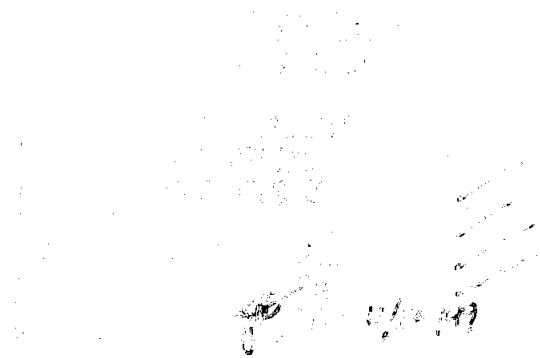


VCP Site Closure Report

Sunset-Rainier Renton Walgreens

**Prepared for
Evergreen-Sunset Limited Partnership**



**Prepared by
Floyd & Snider Inc.**

November 11, 1999

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Chapter 1 – Introduction

This Voluntary Cleanup Program (VCP) Site Closure Report has been prepared to fulfill the reporting requirements for voluntary cleanups under the VCP and the Department of Ecology's (Ecology) Model Toxics Control Act (MTCA) Chapter 173-340 WAC. This Closure Report details the work and results of the remedial action performed on the Sunset-Rainier Renton Walgreens site, formerly known as the Renton Honda Motorcycle site. Refer to Figure 1 for the approximate location of the site. The work described herein completes the remedial activities planned for the site.

The selection and design of the preferred remedial action at the site is presented in the site's Cleanup Action Plan (CAP; FSI, 1998) and is based on a series of Phase I and Phase II site assessments and investigations performed by Floyd & Snider (FSI) and others between 1997 and 1998. A description of these studies and their significant findings can also be found in the CAP. A list of previous reports and studies related to the environmental conditions of the site are provided in the Reference section at the end of this report.

As a result of previous investigations, it was determined that the historical site uses and activities resulted in the limited release of petroleum hydrocarbons into soil and groundwater. The limited petroleum hydrocarbon releases to site soil included: gasoline at Tax Lot 178; heating oil around the former underground heating oil tank; and diesel fuel from abandoned underground storage tanks (USTs). Shallow site groundwater in the vicinity of the southeastern corner of the project site also contained low levels of total petroleum hydrocarbons (TPH) – all detected TPH concentrations were below the site's groundwater cleanup level of 1,000 ug/L. In response to these findings, FSI performed limited soil excavation, contaminated soil treatment, and confirmation soil sampling of the petroleum contaminated soil (PCS) that exceeded site cleanup levels. Additionally rounds of site groundwater quality monitoring were also performed. However, site groundwater monitored previously, as part of the independent cleanup activities, did not contain concentrations of total petroleum hydrocarbons (TPH) in excess of Ecology's MTCA Method A cleanup level of 1,000 µg/L. Therefore, no groundwater remedial action is required for the site.

Figure 2 provides the layout of the former Renton Honda site, including the location of Tax Lot 178, the former heating oil tank, and USTs.

Ecology Reporting and Participation. The work described in this report was performed under the VCP and has been completed with review and participation by Mr. Charles San Juan, and more recently, by Mr. John Lillie, of the Northwest Regional Office of Ecology. The following Ecology reports and participation supplement the independent remedial action work discussed herein:

- Submittal of the VCP Request for Assistance/Review Form and application fee by Evergreen Devco, Inc., c/o Sunset-Rainier Renton Walgreens, in August 1998.
- Submittal and review of the site's Cleanup Action Plan, which detailed cleanup approach and confirmation sampling programs. A verbal review and discussion of the CAP was performed with Ecology's participation.

- As a result of the review and comments made by Ecology on the CAP, a response letter was prepared regarding the proposed Independent Remedial Action activities for the site. A copy of this letter is included in this report as Appendix A.

ORGANIZATION OF REPORT

This Closure Report is organized so that all relevant details pertaining to site cleanup and confirmation sampling are provided in the main body of the report. Other site background and setting information, such as Project Background, Release Information, Site Characterization, etc. are provided in the CAP (FSI, 1998), which is provided as Appendix B (appendices of the CAP are not included). Supporting documentation to this Closure Report, such as Laboratory Analytical Reports, UST Decommissioning report, and well construction logs are provided as Appendices C through E. This report generally follows Ecology's Guidance on Preparing Independent Remedial Action Reports (Ecology, 1994), with minor report format modifications as mentioned above.

The main body of this report contains: **Chapter 1 – Introduction, Chapter 2 – Soil Excavation and Sampling, Chapter 3 – UST Decommissioning and Site Assessment, Chapter 4 – Petroleum Contaminated Soil Treatment Methods, and Chapter 5 – Groundwater Investigation.**

Chapter 2 – Soil Excavation and Sampling

The selected remedy for petroleum contaminated soil (PCS) that exceeded the site's cleanup level was soil excavation, confirmation soil sampling, and treatment of PCS by thermal desorption. Two categories of PCS that required remediation were identified and delineated during previous investigations:

- PCS containing TPH quantified as gasoline within Tax Lot 178; and
- PCS containing a free-product source of heating oil near the former location of the underground heating oil tank, and immediately below the northwest corner of the former Renton Honda building.

Following is a description of how the initial limits of PCS excavation were established and the final results of PCS remediation activities at both locations.

TAX LOT 178

Review of Selected Cleanup Approach. As further detailed in the CAP, field screening and soil sampling efforts from several exploratory test pits on Tax Lot 178 identified a limited quantity of PCS containing elevated levels of TPH quantified as gasoline. The concentrations detected at exploratory test trench location TT-2 were greater than the MTCA Method A cleanup level of 100 mg/kg (see Figure 3). Field observations and soil sampling and analysis from exploratory test trenches within the area characterized the PCS as fill material containing crushed concrete and asphalt debris, and found that the quantity of PCS is small and limited to an area around test trench TT-2.

Given the relatively routine nature and few hazardous substances on Tax Lot 178, Ecology's MTCA Method A soil cleanup level for TPH quantified as gasoline was used for remediation of PCS on Tax Lot 178 (100 mg/kg for TPH quantified as gasoline in soil).

The selected remedial measure for PCS identified within Tax Lot 178 was excavation and off-site disposal and treatment of the impacted soil followed by confirmation sampling of the excavation sidewalls and bottoms. To confirm successful soil remediation, groundwater from Monitoring Well MW-4, located immediately downgradient of the PCS excavation area, was resampled and analyzed as part of site confirmation sampling activities.

Results of PCS Excavation and Confirmation Soil Sampling and Analysis. As mentioned above, previous site investigation efforts identified a limited source of PCS at Tax Lot 178, contaminated with residual gasoline. Initial limits of soil excavation (20 feet by 20 feet by 10 feet deep) were established in this area and the initial excavation area was completed. Based on visual and olfactory conditions and organic-vapor monitoring results, the excavation was continued along the north, south and west sidewalls. Upon reaching the limits of excavation, at least one soil sample per 40 linear feet of excavation sidewall was collected per the CAP. No bottom samples were collected since the excavation was completed at least 1 foot below the observed shallow water table. (The confirmation soil sampling plan was based generally on systematic and stratified sampling designs as defined in Section 4.1 of Methods for Evaluating the Attainment of Cleanup Standards [USEPA, 1989]).

For sidewall samples exceeding the TPH cleanup level, or where free product was observed, the affected area was overexcavated and additional confirmation samples collected and analyzed.

At the conclusion of Tax Lot 178 soil excavation and overexcavation activities, a total of approximately 200 cubic yards of soil was removed from the area. Of this total, approximately two-thirds of the soil was sampled, analyzed and segregated as uncontaminated soil (originating from the top 5 to 7 feet of the fill area). The remaining soil stockpile segregated as PCS was temporarily stockpiled on site and eventually hauled offsite to TPS Technologies in Tacoma, Washington for treatment. The final limits of excavation, along with a note of their total depth, is provided in Figures 3 and 4a.

In total, 4 confirmation soil samples were collected from the former heating oil tank area excavation. All confirmation soil samples contained TPH quantified as gasoline and BETX below Ecology's MTCA Method A cleanup levels. The analytical results for all confirmation samples are provided in Figure 4a adjacent to the sample name and location. Copies of laboratory analytical reports are also provided in Appendix C of this report.

FORMER HEATING OIL UST

Review of Selected Cleanup Approach. As further detailed in the CAP, A 500-gallon UST was used historically to supply heating oil for the former Renton Honda Motorcycle building, as located in Figure 2. In October 1996, the owners of the property decommissioned the UST, during which over 700 tons of PCS, contaminated with diesel-range hydrocarbons (Webster, 1997), was removed from the property. Due to the presence of the former Renton Honda Motorcycle building, the PCS excavation was restricted by the edge of the building, and according to contractor, additional PCS was left in place under the northwestern corner of the building.

Based on more recent investigation activities, impacts to subsurface soil from the former heating oil UST area were described as: elevated concentrations of heating oil in soil under the northwest corner of the building, ranging from 2 to 15 feet bgs. Laterally, heating oil in soil appeared to be limited to an area of approximately 20 feet by 100 feet in size.

The selected soil cleanup level for the former heating oil UST area was 3,000 mg/kg, determined by the State's Pollution Liability Insurance Agency (PLIA, 1997), in conjunction with Ecology (based on Ecology's Interim TPH Policy). This concentration is expected to be protective of both human health and groundwater quality. Groundwater quality will be measured by sampling monitoring well MW-1 after remediation, to confirm that TPH concentrations in that well is at or below Ecology's MTCA Method A groundwater cleanup level of 1,000 µg/L.

Results of PCS Excavation and Confirmation Soil Sampling and Analysis. Previous site investigation efforts identified an area of PCS under the northwestern corner of the former Renton Honda building. Limits of soil excavation were established in this area (see CAP for details of excavation limits), and soil was removed from these pre-established limits until all indications of heating oil were gone (visual and organic-vapor monitoring). Upon reaching the limits of excavation, at least one soil sample per 40 linear feet of excavation sidewall and one soil sample per 400 square feet of excavation bottom were collected and analyzed per the CAP.

(The confirmation soil sampling plan used for site cleanup was based generally on systematic and stratified sampling designs as defined in Section 4.1 of Methods for Evaluating the Attainment of Cleanup Standards [USEPA, 1989]).

For sidewall or bottom samples exceeding the TPH cleanup level, or where free product was observed, the affected area was overexcavated and additional confirmation samples were collected and analyzed.

At the conclusion of Heating Oil UST PCS excavation and overexcavation, a total of approximately 50 cubic yards of PCS were removed from the area. The final lateral limits of excavation, along with a note of their total depth, is provided in Figures 3 and 4b. The excavated PCS material was temporarily stockpiled on site and eventually hauled offsite to TPS Technologies in Tacoma, Washington for treatment. Additional details of soil treatment are provided in Chapter 4 of this report.

In total, 11 confirmation soil samples were collected from the former heating oil tank area excavation. All excavation sidewall and bottom confirmation soil samples contained TPH quantified as heating oil and diesel at or below the site soil cleanup level of 3,000 mg/kg. The analytical results for all confirmation samples are provided in Figure 4b adjacent to the sample name and location. Copies of laboratory analytical reports are provided in Appendix C of this report.

Chapter 3 – UST Decommissioning and Site Assessment

In May 1999, during the initial stages of site demolition and preparation for the construction of the new Renton Walgreens store, four inoperable and abandoned USTs were discovered in the northeast corner of the former Renton Honda building (Figure 2). The USTs are the apparent abandoned tanks used during the operation of the former gasoline station located on the property during the 1930's and 40's.

As a result of the UST discovery, Ecology was notified and determined that a Notice of Intent to Decommission the USTs was not necessary.

Floyd & Snider and their subconsultants performed the UST decommissioning and site assessment activities in general accordance with Ecology guidelines. The following summarizes field activities associated with tank decommissioning:

- All four USTs were uncovered and approximately 4,000 gallons of fluid removed and disposed of from the tanks. The USTs were cleaned and deemed inert. The USTs were removed from their location, inspected for their physical condition, and eventually disposed of off site.
- Approximately 50 cubic yards of petroleum-contaminated soil (based on field screening and visual observations) were removed from around the former UST locations.
- In accordance with Ecology's site assessment guidelines for UST decommissioning, a total of 22 soil samples were collected from the sides and bottom of the tanks. Soil samples were analyzed for TPH quantified as gasoline, diesel, and heavy oils, BETX, and total lead. The results of chemical analysis indicate: all but two of the soil samples did not contain concentrations of TPH, BETX, and total lead above the laboratory method detection limits. Two of the samples (511-4 and 0528-4) contained TPH quantified as diesel/oil in soil at concentrations of 1,900 and 300 mg/kg, respectively. These results are below the site's soil cleanup level for TPH quantified as diesel/oil of 3,000 mg/kg. Therefore, no further remedial action was performed at the former UST location.

All four tanks and associated, limited petroleum-contaminated soil were successfully removed from the site, as determined by confirmation soil sampling results. Field sampling and analysis results related to UST decommissioning indicate there are no remaining soil impacts on the site.

A detailed description and record of the UST decommissioning and site assessment efforts are provided in a report prepared by Dale Kramer, PG, of ADI Geoscience, an Ecology licensed UST Site Assessor. A copy of the report is provided as Appendix D.

Chapter 4 – Petroleum Contaminated Soil Treatment Methods

THERMAL DESORPTION AT TPS, INC.

Petroleum contaminated soil (PCS) generated during site excavation, confirmation sampling and observations, and overexcavation activities, was temporarily stockpiled on the site. Within 5 days following excavation and sampling activities, the soil stockpiles were hauled offsite by Lafdaney Construction of Lakewood, Washington and delivered directly to TPS Technologies, Inc. in Tacoma, Washington. TPS is a state-licensed PCS treatment facility. At TPS, contaminated soil was treated using their fixed thermal desorption plant. Contaminated soil hauling and treatment was performed under manifest. A total of approximately 125 cubic yards was hauled offsite and treated at TPS. Per requirements established by TPS, FSI chemically profiled the soil stockpile prior to hauling and treatment.

Chapter 5 – Groundwater Investigation

REPLACEMENT MONITORING WELL INSTALLATION

This chapter summarizes the work associated with the installation of one replacement monitoring well (MW-1R) and the sampling and analysis of two groundwater monitoring wells (MW-1R and MW-4), in accordance with the site's CAP and Independent Remedial Action Letter from Ecology (Appendix A). The purpose of this round of confirmational groundwater sampling is to demonstrate that groundwater quality immediately downgradient of the two areas of site remediation (Tax Lot 178 and former heating oil tank area) continue to remain below the site's groundwater cleanup level following remedial action.

One replacement groundwater monitoring well (MW-1R) was installed on May 1, 1999, adjacent to abandoned monitoring well MW-1 (see Figure 3). The well was installed using 6-inch-diameter hollow-stem augers by Holt Drilling of Puyallup, Washington. Immediately following its installation, the well was developed in accordance with standard Ecology guidelines and requirements. Additional details of soil boring, monitoring well installation, and construction are provided in Appendix E.

Groundwater Sampling and Analysis of Monitoring Well MW-1R. FSI purged monitoring well MW-1R on August 8, 1999. Approximately three casing volumes were removed from the well. A low-flow purge and sampling technique was used during this work (USEPA, 1997). Immediately following purging, the well was sampled and groundwater samples were submitted to North Creek Analytical in Bothell, Washington for analysis of NWTPH-D Extended. The result of groundwater sample analysis (269 µg/L) indicates that shallow groundwater immediately downgradient of the former heating oil tank area continues to remain below the site's groundwater cleanup level of 1,000 µg/L. As a result, and in accordance with Ecology's Independent Remedial Action Letter, the monitoring well was permanently abandoned per Ecology's standards (Ecology, 1990).

Groundwater Sampling and Analysis of Monitoring Well MW-4. FSI purged monitoring well MW-4 on May 5, 1999. Approximately three casing volumes were removed from the well. A low-flow purge and sampling technique was used during this work (USEPA, 1997). Immediately following purging, the well was sampled and a groundwater sample was submitted to North Creek Analytical in Bothell, Washington for analysis of NWTPH-G and BETX. The results of groundwater sample analysis (<50 µg/L for TPH-G, <0.5 µg/L for benzene, ethylbenzene, and toluene, and <1.0 µg/L for xylenes – essentially, not detected above laboratory detection limits) indicate that shallow groundwater immediately downgradient of Tax Lot 178 continues to remain below the site's groundwater cleanup level of 1,000 µg/L for TPH-G. As a result, and in accordance with Ecology's Independent Remedial Action letter, the monitoring well was permanently abandoned per Ecology's standards (Ecology, 1990).

In summary, the site's measured groundwater quality (from MW-1R and MW-4) continues to remain below the site's groundwater cleanup levels (MTCA Method A) following successful soil remediation of the site. Groundwater quality monitoring continues to indicate no significant

impacts to the site's shallow groundwater. Therefore, all monitoring wells have been abandoned and groundwater monitoring ceased; the corrective action is deemed complete.

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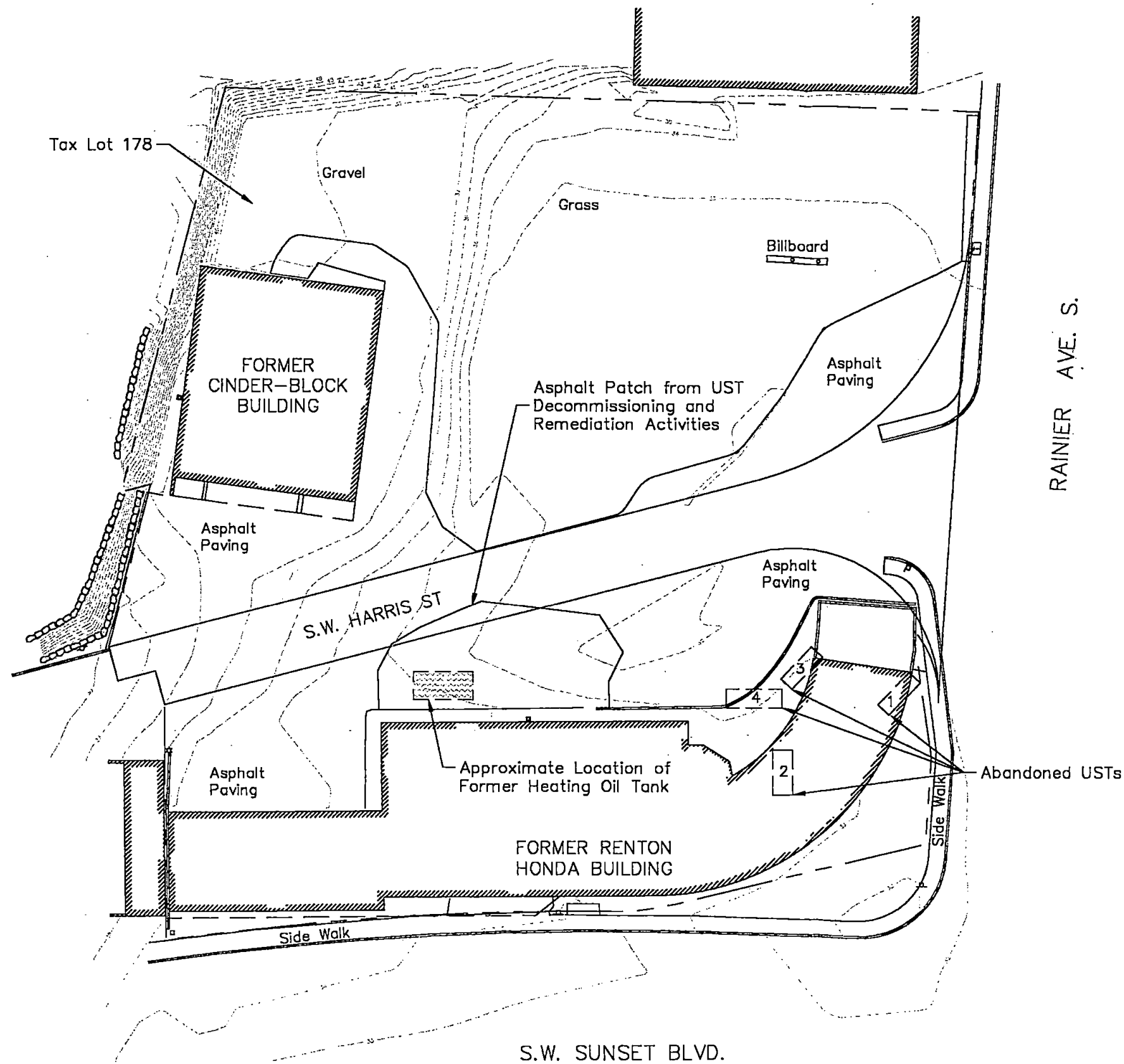
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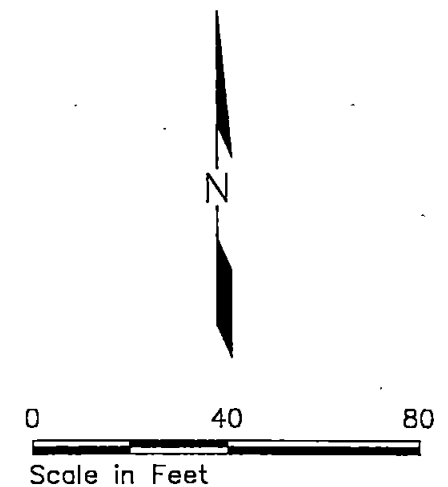
**Floyd &
Snider Inc.**

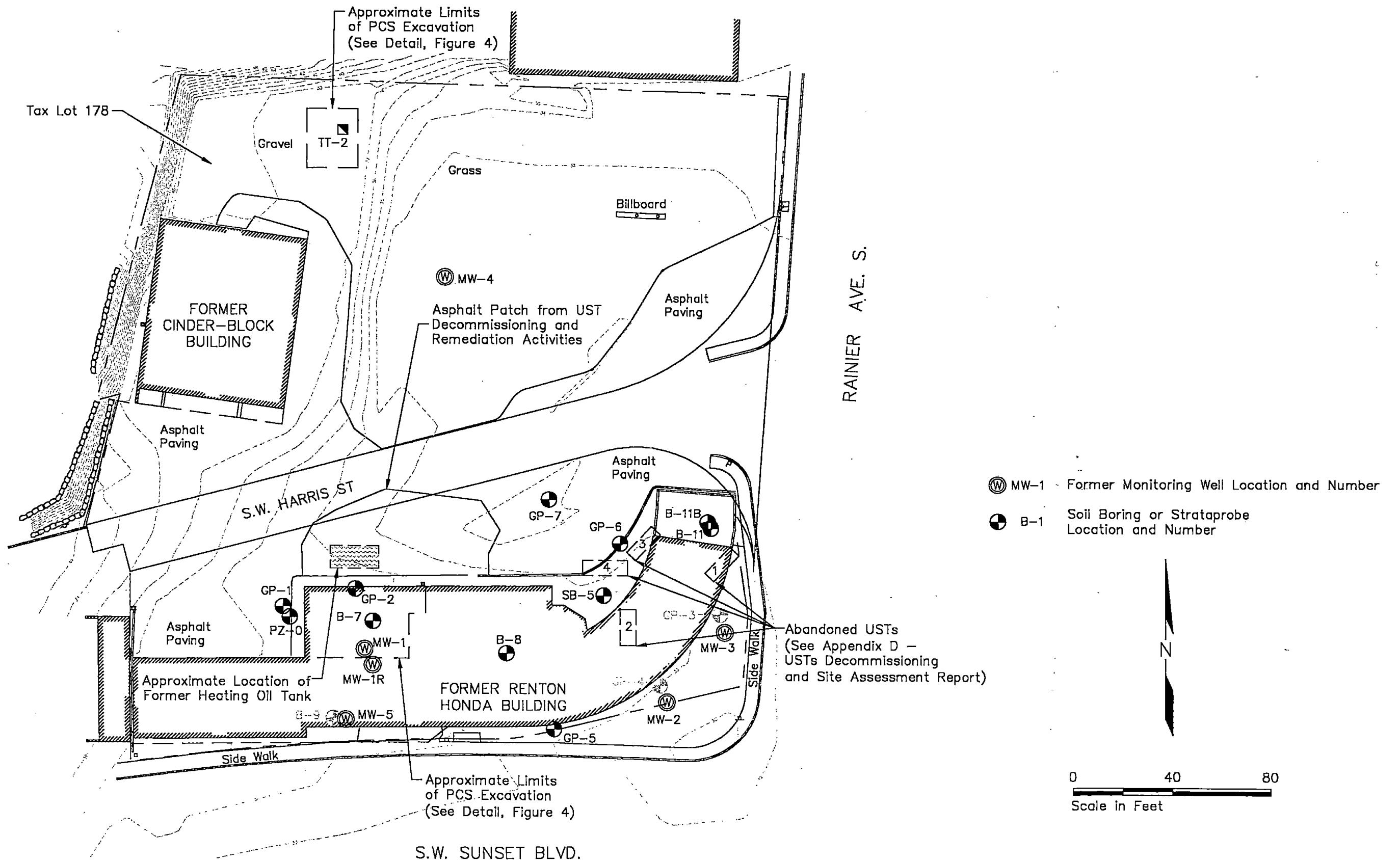
FORMER RENTON
HONDA SITE
Renton, Washington

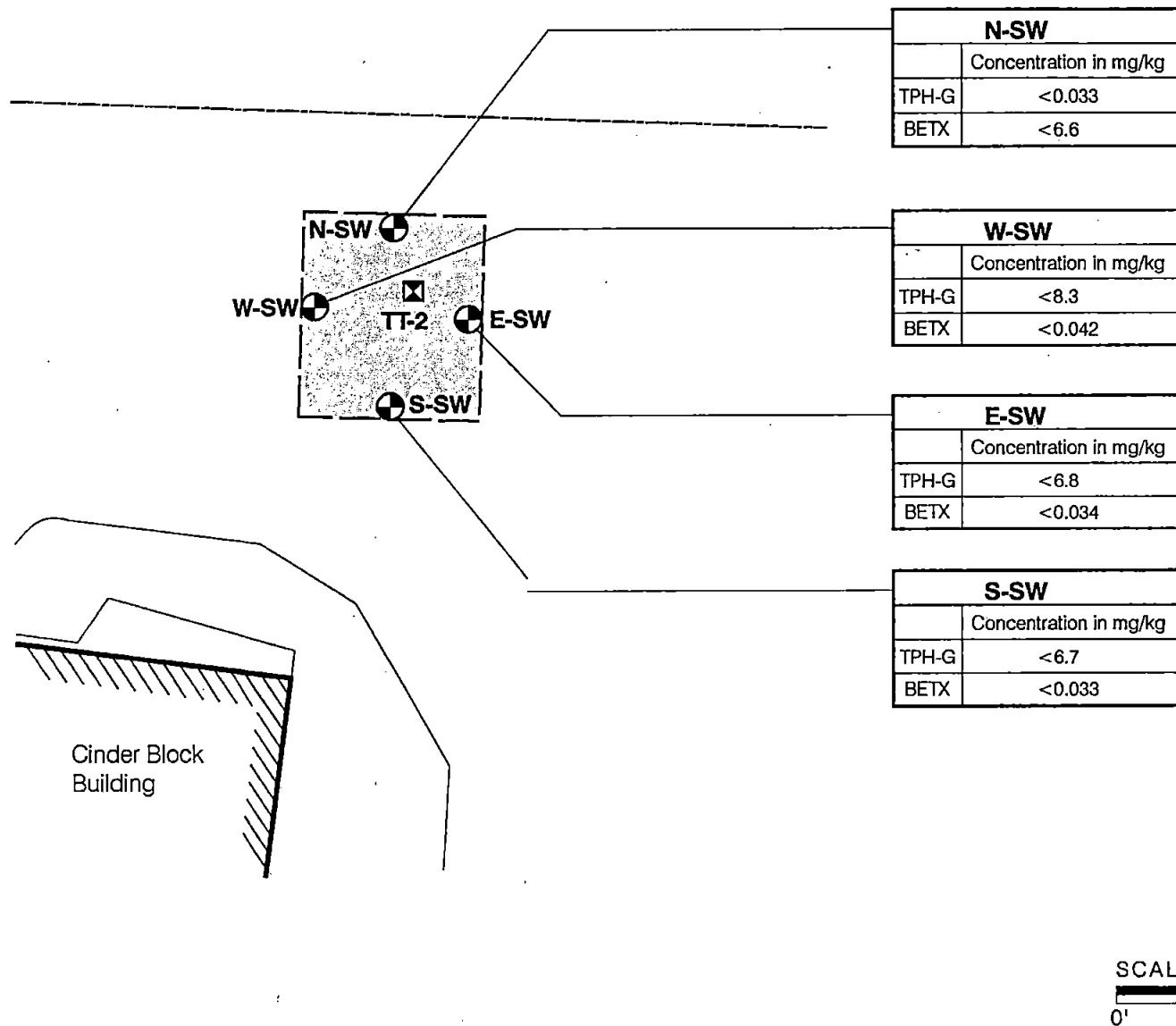
Figure 1
Site Vicinity Map



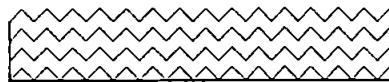
-  Approximate Location of Former 500-gal Heating Oil Tank
-  Approximate Location of Presumed Gasoline Tank Area



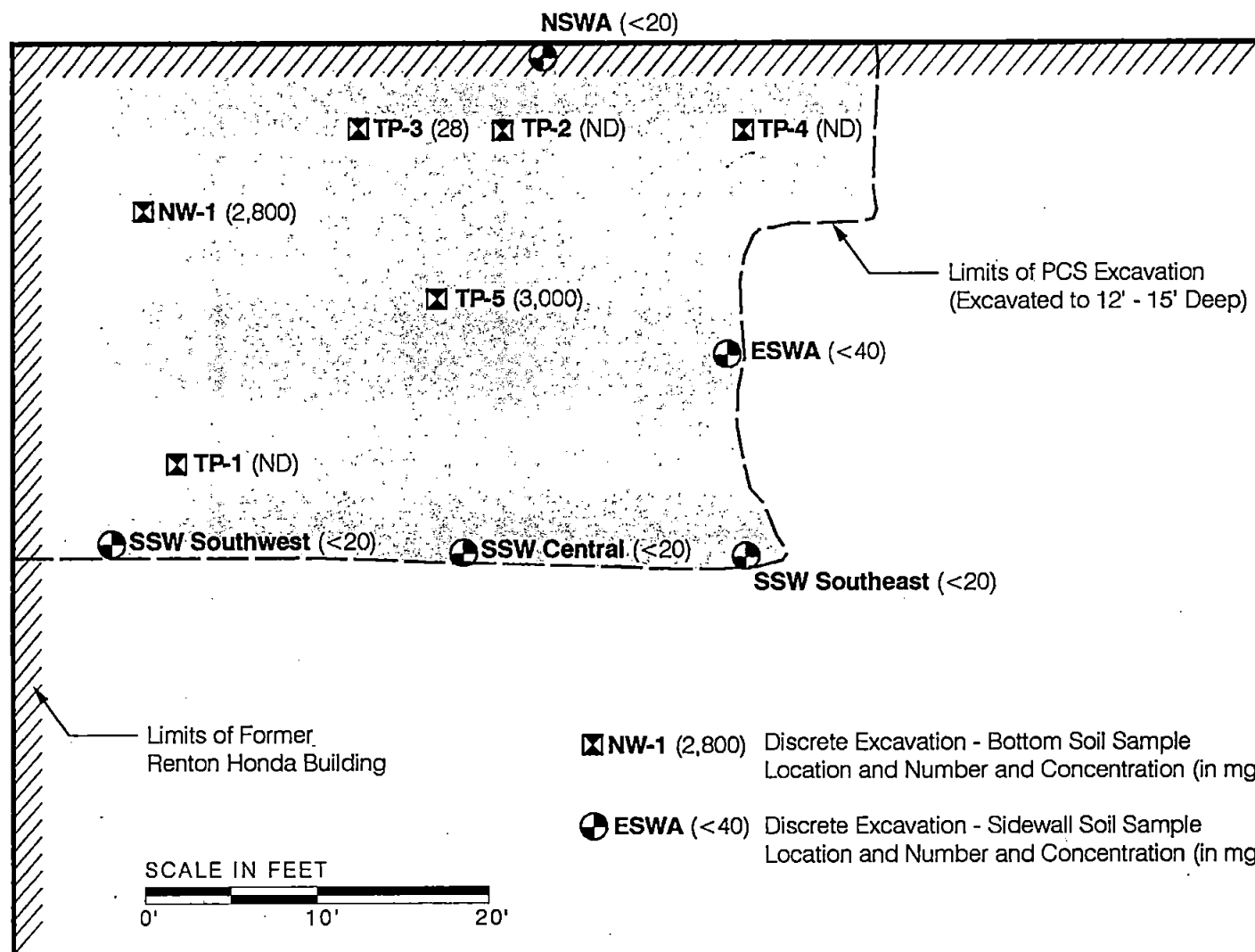




Asphalt Patch from UST
Decommissioning and
Remediation Activities



Limits of Former Heating Oil Tank



**Floyd &
Snider Inc.**

SUNSET - RAINIER
RENTON WALGREENS SITE
Renton, Washington

Figure 4b
Detail of PCS Excavation
and Soil Sampling at
Heating Oil Tank Area

Appendix A
Independent Remedial Action Letter
Department of Ecology
September 28, 1998



RECEIVED
OCT 01 1998

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

September 28, 1998

Roy Kuroiwa, P.E.
Floyd & Snider Inc.
83 South King Street, Suite 614
Seattle, WA 98104

Re: Independent Remedial Action
Renton Honda Motorcycle Site, located at 299 Rainier Avenue South in Renton,
Washington

Dear Mr. Kuroiwa:

Thank you for submitting the results of your independent remedial action for Department of Ecology (Ecology) review. Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA), Ch. 70-105D RCW.

Ecology's Toxics Cleanup Program has reviewed the following report for the former Renton Honda Motorcycle Site, located at 299 Rainier Avenue South in Renton, Washington:

Cleanup Action Plan Sunset-Rainier Renton Walgreens
Prepared for Evergreen Sunset Limited Partnership
September 4, 1998
Prepared by: Floyd & Snider Inc., Roy Kuroiwa, P.E.

Based upon the above listed information, it is Ecology's understanding that the following actions will occur:

1. Petroleum contaminated soil in the area of the heating oil tank will be excavated and removed. A soil cleanup level of 3,000 ppm will be used for this area.
2. Petroleum contaminated soil at concentrations in excess of the Method A cleanup levels (e.g., 100 mg/kg for TPH quantified for gasoline) will be removed from the northwest corner of tax lot 178.
3. Approximately three months after impacted soil from Tax Lot 178 and the former heating oil UST area has been excavated and removed from the property, ground water will be sampled from these two areas (from wells MW-1 and MW-4) and compared to Ecology's MTCA

Roy Kuroiwa, P.E.
September 28, 1998
Page 2

Method A cleanup levels. If the results of ground water monitoring continue to remain below the site's groundwater cleanup level from these wells, all site monitoring wells will be permanently abandoned per Ecology's standards (Ecology, 1990) and the corrective action will be deemed complete.

4. The results of the ground water sampling will be transmitted to Ecology for review.

It is Ecology's understanding that once the above tasks are completed, you will be asking Ecology for a no further action decision (NFA) on this property. Ecology concurs with this approach and will await the results of your remedial action. Once this information is submitted to Ecology, a decision on no further action (NFA) will be made.

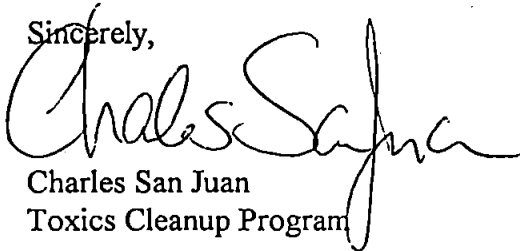
Please note that because your actions were not, or will not be conducted under a consent decree with Ecology, this letter is written pursuant to RCW 70.105D.030(1)(I) and does not constitute a settlement by the state under RCW 70.105D.040(4) and is not binding on Ecology.

The opinions presented by Ecology in this letter are made only with respect to the information provided in the reports, documents, and telephone conversations listed above. This opinion is only applicable to the specified site (or portion of the site) and may not be used to justify action at any other site (or portion of the site) nor any other properties owned or operated by Renton Honda.

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

If you have any questions, please contact Charles San Juan at (360) 407-7191 or e-mail: csan461@ecy.wa.gov

Sincerely,



Charles San Juan
Toxics Cleanup Program

Appendix B
Cleanup Action Plan
Sunset-Rainier Renton Walgreens
(Appendices not included in this copy)

Cleanup Action Plan

Sunset-Rainier Renton Walgreens

**Prepared for
Evergreen-Sunset Limited Partnership**

**Prepared by
Floyd & Snider Inc.**

September 1998

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Appendix D	Laboratory Reports, North Creek Analytical Laboratory
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1.0 INTRODUCTION

1.1 PURPOSE

This Cleanup Action Plan (CAP) presents a summary and evaluation of current subsurface environmental conditions of the proposed Sunset-Rainier Renton Walgreens site (project site), also known as the former Renton Honda Motorcycle site. The environmental data used in this report were developed from surficial soil and groundwater samples collected during previous and recent investigations by Floyd & Snider Inc. (FSI) and by others. This CAP describes the development of site-specific cleanup standards for site soil and groundwater based on the Department of Ecology's (Ecology) Model Toxics Control Act (MTCA) Cleanup Regulation, and concludes with the selection and description of appropriate remedial measures to address environmental impacts.

The cleanup action takes into account the future development plans for the project site. A new Walgreens retail drug store is planned for the property, which is nearly two acres in size. The remedial action measures proposed in this CAP are scheduled to occur concurrently with site preparation activities, including building demolition and site cutting and grading.

This document is submitted to Ecology under the Voluntary Cleanup Program (VCP). The development group, Evergreen Devco, Inc., has applied to participate in the VCP for the cleanup of this site. The proposed cleanup is intended to be a final remedy, which will protect human health and the environment. Based on the CAP, Evergreen Devco requests a "No Further Action" determination from Ecology, subject to the completion of the proposed cleanup.

1.2 CLEANUP ACTION PLAN ORGANIZATION

The CAP presents current environmental site conditions and describes selected remedial action measures as follows:

Section 2.0, SITE BACKGROUND AND PHYSICAL SETTING, which summarizes current understanding of site conditions.

Section 3.0, ENVIRONMENTAL CONDITIONS AND CLEANUP STANDARDS OF THE SITE, which describes the current environmental conditions of the site, and describes the development of appropriate cleanup levels for petroleum products.

