BLOCK 40 East & West Wostlake & Terr, FSID: 602497 Cleanup Site IV: 333 VCP NW 1680 Seattle



Block 40 East + West Westlake + Terry FSID: 602 477 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, Was **URS** Corporation David Raubvoger Hydrogeologist 2010 Senior Geologist, LHG sed RAUBVOGEL R.

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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.<sup>4</sup> 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 O:\Vulcan\Block40E&Wenv-soil construction\VCP Report\Final\Block 40 Cleanup Action Report 8-28-06.DOC

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.

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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 gasolinerange 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

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borings drilled to the east (UGP-14) and southeast (UGP-5) did not detect gasoline- and dieselrange 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

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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 O:\Vulcan\Block40E&Wenv-soil construction\VCP Report\Final\Block 40 Cleanup Action Report 8-28-06.DOC

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

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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, petroleumaffected soils were noted below the tanks to approximately 30 feet above msl. The tank was

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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

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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 Cs 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

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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. Gasolinerange 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

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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

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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 -see. F. 8.7. 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.

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).

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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 finding 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.

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Table 1Summary of Soil Analytical ResultsRailroad Siding RemovalBlock 40 East & WestSeattle, Washington

	Sample Description	Sample Depth (feet bgs)	Sample Date	Total Petroleum Hyd	lrocarbons (mg/kg) <sup>1</sup>	Semivolatile Organic Compounds (SVOCs) (ug/kg)			
Sample ID				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		3	02/28/06	ND	ND	ND	ND	ND ·	
RR-EX-2	soil beneath RR	3	02/28/06	ND	ND	ND	ND	ND	
RR-EX-3	ballast	3	02/28/06	ND	ND	ND	ND	ND	
RR-EX-4		3	02/28/06	ND	ND	ND	ND	ND	
M	MTCA Method A or B Soil Cleanup Level				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

Table 2Summary of Soil Analytical ResultsBuilding 318 - Underground Storage TankBlock 40 East & WestSeattle, Washington

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

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# 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

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

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Notes:

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<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

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

1-1-1-1

Sample Area/ID	Sample Description	Sample Depth	h Approximate Elevation	Sample		Total Petrol	eum Hydrocarbons (mg	/kg) <sup>1</sup>	,	Volatile Organic	Compounds (mg/kg)	
		(feet bgs)	(feet above msl) Date		Diesel-Range	Ofl-Range	Gasoline-Range	Mineral Spirits (Stoddard Solvent)	Benzene	Toluene	Ethylbenzene	Total Xylenes
POST-EXCAVATION SA	MPLES								· ·			<del></del>
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	ND ND	0.37	ND 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-6-13 330-PEX-7-15	sidewall, west of Pile N5 floor, south of Pile N6	13	42	03/22/06	NA	NA	380	ND	ND	ND	0.44	0.17
550-15,47-15	hoor, south of Phe No	13	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	4/6/05	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 PIEZOME												
PZ-1	Piezometer 1	7.5	25	4/17/06	NA							
PZ-1	· · · <u></u>	- 1.5	32.5	4/17/06		NA	ND	ND	ND	ND	ND	ND
PZ-1 PZ-2	Piezometer I					NA	ND	2,000	ND	ND	ND	ND
PZ-2 PZ-3	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 St	oil Cleanup Level			2,000	2,000	100 / 30 <sup>2</sup>	NE	0.03	7	6	9

Notes:

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

IP - Lest 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

				Total Petroleum Hy	drocarbons (mg/kg) <sup>1</sup>		Volatile Organic Compounds (mg/kg)			
Sample Area/ID	Sample Description	Sample Date	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
МТСА М	lethod A Soil Cleanup Level		2,000	2,000	100 / 30 <sup>2</sup>	NE	0.03	7	6	9

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Notes:

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

# Table 6

# Summary of Groundwater Elevation Meaurements 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	30.33		29.41		.94
Total Depth	25	25 <sup>1</sup>		25 <sup>1</sup>		51
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.

 $^2$  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

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

Sample:		PZ-1,	/MW-1		
Date Collected:	4/17/2006	5/8/2006	5/12/2006	5/17/2006	4/17/2006
Diesel Range Organics (mg/L)					
Diesel/Fuel Oil	NA	NA	NA	NA	NA
Heavy Oil	NA	NA	NA	NA	NA
Gasoline Range Organics (mg/L)					
Mineral Spirits/Stoddard Solvent	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Gasoline	5.6	1.0	4.4	8.0	3.4
Volatile Organics (µg/L)*					
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

<u>Notes:</u>

<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	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	<u>NA</u>	NA	NA	NA NA	NA
	INA		- 116	INA		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

onditions.

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

			MTCA Cleanup
UGP-5	UGP-6	UGP-14	
8/9/2005	8/9/2005	8/18/2005	Levels
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)

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

Sample ID: Date Collected:		Bake 5/12/2006	<b>r Tank</b> 5/17/2006	5/19/2006
Gasoline Range Organics (mg/L)				
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
Volatile Organics (µg/L)			-	
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	PZ-1/MW-1			PZ-2/MW-2 <sup>1</sup>	
Range	Low	High	Average	Low	High
Gasoline Range Organics (mg/L)					
Gasoline	1.0	8.0	4.75	0.24	3.6
Volatile Organics (µg/L)*					
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.

1	PZ-3/MW-3			U-MW-1	MTCA Cleanup	
Average	Low	High	Average	(6/8/2006)	Levels	
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!<sup>™</sup> © 1997 Wildflower Productions, www.topo.com, based on USGS topographic map, Seattle North, Washington



Figure 1 Site Location Map

Job No. 33757035

URS



Job No. 33757035





\*





Figure 2 Pre-Construction Site Plan

> Block 40 East and West Seattle, Washington


A North



Job No. 33757035

URS



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

> Block 40 East and West Seattle, Washington



Job No. 33757035

URS





Water units in mg/L

Note 1: A monitoring well was installed in boring U-3-05



Figure 4 Petroleum Hydrocarbon Concentrations in Soil and Groundwater





Existing Building (315 Terry)

Job No. 33757035

Figure 5 UST Removal and Post Excavation Sample Locations



Figure 8 Groundwater Elevations

Job No. 33757035

URS

Block 40 West Seattle, Washington



URS

Block 40 West Seattle, Washington



North

ob No. 33757035

JRS



Figure 7 Extent of Gasoline-Affected Soils

> Block 40 West Seattle, Washington

## APPENDIX A

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# 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 biodegradable 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: Project Name: Project Address:

Type of Decommissioning: UST Installation Date: UST Decommissioning Date: Permit Issuance Date: UST(s) Dimensions: UST(s) Total Gallons: UST(s) Construction:

Certified UST Decommissioner: Licensed UST Site Assessor: City Investors 5, LLC Block 40 - Westlake 318 Westlake Avenue North Seattle, Washington

Excavation and removal from sub-surface Unknown February 27, 2006 February 23, 2006 (City of Seattle – SFD) 36" X 70" – 1 UST 250 Gallons (Approximate) Steel – Single Wall Construction

Deanna M. Donovan Stephen M. Spencer

Stephen M. Spencer, CSA

Deanna M. Donovan, LD

March 6, 2006

Date

March 6, 2006

Date

CGI 18684 NE 142<sup>nd</sup> Avenue, Bldg E Woodinville, Washington 98072

Northwest Marine Chemist, Inc. MARINE CHEMIST CERTIFICATE P.O. Box 7084 SERIAL NO. UGST/PMT OD 1 Tacoma, Washington 98407 (253) 752-0149 BlandNUMC ILRO NMENTAL 27 FEB 2006 aan no Date Survey Requested by JE4TTLE LINDZR GROUWN STOPPOSE ø <u>IGLION</u> TAN WESTLANCE HARRISON Vessel Type of Vesse Specific Location of Vessel STOVE OIL (3 100 HR Last Three (3) Cargoes Time Survey Completed Flest Method LEL Calus In the event of any physical or atmospheric changes adversely affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, or it 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 Cartificate, requires inspection and endorsement or reissue of Cartificate for the spaces so affected. All lines, vents, heating colls, 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 Centificate under Section 2-6 of NFPA 306 and unders

Signe

ndersigned acknowledges receipt of this Certificate under Sec tant conditions and limitations under which it was issued."	tion 2-6 of NFPA 306 and	. This Certificate is ba issued subject to cor	sed on conditions existing at the t npliance with all qualifications and	ime the inspection I I instructions.	hereinset forth was o	completed and is
Day MBaran	(SEI)	2-27-06	he	raigh	Laug	562
Name Company			Signed	<u> </u>	+	
oonpail.	N	Date	Marine Chemist		Gentical	ie No.



#### THE CITY OF SEATTLE

## FIRE DEPARTMENT Fire Marshal's Office

220 Third Ave South Seattle, WA 98104-2608 (206) 386-1450



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

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

PAYOR:ENVIRONMENTAL MANAGEMENT SVCADDRESS:652 & AVFOX ISLAND, WA 98333ATTN:DEANNA DONOVAN

#### DATE:

02/22/2006

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

7908

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 2127 10:00 am CH

BILL OF LADI PRODUCT TRANSPORT MARINE VACUUM SE	MANIFEST RVICE, INC.
	RVICE, INC.
MARINE VACUUM SE	•
24 HOUR EMERGENCY PHONE NU	MBER (206) 762-0240
TRUCK NUMBER 126 DA	TE_2/272006
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Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminates 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.

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Your		- •/	
Seattle			Martine (C)
Fire Department	ΑΡΡΙΙΟΑΤΙΟΝ ΕΟ	DR TEMPORARY PI	FRMIT
Code 7908	Commercial Tank	Removal/Decomm	issioning.
Permit Fee: \$152.00			$\frac{1}{27}$ /27 /0/ / 2/27 /0/ Date Issued Expiration Date
TO BE COMPLETED BY PERMI	APPLICANT (PLEASE PRINT)		
FIRM NAME ENVIYON	nentral Manac	sement Ser	vices
MAILING ADDRESS 652	e Eth Ave	SUITE	
CITY FOX Islay	10 STATE WA	- -	ZIP 98333
OPERATION ADDRESS 31	8 Westlake	Ave N.	Seattle
CONTACT PERSON DEAN	ing Ponovan	PHONE NUMBER (	300) 790-1776
Number of Tank(s):	5 1 only	Tank Size(s):	1000g1 ea.
Product(s) Previously Containe	ed: Heathing Ci		
Removal (Marine Chen	ist inspection and certificate re	equired for all tanks regard	dless of size or contents)
Abandonment-in-Place (N liquids and unknowns)	larine Chemist certificate requ	ired for tanks previously o	containing Class I flammable
Hot Work: Yes ( No	Separate Seattle Fire Departme	ent hot work permit requir	red)
	de a check made payable to		
Permit applications may be s Seattle Fire Departmen	ubmitted in person weekdays	from 8:00 a.m. to 4:30 p	o.m., or mailed to:
Fire Marshal's Office-	-Permits		
220 Third Avenue Sou Seattle, WA 98104-26		Permit processing www.seattle.gov/	g: (206) 386-1025 /fire
	and the second	ded inspection time t	o arrange for an appointment.
TANKS MAY BE	REMOVED/DECOMMISSION	ED ONLY AFTER FIRE	DEPARTMENT INSPECTION
No hot work is all	owed on the tank system	prior to issuance of	this Fire Department permit!
Dermission is hereby grante	d to remove or decommissi	on the tank(s) identifier	d in this permit in accordance with th the Seattle Fire Code, federal, state an <b>NS ARE NOT ATTACHED</b>
Special permit conditions:	Took Rhiptl	need by des	no work of
Sockhoe.	WO TAKS R	Miniking, to	be sched bild.
Site safety	meeting Revin	en office	nit condinions
FMO USE	APPROV	- 1 . 1	10:14
Receipt No.:	Inspecto		SFD ID#
Check No.:		Marine Chemist	27. 1(1411) Deruncate # 1.11124/
	Date:		

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# 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: Project Name: Project Address:

Type of Decommissioning: UST Installation Date: UST Decommissioning Date: Permit Issuance Date: UST(s) Dimensions: UST(s) Total Gallons: UST(s) Construction:

Certified UST Decommissioner: Licensed UST Site Assessor: City Investors 5, LLC Block 40 - Westlake 318 Westlake Avenue North Seattle, Washington

Excavation and removal from sub-surface Unknown March 29, 2006 February 23, 2006 (City of Seattle – SFD) 72" X 144" – 1 UST 2500 Gallons (Approximate) Steel – Single Wall Construction

Deanna M. Donovan Stephen M. Spencer

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化乙基 经济费利益 化磷酸钙 计理想性的 医 <u>非常</u> 能舒服的 经承担偿 医胆管
Stephen M. Spencer, CSA
는 사람했다. 사회는 전체는 이 제공을 다 같은 것에 있는 것이 것 같은 것을 위해서 같이 있다. 사회님께서 사용하는 것을 가지 않는 것
Uleannall Strian
Deanna M. Donovan, LD

April 6, 2006

Date

April 6, 2006

Date

CGI 18684 NE 142<sup>nd</sup> Avenue, Bldg E Woodinville, Washington 98072

MARINE CHEMIST CERTIFICATE SERIAL NO. ST-060 &

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

MARCH 29.2001 MA regement Sorce (es 1 mman Survey Requested by Owner or Agent Date ing hang ANK FARM round 14 Specific Location of Vessel Type of Vessel Vessel -1-2L- V.S.GH OSY5HAS. ςΖ, Time Survey Completed Test Method Last Three (3) Cargoes rl.D Workers 451 - 572 0 For Loturoric in.ks 51 <6% HAS Durg 10. This Lank tations R with Auntion. Proceed ANS Droduct. This Tunk ilas P 1200 267 Secures WYrs . 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."

signed Hum APAMA EUR 3/29/04

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.

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#### THE CITY OF SEATTLE

# FIRE DEPARTMENT

*Fire Marshal's Office* 220 Third Ave South Seattle, WA 98104-2608 (206) 386-1450



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

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

PAYOR:<br/>ADDRESS:ENVIRONMENTAL MANAGEMENT SVC652 8 AV<br/>FOX ISLAND, WA 98333ATTN:DEANNA DONOVAN

#### DATE:

02/22/2006

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

7908

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 2127 10:00 am CH

PRODUCT MARINE VA 24 HOUR EMERGEN	LL OF LADING TRANSPORT MANIFEST CUUM SERVICE, INC. ICY PHONE NUMBER (206) 762-0240 R Z OLDATE 3 79106
TO DESTINATION MAR. VAC NAMESTREET CITY/STATE	FROM SHIPPER DLAWL DWOVIN (EMS) NAME DLAWL DWOVIN (EMS) STREET 652 Oth AUC CITY/STATE FOX, ISLAND
QUANTITY PROPER SHIPPING NAME	
SHIPPER	DRIVER 3 29 06
without limitations, pesticides, chlorinated solvents at concentrations	rred by the above collector do not contain any contaminates including s 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.

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1 OUT				
Seattle			<u>.</u>	
Fire Department	APPLICATION FOR	TEMPORARY PER	MIT	
Code 7908	Commercial Tank Re	moval/Decommiss	sioning, 4	160
Permit Fee: \$152.00			127/06 1-2	127-10
TO BE COMPLETED BY PERMIT	APPLICANT (PLEASE PRINT)		Date Issued Exj	piration Da
FIRM NAME ENVIYONN	montal Manage	mut Seru	(62	
MAILING ADDRESS 652	Eth Ave	SUITE		
CITY FCX Islan	AC STATE WA		ZIP 98333	
OPERATION ADDRESS 31	8 Westlake	Ave N.	Seattle	
CONTACT PERSON DEAN	and going the		00,790-1776	
Number of Tank(s):	3 TAM	k Size(s):	al ea.	R.A.H
Product(s) Previously Containe	ed: Heatilies Cil			3/24/
Removal (Marine Chemi	ist inspection and certificate requi	ired for all tanks regardles	ss of size or contents (TO	BE FAXE
Abandonment-in-Place (M iquids and unknowns)	larine Chemist certificate required	for tanks previously con	taining Class I flammable	
Hot Work: Yes (S	Separate Seattle Fire Department l	hot work permit required	I	
	de a check made payable to the			
Permit applications may be su Seattle Fire Department	ibmitted in person weekdays from t	m 8:00 a.m. to 4:30 p.m	, or mailed to:	
Fire Marshal's Office—	-Permits	Dennik meneriaten di	20(1) 28( 1025	
220 Third Avenue South Seattle, WA 98104-260		Permit processing: () www.seattle.gov/fire		
Call 386-1450, at lea	st 24 hours prior to needed	inspection time to a	rrange for an appoin	tment.
TANKS MAY BE R	REMOVED/DECOMMISSIONED	ONLY AFTER FIRE DE	PARTMENT INSPECTI	ON
No hot work is allo	wed on the tank system pri	ior to issuance of thi	s Fire Department pe	ermit!
Permission is hereby granted attached conditions, all noted ocal regulations. THIS PERI	d to remove or decommission special conditions, and all app MIT IS NULL AND VOID IF P	the tank(s) identified in licable provisions of the PERMIT CONDITIONS	this permit in accordates the seattle Fire Code, federates <b>ARE NOT ATTACHE</b>	ance with t eral, state a D
Special permit conditions:	TANK RISPHIA	ud by demo	2 work by	
SACKAGE. 1	WO TAVES SAN	Suliting, to s	12 SCALLA init	d
Site satety	meeting Review	V of fil pie	+ condinioni	• 
FMO USE	APPROVED			a I Ai
Receipt No.:	Inspector:	MIN'E'E-/	SFD ID#	FATRO

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### **APPENDIX B**

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# CHRONOLOGY OF REMEDIAL EXCAVATION ACTIVITY

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

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	Work	Work
Remedial Action	Began	Completed
Block 40 East Rail Siding Area		
Creosote-containing railroad ballast excavated and	27-Feb-06	28-Feb-06
disposed offsite		
318 Westlake Avenue North Abandoned Heating Oil		
UST		
Removal of UST	27-Feb-06	27-Feb-06
Excavation and removal of PCS	27-Feb-06	6-Mar-06
300 Westlake Avenue North Abandoned Bunker C		
Heating Oil UST		
Removal of UST	29-Mar-	29-Mar-06
	06	
330 Westlake Avenue North Gasoline Affected Soil		
Excavation		
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
Investigation in Harrison Street		
Drilling of soil boring and installation of UMW-1	2-Jun-06	2-Jun-06

# **APPENDIX C**

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# PHOTOGRAPHIC LOG

URS	Р	HOTOGRAPHIC LOG
Client: City Investors, LLC	Site Location: Block 40 E & W, Seattle, WA	Project Number: 33575035



UR	S	F	PHOTOGRAPHIC LOG
	y Investors, LLC	Site Location: Block 40 E & W, Seattle, WA	Project Number: 33575035
Photo No: 3 Direction Ph Description			
Building 31 gallon fuel o	8, 500 oil UST		
Photo No: 4 Direction Ph	Date: 2/27/06 noto Taken:	16.0	
Description Building 318, 500 gallon fu	, Interior of		



# URS

#### Client: City Investors, LLC

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

Project Number: 33575035

PHOTOGRAPHIC LOG



# URS

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sidewall.

