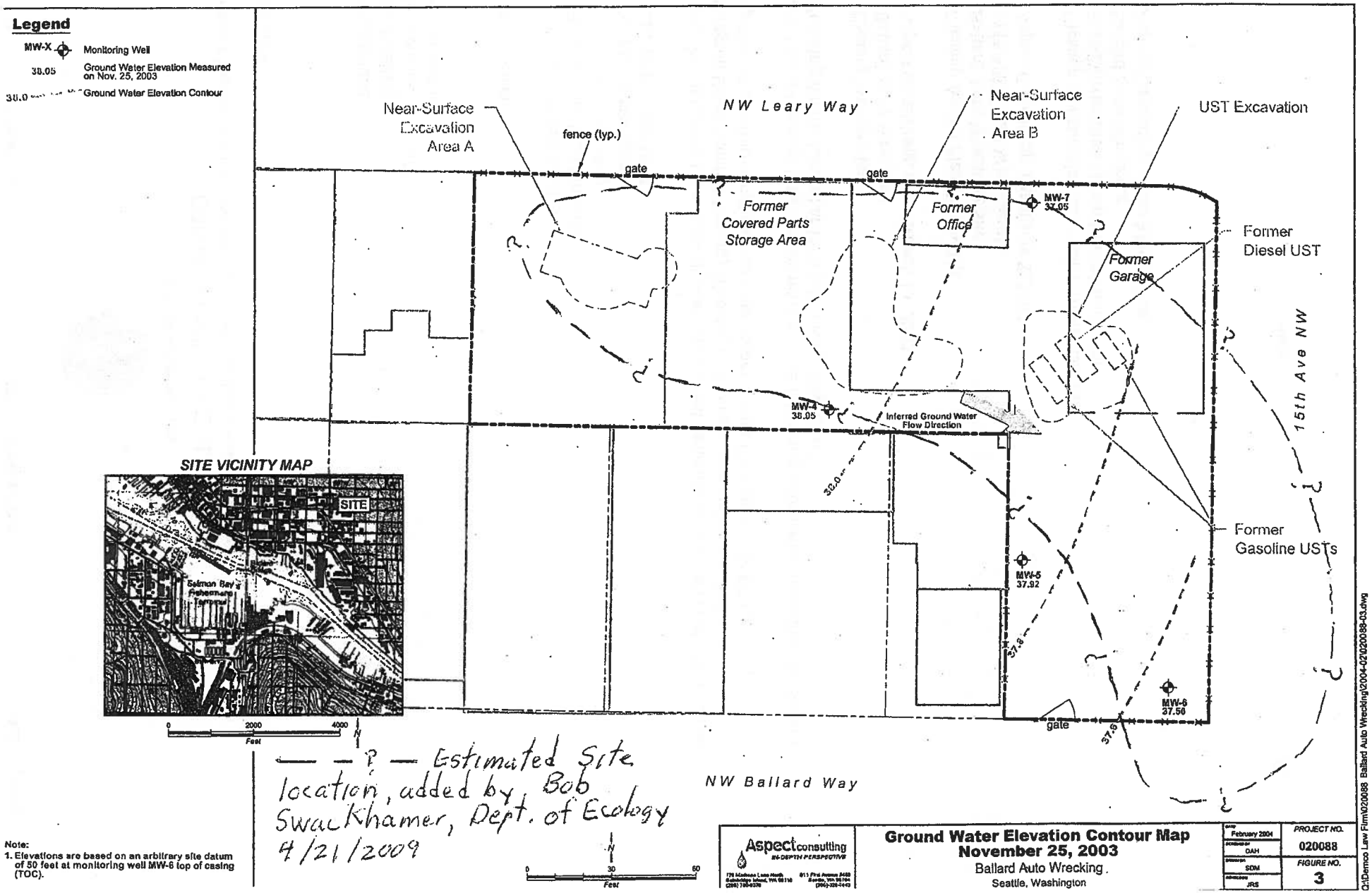
Thank you for submitting the results of your independent remedial actions for review by the State of Washington Department of Ecology (Ecology). Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

Ecology's Toxics Cleanup Program has reviewed the following information regarding the Ballard Auto Wrecking facility located at 1515 NW Leary Way, Seattle:

1. Cleanup Action Plan
Ballard Auto Wrecking
Aspect Consulting, dated March 13, 2003

2. Cleanup Action Plan Follow-Up
Ballard Auto Wrecking Site
1515 NW Leary Way, Seattle
Aspect Consulting, dated July 8, 2003

3. Cleanup Construction and First Two Rounds of
Post-Construction Groundwater Monitoring
Ballard Auto Wrecking
Aspect Consulting, dated March 2004


Legend
MW-X Monitoring Well
38.05 Ground Water Elevation Measured on Nov. 25, 2003
38.0 Ground Water Elevation Contour
Near-Surface Excavation Area A
NW Leary Way
fence (typ.)
gate
gate
Near-Surface Excavation Area B
UST Excavation
Former Covered Parts Storage Area
Former Office
MW-7 37.05
Former Diesel UST
Former Garage
15th Ave NW
MW-4 38.05
Inferred Ground Water Flow Direction
38.0
Former Gasoline USTs
MW-5 37.92
37.5
MW-6 37.50
gate
37.5
NW Ballard Way
SITE VICINITY MAP
SITE
Salmon Bay Fishermans Terminal
0 2000 4000
Feet
N
— — ? — Estimated Site location, added by Bob Swackhamer, Dept. of Ecology 4/21/2009
0 30 60
Feet
Note:
1. Elevations are based on an arbitrary site datum of 50 feet at monitoring well MW-6 top of casing (TOC).
Aspect consulting
IN-DEPTH PERSPECTIVE
Ground Water Elevation Contour Map
November 25, 2003
Ballard Auto Wrecking
Seattle, Washington
February 2004
DAH
SDM
JRS
PROJECT NO.
020088
FIGURE NO.
3
G:\Denco Law Firm\020088 Ballard Auto Wrecking\2004-02\020088-03.dwg

4. Completion of Cleanup Construction and
   Request for No Further Action (NFA) Letter
   Ballard Auto Wrecking Site
   1515 NW Leary Way, Seattle
   Aspect Consulting, dated March 2, 2004

The reports listed above will be kept in the Central Files of the Northwest Regional Office (NWRO) of Ecology for review by appointment only. Appointments can be made by calling Sally Perkins at the NWRO at (425) 649-7190 or -7239.

Based upon the information in the reports listed above, Ecology has determined that, at this time, the release of petroleum hydrocarbon as gasoline, diesel, oil, and lead into the soil and groundwater no longer poses a threat to human health or the environment.

Therefore, Ecology is issuing this determination that no further remedial action is necessary at this site under MTCA, chapter 70.105D RCW. However, please note that because your actions were not conducted under a consent decree with Ecology, this letter is written pursuant to RCW 70.105D.030(1)(i) and does not constitute a settlement by the state under RCW 70.105D.040(4) and is not binding on Ecology. Furthermore, you must conduct the necessary monitoring to assure that this site does not pose a threat to human health or the environment. Specifically, four (4) quarters of consecutive groundwater monitoring results from the existing five monitoring wells, MW-4 through MW-8 must meet the cleanup levels established in the above referenced documents. Failure to conduct the necessary monitoring will result in the automatic withdrawal of Ecology's no further action determination.

In addition, the Restrictive Covenant filed on your property dated June 17, 2004, is a condition to maintain Ecology's no further action determination. The Restrictive Covenant is attached to this letter as Attachment A. Ecology's no further action determination automatically terminates and will have no force and effect if any portion of the Restrictive Covenant is violated. WAC 173-340-440(10) requires you to notify and seek comment from the City of Seattle department with land use planning authority for real property subject to the Restrictive Covenant.

Ecology's no further action determination is made only with respect to the release identified in the reports listed above. This no further action determination applies only to the area of the property affected by the release identified in the reports at 1515 NW Leary Way, Seattle. It does not apply to any other release or potential release at the property, any other areas on the property, nor any other properties owned or operated by Mr. Steve McCormick. This no further action determination does not apply to remedial actions determined necessary as a result of confirmational monitoring.

Ecology will update its database to reflect this "No Further Action" determination. Your site will not appear in future publications of the Confirmed & Suspected Contaminated Sites Report (previously known as the Affected Media and Contaminants Report) or the Leaking Underground Storage Tank database. Ecology will also initiate the process to remove your site from the Hazardous Sites List. This process includes a thirty (30) day public comment period, after which Ecology must evaluate the public's comments before making a final decision.

The state, Ecology, and its officers and employees are immune from all liability and no cause of action of any nature that may arise from any act or omission in providing this determination.

If you have any questions, please contact me at (425) 649-7265 or bsat461@ecy.wa.gov.

Sincerely,

Brian S. Sato, P.E.
Toxics Cleanup Program

BSS:bs
Enclosure

Table 1 - Summary of Groundwater Analytical Data

Former Ballard Auto Wrecking
Seattle, Washington

Sample ID / Date of Sampling	CULs		MW-5 (downgradient) 8/23/04	MW-5 (downgradient) 7/12/06	MW-5 (downgradient) 8/4/07	MW-5 (downgradient) 11/5/07	MW-6 (downgradient) 8/23/04	MW-6 (downgradient) 7/12/06	MW-6 (downgradient) 8/4/07	MW-6 (downgradient) 11/5/07	MW-7 (upgradient) 8/23/04	MW-7 (upgradient) 7/12/06	MW-7 (upgradient) 8/4/07	MW-7 (upgradient) 11/5/07
Concentration in µg/L:														
TPH-Diesel	500	1	350	160	<50	<50	330	1,000	<50	<50	400	250	<50	<50
TPH-Gasoline	800/1000	1	<50	<100	<100	<100	<50	<100	<100	<100	170	<100	<100	<100
Benzene	1.2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	6,800	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	3,100	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes (total)	1,000	1	<3	<3	<2	<2	<3	<3	<2	<2	<3	<3	<2	<2
Napthalene	4,940	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic (diss)	5	2	1.43	1.42	<1	<1	1.86	3.05	<1	<1	2.96	2.11	<1	1.12
Barium (diss)	3,200	3	na	47.9	3.59	6.45	na	75.7	2.52	3.56	na	41.2	2.75	3.12
Chromium (diss)	50	1	na	21.2	1.30	3.37	na	24.2	1.33	2.09	na	7.34	1.76	2.93
Lead (diss)	1.8	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Sample ID / Date of Sampling	CULs		MW-8 (downgradient) 8/23/04	MW-8 (downgradient) 12/22/05	MW-8 (downgradient) 7/12/06	MW-8 (downgradient) 8/4/07	MW-8 (downgradient) 11/5/07
Concentration in µg/L:							
TPH-Diesel	500	1	1,400	790	1,500	180	130
TPH-Gasoline	800/1000	1	1,500	<100	700	<100	<100
Benzene	1.2	2	44	3.1	13	<1	<1
Toluene	6,800	2	6	<1	10	<1	<1
Ethylbenzene	3,100	2	55	<1	17	<1	<1
Xylenes (total)	1,000	1	11	<1	23	<2	<2
Napthalene	4,940	1	3	0.5	8.5	<1	<1
Arsenic (diss)	5	2	8.89	<1	2.69	1.11	<1
Barium (diss)	3,200	3	na	33.4	36.9	5.11	1.89
Chromium (diss)	50	1	na	11.5	14.8	1.86	1.63
Lead (diss)	1.8	1	na	na	2.04	1.56	<1

< - Not detected above the laboratory detection limit indicated.
na - not analyzed or available.
red and bold indicates value exceeds CUL
Notes for CUL table:
1 - For analytes with no established site-specific cleanup level, the MTCA Method A groundwater cleanup level is provided as a screening level value.
2 - Ecology approved site-specific cleanup levels (see Groundwater Compliance Monitoring Results, Aspect, January 2005).
3 - Cleanup levels are standard MTCA Method B groundwater values (CLARC on-line database).

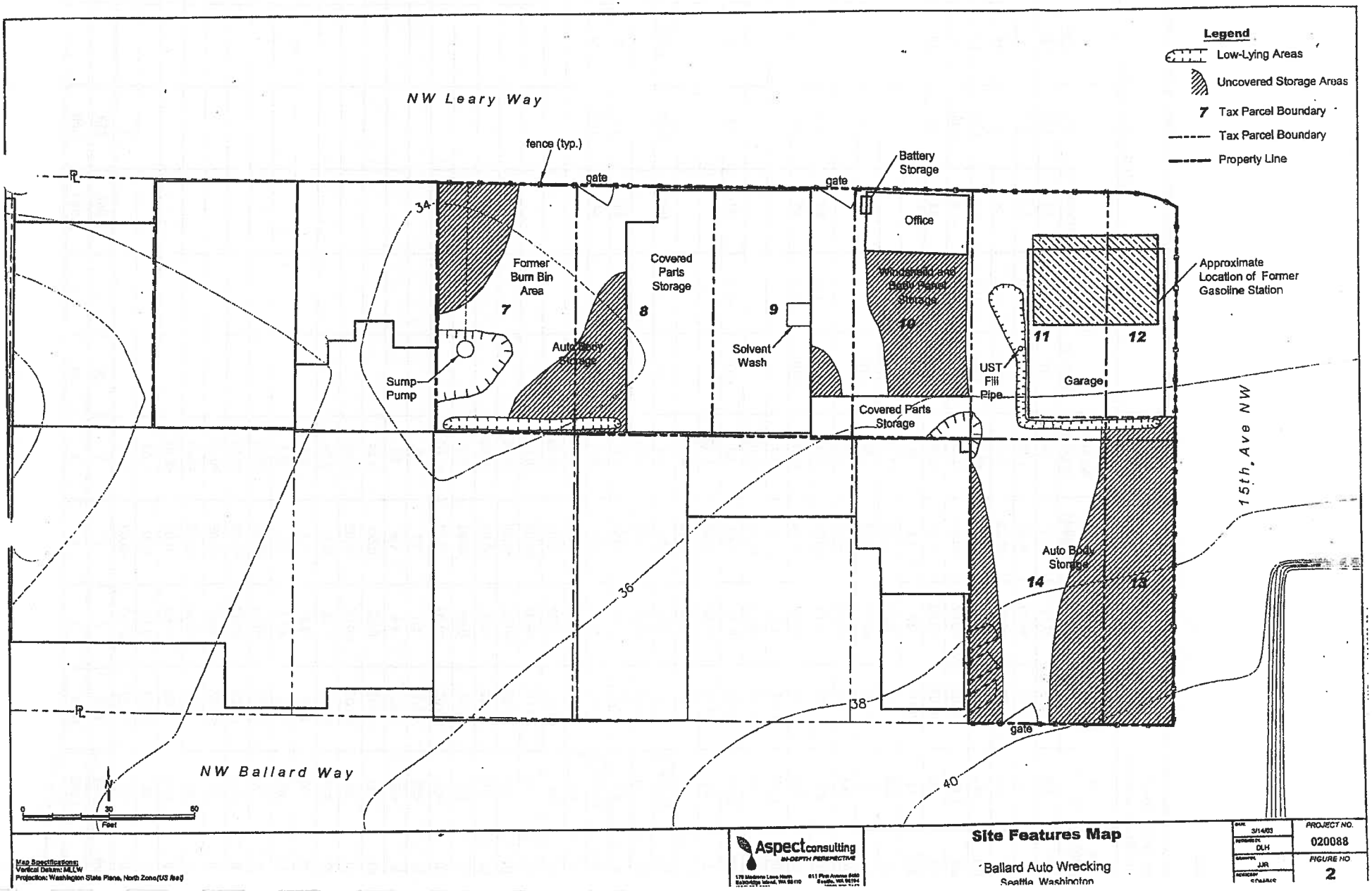
Table 1--Total Petroleum Hydrocarbons and Metals in Soil

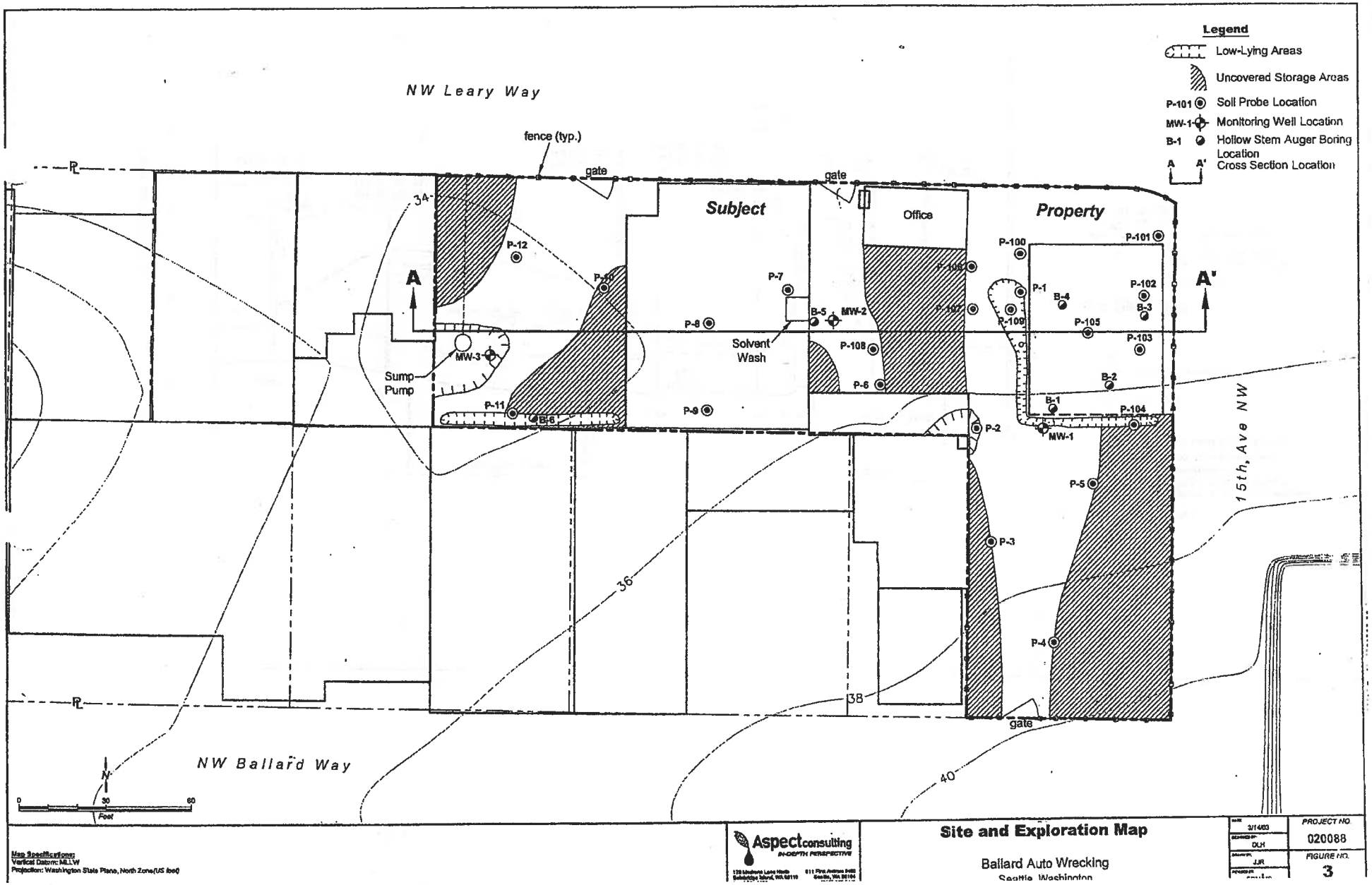
Exploration Number	Sample Number	Sample Depth	Sample Date	Total Petroleum Hydrocarbons NWTPH-G and NWTPH-D extended			BTEX Compounds by EPA Method 8020					
				Gasoline (mg/kg)	Diesel (mg/kg)	Oil (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Arsenic	Cad
MW-1	S-1	0-3	6/13/02	230	1,600	1,900	0.13	0.49	2.2	24	<10	
MW-1	S-2	3-6	6/13/02	<1.0	<10	<50	<0.02	<0.02	<0.02	0.03	<10	<
MW-2	S-1	1.7-2.5	6/13/02	<1.0	<10	<50	<0.02	<0.02	<0.02	<0.02	<10	<
MW-2	S-3	6.5-8	6/13/02	<1.0	<10	<50	<0.02	<0.02	<0.02	<0.02	<10	<
MW-3	S-1	0-2	6/13/02	<1.0	400	1,100	<0.02	<0.02	<0.02	0.04	<10	
MW-3	S-1	2-3	6/13/02	<1.0	<10	<50	<0.02	<0.02	<0.02	<0.02	<10	<
P-1	S-3	6-9	6/25/02	1,800	1,300	58	0.93	10	13	48		
P-2	S-3	6-9	6/25/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-3	S-1	1-3	6/25/02	<1	31	52	<0.02	<0.02	<0.02	0.07	<10	<
P-4	S-2	3-6	6/25/02	7	170	310	<0.02	<0.02	<0.02	0.25		
P-5	S-2	3.5-6	6/13/02	<1.0	<10	<50	<0.02	<0.02	<0.02	<0.02	<10	<
P-6	S-1	2.5-3	6/13/02	4	130	170	<0.02	<0.02	<0.02	0.05	<10	<
P-6	S-3	7-8	6/13/02	270	1,100	2,200	0.03	0.68	1.6	3.5		
P-6	S-3	8-9	6/13/02	<1.0	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-7	S-1	1-3	6/25/02	230	2,800	4,500	<0.02	0.39	0.46	3.3	<10	<
P-8	S-1	1-2.5	6/25/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-9	S-1	1-3	6/25/02	<1	55	150	<0.02	<0.02	<0.02	<0.02		
P-10	S-1	0-2	6/13/02	70	9,900	18,000	<0.1	1.3	<0.1	1.1	15	
P-10	S-2	2-3	6/13/02	5	65	110	<0.02	<0.02	<0.02	0.06		
P-11	S-3	4-6	6/25/02	65	68	120	<0.02	0.05	0.05	0.81	<10	<
P-12	S-1	0-1	6/13/02	18	11,000	21,000	<0.1	<0.1	<0.1	0.3	<10	1
P-12	S-2	2-3	6/13/02	<1.0	18	<50	<0.02	<0.02	<0.02	<0.02		
P-100	S-1	0-3	7/31/02	<1	140	240	<0.02	<0.02	<0.02	<0.02		
P-100	S-3	6-9	7/31/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-101	S-3	6-9	7/31/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-101	S-4	9-12	7/31/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-102	S-1	0-3	7/31/02	<1	57	120	<0.02	0.04	<0.02	<0.02		
P-102	S-4	9-10	7/31/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-103	S-3	6-9	7/31/02	1,100	190	<50	<0.4	6.2	3.5	14		
P-103	S-4	9-12	7/31/02	690	63	<50	0.62	4.4	4.6	14		
P-104	S-1	0-3	7/31/02	13	830	600	<0.02	0.03	0.06	0.24		
P-104	S-4	9-12	7/31/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-105	S-2	3-6	7/31/02	36	130	<50	<0.02	0.16	0.16	0.94		
P-105	S-4	9-12	7/31/02	370	1,100	<50	0.31	2.4	1.8	5.5		
P-106	S-1	0-3	7/31/02	<5	1,600	2,600	<0.1	<0.1	<0.1	<0.1		
P-106	S-4	9-12	7/31/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-107	S-1	0-3	7/31/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-107	S-4	9-10	7/31/02	<1	<10	69	<0.02	<0.02	<0.02	<0.02		
P-108	S-3	6-9	7/31/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-108	S-4	9-12	7/31/02	<1	<10	<50	<0.02	<0.02	<0.02	<0.02		
P-109	S-1	6-9	7/31/02	23	55	66	<0.02	0.17	0.21	0.65		
P-109	S-3	12-15	7/31/02	2	<10	<50	<0.02	<0.02	<0.02	0.07		
Method A Unrestricted Soil Cleanup Levels				*30*	*2,000*	*2,000*	*0.03*	*7*	*6*	*9*	*20*	*2*
Method A Industrial Soil Cleanup Levels				*30*	*2,000*	*2,000*	*0.03*	*7*	*6*	*9*	*20*	*2*