Section 4.0, REMEDIAL ACTION OBJECTIVES AND SELECTION, which describes the selected alternative and its appropriateness for the site.

These sections are supported by tables and figures, which are presented at the end of the text. These are followed by Appendices A through E, which include supporting documentation.

2.0 SITE BACKGROUND AND PHYSICAL SETTING

2.1 SITE DESCRIPTION

The project site, known as the former Renton Honda Motorcycle site, is located at the intersection of Sunset Boulevard and Rainier Avenue South in Renton, Washington (NE ¼ of SW ¼, Township 23 North, Range 05 East, Section 18). Southwest Harris Place traverses the center of the property. The property is zoned CA – Commercial Arterial. The enclosed Site Vicinity Map, Figure 1, provides the general location of the project site.

The site consists of three separate parcels, which cover a total of approximately 68,390 square feet. The parcels include the following:

- tax lot 178, which occupies the northwestern corner of the project site and is developed with a vacant concrete, single-storied warehouse structure;
- tax lot 83, which occupies the northeastern corner of the project site and is undeveloped; and
- tax lot 79, located on the southern half of the project site and developed with two adjoining commercial buildings. Part of one of the buildings on tax lot 79 is occupied by a furniture retail store.

Figure 2, Site Features Map, shows the layout of existing site buildings as of May 1997. Additional details regarding the project site description or its surrounding area, as discussed below, is provided in the Phase 1 Environmental Site Assessment, included as Appendix A of this CAP.

2.2 SURROUNDING AREA

The project site is located in a commercial/retail area of Renton, King County, Washington. As noted in the site's Phase I Environmental Site Assessment (Giles, 1997), several environmentally notable retail or service shops are located within 500 feet of the site. These shops, along with their general location and any reported environmental impacts, are listed below. Information provided in the table below was derived from the Phase I ESA referenced above.

Site Address	Location Relative to Project Site	Comments
Unocal Gas Station 320 Rainier Avenue South	0.02 mile (~100 feet) southeast of the site	UST Decommissioning with petroleum contaminated soil. NFA status. Possibly now Al's Auto Supply.
Cook's Chevron Station 150 SW Sunset Boulevard	0.04 mile (~ 200 feet) west of the site	UST Decommissioning with petroleum contaminated soil and groundwater. Continued monitoring.
Arco Gas Station 175 Rainier Avenue South	0.07 mile (~400 feet) north of the site	Reported petroleum contaminated soil and groundwater. No information regarding cleanup status.
Fred Meyer SW Sunset Boulevard	0.04 mile (~200 feet) southwest of the site	Reported ongoing soil and groundwater remediation using soil-vapor extraction.

This CAP does not provide a complete evaluation of the potential subsurface environmental impacts or contributions that the previously mentioned sites or other non-reported sites may have had on the project site.

2.3 PROJECT SITE GEOLOGY

The project site is located in an area which straddles the course of the former Black River, which ceased to exist in 1916, when the water level in Lake Washington was lowered. Prior to that time, the Black River had been an outlet for Lake Washington. As part of major revisions to Lake Washington, the Cedar River was rerouted into Lake Washington, and the course of the Black River was abandoned and filled to the present grade. The historical path of the Black River is shown in Figure 4.

Local topography decreases in a gentle slope to the east-southeast. A steep slope of increasing topography is found toward the northwest where the former Black River probably deposited flood terraces and over bank deposits.

According to the Soil Survey of King County, Washington (1973), soil at the project site consists of Urban Land (UR) association soils and Beausite gravelly, sandy loam (BeC) with up to 6 to 15 percent slopes. The soil survey reports that soil in the project vicinity generally consists of gravelly sandy loam and gravelly loam. Permeability of the soil per the soil survey is reported to be moderately rapid (Giles, 1997).

Based on recent investigations and the 1997 geotechnical exploration report (Giles, 1997), soils on the site generally consist of the following:

- Fill ranging from 5 to 12 feet in depth, consisting of a composition of silt and sand with varying amounts of gravel, crushed concrete, and quarry spalls.
- Native silts and sands that include very soft silt to depths of approximately 13 feet bgs, overlying medium stiff to stiff silt and loose sand; which, in turn, overlies dense sand. The dense sand extends to the bottom of the deepest boring, which terminates at 26 feet bgs.
- River gravels, consisting of subsurface zones of gravel, gravelly sand and sandy gravel with gravel diameters ranging (on average) between 0.5 inch to 1.5 inch. These occur generally at depths below approximately 14 feet, and only in the southern and southeastern portions of the site (monitoring wells MW-2, MW-3, MW-5 and soil boring SB-5). The gravels appear to represent river bar deposits.

Hence the southern and southeastern portions of the subject site appear to lie upon a channel or point bar of the former Black River, while the rest of the site sits on bank and terrace deposits.

2.4 PROJECT SITE HYDROGEOLOGY

Two landform features – the adjacent uplands to the northwest of the site and the historical Black River channel that intersects the site - complicate site hydrogeology. The effect of recharge from the uplands to the northwest is strongest on tax lot 178, and is seen most clearly in monitoring well MW-4. As the hydrogeological data in Table 1 indicates, the groundwater level measurement for monitoring well MW-4 is almost 8-feet higher than the other groundwater levels. This is consistent with the upland area acting as a recharge zone to the river valley, and steep hydraulic gradients near the margins of the valley where the recharge is occurring. This is also consistent with the appearance of confined groundwater at MW-4 (groundwater was first observed during drilling at 18-ft. bgs, but rose 10-feet in elevation after well completion).

Groundwater monitoring wells MW-2, MW-3, and MW-5, and soil boring SB-5 encountered gravels indicative of river channel deposits or river point bar deposits. As shown in Figure 4, this area lies within the historical river channel of the Black River. Gradients at monitoring wells MW-2, MW-3, and MW-5 indicate a fairly flat potentiometric surface. This is consistent with moderate to high permeability deposits located at some distance from either recharge or discharge points.

Groundwater in all five wells likely represents the same groundwater unit, with the potentiometric surface highest in MW-4, which is nearest to the uplands recharge area.

2.5 GROUNDWATER FLOW DIRECTION

An interpretation of a single groundwater flow direction is difficult for the project site. The delineation of aquifer zones and interpretation of groundwater flow direction using borehole and groundwater monitoring well data is a difficult task which involves much speculation when fluvial

sediments are the predominant stratigraphic entity (Freeze and Cherry, 1987). Water elevations at the site, measured in summer of 1998, are presented in Table 1.

In fluvial deposits, there is likely a potentiometric surface wherein the water table resides within both semi-confined and unconfined zones. Vertical components of groundwater flow probably influence the horizontal flow direction of groundwater in the northern and northwestern portions of the project site (near the uplands terrace). The influence of the vertical component of flow is evidenced by higher potentiometric surface in monitoring well MW-4 and at the Fred Meyer shopping center to the southeast of the site. Horizontal components of groundwater flow probably predominate over the vertical flow component in the southern and southeastern portions of the site, especially within the historical river deposits, as evidenced by the small differences in depth to groundwater measured in monitoring wells MW-2, MW-3, and MW-5.

UNOCAL, as reported by Giles, 1997b, report varying groundwater flow directions (at a site 0.2 miles southeast of the subject site) from a northwest flow direction to a southeast flow direction.

Hence, based on the present data set, groundwater flow direction at the project site ranges from south to southwestward in the vicinity of monitoring wells MW-2 and MW-3, and east to southeastern in the vicinity of monitoring wells MW-1, MW-4, and MW-5.

3.0 ENVIRONMENTAL CONDITIONS AND CLEANUP STANDARDS

3.1 INTRODUCTION

A series of environmental activities and investigations at the project site have established a comprehensive understanding of environmental conditions of the site's subsurface soil and groundwater quality. Our presentation of site environmental conditions provided in this section is based on review of the reports and studies listed in the Reference section of this report.

A thorough review of these reports and findings has identified three distinct areas that show some level of environmental impact. These three areas are identified as:

- tax lot 178;
- former heating oil underground storage tank (UST) area; and
- the intersection at Sunset and Rainier.

Different petroleum products are present in the different areas, and there appears to be no overlap in contaminant occurrence; therefore, each area can be treated as a distinct area with respect to both contamination and cleanup.

3.2 TAX LOT 178

As shown on Figure 2, Tax Lot 178 occupies the northwest corner of the project site. The lot is approximately 16,067 square feet and contains an unoccupied cinder-block, single-story building. The topography varies greatly on the lot, with a 4 to 5 feet rise around the building. Approximately half of the lot is paved or covered by the building foundation; the remaining area is overgrown with blackberry bushes and tall grass.

SUMMARY OF ENVIRONMENTAL INVESTIGATIONS AND CONDITIONS FOR TAX LOT 178

At the time of geotechnical investigation activities performed by Giles in May 1997, residual gasoline odors were discovered in a soil boring approximately 7 to 10 feet below ground surface (bgs) on the elevated half of the site. Further investigation of the area using exploratory test trenches uncovered fill soils and debris covered by blackberry bushes. Samples from the fill within the test trenches were collected and analyzed. Only test trench TT2 was found to be contaminated. Results of chemical analysis indicated that Samples TT2-E9.5 and TT2-E10.5 (from test trench TT-2 at 9.5 and 10.5 feet bgs, respectively) contained concentrations of total petroleum hydrocarbons (TPH) quantified as gasoline of 326 mg/kg and 5,730 mg/kg, respectively. All other soil samples from Tax Lot 178 were below soil cleanup levels for TPH quantified as gasoline and for the aromatic compounds benzene, toluene, ethylbenzene, and xylenes (BETX). Data are summarized in Table 2; location of exploratory test trenches and samples are provided in Appendix A.

As a follow up to the discovery of petroleum-contaminated soil (PCS) in Tax Lot 178, soil boring SB-4 was located and advanced approximately 40 feet to the southeast (and in the

downgradient direction) of former test pit TT2 (Figure 3). Continuous soil sampling of SB-4 to a depth of 18 feet bgs (where groundwater was observed) indicated that petroleum products were not detected using either WTPH-G/BTEX or WTPH-Dx Methods. Soil Boring SB-4 was completed as Monitoring Well MW-4. The groundwater was sampled and analyzed for petroleum products using WTPH-G/BTEX and WTPH-Dx; no contaminants were detected. Groundwater monitoring results from MW-4 indicate that shallow groundwater below Tax Lot 178 has not been impacted by PCS encountered in test trench TT-2.

CLEANUP STANDARDS SELECTED FOR TAX LOT 178

Given the relatively routine nature and few hazardous substances of Tax Lot 178, Ecology's MTCA Method A soil cleanup level for TPH quantified as gasoline will be used for remediation of PCS on Tax Lot 178 (100 mg/kg for TPH quantified as gasoline in soil).

3.3 FORMER HEATING OIL UST

A 500-gallon UST was used historically to supply heating oil for the former Renton Honda Motorcycle building, as shown in Figure 2. In October 1996, the owners of the property elected to decommission the UST. During UST decommissioning, PCS was observed and over 700 tons of PCS, contaminated with diesel-range hydrocarbons (Webster's, 1997), was removed from the property. Due to the presence of the former Renton Honda Motorcycle building, the PCS excavation was restricted to the edge of the building, and according to Webster, additional PCS was left in place under the northwestern corner of the building.

SUMMARY OF ENVIRONMENTAL INVESTIGATIONS AND CONDITIONS FOR FORMER HEATING OIL UST AREA

Subsequent subsurface soil and groundwater investigations by Giles, Hart Crowser, and FSI substantiate the presence of PCS under the northwestern corner of the building. Data are summarized in Tables 2 through 4. Based on these recent investigations, the assessment of existing soil and groundwater impacts in the area of the former heating oil UST is described below.

Elevated concentrations of heating oil exist in soil under the northwest corner of the building, ranging from 2 to 15 feet bgs. The vertical extent of heating oil appears to have been limited by the presence of shallow groundwater occurrences at 12 to 15 feet bgs. Laterally, heating oil in soil appears to be limited to an area of approximately 20 feet by 100 feet in size (as illustrated by the dotted line on Figure 3). The lateral extent of heating oil can be defined as follows:

- to the north by the removal and confirmation sampling of petroleum-contaminated soil to the water table associated with the former heating oil underground storage tank (UST);
- to the south by soil and water samples from Monitoring Well MW-1, which did not contain significant concentrations of heating oil;
- to the west by GP-1 which contained only moderate concentrations of heating oil in soil and groundwater; and
- to the east by B-8 which did not appear to contain any heating oil in soil or groundwater.

Petroleum products in water from the former heating oil UST area were detected at high concentrations only in water samples collected from Strataprobe GP-2 and Boring B-7 at 169,000 µg/L and 250,000 µg/L, respectively. These samples contained large amounts of suspended and entrained solids; therefore, the "water" concentrations represent both water and soil contamination and should be considered to reflect a qualitative identification of heating oil at the water table. These water concentrations may be indicative of a continued free product source in soil at this location. However, neither the free product source nor the affected groundwater appears to be migrating from the impacted area, as evidenced in the downgradient sampling locations of MW-1, B-9 and GP-5. The very limited extent of the heating oil contamination is explained by low mobility of diesel-range products in groundwater, the fine-grained and tight stratigraphy around the tank area, and flat potentiometric surface.

CLEANUP STANDARDS SELECTED FOR FORMER HEATING OIL UST AREA

In January 1997, Ecology published the Interim TPH Policy to clarify the methodology for setting site- and product-specific cleanup levels for petroleum products. The policy clarifies how one should handle both risk due to ingestion, and protection of groundwater from residual soil contamination. In October of that year, Ecology worked with the State's Pollution Liability Insurance Agency (PLIA) to develop a calculated soil cleanup level for residential sites contaminated with heating oil. Soil cleanup levels were adopted for heating oil or diesel fuel of 3,000 mg/kg, when the following conditions exist:

- Pathways of concern are limited to direct human health contact and soil-to-potable groundwater. For this site, future land use is a Walgreens store which will virtually block human contact, leaving soil to groundwater as the most conservative pathway.
- Ecological protection or vapor pathways are not an issue and are not concerns for this site. Direct exposure to ecological receptors does not occur, and existing data indicate that there are few volatile hydrocarbons (less than EC 12) remaining.
- Data exist to show that the petroleum product on site is heating oil (preference is given to surrogate fractionation data, but other TPH data showing the product type is generally acceptable). For this site, WTPH-Dx data confirm that the contamination around the heating oil UST is heating oil.

The selected soil cleanup level for the former heating oil UST area is 3,000 mg/kg. This concentration is expected to be protective of both human health and groundwater quality. Groundwater quality will be measured by sampling monitoring wells MW-1 and MW-5 after

remediation, to confirm that TPH concentrations in those wells are at or below Ecology's MTCA Method A groundwater cleanup level of 1,000 µg/L.

3.4 INTERSECTION AT SUNSET AND RAINIER

The area identified as the Intersection at Sunset Rainier essentially includes the southeastern corner of the project site. As shown on Figure 3, this area is bounded to the north by Soil Borings B-11 and B-11B, to the south by Sunset Boulevard, to the east by Rainier Avenue, and to the west by Monitoring Well MW-5 and the property boundary.

SUMMARY OF ENVIRONMENTAL INVESTIGATIONS AND CONDITIONS FOR THE INTERSECTION AT SUNSET AND RAINIER

Review of historical aerial photographs and tax assessor records indicate the possible existence of a gas sales and service station on the site at the intersection of Sunset and Rainier during the 1940's (Giles, 1997). Based on the aerial photos and tax assessor records, the approximate location of the presumed gasoline USTs would be northwest of the Sunset and Rainier Intersection as shown on Figure 3. With this information, a series of subsurface investigations were performed to determine potential impacts, if any, from the presumed gas station. A summary of past subsurface investigations reveals the following conditions of soil and groundwater quality near the southeast corner of the project site; results are summarized in Tables 2 through 4.

Subsurface soil quality. Subsurface soil impacts were not detected (depths ranging from 0 to 12 feet) in the area of suspected gasoline USTs and product piping, as defined by Strataprobe and Soil Borings GP-6, GP-7, and SB-5. The area of subsurface soil impacted with gasoline-range hydrocarbons is limited to the eastern side of the subject property defined by monitoring wells MW-3, MW-4, and MW-5, Strataprobos GP-3, GP-4, and GP-5, and Soil Borings B-8, B-9, B-11, and B-11B (Figure 3). Vertically, the depth of gasoline-affected soil appears to be confined within a thin wedge of soil located 12 to 15 feet bgs, indicative of gasoline-range hydrocarbons migrating in groundwater. The concentrations of gasoline-range hydrocarbons detected within this area are low to moderate, ranging from 101 to 810 mg/kg. However, the light-end constituents (benzene, toluene, ethylbenzene, and xylenes - BETX) were either not detected or just slightly greater than the detection limit in all of the soil samples (Tables 2 and 3). These concentrations are consistent with the material being old, heavily weathered aged gasoline.

Groundwater quality. Groundwater impacts were not detected in the immediate vicinity of suspected on-site gasoline USTs and product piping during previous investigations, as defined by groundwater samples collected from Strataprobe GP-6, and Soil Boring SB-5. However, during the investigation, gasoline-impacted groundwater was detected on site, along the intersection of Sunset and Rainier. During the first stages of this site investigation, perched water within the southeastern corner of the project site was sampled using field screening techniques. Results of field screening indicated the presence of gasoline-range hydrocarbons in perched water removed from Strataprobos GP-3 (1,250 µg/L), GP-4 (475 µg/L), GP-5 (182 µg/L) and in Soil Boring B-9 (29,100 µg/L). In all cases, the extracted water was reported to be high in turbidity. Although the water samples from each boring or Strataprobe confirm the

presence of gasoline-range hydrocarbons in groundwater, the data is qualitative. The method of sample collection—directly from the center of a hollow stem auger or Strataprobe—is a screening method only. This method tends to overestimate petroleum concentrations by including fine soil particles in the water sample. Therefore, the samples are not considered representative of site groundwater quality and have been replaced with samples collected from monitoring wells constructed per Ecology standards (Ecology, 1990) and located within the immediate vicinity of the study area. The replacement wells, identified as MW-2, MW-3, and MW-5, are located within the area of highest gasoline-range hydrocarbon detections, in both soil and groundwater, and screened across the water table (Appendix A includes soil boring and well construction logs).

Concentrations of gasoline-range hydrocarbons in groundwater from wells MW-2, MW-3, and MW-5 were 592 µg/L, 333 µg/L, and 137 µg/L, respectively. These concentrations are below Ecology's MTCA Method A groundwater cleanup level of 1,000 ug/L. Concentrations of BETX and total lead were also either not detected or were detected at concentrations slightly greater than the laboratory detection limit. Correspondingly, turbidity results for all three wells ranged from 2.9 to 8.3 NTU units. A summary of groundwater analytical results is provided in Table 4.

Conclusions. In addition to the assessment of soil and groundwater quality, one of the objectives of the subsurface investigation on the southeastern corner of the project site was to evaluate the possibility of locating an on-site source of gasoline contamination to soil and groundwater. Given the quantity of well distributed soil borings, Strataprobos, and monitoring wells in the southeastern corner of the project site (within the presumed location of the gasoline USTs) and sampling results for soil and groundwater, the following may be concluded:

- There are no known or discoverable historical on-site sources or releases of gasoline in the southeastern corner of the site's soil or shallow groundwater. Gasoline-range hydrocarbons were not detected in soil between the surface and at approximately 14 to 15 feet bgs (depth of site groundwater), and no gasoline storage tanks or product piping were found.
- The profile of gasoline-range hydrocarbons and its related compounds detected in soil and groundwater appear to be heavier-ranged hydrocarbons, implying that the source of the gasoline is most likely historical.
- The gasoline occurs in a very narrow lens within the saturated zone implying transport in shallow groundwater to the area.
- Measured impacts of gasoline to site soil and groundwater appear to be from off-site sources, likely arriving onto the site in the shallow groundwater in the dissolved phase. The conceptual model of groundwater flow and migration, through the intersection of Sunset and Rainier, is consistent with observations made during soil boring advancement and well installation (presence of clean sands, gravel and cobbles). As shown in Figure 4, the former Black River channel, now filled with over 5 to 10 feet of soil, is mapped as running northeast to southwest, possibly intersecting other nearby sources of petroleum hydrocarbons. This channel appears to be providing a preferred path for off-site contaminants to reach the site.
- Given the weathered condition and age of the gasoline-range hydrocarbons detected, it is not likely that the concentrations measured in soil and groundwater will increase with time. More likely, the concentrations will continue to decrease due to

natural attenuation. Additionally, no organic vapor concentrations were measured in near-surface soils (ranging between 0 and 10 feet bgs) during soil boring advancement and sampling; therefore, no vapor pathways or exposure to surface receptors are anticipated on the project site.

CLEANUP STANDARDS SELECTED FOR INTERSECTION AT SUNSET AND RAINIER

The previous section has established that the probable source of gasoline-range hydrocarbons present on the southeastern corner of the project site is off-site, and that the source is likely old given the heavy weathering of the gasoline. As a result, there is no basis for establishing a site cleanup level for gasoline or its constituents in soil or groundwater. However, the highest levels of gasoline-range hydrocarbons detected during the FSI, August 1998 investigation were analyzed using *Ecology's Interim Interpretive and Policy Statement – Cleanup of TPH (Interim Policy)* method, calculated for commercial scenarios, to determine the potential risks associated with residual gasoline-range hydrocarbons in soil. In this case, soil samples SB-2(S-C) and SB-3(S-4) with concentrations of TPH quantified as gasoline of 406 mg/kg and 238 mg/kg, respectively, were analyzed by the volatile extractable hydrocarbons (VPH) method and evaluated for potential risk associated with human contact with soil and soil-to-groundwater pathways. Copies of laboratory results are provided as Appendix B; calculations for risk associated with human contact (Ingestion Risk Calculation) and soil-to-groundwater (Leaching Model for Residual Soil Conditions) pathways are provided as Appendix C.

Results for the Ingestion Risk Calculation indicate a hazard quotient for the total toxicity at each location that is well below 1 for each fractionation less than 1, which satisfies the MTCA cleanup criteria. Results for the Leaching Model for Residual Soil Conditions indicate a calculated groundwater concentration less than a target concentration of 1,000 µg/L. This assumes a total organic carbon (TOC) concentration of 0.2 percent. Site samples analyzed for TOC ranged from 0.04 to 1.5 percent (the average equal to 0.7 percent).

Ecology's MTCA Method A groundwater cleanup level for gasoline-range hydrocarbons in non-potable groundwater is 1,000 µg/L. The groundwater quality results as measured from monitoring wells located within the Sunset and Rainier intersection (MW-2, MW-3, and MW-5) are less than this cleanup level. These cleanup level analyses were performed for informational purposes only. As stated above, the gasoline contamination in the right-of-way is from an off-site source such that no on-site cleanup level is applicable.

4.0 REMEDIAL ACTION OBJECTIVES AND SELECTION

The selection of an appropriate remedy to address each site environmental impact identified on the future Sunset-Rainier Renton Walgreens site was based principally on three factors:

- the known environmental impacts to the site, as they relate to soil, groundwater, surface water and air, and their associated risk to human health and the environment;
- the appropriateness and practicability of the selected remedy on the project site as it relates to future development; and
- the overall cleanup costs relative to reduction in site risk.

A conceptual identification and evaluation of potential remedial measures for the site was performed. Based on the evaluation, this CAP selects and later evaluates the remedial measures that are considered proven technology, have reasonable costs, and provide permanent solutions to eliminating or controlling risk associated with these impacts. More specifically, the remedial measures have been selected to meet the following objectives:

- Eliminate future risks associated with petroleum products identified in the site's soil and groundwater by remediating the site to the appropriate cleanup level based on Ecology's MTCA regulations; and
- Provide remedial measures that facilitate redevelopment of the property without introducing excessive construction costs or future use restrictions.

The development of selected remedial measures for each distinct subject area is provided below.

TAX LOT 178

As detailed in the above section, field screening and soil sampling efforts from exploratory test pits on Tax Lot 178 has identified a limited quantity of PCS containing TPH quantified as gasoline. The detected level is greater than the MTCA Method A cleanup level of 100 mg/kg in the location of exploratory test trench TT-2 (Figure 3). Field observations and soil sampling and analysis from exploratory test trenches within the area have characterized the PCS as surficial fill material, containing crushed concrete and asphalt debris, and that the quantity of PCS is limited to a small quantity around test trench TT-2.

As a result, the preferred remedial alternative for PCS identified within Tax Lot 178 is excavation and off-site disposal or treatment of the impacted soil followed by confirmation sampling of the excavation sidewalls and bottoms. At least one composite soil sample will be collected and analyzed for each sidewall, for every 20 linear feet. Additionally, a minimum of two discrete soil samples will be collected for every 400 square feet (20 feet by 20 feet square) of excavation bottom. Each confirmation soil sample will be analyzed for TPH quantified as gasoline and BETX and compared to Ecology's MTCA Method A soil cleanup levels. Excavation and confirmation sampling will continue until all sidewall and bottom sample results are within

cleanup levels. The excavation will ultimately be backfilled with a clean, imported backfill material in accordance with site development plans and specifications.

Groundwater from Monitoring Well MW-4 will be resampled and analyzed as part of site confirmation sampling activities, described below.

FORMER HEATING OIL UST

Previous soil sample collection and chemical analysis within the former heating oil UST area indicates elevated levels of heating oil within the subsurface soil, as defined in the section above. However, detected concentrations in soil are less than the site's soil cleanup level of 3,000 mg/kg. As a result, it is not anticipated that any further site investigation or action will be necessary, based on soil concentrations within the former heating oil UST area.

Water sampling and analysis results from soil borings and Strataprobes within the former heating oil UST area (Figure 3, GP-1, GP-2, and B-7 water concentrations) indicate that a free product source of heating oil may persist just under the northwest corner of the building. The selected remedial approach is excavation and removal of this source to an off-site area. The remedial action will result in the excavation and off-site disposal/treatment of approximately 350 cubic yards of soil, and will likely be performed as part of site demolition and preparation. At the time of soil excavation, visual indicators and sidewall/bottom confirmation sampling will ultimately direct and dictate the size of the excavation. Sidewall and bottom confirmation samples will be collected at the same frequency as specified for Tax Lot 178 PCS excavation.

Three months following soil excavation and removal, existing groundwater monitoring wells MW-1 and MW-5 will be resampled and groundwater quality results compared to Ecology's MTCA Method A cleanup level of 1,000 ug/L. If the results of groundwater quality monitoring continue to remain below the cleanup level, the wells will be abandoned in accordance with Ecology's standards (Ecology, 1990).

INTERSECTION AT SUNSET AND RAINIER

Since a source of gasoline was not found onsite, no remedial activity will be performed for the low levels of gasoline detected in this area. Groundwater concentrations are already well below the cleanup standard of 1,000 µg/L, and will likely decrease further over time as natural attenuation of the aged gasoline continues. The only activity planned for this area is a final round of groundwater sampling as described in the next section.

FINAL GROUNDWATER MONITORING

A final round of groundwater sampling in all six monitoring wells will be performed approximately three months after remedial activities and site preparation for development (site cutting, grading, and filling) are completed. Each groundwater sample will be analyzed by methods NWTPH-Gx, NWTPH-Dx, BETX, total lead, and turbidity. The groundwater results and a summary of the results of the remedial action will be submitted in a letter report to Ecology.

If the results of groundwater monitoring continue to remain below Ecology's MTCA Method A groundwater cleanup level, the monitoring wells will be permanently abandoned per Ecology's requirements (Ecology, 1990) and the corrective action will be deemed complete. Should analytical results exceed the applicable groundwater cleanup level, an addendum to this CAP addressing the exceedance will be submitted to Ecology.

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Table 1
Groundwater Level Measurements
Sunset-Rainier Renton Walgreens

	MW-1	MW-2	MW-3	MW-4	MW-5
Date of Installation	8/3/98	7/28/98	7/29/98	7/28/98	8/16/98
Depth to Groundwater in feet (ATI)	6.50	14.00	12.50	18.00	15.50
Stratigraphy of Water Occurance	silt	gravel	gravel	lg. Sand	med. sand
Date of Groundwater Sampling	8/5/98	7/30/98	7/30/98	7/30/98	8/17/98
Depth to Groundwater in feet (ATS)	8.15	14.41	14.05	6.38	16.56
Elevation of Monitoring Well	26.99	33.41	32.90	35.62	--
Elevation of Groundwater	18.84	19.00	18.85	29.23	--

Note: The distrubition of alluvial sediments and terraces indicates that the wells are installed in fluvial sediments of the former Black River.

ATI = At Time of Installation

ATS = At Time of Sampling

Table 2
Chemical Analytical Results for Strataprobe Soil Samples
Sunset-Ranier Renton Walgreens

Sample ID	Sample Depth in Feet	Date	Field Vapor Reading	Concentration in mg/kg							
				NWTPH-HCID	NWTPH-G	NWTPH-D	NWTPH-O	B	T	E	X
GP-1 (S-1)	2.0 to 5.0	12/10/97	<1	Diesel/Oil	-	159	1660	-	-	-	-
GP-1 (S-2)	8.0 to 10.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-1 (S-3)	12.0 to 15.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-2 (S-1)	2.0 to 5.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-2 (S-2)	8.0 to 9.0	12/10/97	>20	-	112	2630	-	0.05U	0.05U	0.05U	0.1U
GP-2 (S-3)	12.0 to 15.0	12/10/97	7.0	-	152	628	-	0.2U	0.2U	0.2U	0.2U
GP-2 (S-4)	16.0 to 17.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-3 (S-1)	2.0 to 5.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-3 (S-2)	8.0 to 10.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-3 (S-3)	12.0 to 15.0	12/10/97	3.0	-	655	36.6	-	0.5 U	0.5 U	0.5 U	1.0U
GP-4 (S-1)	2.0 to 5.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-4 (S-2)	8.0 to 10.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-4 (S-3)	12.0 to 15.0	12/10/97	5.0	-	327	22	-	0.25U	0.25U	0.25U	0.5U
GP-5 (S-1)	2.0 to 5.0	12/10/97	<1	-	-	-	-	-	-	-	-
GP-5 (S-2)	8.0 to 10.0	12/10/97	1.0	ND	102	32.5	-	0.05U	0.05U	0.05U	0.1U
GP-5 (S-3)	12.0 to 15.0	12/10/97	10.0	-	597	109	-	0.5U	0.5U	0.5U	1.0U
GP-6 (S-1)	2.0 to 5.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-6 (S-2)	8.0 to 10.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-6 (S-3)	12.0 to 15.0	12/10/97	<1	ND	-	-	-	-	-	-	-
GP-7 (S-1)	12.0 to 15.0	12/10/97	<1	ND	-	-	-	-	-	-	-
TT1-S8	8.0	6/25/97	0	ND	10U	10U	-	0.05U	0.05U	0.05U	0.05U
TT2-E9.5	9.5	6/25/97	-	Gas	326	-	-	0.05U	0.08	0.75	2.10
T12-E10.5	10.5	6/25/97	30	Gas	5,730	-	-	0.77	8.10	26.00	82.30
TT5-W6	6.0	6/25/97	180	ND	-	-	-	-	-	-	-
TT6-B10	-	6/25/97	-	ND	-	-	-	-	-	-	-
TT7	-	6/25/97	-	ND	-	-	-	-	-	-	-
TP1-6	6.0	6/25/97	-	ND	-	-	-	-	-	-	-
B7-S2	2.5 to 4.0	6/25/97	-	ND	-	-	-	-	-	-	-
B7-S5	10.0 to 11.5	6/25/97	-	Diesel	-	63	-	-	-	-	-
B7-S6	12.5 to 14.0	6/25/97	-	ND	-	-	-	-	-	-	-
B8-S3	7.5 to 9.0	6/25/97	-	ND	-	-	-	-	-	-	-
B8-S4	10.0 to 11.5	6/25/97	-	ND	-	-	-	-	-	-	-
B8-S5	12.5 to 14.0	6/25/97	-	ND	-	-	-	-	-	-	-
B8-S6	15.0 to 16.5	6/25/97	-	Gas	68	-	-	0.05U	0.05U	0.05U	0.36
B8-S7	17.5 to 19.0	6/25/97	-	Gas	613	-	-	0.05U	0.26	0.05U	6.33

Table 2
Chemical Analytical Results for Strataprobe Soil Samples
Sunset-Ranier Renton Walgreens

Sample ID	Sample Depth in Feet	Date	Field Vapor Reading	Concentration in mg/kg							
				NWTPH-HCID	NWTPH-G	NWTPH-D	NWTPH-O	B	T	E	X
B9-S4	10.0 to 11.5	6/26/97	-	ND	-	-	-	-	-	-	-
B9-S5	12.5 to 14.0	6/26/97	-	ND	-	-	-	-	-	-	-
B9-S6	15.0 to 16.5	6/26/97	-	ND	-	-	-	-	-	-	-
B9-S7	17.5 to 19.0	6/26/97	-	Gas	810	-	-	0.05U	0.05U	0.05U	2.41
B11-S2	5.0 to 6.5	6/26/97	-	ND	10U	10U	-	0.05U	0.05U	0.05U	0.05U
B11-S3	7.5 to 9.0	6/26/97	-	ND	-	-	-	-	-	-	-
B11-S4	10.0 to 11.5	6/26/97	-	ND	-	-	-	-	-	-	-
B11-S5	12.5 to 14.0	6/26/97	-	ND	-	-	-	-	-	-	-
B11-S6	15.0 to 16.5	6/26/97	-	Gas	84	-	-	0.05U	0.05U	0.05U	0.26
B11B-S3	10.0 to 11.5	6/26/97	-	ND	-	-	-	-	-	-	-
B11B-S4	12.5 to 14.0	6/26/97	-	ND	-	-	-	-	-	-	-
B11B-S5	15.0 to 16.5	6/26/97	-	Gas	169	-	-	0.05U	0.05U	0.05U	0.32
B11B-S6	17.5 to 19.0	6/26/97	-	ND	-	-	-	-	-	-	-
B14-S1	5.0 to 6.5	6/26/97	-	ND	-	-	-	-	-	-	-
B14-S2	7.5 to 9.0	6/26/97	-	ND	-	-	-	-	-	-	-
B14-S3	10.0 to 11.5	6/26/97	-	ND	-	-	-	-	-	-	-
B14-S4	12.5 to 14.0	6/26/97	-	ND	-	-	-	-	-	-	-
MTCA Method A Cleanup Levels					100	200	200	0.5	40	20	20

Notes:

MTCA = State of Washington Model Toxics Control Act

NWTPH-HCID = Total Petroleum Hydrocarbons Screen Method

NWTPH-G = Total Petroleum Hydrocarbons in the Gasoline Range

NWTPH-D = Total Petroleum Hydrocarbons in the Diesel Range

NWTPH-O = Total Petroleum Hydrocarbons in the Heavy Oil Range

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total Xylenes

ND = Gasoline, Diesel, and Oil not detected at laboratory detection limit unless indicated.

- = Not analyzed.

Table 3
Chemical Analytical Results for Soil Boring Samples
Sunset-Ranier Renton Walgreens

Sample ID	Sample Depth in Feet	Date	Field Vapor Reading	Soil Concentration in mg/kg							
				NWTPH-HCID	NWTPH-G	NWTPH-D	NWTPH-O	B	T	E	X
SB-1 (S-1)	3.0 to 4.5	7/29/98	0	ND	-	-	-	-	-	-	-
SB-1 (S-2)	5.0 to 6.5	7/29/98	0	ND	-	-	-	-	-	-	-
SB-1 (S-3)	6.5 to 8.0	7/29/98	2.9	ND	-	-	-	-	-	-	-
SB-1 (S-4)	8.5 to 10.0	7/29/98	0	ND	-	-	-	-	-	-	-
SB-1 (S-5)	10.0 to 11.5	7/29/98	0	ND	-	-	-	-	-	-	-
SB-2 (S-1)	5.0 to 6.5	7/28/98	0	ND	-	-	-	-	-	-	-
SB-2 (S-2)	10.0 to 11.5	7/28/98	1.1	ND	-	-	-	-	-	-	-
SB-2 (S-A)	11.5 to 13.0	7/28/98	29.4	Gas	138	-	-	ND	ND	ND	ND
SB-2 (S-C)	13.5	7/28/98	2.4	Gas/Kerosene	406	-	-	ND	ND	ND	ND
SB-3 (S-2)	7.5 to 9.0	7/29/98	?	ND	-	-	-	-	-	-	-
SB-3 (S-3)	10.0 to 11.5	7/29/98	?	ND	-	-	-	-	-	-	-
SB-3 (S-4)	12.0 to 13.5	7/29/98	69.4	Kerosene/diesel	238	56.2	34.9	ND	ND	ND	ND
SB-4 (S-2)	10.0 to 11.5	7/28/98	0	ND	-	-	-	-	-	-	-
SB-4 (S-3)	12.5 to 13.5	7/28/98	0	ND	-	-	-	-	-	-	-
SB-4 (S-4)	16.0 to 17.5	7/28/98	0	ND	-	-	-	-	-	-	-
SB-5 (S-2)	10.0 to 11.5	7/29/98	0	ND	-	-	-	-	-	-	-
SB-5 (S-3)	12.0 To 13.5	7/29/98	0	ND	-	-	-	-	-	-	-
SB-5 (S-4)	14.0 to 15.0	7/29/98	0	ND	-	-	-	-	-	-	-
MW-5 (S-5)	12.5 to 14.0	8/16/98	0	-	ND	-	-	ND	ND	ND	ND
MW-5 (S-6)	17.0 to 18.5	8/16/98	108	-	101	-	-	ND	ND	ND	ND
MTCA Method A Cleanup Levels					100	200	200	0.5	40	20	20

Notes:

MTCA = State of Washington Model Toxics Control Act	B = Benzene
NWTPH-HCID = Total Petroleum Hydrocarbons Screen Method	T = Toluene
NWTPH-Gx = Total Petroleum Hydrocarbons in the Gasoline Range	E = Ethylbenzene
NWTPH-Dx = Total Petroleum Hydrocarbons in the Diesel Range	X = Total Xylenes
NWTPH-O = Total Petroleum Hydrocarbons in the Heavy Oil Range	ND = Gasoline, Diesel, and Oil not detected at laboratory detection limit unless indicated.
	- = Not analyzed.