Client: City Investors, LLC

# PHOTOGRAPHIC LOG

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

Project Number: 33575035





# APPENDIX D

# UST DECOMMISSIONING DOCUMENTATION

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construction group international

March 6, 2006

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#### **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 biodegradable 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: Project Name: Project Address:

Type of Decommissioning: UST Installation Date: UST Decommissioning Date: Permit Issuance Date: UST(s) Dimensions: UST(s) Total Gallons: UST(s) Construction:

Certified UST Decommissioner: Licensed UST Site Assessor: City Investors 5, LLC Block 40 - Westlake 318 Westlake Avenue North Seattle, Washington

Excavation and removal from sub-surface Unknown February 27, 2006 February 23, 2006 (City of Seattle – SFD) 36" X 70" – 1 UST 250 Gallons (Approximate) Steel – Single Wall Construction

Deanna M. Donovan Stephen M. Spencer

Stephen M. Spencer, CSA

Deanna M. Donovan, LD

March 6, 2006

Date

March 6, 2006

Date

CGI 18684 NE 142<sup>nd</sup> Avenue, Bldg E Woodinville, Washington 98072

Northwest Marine Chemist, Inc. MARINE CHEMIST CERTIFICATE P.O. Box 7084 SERIAL NO. Tacoma, Washington 98407 LIGST/PMT DO 1 (253) 752-0149 Blair(NWMC) VIRONMENTAL 27 FEB 2006 SE4TTLE Date sel Owner or Agent Survey Requested by LINDER GROUND STOPPOSE FAN HARRISON ø. TA WESTLAKE Type of Vessel Specific Location of Vessel 25.6 ISUA 100 HR OIL (3 TOVE Test Method Time Survey Completed Last Three (3) Cargoes LEL dealus 200 4

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 Ihrough 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.

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is

"The undersigned acknowledges receipt of this Centificate under Section 2-6 of NFPA 306 and understan@conditions and limitations under which it was issued." issued subject to compliance with all qualifications and instructions 56<u>2</u> E.1 2-27-06 Signed Signed. Date



## THE CITY OF SEATTLE

## FIRE DEPARTMENT Fire Marshal's Office

220 Third Ave South Seattle, WA 98104-2608 (206) 386-1450



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

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

•, /

PAYOR:ENVIRONMENTAL MANAGEMENT SVCADDRESS:652 8 AVFOX ISLAND, WA 98333ATTN:DEANNA DONOVAN

DATE:

02/22/2006

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

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 2127

10'00 am CH

	PRODUCT T MARINE VAC 24 HOUR EMERGENC	L OF LADING RANSPORT MAN CUUM SERVIC Y PHONE NUMBER ( 126 DATE2	CE, INC.
TO DESTINATION NAME STREET CITY/STATE	Marine Vacuum Service 1516 S Craham St Seauce w 4 98108	FROM SHIPPER EN NAME EN STREET CITY/STATE	NIRO
QUANTITY	PROPER SHIPPING NAME	<u></u>	UN (PLACARD) NUMBER
	200 GAL Durst i	htu	
	SLUDGE		
SHIPPER	DATE	DRIVER	DATE
NOTE:			

Customer warrants that the waste petroleum products being transferred by the above collector do not contain any contaminates 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.

Mor alar 10:00 and the		
i our		
Seattle Fire Department		
APPLICATION FOR TEMPORARY PERMIT		
Code 7908 Commercial Tank Removal/Decommissioning		
Permit Fee: \$152.00 $2/27/06 + 2/27/06$ Date Issued Expiration Date		
TO BE COMPLETED BY PERMIT APPLICANT (PLEASE PRINT)		
FIRM NAME ENVIRONMENTAL Management Services		
MAILING ADDRESS 652 Ett. AVE SUITE		
CITY FOX Island STATE WA ZIP 98333		
OPERATION ADDRESS 318 Westlake Ave N. Seattle		
CONTACT PERSON DEANING DONONCIL PHONE NUMBER (300) 790-1776		
Number of Tank(s): 3 1 Golly Tank Size(s): USt 1000 gal ea.		
Product(s) Previously Contained: Head Vie Cil		
Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents)		
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)		
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 FloorPermit processing: (206) 386-1025Seattle, WA 98104-2608www.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 RUPHARICA by demo work by		
Southier Two TANKS RAMAINING, to be scheduild.		
Site safety meeting Review of firm in condinions		
FMO USE APPROVED BY		
Receipt No.:  Inspector:  Image: Check No.:  SFD ID#  1914    Check No.:  Name of Marine Chemist  DAE AL  [MAC Certificate # FM TEX7]		
Application ID#: Date: $2/27/06$		
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: Project Name:** Project Address:

Type of Decommissioning: UST Installation Date: UST Decommissioning Date: Permit Issuance Date: UST(s) Dimensions: UST(s) Total Gallons: UST(s) Construction:

Certified UST Decommissioner: Licensed UST Site Assessor:

City Investors 5, LLC **Block 40 - Westlake 318 Westlake Avenue North** Seattle, Washington

Excavation and removal from sub-surface Unknown March 29, 2006 February 23, 2006 (City of Seattle – SFD) 72" X 144" – 1 UST 2500 Gallons (Approximate) Steel – Single Wall Construction

Deanna M. Donovan Stephen M. Spencer

Spencer, CSA

RILLIA INSTROM

Deanna M. Donovan, LD

April 6, 2006

Date

April 6, 2006

Date

CGI 18684 NE 142<sup>nd</sup> Avenue, Bldg E Woodinville, Washington 98072

Northwest Marine Chemist, Inc. P.O. Box 7084 MARINE CHEMIST CERTIFICATE SERIAL NO. ST-060な

Tacoma, Washington 98406

(253) 752-0149

MA Nagement Sorer' CGI Const. MARCH 29 inonno Survey Requested by ANK FREM ing hangs oan 14 Vessel Type of Vessel Specific Location of Vessel ΥŻ, 56-45HAS Time Survey Completed Last Three (3) Cargoes Test Method ct D ີ ຫ oakers For tations 10 لدجيه R Airs Drody P itre Q, 1200 11 ENO

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)

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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.

Signed

Date

The undersigned acknowledges receipt of this Certificate under Section 2-6 of NFPA 306 and inderstands 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.



# THE CITY OF SEATTLE

FIRE DEPARTMENT Fire Marshal's Office

220 Third Ave South Seattle, WA 98104-2608 (206) 386-1450



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

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

ENVIRONMENTAL MANAGEMENT SVC **PAYOR:** ADDRESS: 6528AV FOX ISLAND, WA 98333 DEANNA DONOVAN ATTN:

DATE:

02/22/2006

**AMOUNT:** JOB SITE: **PAYMENT FOR:** CHECK #: **INVOICE #: PERMIT CODE(S): REMARK:** 

\$152.00 318 WESTLAKE AV N APPLICATION FEE 3570

7908

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 2127 1000 am CH

PRODUCT T MARINE VAC	L OF LADING TRANSPORT MANIFEST CUUM SERVICE, INC. CY PHONE NUMBER (206) 762-0240 ZOL DATE 3 79/06
TO DESTINATION MAR. VAC NAMESTREET CITY/STATE	FROM SHIPPER DUANNA DUSVÍN (EMS) NAME DUANNA DUSVÍN (EMS) STREET 052 Oth AUC CITY/STATE FOX, ISLANCE
QUANTITY PROPER SHIPPING NAME	UN (PLACARD) NUMBER
SHIPPER	DRIVER 3/29/04
NOTE: Customer warrants that the waste petroleum products being transferre	ed by the above collector do not contain any contaminates including
without limitations, pesticides, chlorinated solvents at concentrations of	preater than 1000 PPM, any detectible levels of PCBs, 10 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.

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-	Mon alar 10:00 an ett
	1 OUT
( [	Seattle
	Fire Department
1.5	APPLICATION FOR TEMPORARY PERMIT
	1///06
	Code 7908 Commercial Tank Removal/Decommissioning
i i	Permit Fee: \$152.00 $27/27/27/27/27$
	TO BE COMPLETED BY BERMIT APPLICANT (BLEASE DOINT)
e.,	TO BE COMPLETED BY PERMIT APPLICANT (PLEASE PRINT)
	FIRM NAME ENVIYONMENTAL VI CANGAGEMMENT SERVICES
1	MAILING ADDRESS 652 SHA AVR SUITE
· _/	F. T.I. A LIN COMP
Ĺ	CITY FCX ISland STATE WH ZIP 98333
, — <u>)</u>	OPERATION ADDRESS 318 11) OSTATO AUP N. Seattle
	D. D. D.
	CONTACT PERSON : LEanna Donovia PHONE NUMBER (300) FO-1776
:	Number of Tank(s): 3 TANKS (Remediation) Tank Size(s): US 10000 60 R.A.H.
	Product(s) Previously Contained: Hearth Cal
1 ·	Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents) TO BE FAXER
	Abandonment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquids and unknowns)
ι. L. J.	Hot Work: Yes (Separate Seattle Fire Department hot work permit required)
, , ,	
11	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 Permit processing: (206) 386-1025
	Seattle. WA 98104-2608 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
1 I 1 - I	local regulations. THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED
·- ·	Special permit conditions: Took RhiptiAcild by deno with by
1	Sockhoe no takes containing to be scheduid.
	Sitie safety meeting review of fire mit constinuit
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	FMO USE APPROVED BY
1	Receipt No.:
	Application ID#: Date: _2/27/7/
· · · · ·	COMMERCIAL TANK REMOVAL/DECOMMISSIONING PERMIT CONDITIONS
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## **APPENDIX E**

## LABORATORY REPORTS

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Seattle	11720 North Creek Pkwy N, Suite 400, Botheli, 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

L

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,

fiff beedes

Jeff Gerdes Project Manager



 Seattle
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 Anchorage
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 907.563.9200
 fax 507.563.9210

## Project: Block 40 E & W

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

URS Corporation

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

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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 1 of 7



URS Corporation

1501 4th Ave, Suite 1400

Scattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 425.420.9200 fax 425.420.9210 423-720-3200 194 423-420-820 11922 E: 13t Avenue, Spokane Valley, WA 99206-5302 503-924-9200 fax 503-924-9290 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503-906-5200 fax 503-906-9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fat 541.382.7588 Bend 2000 W International Airport Road, Sulte A-10, Anchorage, AK 99502-1119 Anchorage 907.563.9200 fax 907.563.9210

#### Project: Block 40 E & W Project Number: [none] Seattle, WA/USA 98101-1616

Project Manager: Geoffrey Garrison

Reported: 02/24/06 15:43

#### Semivolatile Organic Compounds by EPA Method 8270C

#### North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
RR-1 (B6B0488-01) Soil S	ampled: 02/21/06 12:00 Receiv	red: 02/23/06 1	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	•	•	•	•	•	<b>.</b>	
Surrogate: 2-FBP	74.4 %	27-126			-	-	"	<b>'</b> #	
Surrogate: 2-FP	75.8%	16-121			-	-	-	-	
Surrogate: Nitrobenzene-dS	78. <i>9</i> %	26-125			-	~	-		
Surrogate: Phenol-d6	78.6 %	10-120			~	"	"	"	
Surrogate: p-Terphenyl-d14	7 <b>3.3</b> %	26-150			~	"	"	<b>*</b>	
Surrogate: 2,4,6-TBP	72.8 %	10-152			*	-	"	-	
								1	
								i	

North Creek Analytical - Bothell

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Jeff Gerdes, Project Manager

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Page 2 of 7

I.



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### 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

BSOPSPL003R08

#### Physical Parameters by APHA/ASTM/EPA Methods

#### North Creek Analytical - Bothell

		Reporting					· · · · · · · · · · · · · · · · · · ·		
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
RR-1 (B6B0488-01) Soil Sampled: 02/21/06	12.00 Deceiver	+ 02/23/06 1'	7.15						-

Dry Weight	91.4	1.00	%	1	6B23041	02/23/06	02/24/06

North Creek Analytical - Bothell

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Jeff Gerdes, Project Manager



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URS Corporation 1501 4th Ave, Suite 1400 Seattle, WA/USA 98101-1616 Project: Block 40 E & W Project Number: [none]

A

Reported: 02/24/06 15:43

#### Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Project Manager: Geoffrey Garrison

	R	eporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6B23039: Prepared 02/23/06	Using EPA 3550B		-		ŀ			`	•	
Blank (6B23039-BLK1)									1	
3 & 4-Methylphenol	ND	0.330	mg/kg wet						Ι	
2-Methylphenol	ND	0.330	•						1	
Surrogate: 2-FBP	1.32			1.67		79.0	27-126		,	
Surrogate: 2-FP	3.09		-	3.33		<i>9</i> 2.8	16-121			
Surrogate: Nitrobenzene-d5	1.56		*	1.67		93.4	26-125			
Surrogate: Phenol-d6	3.11		14	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)							·		I	
3 & 4-Methylphenol	2.92	0.330	mg/kg wet	3.33		87.7	50-130		1	
2-Methylphenol	2.62	0.330	•	3.33		78.7	50-130		I.	
Surrogate: 2-FBP	1.13		*	1.67		67.7	27-126			
Surrogate: 2-FP	2.38		~	3.33		71.5	16-121			
Surrogate: Nitrobenzene-dS	1.10		-	1.67		65.9	26-125			
Surrogate: Phenol-d6	2.50		-	3.33		75.I	10-120			
Surrogate: p-Terphenyl-dl4	I.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: E	36B0488-01			;	
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		N	1.84		7 <u>9.3</u>	27-126			
Surrogate: 2-FP	2.75		"	3.67		74.9	16-121		1	
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	. <b>1.30</b>		~	1.84		70,7	26-150		1	
Surrogate: 2,4,6-TBP	3.07		"	3.67		<i>83.7</i>	10-152		1	

North Creek Analytical - Bothell

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Page 4 of 7

Jeff Gerdes, Project Manager



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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

			Reporting		Spike	Source		%REC	· · · ·	RPD	
Analyte		Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6B23041:	Prepared 02/23/06	Using Dry Weig	ht	_							
Blank (6B23041-BL	K1)										

Dry Weight

1.00 %

100

North Creek Analytical - Bothell

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Jeff Gerdes, Project Manager

North Creek Analytical, Inc. Environmental Laboratory Network

Page 6 of 7



**URS** Corporation

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## 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

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	· Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 6B23039: Prepared 02/23/06	Using EPA 3550	B								
Matrix Spike Dup (6B23039-MSD2)					Source: B	6B0488-01			i	
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			<u> </u>
Surrogate: 2-FP	3.04		"	3.60		84.4	16-121			
Surrogate: Nitrobenzene-d5	I.42		*	1.80		78.9	26-125			
Surrogate: Phenol-d6	3.17		-	3.60		88.1	10-120			
Surrogate: p-Terphenyl-d14	1.30		#	I.80		72.2	26-150		:	
Surrogate: 2,4,6-TBP	3.21		-	3.60		<i>89.2</i>	10-152			

North Creek Analytical - Bothell

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Jeff Gerdes, Project Manager

North Creek Analytical, Inc. Environmental Laboratory Network

Page 5 of 7

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	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
chorage	2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
	907.563.9200 fax 907.563.9210

URS Corporation	Project: Block 40 E & W	
1501 4th Ave, Suite 1400	Project Number: [none]	Reported:
Seattle, WA/USA 98101-1616	Project Manager: Geoffrey Garrison	02/24/06 15:43

And

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#### **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

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Jeff Gerdes, Project Manager

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Page 7 of 7

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	CHAIN C	<b>F</b> CUST	ODY R	EPO	RT							Work Order #	34	BD488	>			
NCA CLIENT: URS			INV	OICE TO	):								TURNAR	DUND REQUEST				
REPORT TO: CONFRESS: 150/ 41	AVE, SUITE 140	0	PO	NUMBE								is Enstrans Days • Organic & Inorganic Analyses						
PROTECT NAME: 2020	FAX: 866/495-5	286			R: 33	<u>&gt; /S</u> ERVAT	TVE	55:	00(	152				ydrocarbon Analyses				
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PROJECT NUMBER: 3375	57035,00023	l	<u> </u>	R	QUEST	ED AN	ALYSE	VSES					THER	Specify.				
SAMPLED BY: G. GARR	1207	J	1				<u> </u>	<u> </u>		1				يرسن شيغ مندورت بحارثون هند وما				
CLIENT SAMPLE	SAMPLING DATE/TIME	CREAL										MATRIX (W, S, O)	#OF CONT.	LOCATION / COMMENTS	NCA WO ID			
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#### PROJECT INFORMATION SHEET ENVIR-SOILS, HBM

PROJECT NAME: Block 40 E&W Construction (Westlake Terry) JOB NO.: 33757035 TASKS: .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 <u>martin mccabe@urscorp.com</u>

OTHER URS: David Raubvogel (Envir-Soils task leader) 206-438-2284 206-321-4111 cel <u>david\_raubvogel@urscorp.com</u>

> Jacob Letts (Envir-Soils Staff) 206-438-2103 206-228-4375 cel

> Russ Snyders (Haz Materials task leader)206-438-2316cel 206-910-5365russ 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 Andrew Clapham cel 206-423-3342 (URS primary contact) 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

Site Office : 410 Terry Ave. N. Seattle, 98109 Jim Davis 206-315-5102 jim.davis@gly.com Deane Buechler 425-766-9118 cell dane@gly.com Andy Paroline 425-463-6749 cell andy.paroline@gly.com

EXCAVATION CONTRACTOR Northwest Construction

Tom Nielsen 425-4543-8380 206-793-7626 cell thielsen@northwestconst.com

SHORING CONTRACTOR

Troy Edwards PM 253-838-1402

cel 206-423-9876

troye@dbmcm.com

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## Environmental

Services Network

RECEIVED MAR 1.7 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 Senii-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,

hu a Dore Julie Woods Office Manager

1210 Eastside Street SE, Suite 200 Clympia, Washington 98501 Science 360.459.4670 FAX 360.459.3432

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	<b>RR-EX-1-3</b>	RR-EX-2-3	<b>RR-EX-3-3</b>	RR-EX-4-3	RR-FX-4-3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soi
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	no-
Diesel/Fuel oil	20	nd	nd	nd	nd	nd	nd
Heavy oil	50	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 Job Number:	S60302-2
Client:	URS
Client Job Name:	BLOCK 40 E&W
Client Job Number:	33757035.00042

8270, mg/kg		MTH BLK	LCS	<b>RR-EX-1-3</b>	RR-EX-2-3	<b>RR-EX-3-3</b>	RR-EX-4-3
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soi
Date extracted	Reporting	03/07/06		03/07/06	03/07/06	03/07/06	103/07/06
Date analyzed	Limits	03/07/06	03/07/06	03/07/06	03/07/06	03/07/06	03/07/06
Moisture, %				11%	<u>9</u> %	18%	19%
Pyridine	10						
Aniline	1.0	nd		n'd	nd	nd	, nd
Phenol	1.0	nd		nď	nď	nd	nd
2-Chlorophenol	1.0 1.0	nd		nd	nd	nd	nd
Bis (2-chloroethyl) ether	1.0	nd		nď	nd	nd	nd
1,3-Dichlorobenzene		nd		nd	nd	nd	nd
1,4-Dichlorobenzene	1.0 1.0	nd	44000	nd	nd	nď	nd
1,2-Dichlorobenzene	1.0	nd	113%	nd	nd	nď	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		nd		nģ	nd	nd	nd
3,4-Methylphenol (m.p-cresol)	5.0	nd		nd	nd	nd	nď
lexacholorethane	1.0	nd		nđ	nd	nd	, nd
N-Nitroso-di-n-propylamine	1.0	nd		nđ	nd	nd	nd
Vitrobenzene	1.0	nd		nđ	nd	nd	nd
	1.0	nd		nd	nd	nd	nđ
sophorone	1.0	nd		nd	nd	nď	nd
2-Nitrophenol	5.0	nd	129%	nd	nd	nd	nd
l-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
4-Dichlorophenol	5.0	nđ	112%	nď	nd	nd	nd
,2,4-Trichlorobenzene	1.0	nd		nď	nd	nd	nd
laphthalene	1.0	nď		nď	nď	nd	nd
-Chloroaniline	5.0	nd		nd	nd	nd	nd
lexachlorobutadiene	1.0	nď	86%	nd	กต์	nd	nd
-Chloro-3-methylphenol	5.0	nd	101%	nď	nd	nd	' nd
-Methylnapthalene	1.0	nd		nđ	nđ	nď	nđ
-Methylnapthalene	1.0	nd		nd	nd	nd	nd
exachlorocyclopentadiene	1.0	nd		nd	nd	nd	nd I
,4,6-Trichlorophenol	5.0	nd	87%	nd	nd	nd	nd
4,5-Trichlorophenol	5.0	nd		nd	nd	nd	nd
-Chloronaphthalene	1.0	nd		nd	nd	nd	nd
Nitroaniline	5.0	nd		nd	nd	nd	' nd
4-Dinitrobenzene	5.0	nd		nd	nd	nd	nd
imethylphthalate	1.0	nd		nd	nd	nd	nd
cenaphthylene	0.1	nd		nd	nd	nd	nd
3-Dinotrobenzene	5.0	nd		nd	nd	nď	nd
6-Dinitrotoluene	1.0	nď		nd	nd	nd	nd
2-Dinitrobenzene	1.0	nd		nd	nd	nd	nd
cenaphthene	0.1	nd	90%	nd	nd	nd	nd
Nitroaniline	5.0	nd		nď	nd	nd	nď
ibenzofuran	1.0	nd		nd	nd	nd	i nd
4-Dinitrotoluene	1.0	nd		nd	nd	nd	nd
3,4,6-Tetrachlorophenol	1.0	nd		nd	nd	nd	
3,5,6-Tetrachlorophenol	1.0	nď		nd	nd	nd	nd
4-Dinitrophenol				nu	10	10	nd