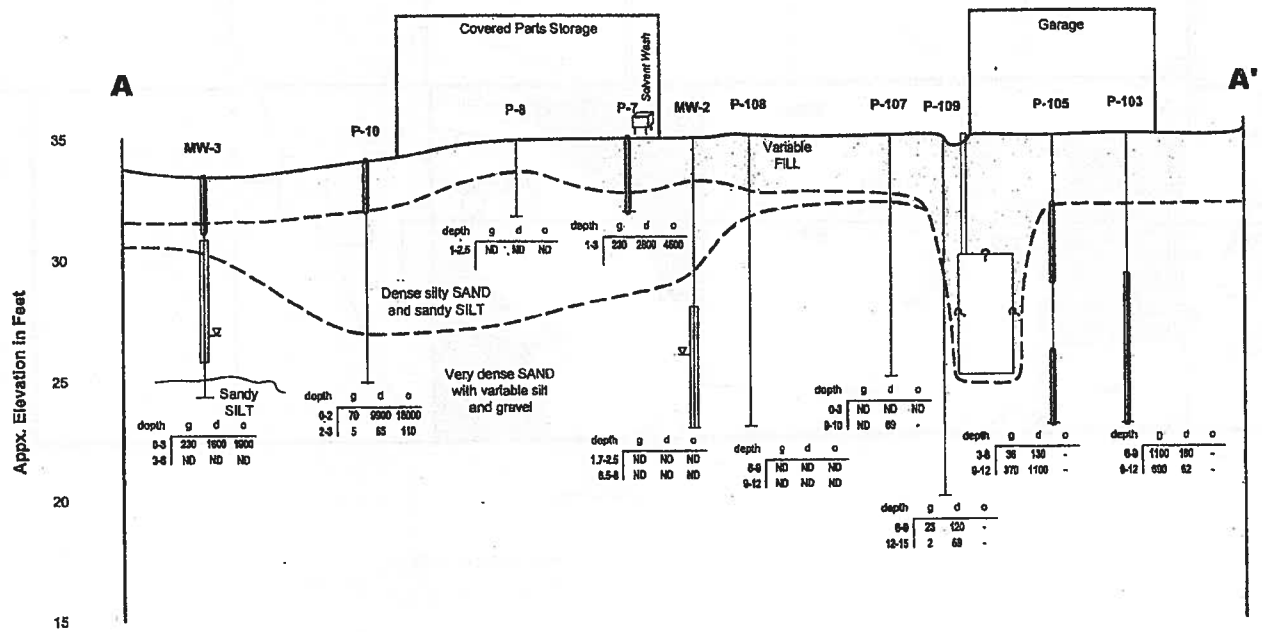
Notes: Cleanup levels presented for screening purposes only

Soil

m Hydrocarbons WTPH-D extended		BTEX Compounds by EPA Method 8020				METALS in mg/kg						
iesel g/kg)	Oil (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	Arsenic	Cadmium	Chromium	Lead	Copper	Nickel	Zinc
,600	1,900	0.13	0.49	2.2	24	<10	3.3	11	420	100	18	500
:10	<50	<0.02	<0.02	<0.02	0.03	<10	<1.0	9.7	<2.0	7	20	14
:10	<50	<0.02	<0.02	<0.02	<0.02	<10	<1.0	14	3.2	12	21	16
:10	<50	<0.02	<0.02	<0.02	<0.02	<10	<1.0	6.5	<2.0	4.3	17	10
100	1,100	<0.02	<0.02	<0.02	0.04	<10	3.5	16	100	56	21	120
:10	<50	<0.02	<0.02	<0.02	<0.02	<10	<1.0	34	7.8	19	26	26
300	58	0.93	10	13	48							
:10	<50	<0.02	<0.02	<0.02	<0.02							
31	52	<0.02	<0.02	<0.02	0.07	<10	<1.0	19	80	22	20	66
70	310	<0.02	<0.02	<0.02	0.25							
:10	<50	<0.02	<0.02	<0.02	<0.02	<10	<1.0	8.9	<2.0	7.3	21	14
30	170	<0.02	<0.02	<0.02	0.05	<10	<1.0	25	25	20	16	36
100	2,200	0.03	0.68	1.6	3.5							
10	<50	<0.02	<0.02	<0.02	<0.02							
800	4,500	<0.02	0.39	0.46	3.3	<10	<1.0	22	29	27	29	76
10	<50	<0.02	<0.02	<0.02	<0.02							
55	150	<0.02	<0.02	<0.02	<0.02							
900	18,000	<0.1	1.3	<0.1	1.1	15	17	160	8,600	1,500	41	23,000
55	110	<0.02	<0.02	<0.02	0.06							
58	120	<0.02	0.05	0.05	0.81	<10	<1.0	11	1.6	9	20	14
000	21,000	<0.1	<0.1	<0.1	0.3	<10	1.2	44	120	37	14	91
8	<50	<0.02	<0.02	<0.02	<0.02							
40	240	<0.02	<0.02	<0.02	<0.02							
10	<50	<0.02	<0.02	<0.02	<0.02							
10	<50	<0.02	<0.02	<0.02	<0.02							
10	<50	<0.02	<0.02	<0.02	<0.02							
7	120	<0.02	0.04	<0.02	<0.02							
10	<50	<0.02	<0.02	<0.02	<0.02							
00	<50	<0.4	6.2	3.5	14							
3	<50	0.62	4.4	4.6	14							
30	600	<0.02	0.03	0.06	0.24							
10	<50	<0.02	<0.02	<0.02	<0.02							
30	<50	<0.02	0.16	0.16	0.94							
00	<50	0.31	2.4	1.8	5.5							
00	2,600	<0.1	<0.1	<0.1	<0.1							
0	<50	<0.02	<0.02	<0.02	<0.02							
0	<50	<0.02	<0.02	<0.02	<0.02							
0	69	<0.02	<0.02	<0.02	<0.02							
0	<50	<0.02	<0.02	<0.02	<0.02							
0	<50	<0.02	<0.02	<0.02	<0.02							
5	66	<0.02	0.17	0.21	0.65							
0	<50	<0.02	<0.02	<0.02	0.07							
00	*2,000*	*0.03*	*7*	*6*	*9*	*20*	*2*	*2,000*	*250*			
00	*2,000*	*0.03*	*7*	*6*	*9*	*20*	*2*	*2,000*	*1,000*			


Legend
Low-Lying Areas
Uncovered Storage Areas
7 Tax Parcel Boundary
Tax Parcel Boundary
Property Line
NW Leary Way
NW Ballard Way
15th Ave NW
fence (typ.)
gate
gate
Battery Storage
Office
Windshield and Body Panel Storage
10
Approximate Location of Former Gasoline Station
11
12
Garage
UST Fill Pipe
Former Burn Bin Area
7
Covered Parts Storage
8
9
Solvent Wash
Auto Body Storage
Sump Pump
Covered Parts Storage
Auto Body Storage
14
13
34
36
38
40
PL
PL
N
0
30
60
Feet
Map Specifications:
Vertical Datum: MLLW
Projection: Washington State Plane, North Zone (US feet)
Aspect consulting
IN-DEPTH PERSPECTIVE
Site Features Map
Ballard Auto Wrecking
Seattle, Washington
3/14/03
DLH
JJR
PROJECT NO.
020088
FIGURE NO
2


Legend
Low-Lying Areas
Uncovered Storage Areas
P-101 Soil Probe Location
MW-1 Monitoring Well Location
B-1 Hollow Stem Auger Boring Location
A A' Cross Section Location
NW Leary Way
fence (typ.)
gate
gate
Subject
Property
Office
15th Ave NW
NW Ballard Way
Sump Pump
Solvent Wash
MW-3
MW-2
B-5
B-6
P-12
P-10
P-7
P-8
P-9
P-11
P-108
P-6
P-2
P-3
P-4
P-5
P-100
P-101
P-106
P-107
P-109
P-1
P-102
P-105
P-103
B-4
B-3
B-2
B-1
P-104
MW-1
A
A'
34
36
38
40
N
0
30
60
Feet
Map Specifications:
Vertical Datum: MLLW
Projection: Washington State Plane, North Zone(US feet)
Aspect consulting
IN-DEPTH PERSPECTIVE
Site and Exploration Map
Ballard Auto Wrecking
Seattle, Washington
3/14/03
DLH
JJR
PROJECT NO.
020088
FIGURE NO.
3



Legend

- MW-3 — Well Identifier
- Sample interval where TPH concentrations exceed MTCA Method A cleanup levels (used as screening levels)
- Well Screen or Perforated Zone
- Static Water Level Reported on Well Log
- P-8 — Soil Probe
- Approximate Geologic Marker Bed

Grid Explanation

Depth in feet

Gas, Diesel, and Oil - range TPH Conc. in mg/kg

ND= Non-detect

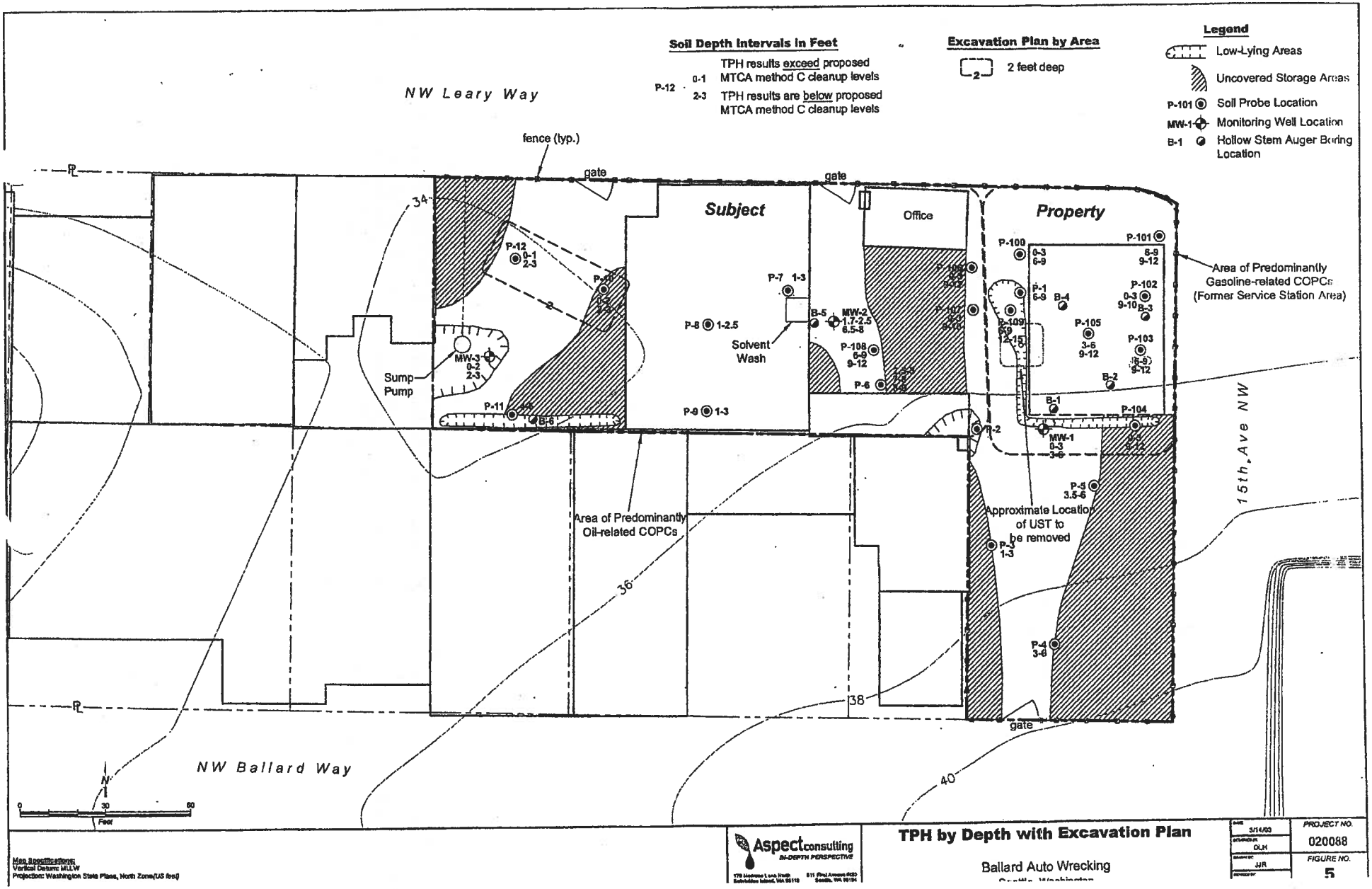
Map Specifications:
Vertical Datum: MLLW
Projection: Washington State Plane, North Zone (US feet)

Aspect consulting
IN-DEPTH PERSPECTIVE

Geologic Cross Section

Ballard Auto Wrecking
Seattle, Washington

3/14/03	PROJECT NO.
DLH	020088
JJR	FIGURE NO 4


Soil Depth Intervals in Feet
P-12 0-1 2-3
TPH results exceed proposed MTCA method C cleanup levels
TPH results are below proposed MTCA method C cleanup levels
Excavation Plan by Area
2 2 feet deep
Legend
Low-Lying Areas
Uncovered Storage Areas
P-101 Soil Probe Location
MW-1 Monitoring Well Location
B-1 Hollow Stem Auger Boring Location
NW Leary Way
NW Ballard Way
15th Ave NW
fence (typ.)
gate
Subject
Property
Office
Sump Pump
Solvent Wash
Area of Predominantly Gasoline-related COPCs (Former Service Station Area)
Area of Predominantly Oil-related COPCs
Approximate Location of UST to be removed
34
36
38
40
Feet
TPH by Depth with Excavation Plan
Ballard Auto Wrecking
Aspect consulting
PROJECT NO. 020088
FIGURE NO. 5

APPENDIX B

Restrictive Covenant

After recording, return to:

Steve McCormick, LLC
36101 Bob Hope Drive, E-5 PMB 126
Rancho Mirage, CA 92270

CONFORMED COPY

200406170002 16
DEMCO COV 22.00
PAGE001 OF 004
06/17/2004 09:33
KING COUNTY, WA

RESTRICTIVE COVENANT

Grantor: Steve McCormick, LLC
Grantee: The Public

This declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f)and (g), and WAC 173-340-440 by Steve McCormick, LLC, its successors and assigns, and the Washington State Department of Ecology, its successors and assigns.

Legal Description: Lots 7 through 14, inclusive in Block 68 of Gilman Park, according to plat recorded in Volume 3 of Plats at page 40, in King County, Washington. Except that portion condemned for the widening of Leary Way under Ordinance No. 21303 Superior Court Cause No. 69864; and except that portion of said property condemned in Cause No. 502446 in the Superior Court of the State of Washington for King County.

Tax Parcel I.D. #: 27670-2105-04

RESTRICTIVE COVENANT
STEVE MCCORMICK, LLC, BALLARD AUTO WRECKING SITE
1515 NW LEARY WAY, SEATTLE, WASHINGTON

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by Steve McCormick, LLC, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following documents:

1. Cleanup Action Plan
   Ballard Auto Wrecking
   Aspect Consulting, dated March 13, 2003

2. Cleanup Action Plan Follow-Up
   Ballard Auto Wrecking Site
   1515 NW Leary Way, Seattle
   Aspect Consulting, dated July 8, 2003

3. Cleanup Construction and First Two Rounds of
   Post-Construction Groundwater Monitoring
   Ballard Auto Wrecking
   Aspect Consulting, dated March 2004

These documents are on file at Ecology's Northwest Regional Office.

This Restrictive Covenant is required because the Remedial Actions performed at this site requires a restrictive covenant for cleanups performed at industrial sites in accordance with WAC 173-340-745.

The undersigned, Steve McCormick, LLC, is the fee owner of real property (hereafter "Property") in the County of King, State of Washington, that is subject to this Restrictive Covenant. The Property is legally described as follows:

adequate and complete provision for continued monitoring, and maintenance of the Remedial Action.

Section 5. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the Remedial Action.

Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

Steve McCormick LLC Date Signed: 6-10-04

Steve McCormick, LLC, by

Steve McCormick, its Owner and Managing Member

STATE OF California)
: ss. ACKNOWLEDGMENT
COUNTY OF Riverside)

I certify that I know or have satisfactory evidence that Steve McCormick is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the owner and managing member of Steve McCormick, LLC, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: 06-10-04 Signed: _____
Notary Public
My appointment expires: 05-04-06

z:\mccormick.steve\ballard\f060904 restr cov revised

LINDA STRONGIN
Commission # 1388028
Notary Public - California
Riverside County
My Comm. Expires May 4, 2008

Lots 7 through 14, inclusive in Block 68 of Gilman Park, according to plat recorded in Volume 3 of Plats at page 40, in King County, Washington. Except that portion condemned for the widening of Leary Way under Ordinance No. 21303 Superior Court Cause No. 69864; and except that portion of said property condemned in Cause No. 502446 in the Superior Court of the State of Washington for King County.

Steve McCormick, LLC makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

Section 1. The Property shall be used only for traditional industrial uses, as described in RCW 70.105D.020(23) and defined in and allowed under the City of Seattle's zoning regulations codified in the Seattle Land Use and Zoning Code as of the date of this Restrictive Covenant.

A portion of the Property contains petroleum hydrocarbon and lead contaminated soils located in the Near-Surface Excavation Area A & B, and the former Underground Storage Tank (UST) Excavation Area described in the above referenced documents. The Owner shall cover these areas to prevent direct contact to the contaminated soils. If future site redevelopment calls for exposing these contaminated soils, all appropriate health and safety measures will be followed for the protection of a construction worker exposure scenario.

Any activity on the Property that may result in the release or exposure to the environment of the contaminated soil that was contained as part of the Remedial Action, or create a new exposure pathway, is prohibited.

Section 2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 4. The Owner of the property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without

APPENDIX C

Cleanup Construction Report
Ballard Auto Wrecking, March 2004

Aspect consulting
IN-DEPTH PERSPECTIVE

Copy + return
4/10/11

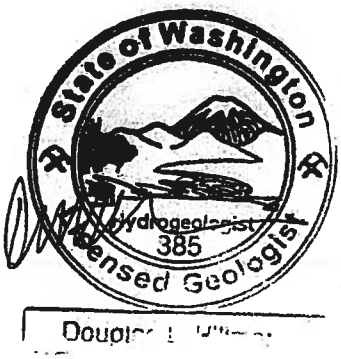
CLEANUP CONSTRUCTION AND FIRST TWO ROUNDS OF POST-CONSTRUCTION GROUNDWATER MONITORING

Ballard Auto Wrecking

Prepared for: Demco Law Firm

Project No. 020088-002-03 • March 2004

Aspect Consulting, LLC



Dave Heffner

Doug Hillman, PG
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V:\020088 Ballard Auto Wrecking\Final Construction Report.doc

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1.0 Introduction

This report documents completion of a cleanup action, installation of groundwater monitoring wells, and the first two rounds of post-construction groundwater compliance monitoring at the former Ballard Auto Wrecking site located at 1515 NW Leary Way in Seattle, Washington (Figure 1). This work was performed under the Washington State Department of Ecology's Voluntary Cleanup Program (VCP), in general accordance with the site's Cleanup Action Plan (CAP) dated March 13, 2003 (Aspect Consulting 2003a), as amended in a follow-up letter to Ecology dated July 8, 2003 (Aspect Consulting 2003b).

Site background, results of previous investigations, and development of the cleanup action are provided in the CAP. Cleanup construction is summarized in Section 2, and documented in greater detail in Section 3. Post-construction installation of five groundwater monitoring wells and the first two rounds of post-construction groundwater compliance monitoring are discussed in Section 4. Exploration and well construction logs are provided in Appendix A, UST closure documentation in Appendix B, waste disposal documentation in Appendix C, and laboratory certificates of analysis in Appendix D.

2.0 Cleanup Construction Summary

Cleanup construction took place primarily between September 15 and October 2, 2003. Construction activities included removal of three underground storage tanks (USTs) associated with former service station operations, and excavation and off-site treatment/disposal of impacted soils exceeding site-specific soil cleanup levels. Two sets of soil cleanup levels had been established, one for near-surface soils in the central and western portions of the site that were impacted by past wrecking yard operations, and the other for deeper impacted soils associated with the UST excavation.

Prior to excavation, there was evidence of only one UST (a single fill pipe discovered at ground surface during the site investigation). However, two 3,500-gallon and one 1,800-gallon USTs were found at that location. Water and product were pumped from the USTs prior to cleaning, inerting, and removing them. Approximately 120 cubic yards (cy) of soils were excavated as part of the UST removal, including roughly 20 cy of overburden soils and 100 cy of soils impacted by petroleum products (primarily gasoline and diesel). Impacted soils were excavated to depths up to 14 feet below ground surface (bgs). Groundwater with a sheen was observed at a depth of approximately 13 feet bgs, and approximately 1,100 gallons were pumped from the excavation prior to backfilling.

Chemical analysis of verification soil samples collected from the UST excavation bottom and sidewalls demonstrated that soil cleanup levels had been achieved. The overburden soil was then backfilled to the UST excavation along with clean imported fill to restore grade. The stockpile of impacted UST excavation soil (154 tons) was removed from the site and disposed of as non-hazardous solid waste at Rabanco's Roosevelt Regional Landfill.

One hundred seventy two tons (approximately 114 cy) of near-surface soils impacted by diesel- and oil-range petroleum hydrocarbons and lead were excavated from two areas within the central and western portions of the site. After verification sampling demonstrated that soil cleanup levels were achieved, clean imported soil was backfilled to these areas to restore grade.

Waste characterization sampling and analysis determined that stockpiled near-surface soils failed the Toxicity Characteristic Leaching Procedure (TCLP) criterion for lead. These soils were transported to Chemical Waste Management's facility in Arlington, Oregon, for treatment via chemical stabilization. The stabilized soil was then disposed of at that facility's hazardous waste landfill.