Table 4
Chemical Analytical Results for Groundwater Samples
Sunset-Ranier Renton Walgreens

Sample ID	Date Sampled	Sample Depth in Feet	Concentration in µg/L					
			NWTPH-G	NWTPH-D	B	T	E	X
GP-1	12/11/97	17.5	50.0 U	2,220	0.5 U	2.99	0.5 U	1.0 U
GP-2	12/11/97	17.0	8,020	169,000	0.5 U	0.5 U	0.5 U	1.0 U
GP-3	12/10/97	19.0	1,250	1,510	0.5 U	0.5 U	0.5 U	1.0 U
GP-4	12/10/97	19.0	475	396	0.5 U	0.5 U	0.5 U	1.0 U
GP-5	12/10/97	19.0	182	250 U	0.5 U	0.5 U	0.5 U	1.0 U
GP-6	12/10/97	19.0	50.0 U	250 U	0.5 U	0.618	0.5 U	1.72
B-9	6/26/97	16.0	29,100	NA	4.19	65	10.71	681.8
MW-1	8/5/98	16.2	50.0 U	298	0.5 U	0.5 U	0.5 U	1.0 U
MW-2	7/30/98	14.4	592	250 U	0.5 U	0.5 U	0.6 U	4.5 U
MW-3	7/30/98	14.0	333	269	0.5 U	0.5 U	0.5 U	2.5 U
MW-4	7/30/98	6.5	50.0 U	250 U	0.5 U	0.5 U	0.5 U	1.0 U
MW-5	8/17/98	16.5	137	NA	1.2	1.35	0.5 U	1.0 U
MTCA Method A Cleanup Levels			1,000	1,000	5	40	30	20

Notes:

MTCA = State of Washington Model Toxics Control Act

NWTPH-G = Total Petroleum Hydrocarbons in the Gasoline-Range

NWTPH-D = Total Petroleum Hydrocarbons in the Diesel-Range

B = Benzene

T = Toluene

E = Ethylbenzene

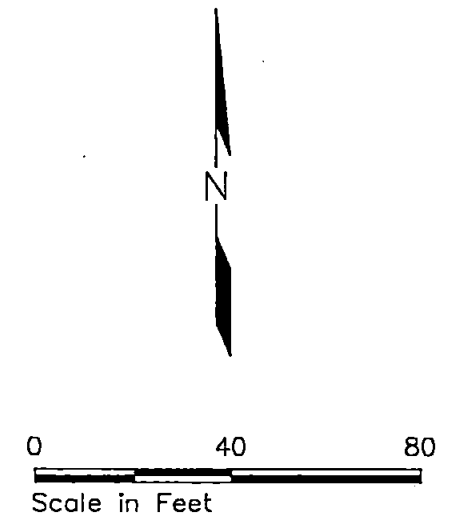
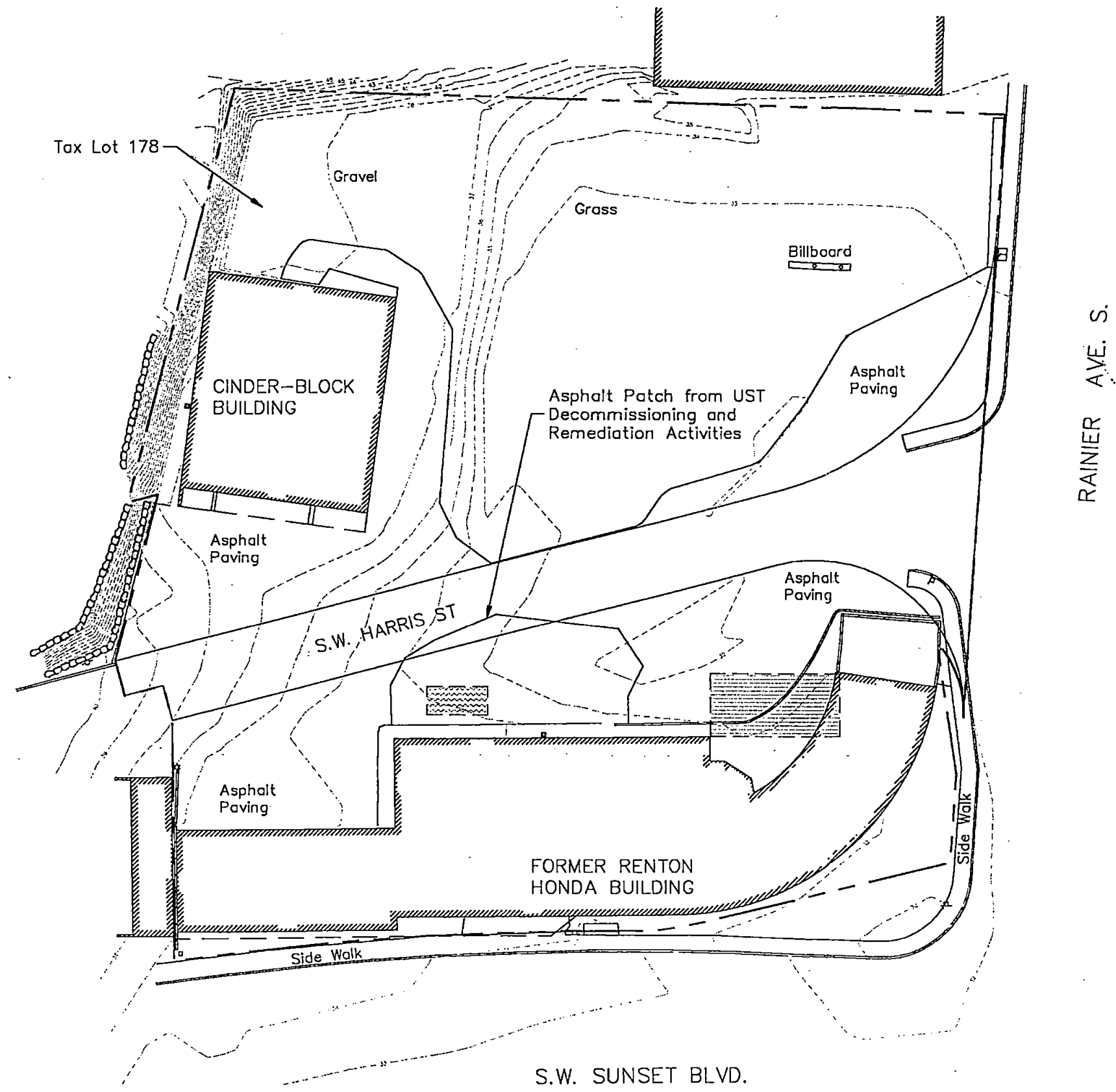
X = Total Xylenes

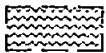
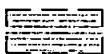
U = Not detected at laboratory detection limit indicated

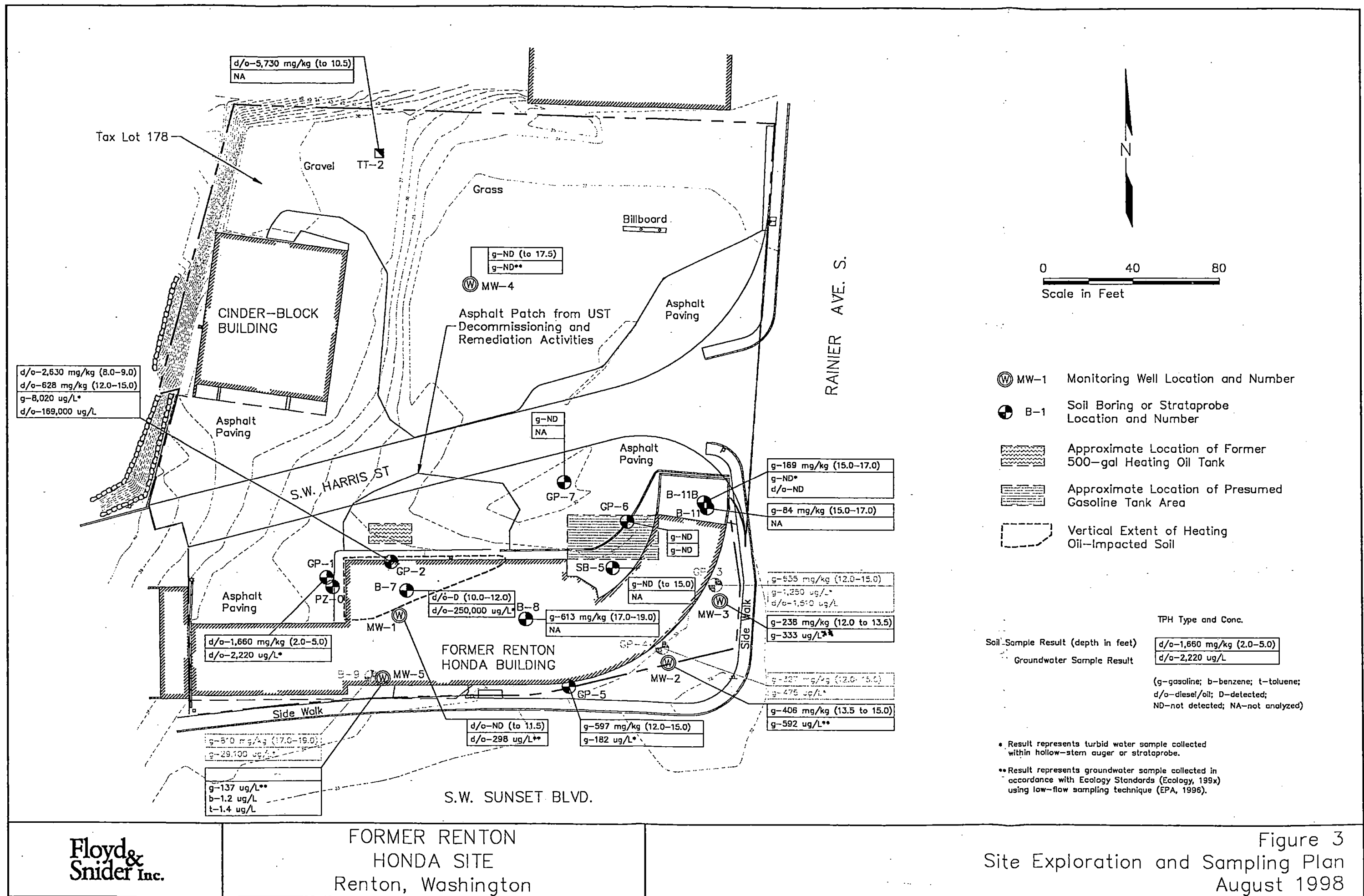
NA = Not Analyzed

Bolded values exceed MTCA Method A Cleanup Levels





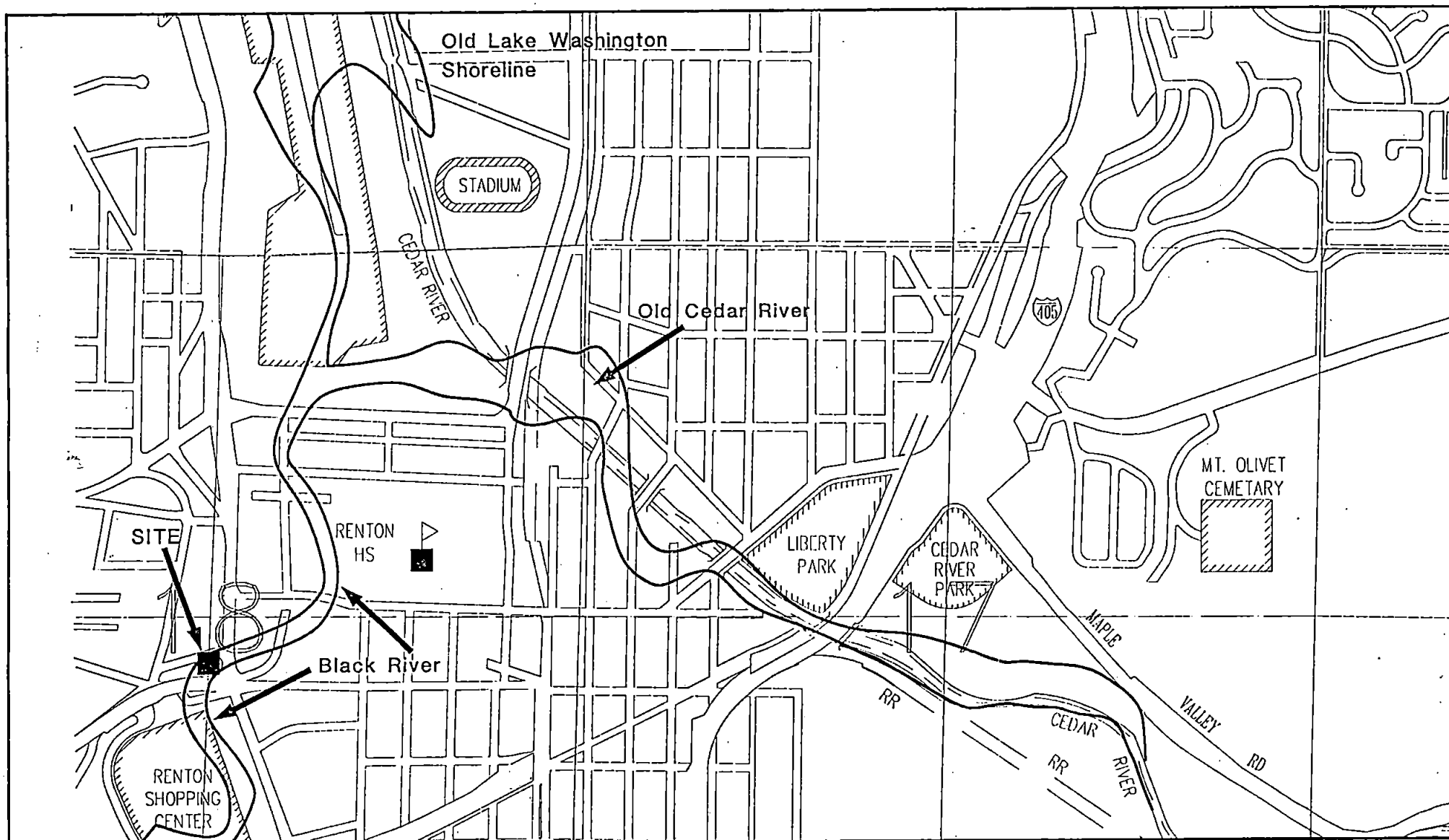
-  Approximate Location of Former 500-gal Heating Oil Tank
-  Approximate Location of Presumed Gasoline Tank Area



Floyd & Snider Inc.

FORMER RENTON
HONDA SITE
Renton, Washington

Figure 3
Site Exploration and Sampling Plan
August 1998



This map was generated from a base map provided by the City of Renton in 1994. The location of the Black River was digitized from a map in an aquifer test report also provided by the City of Renton. The original source of information regarding the location of the Black River is unknown. This work was performed and this map was generated using generally accepted practices and for exclusive use by Floyd & Snider for their project number WLGNS-Renton. This is lieu of all other warranties, express or implied.

0 500 1000
Scale in Feet

FIGURE 4
MAP OF OLD RIVERS

BLACK RIVER MAPPING



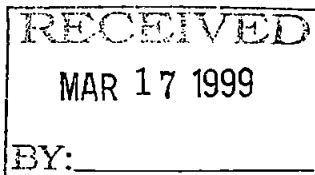
Appendix C

Laboratory Certificates of Analysis



MultiChem
ANALYTICAL SERVICES

MAS I.D. # 903010



March 15, 1999

Floyd & Snider Inc.
83 South King Street
Suite 614
Seattle WA 98104

Attention : Roy Kuroiwa

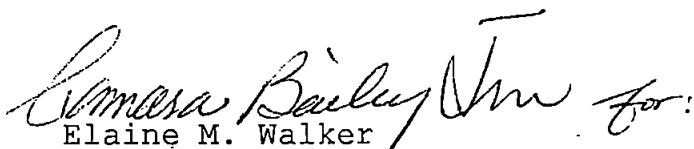
Project Number : WLGRNS-T.3

Project Name : Walgreens Renton

Dear Mr. Kuroiwa:

On March 2, 1999, MultiChem Analytical Services received five samples for analysis. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The results, sample cross reference, and quality control data are enclosed.

Sincerely,


Elaine M. Walker
Project Manager

EMW/hal/trm

Enclosure

MAS I.D. # 903010

MultiChem
ANALYTICAL SERVICES

SAMPLE CROSS REFERENCE SHEET

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON

MAS #	CLIENT DESCRIPTION	DATE SAMPLED	MATRIX
903010-1	W-SW(9.0)	03/02/99	SOIL
903010-2	E-SW(8.5)	03/02/99	SOIL
903010-3	N-SW(9.0)	03/02/99	SOIL
903010-4	S-SW(8.5)	03/02/99	SOIL
903010-5	SP-1	03/02/99	SOIL

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	5

MAS STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of the report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

MAS I.D. # 903010

MultiChem
ANALYTICAL SERVICES

ANALYTICAL SCHEDULE

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON

ANALYSIS	TECHNIQUE	REFERENCE	LAB
BETX	GC/PID	EPA 8021B	R
TOTAL PETROLEUM HYDROCARBONS: GAS	GC/FID	NWTPH-Gx	R
MOISTURE	GRAVIMETRIC	CLP SOW ILM04.0	R

R = MAS - Renton
ANC = MAS - Anchorage
SUB = Subcontract

CASE NARRATIVE

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON

CASE NARRATIVE: BETX - GASOLINE ANALYSIS

The following anomalies were associated with the preparation and/or analysis of the samples in this accession:

The target compounds toluene and total xylenes were detected in the extracted soil blank analyzed on March 3, 1999. All associated compounds which contained reportable concentrations of these compounds were reanalyzed.

The recovery of the surrogate spiking compound bromofluorobenzene exceeded the current MultiChem recovery range in the sample identified as 903010-5 (SP-1). This anomaly was attributed to the presence of high levels of target analytes and was flagged "G" for reporting purposes. No further corrective action was performed.

All other associated quality assurance/quality control (QA/QC) parameters were within established MultiChem control limits.

MAS I.D. # 903010

MultiChem
ANALYTICAL SERVICES

BETX - GASOLINE
DATA SUMMARY

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON
CLIENT I.D. : METHOD BLANK
SAMPLE MATRIX : SOIL
METHOD : NWT PH-Gx/8021B (BETX)
RESULTS ARE CORRECTED FOR MOISTURE CONTENT

DATE SAMPLED : N/A
DATE RECEIVED : N/A
DATE EXTRACTED : 03/03/99
DATE ANALYZED : 03/03/99
UNITS : mg/Kg
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

BENZENE
ETHYLBENZENE
TOLUENE
TOTAL XYLENES

<0.025
<0.025
0.036
0.033

FUEL HYDROCARBONS
HYDROCARBON RANGE
HYDROCARBON QUANTITATION USING

<5.0
TOLUENE THRU NAPHTHALENE
GASOLINE

SURROGATE PERCENT RECOVERY

LIMITS

BROMOFLUOROBENZENE
TRIFLUOROTOLUENE

112
101

61 - 109
48 - 110

MAS I.D. # 903010

MultiChem
ANALYTICAL SERVICES

BETX - GASOLINE
DATA SUMMARY

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON
CLIENT I.D. : METHOD BLANK
SAMPLE MATRIX : SOIL
METHOD : NWT PH-Gx/8021B (BETX)
RESULTS ARE CORRECTED FOR MOISTURE CONTENT

DATE SAMPLED : N/A
DATE RECEIVED : N/A
DATE EXTRACTED : 03/03/99
DATE ANALYZED : 03/04/99
UNITS : mg/Kg
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

BENZENE	<0.025
ETHYLBENZENE	<0.025
TOLUENE	<0.025
TOTAL XYLENES	<0.025

FUEL HYDROCARBONS

<5.0

HYDROCARBON RANGE

TOLUENE THRU NAPHTHALENE

HYDROCARBON QUANTITATION USING

GASOLINE

SURROGATE PERCENT RECOVERY

LIMITS

BROMOFLUOROBENZENE	94
TRIFLUOROTOLUENE	89

61 - 109
48 - 110

MAS I.D. # 903010-1 W-SW

MultiChem
ANALYTICAL SERVICES

BETX - GASOLINE
DATA SUMMARY

CLIENT	: FLOYD & SNIDER INC.	DATE SAMPLED	: 03/02/99
PROJECT #	: WLGRNS-T.3	DATE RECEIVED	: 03/02/99
PROJECT NAME	: WALGREENS RENTON	DATE EXTRACTED	: 03/03/99
CLIENT I.D.	: W-SW(9.0)	DATE ANALYZED	: 03/04/99
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: NWT PH-Gx/8021B (BETX)	DILUTION FACTOR	: 1
RESULTS ARE CORRECTED FOR MOISTURE CONTENT			

COMPOUNDS	RESULTS
BENZENE	<0.042
ETHYLBENZENE	<0.042
TOLUENE	<0.042
TOTAL XYLENES	<0.042
FUEL HYDROCARBONS	<8.3
HYDROCARBON RANGE	TOLUENE THRU NAPHTHALENE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
BROMOFLUOROBENZENE	87	61 - 109
TRIFLUOROTOLUENE	81	48 - 110

MAS I.D. # 903010-2 E-SW

MultiChem
ANALYTICAL SERVICES

BETX - GASOLINE
DATA SUMMARY

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON
CLIENT I.D. : E-SW(8.5)
SAMPLE MATRIX : SOIL
METHOD : NWT PH-Gx/8021B (BETX)
RESULTS ARE CORRECTED FOR MOISTURE CONTENT

DATE SAMPLED : 03/02/99
DATE RECEIVED : 03/02/99
DATE EXTRACTED : 03/03/99
DATE ANALYZED : 03/03/99
UNITS : mg/Kg
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

BENZENE	<0.034
ETHYLBENZENE	<0.034
TOLUENE	<0.034
TOTAL XYLENES	<0.034

FUEL HYDROCARBONS
HYDROCARBON RANGE
HYDROCARBON QUANTITATION USING

<6.8
TOLUENE THRU NAPHTHALENE
GASOLINE

SURROGATE PERCENT RECOVERY

LIMITS

BROMOFLUOROBENZENE	92	61 - 109
TRIFLUOROTOLUENE	83	48 - 110

MAS I.D. # 903010-3 N-SW

MultiChem
ANALYTICAL SERVICES

BETX - GASOLINE
DATA SUMMARY

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON
CLIENT I.D. : N-SW(9.0)
SAMPLE MATRIX : SOIL
METHOD : NWT PH-Gx/8021B (BETX)
RESULTS ARE CORRECTED FOR MOISTURE CONTENT

DATE SAMPLED : 03/02/99
DATE RECEIVED : 03/02/99
DATE EXTRACTED : 03/03/99
DATE ANALYZED : 03/04/99
UNITS : mg/Kg
DILUTION FACTOR : 1

COMPOUNDS

RESULTS

BENZENE <0.033
ETHYLBENZENE <0.033
TOLUENE <0.033
TOTAL XYLENES <0.033

FUEL HYDROCARBONS <6.6
HYDROCARBON RANGE TOLUENE THRU NAPHTHALENE
HYDROCARBON QUANTITATION USING GASOLINE

SURROGATE PERCENT RECOVERY

LIMITS

BROMOFLUOROBENZENE 95 61 - 109
TRIFLUOROTOLUENE 88 48 - 110

MAS I.D. # 903010-4 S-SW

MultiChem
ANALYTICAL SERVICES

BETX - GASOLINE
DATA SUMMARY

CLIENT	: FLOYD & SNIDER INC.	DATE SAMPLED	: 03/02/99
PROJECT #	: WLGRNS-T.3	DATE RECEIVED	: 03/02/99
PROJECT NAME	: WALGREENS RENTON	DATE EXTRACTED	: 03/03/99
CLIENT I.D.	: S-SW (8.5)	DATE ANALYZED	: 03/03/99
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: NWTPH-Gx/8021B (BETX)	DILUTION FACTOR	: 1
RESULTS ARE CORRECTED FOR MOISTURE CONTENT			

COMPOUNDS	RESULTS
BENZENE	<0.033
ETHYLBENZENE	<0.033
TOLUENE	<0.033
TOTAL XYLENES	<0.033
FUEL HYDROCARBONS	<6.7
HYDROCARBON RANGE	TOLUENE THRU NAPHTHALENE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
BROMOFLUOROBENZENE	99	61 - 109
TRIFLUOROTOLUENE	89	48 - 110

MAS I.D. # 903010-5

MultiChem
ANALYTICAL SERVICES

BETX - GASOLINE
DATA SUMMARY

CLIENT	: FLOYD & SNIDER INC.	DATE SAMPLED	: 03/02/99
PROJECT #	: WLGRNS-T.3	DATE RECEIVED	: 03/02/99
PROJECT NAME	: WALGREENS RENTON	DATE EXTRACTED	: 03/03/99
CLIENT I.D.	: SP-1	DATE ANALYZED	: 03/04/99
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: NWTPH-Gx/8021B (BETX)	DILUTION FACTOR	: 10
RESULTS ARE CORRECTED FOR MOISTURE CONTENT			

COMPOUNDS

RESULTS

BENZENE	<0.37
ETHYLBENZENE	3.1
TOLUENE	2.7
TOTAL XYLENES	7.7

FUEL HYDROCARBONS	1200
HYDROCARBON RANGE	TOLUENE THRU NAPHTHALENE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY

LIMITS

BROMOFLUOROBENZENE	155 G	61 - 109
TRIFLUOROTOLUENE	102	48 - 110

G = Out of limits due to high levels of target analytes in sample.

MAS I.D. # 903010

MultiChem
ANALYTICAL SERVICES

BETX - GASOLINE
QUALITY CONTROL DATA

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON
SAMPLE MATRIX : SOIL
EPA METHOD : NWTPH-Gx/8021B (BETX)

SAMPLE I.D. # : BLANK
DATE EXTRACTED : 03/03/99
DATE ANALYZED : 03/04/99
UNITS : mg/Kg

COMPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
BENZENE	<0.0250	1.00	0.952	95	N/A	N/A	N/A
TOLUENE	<0.0250	1.00	0.933	93	N/A	N/A	N/A
TOTAL XYLENES	<0.0250	3.00	2.78	93	N/A	N/A	N/A
GASOLINE	<5.00	50.0	46.6	93	N/A	N/A	N/A

CONTROL LIMITS	% REC.	RPD
BENZENE	80 - 120	20
TOLUENE	80 - 120	20
TOTAL XYLENES	80 - 120	20
GASOLINE	80 - 120	20

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
BROMOFLUOROBENZENE	94	N/A	61 - 109
TRIFLUOROTOLUENE	95	N/A	48 - 110

MAS I.D. # 903010

MultiChem
ANALYTICAL SERVICES

BETX - GASOLINE
QUALITY CONTROL DATA

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON
SAMPLE MATRIX : SOIL
EPA METHOD : NWTPH-Gx/8021B (BETX)

SAMPLE I.D. # : 903010-1
DATE EXTRACTED : 03/03/99
DATE ANALYZED : 03/04/99
UNITS : mg/Kg

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
BENZENE	<0.0417	N/A	N/A	1.67	1.49	89	1.46	87	2
TOLUENE	<0.0417	N/A	N/A	1.67	1.52	91	1.48	89	3
TOTAL XYLENES	<0.0417	N/A	N/A	5.00	4.57	91	4.48	90	2
GASOLINE	<8.33	<8.33	0	83.3	79.9	96	73.3	88	9

CONTROL LIMITS	% REC.	RPD
BENZENE	63 - 124	20
TOLUENE	65 - 122	20
TOTAL XYLENES	72 - 125	24
GASOLINE	59 - 137	24

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
BROMOFLUOROBENZENE	92	90	61 - 109
TRIFLUOROTOLUENE	89	87	48 - 110

MAS I.D. # 903010

MultiChem
ANALYTICAL SERVICES

CASE NARRATIVE

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON

CASE NARRATIVE: GENERAL CHEMISTRY ANALYSIS

There were no anomalies associated with the preparation and/or analysis of the samples in this accession.

MAS I.D. # 903010

MultiChem
ANALYTICAL SERVICES

GENERAL CHEMISTRY ANALYSIS

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON

MATRIX : SOIL

PARAMETER

DATE ANALYZED

MOISTURE

03/02/99

MAS I.D. # 903010

MultiChem
ANALYTICAL SERVICES

GENERAL CHEMISTRY ANALYSIS
DATA SUMMARY

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON

MATRIX : SOIL

UNITS : %

MAS I.D. # CLIENT I.D. MOISTURE

903010-1	W-SW(9.0)	40
903010-2	E-SW(8.5)	27
903010-3	N-SW(9.0)	24
903010-4	S-SW(8.5)	25
903010-5	SP-1	32

MAS I.D. # 903010

MultiChem
ANALYTICAL SERVICES

GENERAL CHEMISTRY ANALYSIS
QUALITY CONTROL DATA

CLIENT : FLOYD & SNIDER INC.
PROJECT # : WLGRNS-T.3
PROJECT NAME : WALGREENS RENTON

MATRIX : SOIL

UNITS : %

PARAMETER	MAS I.D.	SAMPLE RESULT	DUP RESULT	RPD	SPIKED RESULT	SPIKE ADDED	% REC
MOISTURE	903010-2	27	27	0	N/A	N/A	N/A

CONTROL LIMITS

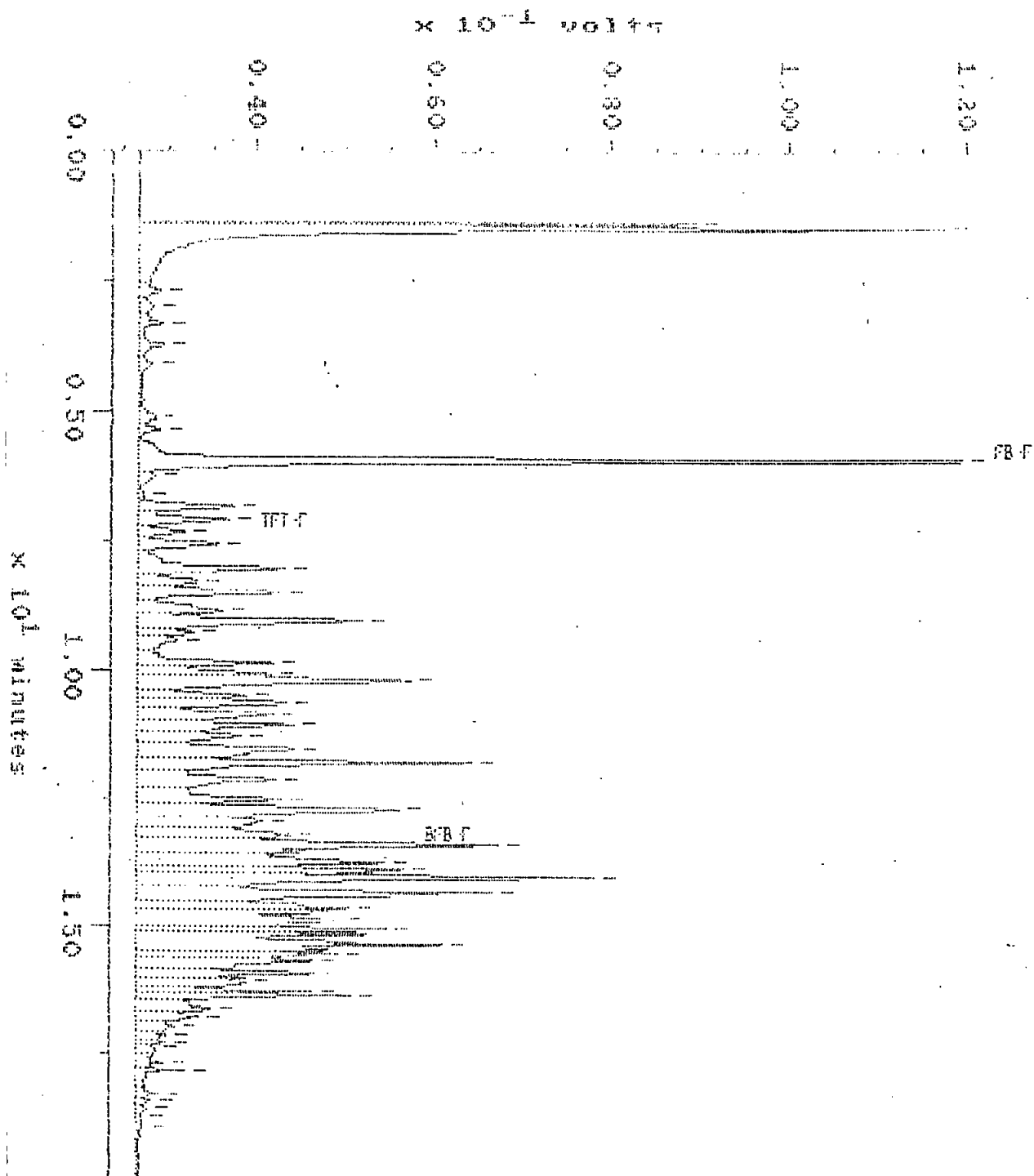
RPD

MOISTURE

31

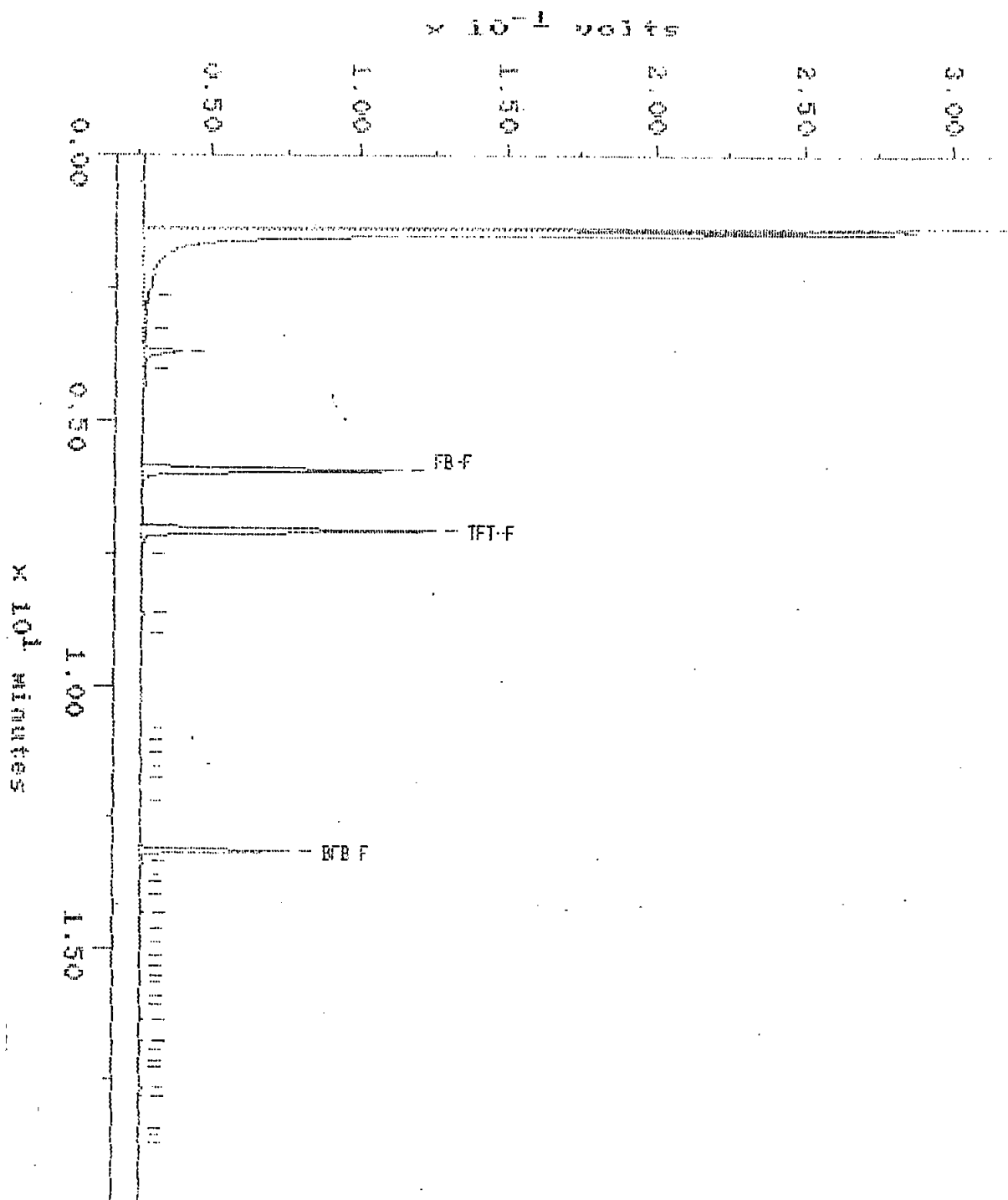
Sample: 903010-SOL RE Channel: FID
Acquired: 04-MAR-99 12:47 Method: X:\MAYDATA\FICARD\030499FC
Dilution: 1 : 10.000
Comments: MAS FUELS: TPMG / 8020 (BETX)

Filename: R3049F10
Operator: MAS



Sample: A0303 GRB Channel: FID
Acquired: 03-MAR-99 13:21 Method: X:\MAXDATA\PICARD\A03039PC
Comments: MAS FUELS: TPMS / 8020 (BETX)

