



Block 40 East & West Westlake & Terry  
FSID: 602477  
Cleanup Site ID: 333  
VCP NW 1680  
Seattle

Block 40 East + West Westlake + Terry  
FSID: 602477  
CSID: 333

**REPORT  
VOLUNTARY CLEANUP ACTION  
AND UST CLOSURES  
BLOCK 40 EAST AND WEST  
SEATTLE, WASHINGTON**

**For**

**CITY INVESTORS, V LLC  
URS PROJECT NO.: 33757035  
August 29, 2006**



August 29, 2006

Ms. Sharon Coleman  
City Investors V LLC  
505 Fifth Avenue, Suite 900  
Seattle, Washington 98101

Report  
Voluntary Cleanup Action and UST Closures  
Block 40 East and West  
Seattle, Washington

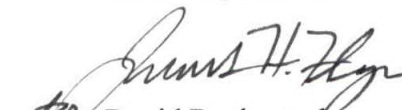
Dear Ms. Coleman:

URS Corporation (URS) is pleased to present our Voluntary Cleanup Action and UST Closures Report to City Investors V LLC (City Investors) for the Block 40 East and West construction site. This project was conducted as a voluntary cleanup action per the State of Washington's Model Toxics Control Act (Chapter 173-340 WAC). This report summarizes the actions taken to remove underground storage tanks and excavate affected soils, including field screening and sampling methodology, field observations, laboratory analysis results, off-site disposal infractions, and conclusions. This information will be provided to the Washington Department of Ecology (Ecology) to evaluate a request for a *No Further Action* letter. This project was performed in accordance with our proposal to City Investors dated September 1, 2005.


Please contact us at (206) 438-2700 if you have any questions or require additional information.

Very truly yours,

URS Corporation

  
David Raubvogel  
Senior Geologist, LHG



  
Geoff Garrison  
Project Geologist, PhD, LG

Copy: Kathy Gerla, Foster Pepper PLLC  
Martin McCabe, URS Corporation

URS Corporation  
1501 4th Avenue, Suite 1400  
Seattle, WA 98101-1616  
Tel: 206.438.2700  
Fax: 206.438.2699

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## 1.0 INTRODUCTION

This report presents the results of the voluntary cleanup of petroleum-affected soils at the Block 40 East and West construction project (subject property or site). The project is also referred to as "Westlake Terry" and construction permit addresses are 318 Westlake Avenue North and 970 Thomas Street. The cleanup action also included the removal of two underground storage tanks (USTs). The existing structures were demolished and the property is being redeveloped by City Investors V LLC (City Investors). The property is owned by Westlake and Terry LLC.

The voluntary cleanup action was conducted consistent with the applicable provisions of the State of Washington's Model Toxics Control Act (MTCA, WAC 173-340) and Washington Department of Ecology's (Ecology's) *Guidance for Remediation of Petroleum Contaminated Soils*, (Ecology, 1994a) and URS Corporation's (URS') Remedial Action Plan (RAP) dated October 11, 2005.

The property redevelopment by City Investors includes the construction of a multi-story office building with subgrade parking levels. RH Rhine, Inc. of Tacoma, Washington demolished the existing structures and paved surfaces prior to the remedial action. The construction and demolition related permits were obtained by GLY Construction Company (GLY) of Bellevue, WA. USTs were removed by Construction Group International (CGI).

The cleanup action consisted of the excavation and removal of petroleum-affected soils in the vicinity of an existing UST and beneath a rail siding. Gasoline affected soils along the northern property boundary which are likely to have originated from a release from the adjacent Firestone facility were also excavated. The petroleum-contaminated soils were removed and disposed of off site at Rabanco Regional Landfill located in Roosevelt, WA. Surface water removed during the remedial excavation was temporarily stored in tanks and discharged into the sanitary sewer in accordance with King County Industrial Waste Program discharge requirements. This report documents the cleanup action and associated field observation, laboratory analytical results, and soil treatment.

### 1.1 SITE DESCRIPTION

The subject property comprises one city block, which is bounded by Harrison Street to the north, Thomas Street to the south, Terry Avenue North to the east, and Westlake Avenue North to the west (Figures 1 and 2). The entire property is approximately 415 feet in length by 285 feet in width. Prior to demolition and new construction activities, which began in 2006, an alley bisected the property into eastern and western halves, and the property was formerly occupied by a number of commercial and retail businesses (HartCrowser, 2004). The eastern half of the property (Block 40 East) was largely occupied by a paved parking lot, with a long slender 1-story structure at 315 Terry Ave. N. (Figure 2). The western half of the property (Block 40 West) consisted of eight parcels with individual adjoining buildings which covered the entire half block: 330, 324, 318, 316, 310, 306, and 300 Westlake Avenue North; and 959 Harrison Street (Figure 2).

Information provided by the design team for the construction project indicates that the new building will be a reinforced concrete structure with six stories above ground and three stories below ground. The lowest basement level is planned at approximately Elevation 24.5 above mean

sea level (msl), which is approximately 25 to 30 feet below ground surface (bgs) at the property. The building will occupy the entire block.

## 1.2 TOPOGRAPHY

The subject property is located in the SE ¼ of the SE ¼ of Section 30, Township 25 North, Range 4 East in Seattle, Washington. The property slopes gently downward to the north from approximately 59 above msl at Thomas Street on the south border to 49 feet above msl on Harrison Street on the northern boundary. The basements of the former buildings were generally 10 feet bgs at the property. The nearest surface water is Lake Union, located approximately ¼ mile to the north.

## 1.3 GEOLOGY AND HYDROGEOLOGY

The subsurface soils consist of fill and native soils formed in glacial till and outwash deposits. Prior environmental and geotechnical boring locations are shown on Figure 2 and were previously reported in the Geotechnical and Phase II Investigation Reports (URS, 2005a,b,c,d). The property is located in an area occupied by artificial fill that extends from Lake Union southward to at least Thomas Street. The fill zone is flanked on the east and west by the Vashon till, which is typically underlain by an advance outwash sand deposit, known as the Esperance Formation, and by Vashon glaciomarine or pre-Vashon glacial drift deposits. The fill beneath the subject property was characterized by grey to brown sandy silt and silty sands with sand lenses, trace gravel, and occasional wood or brick fragments. The bottom of this fill layer was difficult to distinguish from native soil. Native soils were characterized by dense, brown sand to silty sand (Esperance Formation or possibly recessional outwash). This native soil was typically encountered below 20 feet depth, but was occasionally encountered as shallow as about 15 feet (Boring U-3-05). This layer is at least 30- feet thick, and is the material in which all of the geotechnical and environmental borings and probes were terminated (URS, 2005a and b). Groundwater was encountered at depths ranging from 31 (UGP-6) to 37.5 feet bgs (UGP-5). A north to south geologic cross section is provided on Figure 3. The inferred groundwater flow direction is northerly toward Lake Union.

Additional information regarding the subsurface conditions at the property is presented in URS' Geotechnical Investigation reports dated April 11, 2005 and August 25, 2005 (URS, 2005a, b).

## 2.0 BACKGROUND—PRE-REMEDIATION INVESTIGATION

Previous investigations conducted at the property included: environmental site assessments by HartCrowser (1998; 2000a,b; 2004), Secor (1991), and Enviros (1992); geotechnical investigations (URS, 2005a,b), hazardous building materials survey (URS, 2005c), and soil and groundwater investigations (URS, 2005d). The scope of the Phase II investigation was developed based on the prior findings.



The areas identified with petroleum hydrocarbon contamination and the locations of out-of-service USTs are discussed in the following sections.

## **2.1 BLOCK 40 EAST**

URS' geotechnical investigation at the Block 40 East property in April, 2005 noted hydrocarbon odors in the shallow soils at boring U-4-05 near the west property line (Figure 2). Diesel and heavy-oil range petroleum hydrocarbons were detected in the sample collected from 1.5 feet bgs at concentrations (187 mg/kg and 229 mg/kg, respectively) below applicable MTCA Method A cleanup level of 2000 mg/kg. A sample collected from 5 feet bgs did not contain detectable concentrations of petroleum hydrocarbons. Four additional borings were advanced around U-4-05 (Figure 2) to delineate the extent of petroleum-affected soils (URS, 2005b). Petroleum hydrocarbons were not detected in the soil samples collected from these borings.

## **2.2 BLOCK 40 WEST**

### **2.2.1 318 Westlake Avenue North**

Borings completed adjacent to an out-of-service heating oil UST located in the basement of the building indicated that a historic release of heating oil had occurred at this tank location. The soil sampling results are shown on Figure 4. Soil samples from boring UHA-1 from 5 and 7 feet below basement grade (BBG\*) contained diesel-range hydrocarbons at concentrations of 38,000 mg/kg and 71,000 mg/kg, respectively, which exceeds the MTCA Method A cleanup level of 2000 mg/kg. Naphthalene was also detected in this sample at a concentration of 47 mg/kg, which exceeds the MTCA Method A cleanup level of 5 mg/kg. Boring UGP-9 was advanced next to UHA-1 to define the vertical extent of contamination. Soil samples collected from 18 and 22 feet bbg did not contain detectable concentrations of diesel/ heavy oil range hydrocarbons or volatile organic compounds (VOCs). Based on field screening results, the petroleum contamination was identified in the soils directly beneath the basement floor to less than 15 feet bbg (Figure 4). Additional borings advanced east (UGP-5), south (UGP-10), west (UGP-11), and north (UGP-12) of UGP-9 did not indicate evidence of petroleum contamination.

### **2.2.2 330 Westlake Avenue North**

Petroleum hydrocarbons were detected in the soil and groundwater samples collected from boring UGP-6 located on the north side of this property (Figure 4). Gasoline-range petroleum hydrocarbons were detected in soil samples collected from 22 feet bgs at a concentration of 4,300 mg/kg which exceeds the MTCA Method A cleanup level of 100 mg/kg. Samples collected from borings drilled southeast (UPG-13), east (UGP-14) and southwest (UGP-15) of UGP-6 did not indicate evidence of petroleum hydrocarbons in the soils.

A groundwater sample collected from boring UGP-6 at a depth of 31 feet bgs detected gasoline-range petroleum hydrocarbons at a concentration of 5 mg/l. Benzene (7.2 ug/l), toluene (940 ug/l), ethylbenzene (340 ug/l) and total xylenes (1,700 ug/l) were also detected in the groundwater sample. Gasoline-range petroleum hydrocarbons, benzene and total xylenes concentrations exceeded the applicable MTCA Method A cleanup levels. Groundwater samples collected from

borings drilled to the east (UGP-14) and southeast (UGP-5) did not detect gasoline- and diesel-range petroleum hydrocarbons.

### **2.2.3 300 Westlake Avenue North**

Soil samples collected from borings completed around the perimeter of the out-of-service Bunker C fuel oil UST located beneath Building 300 (Figure 2) did not indicate petroleum hydrocarbon contamination in the soil in this location.

### **2.2.4 959 Harrison Street**

A soil boring completed in the vicinity of a suspected UST location along the north wall of the building (Figure 2) did not indicate evidence of petroleum contamination in the soil in this location. A UST was suspected in this area based on the location of a boiler room. However, no evidence of a UST existing in this area was identified (e.g., fill or vent piping, or access manways). In addition, no historical evidence of the suspected UST was identified.

## **2.3 SUMMARY OF CONTAMINANTS AND AREAS OF CONCERN**

The site investigations conducted by URS identified two primary areas (318 Westlake and 330 Westlake) with soils containing elevated concentrations of petroleum hydrocarbons on Block 40 West (Figure 4) and one apparently limited area of contamination on Block 40 East. A summary of these areas and the contaminants of concern (COCs) are presented below:

### **2.3.1 Block 40 East**

A limited area of diesel and heavy-oil range petroleum hydrocarbons affected soil with levels below the MTCA Method A cleanup was detected within the former alleyway to a depth of less than 5 feet below grade (Figure 4).

### **2.3.2 Block 40 West**

**318 Westlake Avenue North Heating Oil UST** - Significant petroleum hydrocarbon staining was noted in soils adjacent to the heating oil UST located beneath the basement of Building 318. Diesel/fuel oil contamination as high as 71,000 mg/kg was detected at 7 feet bbg and the contamination appeared to dissipate at approximately 15 feet bbg. The contamination noted in this area appeared to be directly associated with releases from the heating oil UST and piping system (Figure 4).

**330 Westlake Avenue North Soil/Groundwater Gasoline Range Petroleum Hydrocarbon Contamination** - Evidence of petroleum contamination was noted in the soil from approximately 17 to 31 feet bgs at boring UGP-6 located north of Building 330. Gasoline-range hydrocarbons were detected in the soils at a concentration of 4,300 mg/kg at 22 feet bgs. Groundwater encountered at approximately 31 feet bgs also detected elevated concentrations of gasoline-range petroleum hydrocarbons (5 mg/l), benzene (7.2 ug/l) and xylenes (1700 ug/l). The source of the contamination in this area was not known at the time of initial investigation, but was presumed to be associated with an off-site source. At the time of the initial investigation, the Firestone facility located

directly north of the subject property was considered to be a potential source of the contamination, as three UST fill ports and sump lids were noted in Harrison Street, adjacent to the Firestone facility (Figure 2).

### **3.0 CLEANUP ACTION**

#### **3.1 SELECTION OF CLEANUP LEVELS**

The cleanup action implemented during the construction of the Block 40 East & West building is being conducted in accordance with Ecology's Voluntary Cleanup Program (VCP) and URS' RAP dated October 11, 2005. Based on the nature of the contamination present at the property, MTCA Method A soil cleanup levels were utilized for this property.

#### **3.2 SCOPE OF CLEANUP ACTION**

The purpose of this voluntary cleanup action was to remove soils containing gasoline-, diesel-, and oil-range total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) within the building construction site and dispose of these soils offsite at a permitted facility. Soil excavation was performed by Northwest Construction of Bellevue, WA, under contract to GLY. The excavation program included the three known areas of residual petroleum-affected soils, removal of an unknown rail siding and rail ballast and the removal of two USTs by Construction Group International (CGI).

UST site assessments were performed by URS during the removal of the USTs, including field screening of excavated soils and collecting confirmation soil samples from the excavation walls and floor. Northwest Construction transported petroleum-affected soils to the Subtitle D Roosevelt Landfill Facility (Rabanco) in Roosevelt, Washington. The scope of work provided by Northwest Construction included:

- Excavation of test pits in the northwestern portion of the property to define the extent of gasoline affected soils
- Excavating and segregating soils exhibiting evidence of hydrocarbons based on field screening results obtained by URS in accordance with the RAP (URS, 2005e)
- Excavating clean soils as part of the building construction mass excavation
- Transporting soils containing petroleum hydrocarbons to the disposal facility
- Transporting clean soils to the Seattle Art Museum Sculpture Garden construction site.

The scope of work provided by CGI included:

- Removal and disposal of an approximately 2,000-gallon Bunker C fuel oil UST beneath Building 300- and a 500-gallon fuel oil tank located beneath Building 318 in accordance with Ecology and City of Seattle requirements

URS was responsible for the following scope of services:

- Monitoring the contractor during removal of the affected soils and field screening excavated soils
- Monitoring the removal of the USTs and performed UST Site Assessments
- Documenting the condition of soils exposed in the walls and floor of the excavation
- Collecting post-excavation confirmation soil samples
- Collecting samples from stockpiled soil for waste characterization
- Submitting soil samples to ESN Northwest, an Ecology-accredited analytical laboratory for analysis.
- Retaining Cascade Drilling to install three temporary groundwater monitoring points (PZ-1 through PZ-3) to assess the groundwater conditions in the area of suspected groundwater contamination in the northwestern portion of the property and monitoring the affects of dewatering of the central elevator core (Figure 6)
- Drilling of three soil borings (SB-1, -2 and -3) and conversion of boring SB-2 into a permanent monitoring well UMW-1 in Harrison Street to assess the groundwater quality north of the subject property (Figure 6)
- Collecting baseline groundwater samples and additional groundwater samples during the period of construction dewatering performed at the central elevator pit
- Preparation of this report summarizing the field activities, analytical results, and conclusions regarding the cleanup action and supplying appropriate forms and documentation for review under the VCP

Specific details of the cleanup action and methodology used for soil sampling, field screening, and laboratory analyses performed are presented in Section 4.0.

### **3.2.1 Building Demolition and Soil Excavation**

R.W. Rhine, of Tacoma, WA, performed demolition of the property buildings in February and March 2006. Prior to the demolition of the buildings, a hazardous building materials survey was completed by URS and asbestos containing building materials were abated by Long Services (URS, 2005c). The chronology of the remedial excavation activities is provided in Appendix B. Photographs documenting the former property features, demolition, soil excavation, and other remedial activities are provided in Appendix C. The contaminated soil excavation program was performed from February 2006 through April 2006. Prior to initiating soil removal, a soldier pile shoring wall was installed by DBM around the perimeter of the excavation. The excavation for the building foundation extended from initial elevations of 49 to 59 feet above msl to a final elevation of between 24 and 39 feet above msl.

### **3.2.2 Excavation Monitoring, Waste Characterization and Post Excavation Sampling Procedures**

URS personnel were on site to monitor the excavation program, screen soil, and perform stockpile and post-excavation soil sampling. A Washington State-registered UST site assessor was on site during the tank removals. The tanks removals were performed by CGI in conformance with

Ecology and the City of Seattle requirements. The tank disposal documentation is provided in Appendix D. URS personnel described the subsurface materials encountered in the soil excavation and field screened soil samples for organic vapors using a photoionization detector (PID). Particular attention was given to noting visible evidence of staining, discoloration, odors, or other relevant factors indicative of petroleum hydrocarbon contamination in the exposed soils. The UST Site Assessment forms are provided in Appendix D. Petroleum-affected soils were segregated from unimpacted soils and samples (designated Stockpile (SP)) of this material were periodically collected to document the TPH concentrations in the soils. Soils with no detectable levels of petroleum hydrocarbons were transported by Northwest Construction to the Seattle Art Museum Sculpture Garden construction site in Seattle, WA for use as fill material. Petroleum-affected soils were disposed of at the Roosevelt Regional Landfill (Rabanco) located in Roosevelt, WA. Soil disposal documentation is provided in Appendix A.

When field screening indicated that the excavation base and sidewalls did not contain petroleum concentrations, post-excavation soil samples were collected to confirm that the petroleum-affected soils were adequately removed. The samples were retrieved from the sidewalls and floor of the excavation using a backhoe and samples were collected from undisturbed soils within the backhoe bucket. In accessible areas of the excavation, samples were collected directly from the base and sidewalls using a disposable plastic scoop or equivalent. The soil analytical samples were placed in laboratory-supplied glassware. Samples were labeled with a unique sample number, date, and time of collection. Sealed samples were stored in an ice chest at 4 deg. C until delivered to the laboratory. Chain-of-custody (COC) forms were used to ensure sample integrity.

Soil samples were submitted to an Ecology-accredited laboratory, ESN Northwest of Bellevue, WA for analysis of either gasoline-range hydrocarbons by Washington Method NWTPH- Gx BTEX by Method 8021B or diesel-range petroleum hydrocarbons by NWTPH-Dx. The laboratory analytical reports are provided in Appendix E.

## **4.0 CLEANUP ACTION RESULTS**

### **4.1 BLOCK 40 EAST RAIL SIDING AREA**

#### **4.1.1 Soil Excavation and Field Observation**

During the demolition and excavation of Block 40 East, a rail siding was uncovered beneath the former alleyway (Figure 2). The railroad ties were apparently treated wood (with a creosote-like odor) and some of the underlying railroad ballast and soil in the central portion of the property was also noted to have a creosote-like odor. The rail ties were removed and segregated. The underlying ballast and soil having a creosote-like odor was excavated to a depth of approximately 3 feet bgs (Appendix C). Approximately 383 tons of ballast and soil were disposed of at the landfill. Damaged railroad ties were also transported off site for disposal at the Roosevelt facility. Some of the rail ties in good condition were recycled by GLY.

Four post-excavation soil samples were collected and analyzed for semi-volatile organic compounds (SVOCs) by EPA Method 8270 and diesel/oil range petroleum hydrocarbons by



NWTPH-Dx. A representative sample of the rail ballast, RR-1, was also collected and analyzed for SVOCs.

#### **4.1.2 Analytical Results**

The post-excavation sample locations RR-EX-1 through RR-EX-4 are shown on Figure 2. The post-excavation samples and the rail ballast sample analytical results are summarized in Table 1. The post-excavation samples did not contain detectable concentrations of diesel/oil range petroleum hydrocarbons or SVOCs. SVOCs were also not detected in the rail ballast sample RR-1.

#### **4.1.3 Conclusions**

Based on the post-excavation sampling results, remaining soils in the vicinity of the rail siding do not contain detectable concentrations of petroleum hydrocarbons or SVOCs.

### **4.2 318 WESTLAKE AVENUE NORTH ABANDONED HEATING OIL UST**

#### **4.2.1 UST Removal, Soil Excavation and Field Observations**

On February 27, 2006, a 500 gallon heating oil UST was excavated and removed from the former location on Building 318 (Figure 5). The tank was emptied, rinsed and then removed and transported off-site by CGI (Photos 3 and 4, Appendix C). Piping associated with the tank was also removed. The tank was approximately 6 feet long by 4 feet in diameter. The tank was corroded and had many small holes (Photo 4, Appendix C). The base of the tank was located at an elevation of approximately 38 feet above msl. The tanks were surrounded by silty sand fill material that was consistent with the fill material noted beneath the original buildings. Contamination was observed to approximately 30 feet above msl beneath the tanks. These observations were consistent with the results of the soil borings completed around this tank as discussed in Section 2.2. Following the UST removal, the excavation was subsequently expanded to remove the petroleum-affected soils. When field evidence of petroleum contamination was no longer evident, six post-excavation samples were collected from the sidewalls and floor of the excavation (Figure 5). Groundwater was not observed within the excavation.

Approximately 770 tons of soil were excavated and either directly loaded into dump trucks or temporarily stockpiled on visqueen prior to off-site disposal at the Rabanco landfill.

#### **4.2.2 Analytical Results**

The post excavation sampling results are summarized in Table 2 and the limits of the excavation are shown on Figure 5. Diesel and oil-range petroleum hydrocarbons were not detected in any of the post-excavation samples.

#### **4.2.3 Conclusions**

Following the removal of the fuel oil UST formerly located beneath Building 318, petroleum-affected soils were noted below the tanks to approximately 30 feet above msl. The tank was

corroded and had a number of pin-sized holes near the bottom of the tank. Approximately 770 tons of impacted soils were removed and disposed of at the landfill. The post excavation samples collected along the sidewall and base of the excavation did not detect petroleum hydrocarbons. Based on these results, petroleum-affected soils have been successfully removed from this location. Groundwater was not encountered during the excavation, thus, no impacts to groundwater quality were identified.

#### **4.3 300 WESTLAKE AVENUE NORTH ABANDONED BUNKER C HEATING OIL UST**

##### **4.3.1 Soil Excavation and Field Observations**

On April 29, 2006, a 2000-gallon Bunker C oil UST was removed from beneath the basement of the former Building 300 (Figure 5); The tank was nearly full of Bunker C fuel and was emptied, inerted with dry ice, exhumed, and transported off-site by CGI (Photos 5 and 6, Appendix C). The associated tank piping was also removed. The tank dimensions were approximately 12 feet long by 5 feet in diameter. The tank had some exterior corrosion and one perforation at the top of the tank was noted. No petroleum-affected soils were evident adjacent to the perforation. The base of the tank was located at an elevation of approximately 28 feet above msl. The tank was surrounded by silty sand fill material. Petroleum contamination was not observed within the UST excavation. Four sidewall and one floor sample were collected from the excavation (Figure 5). Groundwater was not encountered in the excavation.

##### **4.3.2 Analytical Results**

The results of the sidewall and bottom of excavation analytical samples are summarized in Table 3 and the locations are shown on Figure 5. Petroleum hydrocarbons were not detected in any of the post excavation samples.

##### **4.3.3 Conclusions**

Following the removal of the 2000 gallon Bunker C oil UST, no evidence of petroleum-affected soils were noted and post excavation soil sample analyses did not detect petroleum hydrocarbon contamination. These results were consistent with the field observations and prior soil borings completed around this tank (Figure 2) as discussed in Section 2.2.

#### **4.4 330 WESTLAKE AVENUE NORTH GASOLINE-AFFECTED SOIL EXCAVATION**

##### **4.4.1 Soil Excavation and Field Observations**

During the 2005 URS Phase II ESA, gasoline-contaminated soils were identified in boring UGP-6 (Figure 3) within Harrison Street north of the northwest corner of Building 330 as summarized in Sections 2.2 and 2.3. Prior to initiating the excavation for the building foundation, shoring was installed around the perimeter of the property. During soldier pile drilling and shoring installation near the prior boring location UGP-6, gasoline affected soils were discovered between piles N2 to

N8 as shown on Figure 6. The first evidence of contamination was noted at approximately 43 feet above msl (6 feet bgs) and extended to 30 feet above msl (19 feet bgs).. URS' site personnel monitored soil excavation activities and performed field screening with a PID and made visual observation of the material. Gasoline-affected soils were evident by their strong odor and gray discoloration of the silty sand soils noted both in the northern excavation wall and extending to the south as shown in Photographs 7, 8 and 9 in Appendix C. During the excavation of soils in this area, no USTs were identified nor was there evidence of a former tank cavity (e.g., fill material different than surrounding material and tank piping). No on-site source of gasoline was identified at the subject property. Gasoline-affected soils were excavated and either temporarily stockpiled or loaded directly into trucks.

Soil samples were collected along the north wall of the excavation wall as it was exposed for shoring and along the base of the mass excavation to confirm the vertical extent of the contamination (samples designated as post excavation or "PEX"). In addition, samples of the excavated material/soil stockpiles were also collected periodically for chemical analysis (samples designated as Stockpile or "SP"). The soil samples were analyzed for gasoline-range petroleum hydrocarbons and BTEX. A selected number of the samples were also analyzed for diesel-range petroleum hydrocarbons to verify the type of petroleum impacts.

To assist in the horizontal and vertical delineation of contamination, three test pits (TP-1, TP-2 and TP-3) were completed to approximate elevation 22 feet above msl and samples were collected on two foot intervals for analysis. In addition, soil samples were collected for analysis during the installation of three temporary piezometers (PZ-1, PZ-2 and PZ-3) installed on April 17, 2006. The boring logs and well as built diagrams are provided in Appendix F. Soil samples were collected for analysis from these borings at approximately 25 feet above msl and additionally, near the groundwater interface (approximately 18 feet above msl) at PZ-1. Once field screening and sampling indicated that gasoline contamination was no longer present, the remainder of the soils requiring excavation for the building foundation were sent to a clean fill site for reuse.

\* Approximately 4470 tons of gasoline-affected soil were transported off site from the Building 330 area and disposed of at the Rabanco facility. The approximate horizontal and vertical extent of the gasoline-affected soils is shown on Figures 6 and 7, respectively. The gasoline contamination extended approximately 55 feet south of the northern property boundary. As shown on Figure 7, the contamination pinches out to the south and was encountered at progressively deeper depth intervals.

On June 6, 2006, Cascade Drilling completed three soils borings (SB-1, SB-2 and SB-3) within Harrison Street to further assess the area of gasoline affected soils and groundwater. The boring locations (Figure 6) were selected based on the observed area of gasoline affected soil noted on the subject property. \* Boring SB-2 was converted into a monitoring well which was designated UMW-1. The boring logs and well as built diagrams are provided in Appendix F. Soil encountered within the street consisted of sandy fill material from approximately 5 to 10 feet bgs. The fill is underlain by silty sand and grades into fine to medium sands near the total depth of the borings. Field screening of the soils did not identify gasoline-affected soils until the groundwater interface at approximately 30 feet bgs (Appendix F). PID measurements exceeded 2000 parts per million (ppm) directly above and within the groundwater table in all three borings. Groundwater was encountered in the borings at depths ranging from approximately 30 feet to 33 feet bgs. Soil

samples were collected from borings SB-1, SB-2 and SB-3 for analysis near the groundwater interface.

#### **4.4.2 Analytical Results**

The soil analytical results are summarized in Table 4. Gasoline-range petroleum hydrocarbons were detected in six of seven samples collected from the excavation between pile N2 and N8 (Figure 6). Ethylbenzene and total xylenes were also detected in the samples, but at concentrations below applicable cleanup levels. Benzene and toluene were not detected in any of the samples.

The soils samples collected within the three test pits did not contain detectable concentrations of gasoline-range petroleum hydrocarbons or BTEX. The soil samples collected from PZ-1, PZ-2 and PZ-3 also did not indicate gasoline contamination in sampled areas at approximately 25 feet above msl. Elevated levels of gasoline-range petroleum hydrocarbons (2000 mg/kg) were observed near the saturated zone interface (18 feet above msl) in temporary well, PZ-1 but BTEX was not detected in this sample.

Results for soil samples collected from stockpiled soils are summarized in Table 5. Gasoline-range petroleum hydrocarbons concentration in these samples ranged from 23 mg/kg to 1100 mg/kg. The only VOCs detected were ethylbenzene and total xylenes, but VOC results were below applicable cleanup levels.

Based on elevated field screening PID results, soil samples were collected near the groundwater table interface in borings SB-1, SB-2 and SB-3 completed within Harrison Street (Figure 6). Gasoline-range petroleum hydrocarbons were detected at concentrations ranging from 10 mg/kg (SB-1-32) to 630 mg/kg (SB-3-33.5) as summarized in Table 4. BTEX concentrations did not exceed the applicable MTCA Method A cleanup levels with the exception of benzene and xylene concentrations in SB-3-33.5 (0.24 mg/kg, 12 mg/kg).

#### **4.4.3 Groundwater Assessment**

To further assess the southern extent of the gasoline-affected groundwater and assess the effects of the planned dewatering of the central elevator core on the groundwater contaminant distribution, three temporary piezometers/well points (PZ-1, PZ-2 and PZ-3) were installed by Cascade Drilling at the base of the excavation (approximately 30.5 to 29 feet above MSL) on April 17, 2006. The well locations are shown on Figure 6 and the boring log/well as built diagrams are provided in Appendix F. Static groundwater level measurements were collected in these wells prior to, and during the dewatering program (Table 6). Prior to construction dewatering, groundwater elevations ranged from approximately 18.3 to 18.9 feet above msl during the period from April 25 through May 5, 2006. Based on the pre-pumping water level data, the groundwater gradient is generally to the north. However, some variability in the gradient has been noted in the pre-pumping data.

Soil boring SB-2 located within Harrison Street was converted into a monitoring well designated UMW-1. The well location is shown on Figure 6 and the boring log/well as built diagram is provided in Appendix F. The static groundwater level in this well was measured at 32.31 feet bgs (17.31 feet above msl) on June 6, 2006 (Table 6). UMW-1 is located south of the reportedly



closed in place USTs situated north of the subject property (Firestone), and was installed to assess the groundwater quality in that area.

#### **4.4.4 Construction Dewatering**

The dewatering system installed around the perimeter of the central elevator core consisted of four dewatering wells (WP-NE, WP-NW, WP-SE and WP-SW) which were installed to elevation 0 to 2 feet above msl (Figure 7). The wells were installed by Slead Construction Co. on May 4 and 5, 2006. The wells were constructed of 12-inch diameter perforated PVC pipe and were equipped with submersible pumps which were connected to piping that discharged to an onsite Baker tank prior to discharging into the sanitary sewer (Photograph 11, Appendix C). The closest monitoring point (PZ-3,) from dewatering well point WP-NW was approximately 110 feet to the north (Figure 6). The excavation plan for the elevator core required that the groundwater table be lowered to an elevation of approximately 10 feet above msl.

Dewatering was initiated on May 5 and was terminated on May 19. The extracted groundwater was discharged into the King County sanitary sewer system in accordance with Wastewater Discharge Authorization No. 4096-01 dated May 4, 2006. Self monitoring requirements included daily measurement of pH, settleable solids and volume. Based on the field monitoring conducted by GLY and URS, no exceedances in discharge limits were identified. Periodic testing of the discharge for gasoline-range petroleum hydrocarbons and BTEX was also performed to comply with self-monitoring requirements. These samples were collected from the Baker tank effluent. The total pumping rates achieved to create the desired drawdown in the elevator core ranged from 150 to 250 gallons per minute (gpm).

Groundwater levels in the piezometers declined by greater than 3 feet during the two weeks of dewatering. Groundwater level measurements collected during the dewatering program are summarized in Table 6. A graph displaying the response to pumping on the groundwater elevations is shown on Figure 8. As anticipated, the well PZ-3, closest to the dewatering well system displayed the greatest amount of drawdown of the three wells.

#### **4.4.5 Groundwater Sampling Procedures and Analytical Results**

Baseline groundwater samples were collected from wells PZ-1, PZ-2 and PZ-3 on April 17, 2006. A groundwater sample (referred to as "grab") was also collected within a hand auger boring completed at the base of a footing excavation located approximately 45 feet south of PZ-3 (Figure 6). A groundwater sample was also collected from monitoring well UMW-1 on June 6, 2006. The wells were purged of at least three casing volumes using dedicated polyethylene bailers prior to sampling. Field parameters were measured (e.g., temperature, pH, conductivity, dissolved oxygen, and turbidity) and were recorded on the sampling data sheets presented in Appendix G. The samples were placed directly in laboratory supplied glassware and stored in a cooler at 4 degrees C until delivery to the laboratory under chain-of-custody protocols.