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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-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	nđ	nd	nď
N-nitrosodiphenylamine	5.0 1.0	nd		nd	nd	nd	nd
Azobenzene	1.0	nd		nd	nd	nd	nd
A-Bromophenylphenylether	1.0	nd		nd	nd	nd	nd
Hexachlorobenzene	1.0	nd		nd	nd	nd	nd ∉nd
	5.0	nd	76%	nd	-	nd	nd
Pentachlorophenol Phenanthrene	5.0 0.1		7070		nd	nd	
	0.1	nd		nď	nđ	nd	nd
Anthracene	1.0	nd		nd	nd		nd
		nd 		nd	nd	nd	nd
Di-n-butylphthalate	1.0	nď	000/	nd	nd	nd	nd
Fluoranthene	0.1	nd	82%	nd	nd	nd.	nd
Pyrene	· 0.1	nd	•	nd	nd	nd	nđ
Butylbenzylphthalate	1.0	nd		nd	nd	nd	nd
Bis(2-ethylhexyl) adipate	1.0	nd		nd	nd	nď	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	nď		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-Fiuorobiphenyl		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 <u>Acceptable Recovery limits:</u> 2-Flurophenol: 10-135 % Phenol - d5: 10-135 % 2,4,6- tribromophenol: 29-159% Nitrobenzene - d5: 20-120 % 2-Flurobiphenyl: 50-150% p-Terphenyl-d14: 50-150% Acceptable RPD limit: 35%

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ESN Job Number:
Client:
Client Job Name:
Client Job Number:

S60302-2 URS BLOCK 40 E&W 33757035.00042

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         Naphthalene       1.0         4-Chloroaniline       5.0         Hexachlorobutadiene       1.0         4-Chloro-3-methylphenol       5.0         2-Methylnapthalene       1.0         1-Methylnapthalene       1.0         4-Chlorophenol       5.0         2-Methylnapthalene       1.0         1-Methylnapthalene       1.0         2,4,6-Trichlorophenol       5.0         2,4,5-Trichlorophenol       5.0         2,4,6-Trichlorophenol       5.0         2,4,5-Trichlorophenol       5.0         2,4,5-Trichlorophenol       5.0         2-Nitroaniline       5.0         1,4-Dinitrobenzene       5.0         1,4-Dinitrobenzene       5.0         Dimethylphthalate       1.0         Acenaphthylene       0.1         1,3-Dinotrobenzene       5.0	Analytical Results		RR-EX-4-3	RR-EX-4-3	
Date extracted         Reporting         03/07/06         03/07/06           Date analyzed         Limits         03/07/06         03/07/06           Moisture, %         03/07/06         03/07/06         03/07/06           Pyridine         1.0         113%         0%           Aniline         1.0         113%         113%         0%           2-Chlorophenol         1.0         120%         121%         1%           Bis (2-chlorobenzene         1.0         100%         98%         2%           1,4-Dichlorobenzene         1.0         100%         98%         2%           1,2-Dichlorobenzene         1.0         100%         98%         2%           1,2-Dichlorobenzene         1.0         100%         98%         2%           2-Methylphenol (n.p-cresol)         1.0         10         10           At-Methylphenol (n.p-cresol)         1.0         10         10           2-Nitrophenol         5.0         2,4-Dimethylphenol         1.0           2,4-Dimethylphenol         1.0         2/4-Dimethylphenol         1.0           2,4-Dimethylphenol         5.0         2,4-Dimethylphenol         1.0           2,4-Dimethylphenol         5.0         2/4-D	8270, mg/kg		MS	MSD	RPD
Date analyzed         Limits         03/07/06         03/07/06           Moisture, %	Matrix	Soil			
Moisture, %           Pyridine         1.0           Aniline         1.0           Phenol         1.0           113%         113%           2-Chlorophenol         1.0           113%         113%           2-Chlorophyl) ether         1.0           1,3-Dichlorobenzene         1.0           1,2-Dichlorobenzene         1.0           1,2-Dichlorobenzene         1.0           1,2-Dichlorobenzene         1.0           1,2-Dichlorobenzene         1.0           1,2-Dichlorobenzene         1.0           2-Methylphenol (n.pcresol)         1.0           Bis (2-chlorostopropyl) ether         5.0           3,4-Methylphenol (m.pcresol)         1.0           Nitrobenzene         1.0           10         99%         105%           10         91%         6%           Nitrobenzene         1.0         2-Nitrophenol           2,4-Dichorophenol         5.0         2,4-Dichorophenol           1,2,4-Trichlorobenzene         1.0         2,4-Dichorophenol           2,4-Dichorophenol         5.0         2,4-Dichorophenol           2,4-Dichorophenol         5.0         2,4-Dichirorophenol           1,					
Pyridine         1.0           Anline         1.0           Phenol         1.0           1.0         113%           2-Chlorophenol         1.0           Bis (2-chloroethyl) ether         1.0           1,3-Dichlorobenzene         1.0           1,4-Dichlorobenzene         1.0           1,4-Dichlorobenzene         1.0           1,4-Dichlorobenzene         1.0           1,4-Dichlorobenzene         1.0           2-Methylphenol (o-cresol)         1.0           Bis (2-chlorolsopropyl) ether         5.0           3,4-Methylphenol (m,p-cresol)         1.0           Hexacholorethane         1.0           N-Nitroso-di-n-propylamine         1.0           Nitrobenzene         1.0           2-Nitrophenol         5.0           2,4-Dimethylphenol         5.0           2,4-Dimethylphenol         1.0           2,4-Dinethylphenol         5.0           1,2,4-Trichlorobenzene         1.0           2,4-Dichlorophenol         5.0           1,2,4-Trichlorophenol         5.0           2,4-Dichlorophenol         5.0           2,4-Dichlorophenol         5.0           2,4-Dichlorophenol         5.0		Limits	03/07/06	03/07/06	
Aniline       1.0         Phenol       1.0       113%       113%       0%         2-Chlorophnol       1.0       120%       121%       1%         Bis (2-chlorobhyl) ether       1.0       1.3-Dichlorobenzene       1.0       1.4-Dichlorobenzene       1.0       1.2-Dichlorobenzene       1.0         1,2-Dichlorobenzene       1.0       100%       98%       2%       2%         1,2-Dichlorobenzene       1.0       1.0       2-Methylphenol (cr.cresol)       1.0         Benzyl alcohol       1.0       1.0       3.4-Methylphenol (cr.cresol)       1.0         A-Mitroso-din-propylamine       1.0       99%       105%       6%         Nitrobenzene       1.0       99%       105%       6%         Nitrobenzene       1.0       2.4-Direthylphenol       5.0       2.4-Direthylphenol       5.0         2,4-Direthylphenol       1.0       2.4-Direthylphenol       5.0       4.4-Nitrophenol       5.0         2,4-Direthylphenol       5.0       1.2,4-Trichlorophenol       5.0       4.4-Nitrophenol       5.0         2,4-Direthylphenol       5.0       4.5%       80%       6%       8.0%       6%         2,4-Direthylphenol       5.0       2.4-Direthylphen	Moisture, %				
Aniline       1.0         Phenol       1.0       113%       113%       0%         2-Chlorophnol       1.0       120%       121%       1%         Bis (2-chlorobhyl) ether       1.0       1.3-Dichlorobenzene       1.0       1.4-Dichlorobenzene       1.0       1.2-Dichlorobenzene       1.0         1,2-Dichlorobenzene       1.0       100%       98%       2%       2%         1,2-Dichlorobenzene       1.0       1.0       2-Methylphenol (cr.cresol)       1.0         Benzyl alcohol       1.0       1.0       3.4-Methylphenol (cr.cresol)       1.0         A-Mitroso-din-propylamine       1.0       99%       105%       6%         Nitrobenzene       1.0       99%       105%       6%         Nitrobenzene       1.0       2.4-Direthylphenol       5.0       2.4-Direthylphenol       5.0         2,4-Direthylphenol       1.0       2.4-Direthylphenol       5.0       4.4-Nitrophenol       5.0         2,4-Direthylphenol       5.0       1.2,4-Trichlorophenol       5.0       4.4-Nitrophenol       5.0         2,4-Direthylphenol       5.0       4.5%       80%       6%       8.0%       6%         2,4-Direthylphenol       5.0       2.4-Direthylphen					
Phenol         1.0         113%         113%         0%           2-Chlorophenol         1.0         120%         121%         1%           Bis (2-chlorobenzene         1.0         120%         121%         1%           Ja-Dichlorobenzene         1.0         100%         98%         2%           1,4-Dichlorobenzene         1.0         100%         98%         2%           1,2-Dichlorobenzene         1.0         100%         98%         2%           1,2-Dichlorobenzene         1.0         100%         98%         2%           2-Methylphenol (o-cresol)         1.0         10         10         10           Hexacholorethane         1.0         0         N         N         N           Nitrobenzene         1.0         99%         105%         6%         Nitrobenzene         1.0         10         2.4         113%         114%         110%         115%	-				
2-Chlorophenol       1.0       120%       121%       1%         Bis (2-chloroethyl) ether       1.0       1       121%       1%         1,3-Dichlorobenzene       1.0       1       121%       1%         1,4-Dichlorobenzene       1.0       100%       98%       2%         1,2-Dichlorobenzene       1.0       100%       98%       2%         1,2-Dichlorobenzene       1.0       2.       100%       98%       2%         1,2-Dichlorobenzene       1.0       2.       100%       98%       2%         1,2-Dichlorobenzene       1.0       2.       100%       98%       6%         3,4-Methylphenol (n.p-cresol)       1.0       10.<					
Bis (2-chloroethyl) ether       1.0         1,3-Dichlorobenzene       1.0         1,4-Dichlorobenzene       1.0         1,2-Dichlorobenzene       1.0         Benzyl alcohol       1.0         2-Methylphenol (n,p-cresol)       1.0         Bis (2-chloroisopropyl) ether       5.0         3,4-Methylphenol (n,p-cresol)       1.0         Hexacholorethane       1.0         N-Nitroso-din-propylamine       1.0         Sophorone       1.0         Isophorone       1.0         Sis (2-chlorobenzene       1.0         Nitrobenzene       1.0         Sis (2-chlorobethoxy) methane       1.0         Sis (2-chlorobethoxy) methane       1.0         2,4-Dichlorobenzene       1.0         98'/       6%         Naphthalene       1.0         4-Chloro-3-methylphenol       5.0         4-Chloro-3-methylphenol       5.0         2.4-Eirhildrobenzene       1.0         4-Chloro-3-methylphenol       5.0         2.4-Sirtichlorophenol       5.0         2.4-Chloro-3-methylphenol       5.0         2.4-Sirtichlorophenol       5.0         2.4-Sirtichlorophenol       5.0         2.4-Sirtichlorop					
1,3-Dichlorobenzene       1.0         1,4-Dichlorobenzene       1.0         1,2-Dichlorobenzene       1.0         1,2-Dichlorobenzene       1.0         Benzyl alcohol       1.0         2-Methylphenol (o-cresol)       1.0         Bis (2-chlorolsopropyl) ether       5.0         3,4-Methylphenol (m.p-cresol)       1.0         Hexacholorethane       1.0         N-Nitroso-din-propylamine       1.0         1.0       99%       105%       6%         Nitrobenzene       1.0       99%       105%       6%         Nitrobenzene       1.0       2.4       10       10       10         2-Nitrophenol       5.0       2.4       10       10       10       10         2,4-Dimethylphenol       1.0       92%       98%       6%       10         2,4-Dirohorophenol       5.0       1.2			120%	121%	1%
1.4-Dichlorobenzene       1.0       100%       98%       2%         1.2-Dichlorobenzene       1.0       1.0       1.0         Benzyl alcohol       1.0       1.0       1.0         2-Methylphenol (o-cresol)       1.0       1.0       1.0         Bis (2-chlorolsopropyl) ether       5.0       3.4-Methylphenol (m.p-cresol)       1.0         N-Nitroso-di-n-propylamine       1.0       99%       105%       6%         Nitrobenzene       1.0       99%       105%       6%         Isophorone       1.0       2.4       1.0       1.0       1.0         2.4-Dimethylphenol       5.0       2.4       4.0       4.0       2.4       4.0       1					
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         Hexacholorethane       1.0         N.Nitroso-di-n-propylamine       1.0         1.0       99%       105%       6%         Nitrobenzene       1.0       10       5.0         2-Nitrophenol       5.0       4.1       2.1         2.4-Dichlorophenol       5.0       2.4-Dichlorophenol       5.0         2.4-Dichlorophenol       5.0       2.4-Dichlorophenol       5.0         1.2.4-Trichlorobenzene       1.0       92%       98%       6%         Naphthalene       1.0       2.4-Dichlorophenol       5.0       4.2         4-Chloro-alline       5.0       85%       80%       6%         Packatorosylatene       1.0       4.2       4.2       4.2       4.2         4-Chloro-alline       5.0       85%       80%       6%         2.4.6-Trichlorophenol       5.0       2.4       5.0       2.4         2.4.6-Trichlorophenol       5.0       2.4       5.0       2.4	•			_	
Benzyl alcohol       1.0         2-Methylphenol (o-cresol)       1.0         Bis (2-chloroisopropyl) ether       5.0         3,4-Methylphenol (m,p-cresol)       1.0         Hexacholorethane       1.0         N-Nitroso-di-n-propylamine       1.0         1.0       99%       105%       6%         Nitrobenzene       1.0         Isophorone       1.0       2-Nitrophenol       5.0         2.4-Dimethylphenol       1.0       2.4       2.4         Nitrobenzene       1.0       2.4       2.4         Sis (2-chloroethoxy) methane       1.0       2.4       2.4         2.4-Dichlorophenol       5.0       1.2       4.7         1.2,4-Trichlorobenzene       1.0       92%       98%       6%         Naphthalene       1.0       4-Chloro-3-methylphenol       5.0       85%       80%       6%         2.4-Bitoros/clopentadiene       1.0       1.4       4-Chloro-3-methylphenol       5.0       85%       80%       6%         2.4-Bitoros/clopentadiene       1.0       1.4       4-Chloros-3-methylphenol       5.0       2.4       2.4       5.0       2.4       5.7       2.4       5.0       2.4       5.0       2.4	•		100%	98%	2%
2-Methylphenol (o-cresol)       1.0         Bis (2-chtorolsopropyl) ether       5.0         3.4-Methylphenol (m.p-cresol)       1.0         Hexacholorethane       1.0         N-Nitroso-di-n-propylamine       1.0         Northogene       1.0         Isophorone       1.0         Sophorone       1.0         2-Nitrophenol       5.0         4-Nitrophenol       5.0         2,4-Dimethylphenol       1.0         2,4-Dinethylphenol       1.0         2,4-Dinethylphenol       5.0         2,4-Dinotophonon       5.0         1,2,4-Trichlorobenzene       1.0         92%       98%       6%         Naphthalene       1.0         4-Chtoroaniline       5.0         4-Chtoroaniline       5.0         4-Chtoroaniline       1.0         1-Methylnapthalene       1.0         1-Methylnapthalene       1.0         1-Methylnapthalene       1.0         2,4,6-Trichlorophenol       5.0         2,4,6-Trichlorophenol       5.0         2,4,6-Trichlorophenol       5.0         2,4,6-Trichlorophenol       5.0         2,4,6-Trichlorophenol       5.0					
Bis (2-chloroisopropyl) ether       5.0         3,4-Methylphenol (m,p-cresol)       1.0         Hexacholorethane       1.0         N-Nitroso-din-propylamine       1.0         Nitrobenzene       1.0         Isophorone       1.0         2-Nitrophenol       5.0         2.4-Dirhthylphenol       1.0         2.4-Dirhthylphenol       1.0         2.4-Dirhthorophenol       5.0         2.4-Dirhthorophenol       5.0         2.4-Dirhthorophenol       5.0         2.4-Dirhthorophenol       5.0         1.2,4-Trichlorophenol       5.0         4-Chloro-3-methylphenol       5.0         4-Chloro-3-methylphenol       5.0         4-Chloro-3-methylphenol       5.0         4-Chloro-3-methylphenol       5.0         4-Chloro-3-methylphenol       5.0         2.4-Birthorophenol       5.0         2.4-S-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2.4,5-Tric	-	1.0			
3.4-Methylphenol (m.p-cresol)       1.0         Hexacholorethane       1.0         N-Nitroso-di-n-propylamine       1.0         Nitrobenzene       1.0         Isophorone       1.0         S-Nitrophenol       5.0         2-Nitrophenol       5.0         2,4-Dimethylphenol       1.0         Bis (2-chloroethoxy) methane       1.0         2,4-Dichlorophenol       5.0         2,4-Dichlorophenol       5.0         1,2,4-Trichlorobenzene       1.0         4-Chloroaniline       5.0         2-Methylnapthalene       1.0         4-Chlorophenol       5.0         2.4,6-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2.4,6-Trichlorophenol       5.0         2.4,6-Trichlorophenol       5.0         2.4,6-Trichlorophenol       5.0	•••••	1.0			
Hexacholorethane       1.0         N-Nitroso-di-n-propylamine       1.0         Nitrobenzene       1.0         Isophorone       1.0         Sphorone       1.0         Sophorone       1.0					
N-Nitroso-di-n-propylamine       1.0       99%       105%       6%         Nitrobenzene       1.0       1.0       1.0       1.0       1.0         Isophorone       1.0       5.0		1.0			
Nitrobenzene       1.0         Isophorone       1.0         Sophorone       1.0         2-Nitrophenol       5.0         2,4-Dirhophenol       5.0         2,4-Dirhophenol       1.0         Bis (2-chloroethoxy) methane       1.0         2,4-Dichlorophenol       5.0         1,2,4-Trichlorobenzene       1.0         2,4-Dichlorophenol       5.0         1,2,4-Trichlorobenzene       1.0         4-Chloroaniline       5.0         Hexachlorobutadiene       1.0         4-Chloro-3-methylphenol       5.0         85%       80%       6%         2-Methylnapthalene       1.0         1.Methylnapthalene       1.0         1.Methylnapthalene       1.0         2.4,6-Trichlorophenol       5.0         2,4,5-Trichlorophenol       5.0         2,4,5-Trichlorophenol       5.0         2-Chloronaphthalene       1.0         1,4-Dinitrobenzene       5.0         2,6-Dinitrotoluene       1.0         1,3-Dinotrobenzene       5.0         2,6-Dinitrotoluene       1.0         1,2-Dinitrobenzene       5.0         2,6-Dinitrotoluene       1.0 <td< td=""><td></td><td>1.0</td><td></td><td></td><td></td></td<>		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           2,4-Trichlorobenzene         1.0           Naphthalene         1.0           4-Chloroaniline         5.0           Hexachlorobutadiene         1.0           4-Chloro-3-methylphenol         5.0           85%         80%         6%           2-Methylnapithalene         1.0           4-Chloro-3-methylphenol         5.0         85%         80%         6%           2-Methylnapithalene         1.0         1.0         1.0         1.0           4-Chloro-3-methylphenol         5.0         85%         80%         6%           2-Methylnapithalene         1.0         2.4,6-Trichlorophenol         5.0           2.4,5-Trichlorophenol         5.0         2.4         2.4           2-Nitroaniline         5.0         2.0         2.0           Dimethylphthalate         1.0         1.0         2.6-Dinitrotobenzene         5.0           2,6-Dinitrotobenzene         5.0         2.6-Dinitrotobenzene	N-Nitroso-di-n-propylamine	1.0	99%	105%	6%
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         Naphthalene       1.0         4-Chloroaniline       5.0         Hexachlorobutadiene       1.0         4-Chloro-3-methylphenol       5.0         2-Methylnapthalene       1.0         1.0       4-Chloro-3-methylphenol         5.0       85%       80%         2-Methylnapthalene       1.0         1-Methylnapthalene       1.0         1-Methylnapthalene       1.0         2.4,6-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0         2-Chloronaphthalene       1.0         2-Chloronaphthalene       1.0         2-Nitroaniline       5.0         2.6-Dinitrobenzene       5.0         2.6-Dinitrobenzene       1.0         3-Dinotrobenzene       1.0         1,2-Dinitrobenzene       1.0         2,6-Dinitrotoluene       1.0         1,2-Dinitrobenzene       1.0	Nitrobenzene	1.0			
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         2-Methylnapthalene       1.0         4-Chloro-3-methylphenol       5.0         2-Methylnapthalene       1.0         1.0       4-Chloro-3-methylphenol         5.0       85%       80%       6%         2-Methylnapthalene       1.0       4-Chloro-3-methylphenol       5.0         2-Methylnapthalene       1.0       4-Chloro-3-methylphenol       5.0         2-Methylnapthalene       1.0       2-Methylnapthalene       1.0         2-Methylnapthalene       1.0       2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0       2.4       2.1         2-Nitroaniline       5.0       2.4       2.1         1.4-Dinitrobenzene       1.0       4.2       3.3         2.6-Dinitrotoluene       1.0	Isophorone	1.0			
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       92%       98%       6%         Naphthalene       1.0       92%       98%       6%         Naphthalene       1.0       92%       98%       6%         4-Chloroaniline       5.0       85%       80%       6%         4-Chloro-3-methylphenol       5.0       85%       80%       6%         2-Methylnapthalene       1.0       4       4       4       6%       4         2-Methylnapthalene       1.0       1.0       4       4       50       4       4       50       4       50       4       50       4       50       50       5.0	2-Nitrophenol	5.0			
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       85%       80%       6%         Hexachlorobutadiene       1.0       4-Chloro-3-methylphenol       5.0       85%       80%       6%         2-Methylnapthalene       1.0       4-Chloro-3-methylphenol       5.0       85%       80%       6%         2-Methylnapthalene       1.0       1.0       4-Chloro-3-methylphenol       5.0       85%       80%       6%         2-Methylnapthalene       1.0       1.0       4-Chloro-3-methylphenol       5.0       2.4,6-Trichlorophenol       5.0         2.4,6-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       1.0       4-Chloro-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-	4-Nitrophenol	5.0			
2,4-Dichlorophenol       5.0         1,2,4-Trichlorobenzene       1.0       92%       98%       6%         Naphthalene       1.0       4       4       4       6%         Hexachlorobutadiene       1.0       4       4       4       6%       6%         Hexachlorobutadiene       1.0       4       4       4       6%       6%       6%         4-Chloroaniline       5.0       85%       80%       6%       6%       6%         4-Chloro-3-methylphenol       5.0       85%       80%       6%       6%         2-Methylnapthalene       1.0       1       4       6%       6%         2-Methylnapthalene       1.0       5.0       2       4       5.0       2       4       6% <td>2,4-Dimethylphenol</td> <td>1.0</td> <td></td> <td></td> <td></td>	2,4-Dimethylphenol	1.0			
1,2,4-Trichlorobenzene       1.0       92%       98%       6%         Naphthalene       1.0       4-Chloroaniline       5.0       85%       80%       6%         4-Chloroaniline       1.0       5.0       85%       80%       6%         4-Chloro-3-methylphenol       5.0       85%       80%       6%         2-Methylnapthalene       1.0       1.0       4         1-Methylnapthalene       1.0       1.0       1.0         1-Methylnapthalene       1.0       2.4,6-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       2.0         2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       2.0         2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       1.0       2.4,5-Trichlorophenol       2.0         2.4,5-Trichlorophenol       1.0       1.0       2.4,5-Trichlorophenol       2.0       2.4,5-Trichlorophenol       2.0         2.4,5-Trichlorophenol       1.0       1.0       2.4,5-Trichlorophenol       2.0       2.4,5-Trichlorophenol       2.0         2.4,6-Trichlorophenol       1.0       3.0<	Bis (2-chloroethoxy) methane	1.0			
Naphthalene       1.0         4-Chloroaniline       5.0         Hexachlorobutadiene       1.0         4-Chloro-3-methylphenol       5.0       85%       80%       6%         2-Methylnapthalene       1.0       1.0       1.0       1.0         1-Methylnapthalene       1.0       1.0       1.0       1.0         1-Methylnapthalene       1.0       1.0       1.0       1.0         1-Methylnapthalene       1.0       2.4,6-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0         2.4,6-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0         2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       1.0         2.4,6-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       1.0         2.4,6-Trichlorophenol       1.0       2.4,5-Trichlorophenol       1.0       2.4,5-Trichlorophenol       1.0         2.4,6-Dinitrobenzene       5.0       1.0       2.6-Dinitrobenzene       1.0       2.6-Dinitrobenzene       1.0         2.6-Dinitrobenzene       1.0       2.0       83%       1%       3%       3%       1%	2,4-Dichlorophenol	5.0			
4-Chloroaniline       5.0         Hexachlorobutadiene       1.0         4-Chloro-3-methylphenol       5.0       85%       80%       6%         2-Methylnapthalene       1.0       1.0       1.0       1.0         1-Methylnapthalene       1.0       1.0       1.0       1.0         1-Methylnapthalene       1.0       1.0       1.0       1.0         1-Methylnapthalene       1.0       2.4,6-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0         2.4,6-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0         2.4,6-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       1.0         2.4,6-Trichlorophenol       5.0       1.4-Dintrobenzene       1.0       2.4,5-Trichlorophenol       1.0         2.4,6-Trichlorophenol       5.0       1.0       1.0       1.0       1.0         2.4,6-Dinitrobenzene       1.0       1.0       1.0       1.0       1.0         2.6-Dinitrobenzene       1.0       2.0       1.0       1.0       1.0       1.0         2.4-Dinitrobenzene       1.0       7.6%       7.8%       3.%       1.0       1.0	1,2,4-Trichlorobenzene	1.0	92%	98%	6%
Hexachlorobutadiene       1.0         4-Chloro-3-methylphenol       5.0       85%       80%       6%         2-Methylnapthalene       1.0       1.0       1.0       1.0         1-Methylnapthalene       1.0       1.0       1.0       1.0         1-Methylnapthalene       1.0       2.4,6-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.4,5-Trichlorophenol       5.0       2.2       2.0       2	Naphthalene	1.0			
4-Chloro-3-methylphenol       5.0       85%       80%       6%         2-Methylnapthalene       1.0       1.0       1.0       1.0         1-Methylnapthalene       1.0       1.0       1.0       1.0       1.0         Hexachtorocyclopentadiene       1.0       5.0       2.4,6-Trichtorophenol       5.0       2.4,6-Trichtorophenol       5.0       2.4,5-Trichtorophenol       5.0       2.2,4,5-Trichtorophenol       5.0       2.2       2.0	4-Chloroaniline	5.0			
2-Methylnapthalene       1.0         1-Methylnapthalene       1.0         1-Methylnapthalene       1.0         Hexachlorocyclopentadiene       1.0         2,4,6-Trichlorophenol       5.0         2,4,5-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-Dinotrobenzene       5.0         2,6-Dinitrotoluene       1.0         1,2-Dinitrobenzene       1.0         Acenaphthene       0.1         3-Nitroaniline       5.0         Dibenzofuran       1.0         2,4-Dinitrotoluene       1.0         76%       78%       3%         2,3,5,6-Tetrachlorophenol       1.0	Hexachlorobutadiene	1.0			
1-Methylnapthalene       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-Dinotrobenzene       5.0         2,6-Dinitrotoluene       1.0         1,2-Dinitrobenzene       5.0         2,6-Dinitrotoluene       1.0         Acenaphthene       0.1         84%       83%         1,2-Dinitrobenzene       5.0         2,4-Dinitrotoluene       1.0         2,4-Dinitrotoluene       1.0         2,4-Dinitrotoluene       1.0         2,4-Dinitrotoluene       1.0         2,4-Dinitrotoluene       1.0         2,3,4,6-Tetrachlorophenol       1.0         2,3,5,6-Tetrachlorophenol       1.0	4-Chloro-3-methylphenol	5.0	85%	80%	6%
Hexachlorocyclopentadiene       1.0         2,4,6-Trichlorophenol       5.0         2,4,5-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-Dinotrobenzene       5.0         2,6-Dinitrotoluene       1.0         1,2-Dinitrobenzene       1.0         Acenaphthene       0.1         3-Nitroaniline       5.0         Dibenzofuran       1.0         2,4-Dinitrotoluene       1.0         3-Nitroaniline       5.0         Dibenzofuran       1.0         2,4-Dinitrotoluene       1.0         2,3,4,6-Tetrachlorophenol       1.0         2,3,5,6-Tetrachlorophenol       1.0	2-Methylnapthalene	1.0			
Hexachlorocyclopentadiene       1.0         2,4,6-Trichlorophenol       5.0         2,4,5-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-Dinotrobenzene       5.0         2,6-Dinitrotoluene       1.0         1,2-Dinitrobenzene       1.0         Acenaphthene       0.1         3-Nitroaniline       5.0         Dibenzofuran       1.0         2,4-Dinitrotoluene       1.0         3-Nitroaniline       5.0         Dibenzofuran       1.0         2,4-Dinitrotoluene       1.0         2,3,4,6-Tetrachlorophenol       1.0         2,3,5,6-Tetrachlorophenol       1.0	1-Methylnapthalene	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-Dinotrobenzene       5.0         2,6-Dinitrotoluene       1.0         1,2-Dinitrobenzene       1.0         Acenaphthene       0.1         1,2-Dinitrobenzene       1.0         Acenaphthene       1.0         Acenaphthene       1.0         1,2-Dinitrobenzene       1.0         Acenaphthene       0.1         3-Nitroaniline       5.0         Dibenzofuran       1.0         2,4-Dinitrotoluene       1.0         2,3,4,6-Tetrachlorophenol       1.0         2,3,5,6-Tetrachlorophenol       1.0		1.0			
2-Chloronaphthalene       1.0         2-Nitroaniline       5.0         1,4-Dinitrobenzene       5.0         Dimethylphthalate       1.0         Acenaphthylene       0.1         1,3-Dinotrobenzene       5.0         2,6-Dinitrotoluene       1.0         1,2-Dinitrobenzene       1.0         Acenaphthene       0.1         3-Nitroaniline       5.0         Dibenzofuran       1.0         2,4-Dinitrotoluene       1.0         76%       78%       3%         2,3,5,6-Tetrachlorophenol       1.0	2,4,6-Trichlorophenol	5.0			
2-Chloronaphthalene       1.0         2-Nitroaniline       5.0         1,4-Dinitrobenzene       5.0         Dimethylphthalate       1.0         Acenaphthylene       0.1         1,3-Dinotrobenzene       5.0         2,6-Dinitrotoluene       1.0         1,2-Dinitrobenzene       1.0         Acenaphthene       0.1         3-Nitroaniline       5.0         Dibenzofuran       1.0         2,4-Dinitrotoluene       1.0         76%       78%       3%         2,3,5,6-Tetrachlorophenol       1.0	2,4,5-Trichlorophenol	5.0			
1,4-Dinitrobenzene5.0Dimethylphthalate1.0Acenaphthylene0.11,3-Dinotrobenzene5.02,6-Dinitrotoluene1.01,2-Dinitrobenzene1.0Acenaphthene0.184%83%1,2-Dinitrobenzene1.0Acenaphthene0.184%83%1,2-Dinitrobenzene1.02,4-Dinitrobenzene1.02,4-Dinitrotoluene1.02,3,4,6-Tetrachlorophenol1.01,01.0	2-Chloronaphthalene	1.0			
Dimethylphthalate 1.0 Acenaphthylene 0.1 1,3-Dinotrobenzene 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-Nitroaniline	5.0			
Acenaphthylene0.11,3-Dinotrobenzene5.02,6-Dinitrotoluene1.01,2-Dinitrobenzene1.0Acenaphthene0.184%3-Nitroaniline5.0Dibenzofuran1.02,4-Dinitrotoluene1.02,3,4,6-Tetrachlorophenol1.02,3,5,6-Tetrachlorophenol1.0	1,4-Dinitrobenzene	5.0			
Acenaphthylene0.11,3-Dinotrobenzene5.02,6-Dinitrotoluene1.01,2-Dinitrobenzene1.0Acenaphthene0.184%3-Nitroaniline5.0Dibenzofuran1.02,4-Dinitrotoluene1.02,3,4,6-Tetrachlorophenol1.02,3,5,6-Tetrachlorophenol1.0	Dimethylphthalate	1.0			
1,3-Dinotrobenzene5.02,6-Dinitrotoluene1.01,2-Dinitrobenzene1.0Acenaphthene0.184%3-Nitroaniline5.0Dibenzofuran1.02,4-Dinitrotoluene1.02,3,4,6-Tetrachlorophenol1.02,3,5,6-Tetrachlorophenol1.0	Acenaphthylene				
2,6-Dinitrotoluene       1.0         1,2-Dinitrobenzene       1.0         Acenaphthene       0.1       84%       83%       1%         3-Nitroaniline       5.0       5.0       5.0         Dibenzofuran       1.0       76%       78%       3%         2,3-4,6-Tetrachlorophenol       1.0       1.0       2,3,5,6-Tetrachlorophenol       1.0					
1,2-Dinitrobenzene       1.0         Acenaphthene       0.1       84%       83%       1%         3-Nitroaniline       5.0       5.0       5.0         Dibenzofuran       1.0       2,4-Dinitrotoluene       1.0       76%       78%       3%         2,3,4,6-Tetrachlorophenol       1.0       1.0       1.0       1.0       1.0	2,6-Dinitrotoluene				
Acenaphthene         0.1         84%         83%         1%           3-Nitroaniline         5.0	•				
3-Nitroaniline5.0Dibenzofuran1.02,4-Dinitrotoluene1.02,3,4,6-Tetrachlorophenol1.02,3,5,6-Tetrachlorophenol1.0	-		84%	83%	1%
Dibenzofuran1.02,4-Dinitrotoluene1.076%78%3%2,3,4,6-Tetrachlorophenol1.02,3,5,6-Tetrachlorophenol1.0	•		0,,0		
2,4-Dinitrotoluene1.076%78%3%2,3,4,6-Tetrachlorophenol1.02,3,5,6-Tetrachlorophenol1.0					
2,3,4,6-Tetrachlorophenol 1.0 2,3,5,6-Tetrachlorophenol 1.0			76%	78%	3%
2,3,5,6-Tetrachlorophenol 1.0			1078	1070	070
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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-Chlorophenyiphenylether	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			
ndeno(1,2,3-cd)pyrene	0.1			
Surrogate recoveries				
2-Fluorophenol		124%	121%	
Phenol-d6		124%	121%	
Nitrobenzene-d5		90%	94%	
2-Fluorobiphenyl		90% 90%	94% 85%	
2,4,6-Tribromophenol		30 <i>%</i> 113%	97%	
FTerphenyl-d14		101%	97% 96%	

Data Qualifiers and Analytical Comments nd - not detected at listed reporting limits <u>Acceptable Recovery limits:</u> 2-Flurophenol: 10-135 % Phenol - d5: 10-135 % 2,4,6- tribromophenol: 29-159% Nitrobenzene - d5: 20-120 % 2-Flurobiphenyl: 50-150% p-Terphenyl-d14: 50-150% Acceptable RPD limit: 35%

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Environmental

Services Network

RECEIVED MAR 2.0 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

heldborgs

Julie Woods Office Manager

1210 Eastside Street SE, Suite 200: Clympia, Washington 98501. 2 360:459:4670. EFAX:360:459:3432 Web Site: www.esuniv.com

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	Soil
Date extracted	Reporting	03/10/06	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	03/10/06
Moisture, %			17%	14%	17%	18%
Kerosene/Jet fuel	20	nd	nd	nd	nď	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	bn	nđ	nd
Surrogate recoveries:						i
Fluorobiphenyl	· · · · · · · · · · · · · · · · · · ·	85%	87%	89%	82%	88%
o-Terphenyl		102%	102%	96%	98%	' <b>95%</b>

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

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	nđ	nd	nď
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 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	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, %		·	23%		1
Mineral spirits/Stoddard solvent	5.0	nđ	nd	nd	i nd
Gasoline	5.0	nd	14	nd	nd
Surrogate recoveries:					
Fluorobiphenyi		85%	92%	83%	91%
o-Terphenyl		102%	103%	97%	96%

Soil	MTH BLK	LCS	330-PEX-1-6'			
Soil			220-LCV-1-0	MS	' MSD	RPD
	Soil	Soil	Şoil	Soil	Soil	
Reporting	03/10/06		03/10/06	03/10/06	03/10/06	
Limits	03/13/06	03/13/06	03/13/06	03/13/06		
			23%			
0.02	nd	114%	ind	107%	113%	5%
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#### Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

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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%

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## **Chain of Custody Record & Laboratory Analysis Request**

ARI Assigned Number:	Turn-around	Requested:	Co 201		Page:		of					al Resources, Incorporated al Chemists and Consultants	
ARI Client Company:		Phone:	<del>Gar 29</del>	38-2699	Date: Ice 3906 Present?						4611 South 134th Place, Suite 100 Tukwila, WA 98168		
Client Contact: GEOFF GARRIS					No. of Coolers	and a stand of the	Cooler Temps				206-695	-6200 206-695-6201 (fax)	
Client Project Name:								Analysis F	Requested		<del></del>	Notes/Comments	
BLOCK 40 5+W	Samplers:	÷,			C + (NUD)	િંગ	221						
33757035			· · · · · · · · ·		بن بر	E v	15×						
Sample ID	Date	Time	Matrix	No. Containers	Diese	Low TPH	2 Té						
318-21-15'	3/2/06	1130	5	(	X						_		
318-5-151	3/2/06	1/30	S	,	X		-						
318-5-15'	3/2/06	1345	5	1	X								
318-FLOOR1-18'	3/2/06	1200	5	1	X				·				
318-FLOORZ-18'	3/2/06	1200	S	1	X						_		
330-5P-1-030906	2/0/00		5		X	×	¥						
330-58-2-030106	319/06		5	3	*	*							
330-PEX-16	3/9/06	1500	S	3	x	x	×						
		$\langle \rangle$											
Comments/Special Instructions	Relinguished by	+	21	Received by:	V	$\overline{a}$	I	Relinquishe	d by:	<u>.                                    </u>	Received by		
	(Signature)	)acity	ll _	(Signature) Printed Name:	7~1	~		(Signature) Printed Nan	16'	<u> </u>	(Signature) Printed Nam	e:	
	Printed Name:	HV255=	~		rone			1 10160 1140					
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	1525		<u></u>	3/9	104 1	525		<u> </u>					