3.0 Construction Activities

3.1 UST Removal and Associated Soil Excavation

Three USTs were removed from the former service station area. Approximate tank locations and areal extent of excavation are shown on Figure 2. Based on field screening, it was determined that diesel had been stored in the middle tank, and gasoline in the two outside tanks. The two larger tanks (i.e., the diesel tank and one gasoline tank) were 6 feet in diameter and 17 feet in length, each having a nominal capacity of 3,500 gallons. The smaller gasoline tank dimensions were 5-foot diameter by 12-foot length, with a nominal capacity of 1,800 gallons. Water and product were pumped from the tanks prior to cleaning, inerting, and removing them. UST closure documentation is provided in Appendix B.

Soils excavated from the UST area were segregated into two soil stockpiles based on headspace vapor screening results. In this semi-quantitative field screening technique, soil samples collected during excavation were placed in a plastic bag. The bag was sealed for approximately 5 minutes at ambient temperature. Vapors present within the bag's headspace were then measured by inserting the probe of a photoionization detector (PID) into a small opening in the bag. The maximum value registered by the instrument in the first 10 seconds after inserting the probe was used to guide soil stockpiling. Soils with headspace vapor screening results below 100 parts per million (ppm) were placed in the "clean UST soil" stockpile. These soils (approximately 20 cy) were used in site restoration, as discussed in Section 3.4.

Soils excavated to access the USTs that screened above 100 ppm were placed in the "dirty UST soil" stockpile. After the tanks were removed, additional impacted soils were removed from the excavation bottom and sidewalls, using a headspace vapor screening result of 1,000 ppm as the cutoff for additional excavation.

Verification soil samples (UST-1 through UST-9) were collected from the UST excavation at six sidewall and three bottom locations, as shown on Figure 2. Verification samples were submitted to Friedman & Bruya, Inc., for the following chemical analyses:

- Gasoline-range total petroleum hydrocarbons (TPH) by Method NWTPH-Gx;
- Diesel- and oil-range TPH by Method NWTPH-Dx;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8021; and
- Total lead by EPA Method 6010.

Table 1 summarizes sample depths and analytical results for the UST excavation verification soil samples. Laboratory certificates of analysis are provided in Appendix C. None of the analytical results exceed the corresponding site-specific soil cleanup levels

(also shown in Table 1), demonstrating that soil cleanup levels have been achieved in the UST excavation.

3.2 Near-Surface Soil Excavation

Near-surface soils impacted by former wrecking yard activities and containing diesel- and oil-range petroleum hydrocarbons and lead were excavated from two areas of the site, identified on Figure 2 as "Area A" and "Area B." Excavation in these areas was primarily guided by visual evidence of contamination (oil staining). The maximum depth of excavation was approximately 3 feet. All excavated near-surface soils were placed in a third stockpile, identified as "dirty near-surface soil."

After roughly 90 cy of near-surface soils were excavated, the first round of verification soil sampling was conducted, which included seven samples from Area A (EX-A1 through EX-A7) and nine from Area B (EX-B1 through EX-B9). Figure 2 shows verification sampling locations. Samples were submitted to F&BI, and tested for the same analytes as noted above for the UST excavation samples. Table 2 summarizes sample depths and analytical results, and also provides the soil cleanup levels applicable to the near-surface excavation areas. First round results exceeded the cleanup level for diesel-range TPH in four of the samples (one from Area A and three from Area B), and the cleanup level for total lead in one (Area A) sample.

Additional soils were then excavated from the exceedence locations, and six new verification samples were collected, two from Area A (EX-A8 and EX-A9) and four from Area B (EX-B10 through EX-B13). Note that, since adjacent Area B sidewall samples EX-B1 and EX-B7 both exceeded the cleanup level for diesel-range TPH in the first round of verification soil sampling, an extra sidewall sample (EX-B13) was collected from midway between those sample locations in the second round. As shown in Table 2, none of the second-round analytical results exceeded the corresponding soil cleanup levels. These results demonstrate that soil cleanup levels have been achieved in the portion of the site impacted by past wrecking yard operations.

3.3 Soil Stockpile Characterization and Treatment/Disposal

Except for leachable lead, site soils had been "pre-qualified" based on analytical results obtained during the investigation phase for disposal as non-hazardous solid waste at Rabanco's Roosevelt Regional Landfill. Consequently, soil samples collected from the impacted soil stockpiles for waste characterization purposes were submitted to F&BI for leachable lead analysis using the Toxicity Characteristic Leaching Procedure (TCLP). Five representative "grab" samples were collected from the near-surface excavation stockpile and submitted as discrete samples. However, since analytical results for total lead were very low for the verification soil samples from the UST excavation (Table 1), five grab samples collected from the UST excavation stockpile were composited in the field and an aliquot was submitted to the laboratory as a single composite sample.

Soil stockpile TCLP results are summarized in Table 3. Laboratory certificates of analysis are provided in Appendix D. All five of the near-surface excavation sample

results exceeded the TCLP criterion of 5 milligrams per liter (mg/L). Therefore, this material was classified as a "characteristic" hazardous waste under Resource Conservation and Recovery Act (RCRA) regulations. On October 27 and 29, 2003, stockpiled near-surface soil was transported to Chemical Waste Management's facility in Arlington, Oregon, for treatment via chemical stabilization. The stabilized soil was then disposed of at that facility's RCRA Subtitle C landfill. [Note: The stabilized soil qualified for disposal in a RCRA Subtitle D landfill, since it no longer exhibited the hazardous characteristic of leachable lead. Although the disposal fee was based on Subtitle D rates, Chemical Waste Management placed it in their Subtitle C landfill.]

The composite sample from the UST excavation stockpile yielded a TCLP result below the detection limit of the analytical method, which was an order of magnitude less than the TCLP criterion for classification as hazardous waste. This soil stockpile (154 tons) was removed from the site and disposed of at Rabanco's Roosevelt Regional Landfill. Waste disposal documentation is provided in Appendix C.

3.4 Site Restoration

After verification sampling demonstrated that soil cleanup levels had been achieved, UST excavation soil that had been placed in the "clean" stockpile (approximately 20 cy) was backfilled to that excavation. In addition, approximately 193 cy of clean soil was imported to the site and distributed/compacted to restore site grades.

4.0 Post-Construction Groundwater Monitoring

The purpose of post-construction monitoring is to confirm that the quality of groundwater migrating from the site is protective of the Ship Canal. Site-specific groundwater cleanup levels (Table 5) were proposed in a letter to Ecology dated July 8, 2003 (Aspect Consulting 2003b). Brian Sato of Ecology indicated acceptance of these cleanup levels in a follow-up telecom on July 14, 2003 (Ecology 2003).

In accordance with the CAP, monitoring wells were installed around the perimeter of the property and one year of quarterly post-construction monitoring will be completed. Well installation is discussed in Section 4.1. Results of the first two rounds of groundwater monitoring, completed in November 2003 and February 2004, are presented in Section 4.2. The third and fourth rounds are planned for May and August 2004, respectively. Following the August 2004 round, results of all four rounds will be summarized in a confirmation groundwater monitoring report. Based on those results, the report will assess the protectiveness of groundwater migrating from the site, and make recommendations regarding the need for additional monitoring.

4.1 Groundwater Monitoring Well Installation

On November 20, 2003, groundwater monitoring wells MW-4 through MW-7 were installed on-site at the locations shown on Figure 3. Well locations were selected to provide one well upgradient (MW-7) and three downgradient of impacted areas of the site, assuming a roughly southerly groundwater flow direction toward the Ship Canal. (The southern edge of the site is roughly 700 feet north of the Ship Canal, as shown on the inset vicinity map on Figure 3.) As discussed in Section 4.2, groundwater elevations measured in these wells on November 25, 2003, indicated a flow direction toward the east-southeast. Given this flow direction, a decision was made to install a fifth well, MW-8, to monitor groundwater quality at the property boundary downgradient of the former UST area. Well MW-8 was installed on February 12, 2004, at the location shown on Figure 4. All wells were installed in accordance with Washington State monitoring well construction standards and under the direction of a licensed driller. An Aspect Consulting field representative observed and documented the installations. Exploration and monitoring well construction logs are provided in Appendix A.

A 4-inch hollow-stem auger (HSA) and standard HSA drilling techniques were used to drill the well borings. Soil samples were collected at 2-1/2-foot intervals in split-spoon samplers, using the Standard Penetration Test procedure described in ASTM D1587. The Aspect Consulting field representative visually classified the soil samples in general accordance with ASTM D2488.

The monitoring wells were constructed of 2-inch-diameter Schedule 40 PVC casing and screen with threaded end plugs and locking caps. A screen slot size of 0.020 inch was used. Screened depth intervals, determined based on conditions encountered at the time

of drilling, were set at nominally 5 to 20 feet for well MW-6, 10 to 20 feet for well MW-8, and 5 to 15 feet for the remaining wells. A sand pack consisting of Colorado 10-20 silica sand was placed from the well bottom to approximately 2 feet above the top of the screen. A bentonite seal and a concrete surface seal were then placed above the sand pack to achieve grade. All wells were completed with a flush-mounted monument equipped with a watertight cover.

Following construction, each monitoring well was developed using a combination of bailing, pumping, and surging. The purpose of development was to stabilize the filter pack and formation materials surrounding the well screen, minimize the amount of fines entering the well, and establish a hydraulic connection between the well screen and the surrounding soil.

The elevation of the top of casing (TOC) of each new well was surveyed to the nearest 0.01 foot relative to an arbitrary site datum. TOC elevations are listed in Table 4.

4.2 Groundwater Monitoring Results

The first round of quarterly post-construction groundwater compliance monitoring was performed on November 25, 2003. Prior to sampling wells MW-4 through MW-7, depth to groundwater was measured in each well, which allowed us to calculate groundwater elevations (Table 4) and estimate flow direction (Figure 3). Based on these measurements, the inferred groundwater flow direction was to the east-southeast, compared with an expected southerly flow toward the Ship Canal. (Groundwater flow at the site may be influenced by subsurface drainage features associated with the elevated 15th Avenue NW overpass.) As noted above, well MW-8 was installed downgradient of the former UST area prior to the second round of monitoring.

The second round of compliance monitoring was performed on February 20, 2004. As shown on Figure 4, groundwater elevations measured during this round indicated an extremely flat water table in the central portion of the site (i.e., elevations in wells MW-4, MW-5, MW-7, and MW-8 were within 0.05 feet of each other). Groundwater flow direction could not be reliably inferred in this area. However, based on elevations measured in wells MW-5, MW-6, and MW-8, the inferred groundwater flow direction in the southern portion of the site was between southeast and south-southeast (Figure 4). Since well MW-5 is located roughly downgradient of MW-4 and along the upgradient edge of the property's southern leg, groundwater samples were not collected from that well in the second round of monitoring.

4.2.1 Chemical Testing

Compliance monitoring consisted of the following chemical analyses:

- Arsenic and lead using EPA Method 6010;
- BTEX and naphthalene using EPA Method 8260;
- Gasoline-range TPH using Method NWTPH-Gx; and
- Diesel- and oil-range TPH using Method NWTPH-Dx.

Chemical analytical results are summarized in Table 5. Site-specific groundwater cleanup levels are also provided for comparison. For analytes with no established site-specific cleanup level, the MTCA Method A groundwater cleanup level is provided as a screening level value. Laboratory certificates of analysis are provided in Appendix D.

In both monitoring rounds, low concentrations of diesel-range TPH were detected in each well sampled, and gasoline-range TPH was detected in upgradient well MW-7. None of these detections exceeded Method A cleanup levels.

BTEX was not detected in any Round 1 sample. In Round 2, benzene was detected in well MW-7 at a concentration of 1 microgram per liter (µg/L), which is less than the site-specific cleanup level of 1.2 µg/L. Toluene concentrations in the range of 1 to 4 µg/L were detected in the four wells sampled, compared to a cleanup level of 6,800 µg/L. Xylenes were detected in well MW-7 at 3 µg/L, compared to a Method A cleanup level of 1,000 µg/L.

Dissolved arsenic was detected at low concentrations in several groundwater samples during both monitoring rounds. The highest arsenic detection (in well MW-5 during Round 1) was 1.63 µg/L, which is less than one-third the site-specific cleanup level.

In both monitoring rounds, concentrations of oil-range TPH, naphthalene, and dissolved lead were below detection limits in all wells sampled.

4.2.2 Field Methods

Groundwater purging and sampling was performed with a peristaltic pump and dedicated tubing, using low-flow techniques in general accordance with EPA guidance (EPA 1996). During purging, groundwater dissolved oxygen, redox potential (Eh), temperature, pH, and specific conductance were periodically monitored. When these parameters stabilized, laboratory-supplied sample containers were filled using the peristaltic pump. Samples for arsenic and lead analysis were field-filtered through 0.45-micron disposable filters to remove suspended solids. Sample containers were placed in a cooler with Blue Ice and delivered to F&BI for chemical analysis.

Field parameters measured prior to groundwater sampling are summarized in Table 5.

6.0 References

Aspect Consulting 2003a. Cleanup Action Plan, Ballard Auto Wrecking. March 13, 2003.

Aspect Consulting 2003b. Letter to B. Sato (Washington State Department of Ecology) dated July 8, 2003, regarding Cleanup Action Plan Follow-up, Ballard Auto Wrecking Site, 1515 NW Leary Way, Seattle.

Ecology 2003. Personal communication with B. Sato (Washington State Department of Ecology). July 14, 2003.

EPA 1996. SOP GW-0001, Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells. Region 1. July 30, 1996.

5.0 Limitations

Work for this project was performed and this report 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. It is intended for the exclusive use of Demco Law Firm for specific application to the referenced property. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

Table 1 - Analytical Results for Verification Soil Samples, UST Excavation

Sample ID	Approx. Sample Depth (feet)	Sample Date	TPH by Methods NWTPH-G and NWTPH-Dx			BTEX Compounds by EPA Method 8021				Total Lead by EPA Method 6010 (mg/kg)
			Gasoline (mg/kg)	Diesel (mg/kg)	Oil (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	
UST-1-NW Wall	8	9/16/03	2	190	90	<0.02	<0.02	<0.02	0.02	11
UST-2-SW Wall	8	9/16/03	1	180	<50	<0.02	<0.02	<0.02	<0.02	4.9
UST-3-West Bottom	12	9/16/03	<1	<10	<50	<0.02	<0.02	<0.02	<0.02	<2.0
UST-4-Center Bottom	12	9/16/03	88	940	150	0.04	0.04	0.14	0.68	71
UST-5-North Wall	8	9/16/03	<1	<10	<50	<0.02	<0.02	<0.02	<0.02	<2.0
UST-6-East Bottom	14	9/16/03	520	4,700	<500	<0.2	0.5	1.9	7.8	4.6
UST-7-N. Wall East	10	9/16/03	2	29	<50	<0.02	<0.02	<0.02	<0.02	<2.0
UST-8-S. Wall West	10	9/16/03	2	<10	<50	<0.02	<0.02	<0.02	<0.02	2.5
UST-9-S. Wall East	10	9/16/03	1,700	3,100	<500	1.8	0.96	8.1	23	4.9
Soil Cleanup Levels for UST Removal			***2,800***	***6,500***						***1,000***

Notes:
1) The soil cleanup level for gasoline is specific to the UST excavation (different from the near-surface excavations).

Table 2 - Analytical Results for Verification Soil Samples, Near-Surface Excavations

Sample ID	Sample Type	Approx. Sample Depth (feet)	Sample Date	TPH by Methods NWTPH-G and NWTPH-Dx			BTEX Compounds by EPA Method 8021				Total Lead by EPA Method 6010 (mg/kg)
				Gasoline (mg/kg)	Diesel (mg/kg)	Oil (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	
Near-Surface Excavation A:											
EX-A1	Sidewall	0 to 1	9/15/03	<1	820	980	<0.02	<0.02	<0.02	<0.02	98
EX-A2	Sidewall	0 to 1	9/15/03	27	3,000	4,400	<0.02	<0.02	<0.02	0.27	530
EX-A4	Sidewall	0 to 1	9/15/03	<1	1,400	1,800	<0.02	<0.02	<0.02	0.03	100
EX-A6	Bottom	1	9/15/03	13	2,800	2,600	<0.02	<0.02	<0.02	0.15	180
EX-A7	Bottom	1	9/15/03	3	270	430	<0.02	<0.02	<0.02	0.05	45
EX-A8[2]	Sidewall	0 to 1	9/25/03	<1	94	140	<0.02	<0.02	<0.02	<0.02	14
EX-A9[3]	Sidewall	0 to 1	9/25/03	<10	3,800	5,300	<0.2	<0.2	<0.2	<0.2	620
EX-A3[2]	Sidewall	0 to 1	9/15/03	34	5,900	9,800	<0.02	<0.02	<0.02	0.26	2,600
EX-A5[3]	Sidewall	0 to 1	9/15/03	31	10,000	13,000	<0.02	<0.02	<0.02	0.33	280
Near-Surface Excavation B:											
EX-B2	Sidewall	0 to 1	9/15/03	60	2,600	2,000	<0.02	<0.02	0.05	0.36	350
EX-B3	Sidewall	0 to 1	9/15/03	3	1,500	2,900	<0.02	<0.02	<0.02	<0.02	480
EX-B4	Sidewall	0 to 1	9/15/03	3	410	610	<0.02	<0.02	<0.02	<0.02	220
EX-B5	Sidewall	0 to 1	9/15/03	<1	140	250	<0.02	<0.02	<0.02	<0.02	78
EX-B6	Sidewall	0 to 1	9/15/03	<1	1,700	2,100	<0.02	<0.02	<0.02	<0.02	150
EX-B8	Bottom	2	9/15/03	8	2,600	3,800	<0.02	<0.02	<0.02	0.06	63
EX-B10[4]	Sidewall	0 to 1	9/25/03	<10	2,600	4,100	<0.2	<0.2	<0.2	<0.2	230
EX-B11[5]	Bottom	3	9/25/03	<1	<10	<50	<0.02	<0.02	<0.02	<0.02	13
EX-B12[4]	Sidewall	0 to 1	9/25/03	<20	2,800	4,400	<0.4	<0.4	<0.4	<0.4	11
EX-B13[4]	Sidewall	0 to 1	9/25/03	<10	2,600	5,000	<0.2	<0.2	<0.2	<0.2	860
EX-B1[4]	Sidewall	0 to 1	9/15/03	51	6,600	10,000	<0.02	<0.02	0.07	0.43	21
EX-B7[4]	Sidewall	0 to 1	9/15/03	3	11,000	12,000	<0.02	<0.02	<0.02	0.03	610
EX-B9[5]	Bottom	2	9/15/03	79	9400	7,200	<0.02	0.08	0.32	1.5	30
Soil Cleanup Levels for Near-Surface Excavation				***790***	***6,500***	***15,000***					***1,000***

Bolded value indicates exceedence of the corresponding soil cleanup level.

Shading indicates that soil at sampling location was removed by additional excavation (see notes below).

Notes:

1) The soil cleanup levels for gasoline and oil are specific to the near-surface excavations (different from the UST excavation).
2) Sample EX-A3 exceeded the soil cleanup level for total lead. Additional soil was removed from the excavation sidewall. Sample EX-A8 represents the new sidewall verification sample, following this overexcavation.
3) Sample EX-A5 exceeded the soil cleanup level for diesel-range TPH. Additional soil was removed from the excavation sidewall. Sample EX-A9 represents the new sidewall verification sample, following this overexcavation.
4) Adjacent samples EX-B1 and EX-B7 exceeded the soil cleanup level for diesel-range TPH. Additional soil was removed from these locations. Samples EX-B10, EX-B12, and EX-B13 represent the new sidewall verification samples, following this overexcavation.
5) Sample EX-B9 exceeded the soil cleanup level for diesel-range TPH. Additional soil was removed from the excavation bottom. Sample EX-B11 represents the new bottom verification sample, following this overexcavation.

Table 3 - Analytical Results for Stockpile Soil Samples and Stockpile Disposition

Sample ID	Sample Date	Sample Type	TCLP Lead by EPA Method 1311 (mg/L)	Source of Stockpiled Soils	Weight (tons)	Treatment/Disposal
UST-SS-1	9/25/03	5-Part Composite	<0.5	UST Excavation	154.3	Disposal at Rabanco's Roosevelt Regional (RCRA Subtitle D) Landfill
NS-SS-1	9/25/03	Grab	5.3	Near-Surface Excavations A & B	171.5	Chemical Stabilization Followed by Disposal at Chemical Waste Management's Arlington (RCRA Subtitle C) Landfill
NS-SS-2	9/25/03	Grab	11			
NS-SS-3	9/25/03	Grab	10			
NS-SS-4	9/25/03	Grab	17			
NS-SS-5	9/25/03	Grab	180 E			
	TCLP Criterion [1]		*5.0*			

E Estimated value (exceeded the linear range of the detector).
RCRA Resource Conservation and Recovery Act
TCLP Toxicity Characteristic Leaching Procedure.

Notes:
1) Per RCRA toxicity characteristic regulations (40 CFR 261.24).

Table 4 - Groundwater Elevation Measurements

Monitoring Well ID	TOC Elevation in Feet	Groundwater Elevation in Feet	
		Round 1 11/25/03	Round 2 02/20/04
MW-4	44.70	38.05	38.32
MW-5	47.93	37.92	38.30
MW-6	50.00	37.56	37.85
MW-7	45.56	37.95	38.34
MW-8	46.59	(Note 2)	38.35

TOC Top of Casing.