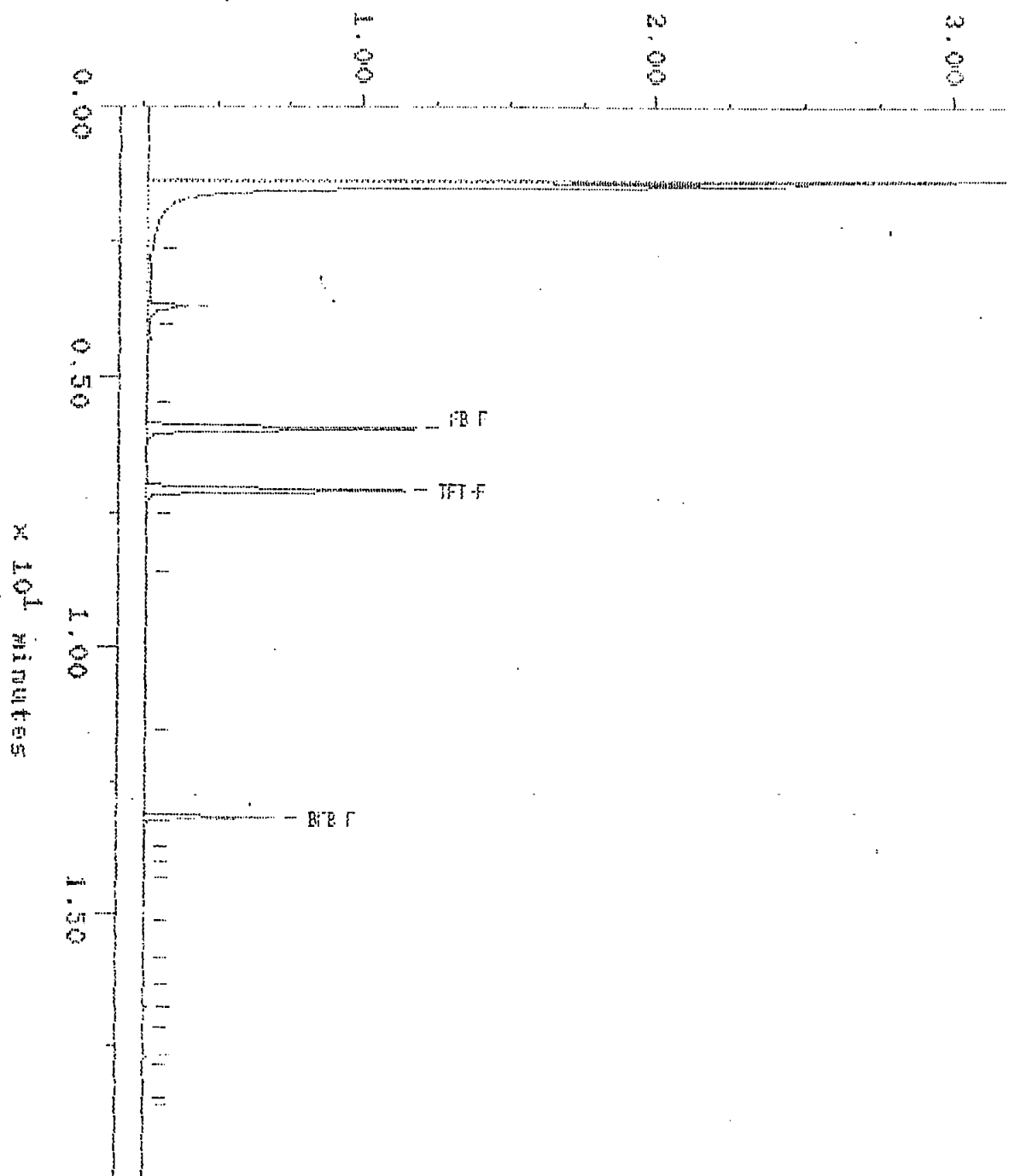
Filename: R3039P12
Operator: MAS



Sample: A0303 SRB RC Channel: FID
Acquired: 04 MAR 99 8:53 Method: X:\MAXDATA\FICARD\A030499PC
Comments: MAS FUELS: TPNG / 8020 (BETX)

Filename: R3049P03
Operator: MAS

$\times 10^{-1}$ volts

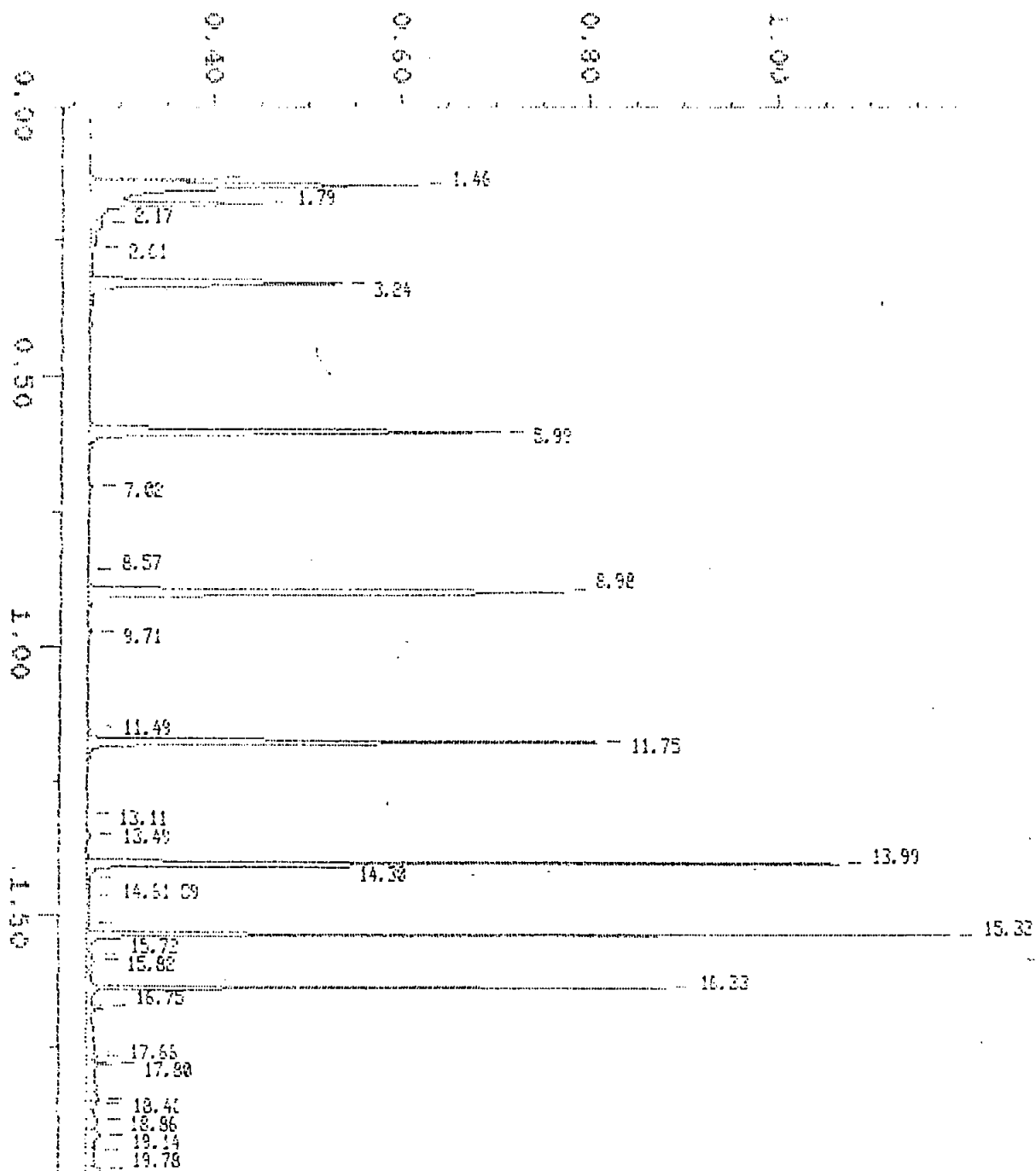


Alkane

Sample: PICARD ALKANE Channel: FID
Acquired: 03 MAR 99 7:35 Method: X:\MAXDATA\PICARD\030399FC
Comments: MAG FUELCO: TAME / 8030 (BETX)

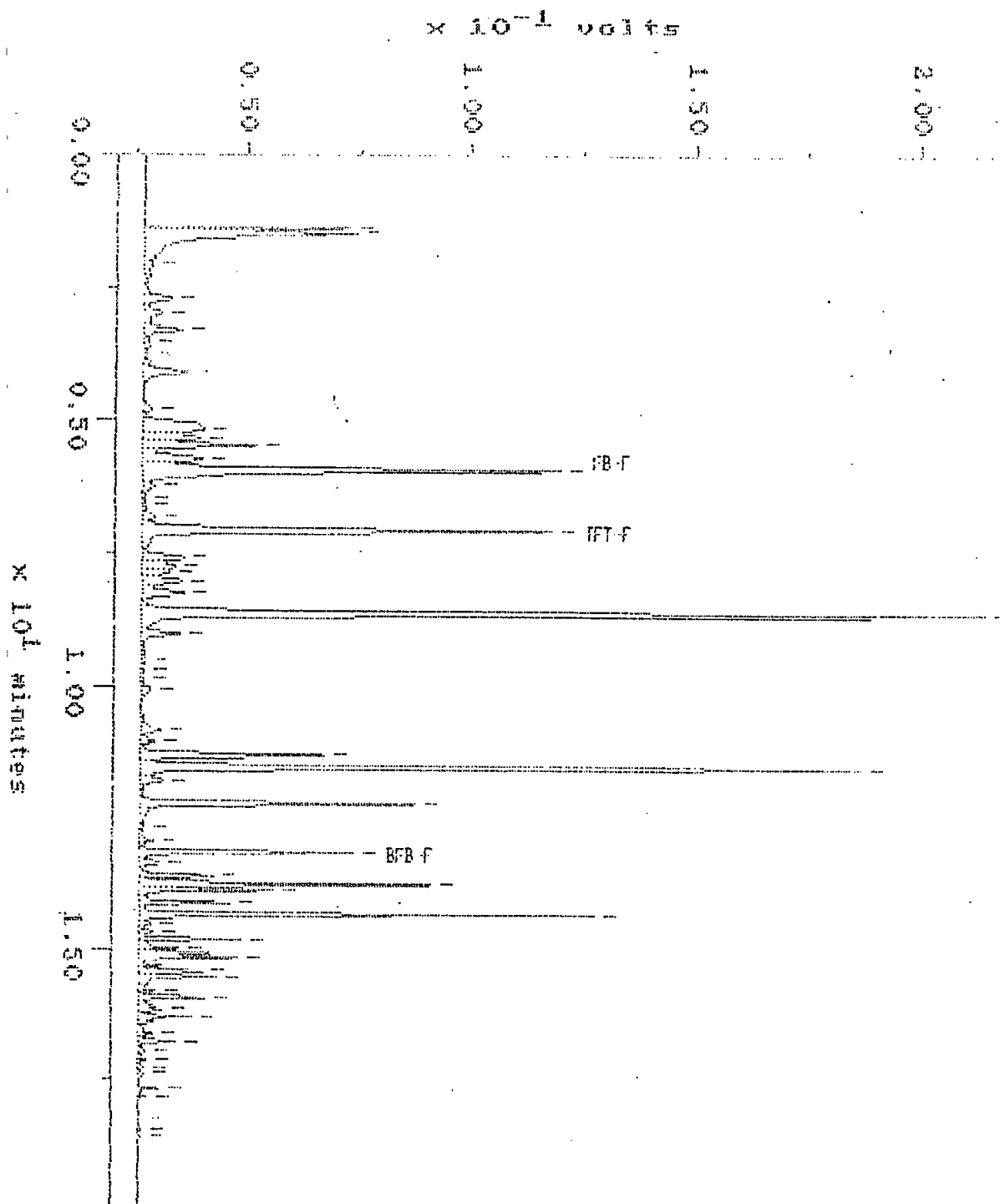
Filename: R3039F01
Operator: MAG

$\times 10^{-1}$ volts



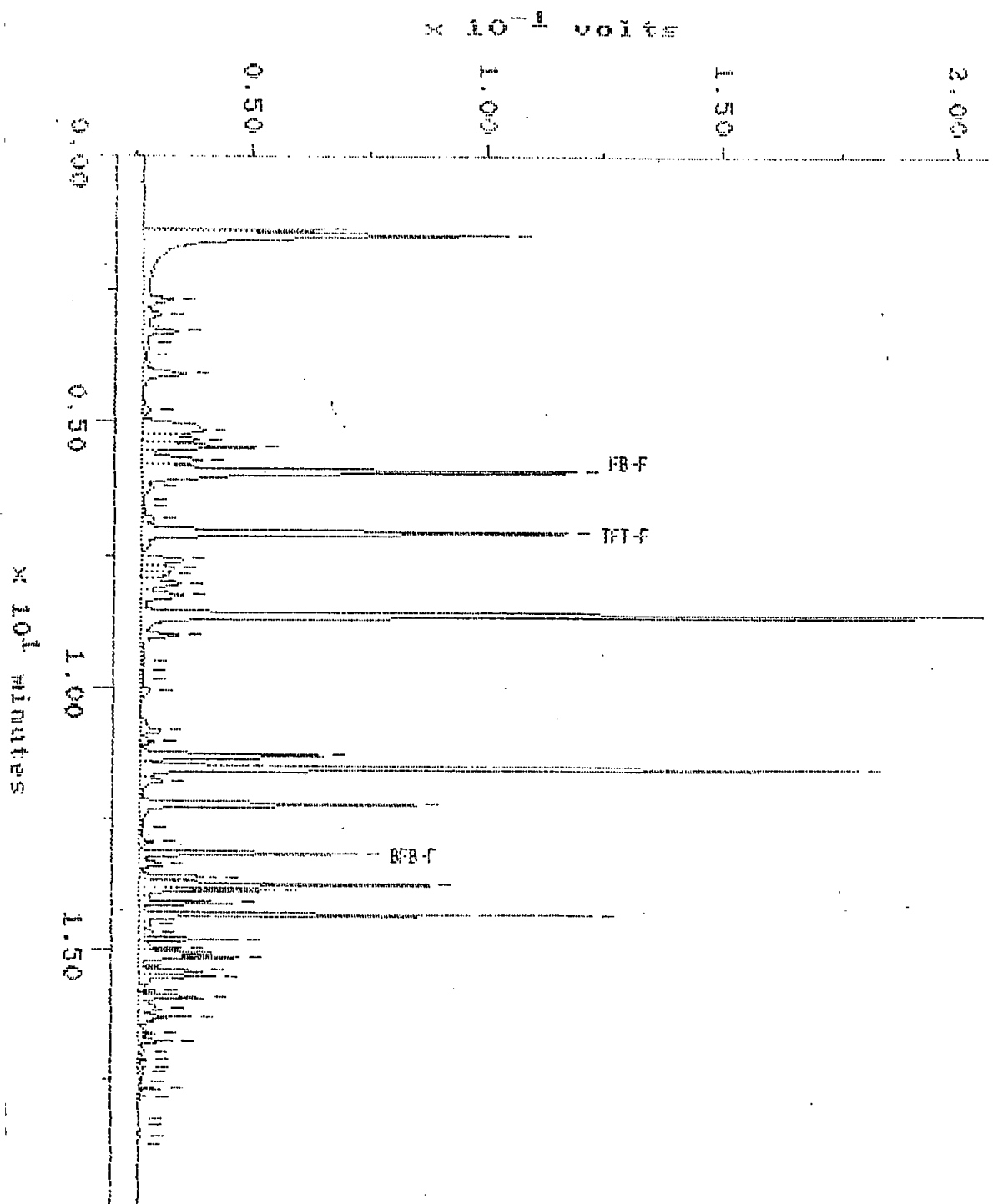
Sample: GAS CCV 1000 Channel: FID
Acquired: 03-MAR-99 12:50 Method: X:\MAXDATA\PCARD\030399PC
Comments: MAS FUELS: TPMS / 8020 (BCTX)

Filename: R3039P11
Operator: MAS



Sample: GAS CCV 1020 Channel: FID
Acquired: 04-MAR-99 8:22 Method: X:\MAXDATA\PICARD\030499PC
Comments: MAG FUELS: TPFG / 0020 (BETX)

Filename: R3049P02
Operator: MAS





560 Naches Ave. SW Suite 101 Renton, WA 98055
(800) 609-0580 ♦ (425) 228-8335 ♦ FAX (425) 228-8336

903017

DATE: 5 12 199

PAGE: 1 of 1

[illegible]

MultiChem Analytical Services

SAMPLE LOG-IN CHECKLIST

DATE: 3/2/99
 TIME: 11:25
 INITIALS: LD

ACCESSION NO. 903010
 CLIENT: Floud & Snyder
 PROJECT: Walgreens Renton

Shipping:

Type:

☒ Cooler
☐ Box
☐ Other

COC Seals:

☐ Ship. Cont.
☐ On Bottles
☒ None

Intact?

Y N
 Y N

Packing Material:

☐ Styrofoam
☒ Bubble Bags
☐ Foam Vial Packs
☐ Other

Refrigerant:

☒ Gel Ice Pack
☒ Loose Ice
☐ Other
☐ None

Frozen?

☒ Y ☒ N
☒ Y ☒ N
☐ Y ☐ N

Received Via:

☒ Hand Delivery
☐ Federal Express
☐ Airborne
☐ Other: ..

☐ Courier
☐ UPS
☐ Taxi
☐ Goldstreak

Sample Information:

Samp.

5
1

Bottle

10
2

Type

Soil
 Water
 Product
 Other

Soil VOAs

Water VOAs

0 headspace ☒ Y ☐ N ☐ N
 0 headspace ☒ Y ☐ N ☐ N
 Preserved? ☒ Y ☐ N
 Trip blanks? ☒ Y ☐ N

Condition of Samples:

Containers:

Intact? (Bottle/Lid)

Correct Type?

☒ Y ☒ N
☒ Y ☒ N

CA

Waters Preserved?
 (if needed)

Y N N

ID's

Match C.O.C.

☒ Y ☐ N ☐ N

Temperature: 7.2 C

CA NO.

(See corrective action on reverse side for explanation if temperature is outside of the MAS recommended range.)

LAB USE ONLY

☐ NO NOTICE

☐ SENDOUTS, NEEDED BY

☒ COC/TAT DOES NOT MATCH NOTICE

☐ NEED TEST(S) VERIFIED BY CLIENT

COMMENTS:

MultiChem Analytical Services Corrective Action Sheet

ACCESSION #

CORRECTIVE ACTION AREA

EXPLAIN CORRECTIVE ACTION:

CA NO.

Salvaged Sample

Replaced Lid

Preserved Sample w/

CA NO.

Replaced Bottle

Notified P.M.

CA NO.

Verified Id w/Client

Notified Client

Comments:

Temperature: 7.2 C 1 CA NO.

Comments: Samples were received outside of the MAS recommended temperature range (4 C +/- 2 C). Samples were received within 5 hours of collection and may not have had sufficient time to equilibrate with coolant. A temperature range from 2 to 15 degrees Celsius is considered acceptable. The samples will be analyzed as scheduled unless directed otherwise by client.

Comments: Samples were received outside of the MAS recommended temperature range (4 C +/- 2 C). The samples will be analyzed as scheduled unless directed otherwise by client.

Tech. Signature/Date: W. Walker 3/2/99

P.M. Signature/Date: W. Walker 3/3/99

CORRECTIVE ACTION TAKEN:

Explain Action Taken:

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

**7110 38th Drive SE
Lacey, Washington 98503**

APR 21 1999

**Mobile Environmental Laboratories
Environmental Sampling Services**

**Telephone: (360) 459-4670
Fax: (360) 459-3432**

April 19, 1999

Roy Kuroiwa
Floyd & Snider
83 King Street, Ste. 614
Seattle, WA 98104

Dear Mr. Kuroiwa:

Please find enclosed the analytical data report for the Walgreen's/Renton Project in Renton, Washington. Mobile Laboratory services were conducted on April 15, 1999. Soil and water samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended.

The results of these analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Floyd & Snider for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4⁰ C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

TPH-Gasoline, TPH-Diesel

(Gasoline and/or Diesel, Modified EPA 8015, NWTPH-Gx and NWTPH-Dx)

A check standard is run at the beginning of the day. 1) A close standard is run at the end of the day. 2) Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. A duplicate sample is run at a rate of 1 per 10 samples. At least 1 method blank is run per 20 samples analyzed.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

WALGREENS, RENTON PROJECT
Renton, Washington
Floyd & Snider, Inc.

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

SAMPLE NUMBER	DATE ANALYZED	SURROGATE RECOVERY (%)	HEATING OIL (mg/kg)	OIL (mg/kg)
Method Blank	04/15/99	106%	nd	nd
NW - 1 (9-11')	04/15/99	int	2800	nd
TP 5 (12-15')	04/15/99	int	3000	nd
SP - 1 (OVBDN)	04/15/99	107%	nd	nd
NSWA (7.5 - 8.75')	04/15/99	86%	nd	nd
ESWA (7.5 - 8.75')	04/15/99	130%	nd	nd
SSW Central (7.5 - 8.75')	04/15/99	111%	nd	nd
SSW Southeast (9 - 11)	04/15/99	103%	nd	nd
SSW Southwest (9 - 11)	04/15/99	114%	nd	nd
SSW Southwest (9 - 11) Dup	04/15/99	73%	nd	nd
SP (TPS)	04/15/99	int	1300	nd
Method Detection Limits			20	40

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Michael Dee

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

WALGREENS, RENTON PROJECT
Renton, Washington
Floyd & Snider, Inc.

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Water.

SAMPLE NUMBER	DATE ANALYZED	SURROGATE RECOVERY (%)	HEATING OIL (ug/l)	OIL (ug/l)
Method Blank	04/15/99	112%	nd	nd
BT - 1	04/15/99	122%	1700	nd
BT - 1 Dup	04/15/99	104%	1600	nd
Method Detection Limits			200	400

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

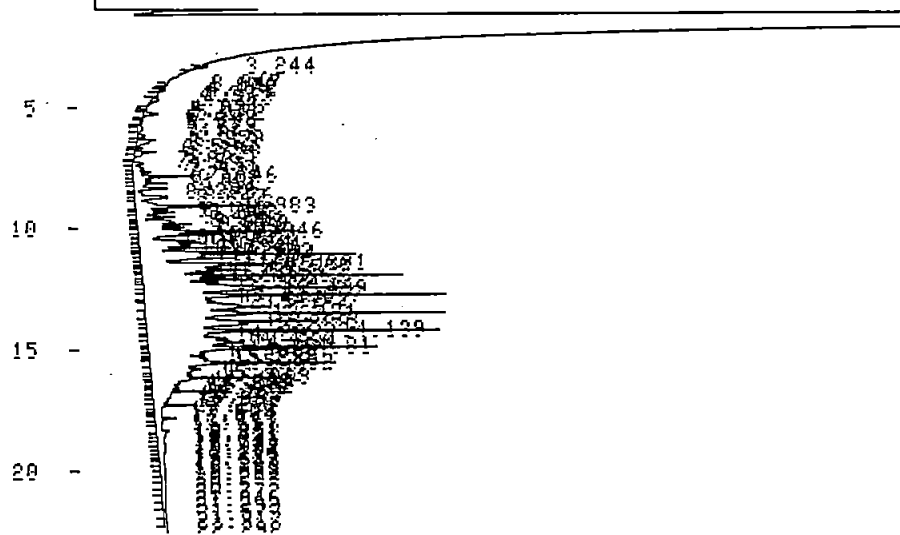
ANALYSES PERFORMED BY: Michael Dee

27	21.228	29886	V	3.4233
30	21.228	29886	V	3.1814
31	21.39	27700	V	2.3951
32	21.554	20854	V	2.323
33	21.723	20225	V	2.3944
34	21.904	20847	V	1.8777
35	22.092	9383	V	0.6195
36	22.328	5394	V	

TOTAL 870670 100

04/15/99 15:04:22

500ppm Diesel



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 12

FILE 0
METHOD 0421

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.244	16118			0.1458	
2	3.947	4842			0.0438	
3	4.182	6950			0.0629	
4	4.563	21661			0.1959	
5	5.031	3846			0.0348	
6	5.172	31336	V		0.2834	
7	5.51	4514			0.0408	
8	5.673	6888			0.0623	
9	5.778	13947	V		0.1261	
10	6.066	20643	V		0.1867	
11	6.259	30314			0.2741	
12	6.369	19465	V		0.176	
13	6.596	8557			0.0774	
14	6.758	33982			0.3073	
15	6.875	16366	V		0.148	
16	7.23	27280	V		0.2467	
17	7.431	35221	V		0.3185	
18	7.572	32354	V		0.2926	
19	7.746	93097	V		0.8419	
20	7.907	35823	V		0.3239	
21	8.03	50335	V		0.4552	
22	8.24	70285	V		0.6356	
23	8.398	11910	V		0.1077	
24	8.576	53557	V		0.4843	
25	8.647	46178	V		0.4176	
26	8.983	246499	V		2.2291	
27	9.163	49301	V		0.4458	
28	9.243	60775	V		0.5496	
29	9.438	72483	V		0.6555	
30	9.59	60404	V		0.5462	
31	9.678	34741	V		0.3142	
32	9.749	81812	V		0.7398	

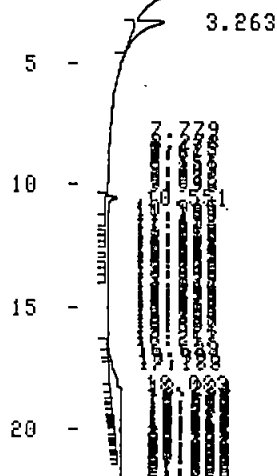
90	27.7	6206	V	0.3541
91	27.985	5055	V	0.2884
92	28.1	3132	V	0.1787
93	28.292	4050	V	0.2311
94	28.485	3864	V	0.2205
95	28.723	3948	V	0.2253
96	28.828	3366	V	0.192
97	29.213	5710	V	0.3258

TOTAL 1752461

100

04/15/99 13:56:52

Blank



CR501, CHROMATOPAC

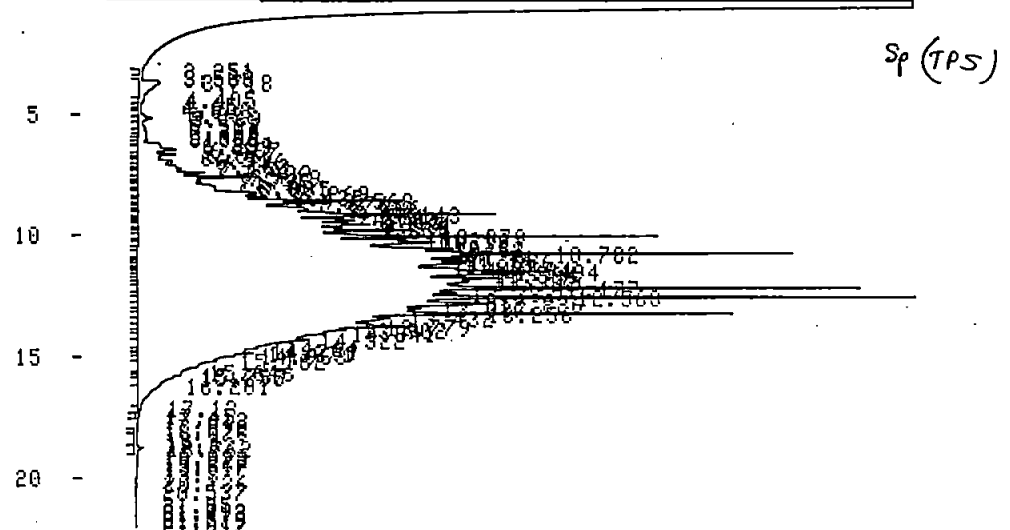
CHANNEL NO 1

SAMPLE NO 0

REPORT NO 11

FILE 0
METHOD 0421

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.263	222885			31.9208	
2	10.551	38206	S		5.4718	
3	11.45	7562	V		1.0831	
4	11.917	4297	V		0.6154	
5	12.169	6580	V		0.9423	
6	12.471	4945	V		0.7082	
7	12.843	3820	V		0.5471	
8	13.308	3382	V		0.4843	
9	13.448	4584	V		0.6565	
10	13.822	4658	V		0.6671	
11	16.688	4532	V		0.6491	
12	16.996	11545	V		1.6534	
13	17.183	7637	V		1.0937	
14	18.083	102211	V		14.6382	
15	18.284	52188	V		7.4742	
16	18.625	32522	V		4.6576	
17	18.783	18959	V		2.7152	
18	18.917	12180	V		1.7444	
19	18.975	21878	V		3.1333	
20	19.272	26464	V		3.7901	
21	19.412	4750	V		0.6803	
22	19.471	4637	V		0.6641	
23	19.517	4523	V		0.6478	
24	19.614	8007	V		1.1467	
25	19.669	4918	V		0.7044	
26	19.764	7456	V		1.0679	
27	19.812	4531	V		0.649	
28	19.911	6826	V		0.9776	
29	20.105	19926	V		2.8538	
30	20.3	8537	V		1.2227	
31	20.402	4796	V		0.6869	
32	20.494	4462	V		0.6391	
33	20.64	4477	V		0.6411	
34	20.794	8005	V		1.1464	
35	20.988	3201	V		0.4585	
36	21.087	4856	V		0.6954	
37	21.433	3300	V		0.4726	



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1

SAMPLE NO 0

REPORT NO 14

FILE 0
METHOD 0421

047

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.251	3373			0.0096	
2	3.718	134966	V		0.3823	
3	4.405	10205	V		0.0289	
4	4.65	3605			0.0102	
5	5.038	18486	V		0.0524	
6	5.169	31418	V		0.089	
7	5.502	31002	V		0.0878	
8	5.702	24684	V		0.0699	
9	5.909	19122	V		0.0542	
10	6.006	21585	V		0.0611	
11	6.234	39581	V		0.1121	
12	6.299	19886	V		0.0563	
13	6.467	137252	V		0.3888	
14	6.667	72876	V		0.2064	
15	6.791	40921	V		0.1159	
16	6.936	102880	V		0.2914	
17	7.162	105798	V		0.2997	
18	7.271	89553	V		0.2537	
19	7.432	206095	V		0.5838	
20	7.619	212385	V		0.6017	
21	7.733	65482	V		0.1855	
22	7.797	103714	V		0.2938	
23	8.001	252566	V		0.7155	
24	8.085	155781	V		0.4413	
25	8.269	457327	V		1.2955	
26	8.435	235096	V		0.666	
27	8.568	489423	V		1.3865	
28	8.676	340888	V		0.9657	
29	8.866	367900	V		1.0422	
30	8.938	363967	V		1.0311	
31	9.143	804850	V		2.28	
32	9.224	302688	V		0.8575	
33	9.337	323988	V		0.9178	
34	9.415	406827	V		1.1525	
35	9.581	734250	V		2.08	
36	9.729	364371	V		1.0322	
37	9.834	611869	V		1.7333	
38	10.079	1252794	V		3.549	
39	10.216	425862	V		1.2064	
40	10.321	985852	V		2.7928	
41	10.58	897108	V		2.5414	
42	10.782	1929851	V		5.467	
43	10.94	541999	V		1.5354	
44	11.076	777782	V		2.2033	
45	11.18	761619	V		2.1576	
46	11.293	350672	V		0.9934	

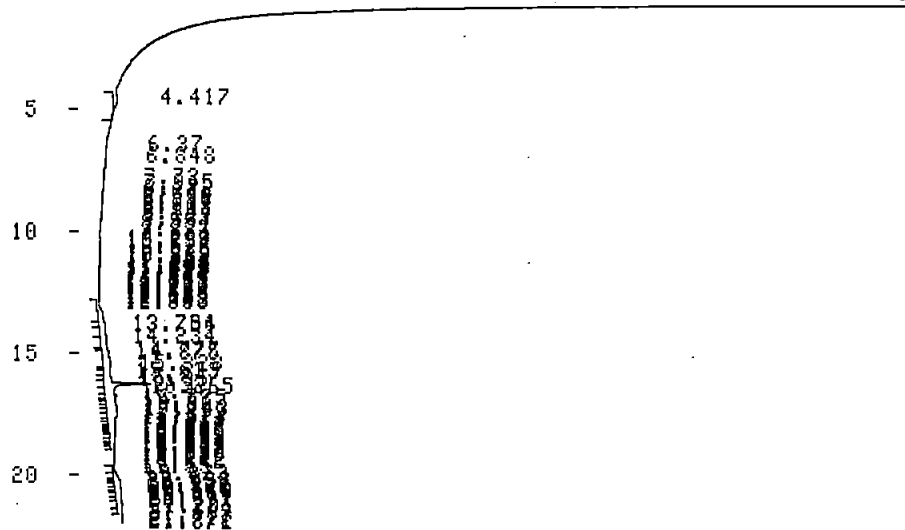
16	18.248	4402	V	0.7312
17	18.167	86174	V	14.3142
18	18.374	44083	V	7.3224
19	18.7	20259	V	3.3653
20	18.794	4983	V	0.8277
21	18.852	5636	V	0.9362
22	18.947	13860	V	2.3022
23	19.095	17064	V	2.8344
24	19.247	3276	V	0.5441
25	19.392	14828	V	2.463
26	19.542	6724	V	1.1169
27	19.647	4076	V	0.677
28	19.746	8503	V	1.4124
29	20.087	13844	V	2.2996
30	20.192	6998	V	1.1623
31	20.592	5000	V	0.8305

TOTAL 602020

100

SSW South West

04/15/99 14:30:55



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1

SAMPLE NO 0

REPORT NO 13

FILE 0
METHOD 0421

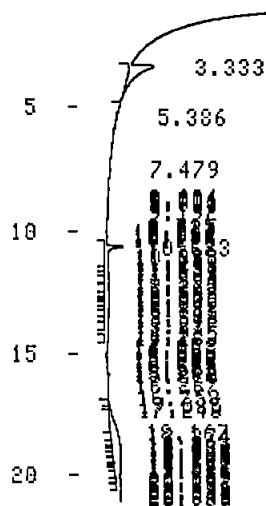
PKNO	TIME	AREA	NK	IDNO	CONC	NAME
1	4.417	57222			6.4015	
2	13.706	68134			7.6223	
3	13.754	25521	V		2.8551	
4	14.234	41207	V		4.6098	
5	14.777	45676	V		5.1099	
6	14.875	12039	V		1.3469	
7	15.328	90630	V		10.1389	
8	15.633	8774	V		0.9816	
9	15.847	23358	V		2.6131	
10	15.95	22811	V		2.5519	
11	16.265	97427	V		10.8993	
12	16.46	33219	V		3.7162	
13	16.725	30026	V		3.3591	
14	16.917	15044	V		1.683	
15	17.03	19135	V		2.1406	
16	17.143	28074	V		3.1407	
17	17.299	28576	V		3.1968	
18	17.514	28807	V		3.2227	
19	17.714	12884	V		1.4413	
20	17.847	13352	V		1.4938	
21	17.939	5995	V		0.6707	
22	18.011	6186	V		0.6921	
23	18.085	8697	V		0.9729	
24	18.201	6143	V		0.6873	
25	18.272	1222	V		0.4743	

25	19.669	4918	V	0.7844
26	19.764	7456	V	1.0679
27	19.812	4531	V	0.649
28	19.911	6826	V	0.9776
29	20.105	19926	V	2.8538
30	20.3	8537	V	1.2227
31	20.402	4796	V	0.6869
32	20.494	4462	V	0.6391
33	20.64	4477	V	0.6411
34	20.794	8085	V	1.1464
35	20.988	3201	V	0.4585
36	21.087	4856	V	0.6954
37	21.433	3300	V	0.4726

TOTAL	698244	100
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04/15/99 14:00:33

SSW Southeast



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 12

FILE 0
METHOD 0421

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.333	206165			34.2455	
2	10.623	55404	S		9.203	
3	11.534	6961	V		1.1562	
4	11.673	4963	V		0.8244	
5	11.994	10028	V		1.6658	
6	12.269	12326	V		2.0475	
7	12.56	6615	V		1.0987	
8	12.702	3198	V		0.5313	
9	12.94	5955	V		0.9891	
10	13.121	3135	V		0.5207	
11	13.392	6280	V		1.0431	
12	13.542	5282	V		0.8773	
13	13.817	5222	V		0.8674	
14	14.283	3270	V		0.5431	
15	17.085	7509	V		1.2473	
16	17.246	4402	V		0.7312	
17	18.167	86174	V		14.3142	
18	18.374	44083	V		7.3224	
19	18.7	20259	V		3.3653	
20	18.794	4983	V		0.8277	
21	18.852	5636	V		0.9362	
22	18.947	13860	V		2.3022	
23	19.095	17064	V		2.8344	
24	19.247	3276	V		0.5441	
25	19.392	14828	V		2.463	
26	19.542	6724	V		1.1169	
27	19.647	4076	V		0.677	
28	19.746	8503	V		1.4124	
29	20.087	13844	V		2.2996	
30	20.192	6998	V		1.1623	
31	20.592	5000	V		0.8305	

TOTAL	600000	100
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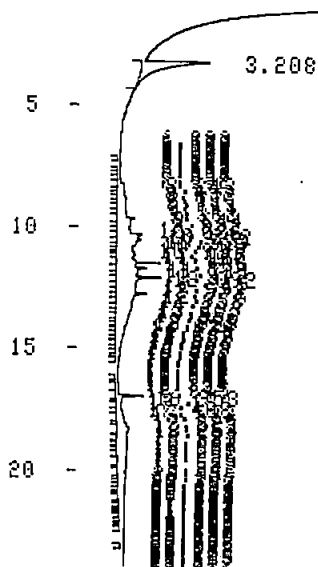
64	14.343	631709	V	0.742
65	14.473	805621	V	0.9462
66	14.678	1415992	V	1.6631
67	15.15	440421	V	0.5173
68	15.346	1266569	V	1.4876
69	16.619	97948	V	0.115
70	16.821	16634	V	0.0195
71	16.884	111703	V	0.1312
72	17.496	22377	V	0.0263
73	17.658	10554	V	0.0124
74	17.765	7695	V	0.009
75	17.904	27811	V	0.0327
76	18.228	15234	V	0.0179

TOTAL 85141072

100

BT-1
(35.1 to i)

04/15/99 11:27:35



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1

SAMPLE NO 0

REPORT NO 6

FILE 0
METHOD 0421

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.208	361994			13.9616	
2	7.199	4369	V		0.1685	
3	7.602	3451	V		0.1331	
4	7.857	6763	V		0.2609	
5	7.992	11543	V		0.4452	
6	8.243	29222	V		1.1271	
7	8.492	16150	V		0.6229	
8	8.643	17607	V		0.6791	
9	8.77	32159	V		1.2403	
10	8.949	17746	V		0.6844	
11	9.144	33707	V		1.3	
12	9.362	30629	V		1.1813	
13	9.644	72661	V		2.8024	
14	9.882	42591	V		1.6427	
15	10.086	47413	V		1.8287	

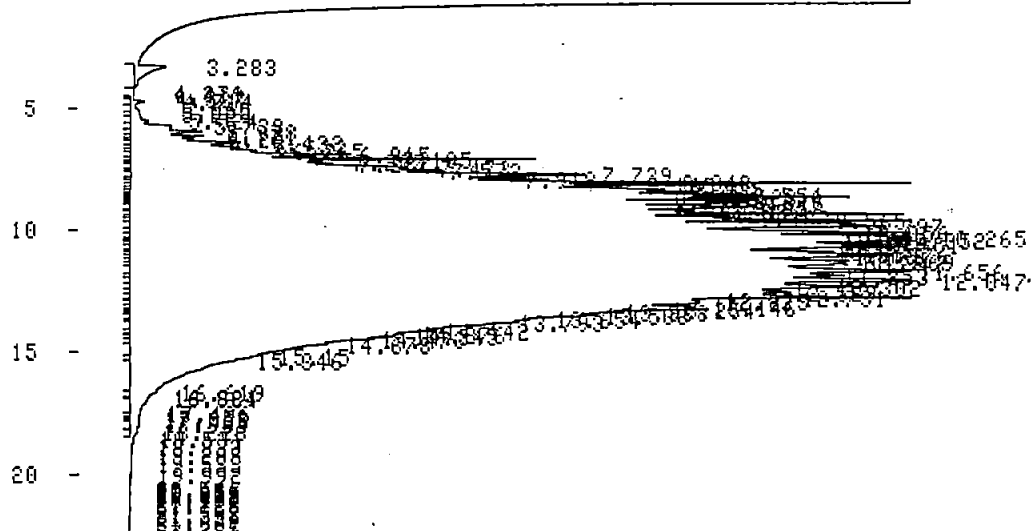
16	10.332	81313	V		3.1361	
17	10.529	91549	V		3.5309	
18	10.705	44851	V		1.7298	
19	10.921	40942	V		1.5791	
20	11.045	31660	V		1.2211	
21	11.127	56013	V		2.1604	
22	11.406	106110	V		4.0925	
23	11.711	104795	V		4.0418	
24	11.912	58066	V		2.2395	
25	12.092	128619	V		4.9606	
26	12.341	77889	V		2.004	