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, not withstanding 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:		Requested:	<u></u>	<u> </u>	Page	:	of			1		Analyti	cal Resources, Incorporated
ARI Client Company:	ر	Phone:			Date		ICe -	i se di s				4611 S	cal Chemists and Consultants outh 134th Place, Suite 100
Client Contact:			<u> </u>		39 No. of Coolers		Cool Temr	ent? er os:			Ý	Tukwila	, WA 98168 5-6200 206-695-6201 (fax)≁
Client Project Name:						<u>n fiz (</u> zzaliterze);	ter But gerleit tree fille -	in April 18 hours and the	Requester			<u> </u>	
BLOCK 40 E+W		·				`		1		ή·	<u> </u>	7	Notes/Comments
Client Project #: 33757035	Samplers:	· .			Ct Ct	ुं स	N N			Ган-			
Sample ID	Date	Time	. Matrix	No. Containers		Tet 1	2 15 X						
318-11-15'	3/2/06	1130	S		X						<u> </u>	<u> </u>	
318-5-151	3/2/06	1/30	S	1	X		· · ·			†	<u> </u>		
318-E-15'	3/2/06	1345	S	1	X			. 					
318- FLOOR 1-181	3/2/06	1200	S	1	×		<u> </u>						
318-FLOORZ-18'	3/2/06	1200	5	A.	. X								
330-22-1-030906	3/9/25		5	-23-	x	×	_X_		- <u> </u>		<u></u>		
330-9-2-030406	statos		S I	3-					<u> </u>		<u> </u>	·	
330-PEX-16	3/9/06	1500	S	3	x	x						<u>-</u> -	
							<b>X</b> C	· · ·	· · · · ·				
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Comments/Special Instructions	Relinguished by	1 7	11	Received by:				Relinquished	by:	l	I	,Received by:	
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and the second se	$\sim$			Printed Name: -				Printed Name		<u> </u>		Printed Name	x
с i <sup>с</sup>	Company;	<u>-225 V.1</u>		Company:	me								
	urs	Caro.		F.	SN			Company:				Company:	
· · · · · · · · · · · · · · · · · · ·	Date & Time: M	erch. 9	ran	Daté & Time:		25	. × ÷	Date & Time;	<u>.</u>			Date & Time:	

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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.



Environmental

Services Network

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

1210 Eastside Street SE, Suife 200 B Olympia, Washington 98501 B 360:459:4670 FAX 360:459:3432 Web Site: www.esnnw.com

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

				1	DUP
· ·	MTH BLK	PEX-330-2-9'	PEX-330-3-9	PEX-330-4-10	PEX-330-4-10'
Soil	Soil	Soil			Soil
Reporting	03/13/06	03/13/06			03/13/06
Limits	03/13/06	03/13/06			03/13/06
		23%	20%	19%	19%
20	лd	nd	nd		nd
20	-				
50	nd	nd	. nd	nd	¦nď nd
				· · · · · ·	
	98%	132%	105%	125%	119%
	109%	104%	109%	106%	
	Reporting Limits 20 20	Soil         Soil           Reporting         03/13/06           Limits         03/13/06           20         nd           20         nd           50         nd           98%	Reporting         03/13/06         03/13/06           Limits         03/13/06         03/13/06           23%         23%           20         nd         nd           20         nd         nd           50         nd         nd           98%         132%	Soil         Soil         Soil         Soil         Soil         Soil         Soil         Soil         Reporting         03/13/06	Soil         Soil <th< td=""></th<>

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

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

NWTPH-Gx, mg/kg		MTH BLK	PEX-330-2-9'	PEX-330-3-9
Matrix	Soil	Soil	Soil	Soi
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	
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	<u>Soi</u>
Date extracted	Reporting	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	nď	114%	nd	nd
Toluene	0.05	nd	112%	nd	nd
Ethylbenzene	0.05	nd		0.37	nd
Xylenes	0.05	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 Job Number:	S60310-1
Client:	URS
Client Job Name:	BLOCK 40 E+W

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

Analytical Results			DU
NWTPH-Gx, mg/kg		PEX-330-4-10'	PEX-330-4-10
Matrix	Soil	Soil	So
Date extracted	Reporting	03/13/05	03/13/0
Date analyzed	Limits	03/13/06	03/13/0
Moisture, %	·	19%	199
Mineral spirits/Stoddard solvent	5.0	nd	
Gasoline	5.0	1,800	1,70
Surrogate recoveries:			
Fluorobiphenyl		125%	119%
o-Terphenyl		106%	107%

BTEX (8260), mg/kg	P	'EX-330-4-10'	MS	MSD	RPD			
Matrix	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			0.0			
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%

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PHONE: (206) 4			· ·	· · ·				•		•				1. ·		•		э.		•			•					[
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## Environmental

Services Network

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 Konnie

Michael A. Korosec President

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

Analytical Results			<u> </u>					DUF
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	So
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	03/29/00
Moisture, %	·····		22%	22%	22%	22%	25%	25%
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	nđ	л
Diesel/Fuel oil	20	nd	nd	nd	nd	nd	nd	ກດ
Heavy oil	50	nd	nd	nd	nd	nd	nd	na
Surrogate recoveries:								
Fluorobiphenyl		107%	101%	94%	95%	97%	99%	97%
o-Terphenyi		<b>1</b> 11%	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%

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Environmental

Services Network

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 Kome

Michael A: Korosec President

1210 Eastside Street SE, Suite 200 🗉 Olympia, Washington 98501 🖷 360,459,4670 🛋 FAX 360,459,3432 Web Site: www.esnnw.com

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

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

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
Date analyzed	Limits	03/24/06	03/23/06	03/24/06	03/24/06
Moisture, %				14%	11%
Benzene	0.02	nď	115%	nd	nd
Toluene	0.05	nd	114%	лd	nď
Ethylbenzene	0.05	nd		0.29	nd
Xylenes	0.05	nd		0.37	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 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, %	·		٩.	1.
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%
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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,

Juli Worts

Julie Woods *Office Manager* 

1210 Eastside Street SE, Suite 200 🛎 Olympia, Washington 98501 🖬 360.459.4670 🖬 FAX 360.459.3432 Web Site: www.esnnw.com

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	Soi
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%	
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	Soi
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	nď	112%	nđ	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	<u> </u>	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%

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, %	·	······	····	ر مرا
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%

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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,

futue Woofs

Julie Woods Office Manager

1210 Eastside Street SE, Suite 200 Clympia, Washington 98501. 360.459.4670. FAX 360.459.3432. Web Site: winn esnue com

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

## NWTPH-Gx / BTEX (8260)

NWTPH-Gx, mg/kg		MTH BLK	330-SP-6	330-SP-7
Matrix	Soil	Soil	Soil	Soi
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, %				16%
Mineral spirits/Stoddard solvent	5.0	nd	nđ	nd
Gasoline	5.0	nd	620	27
Surrogate recoveries:				
Fluorobiphenyl		93%	112%	117%
o-Terphenyl		105%	104%	108%

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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%	nđ	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 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	nđ			
Surrogate recoveries:					
Dibromofluoromethane	-	102%	102%	100%	
Toiuene-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

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Environmental Services Network

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 & Konsee

Michael A. Korosec President

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	nđ	nď	nd .	nd
Gasoline	0.10	nd	nd	nd	3.4	5.6
Surrogate recoveries:					ſ	
Fluorobiphenyl		102%	91%	94%	108%	118%
o-Terphenyl		99%	99%	102%	<b>98%</b> ¦	100%

BTEX (8260), μg/l		MTH BLK	LCS	MW-3	MW-2	MW-1
Matrix	Water	Water	Water	Water	Water	Water
	Reporting					
Date analyzed	Limits	04/17/06	04/17/06	04/17/06	04/17/06	04/17/06
Benzene	1.0	nđ	104%	nd	nd	l nd
Toluene	1.0	nd	108%	nd	nd	nd
Ethyibenzene	1.0	nď		nd	2.7	6.0
Xylenes	1.0	nd		nd	6.9	20
Surrogate recoveries: Dibromofluoromethane Toluene-d8 4-Bromofluorobenzene		101% 101% 100%	100% 100% 99%	98% 99% 98%	99% 100% 100%	101% 102% 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						1 1

Acceptable Recovery limits: 65% TO 135% Acceptable RPD limit: 35%

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

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

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%

			GRAB	GRAB	
BTEX (8260), μg/l		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%

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Environmental

Services Network.

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 forme

Michael A. Korosec President

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:				t i
Fluorobiphenyl		76%	78%	77%
o-Terphenyl		97%	102%	99%

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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:					1
Dibromofluoromethane		106%	108%	108%	106%
Toluene-d8		105%	104%	105%	104%
4-Bromofluorobenzene		106%	105%	104%	104%
Data Qualifiers and Analytical Comments					1 1
nd - not detected at listed reporting limits na - not analyzed					
C - coelution with sample neaks					1

C - coelution with sample peaks M - matrix interference

J - estimated value

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

# NWTPH-Gx / BTEX (8260)

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	nď	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

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

# NWTPH-Gx / BTEX (8260)

NWTPH-Gx, mg/kg		TP2-330-PE-30.5	TP2-330-PE-28	TP2-330-PE-25.5
Matrix	Soil	Soil	Soil	Soi
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%

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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

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

# NWTPH-Gx / BTEX (8260)

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	Soil
Date extracted	Reporting	04/06/06	04/06/06	04/06/06	04/06/06
Date analyzed	Limits	04/06/06	04/06/06	04/06/06	04/07/06
Moisture, %	<u> </u>	6%	14%	11%	7%
Mineral spirits/Stoddard solvent	5.0	nd	nd	nd	nd
Gasoline	5.0	nd	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	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, %		6%	14%	11%	. 7%
Benzene	0.02	nd	nd	nd	nd
Toluene	0.05	nd	nd	. nd	·nd
Ethylbenzene	0.05	nd	nd	nd	· nd
Xylenes	0.05	nd	nd	nd	nd

ounogate recovenes.			·	
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%

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 04/06/06 04/06/06 04/06/06 Reporting 04/06/06 Date analyzed 04/07/06 04/07/06 Limits 04/07/06 04/07/06 Moisture, % 7% 17% 8% 8% Mineral spirits/Stoddard solvent 5.0 nd nd nd nd Gasoline 5.0 nđ nd nd лđ Surrogate recoveries: 82% Fluorobiphenyl 78% 79% 80% 1 o-Terphenyl 98% 102% 105% 95%

					TP3-330-PE-22
BTEX (8260), mg/kg		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%
Benżene	0.02	nđ	nd	nd	125%
Toluene	0.05	nd	nd	nd	128%
Ethylbenzene	0.05	nd	nd	nd	
Xylenes	0.05	nd	nd	nd	L
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

ESN Job Number:S60406-3Client: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-Terphenyi		

TP3-330-PE-22 BTEX (8260), mg/kg MSD RPD 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 0.05 **Xylenes** Surrogate recoveries: Dibromofluoromethane 107% Toluene-d8 105%

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

4-Bromofluorobenzene

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%

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105%

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%

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SAMF	LE DISPOSAL INSTRUCTIO	NS T	RECEIVED GOOD COND./COLD	
	SAL @ \$2.00 each [] Return		NOTES:	Turn Around Time: 24 HR 48 HR 5 DAY



# Environmental

Services Network

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 know

Michael A: Korosec President

1210 Eastside Street SE, Suite 200 🖀 Olympia, Washington 98501 🖻 360.459.4670 🛢 FAX 360.459.3432. Web Site: www.esnnw.com

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%

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

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

NWTPH-Gx, mg/kg		MTH BLK	330-PEX-5-12'	330-PEX-6-13'	330-PEX-7-15
Matrix	Soil	Soil	Soil	Soil	Soi
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:					1
Fluorobiphenyl		91%	112%	142% C	89%
o-Terphenyl		104%	104%	111%	102%

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BTEX (8260), mg/kg		MTHBLK	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%

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

# NWTPH-Gx / BTEX (8260)

Analytical Results						ÐUP
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% 🤯	<u> </u>		
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%	÷

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%

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Environmental Services Network



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,

Michael a Korone

Michael A: Korosec President

S60417-2
URS
BLOCK 40
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	<u> </u>
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	<u></u>	nd		nd	nd
Surrogate recoveries:						
Fluorobiphenyl		91%	84%	124%	86%	86%
o-Terphenyl		113%	112%	118%	120%	120%

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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	nď	108%	nd	nd	nd	חט ו חל
Ethylbenzene	0.05	nd		nd	nd	nd	
Xylenes	0.05	nd		nd	nd	nd	nđ nđ
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 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-Terphenyi		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%	

4-Bromofluorobenzene

Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

Toluene-d8

 $\ensuremath{\mathbf{C}}$  - 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%

Page 2 of 2

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Environmental Services Network

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 & Konne

Michael A. Korosec President

1210 Eastside Street SE, Suite 200 🖬 Olympia, Washington 98501 🖬 360 459 4670 🖬 FAX 360 459 3432 Web Site: www.esninw.com

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

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

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Analytical Results	·			DUP
NWTPH-Gx, mg/l		MTH BLK	BAKER TANK	BAKER TANK
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:				
Fluorobiphenyi	·	105%	100%	95%
o-Terphenyl		108%	104%	105%

BTEX (8260), μg/l		MTH BLK	LCS	<b>BAKER TANK</b>	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	
Date sampled	Reporting	<u> </u>		05/05/06			
Date analyzed	Limits	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%	
Ethylbenzene	1.0	nd	11470	nd	12076	113%	6%
Xylenes	1.0	nd		nď		)	
	-						
Surrogate recoveries:						ľ	
Dibromofluoromethane		109%	105%	108%	108%	108%	
Toluene-d8		104%	103%	102%	102%	103%	
4-Bromofluorobenzene		99%	105%	101%	102%	103%	

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M - matrix interference

J - estimated value

Acceptable Recovery limits: 65% TO 135% Acceptable RPD limit: 35%

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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,

Michael a Know

Michael A. Korosec President

1210 Eastside Street SE, Suite 200 Clympia, Washington 98501 St. 360.459.4670 Street SE, Suite 200 Olympia, Washington 98501 St. 360.459.4670 E-Mail: info@esinnw.com

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	Water Water Water V   05/08/06 05/08/06 05/08/06 05/0   Reporting 05/09/06 05/09/06 05/09/06 05/09/06	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		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	
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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		nđ	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%
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Environmental

Services Network



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,

11 Josts

Julie Woods Office Manager

1210 Eastside Street SE, Suite 200 🖬 Olympia, Washington 98501 🖬, 360.459.4670 🛢 FAX 360.459.3432 Web Site: www.esnnw.com E-Mail: info@esnnw.com

#### 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)**

NWTPH-Gx, mg/l		MTH BLK	BAKER TANK	PZ-01	D7 00	
					PZ-02	PZ-03
Matrix	Water	Water	Water	Water	Water	Water
Date collected			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
Date analyzed	Limits	05/12/06	05/12/06	05/12/06	05/12/06	05/12/06
Mineral spirits/Stoddard solvent	0.10	nd	nd	nď	Ind	nd
Gasoline	0.10	nd	nd	4.4	0.36	nď
Surrogate recoveries:						
Fluorobiphenyl		91%	91%	112%	94%	89%
o-Terphenyl		101%	102%	100%	98%	101%

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BTEX (8260), µg/l		MTH BLK	LCS BA	KERTANK	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		nď	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:			
Fluorobiphenyi	_	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%

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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. 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 & Ronnie

Michael A. Korosec President

1210 Eastside Street SE, Suite 200 🔳 Olýmpia, Washington 98501 📮 360.459.4670 🖷 EAX 360.459.3432 Web Site: www.esnnw.com

#### 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
Client Job Number:	

## 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%

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BTEX (8260), μg/l		MTH BLK	LCS	BAK	ER 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%			
Toluene	1.0	nd	102%		nd	i nd
Ethylbenzene	1.0	nd	10270		nd	1.1
Xylenes	1.0	nd			nd	3.9 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		l		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	P	Z-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%

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Data Qualifiers and Analytical Comments

nd - not detected at listed reporting limits

na - not analyzed

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C - coelution with sample peaks

M - matrix interference

J - estimated value

Acceptable Recovery limits: 65% TO 135% Acceptable RPD limit: 35%

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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.