The groundwater analytical results are summarized in Table 7. Gasoline-range petroleum hydrocarbons were detected in PZ-1 and PZ-2 at concentrations of 5.6 mg/l; and a 3.4 mg/l, respectively but not detected in PZ-3 during the baseline sampling conducted prior to dewatering. The water sample ("Grab") collected south of PZ-3 within the elevator pit excavation did not



detect gasoline-range petroleum hydrocarbons. Low concentrations of ethylbenzene and xylenes were also detected in the groundwater samples from PZ-1 and PZ-2.

Following the initiation of groundwater dewatering on May 5, groundwater sampling was periodically performed in these wells to monitor the affects of the dewatering on the dissolved phase gasoline plume. Groundwater samples were collected on May 8, 12, and 17 and the results are summarized in Table 7. The concentration of gasoline-range petroleum hydrocarbons ranged between 1.0 mg/l to 8.0 mg/l at PZ-1, with the highest levels detected during the last sampling round approximately 12 days after groundwater dewatering was initiated. Gasoline-range petroleum hydrocarbon levels in PZ-2 declined during groundwater pumping from 3.6 mg/l to 0.24 mg/l (Table 7). Gasoline-range petroleum hydrocarbons were not detected in PZ-3 until the last round of sampling (1.4 mg/l) during active pumping. Toluene, ethylbenzene and xylene (TEX) concentrations also were not detected in PZ-3 until the last round of sampling, but none of the detections of these compounds ever exceeded applicable MTCA Method A cleanup levels in PZ-1, PZ-2, or PZ-3.

An additional round of groundwater samples were collected from the wells on June 1, 2006 prior to decommissioning the temporary piezometers. Gasoline-range petroleum hydrocarbons were not detected in samples from PZ-1 or PZ-2 and only low concentrations were detected in PZ-3 (0.370 mg/l). Benzene was also detected in PZ-3 at concentrations of 16 ug/l, which exceeds the MTCA Method A cleanup level of 5 ug/l. Low concentrations of TEX were also detected in PZ-3.

Samples of groundwater discharged to the Baker storage tanks under the King County discharge authorization did not contain concentrations of gasoline constituents during the four sampling events conducted during the two weeks of construction dewatering (Table 8).

Elevated concentrations of gasoline-range petroleum hydrocarbons (6.3 mg/l) and BTEX were detected in the groundwater sample collected from monitoring well UMW-1 (Table 7) located within Harrison Street. Benzene was detected at a concentration of 1000 ug/l, which is the highest concentration of this constituent detected. Elevated concentrations of TEX were also detected, but none of these concentrations exceeded the MTCA Method A cleanup level.

#### 4.4.6 Conclusions

Gasoline-affected soils were encountered during the installation of soldier piles (N3 through N8) located in the northwestern portion of Block 40 West. During the installation of the shoring system (lagging) and excavation for the building foundation, the gasoline affected soils were initially identified at approximately 6 feet bgs. The area of affected soils was bounded to the west by soldier pile N2 and to the east by N9 (Figure 6). No evidence of a former UST or existing tank was identified on the property overlying the impacted area. No record exists of gasoline having ever been stored or dispensed at Block 40 (HartCrowser, 2004; URS, 2005). The Firestone facility located directly north of this area was observed to have three closed in place USTs located in Harrison Street. The fill ports were located approximately 45 feet north of the northern boundary of the subject property. It appears that a gasoline release from these tanks has migrated both laterally within fill material and native soil beneath the street and vertically to the groundwater table, although the limited investigation conducted within Harrison Street did not identify shallow contamination in the soil at the three borings (SB-1, SB-2 and SB-3). Based on these findings, the



gasoline contamination may have migrated along a narrow preferential pathway (e.g., old utility line) which was not identified by the three borings in their investigation.

As the excavation for the building foundation progressed, gasoline-affected soils were identified extending to the south from the north wall of the excavation. The area of gasoline impacted soils was approximately 30 feet in width by 55 to 60 feet in length. The vertical extent of contamination in the unsaturated zone soils decreased with distance from the north property boundary. At the north property boundary, the contamination extended downward into the groundwater table and was approximately 28 feet thick (Figure 7). Based on post-excavation sampling, gasoline-affected soils within the unsaturated zone have been effectively removed from the subject property. No residual contamination was evident in the unsaturated zone soils. However, some residual gasoline contamination is apparent within the saturated zone soils from the north wall extending south to PZ-2. Approximately 4470 tons of gasoline-affected soils were removed from the property during the installation of the shoring and excavation of the new building foundation. Further excavation to remediate groundwater contamination was not considered due to the potential for re-contamination of the backfill material within the saturated zone as the source area north of the property still appears to exist; and future treatment of the saturated zone through conventional means (e.g., bioremediation) is a more practicable approach for addressing gasoline contamination within the groundwater table. ser. F.S. 7.

A geocomposite Volclay mat (CETCO Voltex DS-CR) which includes a geomembrane component and clay/bentonite component for water proofing as well as a vapor barrier was installed vertically along the northern wall of the property in the area of gasoline impacted soils within the unsaturated zone. The Volclay mat was installed between the northwest corner of the property and pile N11 (equivalent to 17.5 feet east of column line F) and will continue on the west wall to pile W44 (equivalent to 8 feet south of column line 1). It extends vertically from approximately 1 to 2 feet bgs (i.e., elevation 47 to 48 feet above msl) to base of the building excavation at approximately elevation 30 feet msl. Based on the generally low concentrations of volatile aromatic compound in the groundwater beneath the subject property, the Volclay mat was not installed at the base of the excavation overlying the area of affected groundwater. The affected groundwater lies beneath an unoccupied parking level which has significant ventilation to exhaust vehicle emissions. Thus, vapor intrusion is not considered to be a risk to the indoor air quality.

The groundwater contamination at the subject property appears to exist over the same general area as the soil contamination, although some southern migration in response to construction dewatering was evident. Gasoline-range petroleum hydrocarbons were detected in PZ-1 and PZ-2 at concentrations exceeding the MTCA Method A cleanup level during the baseline sampling event. The southern most monitoring well PZ-3, did not detect gasoline constituents prior to construction dewatering. As construction dewatering progressed, water levels declined by greater than three feet in the property wells. The groundwater contamination plume was therefore, situated within capture zone of the dewatering system. The groundwater gradient during this time was primarily to the south towards the dewatering wells. Concentrations of gasoline-range petroleum in PZ-1 initially fluctuated, but close to the end of the dewatering period had increased from 5.6 mg/l to 8.0 mg/l. It is evident that this increase in concentrations is due to high levels of residual contamination present in a source area located to the north. This is consistent with the findings noted in the soils along the northern property boundary and is supported by the presence of USTs located north of the property in Harrison Street at the Firestone facility (Appendix H).



The decline in concentrations noted in these wells following the termination of the construction dewatering may be associated with the influx of clean groundwater from areas to the east, south and west and reabsorption of the petroleum hydrocarbons on saturated zone soils.

Based on the concentrations of gasoline constituent noted in PZ-2 and PZ-3, a source of gasoline contamination at the subject property is not evident as the levels of gasoline-range petroleum hydrocarbons would be expected to have also increased similarly to those noted in PZ-1. The effects on the groundwater plume by the construction dewatering were also evident in PZ-3, which had been "clean" until the end of the pumping period. Gasoline-range petroleum hydrocarbons were eventually detected in this well (1.4 mg/l) above the MTCA Method A cleanup. These findings indicate that southerly migration of contamination was apparently minimal (e.g., less than 60 feet) during the period of construction dewatering.

The lowest and highest levels of gasoline constituents detected in the groundwater monitoring wells are summarized in Table 9 along with the average concentration of these compounds. The highest levels of BTEX were detected in monitoring well UMW-1 located adjacent to the closed-in-place USTs in Harrison Street. Given the concentrations and distribution of gasoline-range petroleum hydrocarbon constituents detected in UMW-1, it is evident that this well is situated closest to the source area, which is likely the closed-in-place gasoline USTS located at the property to the north (Firestone). Higher concentrations of dissolved phase BTEX constituents would be expected closest to the source area.

## 5.0 LIMITATIONS

This report has been prepared for the exclusive use of City Investors LLC and their assignees. It is intended to provide an understanding of the potential for the property evaluated in this report to have been affected by the release or presence of petroleum products or hazardous materials or wastes. The conclusions in this report are based upon data and information reviewed as outlined herein and obtained during a reconnaissance of the subject property by URS personnel, and the observed conditions of adjacent properties on the date of such visit. The interpretations and conclusions contained in this report are based on the expertise and experience of URS in conducting similar assessments and current regulations. In evaluating the subject property, URS has also relied upon representations and information furnished by individuals noted in the report with respect to existing operations and property conditions and the historic uses of the property to the extent that the information obtained has not been contradicted by data obtained from other sources. Accordingly, URS accepts no responsibility for any deficiency, misstatements or inaccuracy contained in this report as a result of misstatements, omissions, misrepresentations, or fraudulent information provided by the persons interviewed.

URS' objective is to perform our work with care, exercising the customary thoroughness and competence of earth science, environmental and engineering consulting professionals, in accordance with the standard for professional services for a national consulting firm at the time these services are provided. It is important to recognize that even the most comprehensive scope of services may fail to detect environmental liability on a particular site. Therefore, URS cannot act as insurers and cannot "certify or underwrite" that a site is free of environmental contamination, and no expressed or implied representation or warranty is included or intended in

our reports except that our work was performed, within the limits prescribed by our client, with the customary thoroughness and competence of our profession.

## **6.0 REFERENCES**

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**Table 1**  
**Summary of Soil Analytical Results**  
**Railroad Siding Removal**  
**Block 40 East & West**  
**Seattle, Washington**

Sample ID	Sample Description	Sample Depth (feet bgs)	Sample Date	Total Petroleum Hydrocarbons (mg/kg) <sup>1</sup>		Semivolatile Organic Compounds (SVOCs) (ug/kg)		
				Diesel-Range	Oil-Range	2-Methylphenol	3-Methylphenol	4-Methylphenol
RR-1	RR ballast	0.5	2/21/2006	NA	NA	ND	ND	ND
RR-EX-1	soil beneath RR ballast	3	02/28/06	ND	ND	ND	ND	ND
RR-EX-2		3	02/28/06	ND	ND	ND	ND	ND
RR-EX-3		3	02/28/06	ND	ND	ND	ND	ND
RR-EX-4		3	02/28/06	ND	ND	ND	ND	ND
MTCA Method A or B Soil Cleanup Level				2,000 (A)	2,000 (A)	4,000,000 (B)	4,000,000 (B)	400,000 (B)

**Notes:**

<sup>1</sup> Samples were analyzed for diesel-range and oil-range total petroleum hydrocarbons by NWTPH-Dx.

bgs - below ground surface (measured as feet below the surface of Harrison Street).

MTCA - Model Toxics Control Act (WAC Chapter 173-340-900), effective August 2000. Method A and B values shown are reported with the same concentration units as the sample results.

(A) - MTCA Method A soil cleanup level

(B) - MTCA Method B soil cleanup level

NA - not analyzed

ND - not detected above the laboratory reporting limits.

**Table 2**  
**Summary of Soil Analytical Results**  
**Building 318 - Underground Storage Tank**  
**Block 40 East & West**  
**Seattle, Washington**

Sample ID	Sample Description	Sample Depth (feet bgs)	Approximate Elevation (feet above msl)	Sample Date	Total Petroleum Hydrocarbons (mg/kg) <sup>1</sup>	
					Diesel-Range	Oil-Range
318-N-15	excavation sidewall	15	30	03/02/06	ND	ND
318-S-15		15	30	03/02/06	ND	ND
318-E-15		15	30	03/02/06	ND	ND
318-W-15	excavation floor	15	30	03/16/06	ND	ND
318-Floor1-18		18	27	03/02/06	ND	ND
318-Floor2-18		18	27	03/02/06	ND	ND
MTCA Method A Soil Cleanup Level					2,000	2,000

**Notes:**

<sup>1</sup> Samples were analyzed for diesel-range and oil-range total petroleum hydrocarbons by NWTPH-Dx.

bgs - below ground surface (measured as feet below the surface of Harrison Street).

MTCA - Model Toxics Control Act (WAC Chapter 173-340-900). Values shown are reported with the same concentration units as the sample results.

NA - not analyzed

ND - not detected above the laboratory reporting limits.

**Table 3****Summary of Soil Analytical Results****Building 300 - Bunker Oil Underground Storage Tank****Block 40 East & West****Seattle, Washington**

Sample ID	Sample Description	Sample Depth (feet bgs)	Approximate Elevation (feet above msl)	Sample Date	Total Petroleum Hydrocarbons (mg/kg) <sup>1</sup>	
					Diesel-Range	Oil-Range
300-PEX-N-5	excavation sidewall	20	33	03/29/06	ND	ND
300-PEX-S-5		20	33	03/29/06	ND	ND
300-PEX-E-5		20	33	03/29/06	ND	ND
300-PEX-W-5		20	33	03/29/06	ND	ND
300-PEX-Floor-10	excavation floor	25	28	03/29/06	ND	ND
MTCA Method A Soil Cleanup Level					2,000	2,000

**Notes:**<sup>1</sup> Samples were analyzed for diesel-range and oil-range total petroleum hydrocarbons by NWTPH-Dx.

bgs - below ground surface (measured as feet below the surface of Harrison Street).

MTCA - Model Toxics Control Act (WAC Chapter 173-340-900), effective August 2000. Method A values shown are reported with the same concentration units as the sample results.

NA - not analyzed

ND - not detected above the laboratory reporting limits.

Table 4  
Summary of Soil Analytical Results  
Building 330 - Gasoline-Affected Soil Excavation  
Block 40 East & West  
Seattle, Washington

Sample Area/ID	Sample Description	Sample Depth (feet bgs)	Approximate Elevation (feet above msl)	Sample Date	Total Petroleum Hydrocarbons (mg/kg) <sup>1</sup>				Volatile Organic Compounds (mg/kg)			
					Diesel-Range	Oil-Range	Gasoline-Range	Mineral Spirits (Stoddard Solvent)	Benzene	Toluene	Ethylbenzene	Total Xylenes
POST-EXCAVATION SAMPLES												
330-PEX-1-6	floor, west of Pile N4	6	49	03/09/06	ND	ND	14	ND	ND	ND	ND	ND
PEX-330-2-9	sidewall, west of Pile N5	9	46	03/10/06	ND	ND	3,000	ND	ND	ND	0.37	ND
PEX-330-3-9	sidewall, west of Pile N4	9	46	03/10/06	ND	ND	18	ND	ND	ND	ND	ND
PEX-330-4-10	floor, south of Pile N5	10	45	03/10/06	ND	ND	1,800	ND	ND	ND	3	2.9
330-PEX-5-12	sidewall, west of Pile N7	12	43	03/22/06	NA	NA	820	ND	ND	ND	ND	0.13
330-PEX-6-13	sidewall, west of Pile N5	13	42	03/22/06	NA	NA	380	ND	ND	ND	0.44	0.17
330-PEX-7-15	floor, south of Pile N6	15	40	03/22/06	NA	NA	ND	ND	ND	ND	ND	ND
TEST PIT SAMPLES												
TP1-330-PE-30.5	Test Pit 1	0	30.5	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP1-330-PE-28	Test Pit 1	2	28	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP1-330-PE-26	Test Pit 1	4	26	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP1-330-PE-24	Test Pit 1	6	24	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP1-330-PE-22	Test Pit 1	8	22	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP2-330-PE-30.5	Test Pit 2	0	30.5	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP2-330-PE-28	Test Pit 2	2	28	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP2-330-PE-26	Test Pit 2	4	26	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP2-330-PE-24	Test Pit 2	6	24	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP2-330-PE-22	Test Pit 2	8	22	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP3-330-PE-30.5	Test Pit 3	0	30.5	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP3-330-PE-28	Test Pit 3	2	28	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP3-330-PE-26	Test Pit 3	4	26	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP3-330-PE-24	Test Pit 3	6	24	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
TP3-330-PE-22	Test Pit 3	8	22	4/6/06	NA	NA	ND	ND	ND	ND	ND	ND
WELL POINT PIEZOMETERS												
PZ-1	Piezometer 1	7.5	25	4/17/06	NA	NA	ND	ND	ND	ND	ND	ND
PZ-1	Piezometer 1	0	32.5	4/17/06	NA	NA	ND	2,000	ND	ND	ND	ND
PZ-2	Piezometer 2	7.5	25	4/17/06	NA	NA	ND	ND	ND	ND	ND	ND
PZ-3	Piezometer 3	7.5	25	4/17/06	NA	NA	ND	ND	ND	ND	ND	ND
MTCA Method A Soil Cleanup Level					2,000	2,000	100 / 30 <sup>2</sup>	NE	0.03	7	6	9

**Notes:**

<sup>1</sup>Samples were analyzed for total petroleum hydrocarbons by NWTPH-Gx or NWTPH-Dx.

<sup>2</sup>In soil, the cleanup level for gasoline is 100 mg/kg if benzene is not present and the total of ethylbenzene, toluene, and total xylenes is less than 1% of the gasoline mixture. The cleanup level for all other gasoline mixtures is 30 mg/kg.

bgs - below ground surface (measured as feet below the surface of Harrison Street).

MTCA - Model Toxics Control Act (WAC Chapter 173-340-900). Values shown are reported with the same concentration units as the sample results.

NA - not analyzed

ND - not detected above the laboratory reporting limits.

NE - Not Established

PZ - Well Point Piezometers

TP - Test Pit

Numbers in bold font indicate that the reported result exceeds a MTCA cleanup level

**Table 5**  
**Summary of Soil Analytical Results**  
**Building 330 - Gasoline-Affected Stockpile Samples**  
**Block 40 East & West**  
**Seattle, Washington**

Sample Area/ID	Sample Description	Sample Date	Total Petroleum Hydrocarbons (mg/kg) <sup>1</sup>				Volatile Organic Compounds (mg/kg)			
			Diesel-Range	Oil-Range	Gasoline-Range	Mineral Spirits/ Stoddard solvent	Benzene	Toluene	Ethylbenzene	Total Xylenes
EXCAVATION STOCKPILE SAMPLES										
330-SP-1	stockpile	03/17/06	NA	NA	590	ND	ND	ND	0.22	0.25
330-SP-2	stockpile	03/17/06	NA	NA	1100	ND	ND	ND	0.93	0.86
330-SP-3	stockpile	03/17/06	NA	NA	10	ND	ND	ND	ND	ND
330-SP-4	stockpile	03/23/06	NA	NA	640	ND	ND	ND	0.29	0.37
330-SP-5	stockpile	03/23/06	NA	NA	28	ND	ND	ND	ND	ND
330-SP-6	stockpile	03/28/06	NA	NA	620	ND	ND	ND	ND	ND
330-SP-7	stockpile	03/28/06	NA	NA	27	ND	ND	ND	ND	ND
330-SP-8	stockpile	03/28/06	NA	NA	13	ND	ND	ND	ND	ND
330-SP-9	stockpile	03/30/06	NA	NA	ND	ND	ND	ND	ND	ND
330-SP-10	stockpile	03/30/06	NA	NA	23	ND	ND	ND	ND	ND
330-SP-11	stockpile	03/30/06	NA	NA	480	ND	ND	ND	ND	ND
MTCA Method A Soil Cleanup Level			2,000	2,000	100 / 30 <sup>2</sup>	NE	0.03	7	6	9

**Notes:**

<sup>1</sup>Samples were analyzed for total petroleum hydrocarbons by NWTPH-Gx or NWTPH-Dx.

<sup>2</sup>In soil, the cleanup level for gasoline is 100 mg/kg if benzene is not present and the total of ethylbenzene, toluene, and total xylenes is less than 1% of the gasoline mixture. The cleanup level for all other gasoline mixtures is 30 mg/kg.

bgs - below ground surface (measured as feet below the surface of Harrison Street).

MTCA - Model Toxics Control Act (WAC Chapter 173-340-900). Values shown are reported with the same concentration units as the sample results.

NA - not analyzed

ND - not detected above the laboratory reporting limits.



Table 6  
Summary of Groundwater Elevation Measurements  
Block 40 East & West  
Seattle, Washington

Monitoring Well	PZ-1/MW-1		PZ-2/MW-2		PZ-3/MW-3	
Well Elevation (ft above MSL)	30.33		29.41		31.94	
Total Depth	25 <sup>1</sup>		25 <sup>1</sup>		25 <sup>1</sup>	
Well Screen Interval (ft above MSL)	20.33 - 5.33		19.41 - 4.41		21.94 - 6.94	
Measurement Date <sup>2</sup>	Depth	Elev.	Depth	Elev.	Depth	Elev.
4/17/2006	11.75	18.58	10.08	19.33	13.13	18.81
4/25/2006	12.0	18.33	11.0	18.41	13.0	18.94
4/26/2006	12.0	18.33	10.9	18.51	13.4	18.54
4/27/2006	12.0	18.33	11.0	18.41	13.4	18.54
4/28/2006	12.0	18.33	11.0	18.41	13.4	18.54
5/1/2006	11.7	18.63	11.0	18.41	13.0	18.94
5/2/2006	12.0	18.33	10.7	18.71	13.1	18.84
5/5/2006	11.82	18.51	10.71	18.70	13.24	18.70
5/8/2006	12.95	17.38	11.95	17.46	14.68	17.26
5/9/2006	13.21	17.12	12.24	17.17	15.01	16.93
5/10/2006	13.50	16.83	12.53	16.88	15.33	16.61
5/11/2006	13.79	16.54	12.82	16.59	15.63	16.31
5/12/2006	14.08	16.25	13.11	16.30	15.95	15.99
5/15/2006	14.68	15.65	13.79	15.62	16.51	15.43
5/16/2006	14.82	15.51	13.89	15.52	16.67	15.27
5/17/2006	14.94	15.39	13.96	15.45	16.76	15.18
5/18/2006	14.91	15.42	13.92	15.49	16.65	15.29
5/19/2006	14.65	15.68	13.58	15.83	16.20	15.74
5/22/2006	14.02	16.31	12.94	16.47	15.45	16.49
5/23/2006	13.89	16.44	12.76	16.65	15.26	16.68

Notes:

Well elevations were measured on the north side of the PVC riser.

All measurements are given in feet.

<sup>1</sup> Depth based on measurement within excavation approximately 20 below surface grade.

<sup>2</sup> Groundwater dewatering initiated on 5/5/06. Water level for 5/5/06 measured prior to pumping. Pumping ceased on 5/19/06.

5	20	50
18.58	19.33	18.81
18.33	18.41	18.94
18.63	18.41	18.94
18.33	18.71	18.84

**Table 7**  
**Summary of Groundwater Analytical Results**  
**Block 40 East & West**  
**Seattle, WA**

Sample: Date Collected:	PZ-1/MW-1				4/17/2006
	4/17/2006	5/8/2006	5/12/2006	5/17/2006	
<b><u>Diesel Range Organics (mg/L)</u></b>					
Diesel/Fuel Oil	NA	NA	NA	NA	NA
Heavy Oil	NA	NA	NA	NA	NA
<b><u>Gasoline Range Organics (mg/L)</u></b>					
Mineral Spirits/Stoddard Solvent	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Gasoline	<b>5.6</b>	<b>1.0</b>	<b>4.4</b>	<b>8.0</b>	<b>3.4</b>
<b><u>Volatile Organics (ug/L)*</u></b>					
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1.0 U	1.0 U	1.0 U	1.1	1.0 U
Ethylbenzene	6.0	1.0 U	2.2	3.9	2.7
Xylenes	20	1.0 U	10	15	6.9

**Notes:**

<sup>1</sup> Construction dewatering conducted from May 5, 2006 to May 19, 2006. Thus, the April 17, 2006 sampling event represents baseline cc  
MTCA - Model Toxics Control Act. Method A and B values shown are reported with the same concentration units as the sample results.

(A) - MTCA Method A cleanup value

(B) - MTCA Method B cleanup value

NA - Not Analyzed

NE - Not Established

U - Parameter was analyzed for, but not detected above the reporting limit shown.

\* - Isopropyl benzene (18 ug/L), 1,3,5-trimethylbenzene (70 ug/L), 1,2,4-trimethylbenzene (200 ug/L), and naphthalene (44 ug/L) were det  
Values in **bold font** indicate that the result reported exceeds a MTCA cleanup level.

PZ-2/MW-2 <sup>1</sup>			PZ-3/MW-3				U-MW-1	Grab
5/8/2006	5/12/2006	5/17/2006	4/17/2006	5/8/2006	5/12/2006	5/17/2006	6/8/2006	4/17/2006
NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	NA	NA	NA	NA	NA	NA	NA
0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NA	0.10 U
3.6	0.36	0.24	0.10 U	0.10 U	0.10 U	1.4	6.3	0.10 U
1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1,000	1.0 U
1.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.6	246	1.0 U
16	3.4	1.0 U	1.0 U	1.0 U	1.0 U	14	198	1.0 U
21	5.2	1.3	1.0 U	1.0 U	1.0 U	77	854	1.0 U

nditions.

ected in sample UGP-6 during the August 9, 2005 sampling event.

UGP-5	UGP-6	UGP-14	MTCA Cleanup Levels
8/9/2005	8/9/2005	8/18/2005	
0.20 U	0.20 U	0.20 U	0.5 (A)
0.50 U	0.50 U	0.50 U	0.5 (A)
NA	0.10 U	0.10 U	0.8 (A)
NA	5.0	0.10 U	0.8 (A)
1.0 U	7.2	NA	5 (A)
1.0 U	940	NA	1,000 (A)
1.0 U	340	NA	700 (A)
1.0 U	1,700	NA	1,000 (A)

**Table 8**  
**Summary of Baker Tank Water Sample Results**  
**Block 40 East & West**  
**Seattle, WA**

Sample ID: Date Collected:	Baker Tank			
	5/5/2006	5/12/2006	5/17/2006	5/19/2006
<b>Gasoline Range Organics (mg/L)</b>				
Mineral Spirits/Stoddard Solvent	0.10 U	0.10 U	0.10 U	0.10 U
Gasoline	0.10 U	0.10 U	0.10 U	0.10 U
<b>Volatile Organics (µg/L)</b>				
Benzene	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes	1.0 U	1.0 U	1.0 U	1.0 U

**Notes:**

U - Parameter was analyzed for, but not detected above the reporting limit shown.

NA - Not Analyzed

NE - Not Established

Values in **bold font** indicate that the result reported exceeds King County General Discharge Limits (Major Discharge Authorization #4096-0

Baker Tank sample collected at tank discharge location.

King County General Discharge Limits (mg/L)	
	100
	100
	0.07
	1.4
	1.7
	NE

14 Westlake Terry West Building).



**Table 9**  
**Summary of Gasoline Constituents in Groundwater**  
**Block 40 East & West**  
**Seattle, WA**

Sample ID: Range:	PZ-1/MW-1			PZ-2/MW-2 <sup>1</sup>	
	Low	High	Average	Low	High
<b>Gasoline Range Organics (mg/L)</b>					
Gasoline	<b>1.0</b>	<b>8.0</b>	<b>4.75</b>	<b>0.24</b>	<b>3.6</b>
<b>Volatile Organics (µg/L)*</b>					
Benzene	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	1.0 U	1.1	1.1	1.0 U	1.4
Ethylbenzene	1.0 U	6.0	4.37	1.0 U	16
Xylenes	1.0 U	20	11.5	1.3	21

**Notes:**

<sup>1</sup> Construction dewatering conducted from May 5, 2006 to May 19, 2006. Thus, the April 17, 2006 sampling event represents baseline cc MTCA - Model Toxics Control Act. Method A and B values shown are reported with the same concentration units as the sample results.

(A) - MTCA Method A cleanup value

U - Parameter was analyzed for, but not detected above the reporting limit shown.

Values in **bold font** indicate that the result reported exceeds a MTCA cleanup level.

	PZ-3/MW-3			U-MW-1	MTCA Cleanup Levels
Average	Low	High	Average	(6/8/2006)	
7.6	0.10 U	1.4	0.43	6.3	0.8 (A)
1.0 U	1.0 U	1.0 U	1.0 U	1,000	5 (A)
1.2	1.0 U	1.6	1.15	246	1,000 (A)
5.78	1.0 U	14	7.5	198	700 (A)
8.6	1.0 U	77	20	854	1,000 (A)

onditions.





Map created with TOPO!™ © 1997 Wildflower Productions, www.topo.com,  
based on USGS topographic map, Seattle North, Washington