17	19.288	6130	V	1.231
18	19.298	5012	V	1.0033
19	19.353	4787	V	0.9582
20	19.417	4510	V	0.9028
21	19.473	7826	V	1.5665
22	19.698	11671	V	2.3361
23	19.872	5831	V	1.1672
24	19.994	11699	V	2.3418
25	20.39	3030	V	0.6064

TOTAL	499589	100
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7P 5-(12-15)

84/15/99 10:53:59



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1

SAMPLE NO 0

REPORT NO 5

FILE 0

METHOD 0421

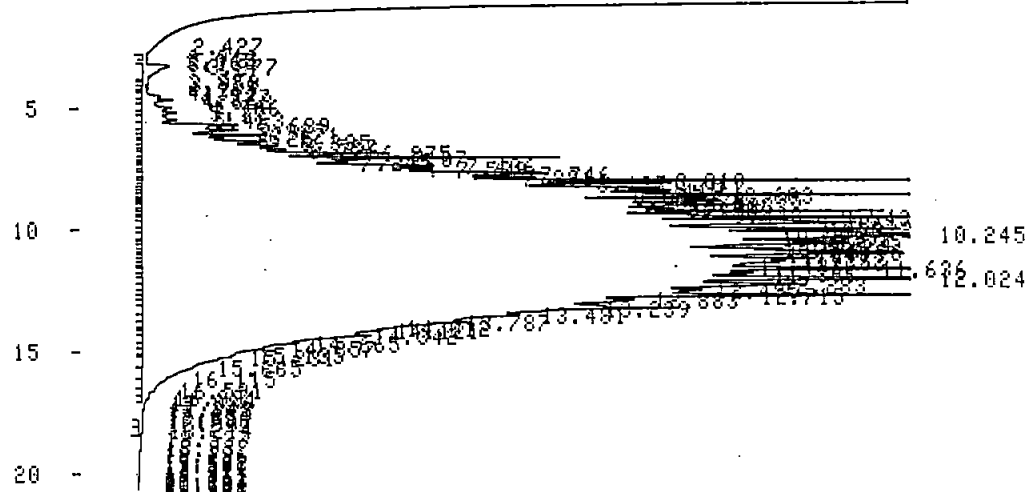
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	3.283	188786			0.2217	
2	4.587	4718	V		0.0055	
3	4.714	33931	V		0.0399	
4	5.065	36535	V		0.0429	
5	5.228	26838	V		0.0315	
6	5.524	76937	V		0.0904	
7	5.738	165453	V		0.1943	
8	5.978	210079	V		0.2467	
9	6.171	146942	V		0.1726	
10	6.29	119400	V		0.1402	
11	6.432	321338	V		0.3774	
12	6.633	276831	V		0.3251	
13	6.765	274923	V		0.3229	
14	6.915	696116	V		0.8176	
15	7.105	699321	V		0.8214	
16	7.207	194612	V		0.2286	
17	7.281	300644	V		0.3531	
18	7.473	882382	V		1.0364	
19	7.572	588627	V		0.6914	
20	7.739	1684369	V		1.9783	
21	7.918	829793	V		0.9746	
22	8.048	1414957	V		1.6619	
23	8.165	1336157	V		1.5693	
24	8.335	1083009	V		1.272	
25	8.432	1256806	V		1.4761	
26	8.554	995038	V		1.1687	
27	8.628	994721	V		1.1683	
28	8.712	1001725	V		1.1765	
29	8.816	889289	V		1.0445	
30	8.896	1176073	V		1.3813	
31	9.057	2221749	V		2.4095	

60	15.555	20742	0.142
61	16.088	10602	0.0726

TOTAL	14605558	100
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NNI (9-11)

04/15/99 09:29:19



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1

SAMPLE NO 0

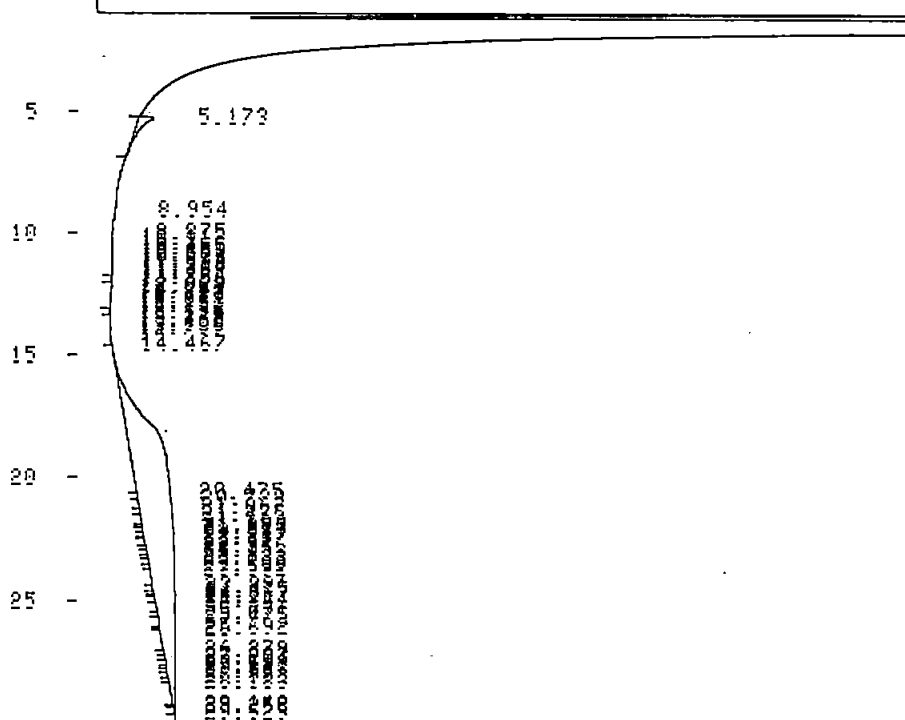
REPORT NO 2

FILE 0
METHOD 0421

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.913	7770			0.0098	
2	3.277	147168	V		0.1854	
3	3.881	5666	V		0.0071	
4	3.959	13487	V		0.017	
5	4.165	12309			0.0155	
6	4.311	8739	V		0.011	
7	4.527	65234	V		0.0822	
8	4.668	66462	V		0.0837	
9	4.966	106557	V		0.1342	
10	5.17	92876	V		0.117	
11	5.463	144666	V		0.1822	
12	5.689	325002	V		0.4093	
13	5.927	283206	V		0.3567	
14	6.121	236921	V		0.2984	
15	6.25	155165	V		0.1954	
16	6.395	360415	V		0.4539	
17	6.587	373470	V		0.4704	
18	6.726	310857	V		0.3915	
19	6.875	753622	V		0.9492	
20	7.07	686351	V		0.8645	
21	7.17	254751	V		0.3209	
22	7.245	331586	V		0.4176	
23	7.406	947481	V		1.1933	
24	7.539	601399	V		0.7575	
25	7.746	1492709	V		1.8801	
26	7.891	733345	V		0.9236	
27	8.019	1610328	V		2.0282	
28	8.137	1112224	V		1.4008	
29	8.311	1003964	V		1.2645	
30	8.419	1249499	V		1.5737	
31	8.603	2154041	V		2.713	
32	8.687	725896	V		0.9143	
33	8.795	808115	V		1.0178	
34	8.876	1108285	V		1.3959	
35	9.033	1857199	V		2.3391	
36	9.178	1114766	V		1.404	
37	9.292	1558934	V		1.9635	
38	9.448	1075390	V		1.3544	
39	9.543	2120008	V		2.6701	

04/15/99 13:22:35

ESW 75-8-75



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC

CHANNEL NO 1

SAMPLE NO 0

REPORT NO 0

FILE 0
METHOD 0421

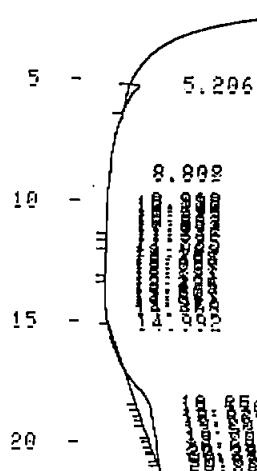
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	5.173	130275			2.4046	
2	11.704	3014			0.0556	
3	13.136	4187			0.0773	
4	20.475	2182129			40.2778	
5	20.729	156241	V		2.8839	
6	21.067	234854	V		4.3349	
7	21.375	143918	V		2.6564	
8	21.4	9811	V		0.1811	
9	21.692	226409	V		4.1791	
10	21.883	70437	V		1.3001	
11	22.037	110561	V		2.0407	
12	22.267	103837	V		1.9166	
13	22.337	31185	V		0.5756	
14	22.546	157364	V		2.9046	
15	22.75	84750	V		1.5643	
16	22.9	107422	V		1.9828	
17	23.133	56533	V		1.0435	
18	23.308	118304	V		2.1827	
19	23.592	87842	V		1.6214	
20	23.921	286112	V		5.2811	
21	24.475	99431	V		1.8353	
22	24.567	47945	V		0.885	
23	24.7	25142	V		0.4641	
24	24.844	91590	V		1.6906	
25	25.071	128756	V		2.3766	
26	25.475	67265	V		1.2416	

6	21.067	48530	V	4.4591
7	21.375	28755	V	1.987
8	21.692	16948	V	1.5572

TOTAL	1088332	100
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04/15/99 14:00:38

SSW Center 004



CHROMATOGRAM 1 MEMORIZED

CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 10

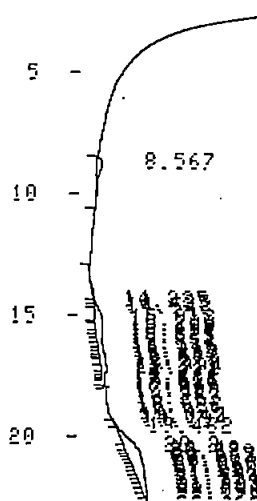
FILE 0
METHOD 0421

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	5.206	90098			13.94	
2	11.346	5558	V		0.86	
3	11.725	6088	V		0.942	
4	13.131	4724			0.7309	
5	18.354	175165			27.1017	
6	18.554	53303	V		8.247	
7	18.833	61412	V		9.5016	
8	18.969	40322	V		6.2386	
9	19.208	41492	V		6.4197	
10	19.704	84153	V		13.0202	
11	19.833	19044	V		2.7918	
12	20.087	27825	V		4.305	
13	20.296	15859	V		2.4538	
14	20.358	3575	V		0.5531	
15	20.6	15217	V		2.3543	
16	20.783	3491	V		0.5402	

TOTAL	646325	100
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04/15/99 14:30:57

SSW SW P.p



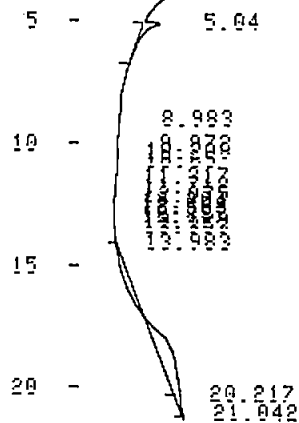
CHROMATOGRAM 1 MEMORIZED

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	5.204	122083			7.0835	
2	13.09	4760			0.2762	
3	18.817	679733			29.4391	
4	19.467	288034	V		16.7122	
5	20.675	386367	V		22.4176	
6	20.997	94819	V		5.5016	
7	21.2	24469	V		1.4197	
8	21.287	13560	V		0.7868	
9	21.558	63667	V		3.6841	
10	21.804	11801	V		0.6847	
11	22.087	28077	V		1.6291	
12	22.429	6130	V		0.3557	

TOTAL 1723500 100

04/15/99 12:52:32

NSWA 7S-8.75



CHROMATOGRAM 1 MEMORIZED

CR501: CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0

FILE 0
METHOD 0421

REPORT NO 7

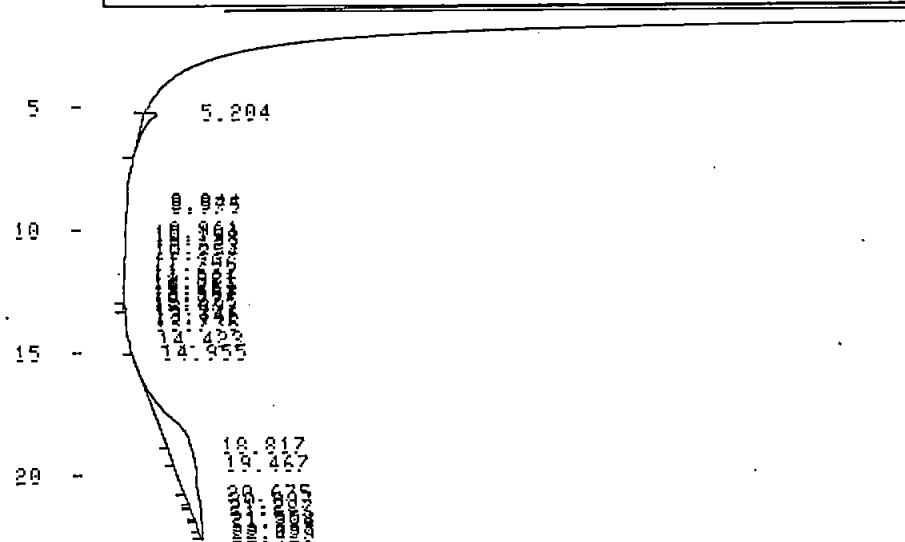
PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	5.04	121243			19.2154	
2	20.217	451972			71.6314	
3	21.042	57754	V		9.1531	
TOTAL		630969			100	

42	21.388	37684	V	1.2723
43	21.567	70792	V	2.3901
44	21.769	70253	V	2.3719
45	21.975	53773	V	1.8155
46	22.192	56453	V	1.906
47	22.425	56904	V	1.9212
48	22.579	18510	V	0.6249
49	22.789	53132	V	1.7938
50	23.271	46202	V	1.5599
51	23.525	12632	V	0.4265
52	23.779	5958	V	0.2012

TOTAL 2961898 100

(OUBDN)
SP-1

04/15/99 12:19:22



CHROMATOGRAM 1 MEMORIZED

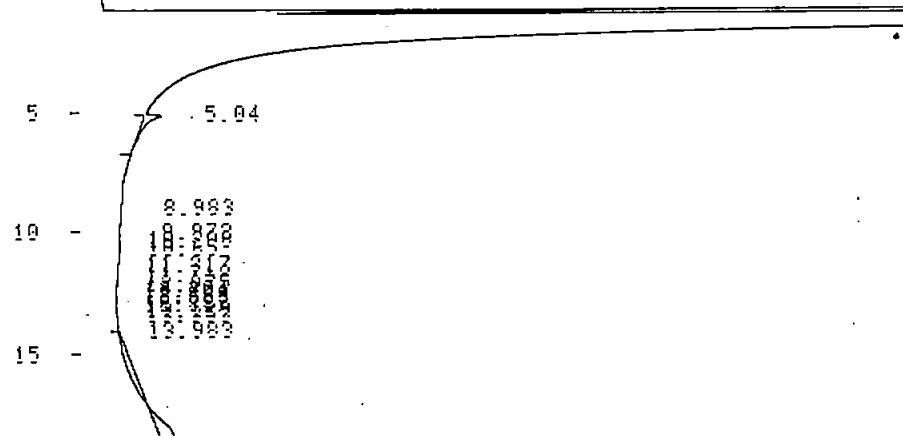
CR501 CHROMATOPAC
CHANNEL NO 1
SAMPLE NO 0
REPORT NO 6

FILE 0
METHOD 0421

PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	5.204	122083			7.0835	
2	13.09	4760			0.2762	
3	18.817	679733			39.4391	
4	19.467	288034	V		16.7122	
5	20.675	386367	V		22.4176	
6	20.997	94819	V		5.5016	
7	21.2	24469	V		1.4197	
8	21.287	13560	V		0.7868	
9	21.558	63667	V		3.6941	
10	21.804	11801	V		0.6847	
11	22.087	28077	V		1.6291	
12	22.429	6130	V		0.3557	
TOTAL		1723500			100	

04/15/99 12:52:32

NSWA 75-8.75



CHAIN-OF-CUSTODY RECORD

[illegible]

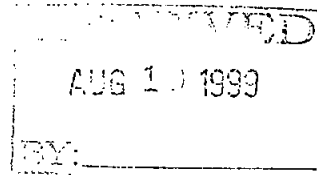


Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Floyd & Snider Inc.	Project: Not Provided	Sampled: 8/10/99
83 South King Street, Suite 614	Project Number: Not Provided	Received: 8/10/99
Seattle, WA 98104	Project Manager: Roy Kuroiwa	Reported: 8/17/99 12:23

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1R	B908199-01	Water	8/10/99



North Creek Analytical - Bothell

Kirk Gendron, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document.
This analytical report must be reproduced in its entirety.*

North Creek Analytical, Inc.
Environmental Laboratory Network



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Floyd & Snider Inc.	Project: Not Provided	Sampled: 8/10/99
83 South King Street, Suite 614	Project Number: Not Provided	Received: 8/10/99
Seattle, WA 98104	Project Manager: Roy Kuroiwa	Reported: 8/17/99 12:23

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<u>MW-1R</u>				<u>B908199-01</u>			<u>Water</u>	
Diesel Range Hydrocarbons	0890457	8/13/99	8/15/99		0.250	0.269	mg/l	
Lube Oil Range Hydrocarbons	"	"	"		0.500	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		92.1	%	

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*Refer to end of report for text of notes and definitions.

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



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541.383.9310 fax 541.382.7588

Floyd & Snider Inc.-	Project: Not Provided	Sampled: 8/10/99
83 South King Street, Suite 614	Project Number: Not Provided	Received: 8/10/99
Seattle, WA 98104	Project Manager: Roy Kuroiwa	Reported: 8/17/99 12:23

Semi-volatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0890457										
Date Prepared: 8/13/99										
Extraction Method: EPA 3520C/600 Series										
Blank										
Diesel Range Hydrocarbons	8/15/99			ND	mg/l	0.250				
Lube Oil Range Hydrocarbons	"			ND	"	0.500				
Surrogate: 2-FBP	"	0.321		0.323	"	50.0-150	101			
Blank										
0890457-BLK2										
Diesel Range Hydrocarbons	8/16/99			ND	mg/l	0.250				
Lube Oil Range Hydrocarbons	"			ND	"	0.500				
Surrogate: 2-FBP	"	0.321		0.294	"	50.0-150	91.6			
LCS										
0890457-BS1										
Diesel Range Hydrocarbons	8/16/99	2.00		1.85	mg/l	60.0-140	92.5			
Surrogate: 2-FBP	"	0.321		0.363	"	50.0-150	113			
LCS Dup										
0890457-BSD1										
Diesel Range Hydrocarbons	8/16/99	2.00		1.83	mg/l	60.0-140	91.5	40.0	1.09	
Surrogate: 2-FBP	"	0.321		0.335	"	50.0-150	104			
Matrix Spike										
0890457-MS1 B908207-02										
Diesel Range Hydrocarbons	8/16/99	3.77	ND	3.44	mg/l	60.0-140	91.2			
Surrogate: 2-FBP	"	0.605		0.454	"	50.0-150	75.0			
Matrix Spike Dup										
0890457-MSD1 B908207-02										
Diesel Range Hydrocarbons	8/15/99	3.77	ND	3.41	mg/l	60.0-140	90.5	40.0	0.770	
Surrogate: 2-FBP	"	0.605		0.602	"	50.0-150	99.5			

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*Refer to end of report for text of notes and definitions.

Kirk Gendron, Project Manager

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Page 3 of 4



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Floyd & Snider Inc.	Project: Not Provided	Sampled: -8/10/99
83 South King Street, Suite 614	Project Number: Not Provided	Received: 8/10/99
Seattle, WA 98104	Project Manager: Roy Kuroiwa	Reported: 8/17/99 12:23

Notes and Definitions

#	Note
---	------

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

Recov. Recovery

RPD Relative Percent Difference

North Creek Analytical - Bothell

Kirk Gendron, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

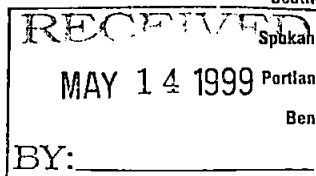


CHAIN OF CUSTODY REPORT

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(503) 906-9200 FAX 906-9210
(541) 383-9310 FAX 382-7588

Work Order #: 15908199

CLIENT: <u>FLOYD SNIDER</u>		INVOICE TO: <u>FLOYD SNIDER</u>		TURNAROUND REQUEST in Business Days*			
REPORT TO: <u>RAY KUROIWA</u>				Organic & Inorganic Analyses			
ADDRESS:				10 7 5 4 3 2 1 <1			
PHONE: <u>206-292-2078</u> FAX:		P.O. NUMBER:		STD. 5 4 3 2 1 <1			
PROJECT NAME:		PROJECT NUMBER:		Petroleum Hydrocarbon Analyses			
SAMPLED BY:		REQUESTED ANALYSES		OTHER Please Specify			
CLIENT SAMPLE IDENTIFICATION		SAMPLING DATE/TIME		MATRIX (W, S, O) # OF CONT. COMMENTS NCA WO ID			
1. <u>MW-1R</u>		<u>WATER</u>		<u>15908799-01</u>			
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
RELINQUISHED BY: <u>[Signature]</u>		DATE: <u>8/12/99</u>		RECEIVED BY: <u>[Signature]</u>		DATE: <u>8-10-99</u>	
PRINT NAME: <u>FLOYD SNIDER</u>		TIME: <u>1529</u>		PRINT NAME: <u>[Signature]</u>		TIME: <u>1530</u>	
RELINQUISHED BY:		DATE:		RECEIVED BY:		DATE:	
PRINT NAME:		TIME:		PRINT NAME:		TIME:	
ADDITIONAL REMARKS:				TEMP: <u>22.0 w/o</u>			



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Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883
541.383.9310 fax 541.382.7588

Floyd & Snider Inc. 83 South King Street, Suite 614 Seattle, WA 98104	Project: Renton - Walgreen Project Number: WLGRNS - MW1R/MW4 Project Manager: Roy Kuroiwa	Sampled: 5/5/99 Received: 5/5/99 Reported: 5/12/99 15:37
---	---	--

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-4 (13:15)	B905096-02	Water	5/5/99



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Floyd & Snider Inc.	Project: Renton - Walgreen	Sampled: 5/5/99
83 South King Street, Suite 614	Project Number: WLGRNS - MW1R/MW4	Received: 5/5/99
Seattle, WA 98104	Project Manager: Roy Kuroiwa	Reported: 5/12/99 15:37

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<u>MW-4 (13:15)</u>				<u>B905096-02</u>			<u>Water</u>	
Gasoline Range Hydrocarbons	0590138	5/6/99	5/7/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		83.8	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		92.1	"	



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541.383.9310 fax 541.382.7588

Floyd & Snider Inc. 83 South King Street, Suite 614 Seattle, WA 98104	Project: Renton - Walgreen Project Number: WLGRNS - MW1R/MW4 Project Manager: Roy Kuroiwa	Sampled: 5/5/99 Received: 5/5/99 Reported: 5/12/99 15:37
---	---	--

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0590138										
Blank										
Date Prepared: 5/6/99			Extraction Method: EPA 5030B (P/T)							
0590138-BLK1										
Gasoline Range Hydrocarbons	5/6/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		42.2	"	50.0-150	87.9			
Surrogate: 4-BFB (PID)	"	48.0		44.5	"	50.0-150	92.7			
Blank										
0590138-BLK2										
Gasoline Range Hydrocarbons	5/7/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		41.9	"	50.0-150	87.3			
Surrogate: 4-BFB (PID)	"	48.0		44.0	"	50.0-150	91.7			
LCS										
0590138-BS1										
Gasoline Range Hydrocarbons	5/6/99	500		520	ug/l	70.0-130	104			
Surrogate: 4-BFB (FID)	"	48.0		49.5	"	50.0-150	103			
Duplicate										
0590138-DUP1			B905066-02							
Gasoline Range Hydrocarbons	5/11/99		143	132	ug/l			25.0	8.00	
Surrogate: 4-BFB (FID)	"	48.0		46.9	"	50.0-150	97.7			
Duplicate										
0590138-DUP2			B905088-03							
Gasoline Range Hydrocarbons	5/7/99		ND	ND	ug/l			25.0		
Surrogate: 4-BFB (FID)	"	48.0		38.2	"	50.0-150	79.6			
Matrix Spike										
0590138-MS1			B905082-01							
Benzene	5/7/99	10.0	ND	10.3	ug/l	70.0-130	103			
Toluene	"	10.0	ND	10.2	"	70.0-130	102			
Ethylbenzene	"	10.0	ND	10.6	"	70.0-130	106			
Xylenes (total)	"	30.0	ND	30.5	"	70.0-130	102			
Surrogate: 4-BFB (FID)	"	48.0		44.7	"	50.0-150	93.1			
Surrogate: 4-BFB (PID)	"	48.0		47.6	"	50.0-150	99.2			

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*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager

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Floyd & Snider Inc. 83 South King Street, Suite 614 Seattle, WA 98104	Project: Renton - Walgreen Project Number: WLGRNS - MW1R/MW4 Project Manager: Roy Kuroiwa	Sampled: 5/5/99 Received: 5/5/99 Reported: 5/12/99 15:37
---	---	--

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup	0590138-MSD1	B905082-01								
Benzene	5/7/99	10.0	ND	10.5	ug/l	70.0-130	105	15.0	1.92	
Toluene	"	10.0	ND	10.5	"	70.0-130	105	15.0	2.90	
Ethylbenzene	"	10.0	ND	10.6	"	70.0-130	106	15.0	0	
Xylenes (total)	"	30.0	ND	29.8	"	70.0-130	99.3	15.0	2.68	
Surrogate: 4-BFB (FID)	"	48.0		43.5	"	50.0-150	90.6			
Surrogate: 4-BFB (PID)	"	48.0		48.5	"	50.0-150	101			



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541.383.9310 fax 541.382.7588

Floyd & Snider Inc.	Project: Renton - Walgreen	Sampled: 5/5/99
83 South King Street, Suite 614	Project Number: WLGRNS - MW1R/MW4	Received: 5/5/99
Seattle, WA 98104	Project Manager: Roy Kuroiwa	Reported: 5/12/99 15:37

Notes and Definitions

#	Note
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

North Creek Analytical - Bothell

Joy B Chang, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



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Environmental Laboratory Services

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(503) 906-9200

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CHAIN OF CUSTODY REPORT

Work Order # 13905096

REPORT TO: <u>Roy K. Kuroiwa, PE</u>			INVOICE TO: <u>Roy Kuroiwa, PE</u>			TURNAROUND REQUEST in Business Days *		
ATTENTION: <u>FLOYD + SNIDER INC.</u>			ATTENTION: <u>FLOYD + SNIDER</u>			Organic & Inorganic Analyses ☐ 10 ☐ 7 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ Same Day		
ADDRESS: <u>B3 King ST #614</u>			ADDRESS:			Fuels & Hydrocarbon Analyses ☒ 3 ☐ 3-4 ☐ 2 ☐ 1 ☐ Same Day		
PHONE: <u>206-2078 (206)</u> FAX:			P.O. NUMBER:			NCA QUOTE #:		
PROJECT NAME: <u>RENTON WLG RNS</u>			Analysis Request: <u>NUTPH-G-BOXER</u> <u>WATER-DX</u> <u>TOILET-DX</u> <u>DISOLV-DX</u> <u>TOILET-DX</u>			OTHER Specify:		
PROJECT NUMBER: <u>WLG RNS - MW 1R / MW 4</u>						* Turnaround Requests less than standard may incur Rush Charges.		
SAMPLED BY: <u>DAK</u>								
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)				MATRIX (W, S, A, O)	# OF CONTAINERS	COMMENTS
1. <u>MW-4</u>	<u>5.5.99/1300</u>		<u>13905096-01</u>			<u>GH2O</u>	<u>4</u>	<u>2 AMBERS</u>
2. <u>MW-4</u>	<u>1/135</u>		<u>13905096-02</u>			<u>GH2O</u>	<u>4</u>	<u>2 PLASTIC LITRES</u>
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
RELINQUISHED BY (Signature): <u>Dale A. Kamen</u>			DATE: <u>5.5.99</u>			RECEIVED BY (Signature): <u>Adam Reed</u>		
PRINT NAME: <u>DALE A. KAMEN</u>			FIRM: <u>ADDGEON</u>			TIME: <u>1600</u>		
RELINQUISHED BY (Signature):			DATE:			RECEIVED BY (Signature):		
PRINT NAME:			FIRM:			TIME:		
RELINQUISHED BY (Signature):			DATE:			RECEIVED BY (Signature):		
PRINT NAME:			FIRM:			TIME:		
ADDITIONAL REMARKS: <u>1 PLASTIC Litre Field Filtered AS Labelled</u> <u>1 PLASTIC Litre NOT Field Filtered</u> → <u>Roy K will call NCA if "HOLDS" ARE to wp/ 10.10e</u>								

Appendix D

UST's Decommissioning & Site Assessment Report

ADI Geoscience

July 1999

USTs' DECOMMISSIONING & SITE ASSESSMENT

REPORT:

Renton Walgreen's Construction Site

Submitted to Floyd & Snider, Inc.

Prepared July 1999

By:

**ADI GEOSCIENCE
P.O. Box 6128
Edmonds, WA 98026
www.aidgeoscience.com**



**ADI GEOSCIENCE
INTERNATIONAL**

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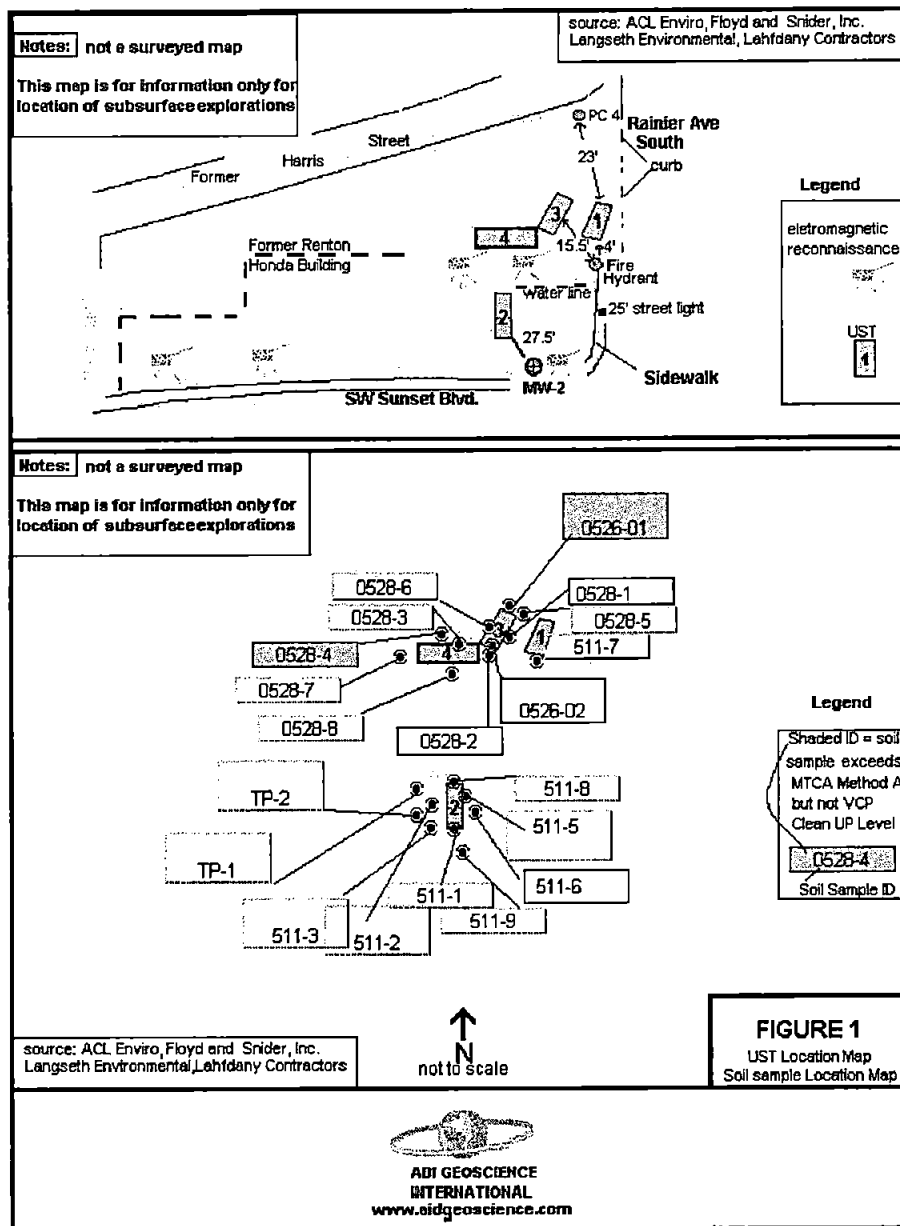
1.0 SUMMARY

ADI Geoscience International (ADI) presents the results of underground storage tank decommissioning of four underground storage tanks (UST's) at the subject site. The project site is known as the former Renton Honda Motorcycle site and is located at the northwest intersection of Sunset Boulevard and Rainier Avenue South in Renton Washington. The four USTs were discovered within Tax Lot 79 of the subject site with the exception of UST #1 which was discovered straddling the eastern subject site property boundary beneath the City of Renton sidewalk.

Figure 1 shows the former locations (approximate) of the USTs. A brief summary of the significant UST site assessment findings is presented below:

- The four USTs were discovered at the subject site in mid- and late May 1999 during water line installation
- The subject site is active in ECOLOGY NWRO Toxic Cleanup Program files. An existing clean up action plan for the site had been negotiated by Floyd and Snider, Inc. in September 1998
- The UST's were removed by in June 1999 by Langseth Environmental and Hobart Excavation Services
- ACL Enviromanagement, LLC and Langseth Environmental Services, Inc. documented UST site assessment per ECOLOGY decommissioning regulations
- No groundwater or saturated soil was reported to have been encountered during UST removal
- Twenty soil samples collected and analyzed in fulfillment of UST decommissioning did not contain concentrations of gasoline or diesel/heavy oil range hydrocarbons above method detection levels
- Two soil samples obtained at six and nine (to-eleven foot depth) tested above ECOLOGY MTCA Method Cleanup Levels for oil range TPH
- All USTs were pumped of fluid, cleaned, rinsed and inerted prior to decommissioning;
- Total fluids pumped from USTs 1, 2 and 3 included approximately 4,042 gallons of water and dissolved phase gasoline range hydrocarbons

This summary is presented for introductory purposes only and should be used in conjunction with the full text of this report.



DALE A. KRAMER, PG

Principal Consulting Geologist

Environmental Geology, Hydrogeology, Sedimentology,
Geology, Water Quality, Watershed Analyses
www.aidgeoscience.com

A.D.I. GEOSCIENCE INTERNATIONAL516 NE 165th Street Seattle, Washington 98155 206.977.6420 fax 206.362.9486**2.0 UST DECOMMISSIONING**

The USTs were discovered in mid and late May 1999 during installation and upgrade waterlines at the subject site. Figure 1 shows the location of the USTs. In this report, the USTs are denoted as UST #'s 1, 2, 3, and 4. Upon discovery of UST #1, the ECOLOGY Northwest Regional Office was notified. ECOLOGY determined that a Notice of Intent to Decommission the UST was not necessary due to the fact the site was an active cleanup site with an active and ongoing Cleanup Action Plan.

The Table below summarizes pertinent information concerning the former USTs.

UST ID	Discovery Date	UST Approx. Capacity	Volume of Fluid Pumped	Date of UST Decommissioning
UST #1	11-May-99	1000 gallon gasoline ?	300 gallons	17-May-99
UST#2	13-May-99	2000 gallon gasoline	1942 gallons	17-May-99
UST#3	20-May-99	2000 gallon gasoline	none reported	26-May-99
UST#4	26-May-99	2000gallon gasoline	1800 gallons	27-28 May 1999

Langseth Environmental Inc. Tacoma, WA removed USTs #1, #2 and # 3. ACL *Enviromanagement* of Renton WA conducted Site Assessment of USTs #1, #2 and # 3. UST #4 was removed by Hobart Services, Inc. The Site Assessment for UST #4 was conducted by Langseth Environmental.

ADI Geoscience International compiled this report summarizing the work. Floyd & Snider, Inc. of Seattle manages the cleanup action plan for the construction site.

Contact names and phone numbers of the project personnel are summarized below:

Floyd & Snider, Inc.	Roy K. Kuroiwa, PE	206-292-2078
ACL Enviromanagement, LLC	Steve M. Marczewski, PE	425-227-5153
ADI Geoscience	Dale A. Kramer, PG	206-977-6420
Langseth Environmental Services, Inc.	Tom Langseth	253-536-6961

2.1 Electromagnetic Reconnaissance of Additional USTs

Following discovery of the second UST, an Electro-magnetic (EM) device was used to look for additional buried metal targets. Small metal objects in the near surface (1 to 2 feet) will have an EM response equivalent to a larger object (UST) at depth. The signal strength, size and continuity of the response at the surface may indicate a possible UST. A Schonstedt magnetometer was employed to look for possible evidence of UST locations.

Due to the amount of construction-related equipment and construction related soil disturbance including stockpiled soil, etc., evidence for additional USTs was not found. UST's #3 and #4 lay undetected beneath a large (construction related) soil stockpile. Georecon International, Inc. conducted the electromagnetic reconnaissance effort.

Environmental Geology, Hydrogeology, Sedimentology,
Geology, Water Quality, Watershed Analyses
www.adigeoscience.com

2.2 USTs Fluid Contents Sampling

USTs #1, #2 and #4 contained fluid upon discovery. The fluid was sampled and tested in order to assess the chemical nature of the fluid. All fluid from the USTs was obtained through the use of factory packaged disposable bailers. Analytical testing results of the fluids from the USTs are summarized in Table 1. Analytical Test Certificates of the fluid samples are located in Appendix B. Fluid disposal documentation is included in Appendix C.