Michaela Korene

Michael A. Korosec President

1210 Eastside Street SE, Suite 200 🖬 Olympia, Washington 98501 🖷 360.459.4670 🖬 FAX 360.459.3432 Web Site: www.esnnw.com

#### 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)

NWTPH-Gx, mg/l		MTH BLK	BAKER TANK 5-19-06
Matrix	Water	Water	Wate
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%

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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%

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			

ourregule recordinee.		
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

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Acceptable Recovery limits: 65% TO 135%

Acceptable RPD limit: 35%

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Environmental Services Network

June 6, 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 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 Konsee

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 L	imits	I	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

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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 Korone

Michael A. Korosec President

## ESN NORTHWEST CHEMISTRY LABORATORY

BLOCK 40 TERRY/HARRISON PROJECT Seattle, Washington URS

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 Li	mits	1	1	1	1	100	

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"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

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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

michael a Kinsee

Michael A. Korosec

## 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 L	imits	0.02	0.05	0.05	0.05	10	

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"---" 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

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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,

Midal a Kome

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@esnnw.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 L	imits	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

CLIENT: <u>URS</u>												DA	TE:	6	12/0	6			PAGE	1	
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Sample Number	Depth			Container Type	<u>/\$/</u>	\$\$ <u>}</u>	18/1	<u>``/``</u>	<u> </u>	<u> </u>	<u>~~/~</u>	X8/	\$\$/{	8/5	r Nez	$\langle \rangle$	87 X		NOTES		
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# APPENDIX F

## **BORING LOGS**

# Log of Boring PZ-1

Sheet 1 of 1



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# Log of Boring PZ-2

Sheet 1 of 1

Date(s) 4/17/06 Drilled	Logged By	МН	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 ~30.5 feet MSL
Groundwater Level 14 ft	Sampling Method	2.5" Dames & Moore	Hammer Data 300-Ib Auto Hammer
Borehole Backfill	Location	Well located at bottom of excava	ation



# Log of Boring PZ-3

Sheet 1 of 1



ENV2 W/O WELL T/ONEWORLD/33757035 315 TERRY AVENUE/33757035.GPJ URSSEA3.GDT 6/27/05

# Log of Boring SB-1

Sheet 1 of 2

Date(s) Drilled	) 6/	/2/2006			-			Logged By EL	Checked By	
Drilling	u	ollow St	em Au	aer				Drilling Concerts Defiling	Total Depth 22.6	eet bas
Method Drill Ri		ME-75 T			d			Drill Bit 4 25" ID	Ground Surface	
Type		Level (fee						Sampling Domes & Masse	Elevation Hammer 300-lb Doy	wahole
Boreho	le		, bgoj		.84			Method Dames & Moore	Data Storig Do	
Backfill										
Elevation, feet	Downhole Depth, feet		Blows/ 6in.	Recovery (%)	OVM (ppm)	Graphic Log	nscs	MATERIAL DESCRIF	TION	REMARKS AND OTHER TESTS
	- - - 5-	2	333242		0 0	-	SM/ SP	2" asphalt 6" concrete Light brown, silty fine SAND (loose) (dry) (no appare staining) (fill) Same as above, trace medium sand (no apparent pe staining) (fill)	- - - -	
	-	~	2 2 4 2		0		ML	Same as above, trace oxidation Light gray SILT with trace fine sand (non-plastic) (dry petroleum odor or staining) Light brown, silty fine SAND (loose) (dry) (no apparent		
	10- -	4	2 4 6		0		ML	staining) Light gray SILT with trace fine sand (non-plastic) (dry petroleum odor or staining)		
	-	ισ	8 8 12		0	-	SP	Light grayish brown fine sand with little silt (loose) (dr petroleum odor or staining)	y) (no apparent _ -	
	15-	œ	4 6 7		0	- - -		Same as above, light gray (no apparent petroleum oc	lor or staining) 	
	-	<b>N</b> ~	4 5 7		0	-	SM	Light gray, silty fine SAND, trace oxidation 17.25'-17. (no apparent petroleum odor or staining)	75' (loose) (damp)	
	<b>20</b> -	∞	5 8 8		0	-		Light gray, silty fine SAND with little medium sand 19 SAND/SILT bedding 19.25'-20' (loose) (damp) (no ap odor or staining)		
	-	თ	12 12 14			-	SP	Light gray fine SAND with little medium sand (loose) petroleum odor or staining)	ury) (no apparent - -	
	25	6	4 4 8			  -  -		Same as above, grading to fine sand at 25' (no appar staining)	_	
	-	÷	5 10 23					Light gray, fine to medium SAND (medium dense) (dr petroleum odor or staining)	y the apparent -	
1	30_	¥ 2	50/5"		· 0	-		Light gray fine SAND with trace medium sand (dense apparent petroleum odor or staining)	) (damp) (no 30 ft ¥	
										· · ]

URS

# Log of Boring SB-1

Sheet 2 of 2

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	Elevation, feet	Downhole Depth, feet	Type Number	Blows/ 6in.	Recovery (%)	(mqq) MVO	Graphic Log	nscs	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
		- JU -	₽ ₽	10 10 15		>2000		-	Same as above (wet) (petroleum odor and staining)	- Sample SB1-32
		- 35-	-	15				-	Boring was completed to 33' bgs. Groundwater was encountered at 30' bgs. Boring was backfilled with bentonite on 6/2/06.	-
		۔ • ۔						-		
		<b>40</b> -						-		
								-		
6/27/08		<b>45</b> -								-
URSSEA3.GDT		- 50-	-					- -		
URSSEA3B.GLB			-					-		
(33757035.GPJ		55-	-					- -		
<b>TERRY AVENUE</b>		•	-					-	•	-
N33757035 315 1		60-						- - - -		
ENV2 W/O WELL T: ONEWORLD:33757035 315 TERRY AVENUE:33757035.GPJ URSSEA3B.GLB URSSEA3.GDT 6/27/06								- - -		
2 W/O WELL		6 <del>5</del> -	<u> </u>	<u> </u>		L	<u> </u>			<u> </u>
Ξl										

# Log of Boring SB-2A

Sheet 1 of 1

Drilleu	6/2/2006	3					Logged By	EL.	-	Checked By	· · · · · · · · · · · · · · · · · · ·		
Drilling Method	Hollow	Stem Au	ger							18 feet bgs			
Drill Rig Type	CME-75	Track-N	lounte	d			Drill Bit Size/Type	4.25" ID		Ground Surface Elevation			
Groundwate	Level (f	eet bgs)			_		Sampling Method	Dames & Moore		Hammer 300-lb	Downhole		
Borehole Backfill													
• •	SAMPLES												
Elevation, feet Downhole Denth feet	Type Number	Blows/ 6in.	Recovery (%) OVM (ppm)		Graphic Log	nscs		MATERIAL DESCRIPTION			REMARKS ANI OTHER TESTS		
U	-	324		0		- SP -	2" aspha 6" concr Light bro odor or s	alt ete own fine SAND with little silt (loose) (o staining) (fill)	dry) (no	apparent petroleum			
5	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	24 22 2		0			Light bro apparen	own, silty fine SAND with trace mediu t petroleum odor or staining)	im sand	(loose) (dry) (no	Driller reports concrete debris. Lat		
10 <sup>.</sup>	-	2 6 8		0		<del>SP</del> ML -	Light gra Light gra staining) Slough n		arent pel	troleum odar or	abandoned water lir No sample collecter Water filled borehol to approximately 5' bgs.		
		12 12 12		0		- - - SP	8" slouat		, dense)	(no apparent			
15		7 9 10 10 14 17		0		- 5P - -	Same as	m odor or staining)	( donsoy				
20 <sup>-</sup>						 - - -	Groundw	ras completed to 18' bgs. vater was not encountered. ras backfilled with bentonite on 6/2/06	6.				
· 25·	-			•		- - - -							
30-						- -		-URS		· · · · · · · · · · · · · · · · · · ·	-		

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ENV2 WITH WELL

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# Log of Boring SB-2B (UMW-1)

Sheet 1 of 2



Same as above (no apparent petroleum odor or staining)

ENV2 WITH WELL THONEWORLD133757035 315 TERRY AVENUE33757035.GPJ URSSEA38.GLB URSSEA3.GDT 6/27/06

# Log of Boring SB-2B (UMW-1)

Sheet 2 of 2

No.         No. <th></th> <th></th> <th></th> <th>SA</th> <th>MPLE</th> <th>S</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>				SA	MPLE	S						
8         8         0         Single 28 addres data maturing and in 0.00 (medium dense) (wel) (petroleum, considered and staining)         Single 28 addres data maturing and in 0.00 (medium dense) (wel) (petroleum, considered and staining)           35         10         6         > 2000         Single 28 addres data maturing and in 0.00 (medium dense) (wel) (petroleum, considered and staining)         Single 28 addres data maturing)         Single 24 addres datadtadtadtres data ma	Elevation, feet		Type	Number	Blows/ 6in.	Recovery (%)	OVM (ppm)	Graphic Log	nscs			REMARKS AND WELL DETAILS
9         10         >2000         - <td></td> <td>30-</td> <td></td> <td></td> <td>8 11 14</td> <td></td> <td>0</td> <td></td> <td>-</td> <td>Same as above, trace medium sand 30'-30.5' (medium dense) (no apparent petroleum odor or staining)</td> <td></td> <td></td>		30-			8 11 14		0		-	Same as above, trace medium sand 30'-30.5' (medium dense) (no apparent petroleum odor or staining)		
10         6         >2000         Weaking of all consider of all of measure in a D conset (staturated)           11         50/57         >2000         Same as above (petroleum odor and stating)           40         Same as above (petroleum odor and stating)         Same as above (petroleum odor and stating)           40         Same as above (petroleum odor and stating)           40         Groundwater same difference           56         Same as above (petroleum odor and stating)           56         Same as above (petroleum odor and stating)           60         Same as above (petroleum odor and stating)           56         Same as above (petroleum odor and stating)				9	10 10		>2000		- - -	Light gravish brown fine SAND (medium dense) (wet) (petroleum odor and staining) 33 ft <u>Y</u> .		Sample SB2-33
40     Boring was completed to 40 hgs. Groundwater setimated at 33 hgs. Monitoring well installed. Ecology ID APC-008. Screer: 40-297. 22-Diameter Standule 40 PVC (to Stor) Screer: 40-297. 22-Diameter Standule 40 PVC (to Stor)       45     -       45     -       50     -       50     -       60     -       61     -		<b>35</b> -		10	16 17				-	Medium gray fine SAND with trace medium and coarse sand, very trace 1" subrounded gravel (medium dense) (saturated) (petroleum odor and staining)		
Borning well inset of a range.         Consistent and a state of the range.         Consistent and the state of the range.         Consistent and the state of the range.         Screen : 40-30" 2*-Diameter Schedule 40 PVC (10 Sici)         Saret : 40-27" Contract 102 Sitiste         Bentonites 27": 1* Purepold Medium         Contract 10"         Contract 10"         Flueth Mount Completion         415         50         51         56         66         66         66         66         66         66				11	50/5"		>2000		-	Same as above (petroleum odor and staining)		
		<b>40-</b> - -							- -			
		45-							-			
		-							-	-		
		- 50-						-	-			
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URS		65–										
		_								URS		

# Log of Boring SB-3

Sheet 1 of 2



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# Log of Boring SB-3

Sheet 2 of 2

		ŚA	MPLE					· · · · · · · · · · · · · · · · · · ·	
Elevation, feet	<b>Downhole</b> Depth, feet	Type Number	터 Blows/ 6in.	Recovery (%)	(mqq) MVO	Graphic Log	nscs	MATERIAL DESCRIPTION	REMARKS AND OTHER TESTS
	35-		7 11 12		>2000			- 33 ft ¥. Medium gray fine SAND (medium dense) (wet) (petroleum odor or staining) -	Sample SB3-33.5
	<b>40</b> -						-	Boring was completed to 40' bgs. Groundwater estimated at 33' bgs. Boring was backfilled with bentonite on 6/2/06.	
GDT 6/27/06	45						-	-	
I URSEA3B.GLB URSSEA3.	- <b>50</b> - - -						-	-	
ERRY AVENUE33757035.6PJ	- 55- - -						- - -	- 	
ENV2 W/O WELL THONEWORLD133757035 315 TERRY AVENUE133757035.GPJ URSSEA38.GLB URSSEA3.GDT 6/27/06	- 60- - -						-	-  - - -	
ENV2 W/O WELL TA	65-						-	URS	
## **APPENDIX G**

### GROUNDWATER SAMPLING LOGS

n w MW-1 Well Number: Sample Number: 33757035,00023 0CK 40 Project Name: Project/Task: 106 Date: Well Depth: Measuring Point (MP): Water Depth: Elevation of MP: Elevation of Water: Feet of Water: Gallons per Foot: v 2 Well Diameter: Well Volume: Well **Purge Volume:** Gallons per Diameter casing foot 2 inches 0.16 4 inches 0.65 sporable Ha U-22 Purge Method: pH meter: Hains (( Sample Method: Eh meter: Water Disposal: Conductivity meter: Weather: D.O. Meter: Sampler(s): Calibration Date: QA/QC Samples **Blind** Duplicate MS/MSD Replicate Blank Sample **Field Parameters** 0 1 2 3 5 4 Volumes Volumes Volume Volumes Volumes Volumes Temperature 5.7 pН 0 7,07 Conductivity 0.719 Ô) 207 Eh e 2 10 **Dissolved** Oxygen U 17 9.9 9.0 Turbidity C0 Time 510 σŪ **BOTTLE REQUIREMENTS** Analysis Bottle Number Number Bottle Bottle Number MS/MSD MS/MSD Type ; Type Number V04 TPH 3 BTEX . ..... ં ન

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MIN-Z MW-Z Well Number: Sample Number: BLOCK 40 33757035.00023 Project Name: Project/Task: Date: Well Depth: Measuring Point (MP): ð¢ 08 0, Water Depth: Elevation of MP: Feet of Water: Elevation of Water: Gallons per Foot: Well Diameter: Well Volume: Well **Purge Volume:** Gallons per Diameter casing foot 2 inches 0.16 4 inches 0.65 ple Harle rb. Purge Method: 4-22 pH meter: Sample Method: Eh meter: Water Disposal: Conductivity meter: Weather: D.O. Meter: Sampler(s): Calibration Date: QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Sample **Field Parameters** 0 1 2 3 5 Volumes Volume Volumes Volumes Volumes Volumes Temperature 1 6,0 pН 86 88 0.86 Conductivity 0,235 25 フリら • Eh  $\nu_{T}$ 0.0 Dissolved Oxygen Turbidity Ю 999 q ( ) q Time 440 3 **BOTTLE REQUIREMENTS Analysis** Bottle Number Number Bottle Bottle Number MS/MSD Туре Type Number MS/MSD TPH V.OA 3 • • • BIE of the . ٠. 1

Wa Wa Sa

MW-3 MW-3 Well Number: Sample Number: 40 BLOCK 757035,0002 Project Name: Project/Task: 25 Date: 00 Well Depth: Measuring Point (MP): いて 5. 16 72 12 Water Depth: Elevation of MP: Feet of Water: Elevation of Water: Gallons per Foot: ĩ٢ ÷ Well Diameter: Well Volume: **Purge Volume:** Well Gallons per Diameter casing foot 2 inches 0.16 4 inches 0.65 orable Houto U-27 Purge Method: pH meter: Eh meter: Sample Method: Water Disposal: Conductivity meter: Weather: D.O. Meter: Calibration Date: Sampler(s): QA/QC Samples **Blind** Duplicate MS/MSD Replicate Blank **Field Parameters** 2 3 5 Sample 0 1 Volumes Volume Volumes Volumes Volumes Volumes Temperature 6.2 О  $\mathbf{pH}$ 13 6.79 6.78 Conductivity 6.222 2 0,199 • Ś Eh Dissolved Oxygen 10.3 1,2 NO, Ó υ Turbidity 94 Time Û 00 **BOTTLE REQUIREMENTS** Analysis. **Bottle** Number Number **Bottle** Bottle Number MS/MSD Туре Туре Number MS/MSD BTEX VOA 3 . .

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# GROUNDWATER SAMPLING DATA SHEËT

Project Name:	BLOCI	240 -	ney/Hracis	De-1	Location	1-1-	dlaver to		ge 1 of
Project/Task N				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Location: Weather:	<u> </u>		1404NJSON	
Date:		6 1	- 66		Samplers:		Sunny AC		
<u> </u>	<u> </u>		- 0-9				10		
	Purging Data								
Station Numbe	21:		N-4	<u>.                                    </u>	Screen Interval		30-40		
Station Type:			NW		Well Diameter:		_Annulus Dia	<b>.</b>	<u> </u>
Well Condition	1:		NEN		Gallons per Cas (2* well: 0.16 gal/il; 4* w	ing Foot: et: 0.65 gave)	<u>3 volui</u>	mer = 3.7	GALLON
Reference Poir	nt:		Elevation:		Gallons per Ann (8" annulus with 2" casing	ulus Foot: - 1.85 gal/fi; 6" azzutu	s with 2" casing = 1.34	gal/ft)	
Depth to Water	r:	32.31	Elevation:		One Purge Volu				
Depth to Botto	m:		Feet of Water:		Final Purge Vol	ume:			
Depth to LNAI			Thickness:		Purge Method:		BAILE	R.	
NAPL Descri	ption:				Water Disposal	Qty:	·		
Containers		, <u> </u>	<u> </u>		Meter Informa	tion			
nalysis		Туре	Primarty Qty	MS/MSD Qty			Model &	LIBA U-ZZ Calibration Date	6/6/01
NWTPH	Gv				pH	3.9			1030
BTEX					Eh				
					Conductivity	: <u>0,44</u>	4	S/m	
				,	DO Meter			mgll	
		<u> </u>			Turbidity	: <u>9.0</u>	<u> </u>	itu	
		<u> </u>			Temperature		1	°C	
					ORP Other	: 28	<u>6</u>	V	
ampling Data				<u> </u>	Field Test Kit F	Results:		QA/QC Sampl	es:
ample Name:			-mw-l		PID:			Duplicate:	
ample Method		BAIL		———	DO:			Replicate:	
ampling Devic ubing Depth:	e:	BAI	LER		Alkalinity:	<u> </u>		MS/MSD:	
ump Intake De	oth:				Ferrous Iron: Other:			Blank: Other:	
leld Paramete Volume	Temperature		Conductivity	ORP	DO	Turbidity	Time	Water Level	Flow Rate
(gallons)	<u>(°C)</u>	(SU)	(uS/cm)	(mV)	(mg/L)	(NTU)	(24 hr)	(Ft below TOC)	(L/min)
0	16.2	6.60	<u>86.1</u>	-104	12.5	999 0 999 0	1240	32.31	;
	6.0	820	93.9	-102	9.6	999.0	12.50		<u>.</u>
·····	6.4	8.32	96.5	-216	7.3	999.0	1300	32.4	
					· · · · ·				
				<u> </u>	· · ·				
	[				1	L		<u>\</u>	·
mments	YPE DOOL OF	TINDE	1	(AA C~~~~-				( .	
	6:0 w/ 945			-				LASELE	>)
		0002	BAT	ED MOD	1- 5-7	- gallon	$\nabla_{12}$	/	A
Anpres	@ 1305		L		olliten in	TO EC		mina Au . m.B.1	۱ <sup>د</sup> سر
		··- ··· ···					J	Sandhard Digit	
Field Forms Cl	W Sampling Log					- Second			4/27/2006

Well Number:	12	BAKER TA	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Sample 1		BAKER	TANK 5/5/06
Project Name:	Block	40 Wes	+	Project/T			<u>e Measuriement</u>
	· · · · ·			Date:		5-5.	
Well Depth:					g Point (MP		
Water Depth:				Elevation		<u> </u>	 
Feet of Water:					of Water:		
Gallons per Foot:		· · ·	 				
1			_	Well Dia	neter:	•	
Well Volume:	<u> </u>						
Purge Volume:	·	·		Well		Gallons pe	
				Diameter 2 inches		casing foo 0.16	<u>x</u>
			•	2 inches		0.65	· ·
Purge Method:	. · ·	<u></u>		pH meter	r:	Horiba	<u> </u>
Sample Method:	Bailer			Eh meter			
Water Disposal:		· ··		_ Conducti	ivity meter:		
Weather:	Junny			D.O. Me	ter:		
Sampler(s):	· · · ·	· · ·		Calibrati	on Date:		
QA/QC Samples							
La Co Dampies				Ľ)	iω: )=	581900	gal ie siwpm
Blind Duplicate			·	- *1	,		U II
MS/MSD	<u> </u>	<del></del>		_			
Replicate	· · ·	· ·	· .	<b>-</b> .			
Blank				-			
Field Parameters	0	1	2	3	4	5	Sample
	Volumes	Volume	Volumes	Volumes	Volumes	Volumes	cht.
Temperature	19.2'0					·	· · · · · ·
pH Conductivity	7.2	7.7	· · · ·	, ·			ļĪ.
Conductivity Eh	510	<u></u>	+	· ·			·
En Dissolved Oxygen	95	<u> </u>	1	<del>  _ ·</del>			<b> </b>
Turbidity	23.K		<del> </del>	<u> </u>			
Time	2:00 pm	5:Wom	1	1 .	[]	·	
5.7. (~1/2)	0.1	0.0 <sup>–</sup>		I	،ا	I	· ·
	·		LE REQU				
Analysis		Bottle Type	Number	Number MS/MSD	Bottle Type	Bottle Number	Number MS/MSD
Blex & NWNPH-L	٨٢	VUA	Baker TANK				
<u></u>	<u>.</u>						
							· · ·
							· · · · · · · · · · · · · · · · · · ·
	÷	· ]			<u> </u>		
				·		l	