0 0.5 1.0

Scale in Miles

Figure 1  
**Site Location Map**

Job No. 33757035

**URS**

Block 40 East and West  
Seattle, Washington



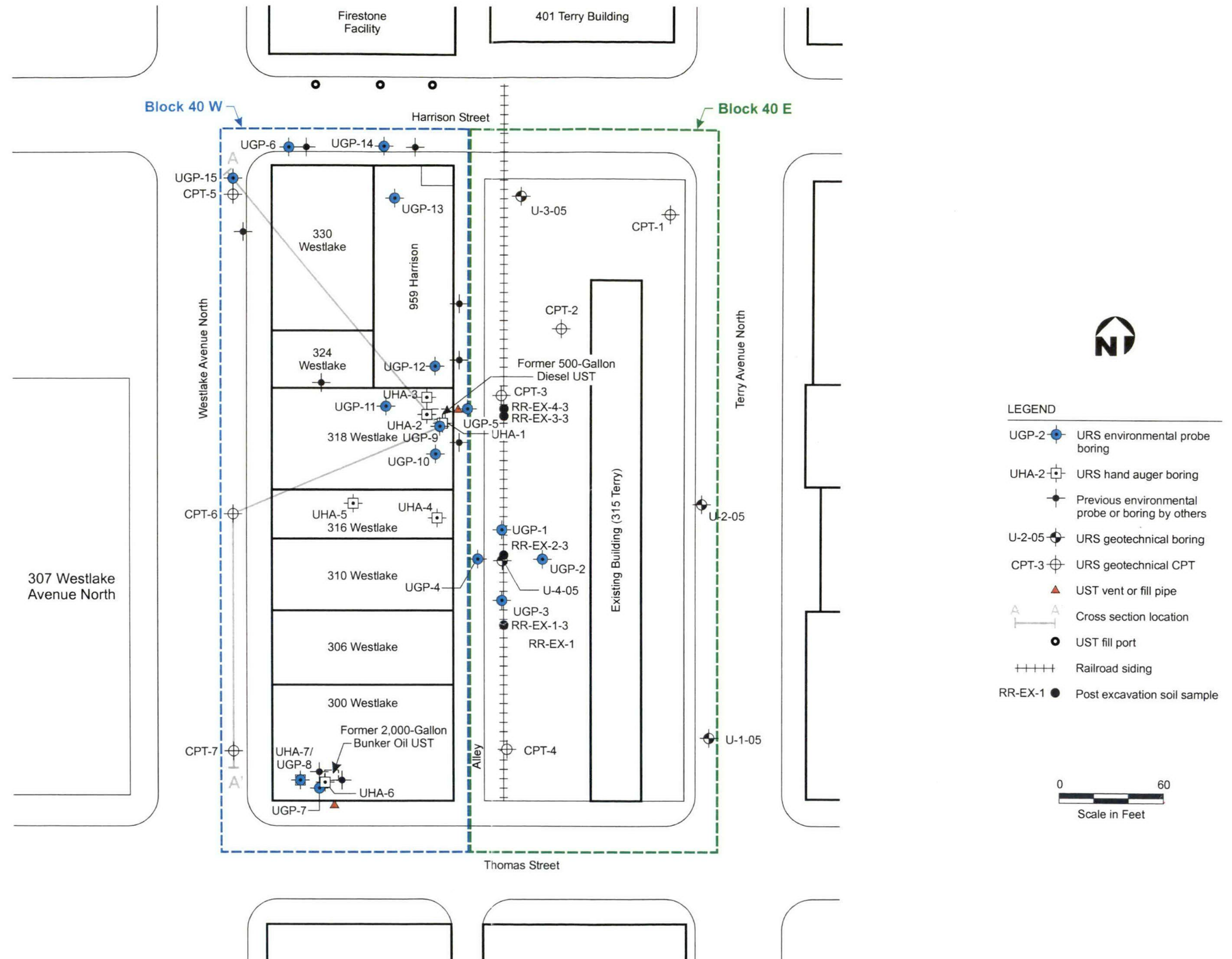


Figure 2  
**Pre-Construction Site Plan**

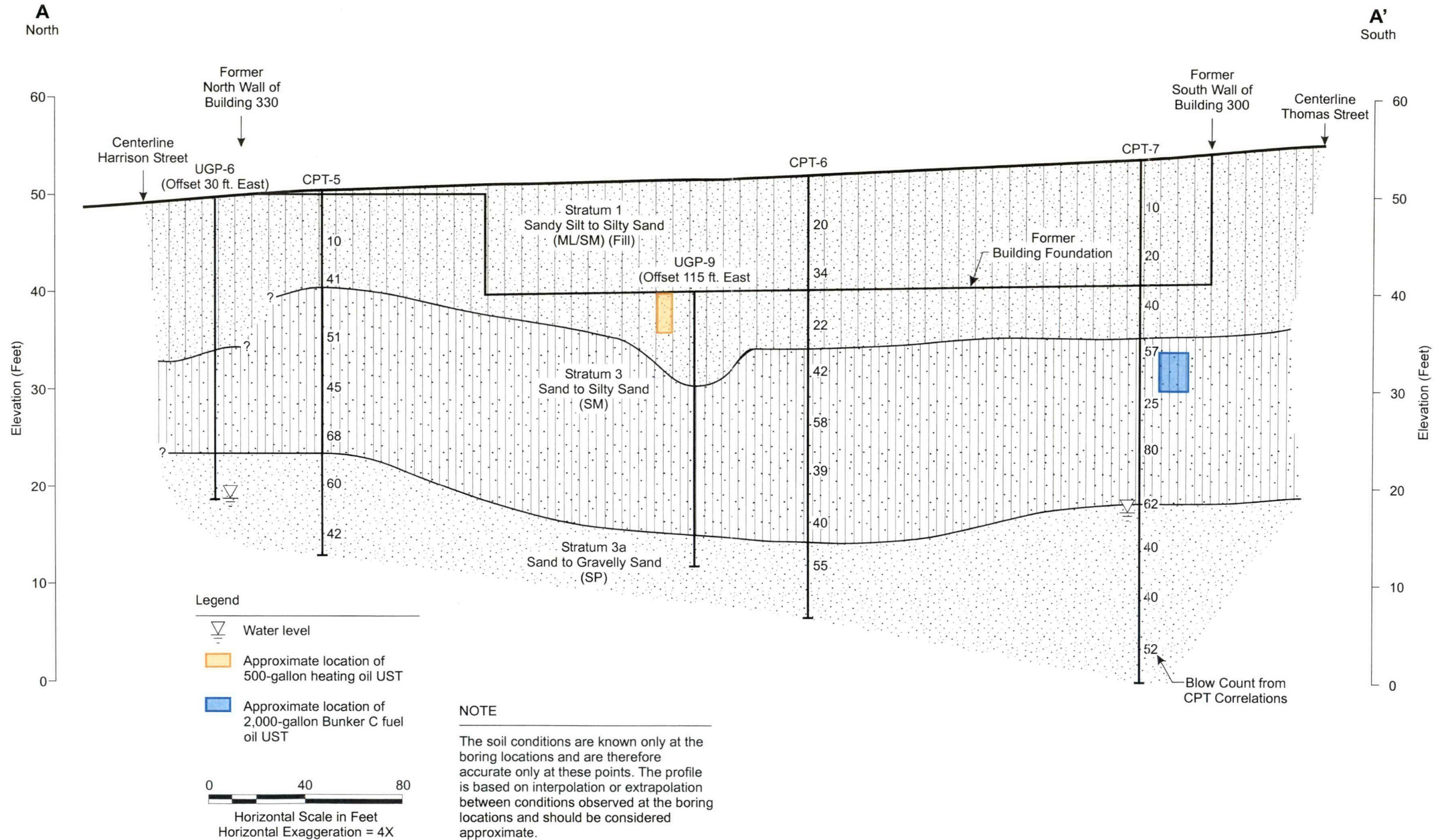
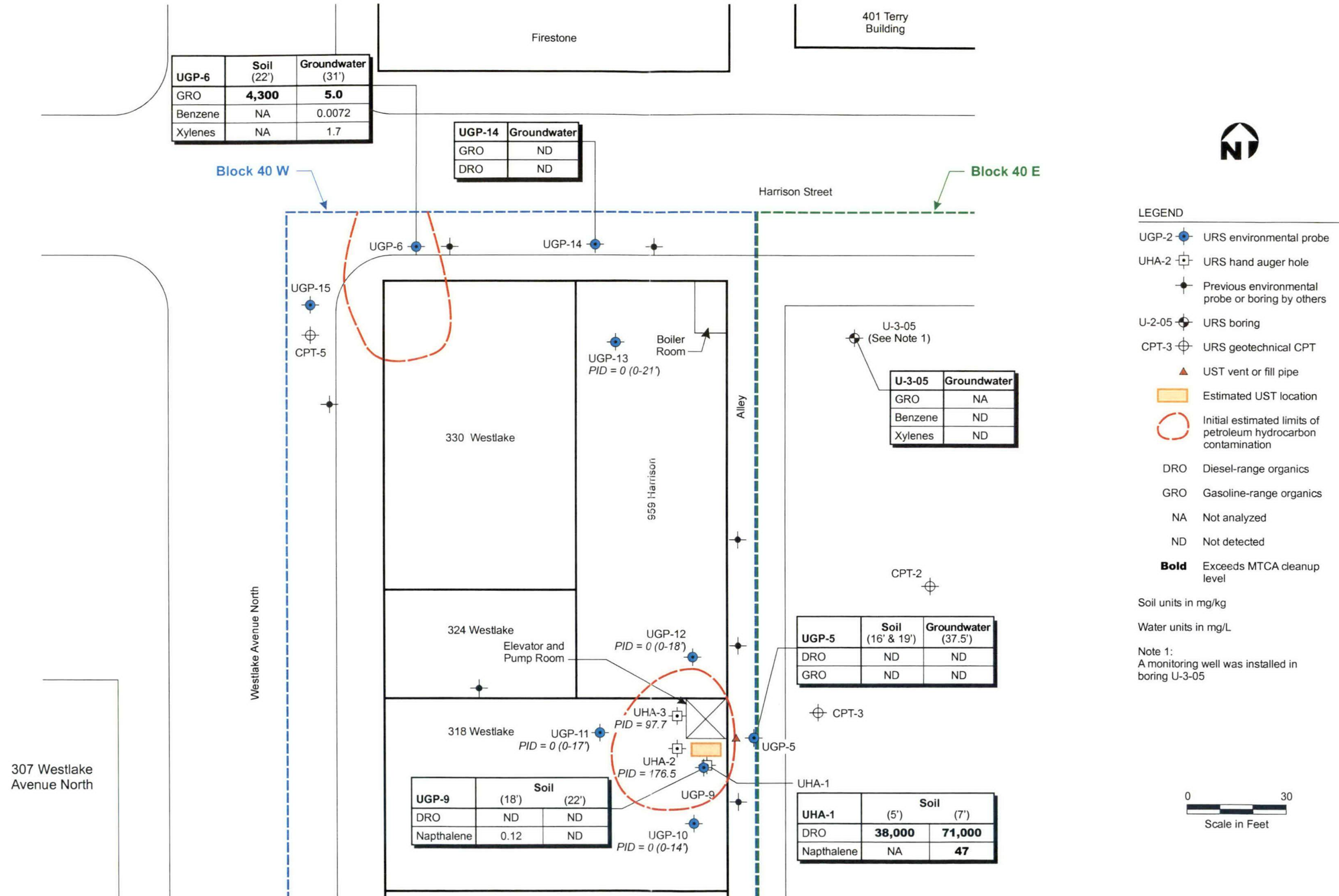


Figure 3  
North to South Geologic Cross Section Through Block 40 West





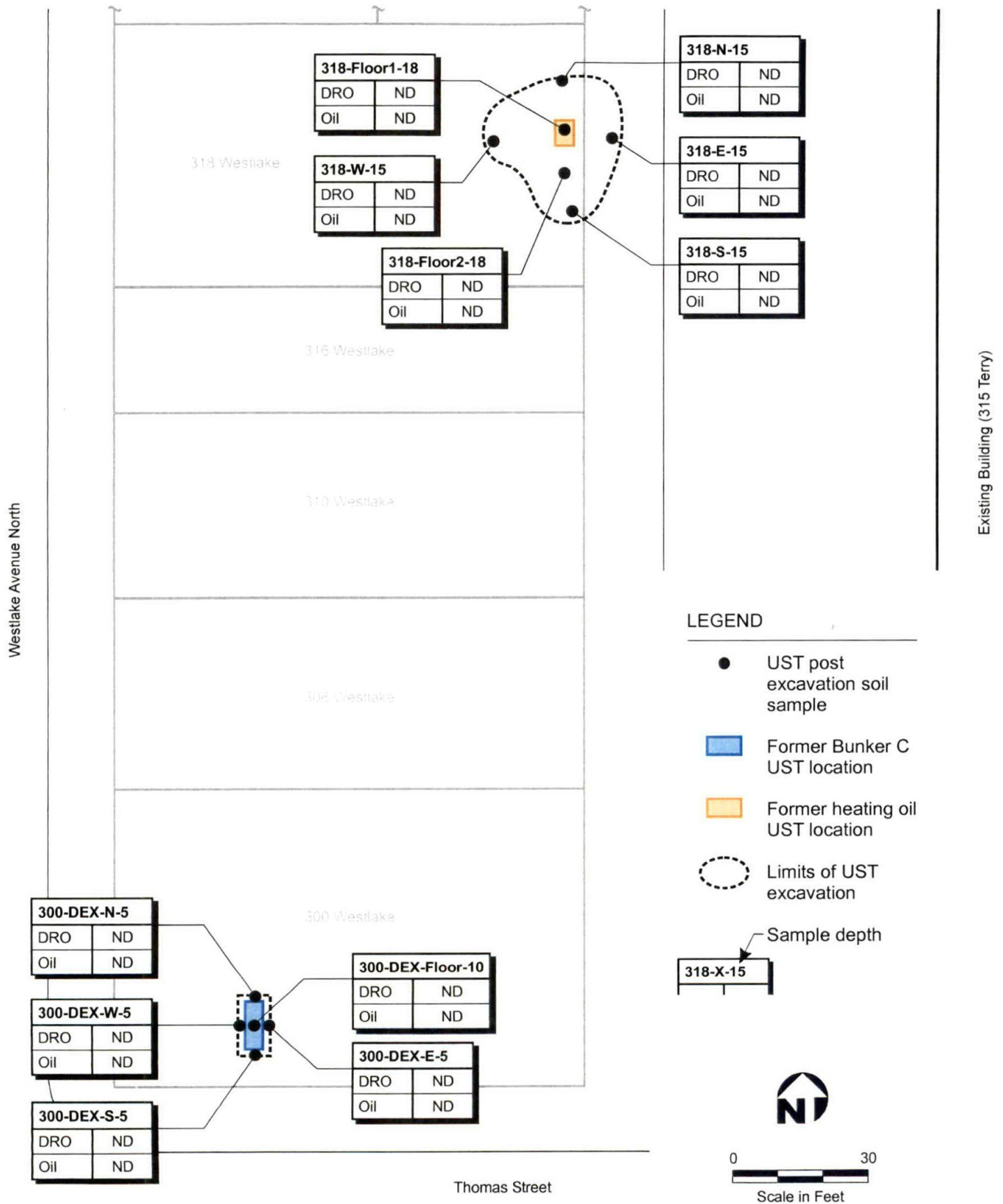


Figure 5

# UST Removal and Post Excavation Sample Locations

Job No. 33757035

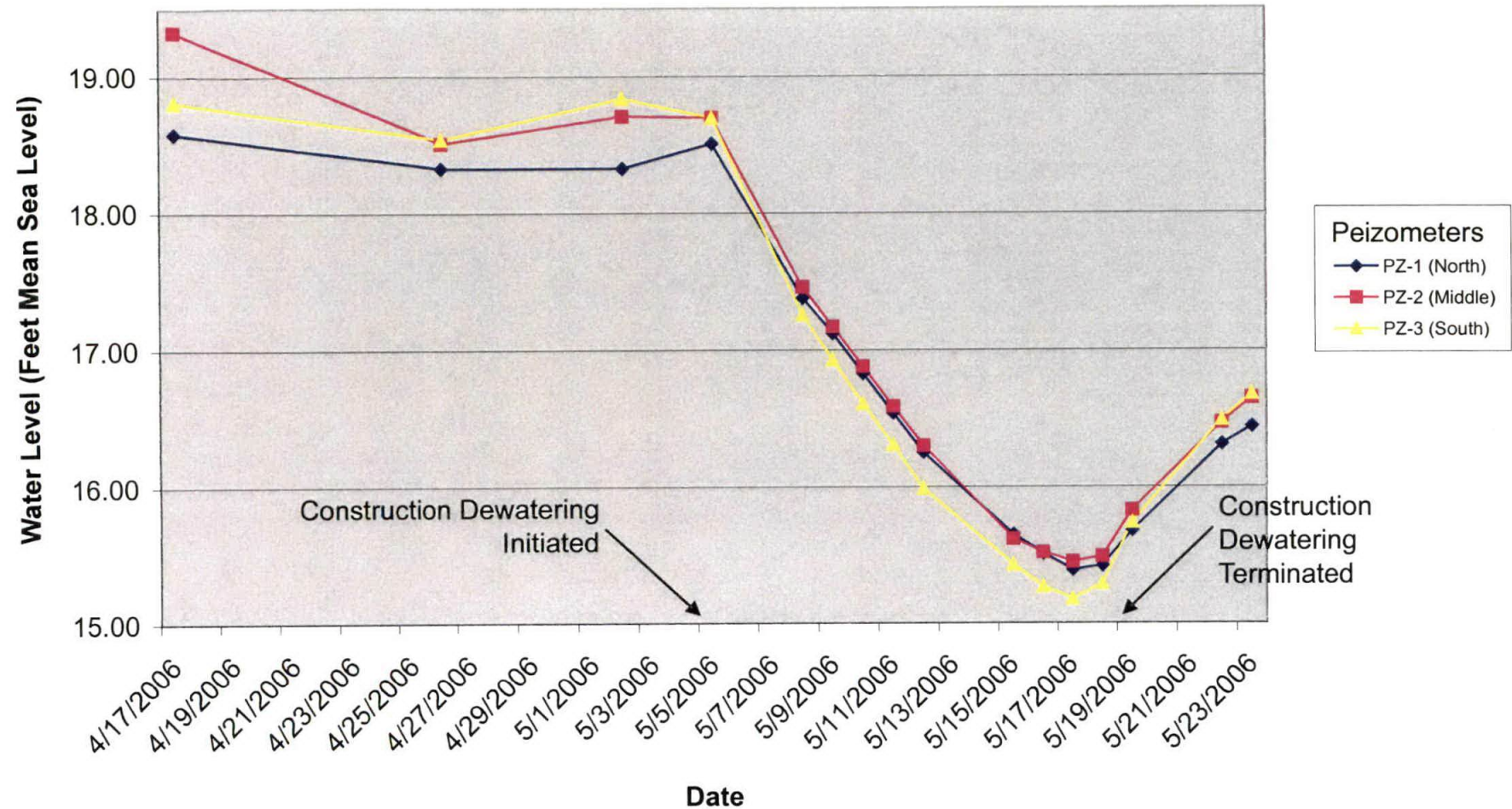
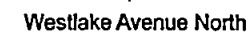


Figure 8  
**Groundwater Elevations**



**URS**

Block 40 West  
Seattle, Washington



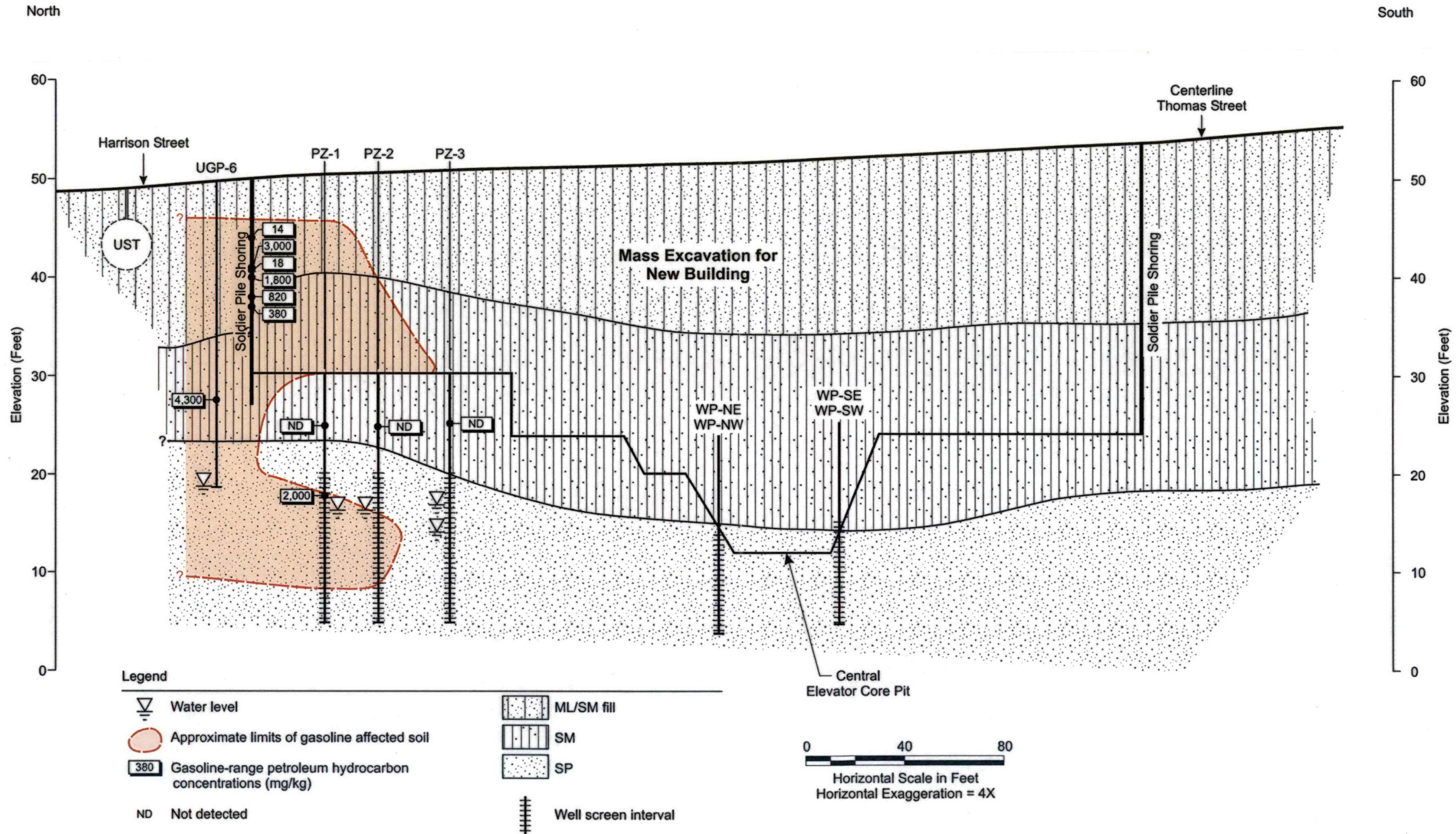
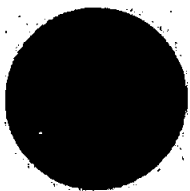


Figure 7  
Extent of Gasoline-Affected Soils

Block 40 West  
Seattle, Washington

**APPENDIX A**  
**SOIL DISPOSAL DOCUMENTATION**



## construction group international

March 6, 2006

### Underground Storage Tank Decommissioning Certification

This is a statement of Underground Storage Tank Decommissioning. This statement is provided by Construction Group International (CGI) following the decommissioning of 1 – 250 gallon underground storage tanks (UST) for City Investors 5, LLC located at 318 Westlake Avenue North, Seattle, Washington. CGI issues this statement to the property owner or they're representative from where the UST(s) were decommissioned.

CGI states this decommissioning has occurred under the supervision of an ICC Certified UST Decommissioner (WAC 173-360) and Washington State Licensed Marine Chemist following the local and state rules and regulations as defined by the Uniform Fire Code (UFC) and Washington Administrative Code (WAC). The UST was triple rinsed using water and bio-degradable surfactant on February 27, 2006. Following marine chemist and fire department certification, the UST was excavated and transported off site to be cut up then disposed at Schnitzer Steel Inc located at 1902 Marine View Drive, Tacoma, Washington.

Project Client: **City Investors 5, LLC**  
Project Name: **Block 40 - Westlake**  
Project Address: **318 Westlake Avenue North  
Seattle, Washington**

Type of Decommissioning: **Excavation and removal from sub-surface**  
UST Installation Date: **Unknown**  
UST Decommissioning Date: **February 27, 2006**  
Permit Issuance Date: **February 23, 2006 (City of Seattle – SFD)**  
UST(s) Dimensions: **36" X 70" – 1 UST**  
UST(s) Total Gallons: **250 Gallons (Approximate)**  
UST(s) Construction: **Steel – Single Wall Construction**

Certified UST Decommissioner: **Deanna M. Donovan**  
Licensed UST Site Assessor: **Stephen M. Spencer**

Stephen M. Spencer, CSA

March 6, 2006

Date

Deanna M. Donovan, LD

March 6, 2006

Date



Northwest Marine Chemist, Inc.  
P.O. Box 7084  
Tacoma, Washington 98407  
(253) 752-0149

# MARINE CHEMIST CERTIFICATE

SERIAL NO.

UGST/PMT 001

SSpencer (SEI)/G. Blair (NMMC) SPENCER ENVIRONMENTAL 27 FEB 2006  
Survey Requested by Vessel Owner or Agent  
150 GALLON TANK (Cylindrical) UNDER GROUND STORAGE TANK SEATTLE - Date  
Vessel Type of Vessel Specific Location of Vessel  
STONE OIL (3) Or LEL/VISUAL WEST LAKE & HARRISON  
Last Three (3) Cargoes Test Method Time Survey Completed  
1100 HR

UGST (250 GAL) } Or LEL } 20.8% O<sub>2</sub> } Safe for hotwork.

This tank has been degaussed - cleaned of product and  
purged to satisfaction. This tank is safe for excavation,  
and removal, and for Transfer to demolition site.

In the event of any physical or atmospheric changes adversely affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

**QUALIFICATIONS:** Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

**STANDARD SAFETY DESIGNATIONS** (partial list, paraphrased from NFPA 306 Subsections 2-3.1 through 2-3.5, and Subsection 6-3.2)

**SAFE FOR WORKERS:** Means that in the compartment or space so designated: (a) the oxygen content of the atmosphere is at least 19.5 percent by volume; and that, (b) toxic materials in the atmosphere are within permissible concentrations; and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate.

**NOT SAFE FOR WORKERS:** Means that in the compartment or space so designated, the requirements of Safe for Workers have not been met.

**ENTER WITH RESTRICTIONS:** Means that in any compartment or space so designated, entry for work may be made only if conditions of proper protective equipment, clothing, and time are as specified.

**SAFE FOR HOT WORK:** Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (c) the residues are not capable of producing a higher concentration than permitted by (b) above under existing atmospheric conditions in the presence of fire, and while maintained as directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces containing or having contained flammable or combustible materials have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily inerted, or, in the case of fuel tanks or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine Chemist's requirements.

**NOT SAFE FOR HOT WORK:** Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met.

**SAFE FOR REPAIR YARD ENTRY:** Means that the compartments and spaces of the flammable cryogenic liquid carrier so designated: (a) have been tested by sampling at remote sampling stations, and results indicate the atmosphere tested to be above 19.5 percent oxygen, and less than 10 percent of the lower flammable limit, or (b) are inerted.

**CHEMIST'S ENDORSEMENT.** This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under Section 2-6 of NFPA 306 and understands conditions and limitations under which it was issued."

This Certificate is based on conditions existing at the time the inspection hereon set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed

Name

Company

Date

Signed

Marine Chemist

Certificate No.

*David M. Brown*

(SEI)

2-27-06

*Raymond S. 562*



THE CITY OF SEATTLE  
FIRE DEPARTMENT  
*Fire Marshal's Office*  
220 Third Ave South  
Seattle, WA 98104-2608  
(206) 386-1450

# RECEIPT

5-104152

**THIS IS NOT A BILL  
PLEASE DO NOT PAY**

When properly made out and signed this becomes a receipt for the amount and purposes as specified herein.

**PAYOR:** ENVIRONMENTAL MANAGEMENT SVC  
**ADDRESS:** 652 8 AV  
FOX ISLAND, WA 98333  
**ATTN:** DEANNA DONOVAN

**DATE:** 02/22/2006  
**AMOUNT:** \$152.00  
**JOB SITE:** 318 WESTLAKE AV N  
**PAYMENT FOR:** APPLICATION FEE  
**CHECK #:** 3570  
**INVOICE #:**  
**PERMIT CODE(S):** 7908  
**REMARK:**

*Chief of the Fire Department*

By CH

**NOTE: PLEASE RETAIN THIS RECEIPT AND POST IT IN A VISIBLE LOCATION ON SITE UNTIL AN ACTUAL FIRE DEPARTMENT PERMIT HAS BEEN ISSUED.**

MOIV 2/27 10:00 am CH

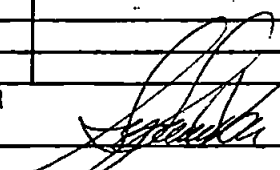
**BILL OF LADING**  
**PRODUCT TRANSPORT MANIFEST**  
**MARINE VACUUM SERVICE, INC.**  
24 HOUR EMERGENCY PHONE NUMBER (206) 762-0240  
TRUCK NUMBER 126 DATE 2/27/2006

TO  
DESTINATION  
NAME Marine Vacuum Service  
STREET 1516 S Graham St  
CITY/STATE Seattle WA 98108

FROM  
SHIPPER  
NAME ENNIRO  
STREET \_\_\_\_\_  
CITY/STATE \_\_\_\_\_

QUANTITY	PROPER SHIPPING NAME	UN (PLACARD) NUMBER
	<u>200 Gal Diesel Water</u>	

SHIPPER	SLUDGE	DRIVER	DATE
	DATE		

NOTE:

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminants including without limitations, pesticides, chlorinated solvents at concentrations greater than 1000 PPM, any detectible levels of PCBs, or any other material classified as dangerous or hazardous waste by 40 CFR Part 261, Subpart C and D (implementing the Federal Resource Conservation and Recovery Act), or by any equivalent state dangerous or hazardous substance classification programs. Should laboratory tests find this waste not in compliance with 40 CFR Part 261, customer (generator) agrees to pay for all disposal costs incurred.

Mon 2/27 10:00am CDT  
Your  
Seattle  
Fire Department

APPLICATION FOR TEMPORARY PERMIT



Code 7908

Commercial Tank Removal/Decommissioning

Permit Fee: \$152.00

2/27/06  
Date Issued

2/27/06  
Expiration Date

TO BE COMPLETED BY PERMIT APPLICANT (PLEASE PRINT)

FIRM NAME	Environmental Management Services		
MAILING ADDRESS	652 8th Ave	SUITE	
CITY	Fox Island	STATE	WA
		ZIP	98333
OPERATION ADDRESS	318 Westlake Ave N. Seattle		
CONTACT PERSON	Deanna Donovan	PHONE NUMBER	(206) 710-1776
Number of Tank(s):	3 1 only	Tank Size(s):	est. 1000gal ea.
Product(s) Previously Contained:	Heating oil		
<input checked="" type="checkbox"/> Removal	(Marine Chemist inspection and certificate required for all tanks regardless of size or contents)		
<input type="checkbox"/> Abandonment-in-Place	(Marine Chemist certificate required for tanks previously containing Class I flammable liquids and unknowns)		
Hot Work:	<input type="checkbox"/> Yes (Separate Seattle Fire Department hot work permit required)	<input checked="" type="checkbox"/> No	

Please include a check made payable to the CITY OF SEATTLE with this application.

Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to:

Seattle Fire Department  
Fire Marshal's Office—Permits  
220 Third Avenue South, Second Floor  
Seattle, WA 98104-2608

Permit processing: (206) 386-1025  
www.seattle.gov/fire

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment.

TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION

No hot work is allowed on the tank system prior to issuance of this Fire Department permit!

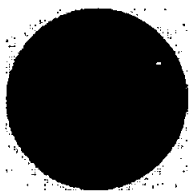
Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the attached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. **THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED**

Special permit conditions: Tank ruptured by demo work by  
Sack Inc. Two tanks remaining, to be scheduled.  
Site safety meeting review of permit conditions

FMO USE	APPROVED BY
Receipt No.: 2104152	Inspector: Hunkle
Check No.: 5716	Name of Marine Chemist: Daniel (MNC)
Application ID#: 2104152	Date: 2/27/06
	SED ID# 1914
	Certificate # PM1201

COMMERCIAL TANK REMOVAL/DECOMMISSIONING PERMIT CONDITIONS





construction group international

April 6, 2006

**Underground Storage Tank Decommissioning Certification**


This is a statement of Underground Storage Tank Decommissioning. This statement is provided by Construction Group International (CGI) following the decommissioning of 1 – 2500 gallon underground storage tanks (UST) for City Investors 5, LLC located at 318 Westlake Avenue North, Seattle, Washington. CGI issues this statement to the property owner or they're representative from where the UST(s) were decommissioned.

CGI states this decommissioning has occurred under the supervision of an ICC Certified UST Decommissioner (WAC 173-360) and Washington State Licensed Marine Chemist following the local and state rules and regulations as defined by the Uniform Fire Code (UFC) and Washington Administrative Code (WAC). The UST was inerted using carbon dioxide gas on March 29, 2006. Following marine chemist and fire department certification, the UST was excavated and transported off site to be cut up then disposed at Schnitzer Steel Inc located at 1902 Marine View Drive, Tacoma, Washington.

Project Client: **City Investors 5, LLC**  
Project Name: **Block 40 - Westlake**  
Project Address: **318 Westlake Avenue North  
Seattle, Washington**

Type of Decommissioning: **Excavation and removal from sub-surface**  
UST Installation Date: **Unknown**  
UST Decommissioning Date: **March 29, 2006**  
Permit Issuance Date: **February 23, 2006 (City of Seattle – SFD)**  
UST(s) Dimensions: **72" X 144" – 1 UST**  
UST(s) Total Gallons: **2500 Gallons (Approximate)**  
UST(s) Construction: **Steel – Single Wall Construction**

Certified UST Decommissioner: **Deanna M. Donovan**  
Licensed UST Site Assessor: **Stephen M. Spencer**

  
Stephen M. Spencer, CSA

April 6, 2006

Date

  
Deanna M. Donovan, LD

April 6, 2006

Date

Northwest Marine Chemist, Inc.  
P.O. Box 7084  
Tacoma, Washington 98406  
(253) 752-0149

MARINE CHEMIST CERTIFICATE  
SERIAL NO. ST-0608

Environmental Management Services C&E Const. March 29, 2001  
Survey Requested by Vessel Owner or Agent Date  
TANK FARM Underground Storage Tank Westlake Tugboats  
Vessel Type of Vessel Specific Location of Vessel  
Bunker Fuel O2-L&L-V. S. S. 0945 Has.  
Last Three (3) Cargoes Test Method Time Survey Completed

1 ≈ 10,000 gal UST } Secured  
Not Safe For Workers  
Oxygen = <6% }  
LEL = N/A } Safe For Limited Network

Limitations = This Tank has been purged with CO<sub>2</sub> to <6%  
Oxygen, and is safe for excavation.

Note - This Tank contains product. Proceed with Caution.  
Tank Re-purged @ 1200 hrs Oxygen = <6%  
All openings are and must remain secured.

END

In the event of any physical or atmospheric changes adversely affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

**QUALIFICATIONS:** Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

**STANDARD SAFETY DESIGNATIONS** (partial list, paraphrased from NFPA 306 Subsections 2-3.1 through 2-3.5, and Subsection 6-3.2)

**SAFE FOR WORKERS:** Means that in the compartment or space so designated: (a) the oxygen content of the atmosphere is at least 19.5 percent by volume; and that, (b) toxic materials in the atmosphere are within permissible concentrations; and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate.

**NOT SAFE FOR WORKERS:** Means that in the compartment or space so designated, the requirements of Safe for Workers have not been met.

**ENTER WITH RESTRICTIONS:** Means that in any compartment or space so designated, entry for work may be made only if conditions of proper protective equipment, clothing, and time are as specified.

**SAFE FOR HOT WORK:** Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (c) the residues are not capable of producing a higher concentration than permitted by (b) above under existing atmospheric conditions in the presence of fire, and while maintained as directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces containing or having contained flammable or combustible materials have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily inerted, or, in the case of fuel tanks or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine Chemist's requirements.

**NOT SAFE FOR HOT WORK:** Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met.

**SAFE FOR REPAIR YARD ENTRY:** Means that the compartments and spaces of the flammable cryogenic liquid carrier so designated: (a) have been tested by sampling at remote sampling stations, and results indicate the atmosphere tested to be above 19.5 percent oxygen, and less than 10 percent of the lower flammable limit, or (b) are inerted.

**CHEMIST'S ENDORSEMENT.** This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under Section 2-6 of NFPA 306 and understands conditions and limitations under which it was issued."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed [Signature] Date 3/29/04

Signed [Signature] Date 3/29/04  
Marine Chemist Certificate No. 637



THE CITY OF SEATTLE  
FIRE DEPARTMENT  
*Fire Marshal's Office*  
220 Third Ave South  
Seattle, WA 98104-2608  
(206) 386-1450

# RECEIPT

5-104152

**THIS IS NOT A BILL  
PLEASE DO NOT PAY**

When properly made out and signed this becomes a receipt for the amount and purposes as specified herein.