2.3 USTs Fluid Pumping

Approximately 4,042 total gallons of fluid was removed from the USTs. The fluids contained water with relatively low concentrations of (weathered?) gasoline range hydrocarbons; no free product was reported to be in any of the USTs. All fluids pumped from all of the USTs were transported and disposed by Guardian Industrial Services, Tacoma. Appendix C contains fluid and UST disposal documentation.

2.4 USTs Inerting, Removal

Following fluid removal, and UST inerting the Renton City Fire Prevention Unit approved removal of the USTs from the subsurface. Marine chemist, George Blair certified all USTs as inert prior to removal.

2.4.1 USTs Physical Condition

Appendix A, Plates 1A through 2B, are photographs of the USTs immediately upon removal from the subsurface. No penetrations or holes were observed on any of the USTs. UST #4 was punctured in the top of the UST by an excavator upon its discovery in the subsurface. UST #1 contained a tag labeled "Chevron Ethyl". All of the USTs themselves were transported by Langseth Environmental Services and disposed at Schnitzer Steel Industries of Tacoma. Appendix C contains UST final disposition documentation.

2.5 USTs Soil Sampling

Soil samples were collected from areas around and beneath all of the USTs in general compliance with ECOLOGY UST site assessment guidelines.

3.0 Sampling and Analysis

ACL Enviromanagement and Langseth Environmental Services collected soil (and fluid) for the UST site assessment efforts. TEG's Mobile Lab and/or North Creek Analytical conducted analytical testing.

Soil and fluid samples were analyzed by ECOLOGY Methods TPH-G/BTEX, TPH-Dx, and Total Lead.

Appendix B contains all analytical test certificates and corresponding chromatography. Table 1 summarizes pertinent information concerning all of the samples, viz.: sample type, depth, and location description and analytical test results.

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A.D.I. GEOSCIENCE INTERNATIONAL516 NE 165th Street Seattle, Washington 98155 206.977.6420 fax 206.362.9486**3.1 Fluid Analytical Test Results**

Fluid analytical test results are summarized in Table 1. Appendix B contains analytical test certificates and corresponding chromatography.

Neither groundwater nor saturated soil conditions were reported in any of the excavations related to the decommissioning efforts.

3.2 Soil Analytical Test Results

Twenty soil samples collected and analyzed in fulfillment of UST decommissioning did not contain concentrations of gasoline or diesel/heavy oil range hydrocarbons above method detection levels.

Two soil samples obtained at six and nine (to-eleven foot depth) tested above ECOLOGY MTCA Method Cleanup Levels for oil range TPH. Figure 1 shows the location of the two soil samples.

Approximately 50 cubic yards of suspected PCS soil was stockpiled however analytical testing yielded results below MTCA Method A cleanup levels. Appendix B contains the analytical test certificates.

4.0 REGULATORY RECORDS/PERMITS

Upon discovery of UST #1 ECOLOGY Northwest Regional Office was notified. ECOLOGY determined on 13 May 1999 that no notice of intent to decommission the USTs was necessary due to the fact the site was an active cleanup site with a Cleanup Action Plan.

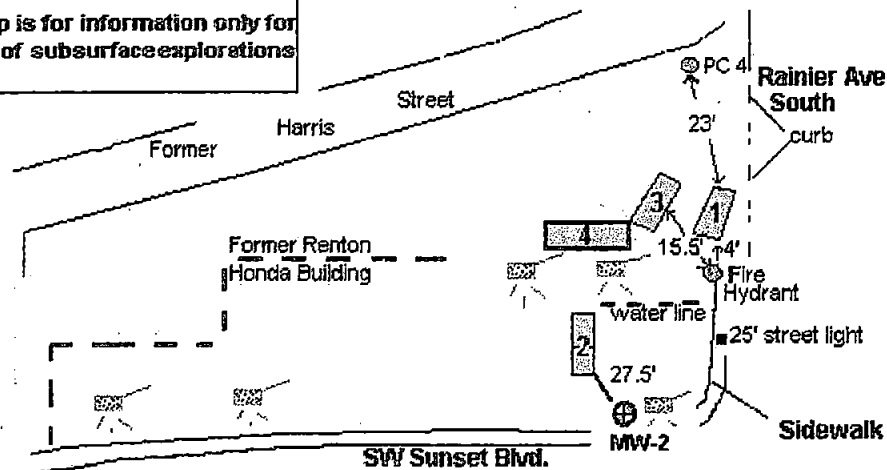
5.0 MATERIAL MANAGEMENT AND HANDLING

Appendix C contains pertinent material handling documentation.

Notes: not a surveyed map

This map is for information only for location of subsurface explorations

source: ACL Enviro, Floyd and Snider, Inc.
Langseth Environmental, Lahfdany Contractors



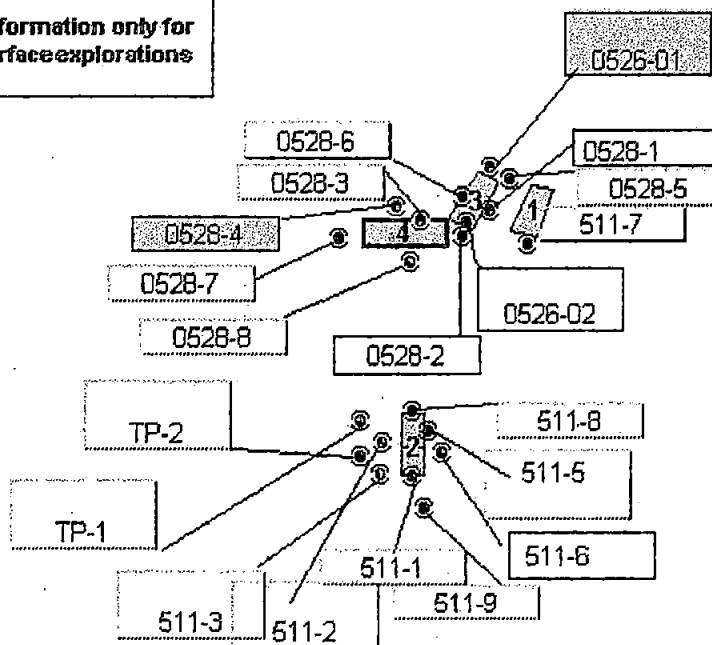
Legend

electromagnetic reconnaissance



Notes: not a surveyed map

This map is for information only for location of subsurface explorations



Legend

Shaded ID = soil sample exceeds MTCA Method A but not VCP Clean Up Level

0528-4
Soil Sample ID

source: ACL Enviro, Floyd and Snider, Inc.
Langseth Environmental, Lahfdany Contractors



FIGURE 1

UST Location Map
Soil sample Location Map



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Table 1
Chemical Analytical Results for Soil and Fluid Samples
Renton Walgreens USTs Decommissioning

Sample ID	Sample Depth in Feet	Sample Date	Sample Location Description	Petroleum Product Type ¹	Concentration in mg/kg or mg/l						8021B or BETX	Total Pb
					TPH-G	TPH-D	TPH-O	TPH (D+O)	cPAHs			
Orphan UST 1 Gasoline (approx. 500 gallon; discovered 11 May 1999)												
Fluid	n/a	5/11/99	fluid from UST interior	gasoline	53.2	nt	nt	nt	nt	3.4, ND, 6.7, 6.9	0.0701	
511-7	6.0	5/17/99	south sidewall	n/a	10 U	nt	nt	nt	nt	ND	nt	
note: Orphan UST excavation 1 was backfilled due to structural concerns of the east sidewall (see report)												
Orphan UST 2 Gasoline (approx. 2000 gallon (double compartment); discovered 12 May 1999)												
Orph 2 Fluid	n/a	5/12/99	north UST compartment	gasoline weathered?	90	nt	nt	nt	nt	16, 1.6, 23.1, 8.0	0.0413	
OR2-C2	n/a	5/13/99	south UST compartment	gasoline weathered?	103	nt	nt	ND	nt	2.24, 1.9, 11.2, 14.5	nt	
TP-1	2.75-4.0	5/12/99	west/adjacent to UST	n/a	20 U	nt	nt	nt	nt	ND	nt	
TP-2	6.0-8.0	5/12/99	west and adj to UST	n/a	6.3 U	nt	nt	0	nt	ND	nt	
511-1	8.0-10.0	5/17/99	south end	n/a	10U	nt	40U	ND	nt	ND	nt	
511-2	11.0	5/17/99	west midpoint of UST	n/a	10U	20U	40U	ND	nt	ND	nt	
511-3	9.0	5/17/99	west midpoint of UST	n/a	10U	nt	40U	ND	nt	ND	nt	
511-4	10.0	5/17/99	south end of UST	weathered gas as diesel??	10U	1,900	40U	1,900	nt	ND	nt	
511-5	10.0	5/17/99	east midpoint of UST	n/a	10U	nt	nt	nt	nt	ND	nt	
511-6	8.0	5/17/99	6 feet from east sidewall from UST midpoint	n/a	10U	nt	nt	nt	nt	ND	nt	
511-8	7.0	5/17/99	north sidewall	n/a	10U	nt	nt	ND	nt	ND	nt	
511-9	36319.0	5/17/99	south sidewall	n/a	10U	20U	40U	ND	nt	ND	nt	
511-9 DUP		5/17/99	south sidewall	n/a	10U	20U	40U	ND	nt	ND	nt	

Table 1
Chemical Analytical Results for Soil and Fluid Samples
Renton Walgreens USTs Decommissioning

Sample ID	Sample Depth in Feet	Sample Date	Sample Location Description	Petroleum Product Type ¹	Concentration in mg/kg or mg/l						Total Pb
					TPH-G	TPH-D	TPH-O	TPH (D+O)	cPAHs	8021B or BETX	
Orphan UST 3 Gasoline (approx. 750 gallon; discovered 20 May 1999)											
0526-01	6.0	5/26/99	north end of UST 3	n/a	10 U	10 U	260	260	nt	ND	5 U
0526-02	5.0	5/26/99	south end of UST	n/a	10 U	10 U	100 U	ND	nt	ND	20
0528-1	9-10.5	5/28/99	east sidewall	n/a	10 U	20 U	40 U	ND	nt	ND	5 U
0528-2	9-10.5	5/28/99	south sidewall	n/a	10 U	20 U	40 U	ND	nt	ND	6
0528-5	9-10.5	5/28/99	east end	n/a	10 U	20 U	40 U	ND	nt	ND	15
0528-6	11.0	5/28/99	UST 3 base	n/a	10 U	20 U	40 U	ND	nt	ND	9
Orphan UST 4 Gasoline (approx. 2000 gallon; discovered 26 May 1999)											
0526-WV	n/a	5/26/99	fluid interior UST	gasoline	100	200 U	400 U	600 U	nt	1.1, 4.0	nt
0526-WV	n/a	5/26/99	fluid interior UST	gasoline	110	200 U	400 U	600 U	nt	1.6, 1.1,	nt
0528-3	11.0	5/28/99	UST 4 bottom	n/a	10 U	20 U	40 U	ND	nt	ND	59
0528-4	"9-11"	5/28/99	north sidewall	undetermined	10 U	20 U	300	300	nt	ND	5U
0528-7	"9-11"	5/28/99	west sidewall	n/a	10 U	20 U	40 U	ND	nt	ND	5
0528-8	9-11	5/28/99	south sidewall	n/a	10 U	20 U	40 U	ND	nt	ND	5
0528-9	9-11	5/28/99	stockpiled soil	n/a	10 U	20 U	40 U	ND	nt	ND	5U
0528-10	n/a	5/28/99	stockpiled soil	gasoline weathered?	65	20 U	40 U	ND	nt	ND, ND, .015	16
0528-11	n/a	5/28/99	stockpiled soil	gasoline weathered?	43	20 U	120	120	nt	ND	6
0528-11 DUP	n/a	5/28/99	stockpiled soil	gasoline weathered?	10 U	20 U	40 U	ND	nt	ND	41
	n/a	5/28/99	stockpiled soil	gasoline weathered?	10 U	20 U	40 U	ND	nt	ND	40
MTCA Cleanup Levels					100	200	200	-	1	varies	1000?

Notes:

1 Product type determined based on review of chromatograms (for FSI data only) and site history.

MTCA = State of Washington Model Toxics Control Act

NWTPH-HCID = Total Petroleum Hydrocarbons Screen Method

NWTPH-G = Total Petroleum Hydrocarbons in the Gasoline Range

NWTPH-D = Total Petroleum Hydrocarbons in the Diesel Range

NWTPH-O = Total Petroleum Hydrocarbons in the Heavy or Lube Oil Range

cPAH = carcinogenic polycyclic aromatic hydrocarbons

ND = Gasoline, Diesel, and Oil not detected at laboratory detection limit unless indicated.

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total Xylenes

- = Not analyzed.

U = Not detected at detection limit indicated.

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**APPENDIX A
SITE PHOTOGRAPHS (PLATES 1A THROUGH 2B)**



PLATE 1A

UST 1

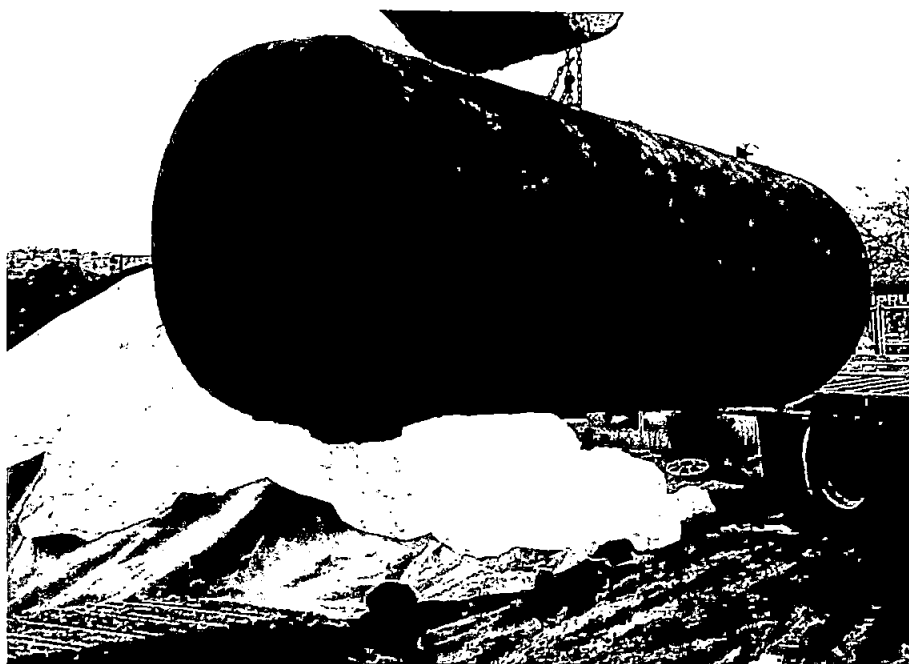


PLATE 1B

UST 2



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Orphan UST
May 1999**

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PLATE 2A

UST 3

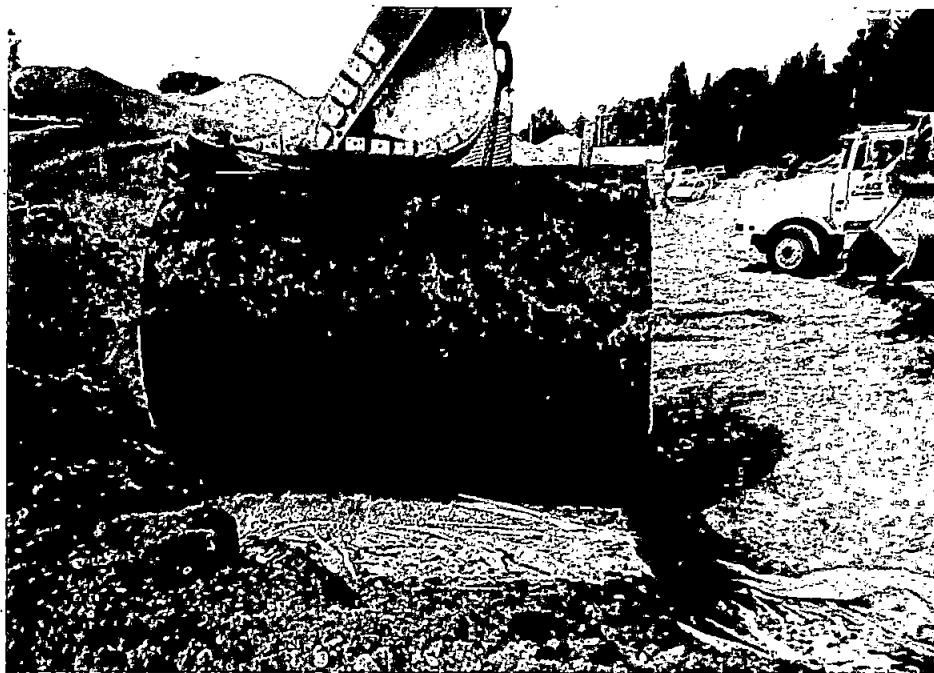


PLATE 2B

UST 4



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Orphan UST
May 1999**

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**APPENDIX B
ANALYTICAL TEST RESULTS OF SOIL AND FLUID
SAMPLES**



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Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883
541.363.9310 fax 541.382.7588

ADI Geoscience International 516 NE 165th St Seattle, WA 98155	Project: J. Lahfdany Project Number: W-05-11-99.01 Project Manager: Dale Kramer	Sampled: 5/11/99 Received: 5/11/99 Reported: 5/12/99 16:00
--	---	--

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
Fluid	B905204-01	Water	5/11/99



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 541.383.9310 fax 541.382.7588

ADI Geoscience International	Project: J. Lahfdany	Sampled: 5/11/99
516 NE 165th St	Project Number: W-05-11-99.01	Received: 5/11/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/12/99 16:00

**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B
 North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<u>Fluid</u>				<u>B905204-01</u>			<u>Water</u>	
Gasoline Range Hydrocarbons	0590138	5/11/99	5/12/99		5000	53200	ug/l	
Benzene	"	"	"		50.0	3400	"	
Toluene	"	"	"		50.0	6710	"	
Ethylbenzene	"	"	"		50.0	ND	"	
Xylenes (total)	"	"	"		100	6920	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		101	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		99.6	"	



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ADI Geoscience International	Project: J. Lahfdany	Sampled: 5/11/99
516 NE 165th St	Project Number: W-05-11-99.01	Received: 5/11/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/12/99 16:00

Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>Fluid</u>				<u>B905204-01</u>			<u>Water</u>	
Lead	0590204	5/11/99	5/12/99	EPA 6020	0.00100	0.0701	mg/l	



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ADI Geoscience International	Project: J. Lahfdany	Sampled: 5/11/99
516 NE 165th St	Project Number: W-05-11-99.01	Received: 5/11/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/12/99 16:00

**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B/Quality Control
North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0590138										
Blank										
0590138-BLK1										
Gasoline Range Hydrocarbons	5/6/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		42.2	"	50.0-150	87.9			
Surrogate: 4-BFB (PID)	"	48.0		44.5	"	50.0-150	92.7			
Blank										
0590138-BLK2										
Gasoline Range Hydrocarbons	5/7/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		41.9	"	50.0-150	87.3			
Surrogate: 4-BFB (PID)	"	48.0		44.0	"	50.0-150	91.7			
LCS										
0590138-BS1										
Gasoline Range Hydrocarbons	5/6/99	500		527	ug/l	70.0-130	105			
Surrogate: 4-BFB (FID)	"	48.0		49.5	"	50.0-150	103			
Duplicate										
0590138-DUP1 B905066-02										
Gasoline Range Hydrocarbons	5/11/99		172	159	ug/l			25.0	7.85	
Surrogate: 4-BFB (FID)	"	48.0		46.9	"	50.0-150	97.7			
Matrix Spike										
0590138-MS1 B905082-01										
Benzene	5/7/99	10.0	ND	10.3	ug/l	70.0-130	103			
Toluene	"	10.0	ND	10.2	"	70.0-130	102			
Ethylbenzene	"	10.0	ND	10.6	"	70.0-130	106			
Xylenes (total)	"	30.0	ND	30.5	"	70.0-130	102			
Surrogate: 4-BFB (FID)	"	48.0		44.7	"	50.0-150	93.1			
Surrogate: 4-BFB (PID)	"	48.0		47.6	"	50.0-150	99.2			
Matrix Spike Dup										
0590138-MSD1 B905082-01										
Benzene	5/7/99	10.0	ND	10.5	ug/l	70.0-130	105	15.0	1.92	
Toluene	"	10.0	ND	10.5	"	70.0-130	105	15.0	2.90	
Ethylbenzene	"	10.0	ND	10.6	"	70.0-130	106	15.0	0	

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.

David Vandel, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



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ADI Geoscience International	Project: J. Lahfdany	Sampled: 5/11/99
516 NE 165th St	Project Number: W-05-11-99.01	Received: 5/11/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/12/99 16:00

Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup (continued)	0590138-MSD1	B905082-01								
Xylenes (total)	5/7/99	30.0	ND	29.8	ug/l	70.0-130	99.3	15.0	2.68	
Surrogate: 4-BFB (FID)	"	48.0		43.5	"	50.0-150	90.6			
Surrogate: 4-BFB (PID)	"	48.0		48.5	"	50.0-150	101			



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ADI Geoscience International 516 NE 165th St Seattle, WA 98155	Project: J. Lahfdany Project Number: W-05-11-99.01 Project Manager: Dale Kramer	Sampled: 5/11/99 Received: 5/11/99 Reported: 5/12/99 16:00
--	---	--

Total Metals by EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0590204	Date Prepared: 5/9/99					Extraction Method: EPA 3020A				
Blank	0590204-BLK1									
Lead	5/10/99			ND	mg/l	0.00100				
Blank	0590204-BLK2									
Lead	5/12/99			ND	mg/l	0.00100				
LCS	0590204-BS1									
Lead	5/10/99	0.200		0.218	mg/l	80.0-120	109			
Matrix Spike	0590204-MS1		B905057-04							
Lead	5/10/99	0.200	0.00201	0.227	mg/l	75.0-125	112			
Matrix Spike Dup	0590204-MSD1		B905057-04							
Lead	5/10/99	0.200	0.00201	0.226	mg/l	75.0-125	112	20.0	0	



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ADI Geoscience International	Project: J. Lahfdany	Sampled: 5/11/99
516 NE 165th St	Project Number: W-05-11-99.01	Received: 5/11/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/12/99 16:00

Notes and Definitions

#	Note
---	------

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

Recov. Recovery

RPD Relative Percent Difference

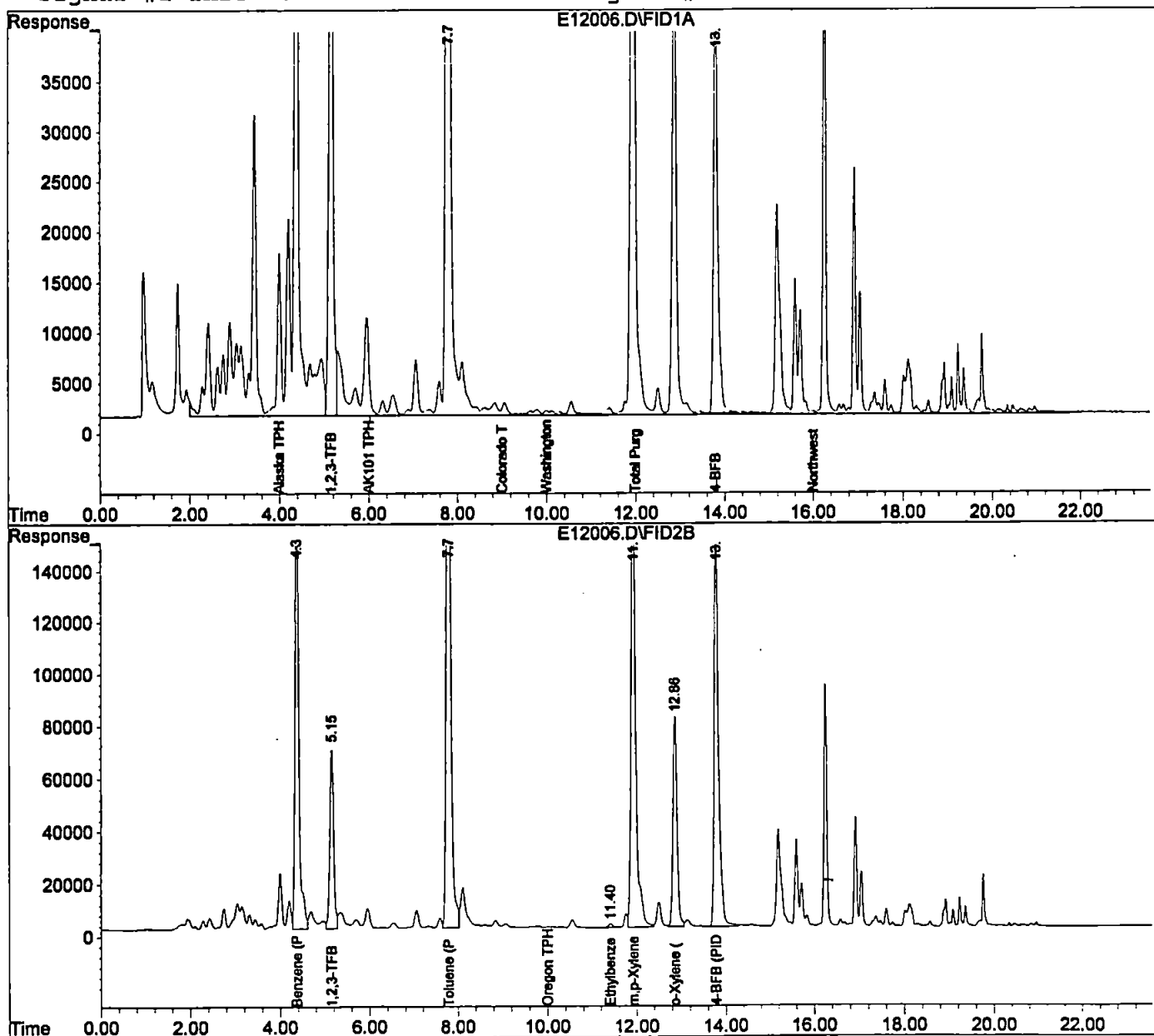
Quantitation Report

Data File : C:\HPCHEM\1\DATA\051299\E12006.D\FID1A.CH Vial: 6
 Acq On : 12 May 1999 9:49 am Operator: sa
 Sample : b905204-01 r1 Inst : GC #2
 Misc : 50 ul Multiplr: 100.00
 IntFile : SURR.E

Data File : C:\HPCHEM\1\DATA\051299\E12006.D\FID2B.CH Vial: 6
 Acq On : 12 May 99 9:49 am Operator: sa
 Sample : b905204-01 r1 Inst : GC #2
 Misc : 50 ul Multiplr: 100.00
 IntFile : SURR2.E
 Quant Time: May 12 10:12 1999 Quant Results File: TPHG0299.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHG0299.M (Chemstation Integrator)
 Title : TPH-G Method
 Last Update : Tue May 11 14:20:41 1999
 Response via : Multiple Level Calibration
 DataAcq Meth : TPHG0299.M

Volume Inj. :
 Signal #1 Phase : Signal #2 Phase:
 Signal #1 Info : Signal #2 Info :





**NORTH
CREEK
ANALYTICAL**

Environmental Laboratory Services

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(509) 924-9200 FAX 924-9290
(503) 906-9200 FAX 906-9210

CHAIN OF CUSTODY REPORT

Work Order #

B905204

REPORT TO: DALE A. KRAMER, PG			INVOICE TO:			TURNAROUND REQUEST in Business Days * Organic & Inorganic Analyses 10 7 5 4 3 2 1 Same Day Standard Fuels & Hydrocarbon Analyses 5 3-4 2 1 Same Day Standard OTHER Specify: _____ * Turnaround Requests less than standard may incur Rush Charges.		
ATTENTION: ADI Geoscience			ATTENTION: SALE					
ADDRESS: 516 NE 165th ST			ADDRESS:					
SCATTLE 98165								
PHONE: 206-977-6420 FAX: 206-362-9486			P.O. NUMBER:			NCA QUOTE #:		
PROJECT NAME: J LAHF DANY			Analysis Request: G-STEP T-LEAD					
PROJECT NUMBER: W-05-11-99-01								
SAMPLED BY: DAK								
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)				MATRIX (W, S, A, D)	# OF CONTAINERS	COMMENTS
1. FLUID	5.11.99/1400	B905204-01				W	3	2 VOAS 1 AMBER
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
RELINQUISHED BY (Signature): <i>Dale A. Kramer</i>			DATE: 5.11.99			RECEIVED BY (Signature): <i>S. Wideen</i>		
PRINT NAME: DALE A. KRAMER			FIRM: ADI			DATE: 5/11/99		
RELINQUISHED BY (Signature):			DATE:			RECEIVED BY (Signature): <i>S. Wideen</i>		
PRINT NAME:			FIRM:			DATE: 1600		
RELINQUISHED BY (Signature):			DATE:			RECEIVED BY (Signature):		
PRINT NAME:			FIRM:			DATE:		
ADDITIONAL REMARKS: PLS. supply chromatography /			5.20 W/O					
PLS. NOTE HCL NOT IN VOAS NEED HCL if > 24hr						PAGE 1 OF 1		



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Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883
541.383.9310 fax 541.382.7588

ADI Geoscience International	Project: RNTN WLGRNS	Sampled: 5/13/99
516 NE 165th St	Project Number: W-05-11-99.01	Received: 5/14/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/17/99 10:25

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
OR2-C2	B905272-01	Water	5/13/99

David Vanhel, Project Manager



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ADI Geoscience International	Project: RNTN WLGRNS	Sampled: 5/13/99
516 NE 165th St	Project Number: W-05-11-99.01	Received: 5/14/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/17/99 10:25

Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
OR2-C2				B905272-01			Water	
Gasoline Range Hydrocarbons	0590272	5/14/99	5/14/99		10000	103000	ug/l	
Benzene	"	"	"		100	2240	"	
Toluene	"	"	"		100	11200	"	
Ethylbenzene	"	"	"		100	1900	"	
Xylenes (total)	"	"	"		200	14500	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		97.1	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		95.2	"	



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ADI Geoscience International	Project: RNTN WLGRNS	Sampled: 5/13/99
516 NE 165th St	Project Number: W-05-11-99.01	Received: 5/14/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/17/99 10:25

**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B/Quality Control
North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0590272										
Blank										
0590272-BLK1										
Gasoline Range Hydrocarbons	5/12/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		39.9	"	50.0-150	83.1			
Surrogate: 4-BFB (PID)	"	48.0		43.2	"	50.0-150	90.0			
Blank										
0590272-BLK2										
Gasoline Range Hydrocarbons	5/13/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		42.3	"	50.0-150	88.1			
Surrogate: 4-BFB (PID)	"	48.0		42.9	"	50.0-150	89.4			
Blank										
0590272-BLK3										
Gasoline Range Hydrocarbons	5/14/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		40.4	"	50.0-150	84.2			
Surrogate: 4-BFB (PID)	"	48.0		42.9	"	50.0-150	89.4			
LCS										
0590272-BS1										
Gasoline Range Hydrocarbons	5/12/99	500		473	ug/l	70.0-130	94.6			
Surrogate: 4-BFB (FID)	"	48.0		47.0	"	50.0-150	97.9			
Duplicate										
0590272-DUP1 B905142-01										
Gasoline Range Hydrocarbons	5/11/99		232	235	ug/l			25.0	1.28	
Surrogate: 4-BFB (FID)	"	48.0		37.9	"	50.0-150	79.0			
Duplicate										
0590272-DUP2 B905269-01										
Gasoline Range Hydrocarbons	5/14/99		ND	ND	ug/l			25.0		
Surrogate: 4-BFB (FID)	"	48.0		40.5	"	50.0-150	84.4			

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.

David Vandel, Project Manager

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ADI Geoscience International	Project: RNTN WLGRNS	Sampled: 5/13/99
516 NE 165th St	Project Number: W-05-11-99.01	Received: 5/14/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/17/99 10:25

Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<u>Matrix Spike</u>	<u>0590272-MS1</u>		<u>B905141-01</u>							
Benzene	5/12/99	10.0	ND	10.1	ug/l	70.0-130	101			
Toluene	"	10.0	ND	10.3	"	70.0-130	103			
Ethylbenzene	"	10.0	ND	10.6	"	70.0-130	106			
Xylenes (total)	"	30.0	ND	30.6	"	70.0-130	102			
Surrogate: 4-BFB (PID)	"	48.0		45.3	"	50.0-150	94.4			
<u>Matrix Spike Dup</u>	<u>0590272-MSD1</u>		<u>B905141-01</u>							
Benzene	5/12/99	10.0	ND	10.1	ug/l	70.0-130	101	15.0	0	
Toluene	"	10.0	ND	10.4	"	70.0-130	104	15.0	0.966	
Ethylbenzene	"	10.0	ND	10.5	"	70.0-130	105	15.0	0.948	
Xylenes (total)	"	30.0	ND	30.3	"	70.0-130	101	15.0	0.985	
Surrogate: 4-BFB (PID)	"	48.0		46.7	"	50.0-150	97.3			



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ADI Geoscience International	Project: RNTN WLGRNS	Sampled: 5/13/99
516 NE 165th St	Project Number: W-05-11-99.01	Received: 5/14/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/17/99 10:25

Notes and Definitions

#	Note
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

North Creek Analytical - Bothell


David Vandel, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Quantitation Report

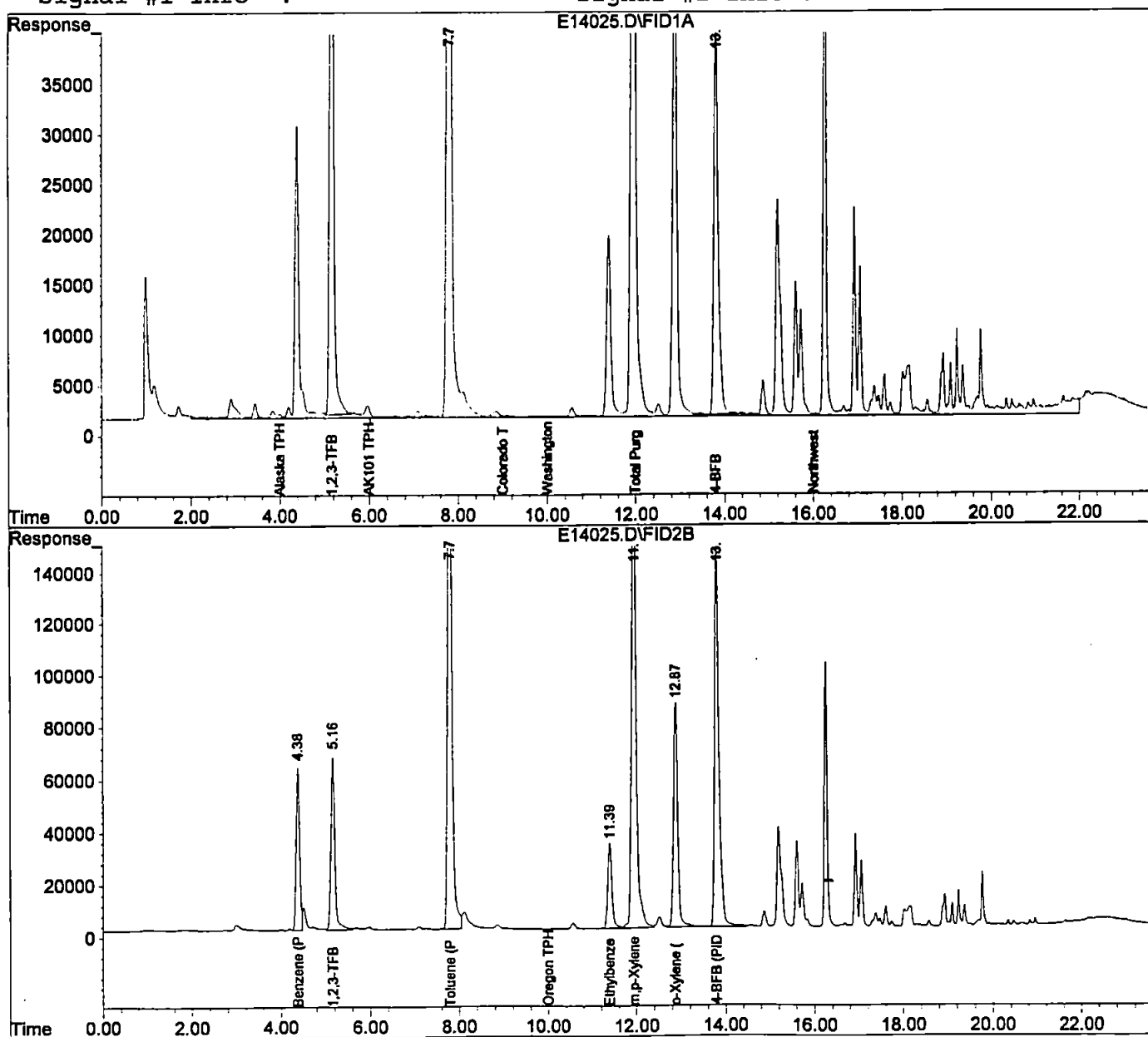
Data File : C:\HPCHEM\1\DATA\051499\E14025.D\FID1A.CH Vial: 25
Acq On : 14 May 1999 8:27 pm Operator: sa
Sample : b905272-01 r1 Inst : GC #2
Misc : 25 ul Multiplr: 200.00
IntFile : SURR.E

Data File : C:\HPCHEM\1\DATA\051499\E14025.D\FID2B.CH Vial: 25
Acq On : 14 May 99 8:27 pm Operator: sa
Sample : b905272-01 r1 Inst : GC #2
Misc : 25 ul Multiplr: 200.00
IntFile : SURR2.E

Quant Time: May 17 6:42 1999 Quant Results File: TPHG0299.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHG0299.M (Chemstation Integrator)
Title : TPH-G Method
Last Update : Fri May 14 17:25:22 1999
Response via : Multiple Level Calibration
DataAcq Meth : TPHG0299.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase:
Signal #1 Info : Signal #2 Info :





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ADI Geoscience International	Project: RNTN WLGRWS	Sampled: 5/12/99
516 NE 165th St	Project Number: 11-05-12-T2-Orphanz	Received: 5/12/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/13/99 13:35

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
Orph 2 Fluid	B905235-01	Water	5/12/99
TP1 (2.75-4.0)	B905235-02	Soil	5/12/99
TP2 (6.0-8.0)	B905235-03	Soil	5/12/99



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ADI Geoscience International	Project: RNTN WLGRWS	Sampled: 5/12/99
516 NE 165th St	Project Number: 11-05-12-T2-Orphanz	Received: 5/12/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/13/99 13:35

**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B
North Creek Analytical - Bothell**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
Orph 2 Fluid				B905235-01			Water	
Gasoline Range Hydrocarbons	0590133	5/12/99	5/13/99		25000	90000	ug/l	
Benzene	"	"	"		250	16000	"	
Toluene	"	"	"		250	23100	"	
Ethylbenzene	"	"	"		250	1550	"	
Xylenes (total)	"	"	"		500	8020	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		91.0	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		94.8	"	
TP1 (2.75-4.0)				B905235-02			Soil	
Gasoline Range Hydrocarbons	0590311	5/12/99	5/12/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		80.4	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		88.3	"	
TP2 (6.0-8.0)				B905235-03			Soil	
Gasoline Range Hydrocarbons	0590311	5/12/99	5/12/99		5.00	ND	mg/kg dry	
Benzene	"	"	"		0.0500	ND	"	
Toluene	"	"	"		0.0500	ND	"	
Ethylbenzene	"	"	"		0.0500	ND	"	
Xylenes (total)	"	"	"		0.100	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		81.5	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		92.1	"	



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ADI Geoscience International 516 NE 165th St Seattle, WA 98155	Project: RNTN WLGRWS Project Number: 11-05-12-T2-Orphanz Project Manager: Dale Kramer	Sampled: 5/12/99 Received: 5/12/99 Reported: 5/13/99 13:35
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Total Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>Orph 2 Fluid</u> Lead	0590337	5/13/99	5/13/99	<u>B905235-01</u> EPA 6020	0.00100	0.0413	<u>Water</u> mg/l	



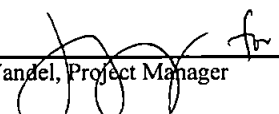
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ADI Geoscience International 516 NE 165th St Seattle, WA 98155	Project: RNTN WLGRWS Project Number: 11-05-12-T2-Orphanz Project Manager: Dale Kramer	Sampled: 5/12/99 Received: 5/12/99 Reported: 5/13/99 13:35
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**Dry Weight Determination
North Creek Analytical - Bothell**

Sample Name	Lab ID	Matrix	Result	Units
TP1 (2.75-4.0)	B905235-02	Soil	79.4	%
TP2 (6.0-8.0)	B905235-03	Soil	85.9	%

North Creek Analytical - Bothell


David Vandel, Project Manager

**North Creek Analytical, Inc.
Environmental Laboratory Network**



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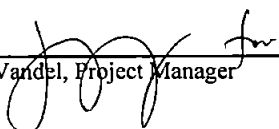
ADI Geoscience International	Project: RNTN WLGRWS	Sampled: 5/12/99
516 NE 165th St	Project Number: 11-05-12-T2-Orphanz	Received: 5/12/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/13/99 13:35

**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B/Quality Control
North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0590133										
Blank										
Date Prepared: 5/6/99										
Extraction Method: EPA 5030B (P/T)										
0590133-BLK1										
Gasoline Range Hydrocarbons	5/6/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		41.2	"	50.0-150	85.8			
Surrogate: 4-BFB (PID)	"	48.0		43.6	"	50.0-150	90.8			
Blank										
0590133-BLK2										
Gasoline Range Hydrocarbons	5/13/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		44.1	"	50.0-150	91.9			
Surrogate: 4-BFB (PID)	"	48.0		46.9	"	50.0-150	97.7			
LCS										
0590133-BS1										
Gasoline Range Hydrocarbons	5/6/99	500		496	ug/l	70.0-130	99.2			
Surrogate: 4-BFB (FID)	"	48.0		46.5	"	50.0-150	96.9			
Duplicate										
0590133-DUP1										
B905048-01										
Gasoline Range Hydrocarbons	5/8/99		918	832	ug/l			25.0	9.83	
Surrogate: 4-BFB (FID)	"	48.0		40.3	"	50.0-150	84.0			
Duplicate										
0590133-DUP2										
B905048-02										
Gasoline Range Hydrocarbons	5/6/99		965	ND	ug/l			25.0		
Surrogate: 4-BFB (FID)	"	48.0		44.1	"	50.0-150	91.9			
Matrix Spike										
0590133-MS1										
B905045-04										
Benzene	5/7/99	10.0	ND	9.30	ug/l	70.0-130	93.0			
Toluene	"	10.0	ND	9.21	"	70.0-130	92.1			
Ethylbenzene	"	10.0	ND	9.65	"	70.0-130	96.5			
Xylenes (total)	"	30.0	ND	27.8	"	70.0-130	92.7			
Surrogate: 4-BFB (PID)	"	48.0		48.6	"	50.0-150	101			

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.