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	0.1					<u> </u>	- 1 1
Well Number:		r Tank	- 1	Sample N	lumber:	Baker TA	nk 5/6/06
Project Name:	Block	40 Wes	t	Project/T	ask:	DBuhurge	nk 5/6/06 Measureviats
			_	Date:		5-6-0	
Well Depth:				Measurin	g Point (MI	): Dischargy	e to Server
Water Depth:				Elevation			
Feet of Water:	• • • • • • • • • • • • • • • • • • •		_	Elevation	of Water:		
Gallons per Foot:							
				Well Diar	neter:		
Well Volume:							
Purge Volume:			-	Well		Gallons pe	r
	· · · · · · · · · · · · · · · · · · ·		-	Diameter		casing foo	t
				2 inches		0.16	
	;			4 inches	· ·	0.65	<b>I</b>
Purge Method:				pH meter		Hori	ba.
Sample Method:	- Pailer	<u> </u>		Eh meter	-	<u> </u>	
Water Disposal:		(h) ()		_ Conducti	vity meter:		
Weather:	Sunny	the Cloud	y An	_ D.O. Met	ter:		
Sampler(s):	·····			_ Calibratio	on Date:		
QA/QC Samples							
Blind Duplicate							
MS/MSD			· · · · · · · · · · · · · · · · · · ·	_			
Replicate			•	_			
Blank		/		_			
				-	-	· · · · · · · · · · · · · · · · · · ·	
Field Parameters	0	1	2	3	4	5	Sample
<u>m</u> .	Volumes	Volume	Volumes	Volumes	Volumes	Volumes	
Temperature	· ·			· · · ·			
pH Conductivity	6.9	6.6	6.6	6.6			
Eh				·			
Dissolved Oxygen			·				
Turbidity				· · · · ·			
Time							
5.5. (m 2/2)	0.0	U. 0	0.0	<u> </u>		,	
	ji			IREMENTS			
Analysis		Bottle Type	Number	Number MS/MSD	Bottle Type	Bottle Number	Number MS/MSD
	<u></u>	<u>hc</u>		110/1100	<u>13hc</u>		MORIDO
	······			<b> </b>	<u>.</u>		
· · · · · · · · · · · · · · · · · · ·							
				· ·		——·†	
	·			·			

	· P. N	To V				Kallor	Tank Glat
Well Number:		TANK	_	Sample N		- Marter	TANK 5/3/A
Project Name:	Block	40 West	· ! 	Project/Ta	ask:	Vischarge	e Mensure men
		•		Date:		5-7	
Well Depth:	<u> </u>		_	Measurin	g Point (MP)	: Discha	ize to Server
Water Depth:		<u>.</u>		Elevation	of MP:		
Feet of Water:				Elevation	of Water:	•	
Gallons per Foot:							
Ganons per root.		·			· .		
				Well Dian	neter.	<u> </u>	
Well Volume:			<u> </u>	Well	<u></u>	Callana na	
Purge Volume:	<del></del>		-	Diameter		Gallons pe casing foo	
				2 inches		0.16	
	•		•	4 inches	•	0.65	
Purge Method:	•			pH meter		Hori	ba
Sample Method:	Bailer	r	· · ·	Eh meter	_		
ł		<u> </u>	<u> </u>			•••••	
Water Disposal:	<u> </u>	· · ·			vity meter:	· · ·	<u> </u>
Weather:	Overcast	r		_ D.O. Mét			· .
Sampler(s):		•		_ Calibratio	on Date:		,
QA/QC Samples	•			,	•		
QANGC Dampies				•			
Blind Duplicate	<u> </u>			_			
MS/MSD					• •		
Replicate		,	· .				
Blank				<b>_</b> `			
				-			
Field Parameters	0	1	. 2	3	4	5	Sample
	Volumes	Volume	Volumes	Volumes	Volumes	Volumes	·
Temperature					· .		
pH	6.7	6.8	6.8	6.8			
Conductivity				•			
Eh							
Dissolved Oxygen Turbidity							
Time	· · · ·			· · · · ·			
5.5 (m2/2)	U. 0	· V. O	0.0	U. 0	I		
		BOTT	LE REQU	IREMENTS	<b>;</b> .		
Analysis		Bottle	Number	Number	Bottle	Bottle	Number
•		Туре	· · · · · · · · · · · · · · · · · · ·	MS/MSD	Туре	Number	MS/MSD
	<u>.</u>	<u> </u>					
<u> </u>							
	·						
· · · · · · · · · · · · · · · · · · ·		ł					
	_ <b>_</b>  .	<u> </u>			<u> </u>	·	· ·
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Well Number:	Baker	Tank	. <u>.</u>	Sample N	Jumber:	BAVER	TANK 5-8-06
Project Name:		40 West		Project/T		Dischara	TANK 5-8-00 e Massurements
Trojoct Hamo.				Date:	u511.	<u> </u>	
Well Death					- D		se to Server
Well Depth:	<u> </u>		<u> </u>	_		): <u>· Vrouhen</u>	se a www
Water Depth:	<del></del>			Élevation			<u> </u>
Feet of Water:	·		<u> </u>	Elevation	of Water:		
Gallons per Foot:							
				Well Diar	neter:		
Well Volume:							
Purge Volume:			_	Well		Gallons pe	r
				Diameter		casing foo	t
			•	2 inches 4 inches		0.16 0.65	
Durge Methodi				L		flori	
Purge Method:				_ pH meter			
Sample Method:	Baile			Éḥ meter		·	
Water Disposal:			•	_ Conducti	vity meter:		
Weather:	Sumo	)		D.O. Me	ter:		
Sampler(s):				Calibrati	on Date:	<u>.</u>	
QA/QC Samples	•						
Blind Duplicate				- flow.	3360000	gan e li	0:15AM
MS/MSD				-			
Replicate	<u> </u>		<u> </u>	<u>.</u>			
Blank	·		<u></u>	_			
Field Parameters	0	1	2	3	4	5	Sample
	Volumes	Volume	Volumes	Volumes	Volumes	Volumes	
Temperature			172%				·
pH Conductivity	7.0	7.2	7.0		ļ		
Eh			147		<u> </u>		· · · · · · · · · · · · · · · · · · ·
Dissolved Oxygen			8.7	·	İ		
Turbidity			0.4				
Time	8:15	10:15	4:45			L	
5.5. (m+/2)	0.0	0-0 BOTT	0.0 Le requi	DEMENTS	2		
Analysis		Bottle	Number	Number	Bottle	Bottle	Number
·		Туре		MS/MSD	Туре	Number	MS/MSD
	·		· · ·		ļ		
- <u></u>	·						
					· · · · · · · · · · · · · · · · · · ·		·. · · · · · · · · · · · · · · · · · ·
	•						

Well Number: Project Name: Well Depth: Water Depth: Feet of Water: Gallons per Foot: Well Volume: Purge Volume: Purge Method: Sample Method: Water Disposal: Weather:		Tank 40 Vert		Elevation	Fask: ng Point (MI n of MP: n of Water: meter:		
Well Depth: Water Depth: Feet of Water: Gallons per Foot: Well Volume: Purge Volume: Purge Method: Sample Method: Water Disposal:	B1042	40 Wert		Date: Measurin Elevation Elevation Well Dia Well Diameter 2 inches	ng Point (MF a of MP: a of Water: meter:	"): <u>()izcher g</u> Gallons pe	e to sewer
Well Depth: Water Depth: Feet of Water: Gallons per Foot: Well Volume: Purge Volume: Purge Method: Sample Method: Water Disposal:	Bailer			Date: Measurin Elevation Elevation Well Dia Well Diameter 2 inches	ng Point (MF a of MP: a of Water: meter:	"): <u>()izcher g</u> Gallons pe	e to sewer
Water Depth: Feet of Water: Gallons per Foot: Well Volume: Purge Volume: Purge Method: Sample Method: Water Disposal:	Bailer			Measurin Elevation Elevation Well Dia Well Diameter 2 inches	a of MP: a of Water: meter:	"): <u>()izcher g</u> Gallons pe	e to sewer
Feet of Water: Gallons per Foot: Well Volume: Purge Volume: Purge Method: Sample Method: Water Disposal:	Bailer			Elevation Elevation Well Dia Well Diameter 2 inches	a of MP: a of Water: meter:	Gallons pe	
Gallons per Foot: Well Volume: Purge Volume: Purge Method: Sample Method: Water Disposal:	Bailer			Well Dia Well Diameter 2 inches	meter:	-	
Well Volume: Purge Volume: Purge Method: Sample Method: Water Disposal:	Bailer			Well Dia Well Diameter 2 inches	meter:	-	
Well Volume: Purge Volume: Purge Method: Sample Method: Water Disposal:	Bailer	· · · · · · · · · · · · · · · · · · ·		Well Diameter 2 inches		-	
Purge Volume: Purge Method: Sample Method: Water Disposal:	Bailer		 	Well Diameter 2 inches		-	
Purge Volume: Purge Method: Sample Method: Water Disposal:	Bailer			Diameter 2 inches		-	
Purge Method: Sample Method: Water Disposal:	Bailer			Diameter 2 inches		-	
Sample Method: Water Disposal:	Bailer			2 inches			t
Sample Method: Water Disposal:	Briler			4 inches		0.16	
Sample Method: Water Disposal:	Bailer					0.65	
Water Disposal:	Briler			pH mete	er:	Hori	ва
-				Eh mete	r:		
Weather:			•	Conduct	ivity meter:		
	Shmy			D.O. Me	eter:	· · ·	
Sampler(s):		•		— Calibrati	ion Date:		
				_		· ·	
A/QC Samples				- Ela	372	0700 @	1:35am
Blind Duplicate					a súro	× 220-0	240 gpm
IS/MSD	•	_	•		repp.		
eplicate							,, ,
	·		• •	- Plan	: 376	3800 Q	2: 15pm
-			· · · ·	_ flow	: 376° ap	3800 Q 970× Z3ć	11:35am }40gpm 2: <b>15p</b> m )gpm (4p
lank			2		aq	9mx 2.32	) gpm (4p
lank	0 Volumes	1 Volume	2 Volumes	3	4	3 600 @ pru× みえ 5 Volumes	2:15pm ) gpm (Hp Sample
ield Parameters	Volumes	1	Volumes	3 Volumes	4	pru× 232	) gpm (4p
ield Parameters èmperature H	11	Volume 17.3°C 6.9	Volumes	3	4	pru× 232	) gpm (4p
ield Parameters emperature H onductivity	Volumes	Volume 17.3°C 6.9 66.9	Volumes	3 Volumes	4	pru× 232	) gpm (4p
ield Parameters emperature H onductivity h	Volumes	Volume 17.3% 6.9 66.9 173	Volumes	3 Volumes	4	pru× 232	) gpm (4p
ield Parameters emperature H onductivity h issolved Oxygen	Volumes	Volume 17.3% 6.9 64.9 173 7.9	Volumes	3 Volumes	4	pru× 232	) gpm (4p
Iank Ield Parameters Emperature H onductivity h issolved Oxygen urbidity	Volumes 7. 2	Volume 17.3% 6.9 66.9 173 7.9 0.0	Volumes	3 Volumes 7.2	4	pru× 232	) gpm (4p
lank eld Parameters emperature f onductivity ssolved Oxygen arbidity me	Volumes 7.2 10:45	Volume 17.3% 6.9 64.9 173 7-9 0.0 17:00	Volumes 7.5	3 Volumes 7.2	4	pru× 232	) gpm (4p
lank ield Parameters emperature f onductivity	Volumes 7. 2	Volume 17.3% 6.9 66.9 173 7.9 0.0 17:00 0.0 17:00 0.0	Volumes 7.5 7.5 7.5 7.5 0.0	3 Volumes 7.2 	4 Volumes	pru× 232	) gpm (4p
lank ield Parameters emperature I onductivity ssolved Oxygen arbidity me	Volumes 7.2 10:45	Volume 17.3% 6.9 66.9 173 7.9 0.0 17:00 0.0 17:00 0.0	Volumes 7.5 7.5 7.5 7.5 0.0	3 Volumes 7.2	4 Volumes	pru× 232	) gpm (4p

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Well Number:	Balce	r Tank	1	Sample N	umber:	BAKer T	ank 5-10-06		
Project Name:	Block	40 We	<del>,</del> <del>,</del> <del>,</del> <del>,</del>	Project/Ta			Discharge Measurement		
			_	Date:			0-04		
Well Depth:					g Point (MP)		e to server		
Water Depth:			_	Elevation		<u>, , , , , , , , , , , , , , , , , , , </u>			
Feet of Water:			_		of Water:				
Gallons per Foot:			-	Liovation	or water.				
Canons per root.	<u></u>		_						
				Well Dian	neter:	·			
Well Volume:	····		_	Well		Callera			
Purge Volume:			_	Diameter		Gallons pe casing foo			
				2 inches		0.16	· · · · · ·		
				4 inches	`	0.65			
Purge Method:				pH meter	:	. Hor	iba		
Sample Method:	Baile	<u> </u>		Eh meter	:				
Water Disposal:				Conducti	vity meter:				
Weather:	Sunny			D.O. Met	er:				
Sampler(s):				- Calibratio					
, Sumptor (b):					Jan Date.				
QA/QC Samples				<u>_</u>	. 1103:	75 00 @	9:20am		
Blind Duplicate				tion			~		
-				-	appros	× 230	gpm (4pump		
MS/MSD				_	4069	300 (	2 12:20pm		
Replicate			<u>`</u>	_	4108		3:20 pm		
Blank		<u></u>		-		•	•		
Field Parameters	0	1	2	3	4	5	Sample		
	Volumes	Volume	Volumes	Volumes	Volumes	Volumes			
Temperature							· · · · · · · · · · · · · · · · · · ·		
pH	7.3	77	7.5	7.3					
Conductivity Eh	i		· · ·						
Dissolved Oxygen									
Turbidity									
Time	9:15	11:50 0,0	0.0	3:20			······		
5.5. (ml/L)	0.0		-	U.U. IREMENTS					
Analysis		Bottle	Number	Number	Bottle	Bottle	Number		
		Туре		MS/MSD	Туре	Number	MS/MSD		
·						· ·			
	·			······			· ·		
· · · · · · · · · · · · · · · · · · ·									
•							·		
	·		·	·			····		
	H			H H		1			

Well Number:	BALLI	Tank		Sample N	lumber:	BAKEr	Tank 5-11-06
Project Name:		HO Wes		Project/T	•		
rioject ivanie.		-10 000		-	ask.		e Mensurement
· .				Date:			1-06
Well Depth:						): Discharg	e to Shurr
Water Depth:				Elevation	of MP:		
Feet of Water:				Elevation	of Water:		
Gallons per Foot:							
				Well Diar	neter:		
Well Volume:							· · ·
Purge Volume:			_	Well		Gallons pe	er l
A unge volume.				Diameter	,	casing foo	
				2 inches	······	0.16	
				4 inches		0.65	·
Purge Method:				_ pH meter	r:	Hovil	DA
Sample Method:	Bail	e/		Eh meter	:	<u> </u>	
Water Disposal:				Conducti	vity meter:		
Weather:	Over	AST AM	Sunny PM	_	•		
1		<u> </u>	<u> </u>	- Calibrati			· · · · · · · · · · · · · · · · · · ·
Sampler(s):	<u> </u>		<u> </u>		JII D'alc.	<u> </u>	
QA/QC Samples				Din 1	434 97	00 gal @	8:45 Am
				Plow			
Blind Duplicate				-	approx	250 gpm	(Hpumps) 2 lines
MS/MSD				_	440640	o gal Q 1	I DE MA
Replicate	<b>.</b>		<u> </u>		<u>^</u>	2	(3 pumps)
Blank	_	_			~	210 gpm	( round)
				- 	,		
Field Parameters	0	• 1	2	3	4	5	Sample
	Volumes	Volume	Volumes	Volumes	Volumes	Volumes	
Temperature		7.0	7.1	<u> </u>			
pH Conductivity	(g. l		<u>  T/\</u>		· ·		
Eh			<b> </b>	<u> </u>			
Dissolved Oxygen							
Turbidity	·						
Time	8:40	11:40	1:25				
5.5. (mL/L)	0.0	0.0	0-0				
	n		LE REQU Number	IREMENTS		Bottle	Númber
Analysis		Bottle Type	namber	Number MS/MSD	Bottle Type	Number	Mumber MS/MSD
		-JPC_			- 380		
· · · ·	·····	 ·					
·					·		
	<b> </b>						
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Well Number:	\$614	4 Tank 2 40 Wer	i	Sample 1	Number:	pake	TANK 5-12-06
Project Name:	61001	= 40 Wer	+	- Project/I	ask:	Dischar	ge Menstreman
				Date:		5	-12-06
Well Depth:				Measurin	ıg Point (MI	): Discha	rge to Server
Water Depth:				Elevation			<u></u>
Feet of Water:				Elevation	of Water:		
Gallons per Foot:							
				Well Dia	meter		
Well Volume:						•	
Purge Volume:	<u></u>			Well	·	Gallons p	er
		<u>_</u> _		Diameter		casing for	
				2 inches 4 inches		0.16	
Durge Mathadi				L		0.65	]
Purge Method:	Baile	/		_ pH mete		Hoviba	~
Sample Method:	Park	A		Eh meter			
Water Disposal:				Conducti	ivity meter:		·
Weather:	Uverust.	AM Sun	ing PM	D.O. Me	ter:		
Sampler(s):				_ Calibrati	on Date:	<u> </u>	
QA/QC Samples							
Qrb QC bampics				flow	. 469090	008.	55 Am
Blind Duplicate				_	47895	500 e ?	3.913pm
MS/MSD						$\sim$ 2	L3Ogpm
Replicate							- 0,
Blank				_			
	1	1	1	- 	·1	<del></del>	
Field Parameters	0 Volumes	1 Volume	2 Volumes	3 Volumes	4 Volumes	5	Sample
Temperature	Volumes	1 Volume	V UIUIICS	180 °C	volumes	Volumes	<b></b>
рН	7.2	7.3	7.3	7.4			
Conductivity				65.7			· · · · · · · · · · · · · · · · · · ·
Eh				217			
Dissolved Oxygen			<u> </u>	9.4			
Turbidity	8:45			0.0			
Fime	<u>8.05</u> 0.0	10:45	17:20	3:45			· · ·
5.5. (m//L)	0.0		LE REQU	-	,		
Analysis	j	Bottle	Number	Number	Bottle	Bottle	Number
1 444 1 9 0 1 3		Туре	number	MS/MSD	Туре	Number	MS/MSD
Btex + NWIPH.	· Care .	Vok	Baker Tank	بنبيب			
	. <u>.</u>	··· ·					
							······
	·			]			·
			· · · · · · · · · · · · · · · · · · ·				<del>,</del>
	÷						<del></del>

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Well Number:	BALL	r Think	· i	Sample 1	Number:	BALLY T	ank 5-13-06
Project Name:	plock	40 We	st !	Project/T	`ask:	pischo	ingo Measurement
				Date:			3-06
Well Depth:			. •	Measurin	ng Point (MI		rge to server
Water Depth:				Elevation		·	P
Feet of Water:	• • •		<b></b>		of Water:	·,	
Gallons per Foot:	·			Biorution	ion mator.	<del>.</del>	
	·		·	Well Die	matan		
				Well Dia	meter:		
Well Volume: Purge Volume:				Well	<u> </u>	Callana	·
Turge volume.				Diameter		Gallons p casing fo	
				2 inches	<del>;</del>	0.16	
				4 inches		0.65	
Purge Method:		<u> </u>		pH meter	r:	Harib	o
Sample Method:	Bailer	-		Eh meter	r:		
Water Disposal:				 Conducti	vity meter:	-	
Weather:	Sum	1	<u> </u>	— D.O. Me			
Sampler(s):		<i></i>					
					on Dato.		
QA/QC Samples		. • *	,				
Blind Duplicate				fler	J. 5109	1000 e	2:10pm
MS/MSD		·	<u>_</u>	<del>-</del> .			
Replicate				_			
	<u> </u>		· · ·	<b>-</b> .		,	
Blank			· · · · · · · ·				
Field Parameters	0	1	2	3	4	5	Sample
	Volumes	Volume	Volumes	Volumes	Volumes	Volumes	
Temperature	· .						
pH	7.3	7.1	7.3	7.1			
Conductivity Eh							
Dissolved Oxygen		<del>.</del>					
Turbidity	· · · · · ·	· · · ·	<u> </u>				
Time	1045	200	630	730			
5.5. (n-/2)	0.0	Q. 0	0.0	0.0			· · ·
<u> </u>		BOTI	LE REQU	REMENTS		· ·	
Analysis		Bottle	Number	Number	Bottle	Bottle	Number
·	l	Туре	· · · · · · · · · · · · · · · · · · ·	MS/MSD	Туре	Number	MS/MSD
· · · · · · · · · · · · · · · · · · ·	<u> </u>		· · · ·				
				<u> </u>			
<u>·</u>							
						<del></del>	· · · · · · · · · · · · · · · · · · ·
······							
	·						
	<u> </u>		·				