**PAYOR:** ENVIRONMENTAL MANAGEMENT SVC  
**ADDRESS:** 652 8 AV  
FOX ISLAND, WA 98333  
**ATTN:** DEANNA DONOVAN

**DATE:** 02/22/2006  
**AMOUNT:** \$152.00  
**JOB SITE:** 318 WESTLAKE AV N  
**PAYMENT FOR:** APPLICATION FEE  
**CHECK #:** 3570  
**INVOICE #:**  
**PERMIT CODE(S):** 7908  
**REMARK:**

*Chief of the Fire Department*

By CH

**NOTE: PLEASE RETAIN THIS RECEIPT AND POST IT IN A VISIBLE LOCATION ON SITE UNTIL AN  
ACTUAL FIRE DEPARTMENT PERMIT HAS BEEN ISSUED.**

MON 2/27 10:00 am CH

BILL OF LADING  
PRODUCT TRANSPORT MANIFEST  
MARINE VACUUM SERVICE, INC.  
24 HOUR EMERGENCY PHONE NUMBER (206) 762-0240  
TRUCK NUMBER 204 DATE 3/19/06

TO  
DESTINATION  
NAME MAR. VAC  
STREET  
CITY/STATE

FROM  
SHIPPER  
NAME Danna Donovan (EMS)  
STREET 652 9th Ave  
CITY/STATE Fox, Island

QUANTITY	PROPER SHIPPING NAME	UN (PLACARD) NUMBER
<u>2000</u>	<u>Gallons of water</u>	

SHIPPER [Signature] SLUDGE  
DATE

DRIVER [Signature] DATE 3/29/06

NOTE:

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminants including without limitations, pesticides, chlorinated solvents at concentrations greater than 1000 PPM, any detectible levels of PCBs, or any other material classified as dangerous or hazardous waste by 40 CFR Part 261, Subpart C and D (implementing the Federal Resource Conservation and Recovery Act), or by any equivalent state dangerous or hazardous substance classification programs. Should laboratory tests find this waste not in compliance with 40 CFR Part 261, customer (generator) agrees to pay for all disposal costs incurred.

Mon 2/27 10:00 am CDT

OUR  
Seattle  
Fire Department



APPLICATION FOR TEMPORARY PERMIT

Code 7908

Commercial Tank Removal/Decommissioning

4/6/06

Permit Fee: \$152.00

2/27/06  
Date Issued

2/27/06  
Expiration Date

TO BE COMPLETED BY PERMIT APPLICANT (PLEASE PRINT)

FIRM NAME	Environmental Management Services		
MAILING ADDRESS	652 8th Ave	SUITE	
CITY	Fox Island	STATE	WA ZIP 98333
OPERATION ADDRESS	318 Westlake Ave N. Seattle		
CONTACT PERSON	Deanna Donovan	PHONE NUMBER	(206) 710-1776
Number of Tank(s):	3 Tanks (Remediation)		R.A.H. 3/29/06
Product(s) Previously Contained:	Heating oil		
<input checked="" type="checkbox"/> Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents) TO BE FAXED			
<input type="checkbox"/> Abandonment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquids and unknowns)			
Hot Work: <input type="checkbox"/> Yes (Separate Seattle Fire Department hot work permit required) <input checked="" type="checkbox"/> No			

Please include a check made payable to the CITY OF SEATTLE with this application.

Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to:

Seattle Fire Department  
Fire Marshal's Office—Permits  
220 Third Avenue South, Second Floor  
Seattle, WA 98104-2608

Permit processing: (206) 386-1025  
www.seattle.gov/fire

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment.

TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION

No hot work is allowed on the tank system prior to issuance of this Fire Department permit!

Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the attached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. **THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED**

Special permit conditions: Tank ruptured by demo work by  
Sack Inc. Two tanks remaining, to be scheduled.  
Site safety meeting review of permit conditions

FMO USE	APPROVED BY
Receipt No.: 21511-2	Inspector: Hinkle
Check No.: 21511-2	Name of Marine Chemist: Daniel (MAC)
Application ID#: 21511-2	Date: 2/27/06
	SFD ID# 191A
	Certificate # PMT001

COMMERCIAL TANK REMOVAL/DECOMMISSIONING PERMIT CONDITIONS

**APPENDIX B**

**CHRONOLOGY OF REMEDIAL EXCAVATION ACTIVITY**

**Chronology of Remedial Excavation Activity**  
**Block 40 East & West**  
**Seattle, WA**

Remedial Action	Work Began	Work Completed
<b>Block 40 East Rail Siding Area</b> Creosote-containing railroad ballast excavated and disposed offsite	27-Feb-06	28-Feb-06
<b>318 Westlake Avenue North Abandoned Heating Oil UST</b> Removal of UST	27-Feb-06	27-Feb-06
Excavation and removal of PCS	27-Feb-06	6-Mar-06
<b>300 Westlake Avenue North Abandoned Bunker C Heating Oil UST</b> Removal of UST	29-Mar-06	29-Mar-06
<b>330 Westlake Avenue North Gasoline Affected Soil Excavation</b> Excavation and removal of gasoline affected soils	3-Mar-06	5-Apr-06
Test pit excavation and soil sampling	6-Apr-06	6-Apr-06
Temporary piezometer installation	16-Apr-06	16-Apr-06
<b>Investigation in Harrison Street</b> Drilling of soil boring and installation of UMW-1	2-Jun-06	2-Jun-06

**APPENDIX C**  
**PHOTOGRAPHIC LOG**



Client: City Investors, LLC

Site Location: Block 40 E & W, Seattle, WA

Project Number: 33575035

Photo No:  
1

Date:  
2/21/06

Direction Photo Taken:

West

Description:

Railroad ballast beneath former rail line, Block 40 East. Ballast overlying gray silty clay.



Photo No:  
2

Date:  
2/28/06

Direction Photo Taken:

View to the north

Description:

Excavation of railroad ballast, Block 40 East.





Client: City Investors, LLC

Site Location: Block 40 E & W, Seattle, WA

Project Number: 33575035

Photo No:

3

Date:

2/27/06

Direction Photo Taken:

Description:

Building 318, 500 gallon fuel oil UST



Photo No:

4

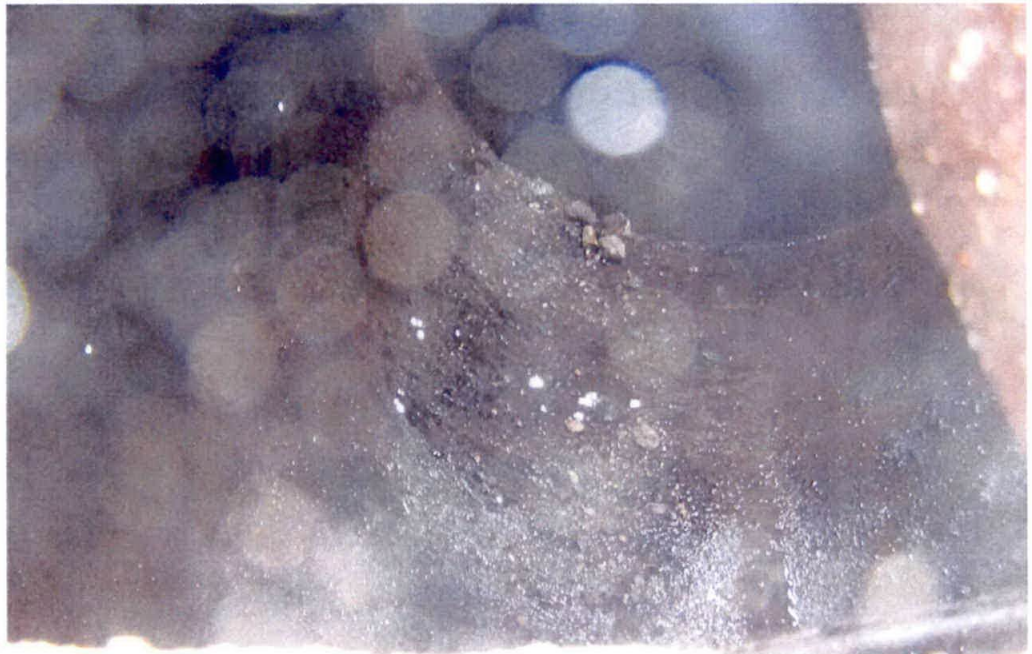
Date:

2/27/06

Direction Photo Taken:

Description:

Building 318, Interior of 500 gallon fuel oil UST





Client: City Investors, LLC

Site Location: Block 40 E & W, Seattle, WA

Project Number: 33575035

Photo No:

5

Date:

3/29/06

Direction Photo Taken:

View to the south

Description:

Building 300, 2000 gallon Bunker Oil UST.



Photo No:

6

Date:

3/29/06

Direction Photo Taken:

Description:

Building 300, 2000 gallon Bunker Oil UST.





Client: City Investors, LLC

Site Location: Block 40 E & W, Seattle, WA

Project Number: 33575035

Photo No:

7

Date:

3/10/06

**Direction Photo Taken:**

View to the east. (Note: sidewalk along Harrison St.)

**Description:**

Gasoline affected soils along northwest property boundary (between soldier piles N3 and N7). Note gray discoloration of sandy material in the sidewall below the lagging and in the base of the excavation. Area is beneath former Building 330.



Photo No:

8

Date:

3/10/06

**Direction Photo Taken:**

View looking southeasterly

**Description:**

Area of gasoline affected soils (note gray discoloration) along the northern property boundary beneath former Building 330.





Client: City Investors, LLC

Site Location: Block 40 E & W, Seattle, WA

Project Number: 33575035

Photo No:

9

Date:

3/10/06

**Direction Photo Taken:**

View to the west.  
Westlake Ave. North in background.

**Description:**

Northwestern corner of property. Gasoline affected soils along the north wall of the excavation below lagging and extending south into excavation. No tanks or evidence of tank cavities were noted in this area beneath the former building foundation.



Photo No:

10

Date:

3/9/06

**Direction Photo Taken:**

View to the West,  
Northwestern corner

**Description:**

Installation of the shoring (Lagging) along north property boundary prior to encountering gasoline contaminated soils within the excavation and along sidewall.





Client: City Investors, LLC

Site Location: Block 40 E & W, Seattle, WA

Project Number: 33575035

Photo No:

11

Date:

Direction Photo Taken:

View to the southeast

Description:

Central elevator core dewater system, four wells (blue casing) and discharge piping shown. Baker tank is evident in the background the photograph on street level.



Photo No:

12

Date:

5/8/06

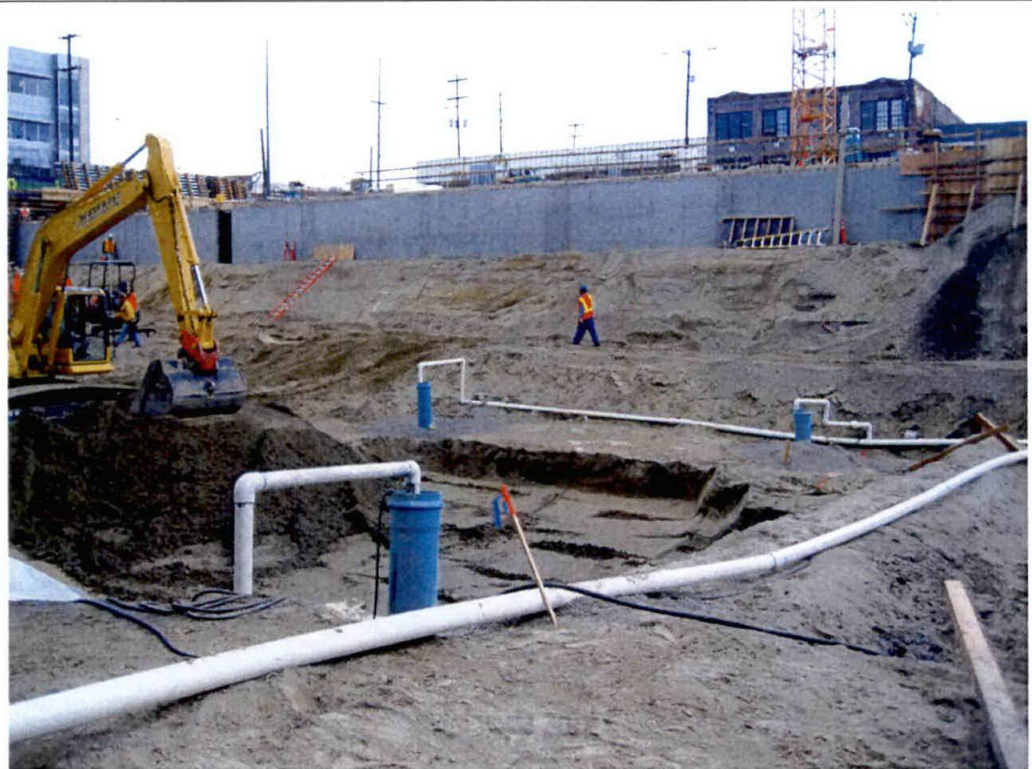
Direction Photo Taken:

View looking west

*North  
East*

Description:

Central elevator core construction dewatering system. Three of the four dewatering wells (blue casing) are shown in the photograph. Note native glacial outwash sand (SP) in the base of the excavation.





**APPENDIX D**  
**UST DECOMMISSIONING DOCUMENTATION**



construction group international

March 6, 2006

### Underground Storage Tank Decommissioning Certification

This is a statement of Underground Storage Tank Decommissioning. This statement is provided by Construction Group International (CGI) following the decommissioning of 1 – 250 gallon underground storage tanks (UST) for City Investors 5, LLC located at 318 Westlake Avenue North, Seattle, Washington. CGI issues this statement to the property owner or they're representative from where the UST(s) were decommissioned.

CGI states this decommissioning has occurred under the supervision of an ICC Certified UST Decommissioner (WAC 173-360) and Washington State Licensed Marine Chemist following the local and state rules and regulations as defined by the Uniform Fire Code (UFC) and Washington Administrative Code (WAC). The UST was triple rinsed using water and bio-degradable surfactant on February 27, 2006. Following marine chemist and fire department certification, the UST was excavated and transported off site to be cut up then disposed at Schnitzer Steel Inc located at 1902 Marine View Drive, Tacoma, Washington.

Project Client:	City Investors 5, LLC
Project Name:	Block 40 - Westlake
Project Address:	318 Westlake Avenue North Seattle, Washington
Type of Decommissioning:	Excavation and removal from sub-surface
UST Installation Date:	Unknown
UST Decommissioning Date:	February 27, 2006
Permit Issuance Date:	February 23, 2006 (City of Seattle – SFD)
UST(s) Dimensions:	36" X 70" – 1 UST
UST(s) Total Gallons:	250 Gallons (Approximate)
UST(s) Construction:	Steel – Single Wall Construction
Certified UST Decommissioner:	Deanna M. Donovan
Licensed UST Site Assessor:	Stephen M. Spencer

Stephen M. Spencer, CSA

Deanna M. Donovan, LD

March 6, 2006

Date

March 6, 2006

Date

Northwest Marine Chemist, Inc.

P.O. Box 7084

Tacoma, Washington 98407

(253) 752-0149

# MARINE CHEMIST CERTIFICATE

SERIAL NO.

UGST/PMT 001

SSpencer (SEI) / G. Blair (NWMC)

SPENCER ENVIRONMENTAL

27 FEB 2006

Survey Requested by

250 GALLON TANK (Cylindrical)

Vessel Owner or Agent

SEATTLE -

Date

Vessel

STONE OIL (3)

UNDER GROUND STORAGE TANK

Type of Vessel

WEST LAKE & HARRISON

Specific Location of Vessel

Last Three (3) Cargoes

Or LEL / VISUAL

Test Method

1100 HR

Time Survey Completed

UGST (250 GAL) } Or LEL } 20.8% O<sub>2</sub> } Safe for hot work.

This tank has been degaussed - cleaned of product and purged to satisfaction. This tank is safe for excavation, and removal, and for transfer to demolition site.

In the event of any physical or atmospheric changes adversely affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

**QUALIFICATIONS:** Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

**STANDARD SAFETY DESIGNATIONS** (partial list, paraphrased from NFPA 306 Subsections 2-3.1 through 2-3.5, and Subsection 6-3.2)

**SAFE FOR WORKERS:** Means that in the compartment or space so designated: (a) the oxygen content of the atmosphere is at least 19.5 percent by volume; and that, (b) toxic materials in the atmosphere are within permissible concentrations; and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate.

**NOT SAFE FOR WORKERS:** Means that in the compartment or space so designated, the requirements of Safe for Workers have not been met.

**ENTER WITH RESTRICTIONS:** Means that in any compartment or space so designated, entry for work may be made only if conditions of proper protective equipment, clothing, and time are as specified.

**SAFE FOR HOT WORK:** Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (c) the residues are not capable of producing a higher concentration than permitted by (b) above under existing atmospheric conditions in the presence of fire, and while maintained as directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces containing or having contained flammable or combustible materials have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily inerted, or, in the case of fuel tanks or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine Chemist's requirements.

**NOT SAFE FOR HOT WORK:** Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met.

**SAFE FOR REPAIR YARD ENTRY:** Means that the compartments and spaces of the flammable cryogenic liquid carrier so designated: (a) have been tested by sampling at remote sampling stations, and results indicate the atmosphere tested to be above 19.5 percent oxygen, and less than 10 percent of the lower flammable limit, or (b) are inerted.

**CHEMIST'S ENDORSEMENT.** This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under Section 2-6 of NFPA 306 and understands conditions and limitations under which it was issued."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed

Name

Company

Date

Signed

Marine Chemist

Certificate No.

(SEI)

2-27-06

Ray Kang 562



THE CITY OF SEATTLE  
FIRE DEPARTMENT  
*Fire Marshal's Office*  
220 Third Ave South  
Seattle, WA 98104-2608  
(206) 386-1450

# RECEIPT

5-104152

**THIS IS NOT A BILL  
PLEASE DO NOT PAY**

When properly made out and signed this becomes a receipt for the amount and purposes as specified herein.

**PAYOR:** ENVIRONMENTAL MANAGEMENT SVC  
**ADDRESS:** 652 8 AV  
FOX ISLAND, WA 98333  
**ATTN:** DEANNA DONOVAN

**DATE:** 02/22/2006  
**AMOUNT:** \$152.00  
**JOB SITE:** 318 WESTLAKE AV N  
**PAYMENT FOR:** APPLICATION FEE  
**CHECK #:** 3570  
**INVOICE #:**  
**PERMIT CODE(S):** 7908  
**REMARK:**

*Chief of the Fire Department*

By CH

**NOTE: PLEASE RETAIN THIS RECEIPT AND POST IT IN A VISIBLE LOCATION ON SITE UNTIL AN ACTUAL FIRE DEPARTMENT PERMIT HAS BEEN ISSUED.**

MON 2/27 10:00 am CH

24 HOUR EMERGENCY PHONE NUMBER (206) 762-0240

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminants including without limitations, pesticides, chlorinated solvents at concentrations greater than 1000 PPM, any detectible levels of PCBs, or any other material classified as dangerous or hazardous waste by 40 CFR Part 261, Subpart C and D (implementing the Federal Resource Conservation and Recovery Act), or by any equivalent state dangerous or hazardous substance classification programs. Should laboratory tests find this waste not in compliance with 40 CFR Part 261, customer (generator) agrees to pay for all disposal costs incurred.

Your  
Seattle  
Fire Department

APPLICATION FOR TEMPORARY PERMIT



Code 7908

Commercial Tank Removal/Decommissioning

Permit Fee: \$152.00

2/27/06  
Date Issued

2/27/06  
Expiration Date

TO BE COMPLETED BY PERMIT APPLICANT (PLEASE PRINT)

FIRM NAME	Environmental Management Services		
MAILING ADDRESS	652 8th Ave	SUITE	
CITY	Fox Island	STATE	WA ZIP 98333
OPERATION ADDRESS	318 Westlake Ave N. Seattle		
CONTACT PERSON	Deanna Donovan	PHONE NUMBER	(360) 790-1776
Number of Tank(s):	3	Tank Size(s):	est. 1000 gal ea.
Product(s) Previously Contained:	Heating oil		
<input checked="" type="checkbox"/> Removal	(Marine Chemist inspection and certificate required for all tanks regardless of size or contents)		
<input type="checkbox"/> Abandonment-in-Place	(Marine Chemist certificate required for tanks previously containing Class I flammable liquids and unknowns)		
Hot Work:	<input type="checkbox"/> Yes (Separate Seattle Fire Department hot work permit required)	<input checked="" type="checkbox"/> No	

Please include a check made payable to the CITY OF SEATTLE with this application.

Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to:

Seattle Fire Department  
Fire Marshal's Office—Permits  
220 Third Avenue South, Second Floor  
Seattle, WA 98104-2608

Permit processing: (206) 386-1025  
www.seattle.gov/fire

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment.

TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION

No hot work is allowed on the tank system prior to issuance of this Fire Department permit!

Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the attached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. **THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED**

Special permit conditions: Tank ruptured by demo work by  
Sunkhoe. Two TANKS remaining, to be scheduled.  
Site safety meeting review of permit conditions.

FMO USE	APPROVED BY
Receipt No.: 2104122	Inspector: Hinkle
Check No.: 3216	Name of Marine Chemist: Daniel (MNC)
Application ID#: 61050	Date: 2/27/06
	SFD ID# 1914
	Certificate # FMT001

COMMERCIAL TANK REMOVAL/DECOMMISSIONING PERMIT CONDITIONS



construction group international

April 6, 2006

### Underground Storage Tank Decommissioning Certification

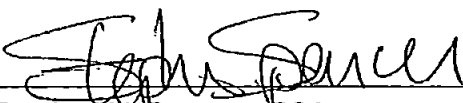
This is a statement of Underground Storage Tank Decommissioning. This statement is provided by Construction Group International (CGI) following the decommissioning of 1 – 2500 gallon underground storage tanks (UST) for City Investors 5, LLC located at 318 Westlake Avenue North, Seattle, Washington. CGI issues this statement to the property owner or they're representative from where the UST(s) were decommissioned.

CGI states this decommissioning has occurred under the supervision of an ICC Certified UST Decommissioner (WAC 173-360) and Washington State Licensed Marine Chemist following the local and state rules and regulations as defined by the Uniform Fire Code (UFC) and Washington Administrative Code (WAC). The UST was inerted using carbon dioxide gas on March 29, 2006. Following marine chemist and fire department certification, the UST was excavated and transported off site to be cut up then disposed at Schnitzer Steel Inc located at 1902 Marine View Drive, Tacoma, Washington.


Project Client: **City Investors 5, LLC**  
Project Name: **Block 40 - Westlake**  
Project Address: **318 Westlake Avenue North  
Seattle, Washington**

Type of Decommissioning: **Excavation and removal from sub-surface**  
UST Installation Date: **Unknown**  
UST Decommissioning Date: **March 29, 2006**  
Permit Issuance Date: **February 23, 2006 (City of Seattle – SFD)**  
UST(s) Dimensions: **72" X 144" – 1 UST**  
UST(s) Total Gallons: **2500 Gallons (Approximate)**  
UST(s) Construction: **Steel – Single Wall Construction**

Certified UST Decommissioner: **Deanna M. Donovan**  
Licensed UST Site Assessor: **Stephen M. Spencer**

  
Stephen M. Spencer, CSA

April 6, 2006  
\_\_\_\_\_  
Date

  
Deanna M. Donovan, LD

April 6, 2006  
\_\_\_\_\_  
Date



Northwest Marine Chemist, Inc.

P.O. Box 7084

Tacoma, Washington 98406

(253) 752-0149

MARINE CHEMIST CERTIFICATE

SERIAL NO. ST-0608

Environmental Management Services C&E Const. March 29, 2001  
Survey Requested by Vessel Owner or Agent Date  
TANK FARM Underground Storage Tank Westlake Ingalls  
Vessel Type of Vessel Specific Location of Vessel  
Bunker Fuel O2-LEL-V.S. 0945 Hrs.  
Last Three (3) Cargoes Test Method Time Survey Completed

i ≈ 10,000 gal UST } Secured  
Not SAFE For Workers  
Oxygen = <6% } SAFE For Limited Hotwork  
LEL = N/A

Limitations = This Tank has been purged with CO<sub>2</sub> to <6% Oxygen, and is SAFE for excavation.

Note - This Tank contains product. Proceed with Caution.  
Tank Re-purged @ 1200 Hrs Oxygen = <6%  
All openings are and must remain secured.

END-

In the event of any physical or atmospheric changes adversely affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

**QUALIFICATIONS:** Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

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**SAFE FOR WORKERS:** Means that in the compartment or space so designated: (a) the oxygen content of the atmosphere is at least 19.5 percent by volume; and that, (b) toxic materials in the atmosphere are within permissible concentrations; and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate.

**NOT SAFE FOR WORKERS:** Means that in the compartment or space so designated, the requirements of Safe for Workers have not been met.

**ENTER WITH RESTRICTIONS:** Means that in any compartment or space so designated, entry for work may be made only if conditions of proper protective equipment, clothing, and time are as specified.

**SAFE FOR HOT WORK:** Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (c) the residues are not capable of producing a higher concentration than permitted by (b) above under existing atmospheric conditions in the presence of fire, and while maintained as directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces containing or having contained flammable or combustible materials have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily inerted, or, in the case of fuel tanks or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine Chemist's requirements.

**NOT SAFE FOR HOT WORK:** Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met.

**SAFE FOR REPAIR YARD ENTRY:** Means that the compartments and spaces of the flammable cryogenic liquid carrier so designated: (a) have been tested by sampling at remote sampling stations, and results indicate the atmosphere tested to be above 19.5 percent oxygen, and less than 10 percent of the lower flammable limit, or (b) are inerted.

**CHEMIST'S ENDORSEMENT.** This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

The undersigned acknowledges receipt of this Certificate under Section 2-6 of NFPA 306 and understands conditions and limitations under which it was issued.

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed

Signature of Marine Chemist

Company

3/29/04

Date

Signed

Signature of Client

Certificate No.

637



THE CITY OF SEATTLE  
FIRE DEPARTMENT  
*Fire Marshal's Office*  
220 Third Ave South  
Seattle, WA 98104-2608  
(206) 386-1450

# RECEIPT

5-104152

**THIS IS NOT A BILL  
PLEASE DO NOT PAY**

When properly made out and signed this becomes a receipt for the amount and purposes as specified herein.

**PAYOR:** ENVIRONMENTAL MANAGEMENT SVC  
**ADDRESS:** 652 8 AV  
FOX ISLAND, WA 98333  
**ATTN:** DEANNA DONOVAN

**DATE:** 02/22/2006  
**AMOUNT:** \$152.00  
**JOB SITE:** 318 WESTLAKE AV N  
**PAYMENT FOR:** APPLICATION FEE  
**CHECK #:** 3570  
**INVOICE #:**  
**PERMIT CODE(S):** 7908  
**REMARK:**

*Chief of the Fire Department*

By CH

**NOTE: PLEASE RETAIN THIS RECEIPT AND POST IT IN A VISIBLE LOCATION ON SITE UNTIL AN ACTUAL FIRE DEPARTMENT PERMIT HAS BEEN ISSUED.**

MON 2/27 10:00 am CH

BILL OF LADING  
PRODUCT TRANSPORT MANIFEST  
MARINE VACUUM SERVICE, INC.

24 HOUR EMERGENCY PHONE NUMBER (206) 762-0240

TRUCK NUMBER 204 DATE 3/19/06

TO  
DESTINATION  
NAME MAR. VAC  
STREET \_\_\_\_\_  
CITY/STATE \_\_\_\_\_

FROM  
SHIPPER  
NAME Danna Donovan (EMS)  
STREET 652 8th AVE  
CITY/STATE Fox, Island

QUANTITY	PROPER SHIPPING NAME	UN (PLACARD) NUMBER
<u>2000</u>	<u>Gallons of water</u>	

SHIPPER [Signature] SLUDGE  
DATE \_\_\_\_\_

DRIVER [Signature] DATE 3/29/06

NOTE:

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminants including without limitations, pesticides, chlorinated solvents at concentrations greater than 1000 PPM, any detectible levels of PCBs, or any other material classified as dangerous or hazardous waste by 40 CFR Part 261, Subpart C and D (implementing the Federal Resource Conservation and Recovery Act), or by any equivalent state dangerous or hazardous substance classification programs. Should laboratory tests find this waste not in compliance with 40 CFR Part 261, customer (generator) agrees to pay for all disposal costs incurred.

Mon 2/27 10:00 am Cth

1 OUR  
Seattle  
Fire Department



APPLICATION FOR TEMPORARY PERMIT

Code 7908

Commercial Tank Removal/Decommissioning

4/6/06

Permit Fee: \$152.00

2/27/06  
Date Issued

2/27/06  
Expiration Date

TO BE COMPLETED BY PERMIT APPLICANT (PLEASE PRINT)

FIRM NAME

Environmental Management Services

MAILING ADDRESS

652 8th Ave

SUITE

CITY

Fox Island

STATE

WA

ZIP

98333

OPERATION ADDRESS

318 Westlake Ave N. Seattle

CONTACT PERSON

Deanna Donovan

PHONE NUMBER

(360) 710-1776

Number of Tank(s):

3 Tanks (Removal)

Tank Size(s):

1000 gal ea.

R.A.H.

3/29/06

Product(s) Previously Contained:

Heating Oil

☒ Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents) TO BE FAXED

☐ Abandonment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquids and unknowns)

Hot Work:

☐  
☒

Yes (Separate Seattle Fire Department hot work permit required)

No

Please include a check made payable to the CITY OF SEATTLE with this application.

Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to:

Seattle Fire Department

Fire Marshal's Office—Permits

220 Third Avenue South, Second Floor

Seattle, WA 98104-2608

Permit processing: (206) 386-1025

www.seattle.gov/fire

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment.

TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION

No hot work is allowed on the tank system prior to issuance of this Fire Department permit!

Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the attached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. **THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED**

Special permit conditions:

Tank ruptured by demo work by  
Sack Inc. Two tanks remaining to be scheduled.  
Site safety meeting review of permit conditions

FMO USE

Receipt No.:

205410N

Check No.:

205410

Application ID#:

205410

APPROVED BY

Inspector:

HWA/1

Name of Marine Chemist

DAKES (MNC)

Date:

2/27/06

SFD ID#

1914

Certificate #

PM1001

COMMERCIAL TANK REMOVAL/DECOMMISSIONING PERMIT CONDITIONS

**APPENDIX E**  
**LABORATORY REPORTS**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
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  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

24 February 2006

Geoffrey Garrison  
URS Corporation  
1501 4th Ave, Suite 1400  
Seattle, WA/USA 98101-1616  
RE: Block 40 E & W

Enclosed are the results of analyses for samples received by the laboratory on 02/23/06 17:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeff Gerdes  
Project Manager



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302  
509.924.9200 fax 509.924.9290  
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541.383.9310 fax 541.382.7588  
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

URS Corporation  
1501 4th Ave, Suite 1400  
Seattle, WA/USA 98101-1616

Project: Block 40 E & W  
Project Number: [none]  
Project Manager: Geoffrey Garrison

Reported:  
02/24/06 15:43

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RR-1	B6B0488-01	Soil	02/21/06 12:00	02/23/06 17:15

North Creek Analytical - Bothell

*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.*

Jeff Gerdes, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network





Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
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907.563.9200 fax 907.563.9210

URS Corporation  
1501 4th Ave, Suite 1400  
Seattle, WA/USA 98101-1616

Project: Block 40 E & W  
Project Number: [none]  
Project Manager: Geoffrey Garrison

Reported:  
02/24/06 15:43

**Semivolatile Organic Compounds by EPA Method 8270C**  
**North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							

RR-1 (B6B0488-01) Soil Sampled: 02/21/06 12:00 Received: 02/23/06 17:15

3 & 4-Methylphenol	ND	0.356	mg/kg dry	1	6B23039	02/23/06	02/24/06	EPA 8270C	
2-Methylphenol	ND	0.356	"	"	"	"	"	"	
Surrogate: 2-FBP	74.4 %	27-126			"	"	"	"	
Surrogate: 2-FP	75.8 %	16-121			"	"	"	"	
Surrogate: Nitrobenzene-d5	78.9 %	26-125			"	"	"	"	
Surrogate: Phenol-d6	78.6 %	10-120			"	"	"	"	
Surrogate: p-Terphenyl-d14	73.3 %	26-150			"	"	"	"	
Surrogate: 2,4,6-TBP	72.8 %	10-152			"	"	"	"	

North Creek Analytical - Bothell

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.