David Vandel, Project Manager

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ADI Geoscience International 516 NE 165th St Seattle, WA 98155	Project: RNTN WLGRWS Project Number: 11-05-12-T2-Orphanz Project Manager: Dale Kramer	Sampled: 5/12/99 Received: 5/12/99 Reported: 5/13/99 13:35
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**Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B/Quality Control
North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup		0590133-MSD1	B905045-04							
Benzene	5/7/99	10.0	ND	9.60	ug/l	70.0-130	96.0	15.0	3.17	
Toluene	"	10.0	ND	9.55	"	70.0-130	95.5	15.0	3.62	
Ethylbenzene	"	10.0	ND	9.87	"	70.0-130	98.7	15.0	2.25	
Xylenes (total)	"	30.0	ND	28.6	"	70.0-130	95.3	15.0	2.77	
Surrogate: 4-BFB (PID)	"	48.0		48.0	"	50.0-150	100			
Batch: 0590311		Date Prepared: 5/12/99		Extraction Method: EPA 5030B (MeOH)						
Blank		0590311-BLK1								
Gasoline Range Hydrocarbons	5/12/99			ND	mg/kg dry	5.00				
Benzene	"			ND	"	0.0500				
Toluene	"			ND	"	0.0500				
Ethylbenzene	"			ND	"	0.0500				
Xylenes (total)	"			ND	"	0.100				
Surrogate: 4-BFB (FID)	"	4.00		3.73	"	50.0-150	93.3			
Surrogate: 4-BFB (PID)	"	4.00		3.89	"	50.0-150	97.3			
LCS		0590311-BS1								
Gasoline Range Hydrocarbons	5/12/99	25.0		25.5	mg/kg dry	70.0-130	102			
Surrogate: 4-BFB (FID)	"	4.00		3.89	"	50.0-150	97.3			
LCS		0590311-BS2								
Surrogate: 4-BFB (PID)	5/12/99	4.00		4.39	mg/kg dry	50.0-150	110			
Duplicate		0590311-DUP1		B905235-02						
Gasoline Range Hydrocarbons	5/13/99		ND	ND	mg/kg dry				50.0	
Surrogate: 4-BFB (FID)	"	5.04		3.95	"	50.0-150	78.4			
Matrix Spike		0590311-MS1		B905175-03						
Benzene	5/12/99	0.565	ND	0.512	mg/kg dry	60.0-140	90.6			
Toluene	"	0.565	ND	0.513	"	60.0-140	90.8			
Ethylbenzene	"	0.565	ND	0.546	"	60.0-140	96.6			
Xylenes (total)	"	1.70	ND	1.61	"	60.0-140	94.7			
Surrogate: 4-BFB (PID)	"	4.52		4.31	"	50.0-150	95.4			
Matrix Spike Dup		0590311-MSD1		B905175-03						
Benzene	5/12/99	0.565	ND	0.509	mg/kg dry	60.0-140	90.1	20.0	0.553	
Toluene	"	0.565	ND	0.524	"	60.0-140	92.7	20.0	2.07	
Ethylbenzene	"	0.565	ND	0.543	"	60.0-140	96.1	20.0	0.519	

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.

David Vandell, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883
541.383.9310 fax 541.382.7588

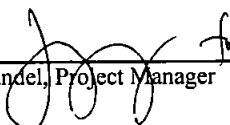
ADI Geoscience International
516 NE 165th St
Seattle, WA 98155

Project: RNTN WLGRWS
Project Number: 11-05-12-T2-Orphanz
Project Manager: Dale Kramer

Sampled: 5/12/99
Received: 5/12/99
Reported: 5/13/99 13:35

Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup (continued)										
	0590311-MSD1		B905175-03							
Xylenes (total)	5/12/99	1.70	ND	1.58	mg/kg dry	60.0-140	92.9	20.0	1.92	
Surrogate: 4-BFB (PID)	"	4.52		4.25	"	50.0-150	94.0			


David Vandell, Project Manager



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883
541.383.9310 fax 541.382.7568

ADI Geoscience International 516 NE 165th St Seattle, WA 98155	Project: RNTN WLGRWS Project Number: 11-05-12-T2-Orphanz Project Manager: Dale Kramer	Sampled: 5/12/99 Received: 5/12/99 Reported: 5/13/99 13:35
--	---	--

Total Metals by EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recovery Limits	Recovery %	RPD Limit	RPD %	Notes*
Batch: 0590337										
Blank										
Lead	5/13/99			ND	mg/l	0.00100				
LCS										
Lead	5/13/99	0.200		0.204	mg/l	80.0-120	102			
Matrix Spike										
Lead	5/13/99	0.200	0.0413	0.250	mg/l	75.0-125	104			
Matrix Spike Dup										
Lead	5/13/99	0.200	0.0413	0.249	mg/l	75.0-125	104	20.0	0	



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883
541.383.9310 fax 541.382.7588

ADI Geoscience International	Project: RNTN WLGRWS	Sampled: 5/12/99
516 NE 165th St	Project Number: 11-05-12-T2-Orphanz	Received: 5/12/99
Seattle, WA 98155	Project Manager: Dale Kramer	Reported: 5/13/99 13:35

Notes and Definitions

#	Note
---	------

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

CHAIN OF CUSTODY REPORT

Work Order #:

6905235

CLIENT: ADI GEOSCIENCE INTL		INVOICE TO: DALE A. KRAMER		TURNAROUND REQUEST in Business Days*			
REPORT TO: DALE A. KRAMER		P.O. NUMBER:		Organic & Inorganic Analyses			
ADDRESS: SIGNE 165th SEATTLE WA 98155				☐ 10 ☐ 7 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ <1			
PHONE: 206-362-9484 FAX: 206-362-9486				STD. Petroleum Hydrocarbon Analyses			
PROJECT NAME: RNIN WLGNS		REQUESTED ANALYSES		☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ <1			
PROJECT NUMBER: 11-05-12-F2-ORPHAN 2				STD. OTHER Please Specify ASAP			
SAMPLED BY: DAK				*Turnaround Requests less than standard may incur Rush Charges.			
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	6/BTEX	TLEAD	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WORK ID
1. ORPH 2 FLUID	5-12-99/1417	X	X	W	5	3 JARS 1 JAR = 2 LITER PLASTIC	690523 01
2. ORPHAN 2							
3. TP1 (2.75-4.0)	5-12-99/1425	X	HOLD	S	1		02
4. TP2 (6.0-8.0)	5-12-99/1430	X	HOLD	S	1		03
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							

**TPH done by 10 AM
PO ASAP on 24hr lat**

**HOLD all fluids for possible reg. of
VAC TRUCK (6 WEEKS)**

RELINQUISHED BY: DALE A. KRAMER	DATE: 5-12-99	RECEIVED BY: DAVID VAN DUSEN	DATE: 5/12/99
PRINT NAME: DALE A. KRAMER FIRM: ADI Geoscience	TIME: 1645	PRINT NAME: DAVID VAN DUSEN FIRM: NCA	TIME: 1700
RELINQUISHED BY:	DATE:	RECEIVED BY:	DATE:
PRINT NAME:	TIME:	PRINT NAME:	TIME:

ADDITIONAL REMARKS: **PLS supply CHROMATOGRAPHY**

COC REV 3/99 **ANY QUESTIONS CALL DALE A. KRAMER 206-977-6420 OR 206-362-9484**

TEMP: PAGE 1 OF 1

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: 360-459-4670
Fax: 360-459-3432

May 24, 1999

Steve Marczewski
ACL EnviroManagement
15219 160th Place SE
Renton, WA 98058-8166

Dear Mr. Marczewski:

Please find enclosed an analytical report for work done at the Wallgreens Renton Project located in Renton, Washington. Mobile Laboratory services were conducted on May 17, 1999. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended and BTEX by Method 8020.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed for your records.

TEG Northwest appreciates the opportunity to have provided analytical services to ACL EnviroManagement for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALLGREENS PROJECT

Renton, Washington

Floyd & Snider, Inc.

Client Project #W- 05-99.01

Preliminary Data

Analyses of BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)
Method Blank	5/17/99	nd	nd	nd	nd	nd
W 051101	5/17/99	nd	nd	nd	nd	nd
W 051102	5/17/99	nd	nd	nd	nd	nd
W 051103	5/17/99	nd	nd	nd	nd	nd
W 051104	5/17/99	nd	nd	nd	nd	nd
W 051105	5/17/99	nd	nd	nd	nd	nd
W 051106	5/17/99	nd	nd	nd	nd	nd
W 051107	5/17/99	nd	nd	nd	nd	nd
W 051108	5/17/99	nd	nd	nd	nd	nd
W 051109	5/17/99	nd	nd	nd	nd	nd
W 051109 Dup	5/17/99	nd	nd	nd	nd	nd
Method Detection Limits		0.05	0.05	0.05	0.05	10

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

ANALYSES PERFORMED BY: Michael Dee

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALLGREENS PROJECT

Renton, Washington

Floyd & Snider, Inc.

Client Project #W- 05-99.01

Preliminary Data

Diesel Range Hydrocarbons in Soil by NWTPH-Dx.

Sample Number	Date Analyzed	Diesel (mg/kg)	Surrogate Recovery (%)
Method Blank	5/17/99	nd	
W 051104	5/17/99	1900	
W 051109	5/17/99	nd	
W 051109 Dup	5/17/99	nd	
Method Detection Limits		20	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

ANALYSES PERFORMED BY: Michael Dee

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

WALLGREENS RENTON PROJECT

Renton Washington

ACL Environmental Management.

Client Project #W - 05 - 11 - 99.0

Analyses of BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Surrogate Recovery (%)
Method Blank	5/17/99	nd	nd	nd	nd	95
511 - 1	5/17/99	nd	nd	nd	nd	95
511 - 2	5/17/99	nd	nd	nd	nd	107
511 - 3	5/17/99	nd	nd	nd	nd	111
511 - 4	5/17/99	nd	nd	nd	nd	113
511 - 5	5/17/99	nd	nd	nd	nd	101
511 - 6	5/17/99	nd	nd	nd	nd	96
511 - 7	5/17/99	nd	nd	nd	nd	92
511 - 8	5/17/99	nd	nd	nd	nd	109
511 - 9	5/17/99	nd	nd	nd	nd	97
511 - 9 Dup	5/17/99	nd	nd	nd	nd	98
Method Detection Limits		0.05	0.05	0.05	0.05	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65 % TO 135 %

ANALYSES PERFORMED BY: Michael Dee

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

WALLGREENS RENTON PROJECT

Renton Washington

ACL Environmental Management.

Client Project #W - 05 - 11 - 99.0

Analyses of Diesel and Oil (NWTPH-Dx/Dx Extended) in Soil.

Sample Number	Date Analyzed	Diesel (mg/kg)	Heavy Oil (mg/kg)	Surrogate Recovery (%)
Method Blank	5/17/99	nd	nd	112
511 - 1	5/17/99	nd	nd	85
511 - 2	5/17/99	nd	nd	90
511 - 4	5/17/99	1900	nd	88
511 - 9	5/17/99	nd	nd	82
511 - 9 Dup	5/17/99	nd	nd	70
Method Detection Limits		20	40	

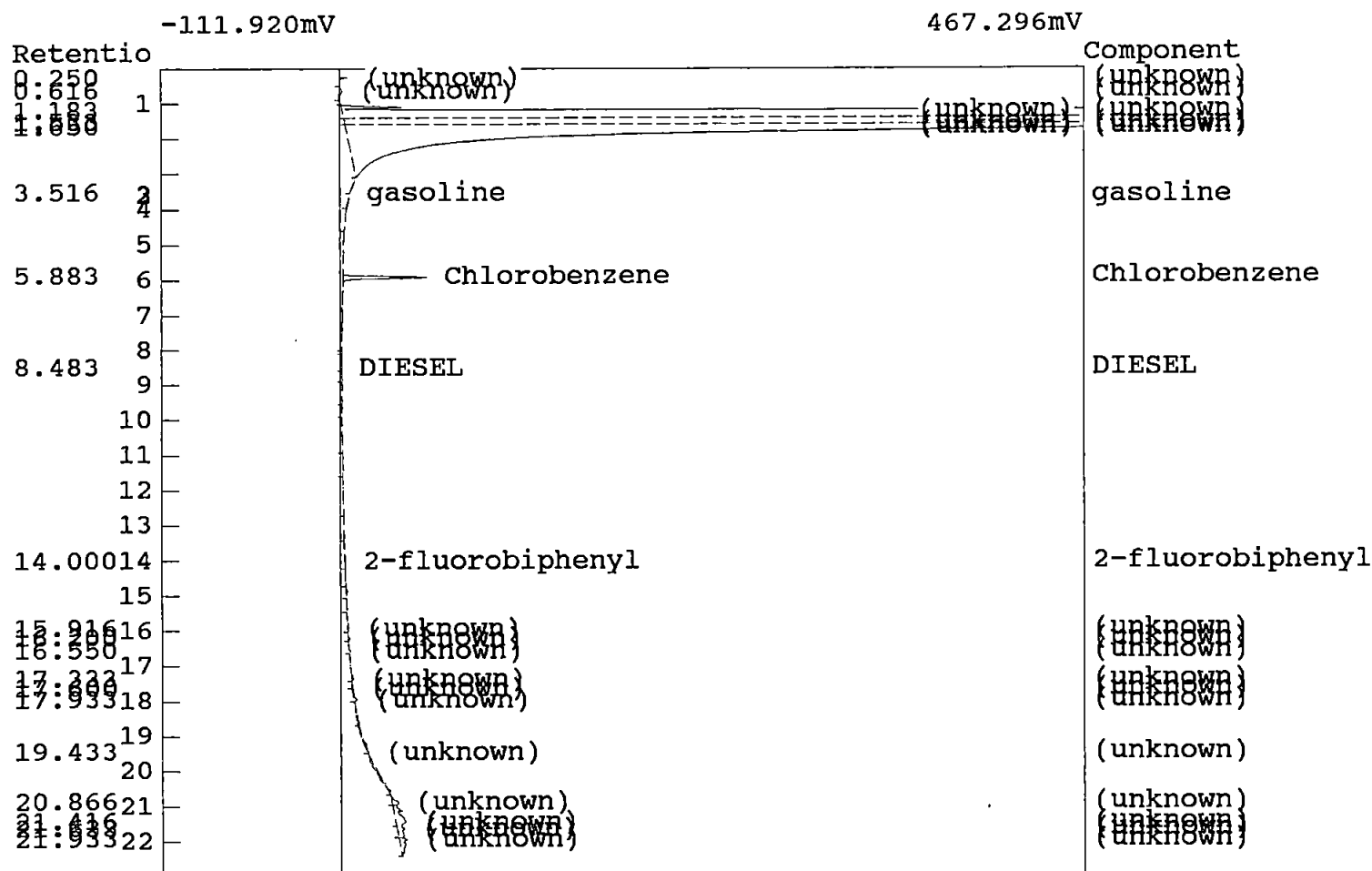
"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65 % TO 135%

ANALYSES PERFORMED BY: Michael Dee

Lab name: TEG NW
 Client: Woodward Clyde
 Analysis date: 05/17/1999 16:01:47
 Method: EPA 8021B
 Description: Hall #3
 Column: J & W 75 m
 Carrier: HELIUM AT 200 ON DIAL
 Data file: ch2de709.CHR ()
 Sample: 517 - 1
 Operator: CDK



Component	Retention	Area	External	Units
gasoline	3.516	3.998	0.23	ppm
Chlorobenzene	5.883	213.716	0.00	ppm
DIESEL	8.483	21.413	1.83	PPM
2-fluorobiphenyl	14.000	3.808	0.00	
		242.934	2.06	

Lab name: TEG NW
 Analysis date: 05/17/1999 16:01:47
 Method: EPA 8021B
 Description: GC6 PID TOPMOUNT
 Column: J & W 75 m
 Carrier: HELIUM AT 200 ON DIAL
 Data file: ch4de402.CHR ()
 Sample: 517 - 2
 Operator: CDK

Component/Retention/Area
 (unknown)/0.433/8.940
 (unknown)/0.883/17776.256
 (unknown)/1.166/13703.496

Chlorobenzene/5.116/224.586

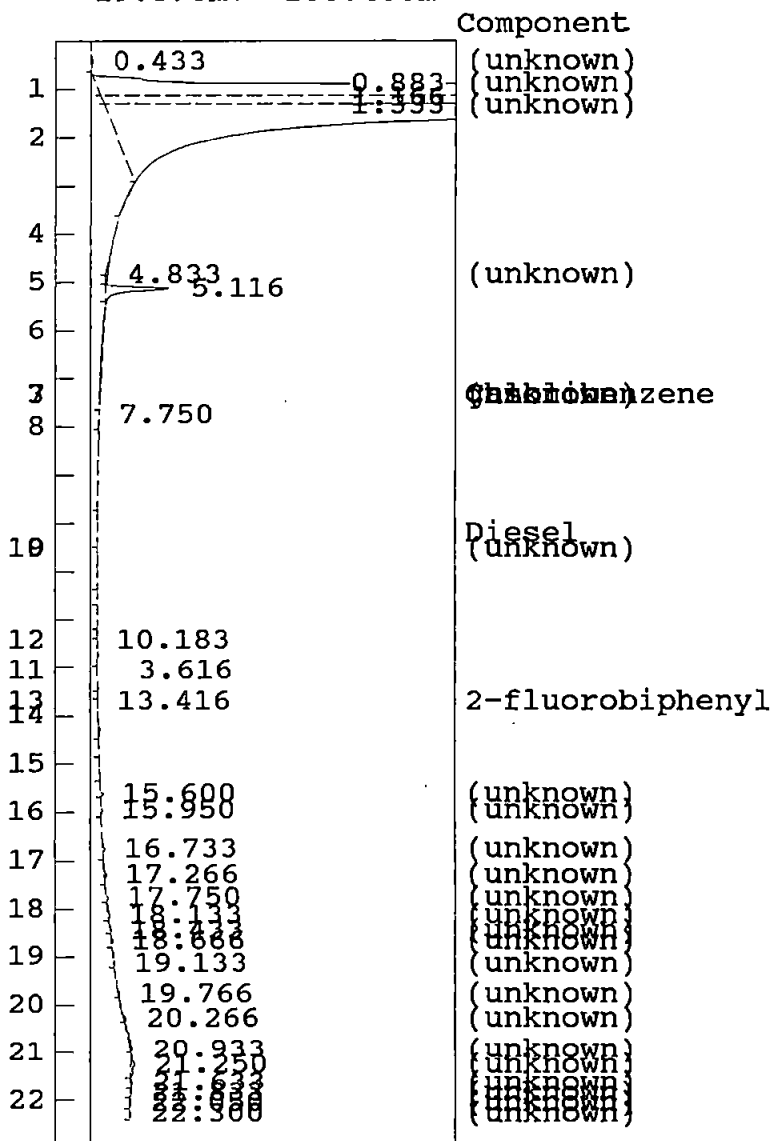
(unknown)/7.750/1.542
 (unknown)/7.750/1.542

Diesel/10.183/26.017

2-fluorobiphenyl/13.416/1.333

(unknown)/15.600/4.878
 (unknown)/15.600/4.878
 (unknown)/16.733/11.077
 (unknown)/17.266/12.676
 (unknown)/17.750/3.926
 (unknown)/18.133/3.564
 (unknown)/18.433/3.540
 (unknown)/18.666/6.520
 (unknown)/19.133/10.911
 (unknown)/19.766/6.465
 (unknown)/20.266/3.747
 (unknown)/20.933/21.735
 (unknown)/21.250/2.427
 (unknown)/21.666/4.144
 (unknown)/22.500/4.598

-19.570mV 200.430mV



Component	Retention	Area	External	Units
gasoline	3.616	10.214	5.20	ppm
Chlorobenzene	5.116	224.586	14.78	ppm
Diesel	10.183	26.017	1.62	ppm
2-fluorobiphenyl	13.416	1.333	0.00	
		262.150	21.60	

Lab name: TEG NW
 Analysis date: 05/17/1999 16:32:37
 Method: EPA 8021B
 Description: GC6 PID TOPMOUNT
 Column: J & W 75 m
 Carrier: HELIUM AT 200 ON DIAL
 Data file: ch4de403.CHR ()
 Sample: 517 - 4
 Operator: CDK

Component/Retention/Area

(unknown)/0.616/7.240
 (unknown)/1.050/15308.104
 (unknown)/1.050/15308.104

gasoline/4.350/594.854

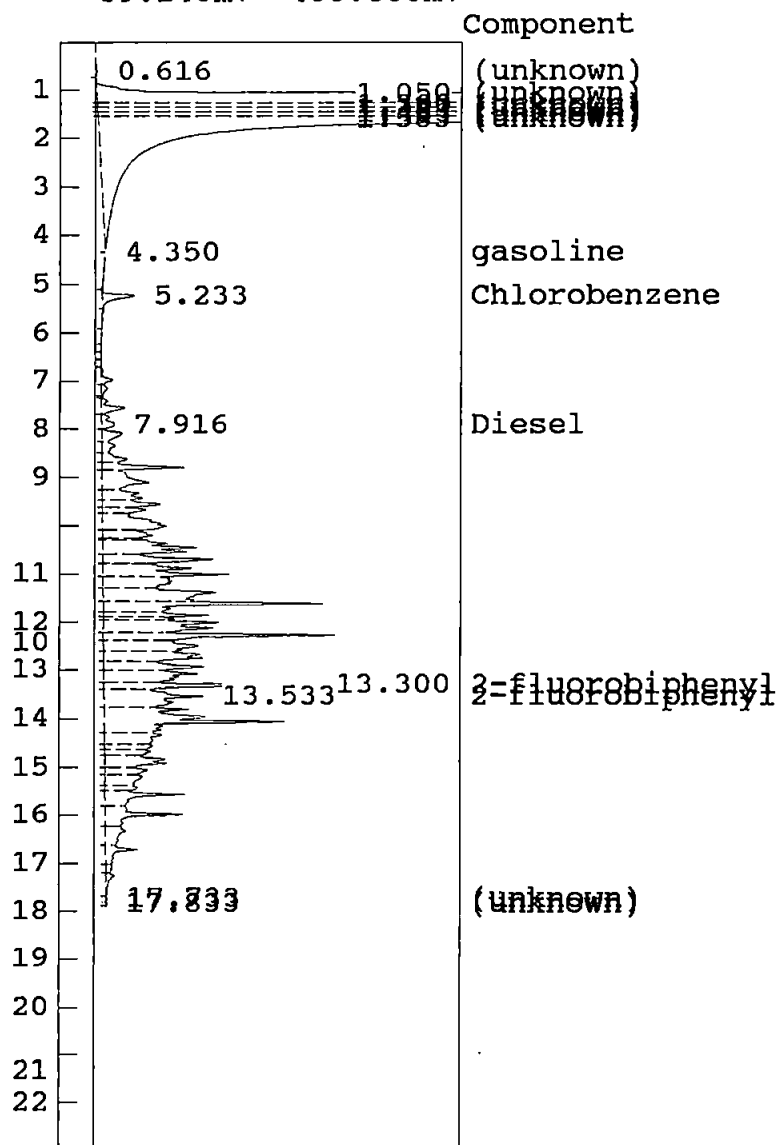
Chlorobenzene/5.233/220.423

Diesel/7.916/30528.432

2-fluorobiphenyl/13.300/1042.219

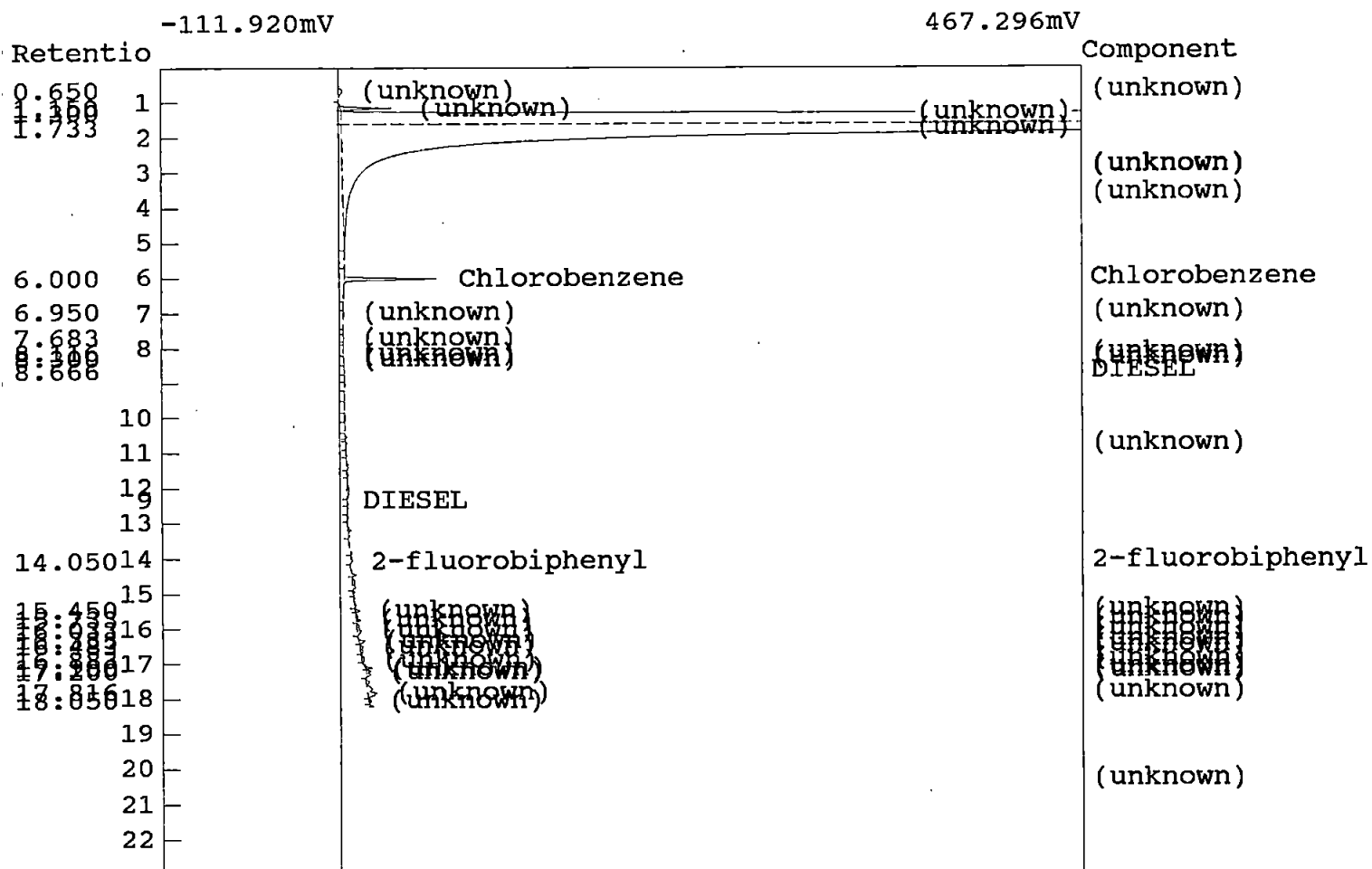
(unknown)/17.833/5.852

-39.140mV 400.860mV



Component	Retention	Area	External	Units
gasoline	4.350	594.854	303.00	ppm
Chlorobenzene	5.233	220.423	14.50	ppm
Diesel	7.916	30528.432	1898.29	ppm
2-fluorobiphenyl	13.300	1042.219	0.00	
2-fluorobiphenyl	13.533	1553.586	0.00	
		33939.515	2215.79	

Lab name: TEG NW
 Client: Woodward Clyde
 Analysis date: 05/17/1999 17:43:09
 Method: EPA 8021B
 Description: Hall #3
 Column: J & W 75 m
 Carrier: HELIUM AT 200 ON DIAL
 Data file: ch2de713.CHR ()
 Sample: 517 - 9
 Operator: CDK



Component	Retention	Area	External	Units
Chlorobenzene	6.000	205.874	0.00	ppm
DIESEL	8.666	133.461	11.41	PPM
2-fluorobiphenyl	14.050	11.172	0.00	
		350.507	11.41	

Lab name: TEG NW
 Analysis date: 05/17/1999 17:43:09
 Method: EPA 8021B
 Description: GC6 PID TOPMOUNT
 Column: J & W 75 m
 Carrier: HELIUM AT 200 ON DIAL
 Data file: ch4de406.CHR ()
 Sample: 517 - 9 dup
 Operator: CDK

Component/Retention/Area

(unknown)/0.966/30.752

~~gasoline~~/2.066/12756.479

~~Chlorobenzene~~/5.500/175.665

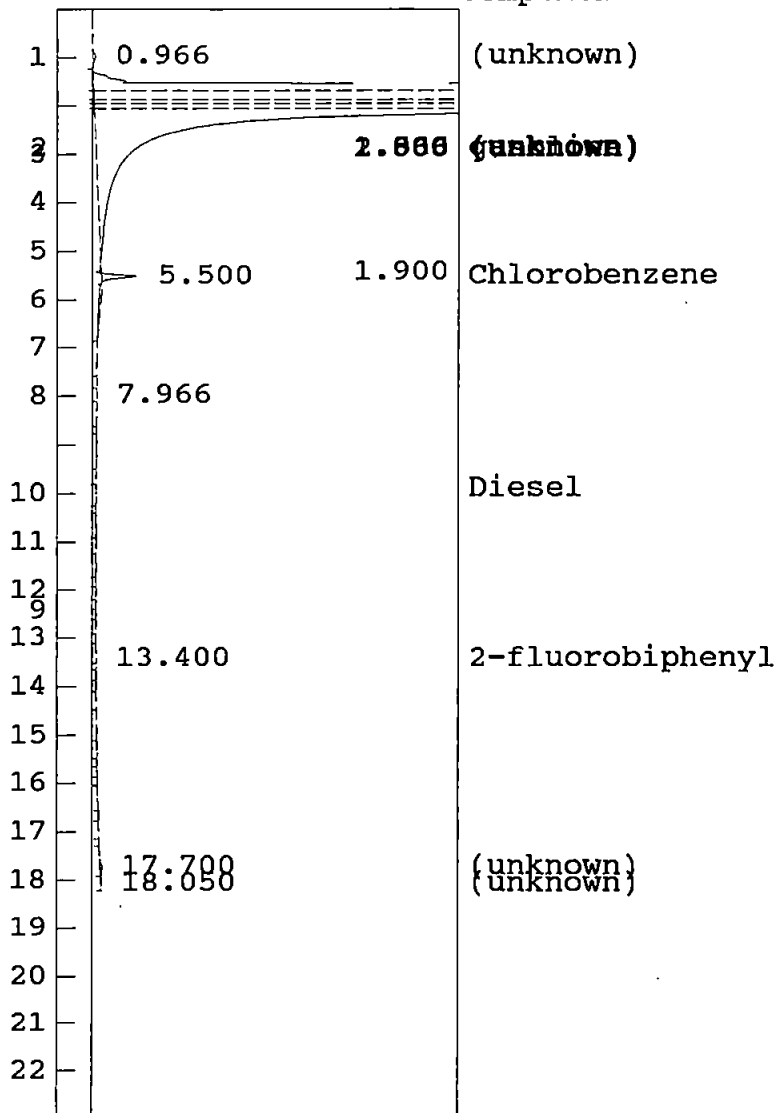
Diesel/7.966/85.406

2-fluorobiphenyl/13.400/2.788

~~{unknown}~~/17.700/19.019
~~{unknown}~~/18.050/5.470

-39.140mV 400.860mV

Component



(unknown)

~~{unknown}~~

Chlorobenzene

Diesel

2-fluorobiphenyl

~~{unknown}~~
~~{unknown}~~

Component	Retention	Area	External	Units
gasoline	2.066	12756.479	6497.66	ppm
Chlorobenzene	5.500	175.665	11.56	ppm
Diesel	7.966	85.406	5.31	ppm
2-fluorobiphenyl	13.400	2.788	0.00	
		13020.338	6514.53	

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4⁰ C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

TPH-Gasoline, TPH-Diesel

(Gasoline and/or Diesel, Modified EPA 8015, NWTPH-Gx and NWTPH-Dx)

A check standard is run at the beginning of the day. 1) A close standard is run at the end of the day. 2) Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. A duplicate sample is run at a rate of 1 per 10 samples. At least 1 method blank is run per 20 samples analyzed.

Purgeable Volatile Aromatics
(BTEx, EPA 602/8020)

A check standard is run at the beginning of the day. The check standard is run at the end of the day. Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. At least 1 method blank is run per day.

CHAIN-OF-CUSTODY RECORD

CLIENT: FDS / AID GEOSCIENCE
ADDRESS: 516 NE 165TH ST SEATTLE 98155
PHONE 206 977 6420 FAX: 425 227-5153
40 ACL Enviro.
CLIENT PROJECT #: W-05-11-99.0 PROJECT MANAGER: DALE KRAMER

DATE: 5.17.99 PAGE 1 OF 1
PROJECT NAME: RENTON WALGREENS
LOCATION: RENTON, WA
COLLECTOR: STEVE MARCZENSKI DATE OF COLLECTION 5/17

[illegible]

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
-----------------------------	-----------	-------------------------	-----------

5/17 5:55 J, dul cor 5/17 6:19

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
-----------------------------	-----------	-------------------------	-----------

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SEALS Y/N/NA

SEALS INTACT? Y/N/NA

RECEIVED GOOD COND./COLD

NOTES:

LABORATORY NOTES:

Sample #'s should
Road 511 not
517 MGD 5/17/99

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: 360-459-4670
Fax: 360-459-3432

June 4, 1999

Steve Marczewski
ACL EnviroManagement
15219 160th Place SE
Renton, WA 98058-8166

Dear Mr. Marczewski:

Please find enclosed an analytical report for work done at the Walgreens Project located in Renton, Washington. Soil and water samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, and Specific Halogenated Hydrocarbons and BTEX by Method 8021B on May 27, 1999.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed for your records.

TEG Northwest appreciates the opportunity to have provided analytical services to ACL EnviroManagement for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4⁰ C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

TPH-Gasoline, TPH-Diesel

(Gasoline and/or Diesel, Modified EPA 8015, NWTPH-Gx and NWTPH-Dx)

A check standard is run at the beginning of the day. 1) A close standard is run at the end of the day. 2) Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. A duplicate sample is run at a rate of 1 per 10 samples. At least 1 method blank is run per 20 samples analyzed.