Well Number:	Baker	Tank	<u>.</u>	Co1-		Andres	TANK 5-14-1
Project Name:		K 40 W	654	-	Number:		
r roject Name.				Project/	l'ask:		ye Measuremon
Wall Deaths				Date:			14-06
Well Depth:	<del></del>		<u> </u>			P): <u>·</u> Ui3ch	arge to Sever
Water Depth:					n of MP:		
Feet of Water:	<u> </u>	<u> </u>		Elevatio	n of Water:	• •	
Gallons per Foot:							
				Well Dia	meter:	<u> </u>	
Well Volume:	—			·			
Purge Volume:				Well		Gallons p	
1				Diameter 2 inches		casing fo	ot
· · ·			.•	4 inches		0.10	1
Purge Method:				pH mete	27: 27:	Ho	viba
Sample Method:	BAIL	e1		Eh mete			
Water Disposal:					ivity meter:		
Weather:	Sunn	 19		D.O. Me	•	<u></u>	
Sampler(s):					ion Date:	<u> </u>	<u> </u>
		·			on Date:	<u> </u>	,
QA/QC Samples		· ·					
Blind Duplicate		·		L	Ann 5	505000	1 Q. 6:45:pm
MS/MSD			·	- ·	1000	-	
		· · ·	<u> </u>				•
Replicate	<u> </u>		·	<b>—</b> .			
Blank			<u> </u>				
Field Parameters	0	• 1	2	3	4	5	Sample
	Volumes	Volume	Volumes	Volumes	Volumes	Volumes	
l'emperature						· · · · · · · · · · · · · · · · · · ·	· · · · · ·
H Conductivity	7.0	7.4	7.2	7.3	· · ·	· ·	
h .	·		·	·	<u> </u>		
oissolved Oxygen		·	· · ·	· · · ·	·		
urbidity						• • • • • • • • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·
ime	10:15	11:15	445	b:4J			
5.5. (mb/r)	0.0	0.0 POTT	$\overline{0,0}$	0.0			· • .
Analysis		Bottle	Number	REMENTS Number	Bottle	Bottle	Number
		Туре		MS/MSD	Бонас Туре	Number	MS/MSD
·							
		ł					
<u>·</u> ·		·			· 		
· ·	ł						· · · ·
· · · · · · · · · · · · · · · · · · ·		· .					· · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·							

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Well Number:	Baker	Tank		Sample N	umber	BAKEr	Tank 5-16-06
Project Name:		10 West	—	Project/Ta			Mensurements
r tojoot r tunio.				Date:			6-06
Well Depth:					g Point (MP)		e to Server
Water Depth:		·	_	Elevation		~ <u></u> ″	
Feet of Water:				Elevation	of Water:		
Gallons per Foot:	· · ·		_				
			—	Well Dian	neter:	-	
Well, Volume:				-			
Purge Volume:				Well		Gallons pe	
				Diameter 2 inches		casing foo 0,16	
		•		4 inches		0.65	ŀ
Purge Method:				pH meter	<del>.</del>	Hovi	br
Sample Method:	Bai	ler		Eh meter	:		
Water Disposal:		、		 Conducti	vity meter:		
Weather:	Sunni	)		D.O. Met	er:		
Sampler(s):				Calibratio	on Date:		
OA/OC Semales							1
QA/QC Samples		•		Pla			
Blind Duplicate			<u> </u>		607710	10 gal e	1:15pm
MS/MSD				_	14	Dumps	
Replicate			<u> </u>		.,	/	1
Blank				-			
Field Parameters.	0	1	2	3	4	5	Sample
	Volumes	Volume	Volumes	Volumes	Volumes	Volumes	
Temperature	18.7 %	·			-		
pH	7.2	7.3	7.4	7,3			
Conductivity	67.1	· • •		·			
Eh	247						
Dissolved Oxygen	9.7	· · · ·					
Furbidity	0.0						
<u>Fime</u>	9:W 17.0	0.0	0.0	2:15			
5.5. (m+/2)	0.0	•	LE REQU	-	5	•	
Analysis		Bottle	Number	Number	Bottle	Bottle	Number
	1	Туре		MS/MSD	Туре	Number	MS/MSD
	<u> </u>		· · · · · · · · · · · · · · · · · · ·		,		
- <u>u</u>			•				
		·					
<u></u> .							· · ·
		•					•
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				<u>-</u>			
	· I		•			[	

	D. I.	A 1.				<u>_</u>	<b>T ( ( ( ( ( ( ( ( ( (</b>
Well Number:		Tank	— i	Sample l	Number:		Tank 5-15-06
Project Name:	15lock	40 Worth	· · ·	Project/I	ask:		inge Mennements
				Date:		5-	15-06
Well Depth:				Measurin	ng Point (MI	P): · Qisch	arge to Sewer
Water Depth:				Elevation			0
Feet of Water:				Elevation	of Water:		
Gallons per Foot:	•						
Cullond por room				W. H. D.			
				Well Dia	meter:	·	······································
Well Volume: Purge Volume:	<u> </u>	- <u></u>	_	[ <u></u>	·		
Furge volume:			<b></b>	Well Diameter		Gallons p casing foo	
				2 inches		0.16	<u> </u>
				4 inches		0.65	
Purge Method:				pH meter	r::	Horik	) cL
Sample Method:	Baile	1		Eh meter	r:		
Water Disposal:					vity meter:		
Weather:	Sunn	1		D.O. Me	-		
Sampler(s):		/		_ Calibrati			
Dampier(3).	•				on Date:	<u></u>	
QA/QC Samples		. •		DIN.			
		•		7.00	<sup>V.</sup> 572	4200 e	10:50ani np5)
Blind Duplicate	<b></b>					(H. OLAN	nori
MS/MSD	<u> </u>			-		C (pro	ر د ب
Replicate				_			1
Blank	<u> </u>						
·	u		· · · ·		<b>.</b>	<u> </u>	
Field Parameters.	0	1	2	3	4	5	Sample
Time conture	<b>Volumes</b>	Volume	Volumes	Volumes	Volumes	Volumes	
Temperature pH	7.1	7.1	7.2	7.4	·		· · · · · · · · · · · · · · · · · · ·
Conductivity	16.6	<u></u>	<u>r.x</u>	7.1			
Eh	210		·			· · · ·	·
Dissolved Oxygen	9.7		·	· · ·			
Turbidity	0.0						
Time	8:45	10415	145	300			
5.5. (mL/L)	0.0	0.0	0.0				
Analysis				REMENTS			
Analysis		Bottle Type	Number	Number MS/MSD	Bottle Type	Bottle Number	Number MS/MSD
				110/1100		number	MONTOD
· · · · · · · · · · · · · · · · · · ·		<u>· · ·</u>					
· · · · · · · · · · · · · · · · · · ·						<u></u>	( ·
				i			

	Δ.	~			-		·
Well Number:		Tank	— i	Sample	Number:	bake	r. Tank 5-17-00
Project Name:	Block	40 West		Project/	Fask:	Discharge	· Mensurements
				Date:		5-	17-06
Well Depth:				Measuri	ng Point (M	?): · Dischar	17-06 ge to server
Water Depth:	_			Elevation		ن ن	
Feet of Water:				Elevatio	n of Water:		
Gallons per Foot:	· · ·						
				Well Dia	motore		·
Well Volume:				wen Dia	1116(61.		<u> </u>
Purge Volume:			<u> </u>	Well		Gallons p	
	;			Diameter		casing fo	
				2 inches		0.16	
				4 inches		0.65	
Purge Method:				pH mete	ar::	<u>Hon</u>	bo
Sample Method:	bailer.		<u> </u>	Eh mete	r:	. <u> </u>	<u> </u>
Water Disposal:				Conduct	ivity meter:		
Weather:	Sunny			D.O. Me	ter:		
Sampler(s):				— Calibrati	on Date:	<u> </u>	
					on Dutt.	<u> </u>	
QA/QC Samples				ľ	\ <b>I</b> .		
Blind Duplicate			•		low:	-	
MS/MSD				_ · ·	6399	500 gal.	e 315pm
Replicate			·			-	
-			<u> </u>	<del>.</del> .		•	
Blank		······································		-			
Field Parameters.	0	1	2	3	4	5	Sample
	Volumes	Volume	Volumes	Volumes	Volumes	Volumes	
Temperature							
pH	7.3	7.2	7.4	7.3	· · · ·		
Conductivity Eh			}	·			· · · · · · · · · · · · · · · · · · ·
Dissolved Oxygen			<u>                                     </u>	<u>.</u>	· · · · · · · · · · · · · · · · · · ·		·
Turbidity		· · ·	<u></u>				
Time	1115	1230	300	400			
5.5. (m4/4)	0.0	0.D	0.0	3.0			
		BOTT	LE REQU	REMENTS	5	•	
Analysis		Bottle Type	Number	Number MS/MSD	Bottle Type	Bottle Number	Number MS/MSD
Btex & NWTP.	H-Lix	VOA	Balker Tan	5-17-06			
	]		•				
	•		·	<u>-</u> -			·
			·				
· · ·				<b> </b>			_ <u>.</u>
····	·		·				

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Well Number:	Baker	Tank	I	Sample	Number:	Baker	Tank 5-18-06
Project Name:		40 West		Project/1	fask:		re Measurements
_				Date:			4-06
Well Depth:					o Point M		ne & Sewer
Water Depth:	· · · _ · · ·	<u> </u>		Elevation		). <u>- 0150-147</u>	pe v now
Feet of Water:					•		
1	·		_	Elevanor	of Water:		
Gallons per Foot:							
	•			Well Dia	meter:		
Well Volume:	<u> </u>					<u></u>	
Purge Volume:				Well Diameter		Gallons p	
		•		2 inches		casing fo	DL
· .				4 inches		0.65	
Purge Method:				pH mete	Г.: 	Hovil	on
Sample Method:	Vail	w		Eh meter	r:	<u></u>	
Water Disposal:					ivity meter:		
Weather:	Sunnu	 ^	- <u>-</u>	D.O. Me	-	<u> </u>	
Sampler(s):		)					
Sampici(s).				Calibrati	on Date;		·
QA/QC Samples		. ·			<b></b>		
		. •	•		Flow:		. <u>.</u> . [
Blind Duplicate	<u> </u>			<del>-</del> .	655	0600	@ 3:45pm
MS/MSD	<u> </u>			_			
Replicate			· · ·	<b>-</b> .	(	uniy a pi	umps. Most
Blank	<u> </u>			_		of too	lay
D'-11 D					<u> </u>		
Field Parameters.	0 Volumes	1 Volume	2 Volumes	3 Volumes	4 Volumes	. 5 Volumes	Sample
Temperature	- tolumes	- Volanie		19.6°C		volumes	· · · · · · · · · · · · · · · · · · ·
pH	7,4	7,3	7.3	7.3	·		
Conductivity		• •		66.9.	-		
Eh			۰	200			
Dissolved Oxygen		<u> </u>		9.2			
Furbidity Fime	845	1010	115	0.0		-	
·""	0.0	0.0	0.0	245	j		·
5.5. (m4/2)	0.0		-	REMENTS	;	•	
Analysis		Bottle	Number	Number	Bottle	Bottle	Number
<u> </u>		Туре		MS/MSD	Туре	Number	MS/MSD
<u> </u>	·	<del>.</del>					
							·
						<b> </b>	
							· · · · · · · · · · · · · · · · · · ·
·							
	<u>·</u>	<u> </u>		··			
	11			1	(		1

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r	······						
Well Number:	Ba.K.	er Tank	- 1	Sample 1	Number:	Baker	[ank 5-19-0
Project Name:	Block	: 40 We	$\mathcal{X}$	Project/I			2 Mensuremen
	<u> </u>		<b>_</b>	Date:	don.	5-19-	·
Well Depth:					<b>.</b>		
-			<u> </u>			P): <u>Uischar</u> g	ze to Server
Water Depth:	— <u> </u>			Elevation	of MP:		
Feet of Water:	<u> </u>			Elevation	of Water:		•
Gallons per Foot:							
				Well Dia	meter:		
Well Volume:	·					<del></del>	
Purge Volume;			_	Well	<u>.</u>	Gallons p	
	·	•		Diameter		casing for	
				2 inches	<u> </u>	0.16	
•				4 inches	<u> </u>	0.65	
Purge Method:				_ pH meter	r:-	Hori	ba
Sample Method:	baily	۲		Eh meter	-		
Water Disposal:				Conducti	vity meter:		
Weather:				D.O. Me	•		
meathor:			·			<u> </u>	
Complan(a)				_ Calibratio	on Date:	_	
Sampler(s):	<u> </u>						
Sampler(s): QA/QC Samples	. <u> </u>				<b>F</b> 1		
	· · · · · · · · · · · · · · · · · · ·	. :		-	Flow:		
QA/QC Samples					•	JUgal @	- 11 ; 3D
QA/QC Samples Blind Duplicate MS/MSD			· · · · · · · · · · · · · · · · · · ·	-	•	)Ugal @	L    ;3D
QA/QC Samples Blind Duplicate MS/MSD Replicate				- - -	•	DUgal @ gpm-pum	- 11;3D 195 Wmovel
QA/QC Samples Blind Duplicate MS/MSD				  	•	DUgal € gpm - ρurr	- 11;3D 195 vemovel
QA/QC Samples Blind Duplicate MS/MSD Replicate			2	  	.67016( 0		r
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank	     Volumes	1 Volume	2 Volumes	- 3	.67016( 0	5	11 ; 3D ps vemovel Sample
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters.	61		· ·	  	.67016( 0		r
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters.	Volumes		· ·	3	.67016( 0	5	r
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters.	Volumes 17.3°6 7.4 17.3	Volume	Volumes	3	.67016( 0	5	r
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Field Parameters.	Volumes 17.3°6 7.4 17.3 219	Volume	· ·	- - - Volumes	.67016( 0	5	r
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Femperature H Conductivity h issolved Oxygen	Volumes 17.3°C 7.4 17.3 219 9.4	Volume	Volumes	- - - Volumes	.67016( 0	5	r
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Field Parameters.	Volumes 17.3 ° C 7.4 17.3 219 6.4 0.0	Volume	Volumes	- - - Volumes	.67016( 0	5	r
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Temperature H conductivity h issolved Oxygen urbidity ime	Volumes 17.3°C 7.4 17.3 219 9.4 0.0 900	Volume	Volumes	- - - Volumes	.67016( 0	5	r
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Femperature H Conductivity h issolved Oxygen urbidity ime	Volumes 17.3 ° C 7.4 17.3 219 6.4 0.0	Volume 7. 1 1130 0.0	Volumes	- - - Volumes	67016( 0 4 Volumes	5	r
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Temperature H conductivity h issolved Oxygen urbidity ime	Volumes 17.3°C 7.4 17.3 219 9.4 0.0 900	Volume 7. 1 1130 0.0	Volumes	3 Volumes	67016( 0 4 Volumes	5	r
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Emperature H conductivity h issolved Oxygen urbidity ime p. 5. (m-/L) Analysis	Volumes 17.3°C 7.4 17.3 219 9.4 0.0 900 0.0	Volume 77. 1 1130 0.0 BOTT Bottle Type	Volumes LE REQUI Number	3 Volumes	67016( 0 4 Volumes	5 Volumes	Sample
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Yield Parameters. Emperature H onductivity h issolved Oxygen urbidity ime 2.5. (m-/L) Analysis	Volumes 17.3°C 7.4 17.3 219 9.4 0.0 900 0.0	Volume -7. 1 -1130 0.0 BOTT Bottle	Volumes LE REQUI Number	3 Volumes	67016( 0 4 Volumes	5 Volumes	Number
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Yield Parameters. Emperature H onductivity h issolved Oxygen urbidity ime 2.5. (m-/L) Analysis	Volumes 17.3°C 7.4 17.3 219 9.4 0.0 900 0.0	Volume 77. 1 1130 0.0 BOTT Bottle Type	Volumes LE REQUI Number	3 Volumes	67016( 0 4 Volumes	5 Volumes	Number
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Emperature H conductivity h issolved Oxygen urbidity ime p. 5. (m-/L) Analysis	Volumes 17.3°C 7.4 17.3 219 9.4 0.0 900 0.0	Volume 77. 1 1130 0.0 BOTT Bottle Type	Volumes LE REQUI Number	3 Volumes	67016( 0 4 Volumes	5 Volumes	Number
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Field Parameters. Field Parameters. Field Parameters. Field Parameters. Field Parameters. Field Parameters. Field Parameters. Conductivity h bissolved Oxygen urbidity ime 5.5. (m-/L) Analysis	Volumes 17.3°C 7.4 17.3 219 9.4 0.0 900 0.0	Volume 77. 1 1130 0.0 BOTT Bottle Type	Volumes LE REQUI Number	3 Volumes	67016( 0 4 Volumes	5 Volumes	Number
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Field Parameters. Field Parameters H Conductivity h issolved Oxygen urbidity ime	Volumes 17.3°C 7.4 17.3 219 9.4 0.0 900 0.0	Volume 77. 1 1130 0.0 BOTT Bottle Type	Volumes LE REQUI Number	3 Volumes	67016( 0 4 Volumes	5 Volumes	Number
QA/QC Samples Blind Duplicate MS/MSD Replicate Blank Field Parameters. Field Parameters. Field Parameters. Field Parameters. Field Parameters. Field Parameters. Field Parameters. Field Parameters. Conductivity h bissolved Oxygen urbidity ime 5.5. (m-/L) Analysis	Volumes 17.3°C 7.4 17.3 219 9.4 0.0 900 0.0	Volume 77. 1 1130 0.0 BOTT Bottle Type	Volumes LE REQUI Number	3 Volumes	67016( 0 4 Volumes	5 Volumes	Number

## APPENDIX H

#### FIRESTONE UST INFORMATION

		resp_unit_cd CCR_COUNTY_A	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	
5	NW	King	32145888	592	FIRESTONE STORE#31A9	
3	NW	King	32145888	592	FIRESTONE STORE#31A9	
6	NW	King	32145888	592	FIRESTONE STORE#31A9	

CCR_CITY	AD S SITE ZIP AD	T_TANK_ID SSLU COMMENT D	ST INSTALL DATE DT	CRLU_CAPACITY_RANGE_NM
Seattle	981095220	25261 Removed		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	

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25603 1	CMP_COMPARTMENT_NUMBER_NR	SLU_COMMENT_DS GIS_ Used Oil/Waste Oil	47.62	
25420 1		Leaded Gasoline	47.62	
25464 1		Leaded Gasoline	47.62	
25664 1		Leaded Gasoline	47.62	
25689 1		Leaded Gasoline	47.62	
25547 1		Leaded Gasoline	47.62	
25405 1		Leaded Gasoline	47.62	232

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