Jeff Gerdes, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 2 of 7



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
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907.563.9200 fax 907.563.9210

URS Corporation  
1501 4th Ave, Suite 1400  
Seattle, WA/USA 98101-1616

Project: Block 40 E & W  
Project Number: [none]  
Project Manager: Geoffrey Garrison

Reported:  
02/24/06 15:43

**Physical Parameters by APHA/ASTM/EPA Methods**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
RR-1 (B6B0488-01) Soil    Sampled: 02/21/06 12:00    Received: 02/23/06 17:15									
Dry Weight	91.4	1.00	%	1	6B23041	02/23/06	02/24/06	BSOPSPL003R08	

North Creek Analytical - Bothell

*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.*

Jeff Gerdes, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



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907.563.9200 fax 907.563.9210

URS Corporation  
1501 4th Ave, Suite 1400  
Seattle, WA/USA 98101-1616

Project: Block 40 E & W  
Project Number: [none]  
Project Manager: Geoffrey Garrison

Reported:  
02/24/06 15:43

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 6B23039: Prepared 02/23/06 Using EPA 3550B**

**Blank (6B23039-BLK1)**

3 & 4-Methylphenol	ND	0.330	mg/kg wet							
2-Methylphenol	ND	0.330	"							
Surrogate: 2-FBP	1.32		"	1.67		79.0	27-126			
Surrogate: 2-FP	3.09		"	3.33		92.8	16-121			
Surrogate: Nitrobenzene-d5	1.56		"	1.67		93.4	26-125			
Surrogate: Phenol-d6	3.11		"	3.33		93.4	10-120			
Surrogate: p-Terphenyl-d14	1.70		"	1.67		102	26-150			
Surrogate: 2,4,6-TBP	2.36		"	3.33		70.9	10-152			

**LCS (6B23039-BS1)**

3 & 4-Methylphenol	2.92	0.330	mg/kg wet	3.33		87.7	50-130			
2-Methylphenol	2.62	0.330	"	3.33		78.7	50-130			
Surrogate: 2-FBP	1.13		"	1.67		67.7	27-126			
Surrogate: 2-FP	2.38		"	3.33		71.5	16-121			
Surrogate: Nitrobenzene-d5	1.10		"	1.67		65.9	26-125			
Surrogate: Phenol-d6	2.50		"	3.33		75.1	10-120			
Surrogate: p-Terphenyl-d14	1.13		"	1.67		67.7	26-150			
Surrogate: 2,4,6-TBP	2.30		"	3.33		69.1	10-152			

**Matrix Spike (6B23039-MS2)**

Source: B6B0488-01

3 & 4-Methylphenol	3.66	0.363	mg/kg dry	3.67	ND	99.7	40-140			
2-Methylphenol	3.28	0.363	"	3.67	ND	89.4	40-140			
Surrogate: 2-FBP	1.46		"	1.84		79.3	27-126			
Surrogate: 2-FP	2.75		"	3.67		74.9	16-121			
Surrogate: Nitrobenzene-d5	1.32		"	1.84		71.7	26-125			
Surrogate: Phenol-d6	2.97		"	3.67		80.9	10-120			
Surrogate: p-Terphenyl-d14	1.30		"	1.84		70.7	26-150			
Surrogate: 2,4,6-TBP	3.07		"	3.67		83.7	10-152			

North Creek Analytical - Bothell

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.

*Jeff Gerdes*

Jeff Gerdes, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 4 of 7



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907.563.9200 fax 907.563.9210

URS Corporation  
1501 4th Ave, Suite 1400  
Seattle, WA/USA 98101-1616

Project: Block 40 E & W  
Project Number: [none]  
Project Manager: Geoffrey Garrison

Reported:  
02/24/06 15:43

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 6B23041: Prepared 02/23/06 Using Dry Weight

Blank (6B23041-BLK1)

Dry Weight	100	1.00	%
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North Creek Analytical - Bothell

Jeff Gerdes, 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

Page 6 of 7



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
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907.563.9200 fax 907.563.9210

URS Corporation  
1501 4th Ave, Suite 1400  
Seattle, WA/USA 98101-1616

Project: Block 40 E & W  
Project Number: [none]  
Project Manager: Geoffrey Garrison

Reported:  
02/24/06 15:43

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 6B23039: Prepared 02/23/06 Using EPA 3550B

Matrix Spike Dup (6B23039-MSD2)

Source: B6B0488-01

3 & 4-Methylphenol	3.88	0.356	mg/kg dry	3.60	ND	108	40-140	5.84	30	
2-Methylphenol	3.52	0.356	"	3.60	ND	97.8	40-140	7.06	30	
Surrogate: 2-FBP	1.56		"	1.80		86.7	27-126			
Surrogate: 2-FP	3.04		"	3.60		84.4	16-121			
Surrogate: Nitrobenzene-d5	1.42		"	1.80		78.9	26-125			
Surrogate: Phenol-d6	3.17		"	3.60		88.1	10-120			
Surrogate: p-Terphenyl-d14	1.30		"	1.80		72.2	26-150			
Surrogate: 2,4,6-TBP	3.21		"	3.60		89.2	10-152			

North Creek Analytical - Bothell

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.

Jeff Gerdes, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
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907.563.9200 fax 907.563.9210

URS Corporation  
1501 4th Ave, Suite 1400  
Seattle, WA/USA 98101-1616

Project: Block 40 E & W  
Project Number: [none]  
Project Manager: Geoffrey Garrison

**Reported:**  
02/24/06 15:43

#### Notes and Definitions

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  
RPD Relative Percent Difference

North Creek Analytical - Bothell


Jeff Gerdes, 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

Page 7 of 7





Work Order #: B6B0488

**PROJECT INFORMATION SHEET  
ENVIR-SOILS, HBM**

**PROJECT NAME:** Block 40 E&W Construction (Westlake Terry)

**JOB NO.:** 33757035

<b>TASKS:</b>	.00023	Envir-Soils Construction (field & office labor)
	.00024	Cleanup Report
	.00042	Reimbursables - Construction (no labor!)
	.00031	Haz Matls Demo Monitoring & Rptg (labor)
	.00041	Reimbursables - Haz Mat'ls Demo (no labor!)

**PROJECT MANAGER:** Martin McCabe (also Geotechnical task leader)

206-438-2216 cel 206-619-5949

[martin\\_mccabe@urscorp.com](mailto:martin_mccabe@urscorp.com)

**OTHER URS:** David Raubvogel (Envir-Soils task leader)

206-438-2284 206-321-4111 cel

[david\\_raubvogel@urscorp.com](mailto:david_raubvogel@urscorp.com)

Jacob Letts (Envir-Soils Staff)

206-438-2103 206-228-4375 cel

Russ Snyders (Haz Materials task leader)

206-438-2316 cel 206-910-5365

[russ\\_snyders@urscorp.com](mailto:russ_snyders@urscorp.com)

**CLIENT CONTACT LIST:**

City Investors LLC (Vulcan Inc)

505 Fifth Avenue, Suite 900

Seattle, WA 98104

(206) 684-4680

Sharon E. Coleman 206-342-2149

[sharonc@vulcan.com](mailto:sharonc@vulcan.com)

Andrew Clapham cel 206-423-3342 (URS primary contact)

[andrew@aca-llc.com](mailto:andrew@aca-llc.com)

**PRIME CONTRACTOR**

GLY

100 - 116<sup>th</sup> Ave SE

Bellevue, WA 98004

Mark Kane 425-519-4357 cel 425-765-5686

[mark@gly.com](mailto:mark@gly.com)

Site Office : 410 Terry Ave. N. Seattle, 98109

Jim Davis 206-315-5102 [jim.davis@gly.com](mailto:jim.davis@gly.com)

Deane Buechler 425-766-9118 cell [dane@gly.com](mailto:dane@gly.com)

Andy Paroline 425-463-6749 cell [andy.paroline@gly.com](mailto:andy.paroline@gly.com)

**EXCAVATION CONTRACTOR**

Northwest Construction

Tom Nielsen 425-4543-8380 206-793-7626 cell [t Nielsen@northwestconst.com](mailto:t Nielsen@northwestconst.com)

**SHORING CONTRACTOR**

DBM

Troy Edwards PM 253-838-1402

cel 206-423-9876

[troye@dbmcm.com](mailto:troye@dbmcm.com)



Environmental  
Services Network

RECEIVED

MAR 17 2006

URS CORPORATION  
SEATTLE

March 15, 2006

Geoff Garrison  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Garrison:

Please find enclosed the analytical data report for the Block 40 E & W Project in Seattle, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended and Semi-VOC's by Method 8270 on March 2 & 7, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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,

Julie Woods  
Office Manager

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60302-2  
Client: URS  
Client Job Name: BLOCK 40 E&W  
Client Job Number: 33757035.00042

Analytical Results

DUP

NWTPH-Dx, mg/kg	MTH BLK RR-EX-1-3 RR-EX-2-3 RR-EX-3-3 RR-EX-4-3 RR-EX-4-3						
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/02/06	03/02/06	03/02/06	03/02/06	03/02/06	03/02/06
Date analyzed	Limits	03/02/06	03/02/06	03/02/06	03/02/06	03/02/06	03/02/06
Moisture, %			11%	9%	18%	19%	19%
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	100%	99%	89%	89%	88%	95%
o-Terphenyl	101%	96%	99%	97%	98%	91%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60302-2  
Client: URS  
Client Job Name: BLOCK 40 E&W  
Client Job Number: 33757035.00042

Analytical Results

8270, mg/kg	MTH BLK		LCS	RR-EX-1-3	RR-EX-2-3	RR-EX-3-3	RR-EX-4-3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/07/06		03/07/06	03/07/06	03/07/06	03/07/06
Date analyzed	Limits	03/07/06	03/07/06	03/07/06	03/07/06	03/07/06	03/07/06
Moisture, %				11%	9%	18%	19%
Pyridine	1.0	nd		nd	nd	nd	nd
Aniline	1.0	nd		nd	nd	nd	nd
Phenol	1.0	nd		nd	nd	nd	nd
2-Chlorophenol	1.0	nd		nd	nd	nd	nd
Bis (2-chloroethyl) ether	1.0	nd		nd	nd	nd	nd
1,3-Dichlorobenzene	1.0	nd		nd	nd	nd	nd
1,4-Dichlorobenzene	1.0	nd	113%	nd	nd	nd	nd
1,2-Dichlorobenzene	1.0	nd		nd	nd	nd	nd
Benzyl alcohol	1.0	nd		nd	nd	nd	nd
2-Methylphenol (o-cresol)	1.0	nd		nd	nd	nd	nd
Bis (2-chloroisopropyl) ether	5.0	nd		nd	nd	nd	nd
3,4-Methylphenol (m,p-cresol)	1.0	nd		nd	nd	nd	nd
Hexachloroethane	1.0	nd		nd	nd	nd	nd
N-Nitroso-di-n-propylamine	1.0	nd		nd	nd	nd	nd
Nitrobenzene	1.0	nd		nd	nd	nd	nd
Isophorone	1.0	nd		nd	nd	nd	nd
2-Nitrophenol	5.0	nd	129%	nd	nd	nd	nd
4-Nitrophenol	5.0	nd		nd	nd	nd	nd
2,4-Dimethylphenol	1.0	nd		nd	nd	nd	nd
Bis (2-chloroethoxy) methane	1.0	nd		nd	nd	nd	nd
2,4-Dichlorophenol	5.0	nd	112%	nd	nd	nd	nd
1,2,4-Trichlorobenzene	1.0	nd		nd	nd	nd	nd
Naphthalene	1.0	nd		nd	nd	nd	nd
4-Chloroaniline	5.0	nd		nd	nd	nd	nd
Hexachlorobutadiene	1.0	nd	86%	nd	nd	nd	nd
4-Chloro-3-methylphenol	5.0	nd	101%	nd	nd	nd	nd
2-Methylnaphthalene	1.0	nd		nd	nd	nd	nd
1-Methylnaphthalene	1.0	nd		nd	nd	nd	nd
Hexachlorocyclopentadiene	1.0	nd		nd	nd	nd	nd
2,4,6-Trichlorophenol	5.0	nd	87%	nd	nd	nd	nd
2,4,5-Trichlorophenol	5.0	nd		nd	nd	nd	nd
2-Chloronaphthalene	1.0	nd		nd	nd	nd	nd
2-Nitroaniline	5.0	nd		nd	nd	nd	nd
1,4-Dinitrobenzene	5.0	nd		nd	nd	nd	nd
Dimethylphthalate	1.0	nd		nd	nd	nd	nd
Acenaphthylene	0.1	nd		nd	nd	nd	nd
1,3-Dinitrobenzene	5.0	nd		nd	nd	nd	nd
2,6-Dinitrotoluene	1.0	nd		nd	nd	nd	nd
1,2-Dinitrobenzene	1.0	nd		nd	nd	nd	nd
Acenaphthene	0.1	nd	90%	nd	nd	nd	nd
3-Nitroaniline	5.0	nd		nd	nd	nd	nd
Dibenzofuran	1.0	nd		nd	nd	nd	nd
2,4-Dinitrotoluene	1.0	nd		nd	nd	nd	nd
2,3,4,6-Tetrachlorophenol	1.0	nd		nd	nd	nd	nd
2,3,5,6-Tetrachlorophenol	1.0	nd		nd	nd	nd	nd
2,4-Dinitrophenol	5.0	nd		nd	nd	nd	nd

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60302-2  
Client: URS  
Client Job Name: BLOCK 40 E&W  
Client Job Number: 33757035.00042

Analytical Results

8270, mg/kg	MTH BLK		LCS	RR-EX-1-3	RR-EX-2-3	RR-EX-3-3	RR-EX-4-3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/07/06		03/07/06	03/07/06	03/07/06	03/07/06
Date analyzed	Limits	03/07/06	03/07/06	03/07/06	03/07/06	03/07/06	03/07/06
Moisture, %				11%	9%	18%	19%
Fluorene	0.1	nd		nd	nd	nd	nd
4-Chlorophenylphenylether	1.0	nd		nd	nd	nd	nd
Diethylphthalate	1.0	nd		nd	nd	nd	nd
4-Nitroaniline	5.0	nd		nd	nd	nd	nd
4,6-Dinitro-2-methylphenol	5.0	nd		nd	nd	nd	nd
N-nitrosodiphenylamine	1.0	nd		nd	nd	nd	nd
Azobenzene	1.0	nd		nd	nd	nd	nd
4-Bromophenylphenylether	1.0	nd		nd	nd	nd	nd
Hexachlorobenzene	1.0	nd		nd	nd	nd	nd
Pentachlorophenol	5.0	nd	76%	nd	nd	nd	nd
Phenanthrene	0.1	nd		nd	nd	nd	nd
Anthracene	0.1	nd		nd	nd	nd	nd
Carbazole	1.0	nd		nd	nd	nd	nd
Di-n-butylphthalate	1.0	nd		nd	nd	nd	nd
Fluoranthene	0.1	nd	82%	nd	nd	nd	nd
Pyrene	0.1	nd		nd	nd	nd	nd
Butylbenzylphthalate	1.0	nd		nd	nd	nd	nd
Bis(2-ethylhexyl) adipate	1.0	nd		nd	nd	nd	nd
Benzo(a)anthracene	0.1	nd		nd	nd	nd	nd
Chrysene	0.1	nd		nd	nd	nd	nd
Bis (2-ethylhexyl) phthalate	1.0	nd		nd	nd	nd	nd
Di-n-octyl phthalate	1.0	nd		nd	nd	nd	nd
Benzo(b)fluoranthene	0.1	nd		nd	nd	nd	nd
Benzo(k)fluoranthene	0.1	nd		nd	nd	nd	nd
Benzo(a)pyrene	0.1	nd	99%	nd	nd	nd	nd
Dibenzo(a,h)anthracene	0.1	nd		nd	nd	nd	nd
Benzo(ghi)perylene	0.1	nd		nd	nd	nd	nd
Indeno(1,2,3-cd)pyrene	0.1	nd		nd	nd	nd	nd

Surrogate recoveries

2-Fluorophenol	124%	120%	115%	110%	128%	121%
Phenol-d6	138%	128%	130%	121%	130%	122%
Nitrobenzene-d5	119%	112%	113%	113%	112%	110%
2-Fluorobiphenyl	91%	102%	96%	91%	89%	90%
2,4,6-Tribromophenol	90%	112%	97%	97%	94%	96%
4-Terphenyl-d14	96%	107%	97%	100%	98%	98%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

Acceptable Recovery limits:

2-Fluorophenol: 10-135 %

Phenol - d5: 10-135 %

2,4,6- tribromophenol: 29-159%

Nitrobenzene - d5: 20-120 %

2-Fluorobiphenyl: 50-150%

p-Terphenyl-d14: 50-150%

Acceptable RPD limit: 35%



ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60302-2  
Client: URS  
Client Job Name: BLOCK 40 E&W  
Client Job Number: 33757035.00042

Analytical Results		RR-EX-4-3 RR-EX-4-3		
8270, mg/kg		MS	MSD	RPD
Matrix	Soil			
Date extracted	Reporting	03/07/06	03/07/06	
Date analyzed	Limits	03/07/06	03/07/06	
Moisture, %				

Pyridine	1.0			
Aniline	1.0			
Phenol	1.0	113%	113%	0%
2-Chlorophenol	1.0	120%	121%	1%
Bis (2-chloroethyl) ether	1.0			
1,3-Dichlorobenzene	1.0			
1,4-Dichlorobenzene	1.0	100%	98%	2%
1,2-Dichlorobenzene	1.0			
Benzyl alcohol	1.0			
2-Methylphenol (o-cresol)	1.0			
Bis (2-chloroisopropyl) ether	5.0			
3,4-Methylphenol (m,p-cresol)	1.0			
Hexachlorethane	1.0			
N-Nitroso-di-n-propylamine	1.0	99%	105%	6%
Nitrobenzene	1.0			
Isophorone	1.0			
2-Nitrophenol	5.0			
4-Nitrophenol	5.0			
2,4-Dimethylphenol	1.0			
Bis (2-chloroethoxy) methane	1.0			
2,4-Dichlorophenol	5.0			
1,2,4-Trichlorobenzene	1.0	92%	98%	6%
Naphthalene	1.0			
4-Chloroaniline	5.0			
Hexachlorobutadiene	1.0			
4-Chloro-3-methylphenol	5.0	85%	80%	6%
2-Methylnaphthalene	1.0			
1-Methylnaphthalene	1.0			
Hexachlorocyclopentadiene	1.0			
2,4,6-Trichlorophenol	5.0			
2,4,5-Trichlorophenol	5.0			
2-Chloronaphthalene	1.0			
2-Nitroaniline	5.0			
1,4-Dinitrobenzene	5.0			
Dimethylphthalate	1.0			
Acenaphthylene	0.1			
1,3-Dinitrobenzene	5.0			
2,6-Dinitrotoluene	1.0			
1,2-Dinitrobenzene	1.0			
Acenaphthene	0.1	84%	83%	1%
3-Nitroaniline	5.0			
Dibenzofuran	1.0			
2,4-Dinitrotoluene	1.0	76%	78%	3%
2,3,4,6-Tetrachlorophenol	1.0			
2,3,5,6-Tetrachlorophenol	1.0			
2,4-Dinitrophenol	5.0			

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60302-2  
Client: URS  
Client Job Name: BLOCK 40 E&W  
Client Job Number: 33757035.00042

Analytical Results		RR-EX-4-3	RR-EX-4-3
8270, mg/kg		MS	MSD RPD
Matrix	Soil		
Date extracted	Reporting	03/07/06	03/07/06
Date analyzed	Limits	03/07/06	03/07/06
Moisture, %			

Fluorene	0.1			
4-Chlorophenylphenylether	1.0			
Diethylphthalate	1.0			
4-Nitroaniline	5.0			
4,6-Dinitro-2-methylphenol	5.0			
N-nitrosodiphenylamine	1.0			
Azobenzene	1.0			
4-Bromophenylphenylether	1.0			
Hexachlorobenzene	1.0			
Pentachlorophenol	5.0	65%	65%	0%
Phenanthrene	0.1			
Anthracene	0.1			
Carbazole	1.0			
Di-n-butylphthalate	1.0			
Fluoranthene	0.1			
Pyrene	0.1	79%	79%	0%
Butylbenzylphthalate	1.0			
Bis(2-ethylhexyl) adipate	1.0			
Benzo(a)anthracene	0.1			
Chrysene	0.1			
Bis (2-ethylhexyl) phthalate	1.0			
Di-n-octyl phthalate	1.0			
Benzo(b)fluoranthene	0.1			
Benzo(k)fluoranthene	0.1			
Benzo(a)pyrene	0.1			
Dibenzo(a,h)anthracene	0.1			
Benzo(ghi)perylene	0.1			
Indeno(1,2,3-cd)pyrene	0.1			

Surrogate recoveries			
2-Fluorophenol	124%	121%	
Phenol-d6	127%	123%	
Nitrobenzene-d5	90%	94%	
2-Fluorobiphenyl	90%	85%	
2,4,6-Tribromophenol	113%	97%	
4-Terphenyl-d14	101%	96%	

#### Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

#### Acceptable Recovery limits:

2-Fluorophenol: 10-135 %  
Phenol - d5: 10-135 %  
2,4,6- tribromophenol: 29-159%  
Nitrobenzene - d5: 20-120 %  
2-Fluorobiphenyl: 50-150%  
p-Terphenyl-d14: 50-150%  
Acceptable RPD limit: 35%

560302-2

**CHAIN-OF-CUSTODY RECORD**

 CLIENT: CARS  
 ADDRESS: 1501 4TH AVE. SUITE 1400  
 PHONE: 206/438-2128 FAX: 806/445-5288  
 CLIENT PROJECT #: 33757035.00042 PROJECT MANAGER: G. GARRISON

 DATE: 2/28/06 PAGE 1 OF 1  
 PROJECT NAME: Block 40 EFW  
 LOCATION: SEATTLE, WA  
 COLLECTOR: G. GARRISON DATE OF COLLECTION: 2/28/06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																NOTES	Total Number of Containers	Laboratory Note Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
					VOA 8021B	VOA 8021B BTEX Only	VOA 8280	SEMI VOL 8270	TPH - HCD	TPH 8015	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100 (6 & o)	PAH 8270	PCBs 8082	Pesticides 8081	EPH	SVPH	Methamphetamine	Pb				Hex Chrome																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature) DATE/TIME

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**SAMPLE DISPOSAL INSTRUCTIONS**
☐ ESN DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

**SAMPLE RECEIPT**

TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SEALS Y/N/A

SEALS INTACT? Y/N/A

RECEIVED GOOD COND/COLD

NOTES:

**LABORATORY NOTES:**

 corrected 3/2/06  
 C.O.C.

Turn Around Time: 24 HR 48 HR 5 DAY



Environmental  
Services Network

RECEIVED

MAR 20 2006

URS CORPORATION  
SEATTLE

March 17, 2006

Geoff Garrison  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Garrison:

Please find enclosed the analytical data report for the Block 40 E & W Project in Seattle, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, and BTEX by Method 8260 on March 10, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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,

Julie Woods  
Office Manager

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60309-1  
Client: URS  
Client Job Name: BLOCK 40 E+W  
Client Job Number: 33757035

Analytical Results

NWTPH-Dx, mg/kg	MTH BLK	318-N-15'	318-S-15'	318-E-15'	318-FLOOR1-18'
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/10/06	03/10/06	03/10/06	03/10/06
Date analyzed	Limits	03/10/06	03/10/06	03/10/06	03/10/06
Moisture, %		17%	14%	17%	18%
Kerosene/Jet fuel	20	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	85%	87%	89%	82%	88%
o-Terphenyl	102%	102%	96%	98%	95%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60309-1  
Client: URS  
Client Job Name: BLOCK 40 E+W  
Client Job Number: 33757035

Analytical Results

DUP

NWTPH-Dx, mg/kg		318-FLOOR2-18'	330-PEX-1-6'	QC SAMPLE	QC SAMPLE
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/10/06	03/10/06	03/10/06	03/10/06
Date analyzed	Limits	03/10/06	03/10/06	03/10/06	03/10/06
Moisture, %		16%	23%		
Kerosene/Jet fuel	20	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	85%	92%	83%	91%
o-Terphenyl	101%	103%	97%	96%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%



ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60309-1  
Client: URS  
Client Job Name: BLOCK 40 E+W  
Client Job Number: 33757035

**NWTPH-Gx / BTEX (8260)**

Analytical Results

DUP

NWTPH-Gx, mg/kg	MTH BLK	330-PEX-1-6'	QC SAMPLE	QC SAMPLE
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/10/06	03/10/06	03/10/06
Date analyzed	Limits	03/10/06	03/10/06	03/10/06
Moisture, %		23%		

Mineral spirits/Stoddard solvent	5.0	nd	nd	nd
Gasoline	5.0	nd	14	nd

Surrogate recoveries:

Fluorobiphenyl	85%	92%	83%	91%
o-Terphenyl	102%	103%	97%	96%

BTEX (8260), mg/kg	MTH BLK	LCS	330-PEX-1-6'	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/10/06	03/10/06	03/10/06	03/10/06	03/10/06
Date analyzed	Limits	03/13/06	03/13/06	03/13/06	03/13/06	03/13/06
Moisture, %			23%			
Benzene	0.02	nd	114%	nd	107%	113% 5%
Toluene	0.05	nd	112%	nd	106%	112% 6%
Ethylbenzene	0.05	nd		nd		
Xylenes	0.05	nd		nd		

Surrogate recoveries:

Dibromofluoromethane	102%	104%	103%	102%	102%
Toluene-d8	101%	100%	100%	100%	100%
4-Bromofluorobenzene	103%	100%	101%	101%	99%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
na - not analyzed  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Results reported on dry-weight basis  
Acceptable Recovery limits: 65% TO 135%  
Acceptable RPD limit: 35%

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page:	of
ARI Client Company:	Phone:	Date:	Ice Present?
Client Contact:		No. of Coolers:	Cooler Temps:



Analytical Resources, Incorporated  
Analytical Chemists and Consultants  
4611 South 134th Place, Suite 100  
Tukwila, WA 98168  
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested						Notes/Comments
					DIESEL + OIL (MUD) TPH (MUD) GAS TPH BTEX (EPA 8021)						
318-N-15'	3/2/06	1130	S	1	X						
318-S-15'	3/2/06	1130	S	1	X						
318-E-15'	3/2/06	1345	S	1	X						
318-FLOOR 1-18'	3/2/06	1200	S	1	X						
318-FLOOR 2-18'	3/2/06	1200	S	1	X						
<del>330-SP-1-030906</del>	<del>3/9/06</del>		<del>S</del>	<del>3</del>	<del>X</del>	<del>X</del>	<del>X</del>				
<del>330-SP-2-030906</del>	<del>3/9/06</del>		<del>S</del>	<del>3</del>	<del>X</del>	<del>X</del>	<del>X</del>				
330-PBX-16'	3/9/06	1500	S	3	X	X	X				
Comments/Special Instructions	Relinquished by: (Signature)		Received by: (Signature)		Relinquished by: (Signature)				Received by: (Signature)		
	Printed Name:		Printed Name:		Printed Name:				Printed Name:		
	Company:		Company:		Company:				Company:		
	Date & Time:		Date & Time:		Date & Time:				Date & Time:		

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: <b>STD</b>	Page:	of
ARI Client Company: <b>URS</b>	Phone: <b>438-2128</b>	Date: <b>3/9/06</b>	Ice Present?
Client Contact: <b>Geoff Garrison</b>	No. of Coolers:	Cooler Temps:	
Client Project Name: <b>Block 40 E+W</b>			
Client Project #: <b>33759035</b>			



Analytical Resources, Incorporated  
Analytical Chemists and Consultants  
4611 South 134th Place, Suite 100  
Tukwila, WA 98168  
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested						Notes/Comments	
					DIESEL + GAS (KWD)	TPH (KWD)	GAS (KWD)	TPH (KWD)	BTEX (FPA 8021)			
318-N-15'	3/2/06	1130	S	1	X							
318-S-15'	3/7/06	1130	S	1	X							
318-E-15'	3/2/06	1345	S	1	X							
318-FLOOR 1-18'	3/2/06	1200	S	1	X							
318-FLOOR 2-18'	3/2/06	1200	S	1	X							
<del>330-SP-1-030906</del>	<del>3/9/06</del>		S	<del>3</del>	X	X	X					
<del>330-SP-2-030406</del>	<del>3/9/06</del>		S	<del>3</del>	X	X	X					
330-PEX-16'	3/9/06	1500	S	3	X	X	X					
Comments/Special Instructions	Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>		Relinquished by: (Signature)		Received by: (Signature)						
	Printed Name: <b>Dean H. Vasser</b>	Printed Name: <b>Boone</b>		Printed Name:		Printed Name:						
	Company: <b>URS Corp.</b>	Company: <b>ESN</b>		Company:		Company:						
	Date & Time: <b>March 9, 2006 1525</b>	Date & Time: <b>3/9/06 1525</b>		Date & Time:		Date & Time:						

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

March 24, 2006

Geoff Garrison  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Garrison:

Please find enclosed the analytical data report for the Block 40 E & W Project in Seattle, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, and BTEX by Method 8260 on March 13, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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*

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60310-1  
Client: URS  
Client Job Name: BLOCK 40 E+W

Analytical Results

DUP

NWTPH-Dx, mg/kg		MTH BLK	PEX-330-2-9'	PEX-330-3-9'	PEX-330-4-10'	PEX-330-4-10'
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/13/06	03/13/06	03/13/06	03/13/06	03/13/06
Date analyzed	Limits	03/13/06	03/13/06	03/13/06	03/13/06	03/13/06
Moisture, %			23%	20%	19%	19%
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd
Surrogate recoveries:						
Fluorobiphenyl		98%	132%	105%	125%	119%
o-Terphenyl		109%	104%	109%	106%	107%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
na - not analyzed  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Results reported on dry-weight basis  
Acceptable Recovery limits: 65% TO 135%  
Acceptable RPD limit: 35%



ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60310-1  
Client: URS  
Client Job Name: BLOCK 40 E+W

**NWTPH-Gx / BTEX (8260)**

**Analytical Results**

NWTPH-Gx, mg/kg		MTH BLK		PEX-330-2-9'	PEX-330-3-9'
Matrix	Soil	Soil		Soil	Soil
Date extracted	Reporting	03/13/06		03/13/06	03/13/06
Date analyzed	Limits	03/13/06		03/13/06	03/13/06
Moisture, %				23%	20%
Mineral spirits/Stoddard solvent	5.0	nd		nd	nd
Gasoline	5.0	nd		3,000	18

**Surrogate recoveries:**

Fluorobiphenyl	98%	132%	105%
o-Terphenyl	109%	104%	109%

BTEX (8260), mg/kg		MTH BLK		LCS	PEX-330-2-9'	PEX-330-3-9'
Matrix	Soil	Soil		Soil	Soil	Soil
Date extracted	Reporting	03/13/06		03/13/06	03/13/06	03/13/06
Date analyzed	Limits	03/13/06		03/13/06	03/15/06	03/13/06
Moisture, %				23%	20%	
Benzene	0.02	nd	114%	nd	nd	nd
Toluene	0.05	nd	112%	nd	nd	nd
Ethylbenzene	0.05	nd		0.37	nd	nd
Xylenes	0.05	nd		nd	nd	nd

**Surrogate recoveries:**

Dibromofluoromethane	102%	104%	105%	101%
Toluene-d8	101%	100%	106%	99%
4-Bromofluorobenzene	103%	100%	83%	100%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits  
na - not analyzed  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Results reported on dry-weight basis  
Acceptable Recovery limits: 65% TO 135%  
Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60310-1  
Client: URS  
Client Job Name: BLOCK 40 E+W

**NWTPH-Gx / BTEX (8260)**

Analytical Results

DUP

NWTPH-Gx, mg/kg		PEX-330-4-10'	PEX-330-4-10'
Matrix	Soil	Soil	Soil
Date extracted	Reporting	03/13/06	03/13/06
Date analyzed	Limits	03/13/06	03/13/06
Moisture, %		19%	19%
Mineral spirits/Stoddard solvent	5.0	nd	nd
Gasoline	5.0	1,800	1,700

Surrogate recoveries:

Fluorobiphenyl	125%	119%
o-Terphenyl	106%	107%

BTEX (8260), mg/kg		PEX-330-4-10'	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	
Date extracted	Reporting	03/13/06	03/13/06	03/13/06	
Date analyzed	Limits	03/15/06	03/13/06	03/13/06	
Moisture, %		19%			
Benzene	0.02	nd	107%	113%	5%
Toluene	0.05	nd	106%	112%	6%
Ethylbenzene	0.05	3.0			
Xylenes	0.05	2.9			

Surrogate recoveries:

Dibromofluoromethane	103%	102%	102%
Toluene-d8	102%	100%	100%
4-Bromofluorobenzene	96%	101%	99%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
na - not analyzed  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Results reported on dry-weight basis  
Acceptable Recovery limits: 65% TO 135%  
Acceptable RPD limit: 35%

56011-1

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS Corporation

ADDRESS: 1501 4th AVE Suite 1400, Seattle WA 98101

PHONE: (206) 438-2128 FAX: \_\_\_\_\_

CLIENT PROJECT #: \_\_\_\_\_ PROJECT MANAGER: Geoff Garrison

DATE: 3-10-06 PAGE 1 OF \_\_\_\_\_

PROJECT NAME: Block 40 E & W

LOCATION: \_\_\_\_\_

COLLECTOR: Dean M. Vassant DATE OF COLLECTION: 3/10/06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																			Total Number of Containers	Laboratory Note Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HClD	TPH 8015	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome	Diesel + Oil TPH NIST	SW TPH 5-6 CAS TPH	B-Tex (EPA 821)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
1. PEX-330-2-G	9'		Soil	Glass																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

330-13-10' water at 4' depth  
Ambient Air Temperature 40°F  
and 0-3' Long  
U.S. High

RELINQUISHED BY (Signature) Dean M. Vassant DATE/TIME 3/9/05 1535 RECEIVED BY (Signature) KEB DATE/TIME 3/11/05 1530

RELINQUISHED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_ RECEIVED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_

**SAMPLE DISPOSAL INSTRUCTIONS**  
☐ ESN DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

**SAMPLE RECEIPT**  
TOTAL NUMBER OF CONTAINERS X 9  
CHAIN OF CUSTODY SEALS Y/N/A  
SEALS INTACT? Y/N/A  
RECEIVED GOOD COND./COLD  
NOTES: \_\_\_\_\_

**LABORATORY NOTES:**  
Standard  
Turn Around Time: 24 HR 48 HR 5 DAY

April 6, 2006

Geoff Garrison  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Garrison:

Please find enclosed the analytical data report for the Block 40 Project in Seattle, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended on March 29, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60329-4  
Client: URS CORP.  
Client Job Name: BLOCK 40  
Client Job Number: BLOCK 40

Analytical Results

								DUP
NWTPH-Dx, mg/kg		MTH BLK	330-PEX-N-5	330-PEX-S-5	330-PEX-E-5	330-PEX-W-5	330-PEX-FLOOR-10	330-PEX-FLOOR-10
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06
Date analyzed	Limits	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06	03/29/06
Moisture, %			22%	22%	22%	22%	25%	25%
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd	nd	nd
Surrogate recoveries:								
Fluorobiphenyl		107%	101%	94%	95%	97%	99%	97%
o-Terphenyl		111%	107%	108%	105%	103%	103%	107%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%



560329-4

**CHAIN-OF-CUSTODY RECORD**

 CLIENT: URS  
 ADDRESS: 1501 4TH AVE. Suite 1400 SEATTLE, WA  
 PHONE: 206/438-2128 FAX: 866-495-5288  
 CLIENT PROJECT #: Block 40 PROJECT MANAGER: G. GARRISON

 DATE: 3/29/06 PAGE 2 OF 2  
 PROJECT NAME: Block 40  
 LOCATION: SEATTLE, WA  
 COLLECTOR: A. SORRIVER DATE OF COLLECTION: 3/29/06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																NOTES	Total Number of Containers	Laboratory Note Number		
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HC10	TPH 8015 (gasoline)	TPH 8015 (total)	PAH 8015 (6 & o)	PAH 8100	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome				NUC129-DX	
1330-PEX-N-S	5'	1420	S	G															X					2	
2330-PEX-S-S	5'	1415	S	G															X					2	
3330-PEX-E-S	5'	1410	S	G															X					2	
4330-PEX-W-S	5'	1425	S	G															X					2	
5330-PEX-Floor-10	10'	1430	S	G															X					2	
6.																									
7.																									
8.																									
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18.																									