Notes:

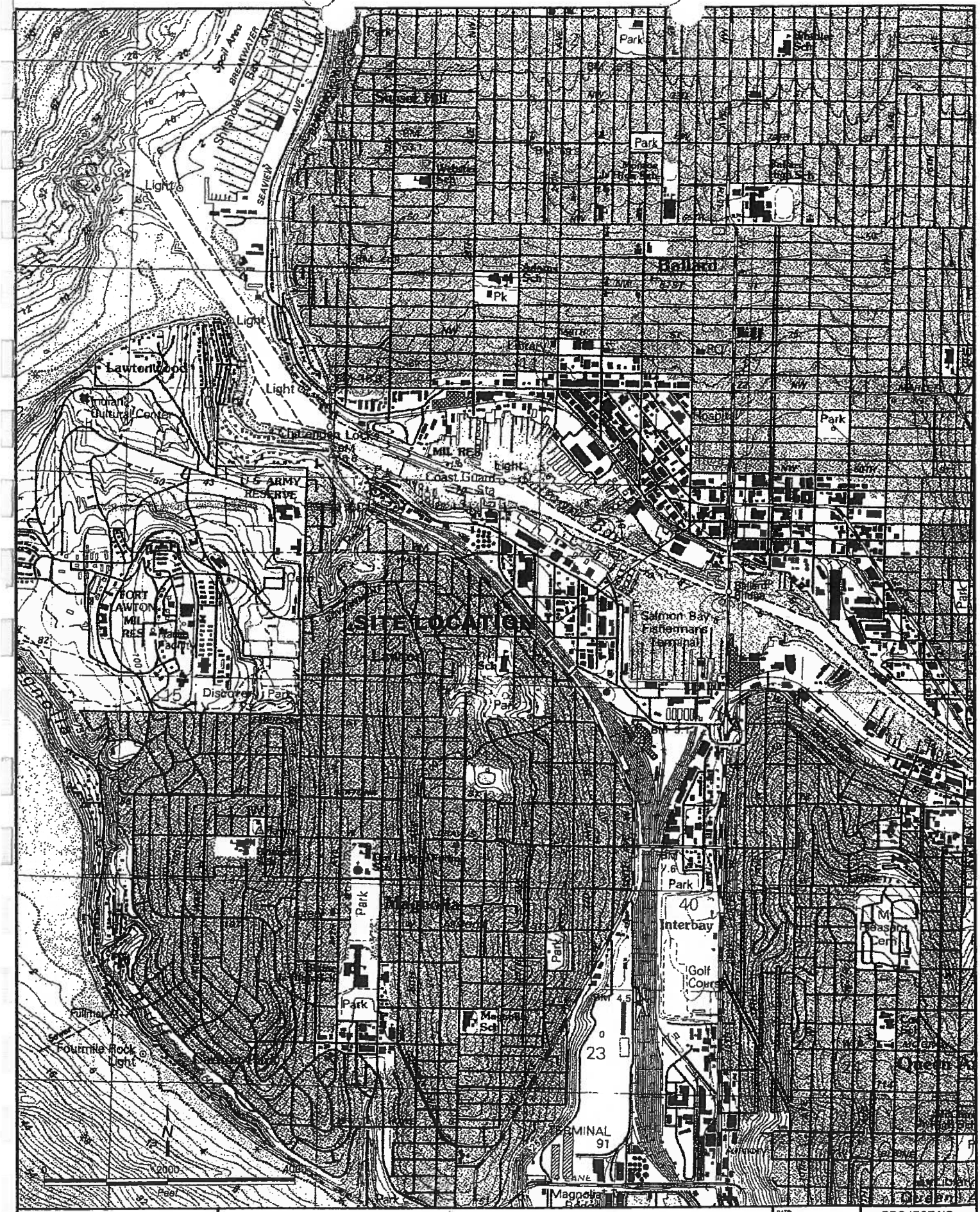
1) Elevations are based on an arbitrary site datum of 50 feet at monitoring well MW-6 top of casing.
2) Well MW-8 was not installed until February 12, 2004 (after Round 1).

Table 5 - Groundwater Monitoring Results, Post-Construction Rounds 1 and 2

Monitoring Well ID:	Cleanup Level	Screening Level[2]	Round 1 (11/25/03)				Round 2 (2/20/04)			
			MW-4	MW-5	MW-6	MW-7	MW-4	MW-6	MW-7	MW-8
Field Parameters										
Dissolved Oxygen in mg/L			8.3	4.3	0.5	4.3	2.8	1.2	2.5	2.3
Redox Potential (Eh) in mV			273	306	188	262	112	146	157	152
Temperature in °C			13.5	14.6	14.5	16.0	11.0	13.1	11.9	12.3
pH			6.4	6.7	6.4	6.1	6.1	6.1	6.2	6.3
Specific Conductance in µS/cm			268	761	1400	470	221	1214	199	259
Individual Analytes in µg/L										
Dissolved Arsenic	5[3]		1 U	1.63	1.18	1.15	1 U	1.44	1.26	1 U
Dissolved Lead	1.8		2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U
Benzene	1.2		1 U	1 U	1 U	1 U	1 U	1 U	1	1 U
Toluene	6,800		1 U	1 U	1 U	1 U	2	1	4	1
Ethylbenzene	3,100		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes (total)		1,000	1 U	1 U	1 U	1 U	3 U	3 U	3	3 U
Naphthalene	4,940		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Total Petroleum Hydrocarbon in mg/L										
Gasoline-range TPH		0.8 or 1.0[4]	0.05 U	0.05 U	0.05 U	0.65	0.05 U	0.05 U	0.20	0.05 U
Diesel-range TPH		0.5	0.20	0.46	0.14	0.45	0.11	0.15	0.26	0.25
Oil-range TPH		0.5	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U

na Not analyzed.
TPH Total petroleum hydrocarbon.
U Analyte not detected above the indicated detection limit.

Notes:
1) Well locations are shown on Figure 4. Laboratory certificates of analysis are provided in Appendix D.
2) For analytes with no established site-specific cleanup level, the MTCA Method A groundwater cleanup level is provided as a screening level value.
3) The cleanup level for dissolved arsenic is set at background level for Washington State (WAC 173-340-900; Table 720-1).
4) The MTCA Method A cleanup level for gasoline-range TPH is 0.8 mg/L for groundwater with benzene, and 1.0 mg/L for groundwater without benzene.



Site Location Map

Ballard Auto Wrecking

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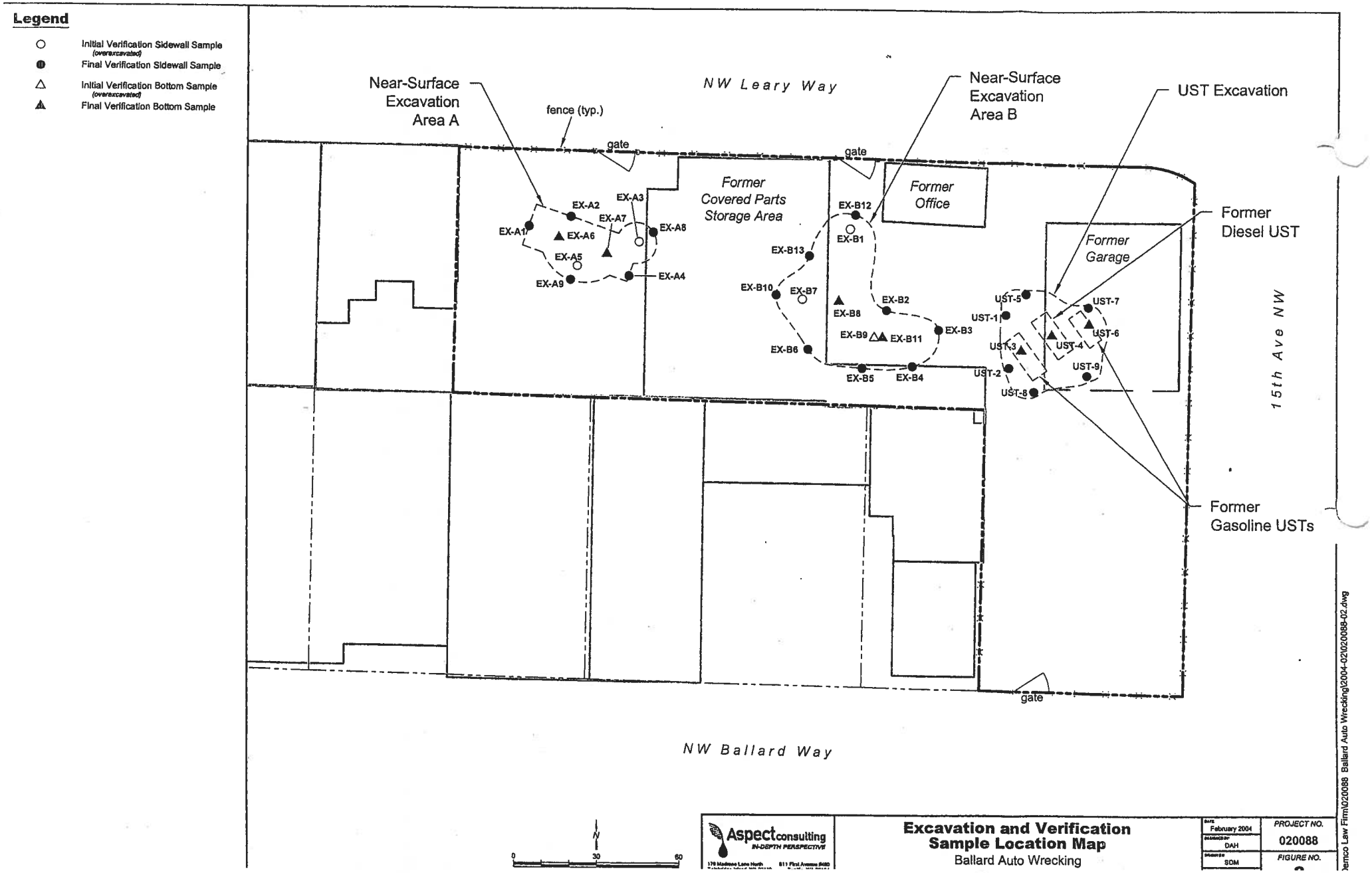
IN-DEPTH PERSPECTIVE

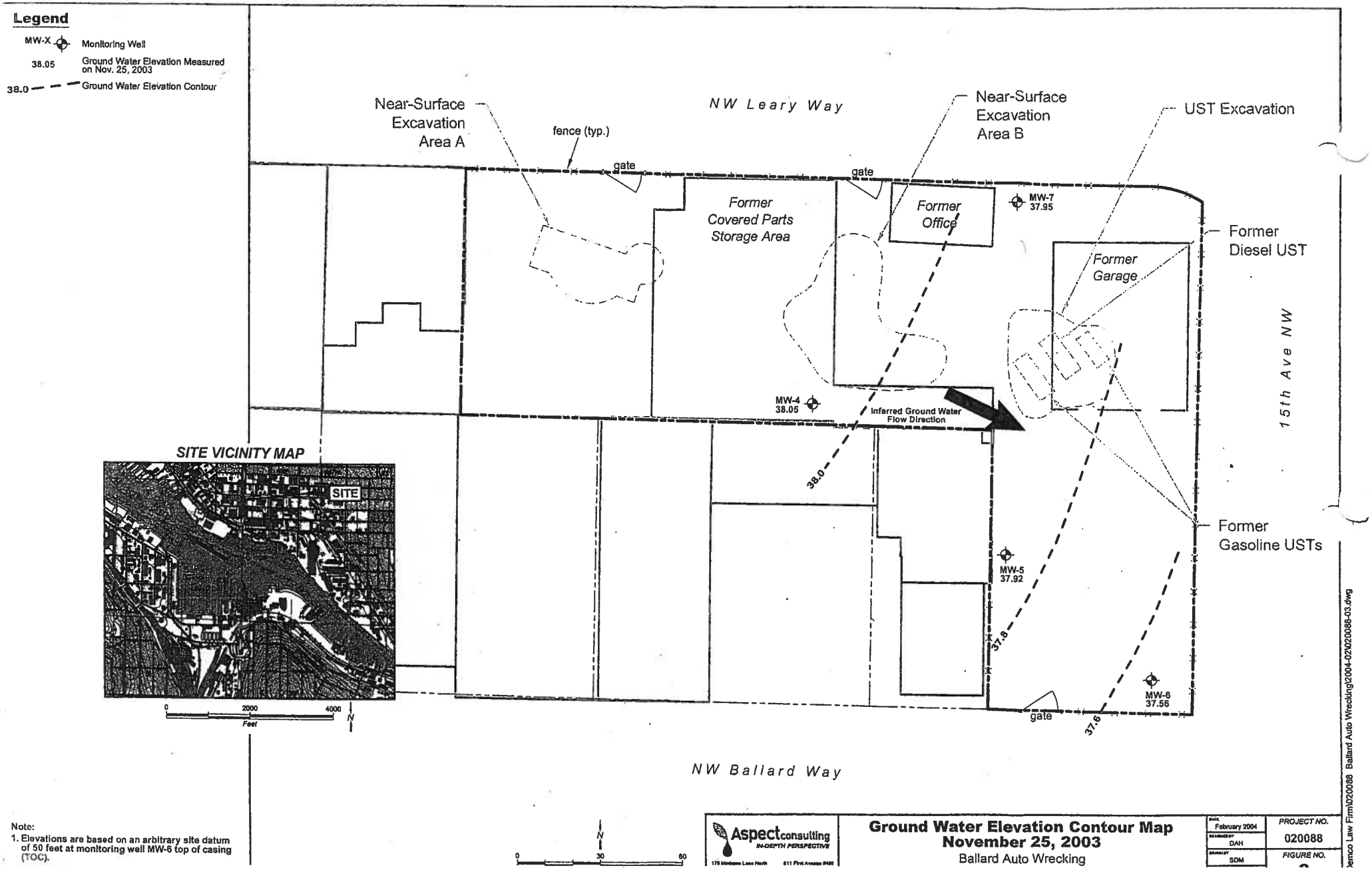
179 Madrona Lane North
Bainbridge Island, WA 98110

911 First Avenue #480
Seattle, WA 98104

DATE: March 2003	PROJECT NO. 020088
DESIGNED BY: DLH	
DRAWN BY: JJR	FIGURE NO. 1
REVISED BY:	

K:\Demco Law Firm\020088 Ballard Auto Wrecking\2003-03\020088-01.dwg


Legend
Initial Verification Sidewall Sample (overexcavated)
Final Verification Sidewall Sample
Initial Verification Bottom Sample (overexcavated)
Final Verification Bottom Sample
Near-Surface Excavation Area A
NW Leary Way
fence (typ.)
gate
Near-Surface Excavation Area B
UST Excavation
Former Covered Parts Storage Area
Former Office
Former Garage
Former Diesel UST
15th Ave NW
EX-A1
EX-A2
EX-A3
EX-A4
EX-A5
EX-A6
EX-A7
EX-A8
EX-A9
EX-B1
EX-B2
EX-B3
EX-B4
EX-B5
EX-B6
EX-B7
EX-B8
EX-B9
EX-B10
EX-B11
EX-B12
EX-B13
UST-1
UST-2
UST-3
UST-4
UST-5
UST-6
UST-7
UST-8
UST-9
Former Gasoline USTs
NW Ballard Way
N
0
30
60
Aspect consulting
IN-DEPTH PERSPECTIVE
Excavation and Verification Sample Location Map
Ballard Auto Wrecking
February 2004
DAH
SDM
PROJECT NO.
020088
FIGURE NO.
2
J:\Jemco Law Firm\020088 Ballard Auto Wrecking\2004-02\020088-02.dwg


Legend
MW-X Monitoring Well
38.05 Ground Water Elevation Measured on Nov. 25, 2003
38.0 Ground Water Elevation Contour
Near-Surface Excavation Area A
NW Leary Way
fence (typ.)
gate
gate
Near-Surface Excavation Area B
UST Excavation
Former Covered Parts Storage Area
Former Office
MW-7 37.95
Former Diesel UST
Former Garage
15th Ave NW
MW-4 38.05
Inferred Ground Water Flow Direction
38.0
Former Gasoline USTs
MW-5 37.92
37.8
MW-6 37.56
gate
37.6
NW Ballard Way
SITE VICINITY MAP
SITE
0
2000
4000
Feet
N
Note:
1. Elevations are based on an arbitrary site datum of 50 feet at monitoring well MW-6 top of casing (TOC).
N
0
30
60
Aspect consulting
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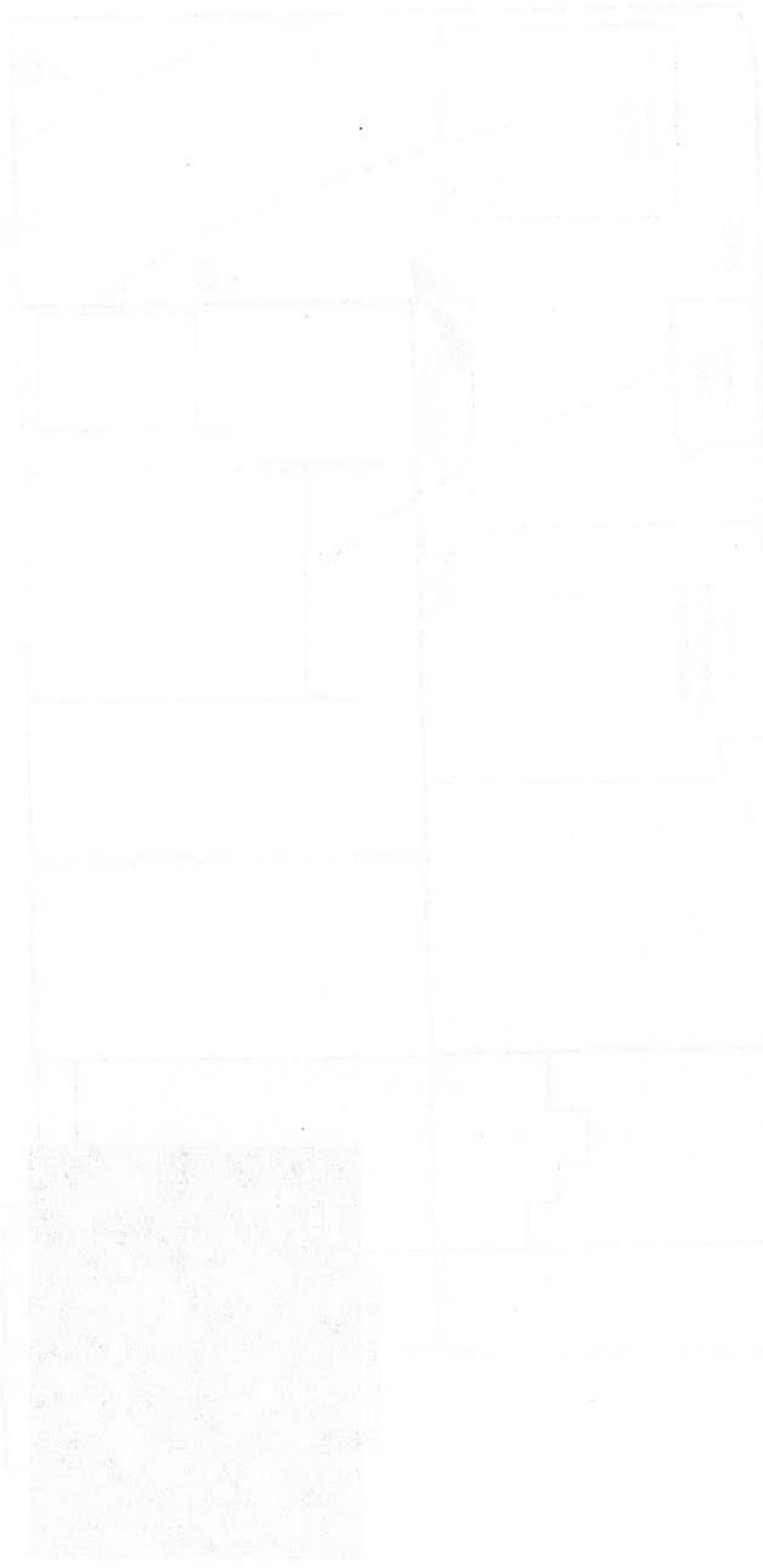
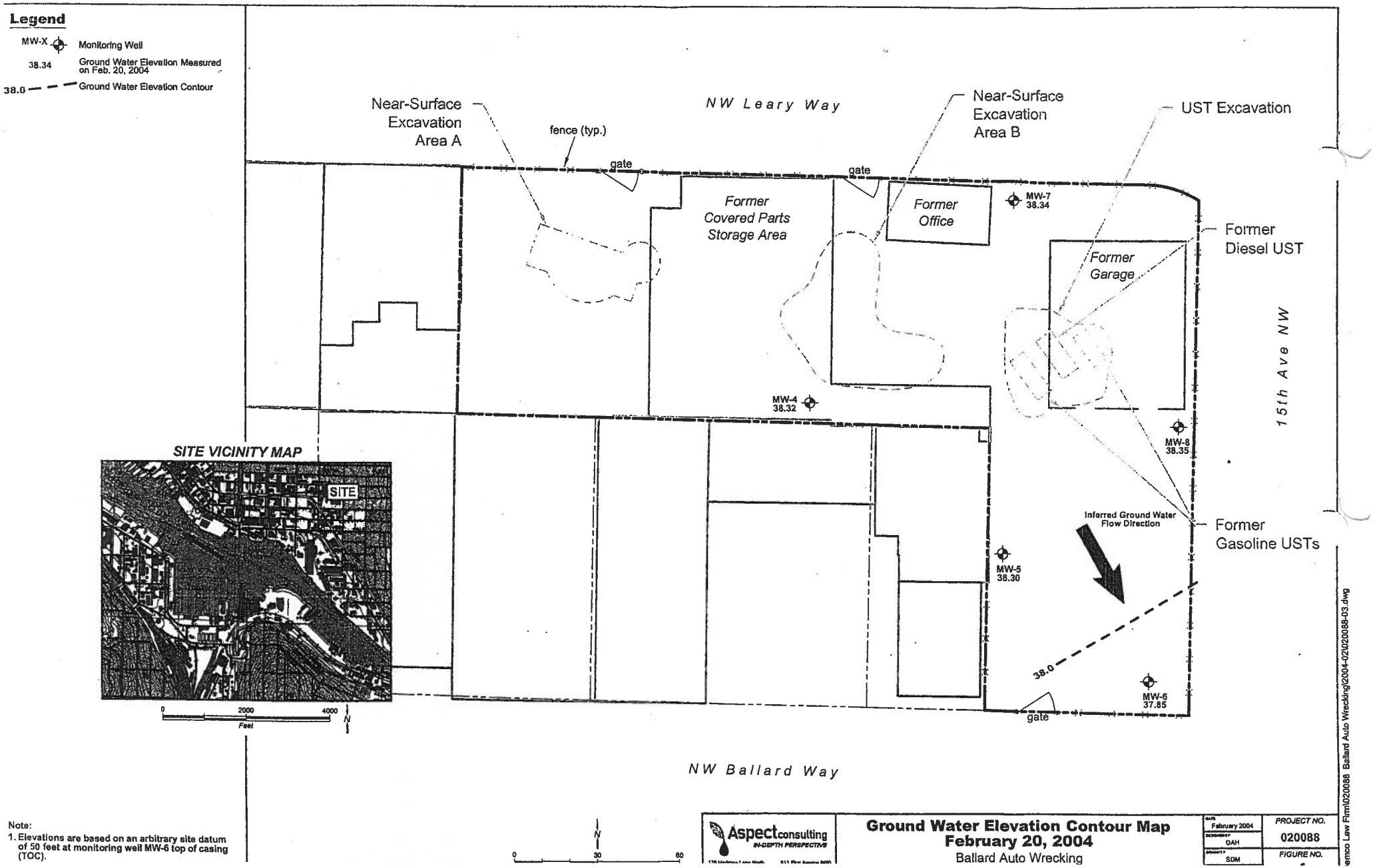
Ground Water Elevation Contour Map
November 25, 2003
Ballard Auto Wrecking
February 2004
DAH
SDM
PROJECT NO.
020088
FIGURE NO.
3
J:\Jemco Law Firm\020088 Ballard Auto Wrecking\2004-02\020088-03.dwg





Note:
1. Elevations are based on an arbitrary site datum of 50 feet at monitoring well MW-6 top of casing (TOC).