Purgeable Volatile Halocarbons**(Chlorinated Hydrocarbons, EPA 601/8021B)**

A calibration standard is run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALGREENS PROJECT

Renton, Washington

ACL Enviro Management LLC

Analyses of Gasoline (NWTPH-Gx) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (mg/kg)
Method Blank	5/27/99	114	nd
0526-01	5/27/99	100	nd
0526-02	5/27/99	85	nd
Method Detection Limits			10

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65 % TO 135 %

ANALYSES PERFORMED BY: Tim McCall, Chantel Kamm, & Michael Dee

DATA REVIEWED BY: Mike Korosec

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALGREENS PROJECT

Renton, Washington

ACL Enviro Management LLC

Analyses of Gasoline (NWTPH-Gx) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (ug/l)
Method Blank	5/27/99	97	nd
0526-W	5/27/99	120	100000
0526-W Dup.	5/27/99	102	110000
Method Detection Limits			100

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65 % TO 135 %

ANALYSES PERFORMED BY: Tim McCall, Chantel Kamm, & Michael Dee

DATA REVIEWED BY: Mike Korosec

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALGREENS PROJECT

Renton, Washington

ACL Enviro Management LLC

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (ug/l)	Oil (ug/l)
Method Blank	5/27/99	79	nd	nd
0526-W	5/27/99	120	nd	nd
0526-W Dup.	5/27/99	102	nd	nd
Method Detection Limits			200	400

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65 % TO 135 %

ANALYSES PERFORMED BY: Tim McCall, Chantel Kamm, & Michael Dee

DATA REVIEWED BY: Mike Korosec

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALGREENS PROJECT

Renton, Washington

ACL Enviro Management LLC

Heavy Metals in Soil by EPA-7000 Series

Sample Number	Date Analyzed	Lead (Pb)
		EPA 7420 (mg/kg)
Method Blank	5/27/99	nd
0526-01	5/27/99	nd
0526-02	5/27/99	20
0526-02 Dup.	5/27/99	21
Method Detection Limits		5

"nd" Indicates not detected at listed detection limits.

ANALYSES PERFORMED BY: Tim McCall, Chantel Kamm, & Michael Dee
DATA REVIEWED BY: Mike Korosec

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALGREENS PROJECT

Renton, Washington

ACL Enviro Management LLC

QA/QC Data - Total Metals EPA-7000 Series Analyses

Sample Number: 0526-01							
Matrix Spike			Matrix Spike Duplicate			RPD	
Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)	
Lead	250	248	99	250	253	101	2.00

Laboratory Control Sample			
Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	
Lead	250	247	99

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%

ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Tim McCall, Chantel Kamm, & Michael Dee

DATA REVIEWED BY: Mike Korosec

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALGREENS PROJECT

Renton, Washington

ACL Enviro Management LLC

Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Water

Sample Description		Method Blank	Method Blank	0526-W	0526-W Dup
Date Sampled				5/26/99	5/26/99
Date Analyzed		5/27/99	5/28/99	5/28/99	5/28/99
	MDL				
	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Vinyl chloride	5.0	nd	nd	< 200	< 200
Benzene	1.0	nd	nd	1400	1600
Toluene	1.0	nd	nd	1100	1200
Ethylbenzene	1.0	nd	nd	1100	1100
Total Xylenes	1.0	nd	nd	4000	4000
1,1-Dichloroethene	1.0	nd	nd	< 5.0	< 5.0
Methylene chloride	1.0	nd	nd	< 5.0	< 5.0
<i>trans</i> -1,2-Dichloroethene	1.0	nd	nd	< 5.0	< 5.0
1,1-Dichloroethane	1.0	nd	nd	< 5.0	< 5.0
<i>cis</i> -1,2-Dichloroethene	1.0	nd	nd	< 5.0	< 5.0
Chloroform	1.0	nd	nd	< 5.0	< 5.0
1,1,1-Trichloroethane (TCA)	1.0	nd	nd	< 5.0	< 5.0
Carbon tetrachloride	1.0	nd	nd	< 5.0	< 5.0
1,2-Dichloroethane	1.0	nd	nd	320	350
Trichloroethene (TCE)	1.0	nd	nd	< 5.0	< 5.0
1,1,2-Trichloroethane	1.0	nd	nd	< 5.0	< 5.0
Tetrachloroethene (PCE)	1.0	nd	nd	< 5.0	< 5.0
1,1,1,2-Tetrachloroethane	1.0	nd	nd	< 5.0	< 5.0
1,1,2,2-Tetrachloroethane	1.0	nd	nd	< 5.0	< 5.0
Surrogate Recovery (%)		95	94	int	int

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65%- 135 %

ANALYSES PERFORMED BY: Tim McCall, Chantel Kamm, & Michael Dee

DATA REVIEWED BY: Mike Korosec

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALGREENS PROJECT
 Renton, Washington
 ACL Enviro Management LLC

QA/QC Data - EPA 8021B Analyses

Sample Description: 0526-2							
Matrix Spike				Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)
Benzene	3.00	2.80	93	3.00	2.70	90	3.64
<i>cis</i> 1,2-Dichloroethene	3.00	2.70	90	3.00	3.20	107	16.95
Trichloroethene (TCE)	3.00	3.20	107	3.00	3.70	123	14.49
Surrogate Spike			115			101	12.96

ANALYSES PERFORMED BY: Tim McCall, Chantel Kamm, & Michael Dee
 DATA REVIEWED BY: Mike Korosec

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALGREENS PROJECT

Renton, Washington

ACL Enviro Management LLC

Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Soil

Sample Description	Method	0526-01	0526-01	0526-02
	Blank		Dup	
Date Sampled	5/26/99	5/26/99	5/26/99	5/26/99
Date Analyzed	5/27/99	5/27/99	5/27/99	5/27/99
	MDL			
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Vinyl chloride	0.25	nd	nd	nd
Benzene	0.05	nd	nd	nd
Toluene	0.05	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd
Total Xylenes	0.05	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd
Methylene chloride	0.05	nd	nd	nd
<i>trans</i> -1,2-Dichloroethene	0.05	nd	nd	nd
1,1-Dichloroethane	0.05	nd	nd	nd
<i>cis</i> -1,2-Dichloroethene	0.05	nd	nd	nd
Chloroform	0.05	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.05	nd	nd	nd
Carbon tetrachloride	0.05	nd	nd	nd
1,2-Dichloroethane	0.05	nd	nd	nd
Trichloroethene (TCE)	0.05	nd	nd	nd
1,1,2-Trichloroethane	0.05	nd	nd	nd
Tetrachloroethene (PCE)	0.05	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd
Surrogate Recovery (%)	98	95	113	86

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65%- 135%

ANALYSES PERFORMED BY: Tim McCall, Chantel Kamm, & Michael Dee

DATA REVIEWED BY: Mike Korosec

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

RENTON WALGREENS PROJECT

Renton, Washington

ACL Enviro Management LLC

QA/QC Data - EPA 8021B Analyses

Sample Description:							
Matrix Spike				Matrix Spike Duplicate			RPD
	Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)	Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)	(%)
Benzene	15.00	15.10	101	15.00	16.00	107	5.79
Toluene	15.00	16.00	107	15.00	19.20	128	18.18
1,1-Dichloroethene	15.00	15.10	101	15.00	17.90	119	16.97
cis-1,2-Dichloroethene	15.00	13.40	89	15.00	14.00	93	4.38
Surrogate Spike			110			126	13.56

S90526-Z

CLIENT: ACL ENVIRONMENTAL MANAGEMENT LLC

DATE: 5/26/99 PAGE 1 OF 1

ADDRESS: 15219 160TH A SE RENTON WA

PROJECT NAME: RENTON WALGREENS

PHONE 425 260 6614 FAX: 425 227-5133

LOCATION: RAINIER & SW SUNSET, RENTON

CLIENT PROJECT #: PROJECT MANAGER: *Steve Marczenko*

COLLECTOR: STEVE MARCZENSKI DATE OF COLLECTION

[illegible]

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
-----------------------------	-----------	-------------------------	-----------

[Signature] 5/26 1517 Tolbachner 5/26^{3:00}/99

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
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SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SEALS Y/N/NA

SEALS INTACT? Y/N/NA

RECEIVED GOOD COND./COLD

NOTES:

LABORATORY NOTES: 24 hr. #1

FAX RESULTS TO
KATE SMIDER @

206 682-7867 CFA

206 292 - 2078 (work)

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: 360-459-4670
Fax: 360-459-3432

June 4, 1999

Steve Marczewski
ACL EnviroManagement
15219 160th Place SE
Renton, WA 98058-8166

Dear Mr. Marczewski:

Please find enclosed an analytical report for work done at the Walgreens Project located in Renton, Washington. Mobile Laboratory services were conducted on May 28, 1999. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, BTEX by Method 8021B, and Pb by Method 7000 series.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed for your records.

TEG Northwest appreciates the opportunity to have provided analytical services to ACL EnviroManagement for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4° C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

TPH-Gasoline, TPH-Diesel

(Gasoline and/or Diesel, Modified EPA 8015, NWTPH-Gx and NWTPH-Dx)

A check standard is run at the beginning of the day. 1) A close standard is run at the end of the day. 2) Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. A duplicate sample is run at a rate of 1 per 10 samples. At least 1 method blank is run per 20 samples analyzed.

Purgeable Volatile Aromatics
(BTEX, EPA 602/8020)

A check standard is run at the beginning of the day. The check standard is run at the end of the day. Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. At least 1 method blank is run per day.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

WALGREENS PROJECT

Renton, Washington

ACL Environmental, Inc.

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	5/28/99	nd	nd	nd	nd	nd	116
0528 - 1	5/28/99	nd	nd	nd	nd	nd	119
0528 - 2	5/28/99	nd	nd	nd	nd	nd	102
0528 - 3	5/28/99	nd	nd	nd	nd	nd	106
0528 - 4	5/28/99	nd	nd	nd	nd	nd	101
0528 - 5	5/28/99	nd	nd	nd	nd	nd	99
0528 - 6	5/28/99	nd	nd	nd	nd	nd	107
0528 - 7	5/28/99	nd	nd	nd	nd	nd	108
0528 - 8	5/28/99	nd	nd	nd	nd	nd	113
0528 - 9	5/28/99	nd	nd	nd	0.15	65	88
0528 - 10	5/28/99	nd	nd	nd	nd	43	100
0528 - 11	5/28/99	nd	nd	nd	nd	nd	101
0528 - 11 Dup	5/28/99	nd	nd	nd	nd	nd	93
Method Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

"ANALYSES PERFORMED BY: Michael Dee

DATA REVIEWED BY: Sherry Chilcutt

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

WALGREENS PROJECT
Renton, Washington
ACL Environmental, Inc.

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	6/1/99	65	nd	nd
0528 - 1	6/1/99	72	nd	nd
0528 - 2	6/1/99	121	nd	nd
0528 - 3	6/1/99	117	nd	nd
0528 - 4	6/1/99	104	nd	300
0528 - 5	6/1/99	113	nd	nd
0528 - 6	6/1/99	99	nd	nd
0528 - 7	6/1/99	102	nd	nd
0528 - 8	6/1/99	86	nd	nd
0528 - 9	6/1/99	77	nd	nd
0528 - 10	6/1/99	92	nd	120
0528 - 11	6/1/99	119	nd	nd
0528 - 11 Dup	6/1/99	68	nd	nd
Method Detection Limits			20	40

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Michael Dee

DATA REVIEWED BY: Sherry Chilcutt

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

WALGREENS PROJECT

Renton, Washington

ACL Environmental

Heavy Metals in Soil by EPA-7000 Series

Sample Number	Date Analyzed	Lead (Pb)
		EPA 7420 (mg/kg)
Method Blank	6/2/99	nd
0528-1	6/2/99	nd
0528-2	6/2/99	6.0
0528-3	6/2/99	59
0528-4	6/2/99	nd
0528-4 Dup.	6/2/99	nd
0528-5	6/2/99	15
0528-6	6/2/99	9.0
0528-7	6/2/99	5.0
0528-8	6/2/99	nd
0528-9	6/2/99	16
0528-10	6/2/99	5.5
0528-11	6/2/99	41
0528-11 Dup.	6/2/99	40
Method Detection Limits		5

"nd" Indicates not detected at listed detection limits.

ANALYSES PERFORMED BY: Tim McCall

DATA REVIEWED BY: Sherry Chilcutt

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

WALGREENS PROJECT

Renton, Washington

ACL Environmental

QA/QC Data - Total Metals EPA-7000 Series Analyses

Sample Number: 0528-11							
Matrix Spike				Matrix Spike Duplicate			RPD
Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)		Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	
Lead	250	239	96	250	236	94	1.26

Laboratory Control Sample			
Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	
Lead	250	215	86

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Tim McCall
DATA REVIEWED BY: Sherry Chilcutt



CHAIN-OF-CUSTODY RECORD

CLIENT: ACL Environmental
ADDRESS: _____
PHONE 435 260 6614 FAX: _____
CLIENT PROJECT #: _____ PROJECT MANAGER: Steve MARCZEWSKI

DATE: 5/28/99 PAGE 1 OF 1
PROJECT NAME: Langseth Jax - 2535350993
LOCATION: Walgreen's site - Benton
COLLECTOR: Tom Langseth DATE OF COLLECTION 5/28

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES														FIELD NOTES	Total Number of Containers	Laboratory Note Number	
					VOA 601/8010	VOA 802/8020	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TOTAL LEAD	pH	ASBESTOS				BTEX
528-1	9-10.5'	10:23	S	G					X	X								X	X	E wall	1	
528-2	9-10.5'	10:28																		SWall E end		
528-3	11'	10:35																		UST #4 bottom @ 11'		
528-4	9-11'	10:58																		N wall		
528-5	9-10.5'	11:04																		N wall E end		
528-6	11'	11:08																		UST #3 bottom		
528-7	9-11'	11:21																		WEST End #4		
528-8	9-11'	11:28																		S wall		
528-9		11:35																		Comp suspect excw		
528-10		11:41																		comp suspect excw		
528-11		207																		Comp suspect excw		

RELINQUISHED BY (Signature) Tom Langseth DATE/TIME 5/28 1:30 RECEIVED BY (Signature) M. J. J. J. DATE/TIME 1:30
RELINQUISHED BY (Signature) _____ DATE/TIME _____ RECEIVED BY (Signature) _____ DATE/TIME _____

SAMPLE DISPOSAL INSTRUCTIONS

☒ TEG DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS _____
CHAIN OF CUSTODY SEALS Y/N/NA _____
SEALS INTACT? Y/N/NA _____
RECEIVED GOOD COND./COLD _____

NOTES:

LABORATORY NOTES:

Fax results to 6th
Tom & Steve

DALE A. KRAMER, PG

Principal Consulting Geologist

Environmental Geology, Hydrogeology, Sedimentology,
Geology, Water Quality, Watershed Analyses
www.aidgeoscience.com

A.D.I. GEOSCIENCE INTERNATIONAL

516 NE 165th Street Seattle, Washington 98155 206.977.6420 fax 206.362.9486

**APPENDIX C
MATERIAL MANAGEMENT RECORDS**

DELIVERY ORDER

CUSTOMER COPY

629226

FILLED		REVIEWED	STAGING AREA	TOTAL PKGS	FREIGHT CHARGES	SHIPPED: DELIVERED VIA			
ITEM COUNT						ON		19	BL #
BY						PCS	ZONE	GR WEIGHT	DECL VALUE \$

SOLD BY:

Airgas Dry Ice
Tacoma Branch
Tacoma WA 98409
[253] 627-6677

P/O
NO:

WALGREENS

228720155

REL
NO:

COPY

CUST. NO:

G0671

ORDER NO:

331765-00

ORD DATE:

05/17/99

PAGE NO:

001 OF 00

SHIP TO:

LANGSETH ENVIRONMENTAL
7517 PORTLAND AVE. #A

-SOLD TO:

LANGSETH ENVIRONMENTAL

TACOMA WA 98404-0000 17-MAY-99 11:50AM CRT:TNA21

TRAN TYPE	SLSM	BROCH	TEAR	UPS	PPD	COLL	SHIP VIA	ROUTING	SCHEDULED SHIP DATE	ENTERED BY		
CHRG		501	51	51	0	X	WILL CALL		05/17/99	JB		
LINE NO	ITEM NUMBER	ITEM DESCRIPTION			UNIT	QTY. ORDERED	QTY. SHIP	QTY. BKORD	BIN LOC	WEIGHT	UNIT AMOUNT	EXTENDED AMOUNT

Location: 51

1 DRI DCU

DRY ICE CUT OR SLICED WILL CALL

UB

100

100

0

5500

55.00

2 DRI REG

REGULATORY COMPLIANCE CHARGE

EA

1

1

0

0

2.0000

2.00

Cash Recd

.00

Subtotal

57.00

Tax:

4.79

DELIVERY ORDER

CUSTOMER COPY

629408

FILLED		REVIEWED	STAGING AREA	TOTAL PKGS	FREIGHT CHARGES	SHIPPED: DELIVERED VIA	
ON		19		BL #			
ITEM COUNT						PCS	ZONE GR WEIGHT DECL VALUE \$
BY							

SOLD BY:

Airgas Dry Ice
Tacoma Branch
Tacoma WA 98109
2531 627-6377

P/O NO: Walgreens
Renton
REL NO:

COPY

243464393

CUST. NO: 60671

ORDER NO: 346482-00

ORD DATE: 05/27/99

PAGE NO: 001 OF 01

SHIP TO:

LANGSETH ENVIRONMENTAL
7817 PORTLAND AVE. #A

SOLD TO: LANGSETH ENVIRONMENTAL

TACOMA WA 98404-0000 27-MAY-99 05:11PM CRT:TN421

PLAN TYPE	SLSM	BACH	TEAR	UPS	PPD	COLL	SHIP VIA	ROUTING	SCHEDULED SHIP DATE	ENTERED BY
CNR		51	51	31	0	X	WILL CALL		05/27/99	JM

LINE NO.	ITEM NUMBER	ITEM DESCRIPTION	UNIT	QTY. ORDERED	QTY. SHIP	QTY. BACK	UNIT WEIGHT	UNIT AMOUNT	EXTENDED AMOUNT
----------	-------------	------------------	------	--------------	-----------	-----------	-------------	-------------	-----------------

1	001-00V	DRY ICE CUT OR CHIPPED WILL CALL	IB	100	100		0	55.00	55.00
---	---------	----------------------------------	----	-----	-----	--	---	-------	-------

2	001-RES	REGULATORY COMPLIANCE CHARGE	EA	1	1	0	0	2.0000	2.00
---	---------	------------------------------	----	---	---	---	---	--------	------

Cash Recd	0.00
-----------	------

Subtotal	57.00
----------	-------

Tax	4.79
-----	------

Freight	0.00
---------	------

Total Sale	61.79
------------	-------

DELIVERY ORDER

CUSTOMER COPY

629460

ITEM COUNT	FILLED	REVIEWED	STAGING AREA	TOTAL PKGS	FREIGHT CHARGES	SHIPPED: DELIVERED VIA			
BY						ON	19	BL #	
						RCS	ZONE	GR WEIGHT	DECL VALUES

SOLD BY:

Airgas Dry Ice
Tacoma Branch
Tacoma WA 98409
[253] 627-6677

SHIP TO:

LANGSETH ENVIRONMENTAL
7517 PORTLAND AVE, WA

P/O NO: *Barbara Walgreen - Renton WA*

REL NO:

CUST. NO:

247686593

ORDER NO:

60671

ORD DATE:

350644-00

06/01/99

PAGE NO:

001 OF 00

SOLD TO:

LANGSETH ENVIRONMENTAL

COPY

TRAN TYPE	COMA	SLSM	BROH	TEAR	UPS	PPD	COLL	SHIP VIA	99	12:51 PM	ROUTING	SCHEDULED SHIP DATE	ENTERED BY
CHRG		501	51	51	0	X		WILL CALL				06/01/99	PD
LINE NO	ITEM NUMBER	ITEM DESCRIPTION		UNIT	QTY ORDERED	QTY SHIP	QTY	BIN	UNIT AMOUNT	EXTENDED AMOUNT			

Location: 51 **

1 DRI DC

DRY ICE C51 UN DILLED

LB

50

50

.6 5500

27.50

Cash Recd

.00

Subtotal

27.50

Tax

2.31

Freight

.00

Total Sale

29.81

SHIPPED BY:

Airgas Dry Ice
1102 South 30th
Tacoma WA 98409
[253] 627-6677

SHIP TO:

LANGSETH ENVIRONMENTAL
7517 PORTLAND AVE, WA

UPS SHIPPER NO.

PKG ID#

350644-00

THIS AGREEMENT SUBJECT TO ADDITIONAL TERMS AND CONDITIONS
PRINTED ON THE REVERSE SIDE - INCLUDING IMPORTANT
GOVERNMENT REGULATIONS.
PLEASE READ AND COMPLY.

ACCEPTED
FOR THE ABOVE
CUSTOMER

NAME
PLEASE PRINT

THIS IS TO CERTIFY THAT THE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED
AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT
OF TRANSPORTATION

IN CASE OF TRANSPORTATION EMERGENCY, CALL CHEMTREC, 1-800-454-3000

ORDER	DATE	SHIP VIA
-------	------	----------

350644-00 06/01/99 WILL CALL

-NONE-

AIRGAS PERSONNEL

DATE

T.O.D.

Guardian

Industrial Services Inc.

No 1657

(253) 536-0455 • 2103 East 112th St. • Tacoma, Washington 98445

SHIPPING PAPER

FROM SHIPPER LANHSTY ENV. SERV.
 STREET 7517 PORTLAND AVE SUITE A
 ORIGIN TACOMA WA

SHIPPER NO. 51799CARRIER NO. 10DATE 5/17/99

PHONE NO. _____

POINT OF

CONTACT 1001 LANHSTY

ZIP _____

U. S. DOT DESCRIPTION

Including Proper Shipping Name, Hazard Class & I.D. Number

CONTAINER
No. TypeQUANTITY
Wt. Vol.MATERIAL NOT REGULATED BY DOT.001 TT1942 Lb
10'4"

SPECIAL HANDLING INSTRUCTION AND ADDITIONAL INFORMATION:

TRANSIT

IN THE EVENT OF A SPILL, CONTACT GUARDIAN INDUSTRIAL SERVICES, INC., (206-536-0455), OR THE DEPARTMENT OF ECOLOGY, (800-258-5990) AND/OR THE NATIONAL RESPONSE CENTER, U. S. COAST GUARD (800-424-8802) FOR EMERGENCY ASSISTANCE.

PLACARDS PROVIDED: YES _____ NO ☒

THIS IS TO CERTIFY THAT THE ABOVE-NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATION OF THE U.S. DEPARTMENT OF TRANSPORTATION.

SHIPPER'S SIGNATURE

DATE

TRANSPORTER GUARDIAN INDUSTRIAL SERV.
 ADDRESS 1813 117 ST TACOMA WA
 SIGNATURE GUARDIAN INDUSTRIAL

PHONE (253) 536-0455DATE 5/17/99

CONSIGNEE 1280
 ADDRESS 1500 ALPINE RD S.E. LITTLE ROCK
 SIGNATURE _____

PHONE (501) 225-1111

DATE _____

WASTE RECEIPT NO. _____

Distribution: Transporter-Canary, Consignee-Pink, Shipper-Gold, GIST (original white to shipper.)



(206) 536-0455 • 2103 East 112th St. • Tacoma, Washington 98445

PUMP AND CLEAN CERTIFICATION

Date: 5/21/94

To: LANE'S ENV SERV.
7517 POKLANO AVE SUITE "A"
TACOMA WA

Invoice number: _____

This document serves as certification that G.I.S.I. has properly pumped and cleaned the following tank(s), sizes(s), in accordance with all Federal, State, and Local rules and regulations.

Location of tank(s): 5TH & POKLANO PENTON (WALGREEN) ^{JHAC}

Description of tank(s): 1 KUB & 2 KUST

Work was performed at: LANE'S TANK YARD

Last known product(s): GASOLINE

Sincerely,

Signed: John H. Lamm

Title: V.P. OF OPER.

Guardian

Industrial Services Inc.

No 1643

(253) 536-0455 • 2103 East 112th St. • Tacoma, Washington 98445

SHIPPING PAPER

FROM SHIPPER LANKSETH ENV.
STREET 7517 PORTLAND AVE SUITE A
ORIGIN TACOMA WA

SHIPPER NO. 52219
CARRIER NO. 10
DATE 5/21/99
PHONE NO. _____
POINT OF CONTACT TOM LANKSETH
ZIP _____

U. S. DOT DESCRIPTION Including Proper Shipping Name, Hazard Class & I.D. Number	CONTAINER No. Type	QUANTITY Wt. Vol.
<u>FLAMMABLE LIQUID N.O.S. 31993 PAIL</u>	<u>DDI TT</u>	<u>300 G</u>
SPECIAL HANDLING INSTRUCTION AND ADDITIONAL INFORMATION: <u>PROF. # 55894-06</u> <u>W.G. # 08978</u> <u>ONE LITRE d. HOME HEATING OIL 4 PAIL</u>		

IN THE EVENT OF A SPILL, CONTACT GUARDIAN INDUSTRIAL SERVICES, INC., (206-536-0455), OR THE DEPARTMENT OF ECOLOGY, (800-258-5990) AND/OR THE NATIONAL RESPONSE CENTER, U. S. COAST GUARD (800-424-8802) FOR EMERGENCY ASSISTANCE.

PLACARDS PROVIDED: YES ☒ NO ☐

THIS IS TO CERTIFY THAT THE ABOVE-NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATION OF THE U.S. DEPARTMENT OF TRANSPORTATION.

SHIPPER'S SIGNATURE _____ DATE 5-21-99
TRANSPORTER GUARDIAN IND. SERV. PHONE (253) 536-0455
ADDRESS 1211 11th St. Tacoma WA
SIGNATURE _____ DATE 5/21/99
CONSIGNEE PROF. # 55894-06 PHONE _____
ADDRESS 1211 11th St. Tacoma WA DATE _____
SIGNATURE _____

WASTE RECEIPT NO. _____

Distributions: Transporter-Canary, Consignee-Pink, Shipper-Gold, GIST will return original white to shipper.



(206) 536-0455 • 2103 East 112th St. • Tacoma, Washington 98445

PUMP AND CLEAN CERTIFICATION

Date: 5-27-99

To: Long & Th ENVIR.

Invoice number: _____

This document serves as certification that G.I.S.I. has properly pumped and cleaned the following tank(s), sizes(s), in accordance with all Federal, State, and Local rules and regulations.

Location of tank(s): Rainier Ave. & Sunset
Renton

Description of tank(s): 250 Gal

Work was performed at: site

Last known product(s): Gasoline

Sincerely,

Signed: Dave Bessens

Title: Manager

SCHNITZER STEEL INDUSTRIES, INC.

1902 MARINE VIEW DRIVE
TACOMA, WASHINGTON 98422
(253) 572-4000

usbank.

24-Hour Banking
1-800-873-3333

263748

19-10
1250

VOID AFTER 90 DAYS



Eighteen 70/100 Dollars

CHECK NO.

T-263748

DATE

AMOUNT

25 May 99 \$18.70

PAY TO THE ORDER OF

RACHAEL LANGSETH

SCHNITZER STEEL INDUSTRIES, INC.

⑈ 263748 ⑈ ⑆ 25000 ⑆ 05 ⑆ 53504 ⑆ 85650 ⑈

Lahfday

Walgreen's Refund

UST # 1

1000 928 UST

Future
warehouse site

Kenton

2 complement
2000 gallon UST

Kahloberg GC Inc

263854

		SEQ. NO.	GROSS WT. (LB.)	DATE			
TOM LANGSETH		LANG	165	33260	13:01 13:17 26 May 99		
CODE	MATERIAL	\$ / UNIT	TARE WT. (LB.)	NET WT. (LB.)	ADJUSTED NET WT. (LB.)	AMOUNT	
25	# 2 UN-PREPARED	\$13.00/BT	31160	2100	2100	12.19	

UST #2

Langseth

UST #3

75092

264079

		SEQ. NO.	GROSS WT. (LB.)	DATE		
ASHLEY LANGSETH		ALA 27	13680	08:17 08:36 28 May 99		
CODE	MATERIAL	\$ / UNIT	TARE WT. (LB.)	NET WT. (LB.)	ADJUSTED NET WT. (LB.)	AMOUNT
83	SHREDDER SCRAP	\$15.00/NT	12100	1580	1580	11.85

SCHNITZER STEEL INDUSTRIES, INC.
1902 MARINE VIEW DRIVE
TACOMA, WASHINGTON 98422
(253) 572-4000

usbank
24-Hour Banking
1-800-673-3555

264079

18-10
1250

VOID AFTER 90 DAYS



Eleven 85/100 Dollars

PAY TO THE ORDER OF

CHECK NO.

T-264079

DATE

AMOUNT

28 May 99

\$11.85

ASHLEY LANGSETH

SCHNITZER STEEL INDUSTRIES, INC.

Thomas R. Kishin

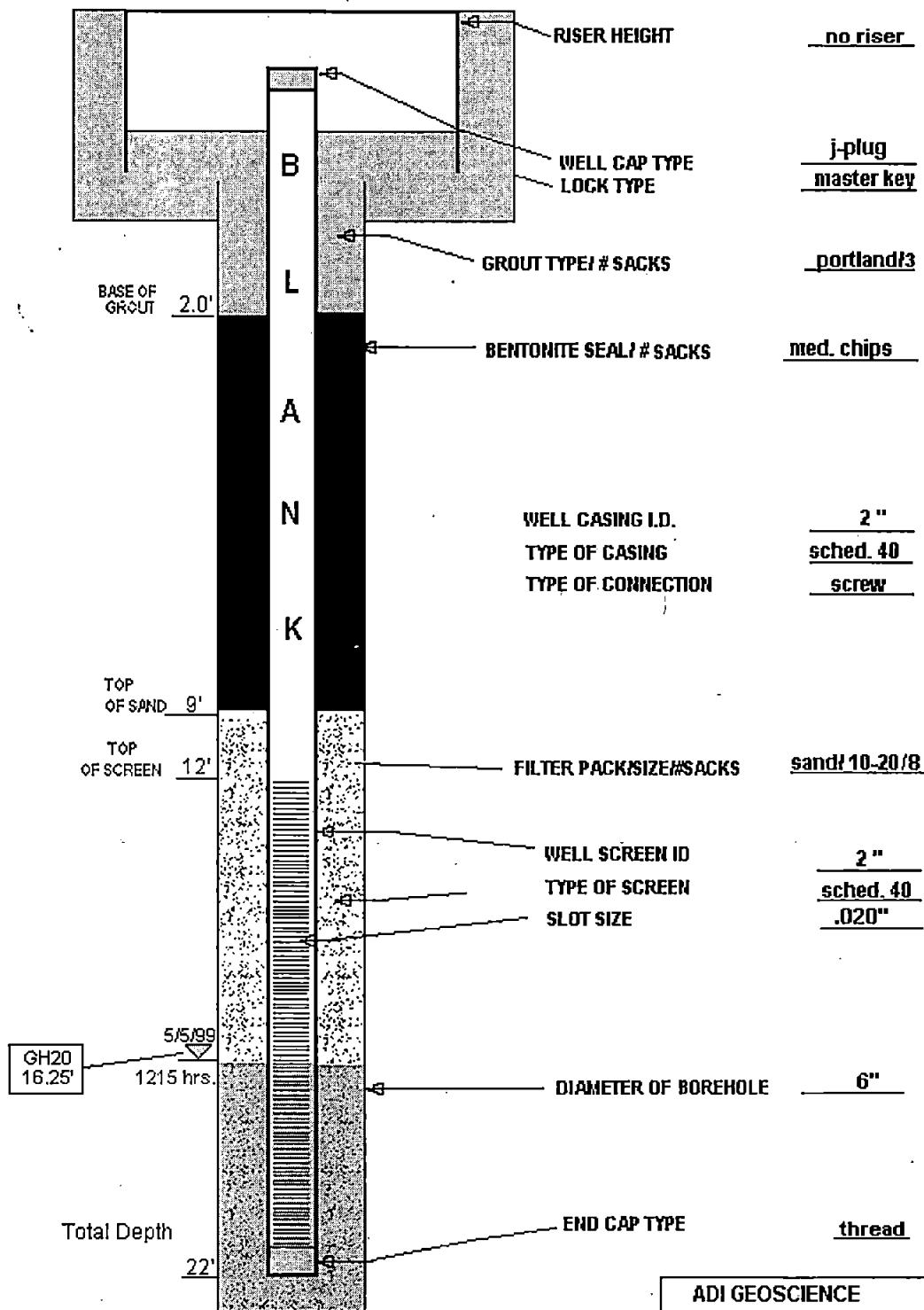
⑈264079⑈ ⑆125000105⑆153504185650⑈

Appendix E

Monitoring Well MW-1R Construction Log

PROJECT NAME Renton Walgreens
DRILLER/INSTALLER HOLT DRILLING, INC.
MONUMENT COMPLETION Mike Reynolds

DATE 5 May 1999
BORING/WELL I.D. MW-1R
OBSERVED BY D.A. Kramer



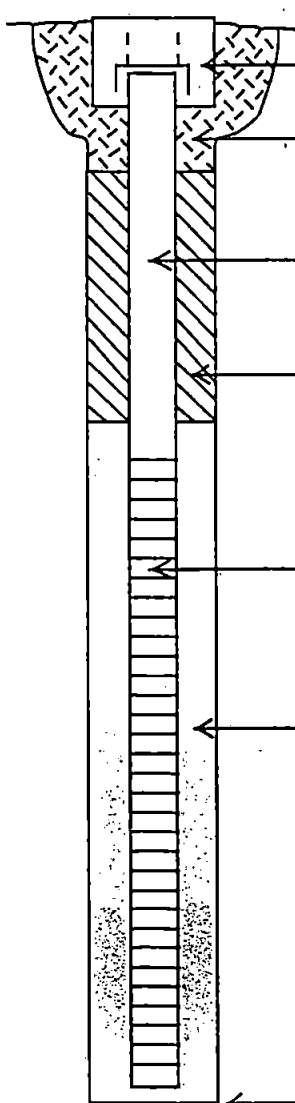
ADI GEOSCIENCE
EDMONDS, WA
206-977-6420
palagonite@msn.com

HOLT DRILLING, INC.

Resource Protection Well Report

Project Name Walgreens / Renton
Well Identification # MW-4
Drilling Method _____
Driller Michael L Reynolds
License # 2442

Date 7-12-99
County King NE $\frac{1}{4}$ SW $\frac{1}{4}$
Section 18 T. 23N R. 5E
Street Address 299 Rainier Ave / Renton
Start Card A29114
Consulting Firm Floyd + Snider

AS-BUILT	WELL DATA	FORMATION DESCRIPTION
	MONUMENT TYPE: _____ CONCRETE SURFACE SEAL _____ ft.	0 - ft.
	PVC BLANK _____ "X"	- ft.
	BACKFILL _____ ft. TYPE: _____	- ft.
	PVC SCREEN _____ "X" SLOT SIZE: _____ TYPE: _____	- ft.
	GRAVEL PACK _____ ft. MATERIAL: _____	- ft.
	WELL DEPTH <u>20.0</u> ft.	

REMARKS Chip in Place +
hydrate until refusal of
water. Removed Monument

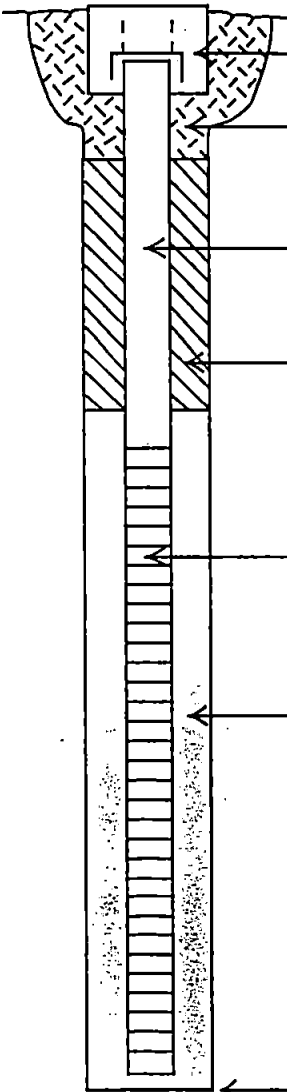
Signature Michael L Reynolds

HOLT DRILLING, INC.

Resource Protection Well Report

Project Name Walgreen site
Well Identification # MW-1, 2, 3 + 5
Drilling Method Abandonment
Driller Dale Smith
License # 1229

Date 4-5-99
County King, NE 1/4 SW 1/4
Section 18 T. 23N R. 5E
Street Address 299 Rainier ave Renton
Start Card A 29107
Consulting Firm Floyd x Snider

AS-BUILT	WELL DATA	FORMATION DESCRIPTION
	MONUMENT TYPE: _____	0 - ft.
	CONCRETE SURFACE SEAL _____ ft.	_____ ft.
	PVC BLANK <u>2</u> "X	_____ ft.
	BACKFILL _____ ft. TYPE: _____	_____ ft.
	PVC SCREEN _____ "X SLOT SIZE: _____ TYPE: _____	_____ ft.
	GRAVEL PACK _____ ft. MATERIAL: _____	_____ ft.
	WELL DEPTH <u>20' +</u>	
REMARKS <u>Backfilled with bentonite.</u>		

Signature

Dale Smith

Floyd & Snider Inc.

Strategy and Technical Solutions
for Contaminated Properties

83 South King Street Suite 614 Seattle, Washington 98104 206.292.2078 Fax 687.7867

November 11, 1999

Mr. John T. Lillie
Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452

SUBJECT: Transmittal of VCP Site Closure Report
Sunset-Rainier Renton Walgreens
Renton, Washington
Project Number: WLGNS-Renton.T3

Dear Mr. Lillie:

On behalf of Evergreen-Sunset Limited Partnership, the development group for the Renton Walgreens site, we are pleased to send you this VCP Site Closure Report for the above referenced site.

As we have discussed previously, we look forward to your determination of "No Further Action" for this site.

Please call me with any questions or clarifications. Thank you very much for your assistance in bringing this site to closure. We very much appreciate your participation on this project.

Sincerely,
Floyd & Snider Inc.



Roy K. Kuroiwa, PE
Project Manager

Encl.: VCP Site Closure Report, Sunset-Rainier Renton Walgreens
Copies: Karyl Clark, Evergreen Development Company
Lynn Manolopoulos, Davis Wright Tremaine LLP