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
<i>[Signature]</i>	3/29/06	<i>[Signature]</i>	3/29/06 1530
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/A	
SEALS INTACT? Y/N/A	
RECEIVED GOOD COND./COLD	

LABORATORY NOTES:

**SAMPLE DISPOSAL INSTRUCTIONS**
☐ ESN DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

NOTES:

Turn Around Time: 24 HR 48 HR 5 DAY

April 6, 2006

Geoff Garrison  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Garrison:

Please find enclosed the analytical data report for the Vulcan Block 40 Project in Seattle, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on March 23 & 24, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60323-3  
Client: URS  
Client Job Name: VULCAN BLOCK 40

# NWTPH-Gx / BTEX (8260)

## Analytical Results

NWTPH-Gx, mg/kg		MTH BLK		330-SP-4	330-SP-5
Matrix	Soil	Soil		Soil	Soil
Date extracted	Reporting	03/23/06		03/23/06	03/23/06
Date analyzed	Limits	03/23/06		03/23/06	03/23/06
Moisture, %				14%	11%
Mineral spirits/Stoddard solvent	5.0	nd		nd	nd
Gasoline	5.0	nd		640	28
Surrogate recoveries:					
Fluorobiphenyl		91%		C	112%
o-Terphenyl		104%		107%	108%

BTEX (8260), mg/kg		MTH BLK		LCS	330-SP-4	330-SP-5
Matrix	Soil	Soil		Soil	Soil	Soil
Date extracted	Reporting	03/23/06		03/23/06	03/23/06	03/23/06
Date analyzed	Limits	03/24/06	03/23/06	03/24/06	03/24/06	03/24/06
Moisture, %				14%	11%	
Benzene	0.02	nd	115%	nd	nd	nd
Toluene	0.05	nd	114%	nd	nd	nd
Ethylbenzene	0.05	nd		0.29	nd	nd
Xylenes	0.05	nd		0.37	nd	nd

## Surrogate recoveries:

Dibromofluoromethane	102%	102%	103%	101%
Toluene-d8	105%	104%	105%	105%
4-Bromofluorobenzene	104%	105%	104%	106%

## Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60323-3  
Client: URS  
Client Job Name: VULCAN BLOCK 40

**NWTPH-Gx / BTEX (8260)**

Analytical Results		DUP	
NWTPH-Gx, mg/kg		QC SAMPLE	QC SAMPLE
Matrix	Soil	Soil	Soil
Date extracted	Reporting	03/23/06	03/23/06
Date analyzed	Limits	03/23/06	03/23/06
Moisture, %			
Mineral spirits/Stoddard solvent	5.0	nd	nd
Gasoline	5.0	nd	nd
Surrogate recoveries:			
Fluorobiphenyl		90%	94%
o-Terphenyl		103%	99%

BTEX (8260), mg/kg		MS	MSD	RPD
Matrix	Soil	Soil	Soil	
Date extracted	Reporting	03/23/06	03/23/06	
Date analyzed	Limits	03/24/06	03/24/06	
Moisture, %				
Benzene	0.02	107%	121%	12%
Toluene	0.05	115%	127%	10%
Ethylbenzene	0.05			
Xylenes	0.05			

Surrogate recoveries:				
Dibromofluoromethane		101%	102%	
Toluene-d8		105%	103%	
4-Bromofluorobenzene		106%	104%	

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits  
na - not analyzed  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Results reported on dry-weight basis  
Acceptable Recovery limits: 65% TO 135%  
Acceptable RPD limit: 35%

560323-3

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS Corporation  
 ADDRESS: 1501 4<sup>th</sup> AVENUE, Seattle WA 98101  
 PHONE: 206 438-2128 FAX: 866 495-3286  
 CLIENT PROJECT #: \_\_\_\_\_ PROJECT MANAGER: Geoff Garrison

DATE: MARCH 23, 2006 PAGE 1 OF \_\_\_\_\_  
 PROJECT NAME: VULCAN  
 LOCATION: Block #40  
 COLLECTOR: Dean M Vassar DATE OF COLLECTION: 3/23/06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																		Total Number of Containers	Laboratory Note Number
					VOA 8021B	VOA 8021B BY EXCHG	VOA 8260	SEM VOL 8260	TPH - ACID	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100 (6 & o)	PAH 8100	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome	NWTPH-DX	BTEX		
1. 330-SP-4			Soil	Glass	X				X									X	X	* Dx HOLD	3			
2. 330-SP-5			Soil	Glass	X				X									X	X	* Dx HOLD	3			
3.																								
4.																								
5.																								
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10.																								
11.																								
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15.																								
16.																								
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18.																								

RELINQUISHED BY (Signature) Dean M Vassar DATE/TIME 3/23/06 1445 RECEIVED BY (Signature) [Signature] DATE/TIME 3/23/06  
 RELINQUISHED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_ RECEIVED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_

## SAMPLE DISPOSAL INSTRUCTIONS

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

## SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS 6  
 CHAIN OF CUSTODY SEALS Y/N/A \_\_\_\_\_  
 SEALS INTACT? Y/N/A \_\_\_\_\_  
 RECEIVED GOOD COND./COLD \_\_\_\_\_  
 NOTES: \_\_\_\_\_

## LABORATORY NOTES:

Archive for Diesel  
 Thank you

Turn Around Time: 24 HR 48 HR 5 DAY



Environmental  
Services Network

April 12, 2006

Geoff Garrison  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Garrison:

Please find enclosed the analytical data report for the Vulcan Block 40 Project in Seattle, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on March 30 – April 3, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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,

A handwritten signature in dark ink, appearing to read "Julie Woods".

Julie Woods  
Office Manager



ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60330-1  
Client: URS  
Client Job Name: VULCAN BLOCK 40

**NWTPH-Gx / BTEX (8260)**

Analytical Results

NWTPH-Gx, mg/kg	MTH BLK		330-SP-9	330-SP-10	330-SP-11
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/30/06	03/30/06	03/30/06	03/30/06
Date analyzed	Limits	03/30/06	03/30/06	03/30/06	03/30/06
Moisture, %			12%	15%	12%
Mineral spirits/Stoddard solvent	5.0	nd	nd	nd	nd
Gasoline	5.0	nd	nd	23	480
Surrogate recoveries:					
Fluorobiphenyl		93%	97%	113%	163% C
o-Terphenyl		105%	106%	106%	115%

BTEX (8260), mg/kg	MTH BLK		LCS	330-SP-9	330-SP-10	330-SP-11
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/30/06		03/30/06	03/30/06	03/30/06
Date analyzed	Limits	04/03/06	04/03/06	04/03/06	04/03/06	04/03/06
Moisture, %				12%	15%	12%
Benzene	0.02	nd	112%	nd	nd	nd
Toluene	0.05	nd	114%	nd	nd	nd
Ethylbenzene	0.05	nd		nd	nd	nd
Xylenes	0.05	nd		nd	nd	nd
Surrogate recoveries:						
Dibromofluoromethane		101%	103%	100%	102%	102%
Toluene-d8		104%	104%	103%	104%	104%
4-Bromofluorobenzene		104%	103%	105%	105%	101%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60330-1  
Client: URS  
Client Job Name: VULCAN BLOCK 40

**NWTPH-Gx / BTEX (8260)**

Analytical Results		DUP	
NWTPH-Gx, mg/kg		QC SAMPLE	QC SAMPLE
Matrix	Soil	Soil	Soil
Date extracted	Reporting	03/30/06	03/30/06
Date analyzed	Limits	03/30/06	03/30/06
Moisture, %			
Mineral spirits/Stoddard solvent	5.0	nd	nd
Gasoline	5.0	13	15

Surrogate recoveries:

Fluorobiphenyl	104%	106%
o-Terphenyl	109%	111%

BTEX (8260), mg/kg		MS	MSD	RPD
Matrix	Soil	Soil	Soil	
Date extracted	Reporting	03/30/06	03/30/06	
Date analyzed	Limits	03/31/06	03/31/06	
Moisture, %				
Benzene	0.02	111%	111%	0%
Toluene	0.05	111%	113%	2%
Ethylbenzene	0.05			
Xylenes	0.05			

Surrogate recoveries:

Dibromofluoromethane	102%	100%
Toluene-d8	104%	105%
4-Bromofluorobenzene	104%	105%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

~~560329-6~~  
 560330-1

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS Corporation  
 ADDRESS: 1501 4th AVENUE Suite 1400 Seattle WA  
 PHONE: 206-438-2128 FAX: 866-495-5288  
 CLIENT PROJECT #: \_\_\_\_\_ PROJECT MANAGER: Geoff Garrison

DATE: March 30, 2006 PAGE 1 OF \_\_\_\_\_  
 PROJECT NAME: VULCAN  
 LOCATION: Block 40  
 COLLECTOR: Dean M Vassar DATE OF COLLECTION: 3/30/06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																	Total Number of Containers	Laboratory Note Number				
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HCD	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8015 (6 & o)	PAH 8100	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome	WTPH - G1			BTEX			
																						NOTES					
1. 330-SP-9			Soil	Glass																			X	X	Hold Diesel	3	
2. 330-SP-10			Soil	Glass																			X	X	Hold Diesel	3	
3. 330-SP-11			Soil	Glass																			X	X	Hold Diesel		
4.																											
5.																											
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RELINQUISHED BY (Signature) [Signature] DATE/TIME 3/30/06 1445 RECEIVED BY (Signature) [Signature] DATE/TIME 3/30/06 1445  
 RELINQUISHED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_ RECEIVED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_

## SAMPLE DISPOSAL INSTRUCTIONS

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

## SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS 9  
 CHAIN OF CUSTODY SEALS Y/N/A \_\_\_\_\_  
 SEALS INTACT? Y/N/A \_\_\_\_\_  
 RECEIVED GOOD COND./COLD \_\_\_\_\_  
 NOTES: \_\_\_\_\_

## LABORATORY NOTES:

Standard

Turn Around Time: 24 HR 48 HR 5 DAY



Environmental  
Services Network

April 12, 2006

Geoff Garrison  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Garrison:

Please find enclosed the analytical data report for the Vulcan Block 40 Project in Seattle, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on March 30 – April 3, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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,

Julie Woods  
*Office Manager*

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60329-5  
Client: URS  
Client Job Name: VULCAN BLOCK 40

**NWTPH-Gx / BTEX (8260)**

Analytical Results

NWTPH-Gx, mg/kg	MTH BLK		330-SP-6	330-SP-7
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/30/06	03/30/06	03/30/06
Date analyzed	Limits	03/30/06	03/31/06	03/30/06
Moisture, %			19%	16%
Mineral spirits/Stoddard solvent	5.0	nd	nd	nd
Gasoline	5.0	nd	620	27

Surrogate recoveries:

Fluorobiphenyl	93%	112%	117%
o-Terphenyl	105%	104%	108%

BTEX (8260), mg/kg	MTH BLK		LCS	330-SP-6	330-SP-7
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/30/06		03/30/06	03/30/06
Date analyzed	Limits	04/03/06	04/03/06	04/03/06	04/03/06
Moisture, %				19%	16%
Benzene	0.02	nd	112%	nd	nd
Toluene	0.05	nd	114%	nd	nd
Ethylbenzene	0.05	nd		nd	nd
Xylenes	0.05	nd		nd	nd

Surrogate recoveries:

Dibromofluoromethane	101%	103%	101%	100%
Toluene-d8	104%	104%	106%	105%
4-Bromofluorobenzene	104%	103%	97%	107%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60329-5  
Client: URS  
Client Job Name: VULCAN BLOCK 40

**NWTPH-Gx / BTEX (8260)**

Analytical Results		DUP	
NWTPH-Gx, mg/kg		330-SP-8	330-SP-8
Matrix	Soil	Soil	Soil
Date extracted	Reporting	03/30/06	03/30/06
Date analyzed	Limits	03/30/06	03/30/06
Moisture, %		17%	17%

Mineral spirits/Stoddard solvent	5.0	nd	nd
Gasoline	5.0	13	15

Surrogate recoveries:

Fluorobiphenyl	104%	106%
o-Terphenyl	109%	111%

BTEX (8260), mg/kg		330-SP-8	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	
Date extracted	Reporting	03/30/06	03/30/06	03/30/06	
Date analyzed	Limits	04/03/06	03/31/06	03/31/06	
Moisture, %		17%			
Benzene	0.02	nd	111%	111%	0%
Toluene	0.05	nd	111%	113%	2%
Ethylbenzene	0.05	nd			
Xylenes	0.05	nd			

Surrogate recoveries:

Dibromofluoromethane	102%	102%	100%
Toluene-d8	104%	104%	105%
4-Bromofluorobenzene	103%	104%	105%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%



560329-5

# CHAIN-OF-CUSTODY RECORD

CLIENT: LLRS Corporation

DATE: March 28, 2006 PAGE 1 OF 1

ADDRESS: 1501 4<sup>th</sup> AVE. Suite 1400 Seattle WA 98101

PROJECT NAME: VULCAN

PHONE: 206 438-2128 FAX: 206-495-5288

LOCATION: Block 40

CLIENT PROJECT #: \_\_\_\_\_ PROJECT MANAGER: Goff Garrison

COLLECTOR: Dean M. Vassar DATE OF COLLECTION: \_\_\_\_\_

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																	Total Number of Containers	Laboratory Note Number
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HClD	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100 (6 & b)	PAH 8100	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome	WTPH-GX		
1. 330-SP-6			Soil	Glass															X	X	Hold Diesel	3	
2. 330-SP-7			Soil	Glass															X	X	Hold Diesel	3	
3. 330-SP-8			Soil	Glass															X	X	Hold Diesel	3	
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RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	SAMPLE RECEIPT		LABORATORY NOTES:
	3/28/06		3/28/06 1:52	TOTAL NUMBER OF CONTAINERS		
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	CHAIN OF CUSTODY SEALS Y/N/NA		
				SEALS INTACT? Y/N/NA		
				RECEIVED GOOD COND./COLD		
SAMPLE DISPOSAL INSTRUCTIONS				NOTES:		Turn Around Time: 24 HR 48 HR <u>5 DAY</u>
<input type="checkbox"/> ESN DISPOSAL @ \$2.00 each <input type="checkbox"/> Return <input type="checkbox"/> Pickup						

April 21, 2006

Geoff Garrison  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Garrison:

Please find enclosed the analytical data report for the Vulcan Block 40 Project in Seattle, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on April 17, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60417-3  
Client: URS  
Client Job Name: BLOCK 40  
Client Job Number: 33757035

**NWTPH-Gx / BTEX (8260)**

Analytical Results

DUP

NWTPH-Gx, mg/l	MTH BLK		MW-3	MW-3	MW-2	MW-1
Matrix	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	04/17/06	04/17/06	04/17/06	04/17/06	04/17/06
Date analyzed	Limits	04/17/06	04/17/06	04/17/06	04/17/06	04/17/06
Mineral spirits/Stoddard solvent	0.10	nd	nd	nd	nd	nd
Gasoline	0.10	nd	nd	nd	3.4	5.6

Surrogate recoveries:

Fluorobiphenyl	102%	91%	94%	108%	118%
o-Terphenyl	99%	99%	102%	98%	100%

BTEX (8260), µg/l	MTH BLK		LCS	MW-3	MW-2	MW-1
Matrix	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting	04/17/06	04/17/06	04/17/06	04/17/06	04/17/06
	Limits	04/17/06	04/17/06	04/17/06	04/17/06	04/17/06
Benzene	1.0	nd	104%	nd	nd	nd
Toluene	1.0	nd	108%	nd	nd	nd
Ethylbenzene	1.0	nd		nd	2.7	6.0
Xylenes	1.0	nd		nd	6.9	20

Surrogate recoveries:

Dibromofluoromethane	101%	100%	98%	99%	101%
Toluene-d8	101%	100%	99%	100%	102%
4-Bromofluorobenzene	100%	99%	98%	100%	102%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60417-3  
Client: URS  
Client Job Name: BLOCK 40  
Client Job Number: 33757035

**NWTPH-Gx / BTEX (8260)**

**Analytical Results**

NWTPH-Gx, mg/l		GRAB
Matrix	Water	Water
Date extracted	Reporting	04/17/06
Date analyzed	Limits	04/17/06
Mineral spirits/Stoddard solvent	0.10	nd
Gasoline	0.10	nd

**Surrogate recoveries:**

Fluorobiphenyl	88%
o-Terphenyl	97%

BTEX (8260), µg/l		GRAB	GRAB	GRAB	GRAB
		GRAB	MS	MSD	RPD
Matrix	Water	Water	Water	Water	
	Reporting				
Date analyzed	Limits	04/17/06	04/17/06	04/18/06	
Benzene	1.0	nd	111%	101%	9%
Toluene	1.0	nd	116%	106%	9%
Ethylbenzene	1.0	nd			
Xylenes	1.0	nd			

**Surrogate recoveries:**

Dibromofluoromethane	99%	100%	103%
Toluene-d8	101%	99%	100%
4-Bromofluorobenzene	101%	99%	99%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

S60417-3

## CHAIN-OF-CUSTODY RECORD

CLIENT: URS  
ADDRESS: 1501 4th AV #1400  
PHONE: (206) 438-2700 FAX: (206) 438-2699  
CLIENT PROJECT #: 33757035 PROJECT MANAGER: DAVID RAUBNOGEL

DATE: 4/17/06 PAGE 1 OF 1  
PROJECT NAME: Block 40  
LOCATION: WESTLAKE + TERRY SEATTLE  
COLLECTOR: D LEWIS DATE OF COLLECTION: 4/17/06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																NOTES	Total Number of Containers	Laboratory Note Number
					VOA 80218 (M & O)	VOA 80218 (BTEX Only)	SEM VOL 8270	TPH - HClO	TPH 8015 (Gasoline)	TPH 8015 (Diesel)	PAH 8015 (6 & o)	PAH 8100	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome				
1. MW-3	13.13	1410	H <sub>2</sub> O	40 mL VOA	X																3 VOAs	3	
2. MW-2	10.08	1440	"	"	X																3 VOAs	3	
3. MW-1	11.75	1510	"	"	X																3 VOAs	3	
4. grab		1545	"	"	Y																2 VOAs / HCL	2	
5.																							
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RELINQUISHED BY (Signature) Dave Lewis DATE/TIME 4/17/06 1615  
RECEIVED BY (Signature) Ken B... DATE/TIME 4/17/06 1615

RELINQUISHED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_  
RECEIVED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_

## SAMPLE DISPOSAL INSTRUCTIONS

☐ ESN 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.  
Turnaround

Turn Around Time: 24 HR 48 HR 5 DAY

April 21, 2006

Geoff Garrison  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Garrison:

Please find enclosed the analytical data report for the Vulcan Block 40 Project in Seattle, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on April 6 – 11, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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



ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60406-3  
Client: URS CORP.  
Client Job Name: VULCAN - BLOCK 40

# NWTPH-Gx / BTEX (8260)

## Analytical Results

NWTPH-Gx, mg/kg	MTH BLK		TP1-330-PE-30.5	TP1-330-PE-28
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/06/06	04/06/06	04/06/06
Date analyzed	Limits	04/06/06	04/06/06	04/06/06
Moisture, %			8%	21%
Mineral spirits/Stoddard solvent	5.0	nd	nd	nd
Gasoline	5.0	nd	nd	nd
Surrogate recoveries:				
Fluorobiphenyl		76%	78%	77%
o-Terphenyl		97%	102%	99%

BTEX (8260), mg/kg	MTH BLK		LCS	TP1-330-PE-30.5	TP1-330-PE-28
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/06/06		04/06/06	04/06/06
Date analyzed	Limits	04/10/06	04/10/06	04/10/06	04/10/06
Moisture, %				8%	21%
Benzene	0.02	nd	120%	nd	nd
Toluene	0.05	nd	123%	nd	nd
Ethylbenzene	0.05	nd		nd	nd
Xylenes	0.05	nd		nd	nd
Surrogate recoveries:					
Dibromofluoromethane		106%	108%	108%	106%
Toluene-d8		105%	104%	105%	104%
4-Bromofluorobenzene		106%	105%	104%	104%

## Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60406-3  
Client: URS CORP.  
Client Job Name: VULCAN - BLOCK 40

**NWTPH-Gx / BTEX (8260)**

Analytical Results

NWTPH-Gx, mg/kg		TP1-330-PE-26	TP1-330-PE-24.5	TP1-330-PE-22
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/06/06	04/06/06	04/06/06
Date analyzed	Limits	04/06/06	04/06/06	04/06/06
Moisture, %		20%	15%	14%
Mineral spirits/Stoddard solvent	5.0	nd	nd	nd
Gasoline	5.0	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	80%	84%	86%
o-Terphenyl	106%	102%	105%

BTEX (8260), mg/kg		TP1-330-PE-26	TP1-330-PE-24.5	TP1-330-PE-22
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/06/06	04/06/06	04/06/06
Date analyzed	Limits	04/10/06	04/10/06	04/10/06
Moisture, %		20%	15%	14%
Benzene	0.02	nd	nd	nd
Toluene	0.05	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd
Xylenes	0.05	nd	nd	nd

Surrogate recoveries:

Dibromofluoromethane	106%	105%	105%
Toluene-d8	104%	106%	104%
4-Bromofluorobenzene	104%	105%	104%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60406-3  
Client: URS CORP.  
Client Job Name: VULCAN - BLOCK 40

**NWTPH-Gx / BTEX (8260)**

**Analytical Results**

NWTPH-Gx, mg/kg		TP2-330-PE-30.5	TP2-330-PE-28	TP2-330-PE-25.5
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/06/06	04/06/06	04/06/06
Date analyzed	Limits	04/06/06	04/06/06	04/06/06
Moisture, %		16%	13%	13%
Mineral spirits/Stoddard solvent	5.0	nd	nd	nd
Gasoline	5.0	nd	nd	nd
Surrogate recoveries:				
Fluorobiphenyl		84%	84%	81%
o-Terphenyl		101%	103%	105%

BTEX (8260), mg/kg		TP2-330-PE-30.5	TP2-330-PE-28	TP2-330-PE-25.5
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/06/06	04/06/06	04/06/06
Date analyzed	Limits	04/10/06	04/10/06	04/10/06
Moisture, %		16%	13%	13%
Benzene	0.02	nd	nd	nd
Toluene	0.05	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd
Xylenes	0.05	nd	nd	nd
Surrogate recoveries:				
Dibromofluoromethane		107%	105%	107%
Toluene-d8		105%	105%	105%
4-Bromofluorobenzene		105%	105%	105%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60406-3  
Client: URS CORP.  
Client Job Name: VULCAN - BLOCK 40

**NWTPH-Gx / BTEX (8260)**

Analytical Results

NWTPH-Gx, mg/kg	TP2-330-PE-24	TP2-330-PE-22	TP3-330-PE-30.5	TP3-330-PE-28
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/06/06	04/06/06	04/06/06
Date analyzed	Limits	04/06/06	04/06/06	04/07/06
Moisture, %	6%	14%	11%	7%
Mineral spirits/Stoddard solvent	5.0	nd	nd	nd
Gasoline	5.0	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	82%	81%	80%	80%
o-Terphenyl	105%	99%	99%	102%

BTEX (8260), mg/kg	TP2-330-PE-24	TP2-330-PE-22	TP3-330-PE-30.5	TP3-330-PE-28
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/06/06	04/06/06	04/06/06
Date analyzed	Limits	04/10/06	04/10/06	04/10/06
Moisture, %	6%	14%	11%	7%
Benzene	0.02	nd	nd	nd
Toluene	0.05	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd
Xylenes	0.05	nd	nd	nd

Surrogate recoveries:

Dibromofluoromethane	106%	105%	107%	107%
Toluene-d8	105%	105%	104%	104%
4-Bromofluorobenzene	107%	106%	106%	105%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60406-3  
Client: URS CORP.  
Client Job Name: VULCAN - BLOCK 40

**NWTPH-Gx / BTEX (8260)**

Analytical Results					DUP
NWTPH-Gx, mg/kg		TP3-330-PE-26	TP3-330-PE-24	TP3-330-PE-22	TP3-330-PE-22
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/06/06	04/06/06	04/06/06	04/06/06
Date analyzed	Limits	04/07/06	04/07/06	04/07/06	04/07/06
Moisture, %		7%	17%	8%	8%
Mineral spirits/Stoddard solvent	5.0	nd	nd	nd	nd
Gasoline	5.0	nd	nd	nd	nd
Surrogate recoveries:					
Fluorobiphenyl		82%	78%	79%	80%
o-Terphenyl		98%	102%	95%	105%

BTEX (8260), mg/kg					TP3-330-PE-22
		TP3-330-PE-26	TP3-330-PE-24	TP3-330-PE-22	MS
Matrix	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/06/06	04/06/06	04/06/06	04/06/06
Date analyzed	Limits	04/10/06	04/10/06	04/10/06	04/10/06
Moisture, %		7%	17%	8%	8%
Benzene	0.02	nd	nd	nd	125%
Toluene	0.05	nd	nd	nd	128%
Ethylbenzene	0.05	nd	nd	nd	
Xylenes	0.05	nd	nd	nd	
Surrogate recoveries:					
Dibromofluoromethane		105%	107%	107%	108%
Toluene-d8		104%	108%	105%	106%
4-Bromofluorobenzene		105%	105%	106%	107%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits  
na - not analyzed  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Results reported on dry-weight basis  
Acceptable Recovery limits: 65% TO 135%  
Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60406-3  
Client: URS CORP.  
Client Job Name: VULCAN - BLOCK 40

**NWTPH-Gx / BTEX (8260)**

Analytical Results

**NWTPH-Gx, mg/kg**

Matrix	Soil
Date extracted	Reporting
Date analyzed	Limits
Moisture, %	

Mineral spirits/Stoddard solvent	5.0
Gasoline	5.0

Surrogate recoveries:

Fluorobiphenyl  
o-Terphenyl

TP3-330-PE-22

<b>BTEX (8260), mg/kg</b>		<b>MSD</b>	<b>RPD</b>
Matrix	Soil	Soil	
Date extracted	Reporting	04/06/06	
Date analyzed	Limits	04/10/06	
Moisture, %		8%	

Benzene	0.02	126%	1%
Toluene	0.05	126%	2%
Ethylbenzene	0.05		
Xylenes	0.05		

Surrogate recoveries:

Dibromofluoromethane	107%
Toluene-d8	105%
4-Bromofluorobenzene	105%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%



ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60406-3  
Client: URS CORP.  
Client Job Name: VULCAN - BLOCK 40

**NWTPH-Gx / BTEX (8260)**

Analytical Results		RERUN		RERUN
NWTPH-Gx, mg/kg		MTH BLK	TP1-330-PE-28	TP1-330-PE-26
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/11/06	04/11/06	04/11/06
Date analyzed	Limits	04/11/06	04/11/06	04/11/06
Moisture, %			21%	20%
Mineral spirits/Stoddard solvent	5.0	nd	nd	nd
Gasoline	5.0	nd	nd	nd

Surrogate recoveries:

Fluorobiphenyl	104%	110%	96%
o-Terphenyl	112%	108%	106%

		RERUN		RERUN
BTEX (8260), mg/kg		MTH BLK	TP1-330-PE-28	TP1-330-PE-26
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/11/06	04/11/06	04/11/06
Date analyzed	Limits	04/11/06	04/11/06	04/11/06
Moisture, %			21%	20%
Benzene	0.02	nd	nd	nd
Toluene	0.05	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd
Xylenes	0.05	nd	nd	nd

Surrogate recoveries:

Dibromofluoromethane	99%	99%	98%
Toluene-d8	101%	100%	100%
4-Bromofluorobenzene	99%	101%	100%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

566-1-6

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS Corporation

DATE: 4-6-06 PAGE 1 OF 1

ADDRESS: 1501 4th AVENUE Suite 1400 Seattle WA 98101

PROJECT NAME: VULCAN

PHONE: 206 438-2120 FAX: 206 438-2120

LOCATION: Block 40

CLIENT PROJECT #: \_\_\_\_\_ PROJECT MANAGER: Carol Garrison

COLLECTOR: Dean M. Vassar DATE OF COLLECTION: 4/6/06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES	NOTES	Total Number of Containers	Laboratory Note Number
1. 330-PE-20.5			Soil	Glass	VOA 8021B VOA 8021B BTEX Only SEMI-VOL 8270 TPH - HClO TPH 8015 (Gasoline) TPH 8015 (G & O) PAH 8100 PCBs 8082 Pesticides 8081 EPH VPH Methamphetamine Pb Hex Chrome WTPH-GX BTEX		3	
2. 330-PE-28			Soil	Glass			3	
3. 330-PE-26			Soil	Glass			3	
4. 330-PI-24.5			Soil	Glass			3	
5. TP1-330-PE-22			Soil	Glass			3	
6. TP2-330-PE-20.5			Soil	Glass			3	
7. TP2-330-PC-28			Soil	Glass			3	
8. TP2-330-PE-25.5			Soil	Glass			3	
9. TP2-330-PC-24			Soil	Glass			3	
10. TP2-330-PC-22			Soil	Glass			3	
11. TP3-330-PL-30.5			Soil	Glass			3	
12. TP3-330-PC-28			Soil	Glass			3	
13. TP3-330-PC-26			Soil	Glass			3	
14. TP3-330-PI-24			Soil	Glass			3	
15. TP3-330-PE-22			Soil	Glass			3	
16.								
17.								
18.								