APPENDIX A

Exploration and Well Construction Logs

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IN-DEPTH PERSPECTIVE

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
020088	MW-4	1 of 1

Project Name: Ballard Auto Wrecking
Location: Ballard, Washington
Drilling Method: Hollow Stem Auger
Sampling Method:

Top of Casing Elev. (ft mllw):
Depth to Water (ft ATD): 9
Start Date: November 20, 2003
Finish Date: November 20, 2003

Depth feet	Well Construction	Tests\Remarks	Blows/ 6"	Sample Recovery	Mtl. Graphic	Description
0	Concrete surface seal, flush-mount monument, 2-inch PVC.					Soft, wet, brown mud at surface.
1						Hard, moist, brown to gray, gravelly, sandy SILT.
2	Bentonite Seal, 1.5' to 3'.					
3			6 15 21	16"		
4	10-20 Filter Pack, 3' to 15'.					
5						
6			6 28 50/6	13"		
7						
8			12 50/6	6"		
9	2" ID, 20-slot PVC, 5' to 15'.	▼				
10						Very dense, wet, gray-brown, slightly gravelly, very silty, fine SAND.
11			17 50/6	9"		
12						
13			21 50/6	9"		
14						Hard, wet, light brown, slightly gravelly, sandy SILT.
			50/6	6"		Bottom of boring at 15'.

Sampler Type (ST):
- 3.25" OD D & M Split-Spoon Ring Sampler
- No Recovery

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

Logged by: DAH
Approved by: DAH

GEOLG (BALLARD) BALLARDMW.GPJ February 13, 2004

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IN-DEPTH PERSPECTIVE

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
020088	MW-5	1 of 1

Project Name	Ballard Auto Wrecking	Top of Casing Elev. (ft mllw)	
Location	Ballard, Washington	Depth to Water (ft ATD)	9
Drilling Method	Hollow Stem Auger	Start Date	November 20, 2003
Sampling Method		Finish Date	November 20, 2003

Depth feet	Well Construction	Tests\Remarks	Blows/ 6"	Sample Recovery	Mtl. Graphic	Description
0	Concrete surface seal, flush-mount monument, 2-inch PVC.					Soft, wet, brown mud at surface.
1						Medium stiff, moist, dark brown, sandy SILT with abundant debris (charcoal, glass, brick).
2	Bentonite Seal, 1.5' to 3'.					
3			2 3 3	2"		
4	10-20 Filter Pack, 3' to 15'.					
5						
6			11 50/6	11"		Very dense, moist, brown to green, very gravelly, very silty, fine SAND.
7						Transitioning to gravelly, silty, medium SAND.
8			26 50/6	9"		
9	2" ID, 20-slot PVC, 5' to 15'.	▼ 9				
10						Transitioning to gray, gravelly, very silty, fine SAND.
11			22 50/5	7"		
12						
13			29 50/6	10"		
14			11 27 35	12"		Bottom of boring at 15'.

Sampler Type (ST):

- 3.25" OD D & M Split-Spoon Ring Sampler
- No Recovery
- 2" OD Split-Spoon Sampler

PID - Photoionization Detector

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

Logged by: DAH

Approved by: DAH

Figure No. A - 2

W-GEOLG (BALLARD) BALLARDMW.GPJ February 13, 2004

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IN-DEPTH PERSPECTIVE

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
020088	MW-6	1 of 2

Project Name: Ballard Auto Wrecking
Location: Ballard, Washington
Drilling Method: Hollow Stem Auger
Sampling Method:

Top of Casing Elev. (ft mllw):
Depth to Water (ft ATD): 14
Start Date: November 20, 2003
Finish Date: November 20, 2003

Depth feet	Well Construction	Tests\Remarks	Blows/ 6"	Sample Recovery	Description
0	Concrete surface seal, flush-mount monument, 2-inch PVC.				Soft, wet, brown mud at surface.
1					Medium stiff, moist, mottled brown, gravelly, sandy SILT with abundant debris (charcoal, brick).
2	Bentonite Seal, 1.5' to 3'.				
3			2 2 3	4"	
4	10-20 Filter Pack, 3' to 20'.				
5					
6			2 3 11	9"	Transitioning to stiff.
7					Very dense, moist, gray, slightly gravelly, very silty, fine SAND.
8	2" ID, 20-slot PVC, 5' to 20'.		10 32 47	12"	
9					
10					
11			28 36 50/5	13"	
12					
13			18 50/6	12"	
14		▼			

Sampler Type (ST):
- 3.25" OD D & M Split-Spoon Ring Sampler
- No Recovery

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

Logged by: DAH
Approved by: DAH

EOLG (BALLARD) BALLARDMW.GPJ February 13, 2004

Aspect consulting
IN-DEPTH PERSPECTIVE

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
020088	MW-6	2 of 2

Project Name: Ballard Auto Wrecking
Location: Ballard, Washington
Drilling Method: Hollow Stem Auger
Sampling Method:

Top of Casing Elev. (ft mllw):
Depth to Water (ft ATD): 14
Start Date: November 20, 2003
Finish Date: November 20, 2003

Depth feet	Well Construction	Tests\Remarks	Blows/ 6"	Sample Recovery	Mtl. Graphic	Description
16			30 50/5	9"		
17						
18			18 50/5	11"		
19						Transitioning to slightly gravelly, slightly silty SAND.
20			30 50/5	15"		Bottom of boring at 20'.
21						
22						
23						
24						
25						
26						
27						
28						
29						

Sampler Type (ST):
- 3.25" OD D & M Split-Spoon Ring Sampler
- No Recovery
- 2" OD Split-Spoon Sampler

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

Logged by: DAH
Approved by: DAH
Figure No. A - 3

W-GEOLG (BALLARD) BALLARDMW.GPJ February 13, 2004

Aspect consulting
IN-DEPTH PERSPECTIVE

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
020088	MW-7	1 of 1

Project Name: Ballard Auto Wrecking
Location: Ballard, Washington
Drilling Method: Hollow Stem Auger
Sampling Method:

Top of Casing Elev. (ft mllw):
Depth to Water (ft ATD): 8
Start Date: November 20, 2003
Finish Date: November 20, 2003

Depth feet	Well Construction	Tests\Remarks	Blows/ 6"	Sample Recovery	Mtl. Graphic	Description
0	Concrete surface seal, flush-mount monument, 2-inch PVC.					Soft, wet, brown mud at surface.
1						Dense, moist, light brown, gravelly, fine SAND.
2	Bentonite Seal, 1.5' to 3'.					
3			8 23 25	13"		
4	10-20 Filter Pack, 3' to 15'.					Transitioning to very dense.
5						Silt laminae.
6			18 50/6	10"		
7						
8	2" ID, 20-slot PVC, 5' to 15'.	▼	10 50/6	3"		
9						
10						
11			32 50/6	11"		Grading siltier.
12						
13			10 50/6	16"		Very dense, wet, gray, medium SAND with silt laminae.
14						
			8 24 50/4	14"		Bottom of boring at 15'.

Sampler Type (ST):
- 3.25" OD D & M Split-Spoon Ring Sampler
- No Recovery

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

Logged by: DAH
Approved by: DAH

3EOLG (BALLARD) BALLARDMW.GPJ February 13, 2004

Aspect consulting
IN-DEPTH PERSPECTIVE

Geologic & Monitor Well Construction Log

Project Number	Well Number	Sheet
020088	MW-8	1 of 2

Project Name: Ballard Auto Wrecking
Location: Ballard, Washington
Drilling Method: Hollow Stem Auger-Track Mounted
Sampling Method: Holt Drilling

Top of Casing Elev. (ft mllw):
Depth to Water (ft ATD): 14
Start Date: February 12, 2004
Finish Date: February 12, 2004

Depth feet	Well Construction	Tests\Remarks	Blows/ 6"	Sample Recovery	Mtl. Graphic	Description
1	Concrete surface seal, flush-mount monument, 2-inch PVC.					Soft, moist, brown mud to 12" depth.
2						Medium stiff, moist, brown sandy SILT; some gravel.
3			3 4 15	18"/18"		
4	Bentonite Seal, 3' to 8'.					
5			13 38 40	18"/6"		
6						Very dense, moist, brown, gravelly, silty SAND.
7						
8			14 24 36	18"/12"		
9	Filter Pack, 8' to 21'.					Transitioning to medium SAND.
10			22 40 50	18"/2"		
11						Transitions to gray-brown silty SAND.
12	2" ID, 20-slot PVC 10' to 20'.					
13			45 50/5"	18"/10"		
14		▼				Transitions to wet, very silty SAND.

Sampler Type (ST):
- 3.25" OD D & M Split-Spoon Ring Sampler
- No Recovery
- 2" OD Split-Spoon Sampler

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

Logged by: JJM
Approved by: DAH
Figure No. A - 5

AW-GEOLG (BALLARD) BALLARDMW.GPJ February 13, 2004

Aspect consulting
IN-DEPTH PERSPECTIVE

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
020088	MW-8	2 of 2

Project Name: Ballard Auto Wrecking
Location: Ballard, Washington
Drilling Method: Hollow Stem Auger-Track Mounted
Sampling Method: Holt Drilling

Top of Casing Elev. (ft mllw): _____
Depth to Water (ft ATD): 14
Start Date: February 12, 2004
Finish Date: February 12, 2004

Depth feet	Well Construction	Tests\Remarks	Blows/ 6"	Sample Recovery	Mtl. Graphic	Description
16			28 43 48	15"/16.5"		
17						
18						
19						
20			21 50/6	12"/6"		
21						Bottom of boring at depth 21.0'.
22						
23						
24						
25						
26						
27						
28						
29						

Sampler Type (ST):
- 3.25" OD D & M Split-Spoon Ring Sampler
- No Recovery

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

Logged by: JJM
Approved by: DAH

:OLG (BALLARD) BALLARDMW.GPJ February 13, 2004

APPENDIX D

Ecology's 2009 Opinion pursuant to WAC 173-340-515(5) – Groundwater Determination

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

April 21, 2009

Lee Noble
4629 Gay Ave SW
Seattle WA 98199

Re: Opinion pursuant to WAC 173-340-515(5) on Environmental Covenant for the following Hazardous Waste Site:

- Name: Ballard Auto Wrecking
- Address: 1515 NW Leary Way, Seattle, WA 98107
- Facility/Site No.: 2346
- VCP No.: NW2111

Dear Mr. Noble:

Thank you for submitting groundwater monitoring results for the Former Ballard Auto Wrecking facility (Site), and for your letter of January 15, 2009, requesting removal of the restrictive covenant that limits the use of the above-referenced property to industrial use, for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion responding to the questions raised regarding the June 29, 2004, opinion letter issued by Brian Sato, Ecology, after review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following releases at the Site:

- Petroleum hydrocarbon as gasoline, diesel, oil, and lead into soil and groundwater

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).

This opinion does not resolve a person's liability to the state under MTCA or protect a person

from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding your request:

1. *Confirmational Monitoring Results, Former Ballard Auto Wrecking Site*, Roy Kuroiwa, PE, November 14, 2008

2. *Letter Re: Independent Remedial Action, Ballard Auto Wrecking Site*, Brian S. Sato, Department of Ecology, to Doug Hilman, Aspect Consulting, June 29, 2004

3. *Completion of Cleanup Construction and Request for No Further Action (NFA) Letter, Ballard Auto Wrecking Site, 1515 NW Leary Way, Seattle,* Aspect Consulting, March 2, 2004

4. *Cleanup Construction and First Two Rounds of Post-Construction Groundwater Monitoring, Ballard Auto Wrecking*, Aspect Consulting, March, 2004.

5. *Cleanup Action Plan Follow-Up, Ballard Auto Wrecking Site, 1515 NW Leary Way, Seattle,* Aspect Consulting, July 8, 2003

6. *Cleanup Action Plan, Ballard Auto Wrecking*, Aspect Consulting, March 13, 2003.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Appointments can be made by calling the NWRO resource contact at (425) 649-7190.

The Site is defined by the extent of contamination caused by the following releases:

- Petroleum hydrocarbon as gasoline, diesel, oil, and lead into soil and groundwater

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of supporting documentation listed above, pursuant to **requirements**

contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site, Ecology has determined:

- **Removal of the existing restrictive covenant is not justified at this time. The restrictive covenant limiting the property to industrial use remains in effect.** At the time of the soil excavation, soil with relatively high levels of contamination was left in place based, at least in part, on the fact that the property would see only industrial use. To justify allowing uses of the property other than industrial uses, you would need to demonstrate that soil on the property has been cleaned up to a more stringent standard, or that the more stringent standard is not needed in the absence of the covenant restriction according to the provisions of MTCA. State law regarding environmental covenants has changed since 2004 and any amended covenant would need to satisfy the requirements of the current law.

- **You have satisfied the groundwater monitoring requirement in Ecology's letter of June 29, 2004, that four consecutive quarters of monitoring meet cleanup levels.** Please note that the groundwater monitoring requirement you have satisfied is a separate requirement from the restrictive covenant provisions. Satisfying the groundwater monitoring requirement does not remove the need to comply with the restrictive covenant.

This letter does not provide an opinion regarding the sufficiency of any remedial action proposed for or conducted at the Site.

This opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

If you have any questions regarding this opinion, please contact me at (425) 649-7233.

Sincerely,

Robert D. Swackhamer

Robert D. Swackhamer, PE
NWRO Toxics Cleanup Program
rds: rds

Enclosure: A – Description of the Site

cc: Roy Kuroiwa, RK Environmental
Dolores Mitchell, Ecology VCP Financial Manager

Enclosure A

Description and Diagram of the Site

Site Description

The Site is defined by the extent of releases to soil and groundwater of petroleum hydrocarbons in the gasoline, diesel, and oil ranges and releases of the metals lead and cadmium to soil. The releases occurred at 1515 NW Leary Way in Seattle, Washington, on King County tax parcel Numbers 2767702105, 2767702115, and 2767702125. This property includes lots 7 through 14 of the Gilman Park Addition, with a total size of approximately 0.68 acres in an L-shaped configuration.

The property is located just west of the north end of the Ballard Bridge, at the corner of 15th Avenue NW and NW Leary Way in a general industrial/commercial area. The Site is further described in the enclosed figure.

The property apparently has served three primary uses during the past century, including residential dwellings, a gasoline service station, and auto wrecking. Residential dwellings were present between 1905 and 1917, but gone from 1917 to 1927. From 1928 until perhaps the 1960's, a gasoline service station operated on lots 11 and 12. Beginning in the late 1920's, an auto wrecking yard began operations on lots 7 through 10. Owners of Ballard Auto Wrecking purchased lots 7 through 10 in 1959 and later purchased lots 11 through 14 and expanded the auto wrecking operations.

Following the termination of auto wrecking operations, excavation of contaminated soil occurred in 2003 at three locations on the property as shown on the enclosed figure. The property currently is vacant.

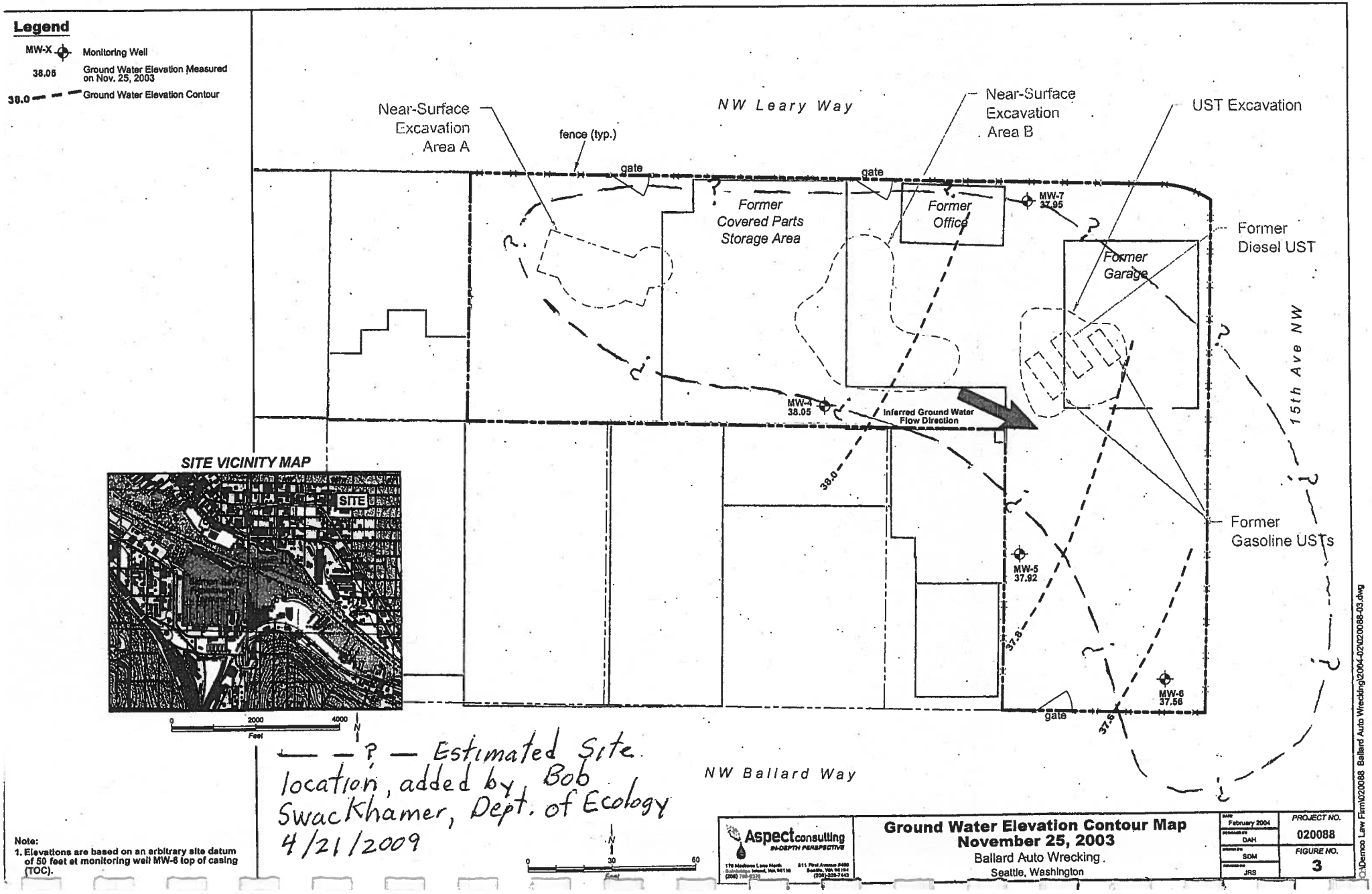
The land surface of the property is generally flat, sloping gently from a high point in the southeast corner toward a lower area on the west.

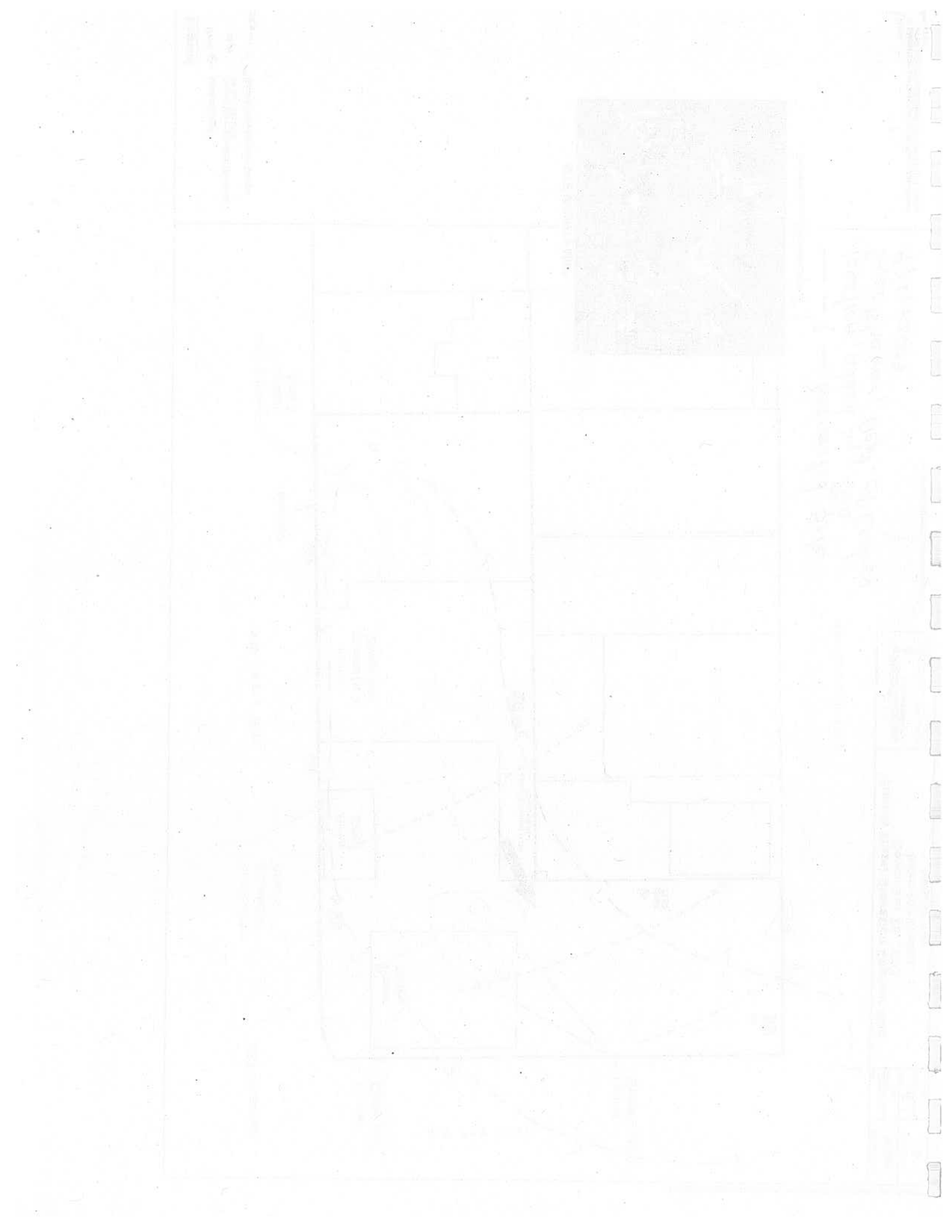
Subsurface soils start with a layer of surficial fill about two to three feet deep consisting of a mixture of sand, gravel, and silt with metallic, wood, and glass debris fragments. This surficial unit is relatively loose compared with the underlying glacial soils.

Under the fill is a dense unit of predominantly fine-grained soils (silty sand and sandy silt) up to 6 feet thick in the central portion of the property, but thinning to one foot thick toward the west. This unit is absent below the east side of the property.

The third and deepest soils unit explored is an extremely dense layer of sand. Explorations extended to a maximum depth of 15 feet, but refusal at depths of 8 to 12 feet was typical.

The uppermost water-bearing horizon is within the very dense sand horizon. Depth to water was approximately 6 to 10 feet below ground surface. Groundwater generally flows in a southeasterly direction. Salmon Bay and the Lake Washington Ship Canal are located approximately 800 feet south of the Site.