RELINQUISHED BY (Signature) [Signature] DATE/TIME 4/6/06 11:30  
 RECEIVED BY (Signature) [Signature] DATE/TIME 4/6/06 12:10

**SAMPLE RECEIPT**  
 TOTAL NUMBER OF CONTAINERS 45  
 CHAIN OF CUSTODY SEALS Y/N/A  
 SEALS INTACT? Y/N/A  
 RECEIVED GOOD COND./COLD  
 NOTES:

**LABORATORY NOTES:**  
\* Hold Diesel  
 Turn Around Time: 24 HR 48 HR 5 DAY

**SAMPLE DISPOSAL INSTRUCTIONS**  
☐ ESN DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

April 6, 2006

Geoff Garrison  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Garrison:

Please find enclosed the analytical data report for the Vulcan Block 40 Project in Seattle, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, and BTEX by Method 8260 on March 23, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60322-1  
Client: URS, INC.  
Client Job Name: VULCAN

Analytical Results		DUP		
NWTPH-Dx, mg/kg		MTH BLK	318-W-15	318-W-15
Matrix	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/23/06	03/23/06	03/23/06
Date analyzed	Limits	03/23/06	03/23/06	03/23/06
Moisture, %			13%	13%
Kerosene/Jet fuel	20	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd
Heavy oil	50	nd	nd	nd

Surrogate recoveries:				
Fluorobiphenyl		91%	90%	94%
o-Terphenyl		104%	103%	99%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60322-1  
Client: URS, INC.  
Client Job Name: VULCAN

**NWTPH-Gx / BTEX (8260)**

**Analytical Results**

NWTPH-Gx, mg/kg		MTH BLK		330-PEX-5-12'	330-PEX-6-13'	330-PEX-7-15'
Matrix	Soil	Soil		Soil	Soil	Soil
Date extracted	Reporting	03/23/06		03/23/06	03/23/06	03/23/06
Date analyzed	Limits	03/23/06		03/23/06	03/23/06	03/23/06
Moisture, %				9%	18%	14%
Mineral spirits/Stoddard solvent	5.0	nd		nd	nd	nd
Gasoline	5.0	nd		820	380	nd

**Surrogate recoveries:**

Fluorobiphenyl	91%	112%	142% C	89%
o-Terphenyl	104%	104%	111%	102%

BTEX (8260), mg/kg		MTH BLK		LCS	330-PEX-5-12'	330-PEX-6-13'	330-PEX-7-15'
Matrix	Soil	Soil		Soil	Soil	Soil	Soil
Date extracted	Reporting	03/23/06			03/23/06	03/23/06	03/23/06
Date analyzed	Limits	03/23/06	03/23/06		03/23/06	03/23/06	03/23/06
Moisture, %					9%	18%	14%
Benzene	0.02	nd	115%		nd	nd	nd
Toluene	0.05	nd	114%		nd	nd	nd
Ethylbenzene	0.05	nd			nd	0.44	nd
Xylenes	0.05	nd			0.13	0.17	nd

**Surrogate recoveries:**

Dibromofluoromethane	99%	102%	100%	101%	100%
Toluene-d8	105%	104%	107%	106%	104%
4-Bromofluorobenzene	103%	105%	92%	101%	105%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60322-1  
Client: URS, INC.  
Client Job Name: VULCAN

**NWTPH-Gx / BTEX (8260)**

Analytical Results						DUP
NWTPH-Gx, mg/kg		330-SP-1	330-SP-2	330-SP-3	QC SAMPLE	QC SAMPLE
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	03/23/06	03/23/06	03/23/06	03/23/06	03/23/06
Date analyzed	Limits	03/23/06	03/23/06	03/23/06	03/23/06	03/23/06
Moisture, %		11%	20%	18%	13%	13%
Mineral spirits/Stoddard solvent	5.0	nd	nd	nd	nd	nd
Gasoline	5.0	590	1,100	10	nd	nd
Surrogate recoveries:						
Fluorobiphenyl		103%	114%	100%	90%	94%
o-Terphenyl		106%	104%	104%	103%	99%

BTEX (8260), mg/kg		330-SP-1	330-SP-2	330-SP-3	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	
Date extracted	Reporting	03/23/06	03/23/06	03/23/06	03/21/06	03/23/06	
Date analyzed	Limits	03/23/06	03/23/06	03/23/06	03/21/06	03/23/06	
Moisture, %		11%	20%	18%			
Benzene	0.02	nd	nd	nd	116%	112%	4%
Toluene	0.05	nd	nd	nd	117%	112%	4%
Ethylbenzene	0.05	0.22	0.93	nd			
Xylenes	0.05	0.25	0.86	nd			
Surrogate recoveries:							
Dibromofluoromethane		99%	99%	98%	99%	99%	
Toluene-d8		106%	107%	106%	106%	106%	
4-Bromofluorobenzene		98%	100%	103%	105%	106%	

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%



# CHAIN-OF-CUSTODY RECORD

CLIENT: URS  
 ADDRESS: 1501 4th Ave Ste 1400 Seattle WA 98107  
 PHONE: 438-2128 FAX: 466 495 5288  
 CLIENT PROJECT #: \_\_\_\_\_ PROJECT MANAGER: Geoff Gerson

DATE: 3/22/06 PAGE 1 OF 1  
 PROJECT NAME: Vulcan  
 LOCATION: Vulcan Drive 410  
 COLLECTOR: VAD DATE OF COLLECTION: \_\_\_\_\_

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES															Total Number of Containers	Laboratory Note Number			
					VOA 8021B	PERC 8021B	VOA 8260	SEMI VOL 8270	TPH - HClD	TPH 8015	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine			Pb	Hex Chrome	NWTOH - DX
1. 330-PEA-S-12	12		Soil	Glass	X				X										X	X		3-22-06	3	
2. 330-PEA-b-13	13		Soil	Glass	X				X										X	X		3-22-06	3	
3. 330-PEA-7-15	15		Soil	Glass	X				X										X	X		3-22-06	3	
4. 330-SP-1			Soil	Glass	X				X										X	X		3-22-06	3	
5. 330-SP-2			Soil	Glass	X				X										X	X		3-22-06	3	
6. 330-SP-3			Soil	Glass	X				X										X	X		3-22-06	3	
7. 318-W-15			Soil	Glass						X											X	Sample Collected 3/16/06	1	
8.																								
9.																								
10.																								
11.																								
12.																								
13.																								
14.																								
15.																								
16.																								
17.																								
18.																						330-DX sent on HOLD till after		

RELINQUISHED BY (Signature) [Signature] DATE/TIME 3/22/05 RECEIVED BY (Signature) [Signature] DATE/TIME 3/22/06  
 RELINQUISHED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_ RECEIVED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_

**SAMPLE RECEIPT**  
 TOTAL NUMBER OF CONTAINERS \_\_\_\_\_  
 CHAIN OF CUSTODY SEALS Y/N/A \_\_\_\_\_  
 SEALS INTACT? Y/N/A \_\_\_\_\_  
 RECEIVED GOOD COND./COLD \_\_\_\_\_  
 NOTES: \_\_\_\_\_

LABORATORY NOTES: BTEX results  
Archive for use on sample collected 3/22/06  
 STANDARD  
 Turn Around Time: 24 HR 48 HR 5 DAY

**SAMPLE DISPOSAL INSTRUCTIONS**

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

330 - Dx-ext on Hold till after



Environmental  
Services Network

May 2, 2006

David Raubvogel  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the Block 40 Project in Seattle, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on April 19, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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,

A handwritten signature in cursive script that reads "Michael A. Korosec".

Michael A. Korosec  
President

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60417-2  
Client: URS  
Client Job Name: BLOCK 40  
Client Job Number: 33757035

**NWTPH-Gx / BTEX (8260)**

**Analytical Results**

NWTPH-Gx, mg/kg	MTH BLK		PZ-1-5	PZ-1-12.5	PZ-2-5	PZ-3-5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/18/06	04/18/06	04/18/06	04/18/06	04/18/06
Date analyzed	Limits	04/19/06	04/19/06	04/19/06	04/19/06	04/19/06
Moisture, %			7%	13%	9%	5%
Mineral spirits/Stoddard solvent	5.0	nd	nd	2,000	nd	nd
Gasoline	5.0	nd	nd	nd	nd	nd

**Surrogate recoveries:**

Fluorobiphenyl	91%	84%	124%	86%	86%
o-Terphenyl	113%	112%	118%	120%	120%

BTEX (8260), mg/kg	MTH BLK		LCS	PZ-1-5	PZ-1-12.5	PZ-2-5	PZ-3-5
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	04/18/06		04/18/06	04/18/06	04/18/06	04/18/06
Date analyzed	Limits	04/19/06	04/18/06	04/19/06	04/19/06	04/19/06	04/19/06
Moisture, %				7%	13%	9%	5%
Benzene	0.02	nd	108%	nd	nd	nd	nd
Toluene	0.05	nd	108%	nd	nd	nd	nd
Ethylbenzene	0.05	nd		nd	nd	nd	nd
Xylenes	0.05	nd		nd	nd	nd	nd

**Surrogate recoveries:**

Dibromofluoromethane	99%	103%	100%	102%	100%	100%
Toluene-d8	101%	100%	100%	104%	101%	99%
4-Bromofluorobenzene	99%	99%	101%	86%	99%	100%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60417-2  
Client: URS  
Client Job Name: BLOCK 40  
Client Job Number: 33757035

**NWTPH-Gx / BTEX (8260)**

Analytical Results		DUP
NWTPH-Gx, mg/kg		PZ-3-5
Matrix	Soil	Soil
Date extracted	Reporting	04/18/06
Date analyzed	Limits	04/19/06
Moisture, %		5%
Mineral spirits/Stoddard solvent	5.0	nd
Gasoline	5.0	nd

Surrogate recoveries:

Fluorobiphenyl	87%
o-Terphenyl	125%

BTEX (8260), mg/kg		MS	MSD	RPD
Matrix	Soil	Soil	Soil	
Date extracted	Reporting	04/18/06	04/18/06	
Date analyzed	Limits	04/18/06	04/18/06	
Moisture, %				
Benzene	0.02	102%	105%	3%
Toluene	0.05	107%	106%	1%
Ethylbenzene	0.05			
Xylenes	0.05			

Surrogate recoveries:

Dibromofluoromethane	101%	99%
Toluene-d8	102%	101%
4-Bromofluorobenzene	101%	101%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Results reported on dry-weight basis

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

560417-2

**CHAIN-OF-CUSTODY RECORD**

 CLIENT: URS Corporation  
 ADDRESS: 1501 4th Ave, Suite 1400  
 PHONE: 206-438-2700 FAX: 206-438-2699  
 CLIENT PROJECT #: 33757035 PROJECT MANAGER: David Raubvogel

 DATE: 4-17-06 PAGE 1 OF 1  
 PROJECT NAME: Block 40  
 LOCATION: Westlake & Terry, Seattle  
 COLLECTOR: Walt Hommeyer DATE OF COLLECTION: 4/17

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES															Total Number of Containers	Laboratory Note Number
					VOA 8021B	VOA 8021B BTEX Only	VOA 80260	SEMI VOL 8270	TPH - HClD	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome		
1. PZ-1-5	5	0935	SOIL	GLASS					X										X	1	
2. PZ-1-12.5	12.5	0945							X										X	1	
3. PZ-2-5	5	1100							X										X	1	
4. PZ-3-5	5	1205							X										X	1	
5.																					
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RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature) DATE/TIME

[Signature] 4-17-06/1530 Dave Lewis 4/17/06/1530

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

[Signature] 4/17/06/1615 [Signature] 4/17/06/1615

**SAMPLE DISPOSAL INSTRUCTIONS**

 ESN DISPOSAL \$2.00 each ☐ Return ☐
**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:**

211 m.

Turn Around Time: 24 HR 48 HR 5 DAY

May 10, 2006

David Raubvogel  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616


Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the Block 40 West Project in Seattle, Washington. One water sample was analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on May 1, 2006.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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



ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60508-1  
Client: URS CORP  
Client Job Name: BLOCK 40 WEST  
Client Job Number: 33758174

**NWTPH-Gx / BTEX (8260)**

Analytical Results				DUP
NWTPH-Gx, mg/l				
Matrix	Water	Water	Water	Water
Date sampled			05/05/06	05/05/06
Date extracted	Reporting	05/08/06	05/08/06	05/08/06
Date analyzed	Limits	05/08/06	05/08/06	05/08/06
Mineral spirits/Stoddard solvent	0.10	nd	nd	nd
Gasoline	0.10	nd	nd	nd
Surrogate recoveries:				
Fluorobiphenyl		105%	100%	95%
o-Terphenyl		108%	104%	105%

BTEX (8260), µg/l							
Matrix	Water	Water	Water	Water	Water	Water	Water
Date sampled	Reporting				05/05/06		
Date analyzed	Limits	05/08/06	05/08/06	05/08/06	05/08/06	05/08/06	05/08/06
Benzene	1.0	nd	108%	nd	116%	108%	7%
Toluene	1.0	nd	114%	nd	120%	113%	6%
Ethylbenzene	1.0	nd		nd			
Xylenes	1.0	nd		nd			

Surrogate recoveries:							
Dibromofluoromethane		109%	105%	108%	108%	108%	
Toluene-d8		104%	103%	102%	102%	103%	
4-Bromofluorobenzene		99%	105%	101%	102%	103%	

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%



Environmental  
Services Network

# CHAIN-OF-CUSTODY RECORD

560508-1

CLIENT: URS  
ADDRESS: 1501 4th Ave #1400 Seattle 98101  
PHONE: (206) 438-2700 FAX: (206) 438-2699  
CLIENT PROJECT #: 33758174 PROJECT MANAGER: David Fambvogel

DATE: 5-5-06 PAGE 1 OF 1  
PROJECT NAME: Block 40 West  
LOCATION: Westlake & Terry, Seattle  
COLLECTOR: B. Loveclay DATE OF COLLECTION: 5-5-06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																	Total Number of Containers	Laboratory Note Number	
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HCD	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100 (6 & o)	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome	WUTH-6x			
1. Baker Tank 5-5-06 1	0	1400	H <sub>2</sub> O	40ml WAF	X														X				1	
2. Baker Tank 5-5-06 2	0	1400	H <sub>2</sub> O	40ml VOA	X														X				1	
3. Baker Tank 5-5-06 3	0	1400	H <sub>2</sub> O	40ml VOA	X														X				1	
4.																								
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## SAMPLE DISPOSAL INSTRUCTIONS

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

## SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS 3  
CHAIN OF CUSTODY SEALS Y/N/NA Y  
SEALS INTACT? Y/N/NA Y  
RECEIVED GOOD COND./COLD Y  
NOTES: 24 hour turnaround

## LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR 5 DAY



Environmental  
Services Network

May 12, 2006

David Raubvogel  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the Block 40 West Project in Seattle, Washington. Water samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on May 9, 2006.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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,

A handwritten signature in cursive script that reads "Michael A. Korosec".

Michael A. Korosec  
President

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60509-1  
Client: URS CORP  
Client Job Name: BLOCK 40 WEST  
Client Job Number: 33758174

**NWTPH-Gx / BTEX (8260)**

Analytical Results						DUP
NWTPH-Gx, mg/l	MTH BLK		PZ-01	PZ-02	PZ-03	PZ-03
Matrix	Water	Water	Water	Water	Water	Water
Date sampled			05/08/06	05/08/06	05/08/06	05/08/06
Date extracted	Reporting	05/09/06	05/09/06	05/09/06	05/09/06	05/09/06
Date analyzed	Limits	05/09/06	05/09/06	05/09/06	05/09/06	05/09/06
Mineral spirits/Stoddard solvent	0.10	nd	nd	nd	nd	nd
Gasoline	0.10	nd	1.0	3.6	nd	nd

Surrogate recoveries:

Fluorobiphenyl	96%	105%	120%	91%	90%
o-Terphenyl	109%	108%	113%	108%	106%

BTEX (8260), µg/l	MTH BLK		LCS	PZ-01	PZ-02	PZ-03	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	
Date sampled	Reporting			05/08/06	05/08/06	05/08/06			
Date analyzed	Limits	05/09/06	05/09/06	05/09/06	05/09/06	05/09/06	05/08/06	05/08/06	
Benzene	1.0	nd	96%	nd	nd	nd	116%	108%	7%
Toluene	1.0	nd	101%	nd	1.4	nd	120%	113%	6%
Ethylbenzene	1.0	nd		nd	16	nd			
Xylenes	1.0	nd		nd	21	nd			

Surrogate recoveries:

Dibromofluoromethane	107%	108%	109%	107%	108%	108%	108%
Toluene-d8	103%	102%	103%	103%	101%	102%	103%
4-Bromofluorobenzene	101%	104%	103%	102%	101%	102%	103%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
na - not analyzed  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Acceptable Recovery limits: 65% TO 135%  
Acceptable RPD limit: 35%

560509-1

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS  
 ADDRESS: 1501 4th Ave Suite 1400 Seattle 98101  
 PHONE: (206) 438-2700 FAX: (206) 438-2699  
 CLIENT PROJECT #: 33758174 PROJECT MANAGER: David Rumborg

DATE: 5-9-06 PAGE 1 OF 1  
 PROJECT NAME: Block 40 West  
 LOCATION: Westlake + Terry, Seattle  
 COLLECTOR: B. Loveday DATE OF COLLECTION: 5-9-06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																Total Number of Containers	Laboratory Note Number
					VOA 802HB	VOA 802HB	VOA 802HB	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome	NWTH H-GW		
1. P2-03 5-9-06	14.66	4:00	H <sub>2</sub> O	40 mL VOA	X	X													X		3	
2. P2-02 5-8-06	11.45	4:05	H <sub>2</sub> O	40 mL VOA	X	X													X		3	
3. P2-01 5-6-06	12.95	4:10	H <sub>2</sub> O	40 mL VOA	X	X													X		3	
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## SAMPLE DISPOSAL INSTRUCTIONS

☐ ESN DISPOSAL \$2.00 each ☐ 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 hour turnaround

Turn Around Time: 24 HR 48 HR 5 DAY



RECEIVED  
MAY 22 2006  
URS CORPORATION  
SEATTLE

May 18, 2006

David Raubvogel  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

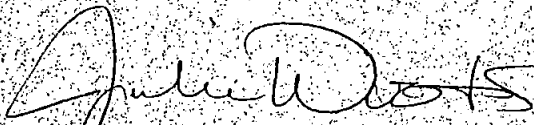
Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the Block 40 West Project in Seattle, Washington. Water samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on May 12, 2006.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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,



Julie Woods  
Office Manager



ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60512-4  
Client: URS  
Client Job Name: BLOCK 40 WEST  
Client Job Number: 33758174

**NWTPH-Gx / BTEX (8260)**

**Analytical Results**

NWTPH-Gx, mg/l	MTH BLK		BAKER TANK		PZ-01	PZ-02	PZ-03
Matrix	Water	Water	Water	Water	Water	Water	Water
Date collected			05/12/06	05/12/06	05/12/06	05/12/06	05/12/06
Date extracted	Reporting	05/12/06	05/12/06	05/12/06	05/12/06	05/12/06	05/12/06
Date analyzed	Limits	05/12/06	05/12/06	05/12/06	05/12/06	05/12/06	05/12/06
Mineral spirits/Stoddard solvent	0.10	nd	nd	nd	nd	nd	nd
Gasoline	0.10	nd	nd	4.4	0.36		nd

**Surrogate recoveries:**

Fluorobiphenyl	91%	91%	112%	94%	89%
o-Terphenyl	101%	102%	100%	98%	101%

BTEX (8260), µg/l	MTH BLK		LCS BAKER TANK		PZ-01	PZ-02	PZ-03
Matrix	Water	Water	Water	Water	Water	Water	Water
	Reporting						
Date collected				05/12/06	05/12/06	05/12/06	05/12/06
Date analyzed	Limits	05/12/06	05/12/06	05/12/06	05/12/06	05/12/06	05/12/06
Benzene	1.0	nd	105%	nd	nd	nd	nd
Toluene	1.0	nd	106%	nd	nd	nd	nd
Ethylbenzene	1.0	nd		nd	2.2	3.4	nd
Xylenes	1.0	nd		nd	10	5.2	nd

**Surrogate recoveries:**

Dibromofluoromethane	107%	105%	105%	107%	106%	107%
Toluene-d8	102%	101%	102%	101%	100%	101%
4-Bromofluorobenzene	102%	101%	100%	101%	102%	100%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60512-4  
Client: URS  
Client Job Name: BLOCK 40 WEST  
Client Job Number: 33758174

**NWTPH-Gx / BTEX (8260)**

Analytical Results		DUP	
NWTPH-Gx, mg/l		QC SAMPLE	QC SAMPLE
Matrix	Water	Water	Water
Date collected		05/12/06	05/12/06
Date extracted	Reporting	05/12/06	05/12/06
Date analyzed	Limits	05/12/06	05/12/06

Mineral spirits/Stoddard solvent	0.10	nd	nd
Gasoline	0.10	nd	nd

Surrogate recoveries:

Fluorobiphenyl	91%	86%
o-Terphenyl	100%	99%

BTEX (8260), µg/l		MS	MSD	RPD
Matrix	Water	Water	Water	
	Reporting			
Date collected				
Date analyzed	Limits	05/12/06	05/12/06	
Benzene	1.0	100%	118%	
Toluene	1.0	106%	110%	
Ethylbenzene	1.0			
Xylenes	1.0			

Surrogate recoveries:

Dibromofluoromethane	106%	106%
Toluene-d8	100%	101%
4-Bromofluorobenzene	101%	102%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

S60512-4

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS  
 ADDRESS: 1501 4th Ave Suite 1400 Seattle 98101  
 PHONE: (206) 438-2700 FAX: (206) 438-2699  
 CLIENT PROJECT #: 33758174 PROJECT MANAGER: David Raulo

DATE: 5-12-06 PAGE 1 OF 1  
 PROJECT NAME: Block 40 West  
 LOCATION: Westlake + Terry, Seattle  
 COLLECTOR: B. Lovejoy DATE OF COLLECTION: 5-12-06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																NOTES	Total Number of Containers	Laboratory Note Number	
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HClD	TPH 8015	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100 (6 & o)	PAH 8100	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb				Hex Chrome
1. Baker Tank 5-12-06	-	12:15	H <sub>2</sub> O	40ml VOA															X	X			3	
2. PZ-01 5-12-06		13:05	H <sub>2</sub> O	40ml VOA															X	X			3	
3. PZ-02 5-12-06		12:55	H <sub>2</sub> O	40ml VOA															X	X			3	
4. PZ-03 5-12-06		12:15	H <sub>2</sub> O	40ml VOA															X	X			3	
5.																								
6.																								
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## SAMPLE DISPOSAL INSTRUCTIONS

☐ ESN DISPOSAL ☒ \$2.00 each ☐ Return ☐ Pickup

## SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SEALS Y/N/A

SEALS INTACT? Y/N/A

RECEIVED GOOD COND./COLD

NOTES:

## LABORATORY NOTES:

24 hour turnaround

Turn Around Time: 24 HR 48 HR 5 DAY

May 30, 2006

David Raubvogel  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the Block 40 West Project in Seattle, Washington. Water samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on May 18, 2006.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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*

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60518-2  
Client: URS CORPORATION  
Client Job Name: BLOCK 40 WEST  
Client Job Number: 3375 8174

**NWTPH-Gx / BTEX (8260)**

Analytical Results

NWTPH-Gx, mg/l	MTH BLK		BAKER TANK 5-17-06	PZ-01 5-17-06
Matrix	Water	Water	Water	Water
Date extracted	Reporting	05/18/06	05/18/06	05/18/06
Date analyzed	Limits	05/18/06	05/18/06	05/18/06
Mineral spirits/Stoddard solvent	0.10	nd	nd	nd
Gasoline	0.10	nd	nd	8.0

Surrogate recoveries:

Fluorobiphenyl	103%	102%	112%
o-Terphenyl	106%	99%	110%

BTEX (8260), µg/l	MTH BLK		LCS	BAKER TANK 5-17-06	PZ-01 5-17-06
Matrix	Water	Water	Water	Water	Water
	Reporting				
Date analyzed	Limits	05/18/06	05/18/06	05/18/06	05/18/06
Benzene	1.0	nd	99%	nd	nd
Toluene	1.0	nd	102%	nd	1.1
Ethylbenzene	1.0	nd		nd	3.9
Xylenes	1.0	nd		nd	15

Surrogate recoveries:

Dibromofluoromethane	104%	104%	105%	104%
Toluene-d8	97%	96%	99%	98%
4-Bromofluorobenzene	99%	98%	98%	102%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60518-2  
Client: URS CORPORATION  
Client Job Name: BLOCK 40 WEST  
Client Job Number: 3375 8174

**NWTPH-Gx / BTEX (8260)**

Analytical Results		DUP		
NWTPH-Gx, mg/l		PZ-02 5-17-06	PZ-03 5-17-06	PZ-03 5-17-06
Matrix	Water	Water	Water	Water
Date extracted	Reporting	05/18/06	05/18/06	05/18/06
Date analyzed	Limits	05/18/06	05/18/06	05/18/06
Mineral spirits/Stoddard solvent	0.10	nd	nd	nd
Gasoline	0.10	0.24	1.4	1.5

Surrogate recoveries:

Fluorobiphenyl	102%	115%	108%
o-Terphenyl	105%	104%	107%

BTEX (8260), µg/l		PZ-02 5-17-06	PZ-03 5-17-06	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	
	Reporting					
Date analyzed	Limits	05/18/06	05/18/06	05/18/06	05/18/06	
Benzene	1.0	nd	nd	100%	99%	1%
Toluene	1.0	nd	1.6	101%	101%	0%
Ethylbenzene	1.0	nd	14			
Xylenes	1.0	1.3	77			

Surrogate recoveries:

Dibromofluoromethane	105%	104%	102%	101%
Toluene-d8	98%	98%	98%	97%
4-Bromofluorobenzene	100%	97%	98%	98%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

C - coelution with sample peaks

M - matrix interference

J - estimated value

Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%



560518-2

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS Corporation  
 ADDRESS: 1501 4th Ave Suite 1400, Seattle, WA 98101  
 PHONE: (206) 438-2700 FAX: (206) 438-2699  
 CLIENT PROJECT #: 33752174 PROJECT MANAGER: David R. Rumbold

DATE: 5-17-06 PAGE 1 OF 1  
 PROJECT NAME: Block 40 West  
 LOCATION: Westlake + Terry, Seattle  
 COLLECTOR: V. Leviday DATE OF COLLECTION: 5-17-06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																		NOTES	Total Number of Containers	Laboratory Note Number			
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome	BTEX	NW1741-6X						
1. Baker Tank 5-17-06		300	H <sub>2</sub> O	H <sub>2</sub> O																		X					3	
2. PZ-01 5-17-06		200	H <sub>2</sub> O	H <sub>2</sub> O																		X					3	
3. PZ-02 5-17-06		205	H <sub>2</sub> O	H <sub>2</sub> O																		X					3	
4. PZ-03 5-17-06		210	H <sub>2</sub> O	H <sub>2</sub> O																		X					3	
5.																												
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## SAMPLE DISPOSAL INSTRUCTIONS

☐ ESN DISPOSAL \$2.00 each ☐ ☐ ☐

## 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:

Turn Around Time: (24 HR) 48 HR 5 DAY



Environmental  
Services Network

May 30, 2006

David Raubvogel  
URS Corporation  
1504 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the Block 40 West Project in Seattle, Washington. One water sample was analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on May 19 & 22, 2006.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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,

A handwritten signature in cursive script that reads "Michael A. Korosec".

Michael A. Korosec  
President

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60519-2  
Client: URS CORPORATION  
Client Job Name: BLOCK 40 WEST  
Client Job Number: 33758174

**NWTPH-Gx / BTEX (8260)**

**Analytical Results**

NWTPH-Gx, mg/l	MTH BLK		BAKER TANK 5-19-06
Matrix	Water	Water	Water
Date sampled	Reporting	05/19/06	05/19/06
Date analyzed	Limits	05/19/06	05/19/06
Mineral spirits/Stoddard solvent	0.10	nd	nd
Gasoline	0.10	nd	nd

**Surrogate recoveries:**

Fluorobiphenyl	108%	108%
o-Terphenyl	116%	108%

BTEX (8260), µg/l	MTH BLK		LCS	BAKER TANK 5-19-06
Matrix	Water	Water	Water	Water
	Reporting			
Date analyzed	Limits	05/22/06	05/22/06	05/22/06
Benzene	1.0	nd	102%	nd
Toluene	1.0	nd	107%	nd
Ethylbenzene	1.0	nd		nd
Xylenes	1.0	nd		nd

**Surrogate recoveries:**

Dibromofluoromethane	106%	102%	107%
Toluene-d8	97%	97%	99%
4-Bromofluorobenzene	100%	99%	98%

**Data Qualifiers and Analytical Comments**

nd - not detected at listed reporting limits  
na - not analyzed  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Acceptable Recovery limits: 65% TO 135%  
Acceptable RPD limit: 35%

ESN SEATTLE CHEMISTRY LABORATORY  
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S60519-2  
Client: URS CORPORATION  
Client Job Name: BLOCK 40 WEST  
Client Job Number: 33758174

**NWTPH-Gx / BTEX (8260)**

Analytical Results		DUP	
NWTPH-Gx, mg/l		QC Sample	QC Sample
Matrix	Water	Water	Water
Date sampled	Reporting	05/18/06	05/18/06
Date analyzed	Limits	05/18/06	05/18/06
Mineral spirits/Stoddard solvent	0.10	nd	nd
Gasoline	0.10	1.4	1.3

Surrogate recoveries:

Fluorobiphenyl	108%	115%
o-Terphenyl	107%	104%

BTEX (8260), µg/l		MS	MSD	RPD
Matrix	Water	Water	Water	
	Reporting			
Date analyzed	Limits	05/22/06	05/22/06	
Benzene	1.0	98%	96%	2%
Toluene	1.0	101%	100%	1%
Ethylbenzene	1.0			
Xylenes	1.0			

Surrogate recoveries:

Dibromofluoromethane	105%	104%
Toluene-d8	97%	98%
4-Bromofluorobenzene	97%	100%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits  
na - not analyzed  
C - coelution with sample peaks  
M - matrix interference  
J - estimated value  
Acceptable Recovery limits: 65% TO 135%  
Acceptable RPD limit: 35%



Environmental  
Services Network

5605101-2

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS Corporation  
ADDRESS: 1501 4th Ave Suite 1400, Seattle 98101  
PHONE: 206 438 2700 FAX: 206 438 2699  
CLIENT PROJECT #: 33758174 PROJECT MANAGER: David Raulvogel

DATE: 5-19-06 PAGE 1 OF 1  
PROJECT NAME: Block 40 West  
LOCATION: Westlake & Terry, Seattle  
COLLECTOR: B. Loveday DATE OF COLLECTION: 5-19-06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																	Total Number of Containers	Laboratory Note Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HClD	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100 (6 & o)	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome	BTEX			NWTHI-6x																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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RELINQUISHED BY (Signature) DATE/TIME RECEIVED BY (Signature) DATE/TIME

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## SAMPLE DISPOSAL INSTRUCTIONS

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

## SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SEALS Y/N/A

SEALS INTACT? Y/N/A

RECEIVED GOOD COND./COLD

NOTES:

## LABORATORY NOTES:

24 hour

Turn Around Time: (24 HR) 48 HR 5 DAY

June 6, 2006

David Raubyvogel  
URS Corporation  
1501 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616


Dear Mr. Raubyvogel:

Please find enclosed the analytical data report for the Block 40 West Project located at Eastlake and Terry Streets in Seattle, Washington. Three water samples were analyzed for Gasoline by NWTPH-Gx and BTEX by EPA Method 8021B on June 2, 2006.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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

ESN NORTHWEST CHEMISTRY LABORATORY

BLOCK 40 WEST PROJECT

Seattle, Washington

URS Corporation

Client Project #33758174

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

Sample Number	Date Analyzed	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	Gasoline (ug/l)	Surrogate Recovery (%)
Method Blank	6/2/2006	nd	nd	nd	nd	nd	98
LCS	6/2/2006	115%	115%	120%	120%	---	92
PZ-01-6-1-06	6/2/2006	nd	2.6	nd	nd	nd	102
PZ-02-6-1-06	6/2/2006	nd	nd	nd	nd	nd	99
PZ-03-6-1-06	6/2/2006	16	4.9	8.5	40	370	102
Method Detection Limits		1	1	1	1	100	

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

"int" Indicates that interference prevents determination.

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

ANALYSES PERFORMED BY: M.Farmer & G.Dutta





Environmental  
Services Network

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS Corporation  
ADDRESS: 1501 4th Ave # 1400, Seattle, 98101  
PHONE: (206) 438-2700 FAX: (206) 438-2699  
CLIENT PROJECT #: 33758174 PROJECT MANAGER: David Rautveit

DATE: 6-1-06 PAGE 1 OF 1  
PROJECT NAME: Block 40 West  
LOCATION: Westlake & Terry, Seattle  
COLLECTOR: E. Loveday DATE OF COLLECTION: 6-1-06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																NOTES	Total Number of Containers	Laboratory Note Number
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome			
1. PE-01 6-1-06		9:00	H <sub>2</sub> O	40mL VOA														X	X			3	
2. PE-02 6-1-06		9:05	H <sub>2</sub> O	40mL VOA														X	X			3	
3. PE-03 6-1-06		9:10	H <sub>2</sub> O	40mL VOA														X	X			3	
4.																							
5.																							
6.																							
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18.																							

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RECEIVED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_

RELINQUISHED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_  
RECEIVED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_

SAMPLE RECEIPT  
TOTAL NUMBER OF CONTAINERS \_\_\_\_\_  
CHAIN OF CUSTODY SEALS Y/N/A \_\_\_\_\_  
SEALS INTACT? Y/N/A \_\_\_\_\_  
RECEIVED GOOD COND./COLD \_\_\_\_\_  
NOTES: \_\_\_\_\_

LABORATORY NOTES:  
24 hour turnaround  
Turn Around Time: 24 HR 48 HR 5 DAY

## SAMPLE DISPOSAL INSTRUCTIONS

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



Environmental  
Services Network

June 12, 2006

David Raubvogel  
URS Corporation  
1501 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the Block 40 – Terry/Harrison Project located in Seattle, Washington. One water sample was analyzed for Gasoline by NWTPH-Gx and BTEX by EPA Method 8021B on June 8, 2006.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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

# ESN NORTHWEST CHEMISTRY LABORATORY

BLOCK 40 TERRY/HARRISON PROJECT

Seattle, Washington

URS

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

Sample Number	Date Analyzed	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	Gasoline (ug/l)	Surrogate Recovery (%)
Method Blank	6/8/2006	nd	nd	nd	nd	nd	113
LCS	6/8/2006	85%	90%	95%	90%	---	67
U-MW-1	6/8/2006	1000	246	198	854	6300	74
Method Detection Limits		1	1	1	1	100	

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

"int" Indicates that interference prevents determination.

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

ANALYSES PERFORMED BY: G. Dutta

## CHAIN-OF-CUSTODY RECORD

CLIENT: VRS  
ADDRESS: 1501 4th AVE, Suite 1400  
PHONE: 206-438-2700 FAX: 866-495-5888  
CLIENT PROJECT # 33754035.00042 PROJECT MANAGER: David R. RUDGEL

DATE: 6-6-06 PAGE 1 OF 1  
PROJECT NAME: Block 40 - Terry/Harrison Proj.  
LOCATION: WESLAKE + HARRISON, Seattle, WA  
COLLECTOR: Anay Shriver AS DATE OF COLLECTION: 6-6-06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES														NOTES	Total Number of Containers	Laboratory Note Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEM VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8015 (6 & o)	PAH 8100	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine				Pb	Hex Chrome																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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NOTES

NUTPH Gx, BTEX

6

RELINQUISHED BY (Signature) [Signature] DATE/TIME 6-6-06  
RECEIVED BY (Signature) [Signature] DATE/TIME 6-6-06

RELINQUISHED BY (Signature) [Signature] DATE/TIME 6-6-06  
RECEIVED BY (Signature) [Signature] DATE/TIME 6-6-06

## SAMPLE DISPOSAL INSTRUCTIONS

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

## SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS 6

CHAIN OF CUSTODY SEALS Y/N/NA

SEALS INTACT? Y/N/NA

RECEIVED GOOD COND./COLD

NOTES:

## LABORATORY NOTES:

END OF TURNS  
7(6/08)

Turn Around Time: 24 HR 48 HR 5 DAY



Environmental  
Services Network

June 12, 2006

David Raubvogel  
URS Corporation  
1501 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the City Investors Block 40 Project located in Seattle, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by EPA Method 8021B on June 6, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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,

A handwritten signature in cursive script that reads "Michael A. Korosec".

Michael A. Korosec  
President

ESN NORTHWEST CHEMISTRY LABORATORY

CITY INVESTORS BLOCK 40 PROJECT

Seattle, WA

URS

Client Project #33757035

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	6/6/2006	nd	nd	nd	nd	nd	103
LCS	6/6/2006	94%	96%	106%	96%	---	105
SB1-32	6/6/2006	nd	nd	0.18	nd	10	105
SB2-33	6/6/2006	nd	nd	0.70	nd	70	87
SB3-33.5	6/6/2006	0.24	0.64	1.7	9.8	150	int.
Method Detection Limits		0.02	0.05	0.05	0.05	10	

"---" Indicates not tested for component.

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

"int" Indicates that interference prevents determination.

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

ANALYSES PERFORMED BY: M Farmer



Environmental  
Services Network

560602-2

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS  
 ADDRESS: 1501 4<sup>th</sup> Ave Suite 1400  
 PHONE: (206) 438-2700 FAX: (206) 438-2699  
 CLIENT PROJECT #: 33757035 PROJECT MANAGER: David Ravbrage

DATE: 6/2/06 PAGE 1 OF 1  
 PROJECT NAME: City Investors Block 40  
 LOCATION: Westlake: Hanson Seattle WA  
 COLLECTOR: Eric Lillywhite DATE OF COLLECTION: 6/2/06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																Total Number of Containers	Laboratory Note Number
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (total)	PAH 8100	PAH 8270	PCBs 8082	Pesticides 8081	EPH	VPH	Methamphetamine	Pb	Hex Chrome		
1. SB1-32	32	0845	Soil	Encore															✓	2 Encores + 1	3	
2. SB2-33	33	1330	Soil	Encore															✓	402 jar per	3	
3. SB3-33.5	33.5	1500	Soil	Encore															✓	Sample	3	
4.																						
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																			ALL Samples			
																			May Contain High			
																			Levels of Gasoline			
																			and BTEX			

NOTES

2 Encores + 1  
 402 jar per  
 Sample  
  
 ALL Samples  
 May Contain High  
 Levels of Gasoline  
 and BTEX

RELINQUISHED BY (Signature) Eric Lillywhite DATE/TIME 6/2/06 1625 RECEIVED BY (Signature) EMW DATE/TIME 6/2/06 1630  
 RELINQUISHED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_ RECEIVED BY (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_

**SAMPLE DISPOSAL INSTRUCTIONS**  
☒ ESN 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:**  
  
 Turn Around Time: 24 HR 48 HR 5 DAY





Environmental  
Services Network

June 13, 2006

David Raubvogel  
URS Corporation  
1501 4<sup>th</sup> Avenue, Suite 1400  
Seattle, WA 98101-1616

Dear Mr. Raubvogel:

Please find enclosed the analytical data report for the City Investors Block 40 Project located in Seattle, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by EPA Method 8021B on June 12, 2006.

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.

ESN Northwest appreciates the opportunity to have provided analytical services to URS Corporation 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,

A handwritten signature in cursive script that reads "Michael A. Korosec".

Michael A. Korosec  
President

## ESN NORTHWEST CHEMISTRY LABORATORY

CITY INVESTORS, BLOCK 40 PROJECT  
Seattle, Washington  
URS

ESN Northwest  
1210 Eastside Street SE Suite 200  
Olympia, WA 98501  
(360) 459-4670 (360) 459-3432 Fax  
lab@esnsw.com

### 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	6/12/2006	nd	nd	nd	nd	nd	98
LCS	6/12/2006	101%	110%	120%	113%	---	99
SB1-32	6/12/2006	nd	nd	0.60	0.49	65	89
SB2-33	6/12/2006	nd	nd	nd	nd	nd	86
SB3-33.5	6/12/2006	nd	nd	4.6	12	630	int.
Method Detection Limits		0.02	0.05	0.05	0.05	10	

"---" Indicates not tested for component.

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

"int" Indicates that interference prevents determination.

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

ANALYSES PERFORMED BY: M. Farmer



Environmental  
Services Network

Santa

60-459-1670

1-800-ESN-NW-2000

# CHAIN-OF-CUSTODY RECORD

CLIENT: URS

ADDRESS: 1501 4th Ave Suite 1400

PHONE: (206) 438-2700

FAX: (206) 438-2699

CLIENT PROJECT #: 3375 7035

PROJECT MANAGER: David Rubroge

DATE: 6/2/06

PAGE 1 OF 1

PROJECT NAME: City Investors Block 40

LOCATION: Westlake, Harrison, Seattle WA

COLLECTOR: Eric Lillywhite

DATE OF  
COLLECTION: 6/2/06

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																Total Number of Containers	Laboratory Note Number
					VOA 802/B	VOA 802/B BTEX Only	VOA 802/B	SEM/VOA 802/B	TPH - NGP	TPH 8015 (Gasoline)	TPH 8015 (Diesel)	PAH 8015 (6 & 9)	PAH 8020	PCBS 8082	Pesticides 8081	EPH	UPH	Methamphetamine	Po	Hex Chloride		
1. SB1-32	32	0845	Soil	Encore																	2 Encores + 1	3
2. SB2-33	33	1330	Soil	Encore																	402 per sample	3
3. SB3-33.5	33.5	1500	Soil	Encore																	Sample	3
4.																						
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RELINQUISHED BY (Signature): <u>Eric Lillywhite</u>	DATE/TIME: <u>6/2/06 10:35</u>	RECEIVED BY (Signature): <u>EMW</u>	DATE/TIME: <u>6/2/06 10:30</u>	SAMPLE RECEIPT	LABORATORY NOTES:
RELINQUISHED BY (Signature):	DATE/TIME:	RECEIVED BY (Signature):	DATE/TIME:	TOTAL NUMBER OF CONTAINERS:	receive new analysis orders 6/9/06 10:30 AM
				CHAIN OF CUSTODY SEALS Y/N/NA	
				SEALS INTACT? Y/N/NA	
				RECEIVED GOOD COND/COLD	
SAMPLE DISPOSAL INSTRUCTIONS:				NOTES:	Turn Around Time: 24 HR 48 HR <u>5 DAY</u>
ESN DISPOSAL @ \$2.00 each <input checked="" type="checkbox"/> Return <input type="checkbox"/> Pickup					

**APPENDIX F**  
**BORING LOGS**

Project: Block 40 City Investors  
 Project Location: Westlake and Terry, Seattle, Washington  
 Project Number: 33757035

## Log of Boring PZ-1

Sheet 1 of 1

Date(s) Drilled	4/17/06	Logged By	MH	Checked By	GG
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	25 feet bgs
Drill Rig Type	CME-75 Track-Mounted	Drill Bit Size/Type	8" OD	Ground Surface Elevation	~30.5 feet MSL
Groundwater Level	14 ft	Sampling Method	2.5" Dames & Moore, 1.5" Split Spoon	Hammer Data	300-lb Auto Hammer
Borehole Backfill	Location Well located at bottom of excavation				

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	Well Completion Schematic	REMARKS AND WELL DETAILS
		Type	Number	Blows/ 6in.	Recovery (%)					
0							SP	Olive-gray to olive (5Y 4/2-4/3) fine to medium SAND (medium dense) (slightly moist) (slight hydrocarbon odor, no stain)		0935, Begin drilling
			1	8 9 11						Odor likely from stockpile next to borehole
5			2	4 5 7				Grading brown to olive brown (10 YR 4/3-2.5Y 4/3), some coarse sand (no odor, no stain)		
			3	8 10 14						0940
10			4	6 6 6				Grading olive gray (5Y 5/2), trace coarse sand		
			5	7 11 13				Grading (very moist) (very dark gray stain) (hydrocarbon odor)		
15			6	9 10 10				Grading (wet)		Driller notes water on sampler
			7	12 15 16				Grading (dense) (saturated)		
20			8	13 16 18						
25								Boring completed to 25' bgs at 0955 on 4/17/06. Groundwater was encountered at 14' bgs. Boring completed as temporary monitoring well. 2" schedule 40 PVC screen 25' to 10' 2" schedule 40 PVC blank 10' to 0' Filter pack: #2/12 sand 25' to 8' Seal: bentonite chips 12' to 8' 4" schedule 40 PVC outer casing for protection 2' to +1'		0955
30										

ENV2 WITH WELL: T:\ONEWORLD\33757035 315 TERRY AVENUE\33757035.GPJ URSSEA3B.GLB URSSEA3.GDT 5/30/06

URS

Project: Block 40 City Investors  
 Project Location: Westlake and Terry, Seattle, Washington  
 Project Number: 33757035

## Log of Boring PZ-2

Sheet 1 of 1

Date(s) Drilled	4/17/06	Logged By	MH	Checked By	GG
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	25 feet bgs
Drill Rig Type	CME-75 Track-Mounted	Drill Bit Size/Type	8" OD	Ground Surface Elevation	~30.5 feet MSL
Groundwater Level	14 ft	Sampling Method	2.5" Dames & Moore	Hammer Data	300-lb Auto Hammer
Borehole Backfill	Location Well located at bottom of excavation				

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	Well Completion Schematic	REMARKS AND WELL DETAILS
		Type	Number	Blows/ 6in.	Recovery (%)					
0							SP	Olive-gray to olive (5Y 5/2-5/3) fine to medium SAND, trace silt (medium dense) (slightly moist) (no odor, no stain)		1055, Begin drilling
5			1	6 12 15						1100
10			2	14 15 14						
			3	9 11 15				Grading little coarse sand (very moist) (very dark gray to dark greenish gray stain, hydrocarbon odor)		
15			4	10 12 10				Grading no silt (wet)		1120
20			5	15 14 16				Grading (saturated) (less staining, still hydrocarbon odor)		Possibly some slough in sample
25								Boring completed to 25' bgs at 1130 on 4/17/06. Groundwater was encountered at 14' bgs. Boring completed as temporary monitoring well: 2" schedule 40 PVC screen 25' to 10' 2" schedule 40 PVC blank 10' to 0' Filter pack: #2/12 sand 25' to 8' Seal: bentonite chips 12' to 8' 4" schedule 40 PVC outer casing for protection 2' to +1'		1130
30										

ENV2 WITH WELL T:\ONEWORLD\33757035 315 TERRY AVENUE\33757035.GPJ URSSEA3B.GLB URSSEA3.GDT 5/30/06

Project: Block 40 City Investors  
 Project Location: Westlake and Terry, Seattle, Washington  
 Project Number: 33757035

## Log of Boring PZ-3

Sheet 1 of 1

Date(s) Drilled	4/17/06	Logged By	MH	Checked By	GG
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	25 feet bgs
Drill Rig Type	CME-75 Track-Mounted	Drill Bit Size/Type	8" OD	Ground Surface Elevation	~30.5 feet MSL
Groundwater Level	13.5 ft	Sampling Method	2.5" Dames & Moore	Hammer Data	300-lb Auto Hammer
Borehole Backfill	Location: Well located at bottom of excavation				

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	Well Completion Schematic	REMARKS AND WELL DETAILS
		Type Number	Blows/ 6in.	Recovery (%)	OVM (ppm)					
0							SP	Dark gray to dark grayish brown (2.5 Y 4/1-4/2) fine to medium SAND, trace silt (medium dense) (slightly moist) (no odor, no stain)		1200, Begin drilling
5		1	8 10 10							
10		2	7 7 6					Grading medium SAND, some fine sand, little coarse sand, trace silt (moist)		1210
		3	10 7 8					Grading fine to medium SAND, trace coarse sand, no silt (very moist to wet)		13.5 ft ▼
15		4	15 14 14					(wet to saturated)		
20		5	14 12 12							
25								Boring completed to 25' bgs at 1225 on 4/17/06. Groundwater was encountered at 13.5' bgs. Boring completed as temporary monitoring well: 2" schedule 40 PVC screen 25' to 10' 2" schedule 40 PVC blank 10' to 0' Filter pack: #2/12 sand 25' to 8' Seal: bentonite chips 12' to 8' 4" schedule 40 PVC outer casing for protection 2' to +1'		1225
30										

ENV2 WITH WELL T:\ONEWORLD\33757035 315 TERRY AVENUE\33757035.GPJ URSSEA3B.GLB URSSEA3.GDT 5/30/06

URS



Project: Block 40 City Investors  
 Project Location: Westlake and Terry, Seattle, Washington  
 Project Number: 33757035

## Log of Boring SB-1

Sheet 1 of 2

Date(s) Drilled	6/2/2006	Logged By	EL	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	33 feet bgs
Drill Rig Type	CME-75 Track-Mounted	Drill Bit Size/Type	4.25" ID	Ground Surface Elevation	
Groundwater Level (feet bgs)	30 ft bgs	Sampling Method	Dames & Moore	Hammer Data	300-lb Downhole
Borehole Backfill		Location			

Elevation, feet	Downhole Depth, feet	SAMPLES					Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)	OVM (ppm)				
0									2" asphalt 6" concrete Light brown, silty fine SAND (loose) (dry) (no apparent petroleum odor or staining) (fill)	
	1			3		0		SM/SP	Same as above, trace medium sand (no apparent petroleum odor or staining) (fill)	
	2			3		0				
	3			2						
	4			4						
	5			2						
	6			2						
	7			2		0		ML	Same as above, trace oxidation Light gray SILT with trace fine sand (non-plastic) (dry) (no apparent petroleum odor or staining)	
	8			4						
	9			2						
	10			4		0		SM	Light brown, silty fine SAND (loose) (dry) (no apparent petroleum odor or staining)	
	11			6				ML	Light gray SILT with trace fine sand (non-plastic) (dry) (no apparent petroleum odor or staining)	
	12			8		0		SP	Light grayish brown fine sand with little silt (loose) (dry) (no apparent petroleum odor or staining)	
	13			8						
	14			12						
	15			4		0				
	16			6						
	17			7						
	18			4		0		SM	Light gray, silty fine SAND, trace oxidation 17.25'-17.75' (loose) (damp) (no apparent petroleum odor or staining)	
	19			5						
	20			8		0			Light gray, silty fine SAND with little medium sand 19'-19.25', very fine SAND/SILT bedding 19.25'-20' (loose) (damp) (no apparent petroleum odor or staining)	
	21			8						
	22			12				SP	Light gray fine SAND with little medium sand (loose) (dry) (no apparent petroleum odor or staining)	
	23			12						
	24			14						
	25			4					Same as above, grading to fine sand at 25' (no apparent petroleum odor or staining)	
	26			4						
	27			8					Light gray, fine to medium SAND (medium dense) (dry) (no apparent petroleum odor or staining)	
	28			5						
	29			10						
	30			23						
	31			50/5"		0			Light gray fine SAND with trace medium sand (dense) (damp) (no apparent petroleum odor or staining)	
	32									
	33									

ENV2 W/O WELL T:\ONEWORLD\33757035 315 TERRY AVENUE\UE33757035.GPJ URSSEA3B.GLB URSSEA3.GDT 6/27/06

**Project:** Block 40 City Investors  
**Project Location:** Westlake and Terry, Seattle, Washington  
**Project Number:** 33757035

## Log of Boring SB-1

Sheet 2 of 2

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type Number	Blows/ 6in.	Recovery (%)	OVM (ppm)				
30		13	10 10 15		>2000			Same as above (wet) (petroleum odor and staining)	Sample SB1-32
35								Boring was completed to 33' bgs. Groundwater was encountered at 30' bgs. Boring was backfilled with bentonite on 6/2/06.	
40									
45									
50									
55									
60									
65									

Project: Block 40 City Investors  
 Project Location: Westlake and Terry, Seattle, Washington  
 Project Number: 33757035

## Log of Boring SB-2A

Sheet 1 of 1

Date(s) Drilled	6/2/2006	Logged By	EL	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	18 feet bgs
Drill Rig Type	CME-75 Track-Mounted	Drill Bit Size/Type	4.25" ID	Ground Surface Elevation	
Groundwater Level (feet bgs)		Sampling Method	Dames & Moore	Hammer Data	300-lb Downhole
Borehole Backfill		Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0								2" asphalt 6" concrete Light brown fine SAND with little silt (loose) (dry) (no apparent petroleum odor or staining) (fill)	
	1			3			SP		
	2			2					
	3			4					
	4			2			SM	Light brown, silty fine SAND with trace medium sand (loose) (dry) (no apparent petroleum odor or staining)	
	5			2					
	6			2					
	7			2					
10				2			SP	Light gray medium SAND (loose) (wet)	Driller reports concrete debris. Later determined to be an abandoned water line. No sample collected. Water filled borehole to approximately 5' bgs.
	1			6			ML	Light gray SILT (non-plastic) (damp) (no apparent petroleum odor or staining)	
	2			8					
	3							Slough noted	
	4			12					
	5			12					
	6			12					
15				7			SP	8" slough Light grayish brown fine SAND (dry) (medium dense) (no apparent petroleum odor or staining)	
	1			9					
	2			10					
	3			10					
	4			14					
	5			17				Same as above	
20								Boring was completed to 18' bgs. Groundwater was not encountered. Boring was backfilled with bentonite on 6/2/06.	
25									
30									

ENV2 W/O WELL T:\ONEWORLD\33757035 315 TERRY AVENUE\33757035.GPJ URSSEA3B.GLB URSSEA3.GDT 6/27/06

Project: Block 40 City Investors

Project Location: Westlake and Terry, Seattle, Washington

Project Number: 33757035

# Log of Boring SB-2B (UMW-1)

Sheet 1 of 2

Date(s) Drilled	6/2/2006	Logged By	EL	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	40 feet bgs
Drill Rig Type	CME-75 Track-Mounted	Drill Bit Size/Type	4.25" ID	Ground Surface Elevation	feet MSL
Groundwater Level	33 ft bgs	Sampling Method	Dames & Moore	Hammer Data	300-lb Downhole
Borehole Backfill		Location	In Harrison Street		

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	Well Completion Schematic	REMARKS AND WELL DETAILS
		Type	Number	Blows/ 6in.	Recovery (%)	OVM (ppm)				
0								2" asphalt 6" concrete Light grayish brown, silty fine SAND, trace silt (loose) (wet) (no apparent petroleum odor or staining)		Soils wet from struck abandoned water line in vicinity
5			1	2 4 6		0				
10			2	2 5 6		0	ML	Same as above Light gray SILT with trace fine sand (non-plastic) (wet) (no apparent petroleum odor or staining) Soils wet from struck abandoned water line in vicinity		
15			3	7 9 10		0	SM/ SP	Light grayish brown silty fine SAND (medium dense) (dry) (no apparent petroleum odor or staining)		
20			4	4 5 6		0		Same as above, medium sand bedding 20'-20.5', very fine SAND/SILT bedding 21'-21.25' (no apparent petroleum odor or staining) (no apparent petroleum odor or staining)		
25			5	7 2 6		0	SP	Light grayish brown fine to medium SAND with trace silt (loose) (dry) (no apparent petroleum odor or staining)		
25			6	4 5 8		0		Light grayish brown fine SAND with little silt (loose) (dry) (no apparent petroleum odor or staining)		
30			7	4 5 6		0		Same as above (no apparent petroleum odor or staining)		

ENV2 WITH WELL T:ONEWORLD33757035 315 TERRY AVENUE33757035.GPJ URSSEA3B.GLB URSSEA3.GDT 6/27/06

URS


Project: Block 40 City Investors

Project Location: Westlake and Terry, Seattle, Washington

Project Number: 33757035

# Log of Boring SB-2B (UMW-1)

Sheet 2 of 2

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION		REMARKS AND WELL DETAILS
		Type	Number	Blows/ 6in.	Recovery (%)					
30			8	8 11 14		0		Same as above, trace medium sand 30'-30.5' (medium dense) (no apparent petroleum odor or staining)		
			9	10 10 10		>2000		Light grayish brown fine SAND (medium dense) (wet) (petroleum odor and staining) 33 ft. 		Sample SB2-33
35			10	6 16 17		>2000		Medium gray fine SAND with trace medium and coarse sand, very trace 1" subrounded gravel (medium dense) (saturated) (petroleum odor and staining)		
			11	50/5"		>2000		Same as above (petroleum odor and staining)		
40								Boring was completed to 40' bgs. Groundwater estimated at 33' bgs. Monitoring well installed, Ecology ID APQ-008. Screen: 40'-30' 2"-Diameter Schedule 40 PVC (10 Slot) Sand: 40'-27' Colorado 10/20 Silica Bentonite: 27'-1' Puregold Medium Concrete 1'-0' Flush Mount Completion		
45										
50										
55										
60										
65										

ENV2 WITH WELL T:\ONEWORLD\33757035 315 TERRY AVENUE\33757035.GPJ\_URSSEA3B.GLB\_URSSEA3.GDT 6/27/06

Project: Block 40 City Investors  
 Project Location: Westlake and Terry, Seattle, Washington  
 Project Number: 33757035

## Log of Boring SB-3

Sheet 1 of 2

Date(s) Drilled	6/2/2006	Logged By	EL	Checked By	
Drilling Method	Hollow Stem Auger	Drilling Contractor	Cascade Drilling	Total Depth of Borehole	40 feet bgs
Drill Rig Type	CME-75 Track-Mounted	Drill Bit Size/Type	4.25" ID	Ground Surface Elevation	
Groundwater Level (feet bgs)	33 ft bgs	Sampling Method	Dames & Moore	Hammer Data	300-lb Downhole
Borehole Backfill		Location			

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type	Number	Blows/ 6in.	Recovery (%)				
0								2" asphalt 6" concrete Medium gray fine sand with silt, trace wire in nose cone (medium plasticity) (damp) (no apparent petroleum odor or staining) (fill)	
5		1		4 4 4					
10		2		6 7 7				Grading light grayish brown fine SAND with little silt (loose) (dry) (no apparent petroleum odor or staining)	
15		3		9 9 9				Same as above (no apparent petroleum odor or staining)	
20		4		6 9 10				Same as above, trace medium SAND 19'-19.25' (no apparent petroleum odor or staining)	
25		5		6 6 8				Light gray fine SAND with little silt (loose) (dry) (no apparent petroleum odor or staining)	
30		6		7 12				Same as above, trace medium sand (medium dense) (no apparent petroleum odor or staining)	

ENV2 W/O WELL T:ONEWORLD33757035 315 TERRY AVENUE GPJ URSSEA3B.GLB URSSEA3.GDT 6/27/06

**Project: Block 40 City Investors**  
**Project Location: Westlake and Terry, Seattle, Washington**  
**Project Number: 33757035**

## Log of Boring SB-3

Sheet 2 of 2

Elevation, feet	Downhole Depth, feet	SAMPLES				Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		Type Number	Blows/ 6in.	Recovery (%)	OVN (ppm)				
30			14						
35		7	7 11 12		>2000			Medium gray fine SAND (medium dense) (wet) (petroleum odor or staining)	Sample SB3-33.5
40								Boring was completed to 40' bgs. Groundwater estimated at 33' bgs. Boring was backfilled with bentonite on 6/2/06.	
45									
50									
55									
60									
65									



**APPENDIX G**  
**GROUNDWATER SAMPLING LOGS**

## GROUNDWATER SAMPLING DATA SHEET

[illegible]

[illegible]

## GROUNDWATER SAMPLING DATA SHEET

Well Number:	MW-3	Sample Number:	MW-3
Project Name:	BLOCK 40	Project/Task:	33757035.0002
Well Depth:		Date:	4/17/06
Water Depth:	13.13	Measuring Point (MP):	TOL
Feet of Water:		Elevation of MP:	
Gallons per Foot:		Elevation of Water:	
Well Volume:		Well Diameter:	2"
Purge Volume:			

Well Diameter	Gallons per casing foot
2 inches	0.16
4 inches	0.65

Purge Method:	disposable bailer	pH meter:	Hanna U-22
Sample Method:	"	Eh meter:	
Water Disposal:	ground	Conductivity meter:	
Weather:	fair	D.O. Meter:	
Sampler(s):	Stewie	Calibration Date:	4/17/06

QA/QC Samples

Blind Duplicate

MS/MSD

Replicate

Blank

Field Parameters	0 Volumes	1 Volume	2 Volumes	3 Volumes	4 Volumes	5 Volumes	Sample
Temperature	16.2	14.0	16.1				
pH	7.13	6.79	6.78				
Conductivity	0.222	.216	0.199				
Eh	151	156	154				
Dissolved Oxygen	10.3	10.2	10.0				
Turbidity	35.3	7999	7999				
Time	1358	1402	1405				1410

## BOTTLE REQUIREMENTS

Analysis	Bottle Type	Number	Number MS/MSD	Bottle Type	Bottle Number	Number MS/MSD
TPH-G/BTEX	V.04	3				

25  
13  
12  
16  
72  
12  
1.92



## Page 1 of 1

## Gauging and Purging Data

## Containers

### Meter Information

## Sampling Data

**Field Test Kit Results:**

**QA/QC Samples:**

### Field Parameters

### Comments

Field Forms, GW Sampling Log

## GROUNDWATER SAMPLING DATA SHEET

[illegible]

## GROUNDWATER SAMPLING DATA SHEET

[illegible]



## GROUNDWATER SAMPLING DATA SHEET.

[illegible]

## GROUNDWATER SAMPLING DATA SHEET

[illegible]

# GROUNDWATER SAMPLING DATA SHEET

[illegible]

## GROUNDWATER SAMPLING DATA SHEET

[illegible]

## GROUNDWATER SAMPLING DATA SHEET

[illegible]

## GROUNDWATER SAMPLING DATA SHEET

[illegible]

## GROUNDWATER SAMPLING DATA SHEET

[illegible]



## GROUNDWATER SAMPLING DATA SHEET

<p>Well Number: <u>Baker Tank</u></p> <p>Project Name: <u>Block 40 West</u></p> <p>Well Depth: _____</p> <p>Water Depth: _____</p> <p>Feet of Water: _____</p> <p>Gallons per Foot: _____</p> <p>Well Volume: _____</p> <p>Purge Volume: _____</p> <p>Purge Method: _____</p> <p>Sample Method: <u>Bailer</u></p> <p>Water Disposal: _____</p> <p>Weather: <u>Sunny</u></p> <p>Sampler(s): _____</p>	<p>Sample Number: <u>Baker Tank 5-14-06</u></p> <p>Project/Task: <u>Discharge Measurement</u></p> <p>Date: <u>5-14-06</u></p> <p>Measuring Point (MP): <u>Discharge to Sewer</u></p> <p>Elevation of MP: _____</p> <p>Elevation of Water: _____</p> <p>Well Diameter: _____</p> <table border="1" style="margin-top: 10px; width: 100%;"> <thead> <tr> <th>Well Diameter</th> <th>Gallons per casing foot</th> </tr> </thead> <tbody> <tr> <td>2 inches</td> <td>0.16</td> </tr> <tr> <td>4 inches</td> <td>0.65</td> </tr> </tbody> </table> <p>pH meter: <u>Horiba</u></p> <p>Ek meter: _____</p> <p>Conductivity meter: _____</p> <p>D.O. Meter: _____</p> <p>Calibration Date: _____</p>	Well Diameter	Gallons per casing foot	2 inches	0.16	4 inches	0.65
Well Diameter	Gallons per casing foot						
2 inches	0.16						
4 inches	0.65						

### QA/QC Samples

### Blind Duplicate

MS/MSD

## Replicate

Blank

flow. 5505000 @ 6:45 pm

[illegible]

# GROUNDWATER SAMPLING DATA SHEET

[illegible]

# GROUNDWATER SAMPLING DATA SHEET

[illegible]

## GROUNDWATER SAMPLING DATA SHEET

[illegible]

## GROUNDWATER SAMPLING DATA SHEET

[illegible]

## GROUNDWATER SAMPLING DATA SHEET

Well Number: Baker Tank  
 Project Name: Block 40 West  
 Well Depth: \_\_\_\_\_  
 Water Depth: \_\_\_\_\_  
 Feet of Water: \_\_\_\_\_  
 Gallons per Foot: \_\_\_\_\_

Sample Number: Baker Tank 5-19-06  
 Project/Task: Discharge Measurements  
 Date: 5-19-06  
 Measuring Point (MP): Discharge to Sewer  
 Elevation of MP: \_\_\_\_\_  
 Elevation of Water: \_\_\_\_\_

Well Diameter: \_\_\_\_\_

Well Volume: \_\_\_\_\_  
 Purge Volume: \_\_\_\_\_

Well Diameter	Gallons per casing foot
2 inches	0.16
4 inches	0.65

Purge Method: \_\_\_\_\_  
 Sample Method: bailer  
 Water Disposal: \_\_\_\_\_  
 Weather: overcast  
 Sampler(s): \_\_\_\_\_

pH meter: Horiba  
 Eh meter: \_\_\_\_\_  
 Conductivity meter: \_\_\_\_\_  
 D.O. Meter: \_\_\_\_\_  
 Calibration Date: \_\_\_\_\_

QA/QC Samples

Blind Duplicate \_\_\_\_\_

MS/MSD \_\_\_\_\_

Replicate \_\_\_\_\_

Blank \_\_\_\_\_

Flow:

6701600 gal @ 11:30

0 gpm - pumps removed

Field Parameters.	0 Volumes	1 Volume	2 Volumes	3 Volumes	4 Volumes	5 Volumes	Sample
Temperature	17.3°C						
pH	7.4	7.1					
Conductivity	17.3						
Eh	219						
Dissolved Oxygen	9.4						
Turbidity	0.0						
Time	900	1130					
S.S. (mL/L)	0.0	0.0					

## BOTTLE REQUIREMENTS

Analysis	Bottle Type	Number	Number MS/MSD	Bottle Type	Bottle Number	Number MS/MSD
<u>Etex &amp; NWTPI-6x</u>	<u>VOA</u>	<u>Baker Tank</u>	<u>5-19-06</u>			

Flow: 6714400 gal @ 9:00 on 5-22-06, Baker Tanks empty.

**APPENDIX H**  
**FIRESTONE UST INFORMATION**



T_TANK_NAME_NM	site_resp_unit_cd	CCR_COUNTY_AD	site_fs_id	S_SITE_ID	S_SITE_NAME_NM	S_SITE_ADDRESS1_AD
7	NW	King	32145888	592	FIRESTONE STORE#31A9	400 WESTLAKE AVE N
2	NW	King	32145888	592	FIRESTONE STORE#31A9	400 WESTLAKE AVE N
4	NW	King	32145888	592	FIRESTONE STORE#31A9	400 WESTLAKE AVE N
1	NW	King	32145888	592	FIRESTONE STORE#31A9	400 WESTLAKE AVE N
5	NW	King	32145888	592	FIRESTONE STORE#31A9	400 WESTLAKE AVE N
3	NW	King	32145888	592	FIRESTONE STORE#31A9	400 WESTLAKE AVE N
6	NW	King	32145888	592	FIRESTONE STORE#31A9	400 WESTLAKE AVE N

CCR CITY_AD	S_SITE ZIP_AD	T_TANK ID	SSLU_COMMENT_DS	T_INSTALL_DATE_DT	CRLU_CAPACITY_RANGE_NM
Seattle	981095220	25261	Removed	1/1/1956 00:00:00	111 TO 1,100 Gallons
Seattle	981095220	25080	Closed in Place	12/31/1964 00:00:00	
Seattle	981095220	25123	Closed in Place	12/31/1964 00:00:00	
Seattle	981095220	25321	Closed in Place	12/31/1964 00:00:00	
Seattle	981095220	25346	Closed in Place	12/31/1964 00:00:00	
Seattle	981095220	25205	Closed in Place	12/31/1964 00:00:00	
Seattle	981095220	25065	Closed in Place	12/31/1964 00:00:00	

CMP_COMPARTMENT_ID	CMP_COMPARTMENT_NUMBER_NR	SLU_COMMENT_DS	GIS_CALC_LAT_DECIMAL_NR
25603	1	Used Oil/Waste Oil	47.62232
25420	1	Leaded Gasoline	47.62232
25464	1	Leaded Gasoline	47.62232
25664	1	Leaded Gasoline	47.62232
25689	1	Leaded Gasoline	47.62232
25547	1	Leaded Gasoline	47.62232
25405	1	Leaded Gasoline	47.62232