Legend
MW-X Monitoring Well
38.05 Ground Water Elevation Measured on Nov. 25, 2003
38.0 Ground Water Elevation Contour
Near-Surface Excavation Area A
NW Leary Way
fence (typ.)
gate
gate
Near-Surface Excavation Area B
UST Excavation
Former Covered Parts Storage Area
Former Office
MW-7 37.95
Former Diesel UST
Former Garage
15th Ave NW
MW-4 38.05
Inferred Ground Water Flow Direction
38.0
SITE VICINITY MAP
SITE
0 2000 4000 Feet
N
Former Gasoline USTs
MW-5 37.92
37.8
MW-6 37.56
gate
37.6
NW Ballard Way
? Estimated Site location, added by Bob Swackhamer, Dept. of Ecology 4/21/2009
N
0 30 60 Feet
Note:
1. Elevations are based on an arbitrary site datum of 50 feet at monitoring well MW-6 top of casing (TOC).
Aspect consulting IN-DEPTH PERSPECTIVE
Ground Water Elevation Contour Map
November 25, 2003
Ballard Auto Wrecking
Seattle, Washington
February 2004
DAH
SDM
JRS
PROJECT NO.
020088
FIGURE NO.
3
C:\Demco Law Firm\020088 Ballard Auto Wrecking\2004-02\020088-03.dwg



APPENDIX E

Copy of Laboratory Analytical Reports, Friedman & Bruya, Inc.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

March 7, 2011

Roy Kuroiwa, Project Manager
RK Environmental, Inc.
4036 Williams Ave. W.
Seattle, WA 98199

Dear Mr. Kuroiwa:

Included are the results from the testing of material submitted on February 21, 2011 from the Ballard Auto Wrecking, F&BI 102223 project. There are 27 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
RKK0307R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 21, 2011 by Friedman & Bruya, Inc. from the RK Environmental Ballard Auto Wrecking project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	RK Environmental
102223-01	X1-1
102223-02	X1-2
102223-03	X1-3
102223-04	X1-4
102223-05	X1-5
102223-06	X1-6
102223-07	X1-7
102223-08	X1-8
102223-09	X1-9
102223-10	X1-10
102223-11	X3-1
102223-12	X3-2
102223-13	X3-3
102223-14	X3-4
102223-15	X3-5
102223-16	BF-1
102223-17	BF-2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/07/11
Date Received: 02/21/11
Project: Ballard Auto Wrecking, F&BI 102223
Date Extracted: 03/03/11
Date Analyzed: 03/03/11 and 03/04/11

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
X1-1 102223-01	<0.02	<0.02	<0.02	<0.06	<2	89
X1-2 102223-02	<0.02	<0.02	<0.02	<0.06	<2	85
X1-3 102223-03	<0.02	<0.02	<0.02	<0.06	<2	89
X1-4 102223-04	<0.02	<0.02	<0.02	<0.06	<2	86
X1-5 102223-05	<0.02	<0.02	<0.02	<0.06	<2	89
X1-6 102223-06	<0.02	<0.02	<0.02	0.078	<2	83
X1-7 102223-07	<0.02	<0.02	<0.02	<0.06	<2	83
X1-8 102223-08	<0.02	<0.02	<0.02	<0.06	<2	86
X1-9 102223-09	<0.02	<0.02	<0.02	<0.06	<2	81
X1-10 102223-10	<0.02	<0.02	<0.02	<0.06	<2	88
X3-1 102223-11	<0.02	<0.02	<0.02	<0.06	<2	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/07/11
Date Received: 02/21/11
Project: Ballard Auto Wrecking, F&BI 102223
Date Extracted: 03/03/11
Date Analyzed: 03/03/11 and 03/04/11

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
X3-2 102223-12	<0.02	<0.02	<0.02	<0.06	<2	87
X3-3 102223-13	<0.02	<0.02	<0.02	<0.06	<2	91
X3-4 102223-14	<0.02	<0.02	<0.02	<0.06	<2	106
X3-5 102223-15	<0.02	<0.02	<0.02	<0.06	<2	87
BF-1 102223-16	<0.02	<0.02	<0.02	<0.06	<2	89
BF-2 102223-17	<0.02	<0.02	<0.02	<0.06	<2	86
Method Blank 01-0367 MB	<0.02	<0.02	<0.02	<0.06	<2	91

Date of Report: 03/07/11
Date Received: 02/21/11
Project: Ballard Auto Wrecking, F&BI 102223
Date Extracted: 02/21/11
Date Analyzed: 02/21/11 and 02/22/11

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)
X1-1 102223-01	<50	<250	104
X1-2 102223-02	<50	<250	104
X1-3 102223-03	<50	<250	102
X1-4 102223-04	<50	<250	101
X1-5 102223-05	<50	<250	101
X1-6 102223-06	<50	<250	100
X1-7 102223-07	<50	<250	101
X1-8 102223-08	<50	<250	101
X1-9 102223-09	<50	<250	101
X1-10 102223-10	<50	<250	100
X3-1 102223-11	<50	<250	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/07/11
Date Received: 02/21/11
Project: Ballard Auto Wrecking, F&BI 102223
Date Extracted: 02/21/11
Date Analyzed: 02/21/11 and 02/22/11

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)
X3-2 102223-12	<50	<250	98
X3-3 102223-13	<50	<250	101
X3-4 102223-14	<50	<250	101
X3-5 102223-15	<50	<250	102
BF-1 102223-16	<50	<250	99
BF-2 102223-17	<50	<250	98
Method Blank 01-0305 MB	<50	<250	102

Analysis For Total Metals By EPA Method 200.8

Client ID:	X1-1	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-01
Date Analyzed:	02/23/11	Data File:	102223-01.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X1-2	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-02
Date Analyzed:	02/23/11	Data File:	102223-02.013
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X1-3	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-03
Date Analyzed:	02/23/11	Data File:	102223-03.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	1.08

Analysis For Total Metals By EPA Method 200.8

Client ID:	X1-4	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-04
Date Analyzed:	02/23/11	Data File:	102223-04.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	1.06

Analysis For Total Metals By EPA Method 200.8

Client ID:	X1-5	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-05
Date Analyzed:	02/23/11	Data File:	102223-05.018
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	1.01

Analysis For Total Metals By EPA Method 200.8

Client ID:	X1-6	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-06
Date Analyzed:	02/23/11	Data File:	102223-06.019
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	1.30

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X1-7	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-07
Date Analyzed:	02/23/11	Data File:	102223-07.020
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	90	60	125

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

<- "MRL"

Analysis For Total Metals By EPA Method 200.8

Client ID:	X1-8	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-08
Date Analyzed:	02/23/11	Data File:	102223-08.021
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

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

Analysis For Total Metals By EPA Method 200.8

Client ID:	X1-9	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-09
Date Analyzed:	02/23/11	Data File:	102223-09.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	1.96

Analysis For Total Metals By EPA Method 200.8

Client ID:	X1-10	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-10
Date Analyzed:	02/23/11	Data File:	102223-10.023
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	84	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	14.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	X3-1	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-11
Date Analyzed:	02/23/11	Data File:	102223-11.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	83	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	76.1

Analysis For Total Metals By EPA Method 200.8

Client ID:	X3-2	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-12
Date Analyzed:	02/23/11	Data File:	102223-12.025
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	85	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	93.5

Analysis For Total Metals By EPA Method 200.8

Client ID:	X3-3	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-13
Date Analyzed:	02/23/11	Data File:	102223-13.026
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	3.04

Analysis For Total Metals By EPA Method 200.8

Client ID:	X3-4	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-14
Date Analyzed:	02/23/11	Data File:	102223-14.027
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	11.0

Analysis For Total Metals By EPA Method 200.8

Client ID:	X3-5	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-15
Date Analyzed:	02/23/11	Data File:	102223-15.029
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	2.65

Analysis For Total Metals By EPA Method 200.8

Client ID:	BF-1	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-16
Date Analyzed:	02/23/11	Data File:	102223-16.030
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	5.25

Analysis For Total Metals By EPA Method 200.8

Client ID:	BF-2	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	102223-17
Date Analyzed:	02/23/11	Data File:	102223-17.031
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	16.8

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	RK Environmental
Date Received:	NA	Project:	Ballard Auto Wrecking, F&BI 102223
Date Extracted:	02/22/11	Lab ID:	I1-117 mb
Date Analyzed:	02/23/11	Data File:	I1-117 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	89	60	125

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

Date of Report: 03/07/11
Date Received: 02/21/11
Project: Ballard Auto Wrecking, F&BI 102223

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

Laboratory Code: 102223-16 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	92	66-121
Toluene	mg/kg (ppm)	0.5	92	72-128
Ethylbenzene	mg/kg (ppm)	0.5	92	69-132
Xylenes	mg/kg (ppm)	1.5	93	69-131
Gasoline	mg/kg (ppm)	20	120	61-153

Date of Report: 03/07/11
Date Received: 02/21/11
Project: Ballard Auto Wrecking, F&BI 102223

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

Laboratory Code: 102223-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	93	91	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	58-147

Date of Report: 03/07/11
Date Received: 02/21/11
Project: Ballard Auto Wrecking, F&BI 102223

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

Laboratory Code: 102223-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	20	<1	108	106	65-126	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	20	103	81-120

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.

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

102223

SAMPLE CHAIN OF CUSTODY ME 02/21/11

Page # 1 of 2

Send Report To: Roy Kuroiwa
Company: RK Environmental
Address: 4036 Williams Ave W
City, State, ZIP: SEA WA 98199
Phone #: 310-7446 Fax #: rkkpe@comcast.net

SAMPLERS (signature): Ray

PROJECT NAME/NO.: Ballard Auto Wrecking

PO #:

REMARKS: 5 samples: 8402 4@ VOA bottles

TURNAROUND TIME
- [X] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [X] Return samples
- [ ] Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8260B	VOCs by 8260	SVOCs by 8270	HFS	Total Lead					Notes
X1-1	01 A-E	2/19		Soil	5	X	X	X				X					
X1-2	02					X	X	X				X					
X1-3	03					X	X	X				X					
X1-4	04					X	X	X				X					
X1-5	05					X	X	X				X					
X1-6	06					X	X	X				X					
X1-7	07					X	X	X				X					
X1-8	08					X	X	X				X					
X1-9	09					X	X	X				X					
X1-10	10					X	X	X				X					

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Ray	Roy Kuroiwa	RK ENV	2/21/11	08:55
Received by:	Michael Erdahl	Michael Erdahl	FGBrc.	2/21/11	08:55
Relinquished by:					
Received by:					

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

102223

SAMPLE CHAIN OF CUSTODY

ME 02/21/11 VS2/CD2

Page # 2 of 2

Send Report To Roy Kuroiwa

Company RK Environmental

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. PO #

REMARKS

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

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

ANALYSES REQUESTED

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8260B	VOCs by 8260B	SVOCs by 8270C	HFS	Tot Lead	Notes
X3-1	11 A-E	2/19		Soil	5	X	X	X				X	
X3-2	12					X	X	X				X	
X3-3	13					X	X	X				X	
X3-4	14					X	X	X				X	
X3-5	15					X	X	X				X	
						X	X	X				X	
BF-1	16	2/19		Soil	$ (1) (WE)	X	X	[redacted]				X	
BF-2	17	2/19		soil	$ (1)	X	X	[redacted]				X	
						[redacted]						X	

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Roy Kuroiwa	RK Env.	2/21/11	08:55
Received by:	Michael Erdahl	PES Env	2/21/11	0855
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

March 1, 2011

Roy Kuroiwa, Project Manager
RK Environmental, Inc.
4036 Williams Ave. W.
Seattle, WA 98199

Dear Mr. Kuroiwa:

Included are the results from the testing of material submitted on February 21, 2011 from the Ballard Auto Wreck, F&BI 102226 project. There are 17 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
RKK0301R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 21, 2011 by Friedman & Bruya, Inc. from the RK Environmental Ballard Auto Wreck project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	RK Environmental
102226-01	X2-1
102226-02	X2-2
102226-03	X2-3
102226-04	X2-4
102226-05	X2-5
102226-06	X2-6
102226-07	X2-7
102226-08	X2-8
102226-09	X2-9

All quality control requirements were acceptable.

Date of Report: 03/01/11
Date Received: 02/21/11
Project: Ballard Auto Wreck, F&BI 102226
Date Extracted: 02/22/11
Date Analyzed: 02/23/11

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
X2-1 102226-01	<0.02	<0.02	<0.02	<0.06	<2	86
X2-2 102226-02	<0.02	0.90	0.85	0.68	240	145
X2-3 102226-03	<0.02	<0.02	0.22	0.19	65	94
X2-4 102226-04	<0.02	<0.02	0.48	0.55	150	126
X2-5 102226-05	<0.02	<0.02	<0.02	<0.06	<2	78
X2-6 102226-06	<0.02	<0.02	<0.02	<0.06	<2	88
X2-7 102226-07	<0.02	<0.02	<0.02	<0.06	<2	81
X2-8 102226-08	<0.02	<0.02	<0.02	<0.06	<2	86
X2-9 102226-09	<0.02	<0.02	<0.02	<0.06	<2	100
Method Blank 01-0331 MB	<0.02	<0.02	<0.02	<0.06	<2	84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/01/11
Date Received: 02/21/11
Project: Ballard Auto Wreck, F&BI 102226
Date Extracted: 02/21/11
Date Analyzed: 02/22/11

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 50-150)
X2-1 102226-01	<50	<250	112
X2-2 102226-02	360 x	700	109
X2-3 102226-03	490 x	1,200	109
X2-4 102226-04	240 x	670	109
X2-5 102226-05	<50	<250	108
X2-6 102226-06	<50	<250	112
X2-7 102226-07	110 x	<250	116
X2-8 102226-08	160 x	770	113
X2-9 102226-09	<50	<250	107
Method Blank 01-310 MB	<50	<250	113

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X2-1	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wreck, F&BI 102226
Date Extracted:	02/23/11	Lab ID:	102226-01
Date Analyzed:	02/25/11	Data File:	102226-01.071
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	3.42

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X2-2	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wreck, F&BI 102226
Date Extracted:	02/23/11	Lab ID:	102226-02
Date Analyzed:	02/25/11	Data File:	102226-02.074
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	7.30

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X2-3	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wreck, F&BI 102226
Date Extracted:	02/23/11	Lab ID:	102226-03
Date Analyzed:	02/25/11	Data File:	102226-03.075
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	8.20

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X2-4	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wreck, F&BI 102226
Date Extracted:	02/23/11	Lab ID:	102226-04
Date Analyzed:	02/25/11	Data File:	102226-04.076
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	7.97

Analysis For Total Metals By EPA Method 200.8

Client ID:	X2-5	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wreck, F&BI 102226
Date Extracted:	02/23/11	Lab ID:	102226-05
Date Analyzed:	02/25/11	Data File:	102226-05.077
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	83	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	5.36

Analysis For Total Metals By EPA Method 200.8

Client ID:	X2-6	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wreck, F&BI 102226
Date Extracted:	02/23/11	Lab ID:	102226-06
Date Analyzed:	02/25/11	Data File:	102226-06.078
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	87	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	7.91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X2-7	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wreck, F&BI 102226
Date Extracted:	02/23/11	Lab ID:	102226-07
Date Analyzed:	02/25/11	Data File:	102226-07.080
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	85	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	87.9

Analysis For Total Metals By EPA Method 200.8

Client ID:	X2-8	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wreck, F&BI 102226
Date Extracted:	02/23/11	Lab ID:	102226-08
Date Analyzed:	02/25/11	Data File:	102226-08.081
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	84	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	285

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X2-9	Client:	RK Environmental
Date Received:	02/21/11	Project:	Ballard Auto Wreck, F&BI 102226
Date Extracted:	02/23/11	Lab ID:	102226-09
Date Analyzed:	02/25/11	Data File:	102226-09.082
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	9.38

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	RK Environmental
Date Received:	NA	Project:	Ballard Auto Wreck, F&BI 102226
Date Extracted:	02/23/11	Lab ID:	I1-121 mb
Date Analyzed:	02/25/11	Data File:	I1-121 mb.069
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

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

Date of Report: 03/01/11
Date Received: 02/21/11
Project: Ballard Auto Wreck, F&BI 102226

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

Laboratory Code: 102226-09 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	82	66-121
Toluene	mg/kg (ppm)	0.5	78	72-128
Ethylbenzene	mg/kg (ppm)	0.5	77	69-132
Xylenes	mg/kg (ppm)	1.5	80	69-131
Gasoline	mg/kg (ppm)	20	80	61-153

Date of Report: 03/01/11
Date Received: 02/21/11
Project: Ballard Auto Wreck, F&BI 102226

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

Laboratory Code: 102226-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	106	111	63-146	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	112	79-144

Date of Report: 03/01/11
Date Received: 02/21/11
Project: Ballard Auto Wreck, F&BI 102226

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

Laboratory Code: 102226-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	20	3.42	123	110	65-126	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	20	101	81-120

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.

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

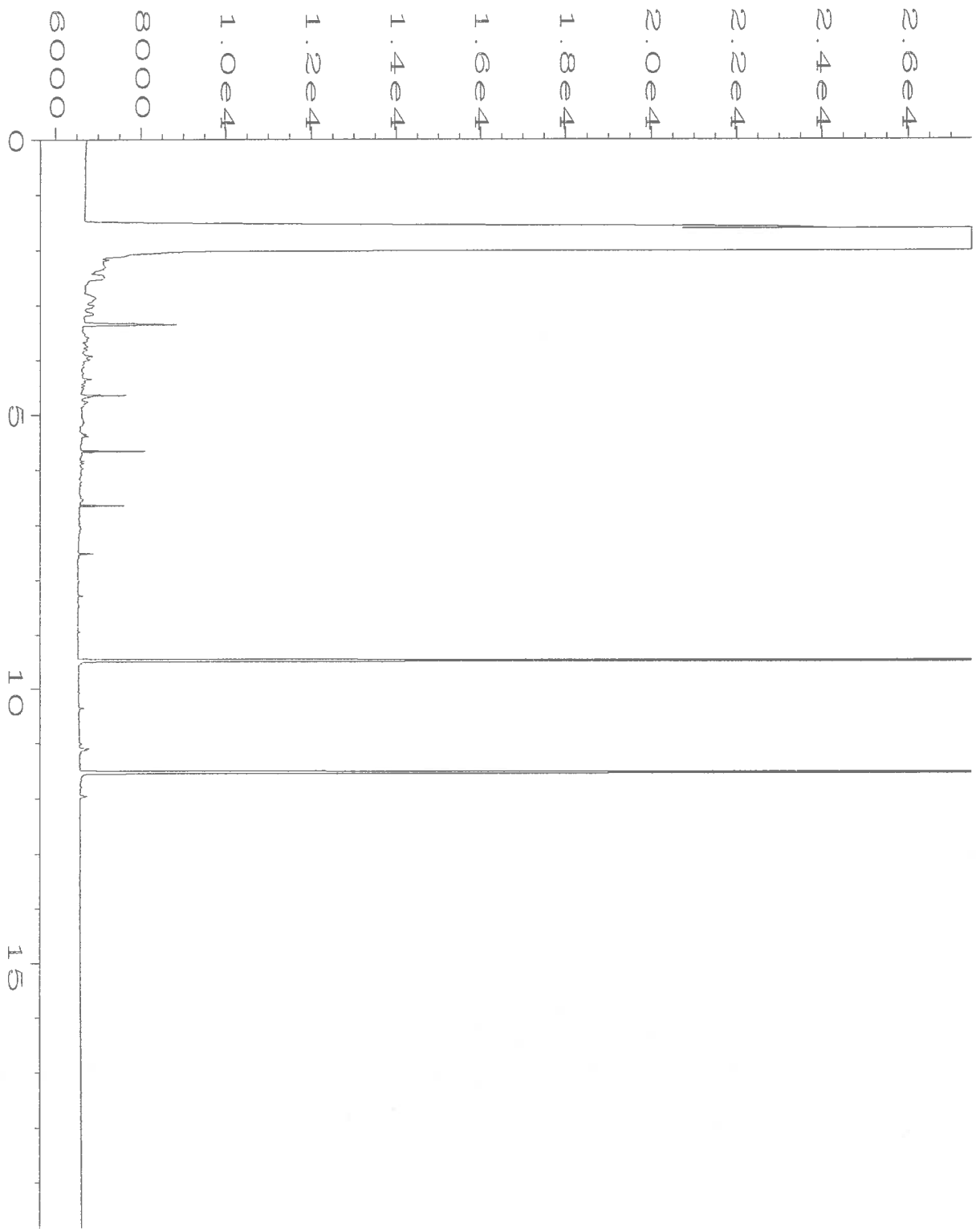
pc – The sample was received in a container not approved by the method. The value reported should be considered an estimate.

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

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

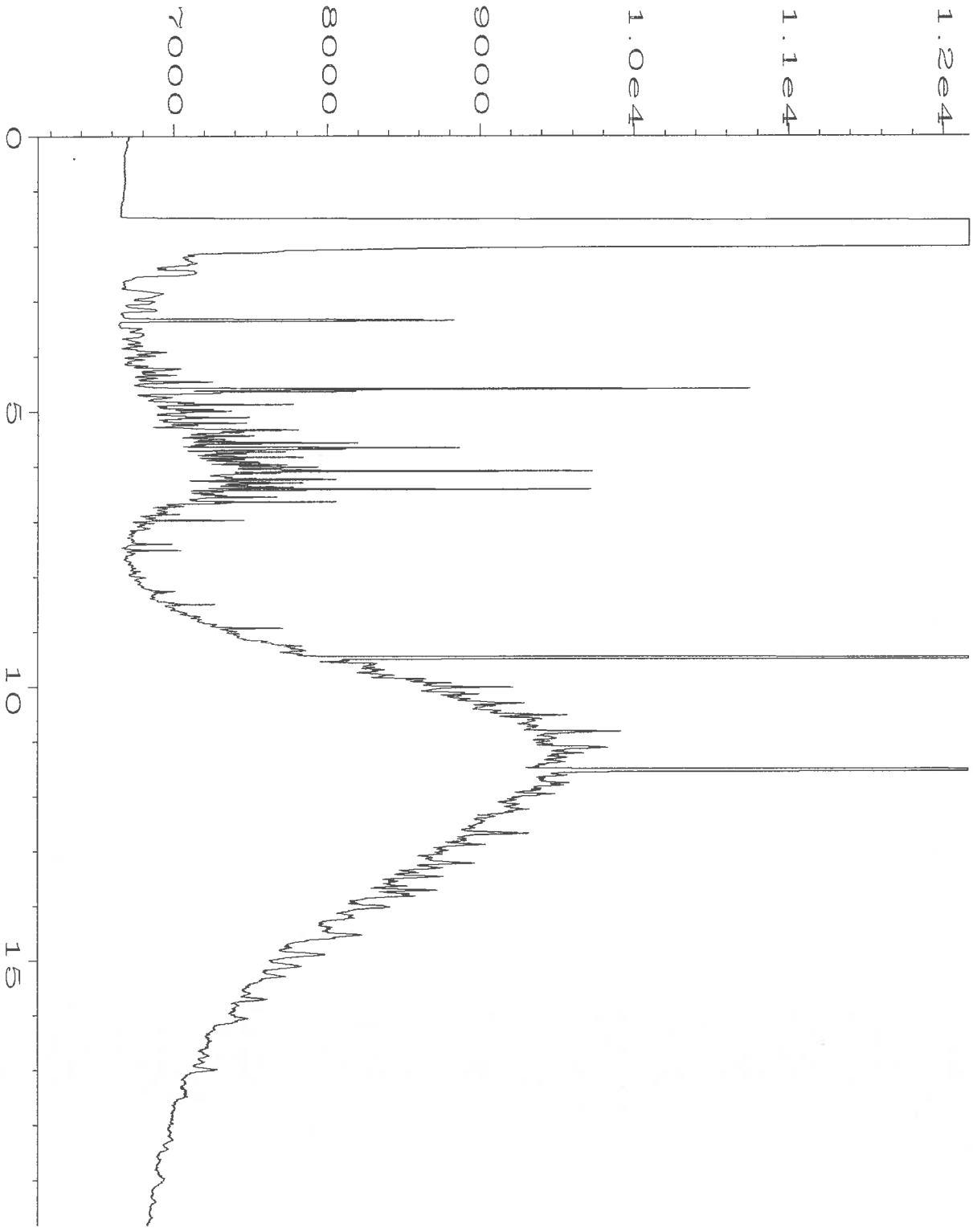
vo - The value reported fell outside the control limits established for this analyte.

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



Data File Name : C:\HPCHEM\1\DATA\02-22-11\011F0301.D
Operator : ML
Instrument : GC1
Sample Name : 102226-01
Run Time Bar Code:
Acquired on : 22 Feb 11 12:19 PM
Report Created on: 23 Feb 11 08:50 AM

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 3
Instrument Method: TPHD.MTH
Analysis Method : BAKEOUT.MTH



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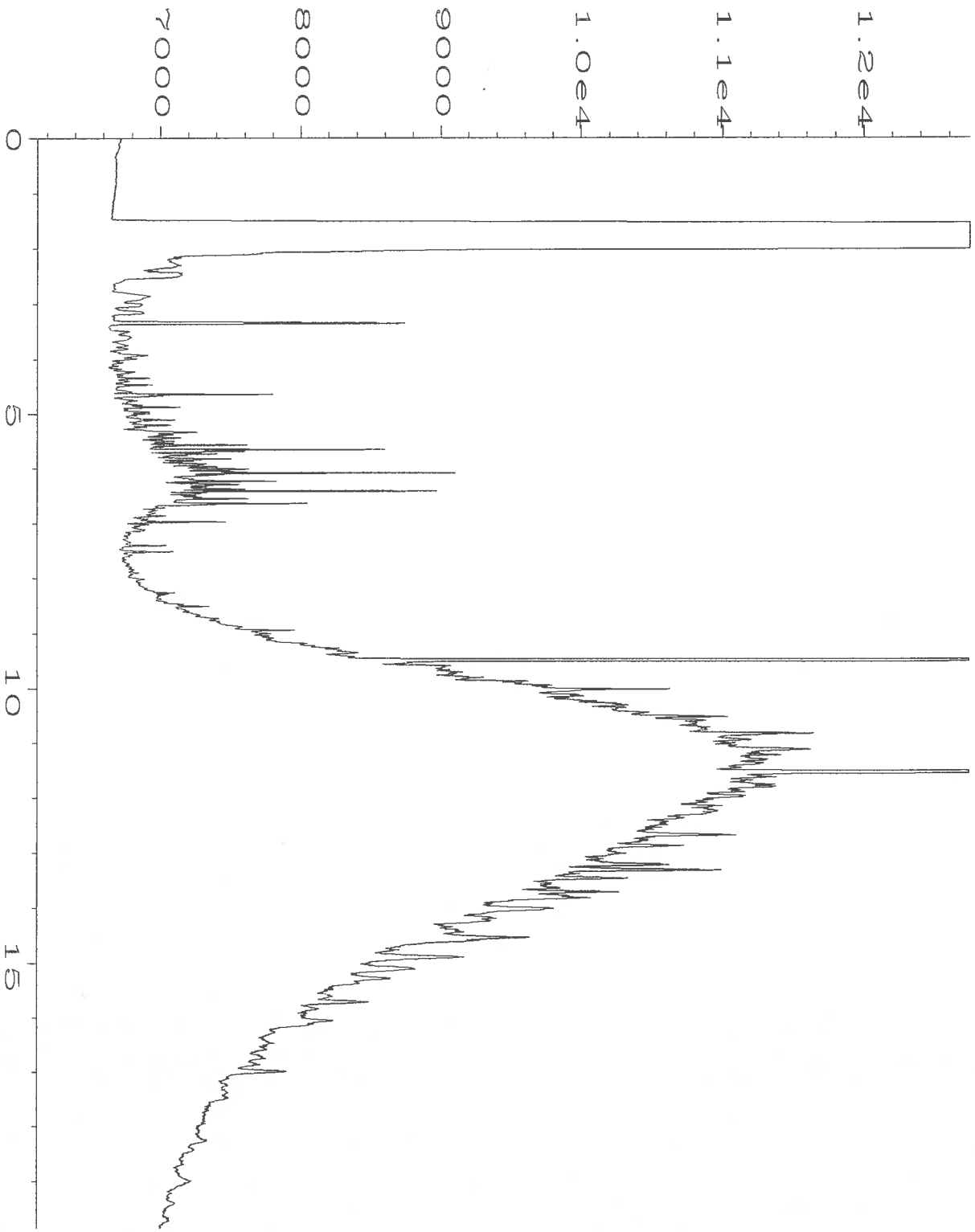
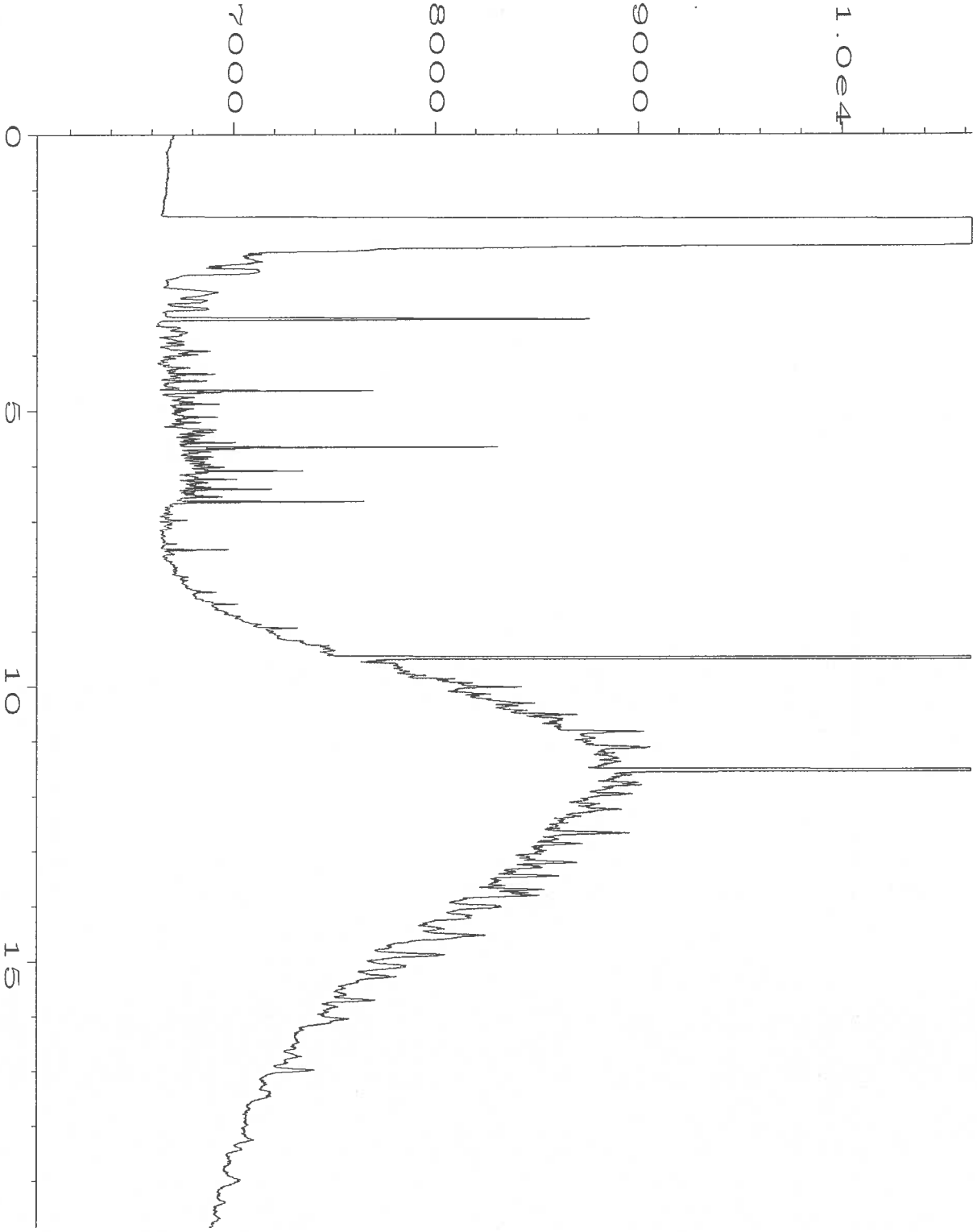
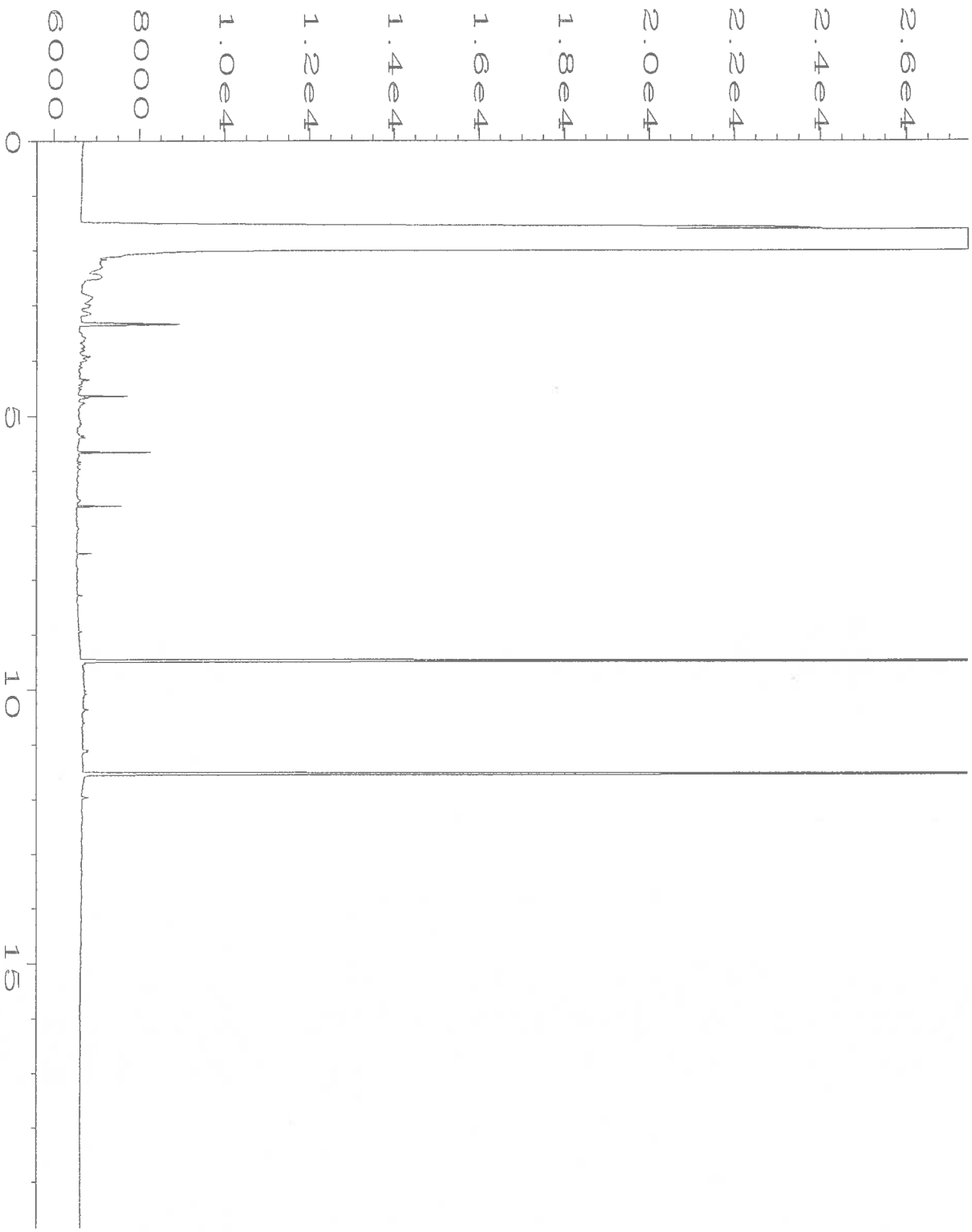
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 12
Sample Name	: 102226-02	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 22 Feb 11 12:47 PM	Instrument Method	: TPHD.MTH
Report Created on	: 23 Feb 11 08:51 AM	Analysis Method	: BAKEOUT.MTH



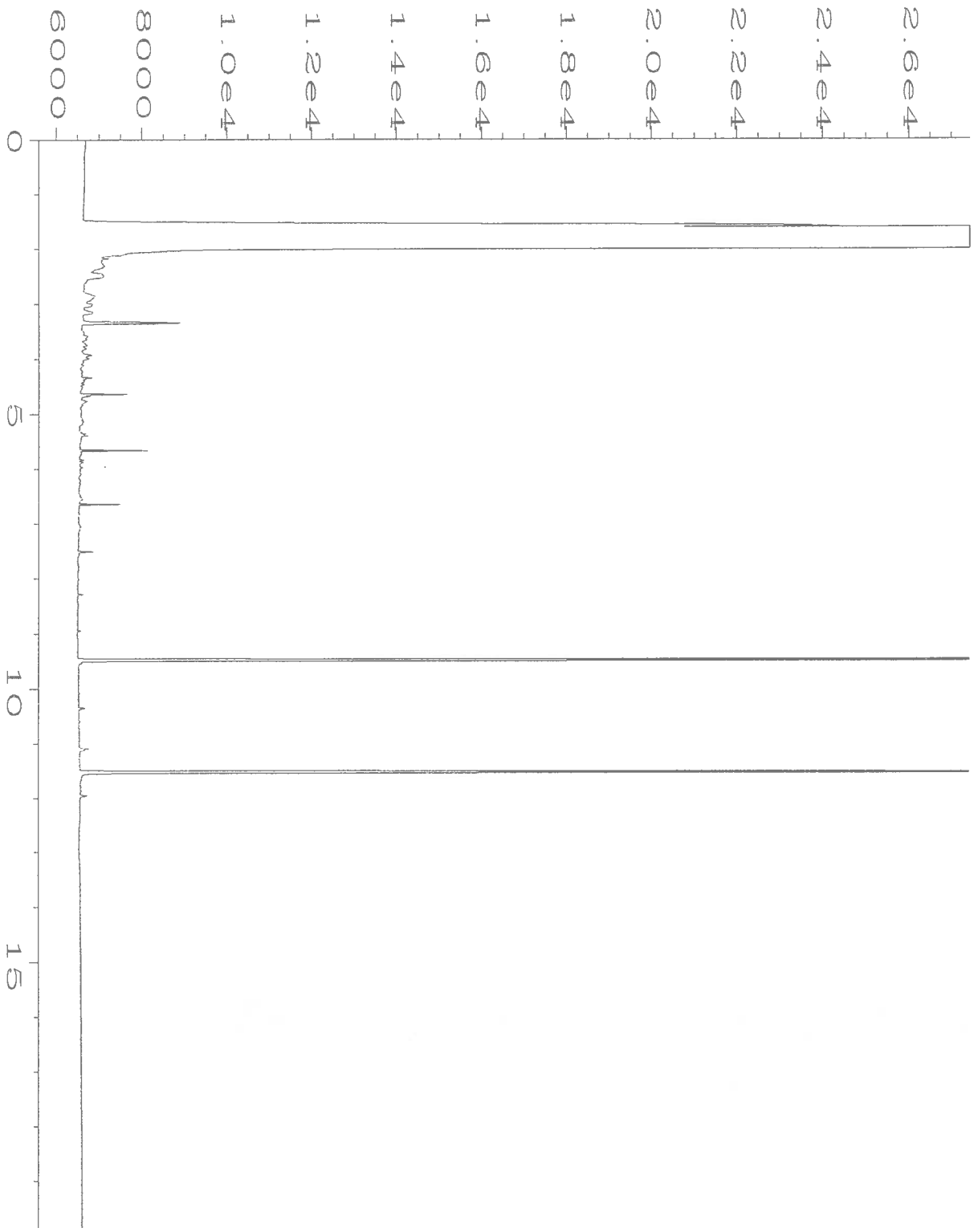
Data File Name	: C:\HPCHEM\1\DATA\02-22-11\013F0301.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 13
Sample Name	: 102226-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 22 Feb 11 01:14 PM	Instrument Method	: TPHD.MTH
Report Created on	: 23 Feb 11 08:51 AM	Analysis Method	: BAKEOUT.MTH



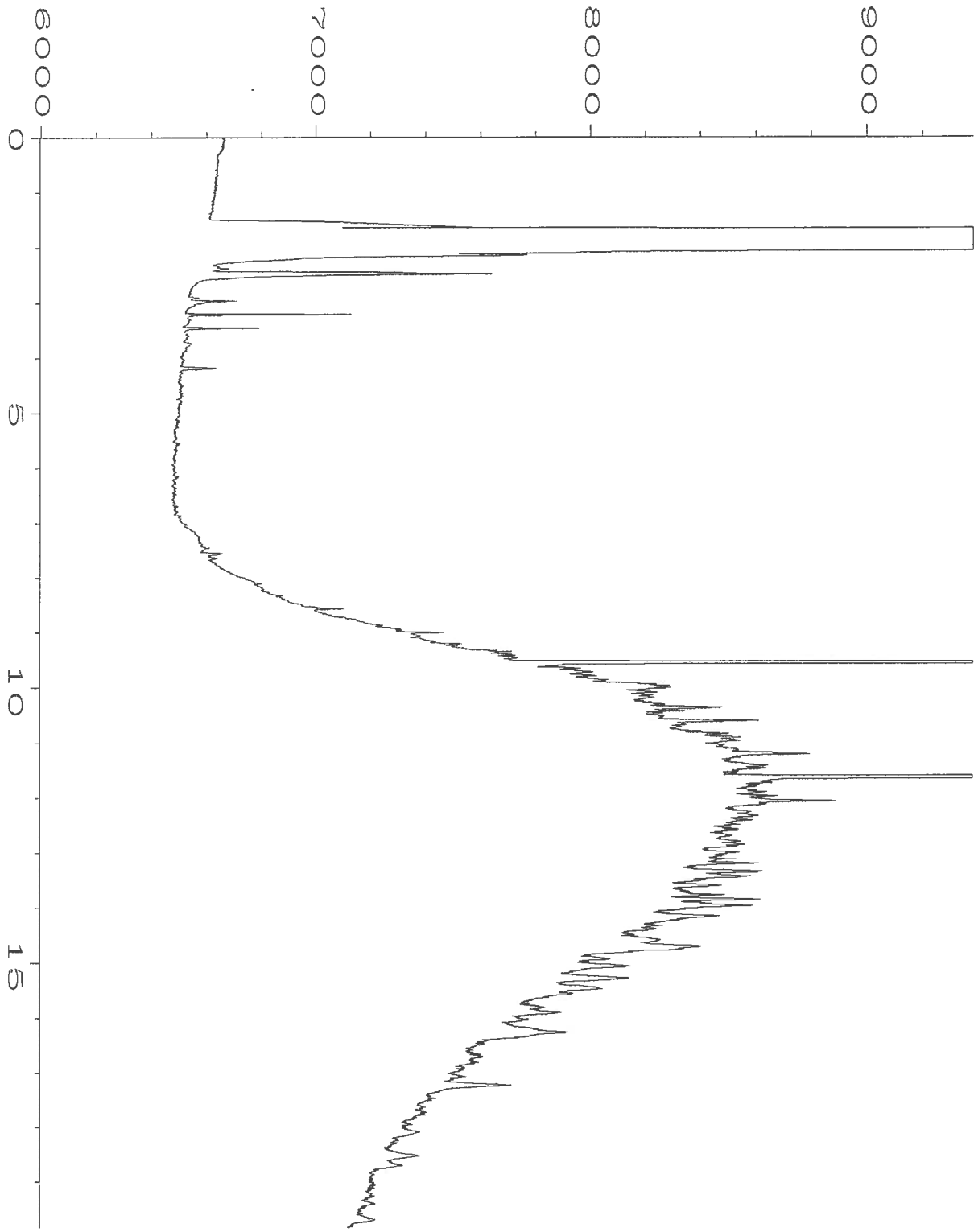
Data File Name	: C:\HPCHEM\1\DATA\02-22-11\014F0301.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 14
Sample Name	: 102226-04	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 22 Feb 11 01:41 PM	Instrument Method	: TPHD.MTH
Report Created on	: 23 Feb 11 08:51 AM	Analysis Method	: BAKEOUT.MTH



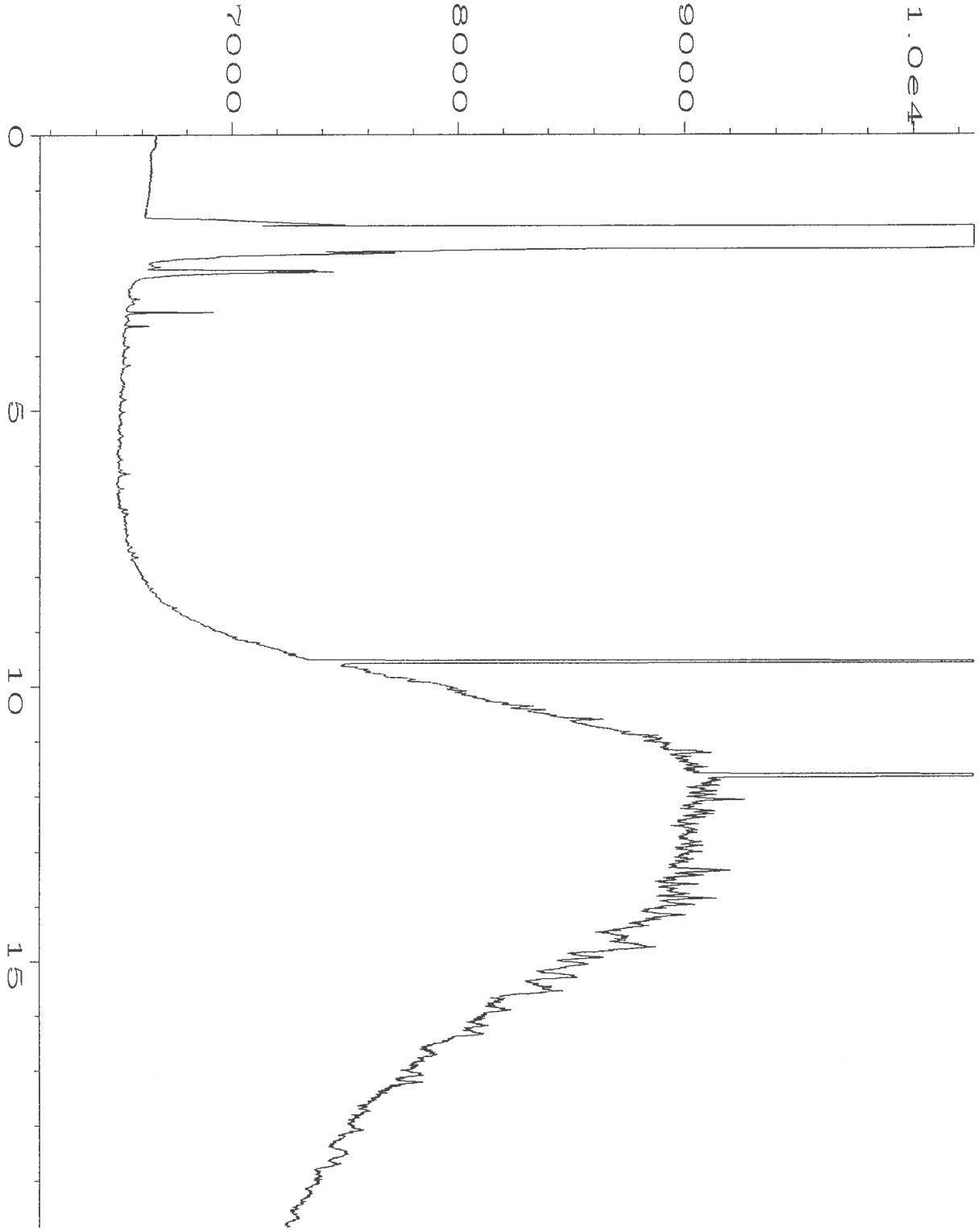
Data File Name	: C:\HPCHEM\1\DATA\02-22-11\015F0301.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 15
Sample Name	: 102226-05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 22 Feb 11 02:08 PM	Instrument Method	: TPHD.MTH
Report Created on	: 23 Feb 11 08:51 AM	Analysis Method	: BAKEOUT.MTH



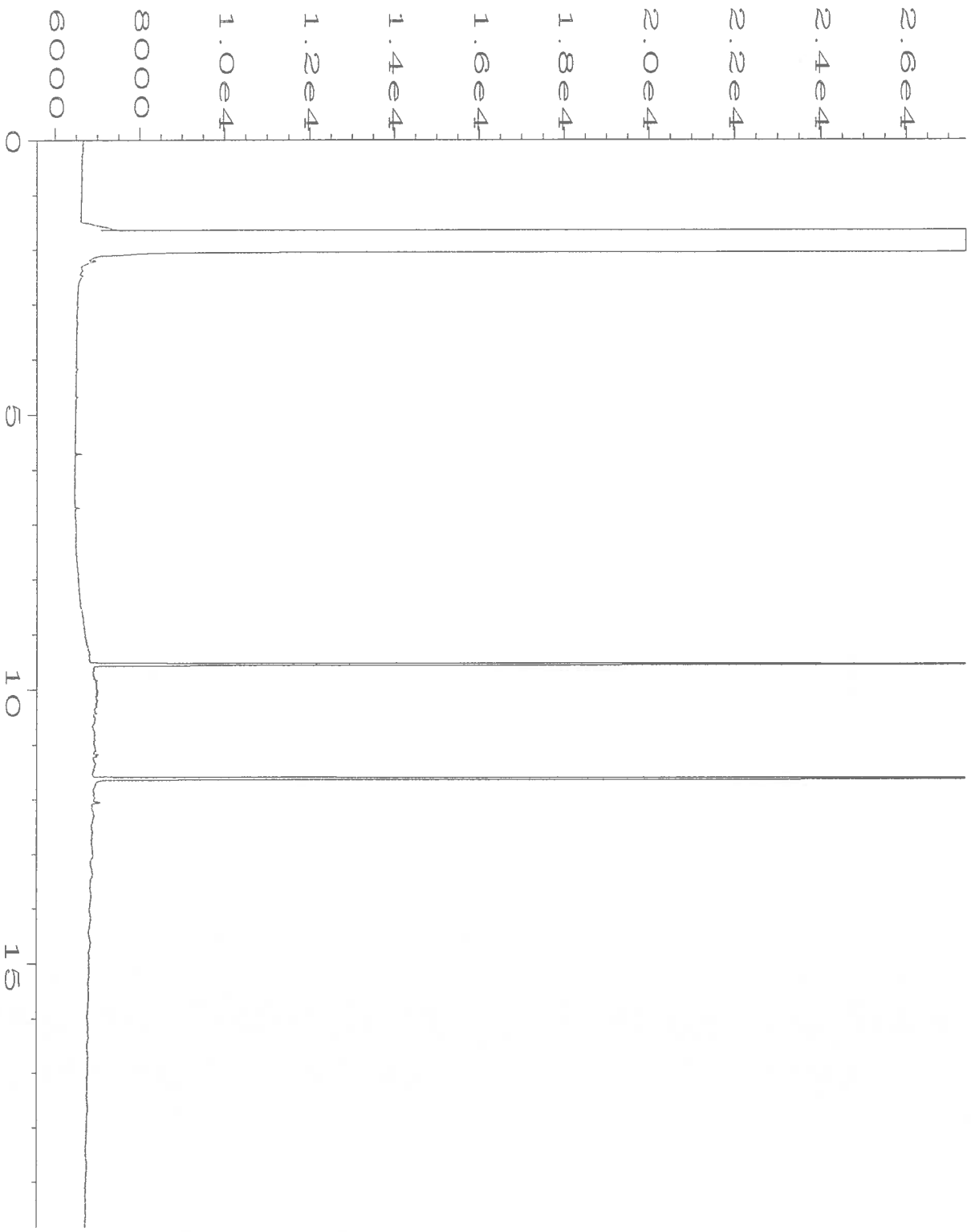
Data File Name	: C:\HPCHEM\1\DATA\02-22-11\016F0301.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 16
Sample Name	: 102226-06	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 22 Feb 11 02:35 PM	Instrument Method	: TPHD.MTH
Report Created on	: 23 Feb 11 08:51 AM	Analysis Method	: BAKEOUT.MTH



Data File Name	: C:\HPCHEM\1\DATA\02-22-11\017F0701.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 17
Sample Name	: 102226-07	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 22 Feb 11 04:51 PM	Instrument Method	: TPHD.MTH
Report Created on	: 23 Feb 11 08:51 AM	Analysis Method	: BAKEOUT.MTH



Data File Name	: C:\HPCHEM\1\DATA\02-22-11\018F0701.D		
Operator	: ML	Page Number	: 1
Instrument	: GC1	Vial Number	: 18
Sample Name	: 102226-08	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 22 Feb 11 05:18 PM	Instrument Method	: TPHD.MTH
Report Created on	: 23 Feb 11 08:51 AM	Analysis Method	: BAKEOUT.MTH



Data File Name : C:\HPCHEM\1\DATA\02-22-11\019F0701.D
Operator : ML
Instrument : GC1
Sample Name : 102226-09
Run Time Bar Code:
Acquired on : 22 Feb 11 05:45 PM
Report Created on: 23 Feb 11 08:52 AM

Page Number : 1
Vial Number : 19
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHD.MTH
Analysis Method : BAKEOUT.MTH

10222b

SAMPLE CHAIN OF CUSTODY

MG 02/21/11 VS3/GI2

Page # 1 of 1

Send Report To: Roy Kuroiwa
Company: RK Environmental
Address:
City, State, ZIP:
Phone # 310-7440 Fax #:

SAMPLERS (signature): Kayla
PROJECT NAME/NO.: Ballard Auto Wreck.
PO #:
REMARKS:

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

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Return samples
- [x] Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Tot Lead					Notes
X2-1	01 A-E	2/21		Soil	5	X	X	X				X					
X2-2	02					X	X	X				X					
X2-3	03					X	X	X				X					
X2-4	04					X	X	X				X					
X2-5	05					X	X	X				X					
X2-6	06					X	X	X				X					
X2-7	07					X	X	X				X					
X2-8	08					X	X	X				X					
X2-9	09					X	X	X				X					
						X	X	X				X					

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Kayla	Roy Kuroiwa	RK Env	2/21/11	11:10
Received by:	[illegible]	VINH	FBI	2/22/11	11:10 AM
Relinquished by:					
Received by:					

FORMS\COC\COC.DOC

Samples received at 6 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

March 1, 2011

Roy Kuroiwa, Project Manager
RK Environmental, Inc.
4036 Williams Ave. W.
Seattle, WA 98199

Dear Mr. Kuroiwa:

Included are the results from the testing of material submitted on February 24, 2011 from the Ballard Wrecking Yard, F&BI 102258 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
RKK0301R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 24, 2011 by Friedman & Bruya, Inc. from the RK Environmental Ballard Wrecking Yard project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	RK Environmental
102258-01	Disp-1
102258-02	Disp-2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

Client ID:	Disp-1	Client:	RK Environmental
Date Received:	02/24/11	Project:	Ballard Wrecking Yard, F&BI 102258
Date Extracted:	02/24/11	Lab ID:	102258-01
Date Analyzed:	02/25/11	Data File:	102258-01.050
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	89	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

Client ID:	Disp-2	Client:	RK Environmental
Date Received:	02/24/11	Project:	Ballard Wrecking Yard, F&BI 102258
Date Extracted:	02/24/11	Lab ID:	102258-02
Date Analyzed:	02/25/11	Data File:	102258-02.053
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	89	60	125

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

Client ID:	Method Blank	Client:	RK Environmental
Date Received:	Not Applicable	Project:	Ballard Wrecking Yard, F&BI 102258
Date Extracted:	02/24/11	Lab ID:	I1-129 mb
Date Analyzed:	02/25/11	Data File:	I1-129 mb.048
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/L (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	82	60	125

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

Date of Report: 03/01/11
Date Received: 02/24/11
Project: Ballard Wrecking Yard, F&BI 102258

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

Laboratory Code: 102258-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	<1	102	106	50-150	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	105	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.

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

102258

SAMPLE CHAIN OF CUSTODY ME 02/24/11

AI1

Send Report To Roy Kouris

Company RK

Address

City, State, ZIP

Phone # Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Ballard Wrecking Yard

PO #

REMARKS

Page # of

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

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	TCLP					Notes
Disp-1	01	2/24		Soil	1							X					
Disp-2	02	1		1	1							X					

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

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		E Lee Noble	RK	2-24-11	10:57
Received by:		A. POSNOZOVA	FBI	2/24/11	11:00
Relinquished by:					
Received by:					

Samples received at 8 °C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

March 23, 2011

Roy Kuroiwa, Project Manager
RK Environmental, Inc.
4036 Williams Ave. W.
Seattle, WA 98199

Dear Mr. Kuroiwa:

Included are the results from the testing of material submitted on March 15, 2011 from the Ballard Auto Wrecking, F&BI 103171 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
RKK0323R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 15, 2011 by Friedman & Bruya, Inc. from the RK Environmental Ballard Auto Wrecking project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	RK Environmental
103171-01	X4-1
103171-02	X4-2
103171-03	X4-3
103171-04	X4-4
103171-05	X4-5
103171-06	X4-6

All quality control requirements were acceptable.

Date of Report: 03/23/11
Date Received: 03/15/11
Project: Ballard Auto Wrecking, F&BI 103171
Date Extracted: 03/17/11
Date Analyzed: 03/17/11

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
X4-1 103171-01	<0.02	<0.02	<0.02	<0.06	<2	87
X4-2 103171-02	<0.02	<0.02	<0.02	<0.06	<2	83
X4-3 103171-03	<0.02	<0.02	<0.02	<0.06	<2	90
X4-4 103171-04	<0.02	<0.02	<0.02	<0.06	<2	84
X4-5 103171-05	<0.02	<0.02	<0.02	<0.06	<2	83
X4-6 103171-06	<0.02	<0.02	<0.02	<0.06	<2	83
Method Blank 01-0450 MB	<0.02	<0.02	<0.02	<0.06	<2	87

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/23/11
Date Received: 03/15/11
Project: Ballard Auto Wrecking, F&BI 103171
Date Extracted: 03/15/11
Date Analyzed: 03/15/11 and 03/16/11

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 50-150)
X4-1 103171-01	<50	<250	101
X4-2 103171-02	<50	<250	105
X4-3 103171-03	<50	<250	102
X4-4 103171-04	<50	<250	102
X4-5 103171-05	<50	<250	99
X4-6 103171-06	<50	<250	102
Method Blank 01-0440 MB	<50	<250	106

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X4-1	Client:	RK Environmental, Inc.
Date Received:	03/15/11	Project:	Ballard Auto Wrecking, F&BI 103171
Date Extracted:	03/18/11	Lab ID:	103171-01
Date Analyzed:	03/21/11	Data File:	103171-01.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	1.32

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X4-2	Client:	RK Environmental, Inc.
Date Received:	03/15/11	Project:	Ballard Auto Wrecking, F&BI 103171
Date Extracted:	03/18/11	Lab ID:	103171-02
Date Analyzed:	03/21/11	Data File:	103171-02.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	1.39

Analysis For Total Metals By EPA Method 200.8

Client ID:	X4-3	Client:	RK Environmental, Inc.
Date Received:	03/15/11	Project:	Ballard Auto Wrecking, F&BI 103171
Date Extracted:	03/18/11	Lab ID:	103171-03
Date Analyzed:	03/21/11	Data File:	103171-03.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	1.34

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X4-4	Client:	RK Environmental, Inc.
Date Received:	03/15/11	Project:	Ballard Auto Wrecking, F&BI 103171
Date Extracted:	03/18/11	Lab ID:	103171-04
Date Analyzed:	03/21/11	Data File:	103171-04.018
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	1.32

Analysis For Total Metals By EPA Method 200.8

Client ID:	X4-5	Client:	RK Environmental, Inc.
Date Received:	03/15/11	Project:	Ballard Auto Wrecking, F&BI 103171
Date Extracted:	03/18/11	Lab ID:	103171-05
Date Analyzed:	03/21/11	Data File:	103171-05.019
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	1.34

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	X4-6	Client:	RK Environmental, Inc.
Date Received:	03/15/11	Project:	Ballard Auto Wrecking, F&BI 103171
Date Extracted:	03/18/11	Lab ID:	103171-06
Date Analyzed:	03/21/11	Data File:	103171-06.020
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	1.38

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	RK Environmental, Inc.
Date Received:	Not Applicable	Project:	Ballard Auto Wrecking, F&BI 103171
Date Extracted:	03/18/11	Lab ID:	I1-193 mb
Date Analyzed:	03/21/11	Data File:	I1-193 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	90	60	125

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

Date of Report: 03/23/11
Date Received: 03/15/11
Project: Ballard Auto Wrecking, F&BI 103171

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

Laboratory Code: 103171-01 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	85	66-121
Toluene	mg/kg (ppm)	0.5	85	72-128
Ethylbenzene	mg/kg (ppm)	0.5	86	69-132
Xylenes	mg/kg (ppm)	1.5	87	69-131
Gasoline	mg/kg (ppm)	20	85	61-153

Date of Report: 03/23/11
Date Received: 03/15/11
Project: Ballard Auto Wrecking, F&BI 103171

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

Laboratory Code: 103171-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	106	107	63-146	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	108	79-144

Date of Report: 03/23/11
Date Received: 03/15/11
Project: Ballard Auto Wrecking, F&BI 103171

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

Laboratory Code: 103171-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	20	1.32	105	111	65-126	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	20	110	81-120

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.

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

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

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

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

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

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

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

fb - Analyte present in the blank and the sample.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

103171

SAMPLE CHAIN OF CUSTODY ME 03/15/11 VSI / BE2

Page # 1 of 1

Send Report To RK Env.
Company
Address
City, State, ZIP
Phone # 206 310-7446 **Fax #**

SAMPLERS (signature) Lee Noble

PROJECT NAME/NO. Ballard Auto Wrecking **PO #** per RK 3/15

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	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Tot Lead					Notes
X4-1	01 A-E	3/14		S	5	X	X	X				X					
X4-2	02 A-E	"		S	"	X	X	X				X					
X4-3	03 A-E	"		S	"	X	X	X				X					
X4-4	04 A-E	"		S	"	X	X	X				X					
X4-5	05 A-E	"		S	"	X	X	X				X					
X4-6	06 A-E	"		S	"	X	X	X				X					

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

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Roy Kuroiwa	RK	3/15	9:10a
Received by:		Nhan Phan	FEBI	3/15/11	9:10
Relinquished by:					
Received by:			Samples received at	4 °C	

APPENDIX F

Non-Hazardous Waste Profile and
Trip Tickets
Waste Management, Inc.

Alaska Street Reload and Recycling

70 South Alaska Street, Seattle Washington 98134

Profile # 102647WA

PERMIT TO DISPOSE OF NON-HAZARDOUS MATERIALS

This permit authorizes disposal of Customer's waste materials in accordance with the Industrial Waste & Disposal Services Agreement dated ___ _____.

EXPIRES: 3/3/2012

GENERATOR: CARSTENS LLC	
DESCRIPTION: *PCS*	**VOLUME:** *70 TONS*
☐ DRUMS ☐ BR ☒ ADC ☐ CLEAN UP	
LOCATION: *SEATTLE, WASHINGTON 1515 NW LEARY WAY*	**COUNTY:*** *KING*
CONTACT: *LEE NOBLE*	**PHONE:** *206-226-6153*
	FAX: *E.LEENOBLE@GMAIL.COM*
Recertification: ☐Yes ☐ No	

BILLING: *CARSTENS LLC*	**PO#:** *N/A*	**JOB#:** *N/A*

TYPE OF DISPOSAL/SPECIAL HANDLING : *BULK, ADC, NO FREE LIQUIDS*

******** FAILURE TO SCHEDULE LOADS MAY RESULT IN REFUSAL AT GATE*******

APPROVED: KC *KRISTIN CASTNER* DATE: *03/14/11 9:24:51 AM*

A COPY OF THIS PERMIT MUST BE SHOWN BY EACH DRIVER

PROJECTS MUST BE SCHEDULED PRIOR TO SHIPPING CALL : 206-763-5025

WASTE MANAGEMENT

HAZARDOUS WASTE IS STRICTLY PROHIBITED

Ballard Auto Wrecking
2 loads on 3/14/11

Alaska Street
70 S Alaska Street
Seattle, WA. 98134

Reprint
Ticket# 27752

Ph: 206 753 5025

Customer Name CARSTENS LLC CARSTENS LLC
Ticket Date 03/14/2011
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 102547WA

Carrier SELF HAULER X
Vehicle# F72
Container
Driver KRISTIE KRAFT
Check#
Billing# 0000195
Grid

Volume

	Time	Scale	Operator	Inbound	Gross	56820 lb
In	03/14/2011 13:31:58	SCALE 1	lmercer		Tare	26420 lb
Out	03/14/2011 13:41:00	SCALE 1	lmercer		Net	30400 lb
					Tons	15.20

Comments 5TH AVE EXC - LM

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	15.20	Tons				KING
2	PROFILEFTS-Profile Fee X	100	1	Each				KING
3	GONDOLA 16.10/TN 12T-GDN	100	15.20	Tons				KING
4	ENVFEE$5.01 W/10TONM-ENV	100	15.20	Tons				KING

Total Tax
Total Ticket

Driver's Signature

Alaska Street
70 S Alaska Street
Seattle, WA. 98134

Reprint
Ticket# 27756

Ph: 206 753 5025

Customer Name CARSTENS LLC CARSTENS LLC
Ticket Date 03/14/2011
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 102547WA

Carrier SELF HAULER X
Vehicle# F72
Container
Driver GARY ARD
Check#
Billing# 0000195
Grid

Volume

	Time	Scale	Operator	Inbound	Gross	59910 lb
In	03/14/2011 14:07:06	SCALE 1	lmercer		Tare	26420 lb
Out	03/14/2011 14:12:34	SCALE 1	lmercer		Net	33490 lb
					Tons	16.74

Comments 5TH AVE EXC - LM

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	16.72	Tons				KING
2	GONDOLA 16.10/TN 12T-GDN	100	16.72	Tons				KING
3	ENVFEE$5.01 W/10TONM-ENV	100	16.72	Tons				KING

Total Tax

Dirt Exchange

2572 5th Ave N
Seattle, WA 98109
(206) 284-8452

Invoice

Date	Invoice #
2/22/2011	9424

Dirt Exchange Yard
2572 5th Ave N
Seattle, WA 98109

Day 1 & 2

Terms	Project
Due on receipt	Lee Noble

Qty	Item Code	Description	Price Each	Amount
7	321	2/19: Excavate	170.00	1,190.00T
3	314	2/19: Excavate	135.00	405.00T
8.5	Truck #82	2/19: Export 7 Loads Contaminated, 3 Loads Backfill - 18 yds each	95.00	807.50T
9.5	Gary	2/19: 4 Loads Backfill - 18 yds each	95.00	902.50T
2	Truck #72	2/19: Export 2 Loads Contaminated	95.00	190.00T
3	321	2/21: Excavate & Grade	175.00	525.00T
5	314	2/21: Excavate & Grade	135.00	675.00T
3	Truck #72	2/21: Backfill in 3 Loads - 18 yds each	95.00	285.00T
3	312	2/24: Loading Contaminated Dirt	125.00	375.00T
4.25	Truck #82	2/24: Export 5 Loads Contaminated	95.00	403.75T
3	Truck #72	2/24: Export 3 Loads Contaminated	95.00	285.00T
		Subtotal		6,043.75

Export 84
Fill 54
72
24
60
36
204
54
180
See invoice # 9506

Visa & Mastercard Accepted	Subtotal	$6,043.75
Resale Cert Expires:	State Tax (9.5%)	$574.16
	Total	**$6,617.91**

No Charge per contract

Export 2/19 104 yds
2/24 96 yds

3/14 24 yds
224 yds

Invoice

Dirt Exchange
2572 5th Ave N
Seattle, WA 98109
(206) 284-8452

Date	Invoice #
3/30/2011	9506

Dirt Exchange Yard
2572 5th Ave N
Seattle, WA 98109

Day 3

Terms	Project
Due on receipt	Lee Noble

Qty	Item Code	Description	Price Each	Amount
5	314 Export 12	3/14: Excavate / Grade	135.00	675.00T
3.5	Truck #82	3/14: Export 1 Load Contaminated Dirt to Alaska WM, Import 1 Load Recycled Concrete from Building Buster	95.00	332.50T
2	Truck #72 12/24	3/14: Export 1 Load Contaminated Dirt to Alaska WM, Import 1 load Recycled Concrete from Building Buster	95.00	190.00T
180	Clean Fill	Backfill for Exported Material	12.00	2,160.00T
32	1 1/4" Clean	Replace Yard Surface Rock	31.50	1,008.00T

Visa & Mastercard Accepted

Subtotal	$4,365.50
State Tax (9.5%)	$414.72
Total	**$4,780.22**

Resale Cert Expires: