Remedial Investigation/Feasibility Study and Cleanup Action Plan

Rainier Court Property
Phase IV Development (Parcels GG, M, N, O and P)
3616 34th Avenue South and
3603 35th Avenue South
Seattle, Washington
Ecology TCP ID #NW0716

for
Rainier Court Associates 2015-IV, LLC

October 22, 2015

GeoEngineers

Plaza 600 Building
600 Stewart Street, Suite 1700
Seattle, Washington 98101
206.728.2674

Remedial Investigation/Feasibility Study and Cleanup Action Plan

Rainier Court Property
Phase IV Development (Parcels GG, M, N, O and P)
3616 34th Avenue South and 3603 35th Avenue South
Seattle, Washington
Ecology TCP ID #NW0716

File No. 8322-005-03

October 22, 2015

Prepared for:

Rainier Court Associates 20125-IV, LLC
c/o Southeast Effective Development
5117 Rainier Avenue South
Seattle, Washington 98118-1928

Attention: Kim Calander

Prepared by:

GeoEngineers, Inc.
Plaza 600 Building
600 Stewart Street, Suite 1700
Seattle, Washington 98101
206.728.2674

James G. Roth, LG, LHG
Senior Hydrogeologist

JGR:leh

Table of Contents

LIST OF TABLES

LIST OF FIGURES

APPENDICES

EXECUTIVE SUMMARY

Project Overview

This report presents the results of the Remedial Investigation and Feasibility Study (RI/FS) and the Cleanup Action Plan (CAP) for soil and groundwater contamination by hazardous substances on the Phase IV portion (Parcels GG, M, N, O and P) of the Rainier Court property. The Rainier Court property consists of 14 parcels (Parcels B, C, F, G, GG, H, HH, I, J, L, M, N, O and P) located between Rainier Avenue South, South Charlestown and South Spokane Streets and 35th Avenue South in Seattle, Washington. The City of Seattle and King County have recognized the Rainier Court project as a priority Brownfield Showcase Project. Redevelopment of the Rainier Court property is being conducted in Phases. The first phase of redevelopment (Phase I, the Courtland) was completed in 2005 on Parcels B and C and consists of a multi-story senior housing and retail complex with underground and at-grade parking. The second phase of redevelopment (Phase II, the Dakota) was completed in 2006 on Parcels F, G and H and consists of a two-story multi-family housing and retail complex. The third phase of redevelopment (Phase III) was completed in 2014 on Parcel HH and consists of rental apartments (south half) and rental townhouses (north half). The fourth phase of redevelopment (Phase IV aka the "project Site" or "Site") will consist of street level commercial businesses and multi-story rental apartments (west half) and townhouses (east half) on Parcels GG, M, N, O and P.

Although Site characterization, completed through multiple US Environmental Protection Agency (EPA) Targeted Brownfields Assessments (TBAs), has been completed on all 14 parcels, this report pertains only to the Phase IV development Site (Parcels GG, M, N, O and P). The Site characterization results were used to complete the RI/FS and CAP for the project Site. Some elements of the CAP were implemented during an interim cleanup action in 2010 (partial removal of contaminated soil). The final cleanup action will be completed during Site redevelopment activities scheduled for 2016-2017.

This RI/FS and CAP meet the requirements for an Engineering Evaluation/Cost Analysis, Analysis of Brownfields Cleanup Alternatives, or equivalent which is typically required for EPA brownfields funding. EPA Region 10 has concurred with this determination on past phases of the Rainier Court redevelopment.

Site Use History

The Site generally was undeveloped prior to the 1930s with the exception of the placement of fill and a few single-family residences. The surface of the Site was leveled using imported fill in the 1940s and 1950s during construction of additional residences and small buildings. A variety of commercial and industrial activities took place at the Site and some of the residences and commercial buildings were heated with oil stored in underground storage tanks (USTs) or aboveground storage tanks (ASTs). Historic Site uses have included welding and fabrication, vehicle storage, maintenance and salvage.

Soil Contaminants of Concern

Surface and subsurface soil samples were obtained for chemical analytical testing from the Rainier Court Phase IV Site by Ecology and Environment (E&E) and Weston Solutions, Inc. (Weston) during four phases of environmental studies completed from 2000 to 2005.

The E&E and Weston studies included obtaining 34 surface soil samples and 42 subsurface soil samples from 43 boring locations across the Phase IV Site. Polycyclic aromatic hydrocarbons (PAHs), one or more

metals (lead, arsenic, iron, copper, mercury, and cadmium), petroleum hydrocarbons and volatile organic compounds (VOC) were detected at concentrations exceeding screening levels in fill soil at the Site. Metals and PAHs are the most widely distributed contaminants at the site, followed by diesel- and oil-range petroleum hydrocarbons. Exceedances of the VOC dichloromethane (methylene chloride) were detected in surface soil at three locations. These VOC exceedances are likely not representative of Site conditions because methylene chloride is a common laboratory contaminant and no other VOCs exceeded screening levels for soil. The pesticide heptachlor was detected in one surface sample in Parcel O at a concentration exceeding the screening level. Screening levels for one or more contaminants were exceeded in 35 out of the 76 soil samples that were analyzed from across the Site. Contaminants in soil exceeded screening levels at two or more locations in each of the five parcels. In general the greatest thicknesses of contaminated soil are located in the south half of the Site in Parcels GG, M and N. The contamination is associated with fill soils that are encountered from the ground surface to depths of 6 to 10 feet across much of the Site. The least amount of contamination was encountered in the northeast portion of the Site (Parcel P) where there is a low ridge and fill thickness appears to be two feet or less.

Groundwater Contaminants of Concern

Groundwater samples were obtained at six locations on the Phase IV Site from 2001 to 2006. Diesel- and/or oil-range petroleum hydrocarbons were detected at concentrations exceeding screening levels in samples obtained from five locations in Parcels M, N, O and P. The petroleum hydrocarbon exceedances are likely related to releases from suspected heating oil USTs or historic spills of fuel and oil products on the ground surface.

Metals including arsenic, lead, iron and manganese were detected at concentrations exceeding screening levels at four locations on the Phase IV Site. The total lead and arsenic concentrations appear to be biased high by the presence of sediment/soil in the groundwater samples (no exceedances of these metals in dissolved metals analyses). The source of the metals in groundwater appears to be metals-contaminated fill soil that is present throughout much of the Site.

PAHs and other semi-volatile organic compounds (SVOCs), VOCs, polycyclic aromatic hydrocarbons (PCBs) and pesticides were not detected or were detected at concentrations less than screening levels in groundwater samples obtained from the Phase IV Site.

Objective of Remedial Action

The objective of the planned remedial action is to achieve compliance with Model Toxics Cleanup Act (MTCA; Washington Administrative Code [WAC] 173-340) in conjunction with the planned residential/commercial development of the Site. The planned development includes:

- A 4-story mixed-use residential apartment building on the west half of the site fronting 34th Avenue South.
- Seventy-three apartment units and approximately 5,600 square feet of commercial space on the ground level at the south end of the building. Thirty-four surface parking spaces south and west of the apartment building.
- An improved alley right-of way that provides access to 34th Avenue South in the southwest portion of the site, runs north-south through the center of the Site, and provides access to 35th Avenue South in the northeast portion of the Site.

- Three 2-story townhouse buildings on the east half of the site fronting 35th Avenue South.
- Twenty townhouse units are planned with 29 surface parking spaces fronting the alley on the west side of the townhouse buildings.
- A pocket park located in the northeast corner of the Site that includes a 20 foot-high retaining wall/green wall.
- A pedestrian promenade and shared open spaces between the townhouse buildings.

Cleanup Action Options

The following remedial options were evaluated for the Site:

1. No action.
2. Containment/capping of the contaminants and implementation of institutional controls.
3. Design, installation and operation of in-situ remedial/stabilization systems.
4. Excavation of contaminated soil with on-site treatment and reuse of the excavated soil.
5. Excavation of contaminated soil with off-site treatment/disposal at a permitted facility.

Cleanup options 2 and 5 were identified as feasible for this Site. The remaining options were eliminated based on lack of compliance with MTCA threshold criteria or technical impracticability. Three remedial alternatives were developed for detailed evaluation using combinations of remedial options 2 and 5:

Alternative 1 – Removal and off-site disposal of the upper 1.5 feet of contaminated soil at the Site; containment/capping and institutional controls for the contaminated soil that would remain 1.5 to 10 feet below existing grades.

Alternative 2 – Removal and off-site disposal of the upper 3 feet of contaminated soil at the Site; containment/capping and institutional controls for the contaminated soil that remains 3 to 10 feet below existing grades.

Alternative 3 – Removal and off-site disposal of all contaminated soil across the Site. Containment/ capping and institutional controls would be implemented if contaminated soil remained in small areas of the site at the limits of the remedial excavation.

Remedial Alternative 2 was selected as the preferred alternative based on MTCA benefits ranking and a disproportionate cost analysis. Remedial Alternative 2 is intended to remove contaminated fill soil from existing ground surface to depths of 3 feet across the site (except for northeast portion of the site where 2 feet of contaminated fill would be removed from the ridge/knoll that has a thinner layer of fill). Contaminated soil that remains beneath the Site will be contained beneath caps consisting of building foundations, concrete slabs, asphalt-concrete pavement and clean, imported soil.

Institutional controls will be implemented including cap maintenance and land/groundwater use restrictions. The institutional controls would be described in an environmental covenant if a no further action (NFA) opinion is to be provided by Washington State Department of Ecology (Ecology). Compliance groundwater monitoring will be completed to evaluate post-cleanup groundwater quality.

The selected remedy (partial soil removal with off-site disposal, containment/capping and institutional controls), is intended to be protective of human health and the environment and comply with MTCA. This remedy will mitigate each pathway of concern (direct contact with soil and soil leaching to groundwater).

This evaluation of remedies included a review of the potential effects on terrestrial ecology and endangered species. Results of this review indicated that terrestrial ecological impact, including endangered species impacts, will be negligible. In our opinion, the selected remedy will (1) achieve compliance with MTCA, and (2) support the planned redevelopment of the Site for a reasonable cost.

1.0 INTRODUCTION

This report presents the Remedial Investigation and Feasibility Study (RI/FS) and Cleanup Action Plan (CAP) for soil and groundwater contamination by hazardous substances at the Phase IV development (Parcels GG, M, N, O and P) of the Rainier Court property (referred to herein as "the Site"). The west site address is 3616 34th Avenue South; the east site address is 3603 35th Avenue South, Seattle, Washington. The Phase IV Site is located in the Rainier Valley between 34th and 35th Avenues South, South Spokane and South Charlestown Streets. The location of the Site relative to surrounding physical features is shown on Figure 1.

The RI/FS and CAP presented in this report include all the elements required for an Engineering Evaluation/Cost Analysis (EE/CA), Analysis of Brownfields Cleanup Alternatives (ABCA) or equivalent. An EE/CA, ABCA or equivalent must be prepared and presented to the public for comment on the remedial alternatives considered and the preferred remedial alternative in order to obtain funding through a US Environmental Protection Agency (EPA) Brownfields grant and/or the Washington Coalition Brownfields Cleanup Revolving Loan Fund (BCRLF) Program.

Under separate cover, Rainier Court Associates and others have prepared a site-specific Community Involvement Plan (CIP) for the Rainier Court project. The CIP and this RI/FS and CAP can be reviewed by visiting the Information Repository established at Southeast Effective Development (SEED), located at 5117 Rainier Avenue South, Seattle, Washington, 98118.

2.0 BACKGROUND

Although the Rainier Court property consists of 14 parcels (Parcels B, C, F, G, GG, H, HH, I, J, L, M, N, O and P) located on approximately 7 acres, this RI/FS and CAP focuses on the Phase IV portion of the project. Phase IV encompasses Parcels GG, M, N, O and P and occupies an area of approximately 1.8 acres. A site plan showing the parcel boundaries and the Phase I, II, III and IV areas is presented in Figure 2. Phase IV is the final phase of the overall Rainier Court redevelopment project and builds on the previous three phases of cleanup and development that have been completed from 2005 to 2014 (Phases I, II and III). Phase IV will consist of a mixed-use, 4-story residential apartment building on the west half of the site with 73 rental apartments and some ground floor commercial space fronting 34th Avenue South. The east half of the site will have three, 2-story townhouse buildings with 20 residential units fronting 35th Avenue South. A pocket park will be located in the northeast corner of the Site. Site features and project elements are shown on Figure 3.

The objectives and goals for developing Phase IV are the same as those for the other phases of the project: reclaim an abandoned, contaminated site to create a new community, provide affordable housing and jobs, act as a catalyst for new development, stimulate local reinvestment and create pride in one of Rainier Valley's most diverse neighborhoods. Rainier Court was a blighted area for at least 30 years, with boarded and abandoned buildings that attracted criminal activity. This project is reclaiming environmentally contaminated land for productive use and increasing housing density in an inner city neighborhood near light rail and other infrastructure.

The Phase IV parcels have a long history of fill placement, and vehicle and equipment storage and maintenance. Soil and groundwater contamination by hazardous substances has been documented in

portions of the Site. Financial support for the cleanup and redevelopment has included the EPA's Brownfields Economic Redevelopment Initiative and a 2006 Brownfields Cleanup Grant. Targeted Brownfields Assessments (TBAs) have been performed at the Site by Ecology and Environment (E&E) and Weston Solutions, Inc. (Weston) under the Superfund Technical Assessment and Response Team (START) contract managed by EPA. GeoEngineers, Inc. (GeoEngineers) has supplemented the TBA data with additional groundwater characterization studies, and soil chemical data that was obtained from the limits of two remedial excavations during the September 2010 Interim Cleanup Action (contaminated soil removal) in the north portion of the Site.

SEED, a not-for-profit community-based development organization, is the property owner. SEED has formed a limited liability corporation (LLC) to develop the Site. Key members of the project team are identified below.

SEED – Site Owner and Development Partner	Kim Calander (Housing Developer) and Lance Matteson (Executive Director)	(206) 760-4266 and (206)-460-4281
Pacific Northern Construction– Development/Project Manager	Bryan Park, President	(206) 463-2932
US Environmental Protection Agency	Brooks Stanfield, Project Officer	(206) 553-4423
Washington State Department of Ecology	Roger Nye, Site Manager	(425) 649-7000
GeoEngineers, Inc. – Environmental Consultant to SEED	Jim Roth, Project Manager	(206) 728-2674

The entire Rainier Court property (14 parcels) was entered into the Washington State Department of Ecology's (Ecology) voluntary cleanup program (VCP) in June 2001. The VCP toxics cleanup program identification number assigned to the site is NW0716. The legal description for the Phase IV Site is provided on Figure 3. GeoEngineers compiled site characterization information for the entire Rainier Court site into a "Conceptual Remedial Action Plan" (GeoEngineers, 2002) and provided it to Ecology. The Conceptual Plan has served as a preliminary document that provides a general understanding of the redevelopment vision and contaminant issues across the 14 parcels. Individual Cleanup Action Plans based on final building designs have been prepared for each development phase. The final CAPs supersede the Conceptual Plan. This RI/FS and CAP presents (1) the results of the TBAs conducted on Parcels GG, M, N, O and P, (2) cleanup action alternatives, and (3) the selected remedy for the Phase IV development.

3.0 PROJECT OBJECTIVE AND PLANNED DEVELOPMENT

The objective of the planned remedial action is to achieve compliance with Washington State's Model Toxics Control Act (MTCA) Washington Administrative Code (WAC) 173-340 in conjunction with the planned residential development of the Site. Soil with contamination by hazardous substances that exceeds Site screening levels will be removed from the Site or contained beneath a cap consisting of building foundations, concrete slabs or asphalt-concrete pavement. Areas of the Site where contaminated soil remains after construction will be subject to institutional controls that further restrict access to contaminated materials. Contaminated soil that is removed from the Site will be transported to a permitted disposal/treatment facility.

The proposed development consists of the following key components:

- A 4-story mixed-use residential apartment building on the west half of the site fronting 34th Avenue South.
- Seventy-three apartment units and approximately 5,600 square feet of commercial space on the ground level at the south end of the apartment building. Thirty-four surface parking spaces south and west of the building.
- An improved alley right-of way that provides access to 34th Avenue South in the southwest portion of the site, runs north-south through the center of the site, and provides access to 35th Avenue South in the northeast portion of the site.
- Three, 2-story townhouse buildings on the east half of the site fronting 35th Avenue South.
- Twenty townhouse units are planned with 29 surface parking spaces fronting the alley on the west side of the townhouse buildings.
- A pocket park located in the northeast corner of the Site that includes a 20 foot-high retaining wall/green wall.
- A pedestrian promenade and shared open spaces between the townhouse buildings.

Architectural drawings that show views of the proposed residential buildings, alley, park and other Site features are presented in Appendix A.

4.0 SCOPE OF SERVICES

The following general tasks were completed for this project by GeoEngineers, Weston and/or E&E: (1) site use history research, (2) subsurface exploration of soil and groundwater conditions, (3) chemical analysis of soil and groundwater samples and (4) preparation of a RI/FS and CAP.

E&E and Weston completed 43 exploratory borings, three monitoring wells and chemical analyses to evaluate soil and groundwater conditions at the Site. Their studies provided the data for most of the RI portion of this report. The scope of their services is described in the reports "Rainier Court, Targeted Brownfields Assessment, Seattle, Washington" (E&E, 2001), "Rainier Court Area 2, Targeted Brownfields Assessment, Seattle, Washington" (Weston, 2001), "Rainier Court Area 3, Targeted Brownfields Assessment, Seattle, Washington" (Weston 2003), and the memorandum "Rainier Court Area 4, Targeted Brownfields Assessment, Seattle, Washington" (Weston 2006). GeoEngineers was provided with the sampling locations and validated chemical analytical data in order to complete the RI/FS and CAP. GeoEngineers completed one monitoring well and collected several rounds of groundwater data to supplement the data obtained during the TBAs.

5.0 SPECIAL CONSIDERATIONS

For the purposes of this RI/FS and CAP, a similar methodology and cleanup selection rationale as was approved by Ecology on Phases I, II and III was used. A MTCA-compliant disproportionate cost analysis (DCA) was completed for this FS to comply with Ecology requirements.

6.0 PRIOR ENVIRONMENTAL SITE STUDIES

Soil and groundwater samples were obtained from the Rainier Court Phase IV Site by E&E, Weston and GeoEngineers during six phases of environmental studies completed from 2000 to 2006. The soil and groundwater samples were submitted for chemical analysis of a variety of contaminants of concern based on potential contaminant sources identified in Site use history research and site reconnaissance. Chemicals tested in soil and groundwater included: target analyte list (TAL) metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), chlorinated pesticides, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and petroleum hydrocarbons. A summary of soil and groundwater conditions and the results of chemical analyses are presented in subsequent sections of this report. Soil and groundwater analytical data from these studies is presented in Appendix B. An overview of the soil and groundwater sampling programs that were completed at the Phase IV Site is presented below.

E&E TBA in 2000: E&E conducted environmental site studies in 2000 on Parcels GG and M as part of the Rainier Court TBA and produced a report dated January 2001. E&E's field methods, sample locations and chemical analytical results are summarized in their TBA report (E&E 2001).

E&E obtained surface soil samples from eight locations across Parcels GG and M for chemical analysis. Two composite subsurface soil samples were analyzed from depth intervals of 4 to 8.5 feet from two locations in Parcel M. Groundwater samples were not obtained by E&E from any of the Phase IV parcels.

Weston TBA in 2001: Weston conducted a TBA in 2001 on Parcels N and P. Weston's field methods, sample locations and chemical analytical results are summarized in their TBA report (Weston, 2001).

Weston obtained surface soil samples from 19 locations across Parcels N and P for chemical analysis. Twenty-four composite subsurface soil samples were obtained and analyzed from depth intervals of 2 to 6 feet and 6 to 10 feet across Parcels N and P. One groundwater sample was obtained from a push-probe PP003 (Parcel P) for chemical analysis.

GeoEngineers Sampling in 2002: GeoEngineers obtained groundwater samples for chemical analysis from monitoring well MW-6 (Parcel N) in January 2002. Field methods, sample locations and chemical analytical results are summarized in the Conceptual Remedial Action Plan report (GeoEngineers, 2002).

Weston TBA in 2003: Weston conducted a TBA in 2003 that included Parcel O. Weston's field methods, sample locations and chemical analytical results are summarized in their TBA report (Weston, 2003).

Weston obtained surface soil samples from seven locations in Parcel O for chemical analysis. Eight composite subsurface soil samples were obtained from four locations in Parcel O for chemical analysis. The subsurface samples were obtained from depth intervals of 2 to 6 feet, 3 to 4 feet and 8 to 9 feet. Groundwater samples were obtained for chemical analysis from a push-probe in Parcel O (PO007) and monitoring well MW-6.

Weston TBA in 2005: Weston conducted a TBA in September and October 2005 on all Phase IV Parcels with the exception of Parcel P. The TBA was conducted to fill data gaps from earlier studies. Weston's field methods, sample locations and chemical analytical results are summarized in their TBA memorandum (Weston, 2006).

Weston obtained 8 soil samples from six boring locations on the Phase IV Site for chemical analysis. The composite soil samples were obtained from depth intervals of 2 to 6 feet and 6 to 10 feet. Groundwater samples were obtained from monitoring wells MW-10 through MW-12 in Parcels M, N and O.

GeoEngineers Sampling in 2006: GeoEngineers obtained groundwater samples for chemical analysis from monitoring well MW-12 (Parcel M) in February 2006. Field methods, sample locations and chemical analytical results are summarized in the report "First Quarter 2006 Groundwater Monitoring and Well Installation for Rainier Court, Phase II" (GeoEngineers, 2006).

Interim Cleanup Action in 2010: An interim cleanup action was completed in the north portion of the Phase IV Site (Parcel P) in September 2010. A total of 1,937 tons (approximately 1,330 cubic yards) of soil containing metals, carcinogenic PAHs (cPAHs) and/or petroleum hydrocarbons at concentrations exceeding MTCA Method A cleanup levels was excavated from two locations and disposed at a permitted landfill. Most of the contaminated soil was removed from a 4 to 7 foot deep excavation in the northwest portion of the Site. Approximately 187 tons of lead-contaminated soil were removed from a smaller 1 to 2 foot deep excavation in the northeast portion of the Site. The 2010 interim cleanup excavation footprints are shown on Figure 12. The results of the Interim Cleanup Action are presented in the report "Interim Cleanup Action, Rainier Court Property Phase IV Development" (GeoEngineers, 2010).

7.0 REMEDIAL INVESTIGATION

7.1. Geologic Setting

The subject site is located within the glacially scoured Rainier Valley of south Seattle. The valley walls are composed of lacustrine interglacial fine-grained sediments mantled by Vashon glacial till according to a United States Geological Survey (USGS) geologic map of Seattle (Troost, K., et. al, 2005). The eastern valley wall is located near the east boundary of the 14-parcel Rainier Court property and it appears that remnants of glacial till form a knoll/low ridge in the northeast portion of the Site (Parcel P).

The east valley wall (Mt. Baker Ridge) is topographically lower than the west valley wall (Beacon Hill) and extends down to Lake Washington; located about ½ mile east of the Site. The west valley wall slopes up to elevation 245 feet above mean sea level (AMSL) about ½ mile west of the subject Site. The subject Site is positioned within the central to east portion of the valley, at an elevation of approximately 80 feet AMSL, and is underlain by varying thicknesses of historic fill.

Subsurface soil and groundwater conditions were evaluated by completing 24 direct-push borings to depths of 6 to 10 feet below the ground surface (bgs), four monitoring wells to depths of 16 to 24 feet bgs and two geotechnical borings to depths of 51 to 66 feet bgs. Logs of the monitoring wells are presented in Appendix C.

7.1.1. Soil

With the exception of the northeast portion of the Site, soil beneath the Site consists of various generations of fill that typically is present from the ground surface to depths of approximately 6 to 10 feet bgs. In general, fill soil consists of soft/loose, silt and silty fine sand with variable organic and gravel content. Debris including brick, concrete, glass, metal, paper, charcoal and wood fragments was encountered in some of the fill. Based on deep geotechnical borings B-1 and B-2, the fill is underlain by soft native

lacustrine soil consisting of low permeability silt and clay to depths of 32 to 43 feet bgs. Glacially consolidated soils consisting of dense to very dense silty sand and hard silt were encountered beneath the lacustrine soil to the total depths explored (51 to 66 feet).

Glacially consolidated soils generally were encountered at the ground surface or less than 2 feet bgs in the northeast portion of the Site where the low ridge in Parcel P is located.

7.1.2. Groundwater

Groundwater conditions at the Phase IV Site were evaluated by observing the depth where groundwater was encountered in the environmental and geotechnical borings and measuring depths to water and calculating groundwater elevations in three monitoring wells (MW-10 through MW-12) that were installed by Weston in 2005. A thin zone of perched groundwater generally was encountered at depths of 6 to 9 feet bgs across much of the Site. Groundwater was encountered at depths ranging from 2.5 to 5 feet in MW-6 in the southeast portion of the Site. The shallow groundwater is perched at the contact between fill and the underlying thick unit of native silt/clay. No significant thickness of coarse-grained water-bearing soil (aquifer) was encountered in deep borings B-1 and B-2.

Groundwater conditions in the Phase IV wells were supplemented with measurements made in 12 other wells located across the Phase I, Phase II and Phase III Sites. GeoEngineers completed groundwater monitoring events in all accessible wells located at the Rainier Court Site in February, May and October 2006 and February 2007. Perched groundwater was measured in the three accessible Phase IV wells at depths ranging between approximately 6.7 and 8.6 feet bgs during monitoring events in 2006 and 2007. Groundwater depths and elevations for all of the wells at Rainier Court that were monitored in 2006 and 2007 are presented in Table 1.

The primary direction of shallow groundwater flow beneath the Phase IV Site appears to be to the southwest. However, groundwater flow in the vicinity of the Rainier Court redevelopment area is variable and complex. Shallow, perched groundwater flow beneath the Site likely is influenced by (1) heterogeneous fill and variable fill placement/thickness, (2) subsurface utilities (primarily sewers) (3) orientation of the low permeability, undulating native soil surface beneath the fill and (4) seasonal variations in rainfall/recharge. Groundwater elevation contours and interpreted flow direction based on February 2007 groundwater measurements are shown on Figure 2.

7.2. Site Use

7.2.1. Prior and Current Site Uses

General: The following historic and current Site use information is based primarily on information contained in the E&E TBA report dated January 2001 and Weston TBA reports/memorandums dated December 2001 and February 2006, respectively. Information in these documents was supplemented by historical research completed by GeoEngineers in 2001 and 2002 during preparation of the Conceptual Remedial Action Plan for SEED.

Parcel GG: Parcel GG was the site of a former building based on information summarized in the 2001 E&E report. A 1961 aerial photograph shows a building that may be a residence. The building does not appear in the 1972 aerial photograph. It is possible that a heating oil underground storage tank (UST) was associated with the potential residence on this property. The east portion of the property adjacent to 35th Avenue South was used for parking by several automobiles and several soil piles were observed near the center of the property during a 2000 site visit by E&E staff. Parcel GG currently is vacant.

Parcel M: A residence was constructed on Parcel M in 1947 based on historical research completed by E&E for the 2001 TBA report. The residence was demolished around 1990. Since 1990 site use has included dump truck parking and maintenance, and storage of construction and maintenance materials by SEED. According to SEED, three drums observed on the site in 2000 contained asphalt emulsifier that was used periodically by the property owner. Parcel M currently is vacant.

Parcel N: Weston conducted a historical information review for Parcel N as part of the Rainier Court Area 2 TBA that was completed in 2001. Parcel N has been used for construction vehicle maintenance and storage and salvage operations. A small office building was constructed in the southwest corner of the parcel in 1954; the building was removed sometime after 2001. The building was heated with a heating oil "stove" and was equipped with a 500-gallon gasoline tank and pump according to King County property records. A 16 to 30 foot wide alley right-of-way and gated fence bisect the property.

Dozens of drums stacked in the southeast portion of the parcel are visible in a 1961 aerial photograph. The parcel was used for storage of vehicles and various materials/debris based on aerial photos dated 1956 through 1974. The property was listed in 1991 on Ecology's Confirmed and Suspected Contaminated sites list with a 4 hazard ranking.

Large oil stains were visible on the ground surface during a site visit completed by Environmental Associates for a 1996 Phase I Environmental Site Assessment (ESA). A magnetometer survey completed by Environmental Coalition of South Seattle (ECOSS) in 1998 detected three elevated readings in the eastern half of the parcel.

Parcel N was fenced and occupied by a salvage operation and several stored boats/vehicles during a site visit conducted by Weston in 2001. Several large oily stains were observed on the ground surface in the western portion of the parcel. Items observed on the ground included automotive batteries, dozens of tires, metal vehicle parts, equipment and junk. A partially dismantled vehicle and several small oily stains were observed in the eastern portion of the parcel. A covered 55-gallon drum labeled "thinner" was observed. Most of the western half of the parcel appeared to be covered with an irregular layer of asphalt and concrete that is covered by several inches of fill soil.

Parcel O: Weston conducted a historical information review for Parcel O as part of the Rainier Court Area 3 TBA that was completed in 2003. Parcel O was developed in 1961 when the welding/fabrication shop building that currently occupies the Site was constructed. The welding/fabrication shop operated from 1961 to 2002 when SEED bought the property. A sculptor was leasing the building from SEED as of December 2003. The western and southern portions of the property were paved; the eastern portion of the property remains unpaved. A small storage shed and an addition to the building were constructed in the mid-1970s.

Minor to moderate staining was observed on the concrete floor inside the building, primarily along the north wall. Oil stains were observed on the ground surface at the northeast corner of the building during Weston's 2003 site visit. The oil stains were located near several uncovered containers of oily liquids that were left behind by the previous owners. It appeared that an area in the northeast corner of the parcel was used for dumping based on the presence of a hydraulic ram, several compressed gas cylinders and other metal debris. Jerry cans and used oil filters were observed between the former welding/fabrication building and the abandoned building located on adjacent Parcel P.

Parcel P: Weston conducted a historical information review for Parcel P as part of the Rainier Court Area 2 TBA that was completed in 2001. A residence occupied the top of the ridge in the northeast corner of the parcel from 1908 until it was demolished in 1970. The house was originally heated with coal according to King County records. A warehouse building was constructed in the southwestern portion of the site in 1953. The warehouse was removed in 2001 or 2002. Dames & Moore (D&M) conducted a Phase I ESA on Parcel P in 1999. D&M staff noted that the warehouse building was abandoned and observed several 5-gallon buckets containing hydraulic fluid, oil, and car batteries in the warehouse and a semi-trailer parked on the property. Two unlabeled, empty 55-gallon drums and surface staining were observed on the property west of the warehouse.

Weston visited the Site in 2001 and observed that the warehouse had no roof, was full of refuse, and appeared to be occupied by vagrants. A 10 foot by 10 foot area of oil staining was observed on the ground surface near 34th Avenue South. Small piles of refuse and construction debris were observed at several locations on the parcel.

7.2.2. Current Site Buildings and Utilities

The following table summarizes the current parcel use, addresses and buildings. The approximate building locations are shown on Figure 2. There are no other known structures or utilities on the Site. Sanitary and storm sewer mainlines are present in 33rd, 34th and 35th Avenues South. The sanitary sewer mainlines flow to a confluence sewer mainline located in South Charlestown Street while the storm lines flow to the north and east.

Parcel and Site Address	Current Site Buildings/Use
Parcel GG – no street number (35th Avenue South)	Undeveloped
Parcel M – 3622 34th Avenue South	Undeveloped
Parcel N – 3626 34th Avenue South	Undeveloped (possible UST associated with former one-story office building; used for vehicle salvage and storage.
Parcel O – 3616 34th Avenue South	Welding/fabrication shop building and small storage shed.
Parcel P – 3612 34th Avenue South	Undeveloped

7.3. Chemical Analytical Results

This section provides a summary of the chemical analytical results obtained from the E&E, Weston and GeoEngineers Site studies described in Section 6.0. GeoEngineers obtained sample location information from E&E and Weston and the validated digital dataset from the EPA in order to prepare this RI/FS and CAP. Because the E&E and Weston studies were conducted as part of a TBA, actual laboratory datasheets are not included in this report. However, queries were conducted from digital databases that GeoEngineers merged in order to prepare complete datasets. Tables of all chemical analytical results from the validated databases provided by E&E and Weston (soil and groundwater samples) and GeoEngineers groundwater data are presented in Appendix B. Readers are referred to the individual E&E and Weston reports for chemical analytical program details.

7.3.1. Contaminants of Concern and Sources of Contamination

Contaminants detected at the Site at concentrations exceeding screening levels are summarized in Table 2 (soil) and Table 3 (groundwater). Chemicals tested in soil and groundwater included: target analyte list (TAL) metals, VOCs, SVOCs, PAHs, petroleum hydrocarbons, chlorinated pesticides and PCBs. The following contaminants were detected in portions of the Phase IV Site at concentrations exceeding screening levels.

Shallow Soil (0 to 0.5 feet): metals (arsenic, cadmium, iron and lead), PAHs, petroleum hydrocarbons, one VOC (dichloromethane) and one pesticide (heptachlor).

Subsurface Soil (0.5 to 4, 4 to 8 or 8 to 10 feet bgs): metals (antimony, arsenic, cadmium, copper, iron, lead and mercury), PAHs and petroleum hydrocarbons.

Based on the Site use history and the TBA studies completed between 2001 and 2006, the source of the contaminants listed above appears to be imported uncontrolled fill and hazardous substance use, storage, generation, spills and disposal related to welding activities, vehicle and equipment storage, maintenance and salvage on Site.

Groundwater (MW-6, MW-10 through MW-12 and borings PP003, P0007): Shallow groundwater appears to be limited to a thin perched zone typically encountered 6 to 9 feet bgs at the contact between imported fill soil and low permeability, native silt and clay. The thick silt and clay unit beneath the imported fill makes it very unlikely that deep groundwater at the Site has been impacted by contaminants in the shallow fill soil or perched groundwater. Metals (arsenic, lead, iron and manganese) and diesel- and oil-range petroleum hydrocarbons exceeded Site screening levels in several wells. The total lead and arsenic concentrations appear to be biased high by the presence of sediment/soil in the groundwater samples. Dissolved lead and arsenic were not detected or were detected at concentrations less than screening levels in samples collected from P0007 and MW-12. These results support the conclusion that the results for the total lead and arsenic analyses are biased high.

The source of the metals in groundwater appears to be metals-contaminated fill soil that is present throughout much of the Site. The petroleum hydrocarbon exceedances are likely related to releases from historic heating oil USTs or historic spills of fuel and oil products on the ground surface.

7.3.2. Distribution of Soil Contamination

Screening levels for one or more contaminants were exceeded in 35 out of the 76 soil samples that were analyzed across the Site. The contamination is associated with fill soils that are encountered from the ground surface to depths of 6 to 10 feet across much of the Site. In general the contaminated fill soils are thickest in the south half of the Site in Parcels GG, M and N. The areas with the least amount of contamination are the east and northwest portions of Parcel P where little or no fill soil is present and native, glacially consolidated soils form a low ridge that rises approximately 15 to 20 feet above the central and southern portions of the Site.

The following describes general contaminant distribution patterns in soil. Soil samples with detections that exceeded screening levels are presented in Table 2 and Figures 4 through 9. Full chemical analytical datasets are presented in Appendix B.

- **Metals:** Concentrations of metals exceeded screening levels in 20 of the samples that were tested. Six of the exceedances were from surface samples and the remaining 14 were from fill soil at depths ranging between 0.5 foot and 10 feet bgs. Lead, arsenic and iron are the metals with the greatest number of exceedances. Metals exceedances were detected in all five parcels that make up the Phase IV Site. All of the parcels had at least two samples with metals exceedances. The east and northwest portion of Parcel P did not have metals exceedances with the exception of one surface sample from boring PP009.
- **PAHs:** Concentrations of cPAHs based on the toxicity equivalent (TEQ) evaluation method ranged from less than the MTCA Method A cleanup level (0.1 milligrams per kilogram [mg/kg]) to 3.1 mg/kg. There were 17 cPAH exceedances based on the TEQ evaluation method. Eight of the exceedances were from surface samples and the remaining nine were from fill soil at depths ranging between 0.5 feet and 10 feet bgs. There were no exceedances of non-carcinogenic PAHs. The greatest number of PAH exceedances were detected in Parcel N. The other four parcels had two or less PAH exceedances. PAH concentrations decrease in magnitude and extent with depth. Only two of the 17 cPAH exceedances were collected at depths greater than 6 feet bgs. Parcel P had no PAH exceedances with the exception of boring PP002 in the southwest corner of the parcel.
- **Petroleum Hydrocarbons:** Concentrations of petroleum hydrocarbons exceeded screening levels in 13 of the samples that were tested. There were 12 exceedances of diesel- and oil-range hydrocarbons. Petroleum concentrations decrease in magnitude and extent with depth. Eight of the exceedances were from surface samples. With the exception of two exceedances in Parcel N obtained from 2 to 6 feet bgs, the petroleum exceedances were detected in samples obtained from the upper two feet of soil at the Site. The majority of the petroleum exceedances were detected in Parcel N. The remaining exceedances were detected in Parcels M, O and the southwest portion of Parcel P.
- **VOCs:** Concentrations of VOCs (dichloromethane) slightly exceeded screening levels in three out of 33 surface samples that were tested. There were no subsurface exceedances of VOCs. The VOC exceedances were detected in samples from Parcel M. These VOC exceedances are likely not representative of site conditions because dichloromethane (aka methylene chloride) is a common laboratory contaminant and no other VOCs exceeded screening levels for soil. Based on the large number of samples tested and only three questionable exceedances, VOCs do not represent a contaminant of concern at the Site.
- **SVOCs:** There were no SVOC exceedances other than the PAHs discussed above.
- **Pesticides and PCBs:** There was one exceedance of pesticides (heptachlor) in a surface sample collected from Parcel O. There were no PCB exceedances.

7.3.3. Distribution of Groundwater Contamination

Perched groundwater samples were collected from six locations at the Site (four monitoring wells and two direct-push borings. Groundwater cleanup levels for metals and/or petroleum hydrocarbons were exceeded at the six locations based on sampling events from 2001 to 2005. Groundwater screening level exceedances are summarized in Table 3 and Figure 10.

- **Petroleum Hydrocarbons:** Concentrations of diesel- and/or oil-range petroleum hydrocarbons exceeded groundwater screening levels at five locations in Parcels M (MW-12), N (MW-6), O (MW-11 and boring PO007) and P (boring PP003). These exceedances are likely related to releases from historic heating oil USTs or historic spills of fuel and oil products on the ground surface.

- **Metals:** Arsenic, lead, iron and manganese were detected at concentrations exceeding screening levels at four out of six sampling locations on the Site. Total lead was detected at concentrations exceeding the screening level in samples from boring P0007 (Parcel O) and MW-12 (Parcel M). Total arsenic was detected at a concentration exceeding the screening level in the sample from P0007. The arsenic and lead concentrations appear to be biased high by the presence of sediment/soil in the groundwater samples (no exceedances of these metals in dissolved metals analyses). Concentrations of iron and manganese exceeded groundwater screening levels at three and four locations, respectively. The source of the metals in groundwater appears to be metals-contaminated fill soil.
- PAHs and other SVOCs, VOCs, PCBs and pesticides were not detected in groundwater samples or were detected at concentrations less than screening levels.

7.3.4. Surface Water

Surface water is not present at the Site. The closest surface water body, Lake Washington, is located approximately a half mile to the east. It appears that contaminants at the Site have not impacted surface water.

7.3.5. Sediment

The Site does not contain significant areas of sediment accumulation. Therefore, this media was not analyzed.

7.3.6. Ambient Air and Soil Gas

No samples of ambient air or soil gas were analyzed as part of this study.

7.3.7. Terrestrial Ecological Evaluation

Based on our review of the terrestrial ecological evaluation exclusion section in MTCA, this urban Site is excluded from a terrestrial ecological evaluation (TEE). Exclusion (b) of Washington Administrative Code (WAC) 173-340-7491 is applicable to this Site. This exclusion indicates that a Site may be excluded from further terrestrial ecological evaluation "if all soil contaminated with hazardous substances is, or will be, covered by buildings, paved roads, pavement or other physical barriers that will prevent plants or wildlife from being exposed to the soil contamination." In addition, the Site appears to qualify for Exclusion (c) of WAC 173-340-7491 because there is less than 1.5 acres of contiguous undeveloped land on the Site or within 500 feet of any area of the Site. A completed TEE form is provided in Appendix D.

7.3.8. Endangered Species Act Evaluation

Because this project involves federal funding, it must comply with relevant provisions of the Endangered Species Act (ESA). The first step in the ESA process is to determine whether listed or proposed fish, wildlife, or plant species as well as their critical habitats occur in the vicinity of the project. If it is documented that no such resources are present, ESA requirements are satisfied. If protected species or habitat is present, then a biological assessment and possibly consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) Fisheries must be completed before the federal action can proceed.

As part of GeoEngineers' research in 2003 for the Phase II Cleanup Action Plan, the NOAA Fisheries website (www.nwr.noaa.gov) was reviewed for information on ESA-protected anadromous fish species and habitat

in the Rainier Court project vicinity. Written requests for information on protected species and habitats in the vicinity were sent on September 3, 2003 to the following agencies:

- USFWS for terrestrial and freshwater species and habitats protected under the ESA;
- Washington Department of Fish and Wildlife (WDFW) for Priority Habitat and Species which includes both state-protected habitats and species and those listed under the federal ESA; and
- Washington Department of Natural Resources (WDNR) for Natural Heritage Information System data on rare plants and high quality native ecosystems.

The WDNR reported that their search of the Natural Heritage Information System found no records for rare plants or high quality native ecosystems in the vicinity of the Rainier Court project. This is not surprising considering the developed nature of the area.

The WDFW reported six areas designated as Urban Natural Open Space within a mile of Rainier Court, with the closest area located about 0.5-mile from the Site. These open spaces are essentially urban parks and steep hillsides that retain patches of vegetated habitats suitable for various birds and small mammals, but they are not protected habitats under the ESA. The Phase IV project would not affect any of these locations.

The WDFW report also noted that three nest sites for bald eagles (listed as threatened under the ESA) occur in Seward Park approximately 2 miles from the Rainier Court site. These locations are well beyond the 0.5-mile action area radius commonly used to determine whether federally-protected species occur within a project's impact zone. Based on the developed nature of the Rainier Court Site and a discussion with WDFW's eagle biologist responsible for this region, eagles are not expected to use the Rainier Court Site itself or its immediate vicinity. There are no perch trees or other qualities that would draw eagles to the Site for foraging or overwintering purposes. The WDFW report shows the entire Lake Washington shoreline as a priority habitat for foraging bald eagles, but there is no designated critical habitat for bald eagles under the ESA. Furthermore, the project will have no effect on this nearshore habitat. Thus, it is concluded that the project will have "no effect" on bald eagles.

Finally, the Site is located approximately 2,500 feet from the nearest water body (Lake Washington). There are no creeks or other water bodies closer than about a half-mile from the Site. Because of the topography and urban nature of the site, any rainfall or surface water running onto the site or groundwater collected during excavation activities will be readily contained and disposed of via existing stormwater or sanitary sewer systems. Although two fish species listed as threatened under the ESA (Chinook salmon and bull trout) and one candidate species (Coho salmon) may be found in nearshore areas of Lake Washington or in tributary streams at certain times of year, these locations are well beyond the zone of potential project impact (action area). The US Army Corps of Engineers has issued guidance stating that projects which occur 300 feet or more from waters containing ESA-listed or proposed fish and which will not cause water quality or quantity impacts on the species or their forage base qualify for a "no effect" determination under the ESA. Consequently, this project will have "no effect" on Chinook salmon, bull trout or Coho salmon.

In summary, no ESA-protected aquatic or terrestrial species or their designated critical habitats occur within the project action area or would otherwise be subject to any project impacts. This information was relayed to Tim Brincefield of the EPA during preparation of the Rainier Court Phase I and II Cleanup Action Plans. Mr. Brincefield reported on October 3, 2003 that he had reached a conclusion that the project would have "no effect" on ESA-protected resources, thus concluding EPA's Section 7 responsibilities under the ESA.

7.4. Conceptual Site Model

7.4.1. Contaminants of Concern

Metals, PAHs, petroleum hydrocarbons, and to a much lesser extent, pesticides (one surface location), were detected in some of the soil samples obtained during Site studies at concentrations exceeding the screening levels (Table 2 and Figures 4 through 9). Based on groundwater sampling results from four monitoring wells and two direct-push borings at the Site, groundwater has been impacted by diesel- and oil-range petroleum hydrocarbons at five locations and metals at four locations (Table 3 and Figure 10). The general sources of these contaminants in soil and groundwater are likely as follows:

- **Petroleum hydrocarbons:** product spills/leaks from fuel storage tanks (USTs and/or above ground storage tanks [ASTs]) and vehicle/equipment maintenance, storage and salvage activities.
- **PAHs:** present in some of the petroleum hydrocarbons released on site and present in some of the fill imported to the Site.
- **Metals:** spills/disposal of waste products from manufacturing processes, vehicle/equipment maintenance and salvage and present in some of the fill soil imported to the Site.
- **VOCs (dichloromethane):** unknown source (not considered a contaminant of concern—limited detections and is a common laboratory contaminant).
- **Pesticides:** surface application or small release in one location of Parcel O.

7.4.2. Future Site Use

The planned development and remediation of the Site will significantly reduce the potential for future releases of hazardous substances to the environment because residential developments are not typically associated with the use, storage, generation or release of hazardous substances. Remediation associated with construction will result in removal and off-site disposal of the majority of the contaminated soil from the Site. Remaining contaminated soil and groundwater will be capped by concrete floor slabs, foundations, concrete-asphalt pavement and concrete slabs beneath landscape and other permeable areas. Other potential pathways of concern (identified below) will be mitigated with monitoring and cap maintenance activities.

7.4.3. Occurrence of Contamination

Based on the results of the Site studies, a conceptual model was developed that summarizes the occurrence of contamination beneath the Site, potential contaminant migration pathways, and potential exposure scenarios. Much of the fill soil imported to the Site appears to contain metals and/or PAH concentrations. Additionally, historical releases/dumping of hazardous substances (e.g. petroleum hydrocarbons) appears to have impacted shallow soil at the Site in some areas.

Shallow groundwater appears to be limited to a thin perched zone 6 to 9 feet bgs located at the contact between fill soil and a thick layer of low permeability native silt and clay. As discussed in Section 7.3.3., arsenic and lead were detected in groundwater at concentrations above screening levels at several locations on the Site. The concentrations are less than two times the screening levels and are biased high based on the presence of sediment in the water samples (no dissolved arsenic and lead exceedances). The likely sources of iron, manganese and petroleum hydrocarbon exceedances detected in Site groundwater include leaching of contaminants from the fill soils and spills/releases of petroleum hydrocarbons and metals to the ground surface. Spills/releases of hydrocarbons from historic USTs are also a potential source of hydrocarbons in groundwater.

Much of the contaminated soil at the Site will be removed during remediation, and remaining contaminated soil will be contained/capped. The caps will prevent direct contact with residual contaminated soil, prevent airborne transport of contaminated soil (blowing dust), limit/prevent surface water infiltration and decrease contaminant leaching potential. It is reasonable to conclude that the potential for groundwater contamination beneath the Site will be reduced by the cleanup action.

7.4.4. Exposure Pathways

Several potential exposure scenarios must be considered relative to the contaminated soil and shallow groundwater at the Site. The remedial alternative selected must mitigate the following exposure pathways:

1. Direct contact (human dermal contact and/or ingestion) with impacted soil (metals, PAHs and petroleum hydrocarbons) down to depths of 15 feet (standard point of compliance).
2. The leaching of contaminants from soil to groundwater (metals, PAHs and petroleum hydrocarbons) and potential exposure scenarios related to shallow groundwater contamination beneath the Site. Site characterization results show that there are limited groundwater impacts in the Site's current state (uncapped without any removal of contaminants except in the northeast portion of the Site).
3. Inhalation of vapors released from soil and/or groundwater to ambient air or building interiors. Remedial investigation results indicate that contaminants of concern (metals, PAHs, and diesel- and oil-range hydrocarbons) are not volatile.
4. Ingestion of groundwater (metals, PAHs and petroleum hydrocarbons). Existing site characterization data show that there are limited groundwater impacts in the Site's current state. The perched groundwater at the Site is not a current source of drinking water and is not a practicable source of future drinking water. There are no nearby points of entry of groundwater into surface water.

The FS portion of this report will show that removal of more than half of the contaminated soil beneath the Site, along with containment/capping and institutional controls, will mitigate all of the pathways of concern.

The following sections present the regulatory framework and an evaluation of remedial alternatives for mitigating the contaminated media and potential exposure pathways present at the Site.

7.5. Regulatory Framework

The MTCA requirements address contaminated sites in a seven step process. The seven steps include: 1) site discovery, 2) initial investigation, 3) site hazard assessment, 4) hazard ranking, 5) remedial investigation/feasibility study, 6) selection of a cleanup action and 7) site cleanup. This document represents steps 5 and 6 of this process for Phase IV of the Rainier Court redevelopment. The specific regulations addressing these requirements are described below:

- WAC 173-340-350 Remedial Investigation and Feasibility Study. The TBAs conducted at this Site by EPA are sufficient to evaluate the feasibility of appropriate remedial actions that will be compatible with Site development. This report addresses the reporting requirement described in this section of MTCA.
- WAC 173-340-360 Selection of Cleanup Actions. This report presents the cleanup action selection process and balances Ecology's selection criteria with the planned Site development.

- WAC 173-340-400 Cleanup Actions. Implementation of the Cleanup Action. The selected cleanup action and details outlined in this report complies with the design, construction and operational requirements of this section of MTCA.
- WAC 173-340-410 Compliance Monitoring Requirements. A description of the compliance monitoring to be performed during and following implementation of the remedial action is included in this report. The monitoring has been designed to confirm the long-term effectiveness of the cleanup action and that human health and the environment are protected during and after construction.
- WAC 173-340-440 Institutional Controls. The selected cleanup action will result in residual concentrations of metals, PAHs and limited areas with petroleum hydrocarbons being contained/ capped on Site. Institutional controls will be necessary to manage the in-place containment of these contaminants.
- WAC 173-340-810 Safety and Health Requirements. This section incorporates the federal Occupational Safety and Health Administration (OSHA; 29 U.S.C. Section 651) and Washington Industrial Safety and Health Act (WISHA; Chapter 49.17 Revised Code of Washington [RCW]) regulations applicable to remedial actions under MTCA. Individual Site Health and Safety Plans (HASP) that addresses the Safety and Health issues associated with the remedial action will be developed to support the cleanup action by the consultants and contractors working on-site.
- WAC 173-340-820 Sampling and Analytical Plan. Procedures to ensure that sample data of sufficient quality are generated during and after the remedial action will be developed before starting the cleanup action.

7.6. Applicable, Relevant and Appropriate Requirements

The selected cleanup action for the Site will comply with applicable local, state and federal laws and regulations. MTCA (173-340 WAC) represents the primary regulation that establishes cleanup levels and other requirements for the Site. Cleanup standards developed under MTCA must also meet the statutory requirement to be at least as stringent as other applicable state and federal laws. Applicable cleanup concentrations (screening levels) for contaminants of concern in soil and groundwater are presented in section 7.8. MTCA Method A and/or Method B cleanup levels have been selected for all of the contaminants of concern except iron. The cleanup levels for iron are based on background concentrations in Puget Sound soil and the EPA Region 9 Preliminary Remediation Goals (PRGs) [1] for groundwater.

7.7. Other Environmental Regulations

State Environmental Policy Act (SEPA) regulations will be addressed as part of the redevelopment construction process. A SEPA checklist will be prepared by others.

[1] *EPA Region 9 indicates that "The PRG table contains over 600 preliminary remediation goals (PRGs) for contaminants in soil, air, and tap water. Region 9 PRGs are risk-based concentrations that are intended to assist risk assessors and others in initial screening-level evaluations of environmental measurements. As their name implies, Region 9 PRGs may also be viewed as preliminary cleanup goals for an individual chemical, but in this context, they are best viewed as dynamic and subject to change. because they are generic and based on direct contact exposures which may not address site-specific conditions and/or indirect exposure pathways at sites (See Exhibit 1-1 in "Region 9 PRGs Table Users Guide/Technical Background Document").*

7.8. Cleanup Levels

Cleanup levels for soil and groundwater that are protective of human health and the environment and address the relevant exposure pathways are discussed in this section. The cleanup levels consider the proposed redevelopment and future use of the Site as multi-unit and single family housing (residential). Preliminary cleanup standards are developed during the RI, proposed cleanup standards for remedial alternative evaluation are presented in the FS and final cleanup standards are established in the Cleanup Action Plan (CAP). Because of the combined nature of this document, the cleanup levels presented in this section are proposed as the final cleanup levels for remediation at the Site.

The proposed cleanup levels (aka screening levels) for the contaminants of concern at the Site are shown in the tables below. The screening levels have been utilized throughout the TBA site characterization process, cleanup and redevelopment of Rainier Court Phases I, II and III, and the 2010 Interim Cleanup Action at the Site. The screening levels are a combination of MTCA Method A and B (for non-restricted use) and EPA Region 9 PRGs. The EPA Region 9 PRGs have only been used where a MTCA cleanup level does not exist within a "lookup" table (e.g. WAC 173-340-900 and/or cleanup levels and risk calculations [CLARC]).

SOIL CLEANUP LEVELS

Compound	Soil Cleanup Level (mg/kg)	Cleanup Level Criteria
Benzene	0.03	Method A
Ethylbenzene	6	Method A
Toluene	7	Method A
Xylenes	9	Method A
Dichloromethane (Methylene Chloride)*	0.02	Method A
Gasoline-range hydrocarbons	100 (benzene not present)	Method A
Diesel-range hydrocarbons	2,000	Method A
Oil-range hydrocarbons	2,000	Method A
Benzo (A) Pyrene	0.137	Method B
cPAHs (cumulative by TEQ)	0.1	Method A (see following paragraph for additional discussion related to cPAHs)
Naphthalenes	5	Method A
PCBs	1.0	Method A
Heptachlor	0.222	Method B
Antimony	32	Method B
Arsenic	20	Method A
Cadmium	2	Method A
Copper	2,960	Method B
Chromium III**	2,000	Method A

Compound	Soil Cleanup Level (mg/kg)	Cleanup Level Criteria
Chromium VI**	19	Method A
Iron	58,700	Background concentration in Puget Sound Soil
Lead	250	Method A
Mercury	2	Method A

Notes:

* A common laboratory contaminant.

** The background concentration for Chromium is 48 milligrams per kilogram (mg/kg).

Based on soil sampling results, one or more of the following cPAHs were detected at the Site: Benzo(A)Anthracene, Benzo(A)Pyrene, Benzo(B)Fluoranthene, Benzo(K)Fluoranthene, Chrysene, Dibenzo(A,H)Anthracene, and Indeno(1,2,3-CD)Pyrene. Total concentrations of cPAHs calculated using the toxicity equivalency methodology outlined in WAC 173-340-708(8) will be compared against the MTCA Method A cleanup level shown in the table above.

GROUNDWATER CLEANUP LEVELS

Compound	Groundwater (µg/L)	Cleanup Level Criteria
Benzene	5	Method A
Ethylbenzene	700	Method A
Toluene	1,000	Method A
Xylenes	1,000	Method A
Dichloromethane (Methylene Chloride)	5	Method A
Gasoline-range hydrocarbons	1,000	Method A
Diesel-range hydrocarbons	500	Method A
Oil-range hydrocarbons	500	Method A
cPAHs (as Benzo(a)pyrene)	0.1	Method A (if other cPAHs are detected, use TEQ method)
Arsenic	5	Method A
Iron	11,000	EPA Region 9 PRG
Lead	15	Method A
Manganese	2,240	Method B
Mercury	2	Method A
Cadmium	5	Method A
Chromium (total)	50	Method A

Notes:

µg/L = micrograms per liter

8.0 FEASIBILITY STUDY

The primary purpose of the FS is to develop and evaluate cleanup action alternatives and select a preferred cleanup alternative that meets the MTCA requirements for cleanup actions described in WAC 173-340-360. Cleanup action objectives, screening of remedial alternatives, and selection of the most permanent practicable remedial alternative based on a disproportionate cost analysis are presented in the following sections.

8.1. Cleanup Action Objectives

The objective of the cleanup action is to achieve compliance with MTCA in conjunction with the planned multi-family housing development at the Site. The primary goal is to complete a cleanup action that is protective of human health and the environment. In locations where contaminated soil exceeding MTCA cleanup levels remains in place, that soil will be contained beneath engineered caps and subject to institutional controls.

The remainder of this report incorporates the redevelopment elements discussed below and shown in Figure 3 and Appendix A. These project elements are key to understanding the selected cleanup action.

Apartment Area. This area will occupy the west half of the Site and consists of a 4-story mixed-use residential apartment building fronting 34th Avenue South. Seventy-three apartment units are planned with approximately 5,600 square feet of commercial space on the ground level at the south end of the apartment building; an outdoor courtyard is planned. Thirty-four surface parking spaces are proposed south and west of the building.

Townhouse Area. Three, 2-story townhouse buildings on the east half of the Site fronting 35th Avenue South. Twenty townhouse units are planned with 29 surface parking spaces fronting the alley on the west side of the townhouse buildings. A pedestrian promenade and shared open spaces between the townhouse buildings are planned.

Other Features. An improved alley right-of-way that provides access to 34th Avenue South in the southwest portion of the Site, runs north-south through the center of the Site, and provides access to 35th Avenue South in the northeast portion of the Site. A pocket park located in the northeast corner of the Site that includes a 20 foot-high retaining wall/green wall. Small landscape areas located along the perimeter of the apartment building and townhomes, and permeable-pavement plazas/shared areas.

8.2. Identification and Screening of Remedial Alternatives

The list of remedial options presented below represents the broad group of remedial measures that were considered in the "Conceptual Remedial Action Plan" (GeoEngineers, 2002). The Conceptual Plan considered remedial alternatives for the entire 14-parcel Rainier Court site. These options were re-evaluated for the Phase IV Rainier Court development based on additional TBAs completed by Weston in 2003 and 2005, and groundwater sampling completed by GeoEngineers in 2006. Remedial options that were considered are as follows:

1. No action.
2. Containment/capping of contaminated soil and implementation of institutional controls.

3. Design, installation and operation of in-situ remedial systems.
4. Excavation of contaminated soil with on-site treatment and reuse of the excavated soil.
5. Excavation of contaminated soil with off-site treatment/disposal at a permitted facility.

In our opinion, options 1, 3 and 4 would not achieve the remedial objectives of this project for the following reasons. As a result of the following rationale, these three remedial options were eliminated from further consideration.

- *No action.* The "no action" alternative would not achieve compliance with MTCA because contaminant concentrations in soil would not be reduced or isolated and exposure pathways would not be mitigated.
- *Design, installation and operation of in-situ soil treatment systems.* This alternative would be relatively high in cost and would not be effective in degrading metals, PAHs and oil-range hydrocarbons in soil to MTCA cleanup levels.
- *Excavation of contaminated soil with on-site treatment and reuse of the excavated soil.* This alternative would be (1) relatively high in cost, (2) require additional space for soil treatment, (3) time consuming and (4) labor intensive. A large net volume of soil will be exported from the site so reuse of a large volume of soil is not feasible. Also, some of the treated excavated soil may not be appropriate for reuse because of geotechnical concerns and would have to be exported to an off-site location.

Remedial options 2 and 5 have been retained for further consideration:

- **Remedial Option 2 - Containment/capping of contaminated soil and implementation of institutional controls** is a feasible option for the Site. Contaminated soil beneath the apartment building and townhomes would be capped by concrete slabs and foundations at the base of the buildings. Contaminated soil beneath the alley and surface parking areas would be capped by asphalt-concrete pavement. Landscaped/planter areas around the perimeter of the buildings and permeable pavement installed on plazas/shared areas would be underlain by clean fill and concrete caps to prevent infiltration of precipitation and irrigation water. Institutional controls that would be implemented include cap maintenance, soil and groundwater handling protocols and restrictions on the use of groundwater beneath the Site. Groundwater monitoring would be completed after the cleanup action is completed.

  The soil contaminants that would be capped would primarily be metals and PAHs with limited areas of oil-range petroleum hydrocarbons. These contaminants have relatively low mobility, low solubility and low volatility. Perched groundwater in some portions of the Site has low level exceedances (less than 2 times MTCA cleanup levels) of lead, arsenic and petroleum based on samples from four monitoring wells and two direct-push borings.
- **Remedial Option 5 - Excavation and off-site treatment/disposal of contaminated soil** would meet regulatory criteria for soil within the Phase IV property boundary and not require engineering controls (caps). However, it is likely that soil contamination would remain at the lateral excavation limits (Site perimeter). Institutional controls that would be implemented include groundwater handling protocols and restrictions on the use of groundwater beneath the Site. Groundwater monitoring would be completed after the cleanup action is completed. Although removal of all contaminated soil within the Phase IV property boundary is technically feasible, the cost is disproportionately high for the benefit obtained. A disproportionate cost analysis is presented in Section 8.4.

8.3. Remedial Alternatives Description

Three remedial alternatives were developed using combinations of remedial options 2 and 5. Note that these alternatives are similar to what is presented in the Conceptual Remedial Action Plan, section 8.3 (GeoEngineers, 2002). The Conceptual Plan presented three alternatives that combined Options 2 and 5 reflecting varying degrees of remedial excavation/off-site disposal (Option 5) and containment/capping with institutional controls (Option 2). The three remedial alternatives are described in Table 4 and summarized below.

Alternative 1– Removal of Upper 1.5 Feet of Contaminated Soil with Containment/Capping and Institutional Controls:

Alternative 1 involves removal of the upper 1.5 feet of contaminated fill soil across the Site. A 1-foot-thick layer of clean, imported fill would be placed across the entire Site after the remedial excavation is completed. Residual contaminated soil would be capped/contained beneath the buildings, alley, surface parking areas and landscaped/permeable paved areas as described in Section 8.2 (Remedial Option 2).

- Excavate approximately 5,270 cubic yards (7,380 tons) of contaminated soil by removing the upper 1.5 feet from across the Site and place 1 foot of clean imported fill. Approximately 30 percent of the contaminated soil at the Site is removed by Alternative 1.
- Isolate and contain remaining contaminated soil beneath the apartment and townhome buildings, alley and surface parking areas by capping with concrete slabs and asphalt-concrete pavement.
- Construct a 3-inch thick concrete cap beneath 1.0 foot of clean fill/topsoil in landscape/permeable paved areas where residual contaminated soil is present. Install a drainage collection system at the bottom of the clean fill (top of concrete cap) to capture infiltrating precipitation/irrigation water. Route the captured water to the storm drain.
- Implement institutional controls to manage the contaminated soil that will remain. Controls will include cap maintenance, land use/groundwater use restrictions, and post-cleanup soil and groundwater handling protocols. Institutional controls will be presented in an environmental covenant if a no further action (NFA) opinion is to be provided by Ecology.
- Conduct post-cleanup compliance monitoring to evaluate groundwater conditions at the Site.
- The cleanup action is estimated to take between 1 and 2 years to design and implement. Cleanup takes place during construction of the Phase IV project.
- The probable estimated cost to implement cleanup Alternative 1 is $1,314,000. A detailed cost estimate is provided in Appendix E, Table E-1.

Alternative 2 – Removal of Upper 3 Feet of Contaminated Soil with Containment/Capping and Institutional Controls:

Alternative 2 involves excavating three feet of contaminated soil across most of the Site from the current ground surface to a depth of 3 feet bgs. Two feet of contaminated soil would be removed from the northeast portion where fill on the knoll/ridge is thinner. An approximately 2 foot-thick layer of clean, imported fill would be placed in areas with residual contaminated soil after the remedial excavation is completed. Residual contaminated soil would be capped/contained beneath the buildings, alley, surface parking areas and landscaped/permeable paved areas as described in Section 8.2 (Remedial Option 2).

- Excavate approximately 8,970 cubic yards (12,560 tons) of contaminated soil by removing the upper 3 feet of soil from the Site (2 feet in northeast portion). Place approximately 2 feet of clean, imported fill in areas with residual contaminated soil. Approximately 52 percent of the contaminated soil at the Site is removed by Alternative 2.
- Isolate and contain remaining contaminated soil beneath the apartment and townhome buildings, alley and surface parking areas by capping with concrete slabs and asphalt-concrete pavement.
- Construct a 3-inch-thick concrete slab beneath the two feet of clean fill/topsoil in landscape/permeable paved areas where residual contaminated soil is present. Install a drainage collection system at the base of the clean fill/top of concrete slabs to capture infiltrating precipitation/irrigation water. Route the captured water to the storm sewer.
- Implement institutional controls to manage the contaminated soil that will remain. Controls will include cap maintenance, land use/groundwater use restrictions, and post-cleanup soil and groundwater handling protocols. Institutional controls will be presented in an environmental covenant if a NFA opinion is to be provided by Ecology.
- Conduct post-cleanup compliance monitoring to evaluate groundwater conditions at the Site.
- The cleanup action is estimated to take between 1 and 2 years to design and implement. Cleanup takes place during construction of the Phase IV project.
- The probable estimated cost to implement cleanup Alternative 2 is $1,921,000. A detailed cost estimate is provided in Appendix E, Table E-2.

Alternative 3– Removal of all Contaminated Soil with Containment/Capping and Institutional Controls if Needed:

- Remove all contaminated soil at the Site by completing excavations to depths of approximately 6 to 10 feet across much of the Site (two feet in northeast portion of Site on low ridge). Place approximately 2 to 7 feet of clean fill across the entire Site (4 foot average thickness).
- Remove approximately 17,140 cubic yards (24,000 tons) of contaminated soil from the Site. Approximately 100 percent of the contaminated soil at the Site is removed by Alternative 3.
- Isolate and contain any small areas of remaining contaminated soil that cannot be removed because of utilities or right-of-way restrictions. Containment/capping of these areas would be accomplished with concrete slabs or asphalt pavement.
- If contaminated soil remains at limits of remedial excavation, implement institutional controls. Controls would include cap maintenance, land use/groundwater use restrictions and post-cleanup soil and groundwater handling protocols.
- Conduct post-cleanup compliance monitoring to evaluate groundwater conditions at the Site.
- The cleanup action is estimated to take between 1 and 2 years to design and implement. Cleanup takes place during construction of the Phase IV project.
- The probable estimated cost to implement cleanup Alternative 3 is $2,924,000. A detailed cost estimate is provided in Appendix E, Table E-3.

8.4. Detailed Evaluation of Remedial Alternatives

Detailed evaluations and environmental benefits ranking of remedial Alternatives 1, 2 and 3 relative to the MTCA threshold criteria and disproportionate cost analysis criteria were completed. The requirements and procedures for evaluating and selecting cleanup actions are described in WAC 173-340-360.

All three Alternatives comply with the four MTCA threshold criteria: 1) protect human health and the environment; 2) comply with soil cleanup standards; 3) comply with applicable state and federal laws; and 4) provide for compliance monitoring. In addition to meeting the threshold criteria, Alternatives 1 through 3 provide reasonable restoration timeframes of 1 to 2 years. A MTCA disproportionate cost analysis (DCA) was completed to determine which cleanup alternative that otherwise meets threshold requirements is permanent to the maximum extent practicable. The results of the detailed cleanup alternatives evaluation and DCA are presented in Tables 4 and 5.

Disproportionate Cost Analysis

The DCA compares cleanup costs and benefits and allows selection of a remedial alternative that provides the greatest relative benefit for the least cost. Remedial Alternatives 1, 2 and 3 were evaluated based on the DCA criteria described in the MTCA regulation. The DCA criteria are protection of human health and the environment, permanence, cost, long-term effectiveness, management of short-term risks, technical and administrative implementability, and consideration of public concerns. The cleanup Alternatives were ranked using a numeric scoring scale of 1 (lowest) to 10 (highest) for each of the DCA criteria. Each of the DCA criteria were assigned weightings that ranged between 10 percent and 30 percent (the sum of the weightings equaled 100 percent). The detailed scoring is shown in Table 4; the relative benefits ranking summary is presented in Table 5. A comparison of cleanup cost and environmental benefit ranking for each of the remedial alternatives is summarized below and shown in Figure 11.

- **Alternative 1:** 6.2 (out of 10) benefit ranking; estimated cleanup cost of $1,314,000.
- **Alternative 2:** 7.5 benefit ranking; estimated cleanup cost of $1,921,000.
- **Alternative 3:** 8.2 benefit ranking; estimated cleanup cost of $2,924,000.

8.5. Preferred Remedial Alternative

Based on the detailed evaluation of remedial alternatives and the results of the DCA, Alternative 2 is the preferred remedial alternative to achieve compliance with MTCA and support the planned redevelopment of the Site at a reasonable cost. The rationale for selecting Alternative 2 is as follows:

- Alternative 1 complies with the MTCA threshold criteria and provides a reasonable restoration timeframe. However, it has the lowest relative benefits ranking because it relies primarily on containment/capping of contaminated soil.
- Alternative 2 complies with the MTCA threshold criteria and provides a reasonable restoration timeframe. It scored relatively high on the benefits ranking because a large percentage of the contaminated soil is removed from the Site, including soil with the highest cPAH concentrations. Residual contaminated soil will be at least three feet below the surface and will be capped with a combination of clean soil and impermeable caps across the entire Site. The engineered caps will isolate the residual contaminated soil and prevent direct contact with humans and wildlife and prevent infiltration of precipitation/landscape irrigation water through residual contaminated soil. The caps and

associated institutional controls have a high likelihood of effectiveness and reliability. Alternative 2 allows the Site to be cleaned up at a reasonable cost that is not disproportionate to the incremental benefits.

- Alternative 3 complies with the MTCA threshold criteria and provides a reasonable restoration timeframe. It scored highest on the benefits ranking because all or nearly all of the contaminated soil is removed. However, the DCA indicates that the cost to implement Alternative 3 is disproportionately high for the incremental benefits achieved. The benefits ranking for Alternative 3 is 9 percent higher compared to Alternative 2 (8.2 vs. 7.5); however, Alternative 3 costs approximately $1 million more than Alternative 2 ($2,924,000 vs. $1,921,000). The more than 50 percent higher cost to implement Alternative 3 versus Alternative 2 would prevent the planned cleanup and redevelopment of the Site according to Rainier Court Associates.

9.0 CLEANUP ACTION PLAN

This section presents the cleanup action plan (CAP) for the Site based on implementation of Remedial Alternative 2. The basic elements of implementing the planned remedial action and achieving compliance with MTCA are described below.

9.1. Supplemental Environmental Site Characterization

No additional site characterization is anticipated prior to construction.

9.2. Permitting

The necessary permits to complete the planned remedial action will be obtained as part of the overall permitting for Site development. Required permits will include demolition permits for removal of Site structures, a grading permit and a general construction permit for the planned development.

9.3. Materials/Debris Removal And Demolition Of Site Structures

Materials and debris on the surface of the site will be characterized, collected and transported off-site for permitted disposal. The building on Parcel 0 will be demolished and transported off-site for permitted disposal after hazardous material (e.g. lead paint, asbestos) abatement, if necessary.

9.4. Excavation Of Contaminated Soil

Soil excavated from the upper 3 feet of the Site during cleanup activities is considered to be contaminated with metals, PAHs and/or petroleum hydrocarbons at concentrations exceeding the Site cleanup levels described in Section 7.8. This soil will be transported off-site for permitted treatment/disposal. Excavation of soil from the surface to a depth of 3 feet bgs across the Site (2 feet in northeast portion) will result in removal of an estimated 8,970 cubic yards (12,560 tons) of contaminated soil. The preliminary excavation/grading plan is shown on Figure 12. Existing chemical data from the RI (and data from supplemental soil samples if required by the treatment/disposal facility) will be used to profile excavated soil for disposal purposes.

9.5. Construction of Engineered Caps

Engineered caps consisting of clean fill, the building foundations (imported subgrade materials and concrete), asphalt-concrete pavement in the alley and parking areas will cover much of the Site. A concrete

cap beneath landscape/permeable paved areas will be constructed where residual contaminated soil exceeding cleanup levels remains after excavation is completed. Specifications for cap materials, thickness and location will be provided in final construction design documents

9.6. Monitoring Well Construction

The existing monitoring wells at the Site will be decommissioned in accordance with Chapter 173-160 WAC prior to construction. Four monitoring wells will be installed at the Site after construction is completed. The 2-inch diameter wells will be completed to depths of approximately 15 feet bgs. The new wells will be used to complete post-construction compliance groundwater monitoring.

9.7. Documentation Of Remedial Action

Remedial activities at the site will be monitored and documented by a qualified environmental professional. Logs of cleanup field activities will be maintained along with photographs of significant Site features and events. Confirmation soil samples will be obtained from the final limits of the remedial excavations for chemical analysis to document remaining soil conditions. The soil samples from the final limits of the remedial excavation will supplement existing site characterization results shown in Figures 4 through 9. Samples will be tested for metals and PAHs; selected samples will be tested for diesel- and oil-range petroleum hydrocarbons. A soil sampling plan showing approximate locations of confirmation soil samples will be prepared after the final design for the redevelopment, and final grading plan, are completed. A report will be prepared to summarize the cleanup action results. The report will be submitted to Ecology for review.

9.8. Implementation of Institutional Controls and Compliance Groundwater Monitoring

Institutional controls will be implemented after the construction activities are completed. Institutional controls including cap maintenance and land/groundwater use restrictions will be described in an environmental covenant if a NFA opinion is to be provided by Ecology.

9.8.1. Documentation and Notification

The remedial action and institutional controls will be documented in a cleanup action report prepared after building foundations and other caps are completed. Site/facility managers will be notified of the remaining contamination and institutional control requirements through briefings and document review. Documents pertaining to the remedial action, including the cleanup action report, drawings identifying the location of remaining soil contamination, and an environmental covenant (if prepared) will be permanently stored by Rainier Court Associates.

9.8.2. Cap Monitoring and Maintenance

Cap monitoring and maintenance plan will be handled by Rainier Court Associates. The integrity of the building concrete slabs, exterior subsurface walls, alley, paved parking areas, and caps beneath the landscaped/permeable paved areas (which comprise the subsurface and surface portions of the soil cap), will need to be maintained consistent with standard building and parking area maintenance practices. Any cracks or structural failure of the concrete slab, exterior walls or paved areas will be documented and repaired in accordance with standard maintenance procedures. Ecology will be notified in writing of any significant damage, repairs or other changes to the caps.

9.8.3. Compliance Groundwater Monitoring

Post-construction compliance groundwater monitoring will be conducted in accordance with a written groundwater monitoring plan. Four monitoring wells will be used to evaluate the groundwater flow direction and perform groundwater compliance sampling on/adjacent to the Phase IV Site. The purpose of the groundwater monitoring program is to obtain groundwater depths and groundwater chemical analytical data to document post-construction groundwater quality. Chemical data obtained during the groundwater monitoring events will be evaluated relative to MTCA cleanup levels presented in Section 7.8.

Similar to recent post-cleanup monitoring at the adjacent Rainier Court III Site, two semiannual groundwater monitoring events will be conducted after Phase IV cleanup and construction activities are completed. Groundwater samples will be tested for selected metals (total and dissolved arsenic and lead), PAHs, and diesel-, oil-range petroleum hydrocarbons. The wells will be purged with a low flow pump prior to sampling. Results of the two semiannual events will be summarized in reports that are provided to Ecology. The groundwater data from the semiannual events will be evaluated to see if additional groundwater monitoring is warranted.

10.0 SCHEDULE

10.1. Start Date

The target date for the start of construction and soil remediation activities at the Site is summer 2016.

10.2. Proposed Schedule

Remedial excavation activities are scheduled to begin in summer 2016 and be completed in fall 2016. Concrete floor slabs, foundation and other cap elements will likely be completed in 2017.

11.0 REFERENCES

Ecology & Environment, 2001. "Rainier Court, Targeted Brownfields Assessment, Seattle, Washington," January 2001.

GeoEngineers, Inc., 2002. "Conceptual Remedial Action Plan, Rainier Court Property, Seattle, Washington," February 7, 2002.

GeoEngineers, Inc., 2006. "First Quarter 2006 Groundwater Monitoring and Well Installation for Rainier Court Phase II, Seattle Washington," May 2, 2006.

GeoEngineers, Inc., 2010. "Interim Cleanup Action Report, Rainier Court Property Phase IV Development, Seattle Washington," November 29, 2010

Troost, K., Booth, D., Wisher, A. and Shimel, S. 2005. "U.S. Geological Survey Open–File Report 2005-1252, Geologic Map of Seattle," 2005.

Weston Solutions, Inc., 2001. "Rainier Court Area 2, Targeted Brownfields Assessment, Seattle, Washington," December 11, 2001.

Weston Solutions, Inc., 2003. "Rainier Court Area 3, Targeted Brownfields Assessment, Seattle, Washington," December 19, 2003.

Weston Solutions, Inc., 2006. "Rainier Court Area 4, Targeted Brownfields Assessment, Seattle, Washington," February 10, 2006.

12.0 LIMITATIONS

We have prepared this report for use by Rainier Court Associates 2015-IV, LLC as part of their evaluation of and planning for environmental conditions at the Rainier Court Phase IV Site.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to Appendix F titled "Report Limitations and Guidelines for Use" for additional information pertaining to the use of this report.

Table 1

Summary of Groundwater Levels

Rainier Court Phase IV Site

Seattle, Washington

Monitoring Well[1] (top of casing elevation)	Date Measured	Depth to Groundwater[2] (feet)	Groundwater Elevation[3] (feet)
SMW-1	2/13/2006	8.63	39.16
(47.79)	5/26/2006	9.51	38.28
	10/31/2006	9.43	38.36
	2/13/2007	8.81	38.98
SMW-2	2/13/2006	8.20	36.83
(45.03)	5/26/2006	8.70	36.33
	10/31/2006	8.92	36.11
	2/13/2007	8.38	36.65
SMW-3	2/13/2006	8.97	36.60
(45.57)	5/26/2006	9.41	36.16
	10/31/2006	8.56	37.01
	2/13/2007	9.03	36.54
SMW-4	2/13/2006	10.27	36.16
(46.43)	5/26/2006	10.30	36.13
	10/31/2006	8.78	37.65
	2/13/2007	10.45	35.98
SMW-5	2/13/2006	7.46	39.04
(46.50)	5/26/2006	8.87	37.63
	10/31/2006	8.68	37.82
	2/13/2007	7.63	38.87
SMW-6	2/13/2006	7.98	36.60
(44.58)	5/26/2006	8.77	35.81
	10/31/2006	8.80	35.78
	2/13/2007	8.43	36.15
SMW-7	10/31/2006	16.15	30.77
(46.92)	2/13/2007	11.66	35.26
SMW-8	10/31/2006	10.60	37.10
(47.70)	2/13/2007	10.37	37.33
MW-3	2/13/2006	9.78	36.60
(46.38)	5/26/2006	7.47	38.91
	10/31/2006	7.94	38.44
	2/13/2007	7.71	38.67
MW-10	2/13/2006	8.11	38.59
(46.70)	5/26/2006	9.13	37.57
	10/31/2006	9.86	36.84
	2/13/2007	8.56	38.14
MW-11	2/13/2006	6.26	38.36
(44.62)	5/26/2006	7.07	37.55
	10/31/2006	7.44	37.18
	2/13/2007	6.70	37.92
MW-12	2/13/2006	8.13	38.40
(46.53)	5/26/2006	9.03	37.50
	10/31/2006	9.47	37.06
	2/13/2007	8.59	37.94
MW-13	2/13/2006	9.80	33.17
(42.97)	5/26/2006	11.06	36.32[4]
	10/31/2006	11.25	35.13[4]
	2/13/2007	10.23	32.7[4]

Monitoring Well[1] (top of casing elevation)	Date Measured	Depth to Groundwater[2] (feet)	Groundwater Elevation[3] (feet)
MW-14	2/13/2006	6.95	37.31
(44.26)	5/26/2006	7.34	36.92
	10/31/2006	9.76	34.50
	2/13/2007	7.41	36.85
MW-15	2/13/2006	8.72	38.28
(47.00)	5/26/2006	--	--
	10/31/2006	--	--
	2/13/2007	8.85	38.15

Notes:

[1]Approximate locations of monitoring wells are shown in Figure 2.

[2]Below casing rim.

[3]Groundwater elevations are referenced to actual elevations of site features based on survey information provided by SEED.

[4]Groundwater elevation corrected for

-- Not Measured

Table 2

Summary of Soil Analytical Results - Screening Level Exceedances

Rainier Court Phase IV Site

Seattle, Washington

Group	Chemical Name	Screening Level (mg/kg)	Station Depth (ft) Units	MW-10 2- 6 mg/kg	P4-013 2- 6 mg/kg	P4-013 6- 10 mg/kg	P4-014 2- 6 mg/kg	P4-015 2- 6 mg/kg	P4-015 6- 10 mg/kg	P4-017 2- 6 mg/kg	PN001 0- .25 mg/kg	PN002 .75- 1.1 mg/kg	PN003 0- .5 mg/kg	PN003 6- 10 mg/kg	PN004 0- .5 mg/kg	PN004 1- 1.5 mg/kg	PN004 2- 6 mg/kg	PN005 0- 1 mg/kg	PN006 0- 1 mg/kg	PN007 0- .5 mg/kg	PN007 2- 6 mg/kg	PN008 0- .5 mg/kg
METALS	ARSENIC	20				22.8				39.5												
METALS	CADMIUM	2				6.7																
METALS	COPPER	2960																				
METALS	IRON	58700		68300 J		94200 J														72400		
METALS	LEAD	250		511 J	353 J	455 J	358 J	516 J		917 J				287 J			1460 J				1630 J	
METALS	MERCURY	2							7.4 J+													
PAHs	BENZO(A)ANTHRACENE	0.137		.21		.23					1.5		1.8	.35 J					.78 J	.27 J+		.69
PAHs	BENZO(A)PYRENE	0.137		.27		.21					1.8		2.2	.32 J					.91 J	.35 J		.75
PAHs	BENZO(B)FLUORANTHENE	0.137		.22		.17					2.7		1.8	.34 J					1.3 J	.31 J		1.1
PAHs	BENZO(K)FLUORANTHENE	0.137		.22		.27							1.8 JK	.18 J								
PAHs	CHRYSENE	0.137		.32		.25		.15		.48 J	2	.18 J	2.3	.39 J		.37 J		.14 J	.88 J	.37 J+	.16 J	.81
PAHs	DIBENZO(A,H)ANTHRACENE	0.137											.45 J									
PAHs	INDENO(1,2,3-CD)PYRENE	0.137		.17							1.5		1.6	.18 J				.14 J	.68 J	.34 J		.65
CPAHs by TEQ	N/A	0.1		0.3552		0.2795		0.1162			2.39	0.1325	3.103	0.4289				0.1564	1.1948	0.4587	0.11	1.0021
PEST./PCBs	HEPTACHLOR	0.222																				
PETROLEUM	OIL RANGE-PETROLEUM HYDROCARBONS	2000						2700			5800 D	8200 D	8800 D			D			4000 D	7400 D		
PETROLEUM	DIESEL-RANGE PETROLEUM HYDROCARBONS	2000								3600 DJ	7100 D	6700 D				D				3700 D		
PETROLEUM	GASOLINE-RANGE PETROLEUM HYDROCARBONS	30																				
PETROLEUM	TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS	2000													4603	3778						
VOCs	DICHLOROMETHANE (methylene chloride)[1]	0.02																				

Notes appear on page 2

Group	Chemical Name	Screening Level (mg/kg)	Station Depth (ft) Units	PO001 0- .5 mg/kg	PO003 0- .5 mg/kg	PO005 0- .5 mg/kg	PP001 6- 10 mg/kg	PP002 0- .5 mg/kg	PP002 2- 6 mg/kg	PP003 0- .5 mg/kg	PP004 0- .5 mg/kg	PP009 0- .5 mg/kg	SS37 0- .5 mg/kg	SS38 0- .5 mg/kg	SS39 4- 8 mg/kg	SS40 0- .5 mg/kg	SS41 0- .5 mg/kg	SS41 4.5- 8.5 mg/kg	SS42 0- .5 mg/kg
METALS	ARSENIC	20						46.1										24.2	
METALS	CADMIUM	2		2.4															
METALS	COPPER	2960																3240	
METALS	IRON	58700			96600	61700													
METALS	LEAD	250			324		309 J		330 J			685 J			331			1590	
METALS	MERCURY	2																	
PAHs	BENZO(A)ANTHRACENE	0.137			.44 J			.28 J	.23 J				.16	.25					
PAHs	BENZO(A)PYRENE	0.137			.45 J			.29 J	.24 J				.19	.49					
PAHs	BENZO(B)FLUORANTHENE	0.137						.26 J	.33 J										
PAHs	BENZO(K)FLUORANTHENE	0.137						.23 J	.18 J										
PAHs	CHRYSENE	0.137			.58 J			.32 J	.32 J				.17	.31					
PAHs	DIBENZO(A,H)ANTHRACENE	0.137																	
PAHs	INDENO(1,2,3-CD)PYRENE	0.137			.23 J			.16 J	.2 J					.35					
CPAHs by TEQ	N/A	0.1			0.5228			0.3862	0.3372				0.216	0.5531					
PEST./PCBs	HEPTACHLOR	0.222			.46														
PETROLEUM	OIL RANGE-PETROLEUM HYDROCARBONS	2000								70000 D	52000 D								
PETROLEUM	DIESEL-RANGE PETROLEUM HYDROCARBONS	2000								22000 D	15000 D								
PETROLEUM	GASOLINE-RANGE PETROLEUM HYDROCARBONS	30			34														
PETROLEUM	TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS	2000														2240			
VOCs	DICHLOROMETHANE (methylene chloride)[1]	0.02												0.024			.021		.021

Notes:

[1] Dichloromethane (methylene chloride) is a common laboratory contaminant.
Approximate sample locations are shown on Figures 4 through 9.
A summary of chemical analytical results is presented in Appendix B.
cPAHS = carcinogenic PAHs
mg/kg = milligrams per kilogram
N/A = Not Applicable
PAHs = polycyclic aromatic hydrocarbons
PEST./PCBs = pesticides/polychlorinated biphenyls

Table 3

Summary of Groundwater Analytical Results - Screening Level Exceedances

Rainier Court Phase IV Site

Seattle, Washington

Group	Chemical Name	Screening Level (µg/L)	Station Sample Date Units	1/14/2002 µg/L	MW-10 10/28/2005 µg/L	09/23/2005 µg/L	MW-12 10/28/2005 µg/L	PO007 5/15/2003 µg/L	PP003 8/2001 µg/L
METALS[1]	ARSENIC	5						8.4	
METALS[1]	IRON	11,000			32,500	27,900	23,200		
METALS[1]	LEAD	15					27.4	16.9	
METALS[1]	MANGANESE	2,240			2,340	3,330	4,360	3,530	
PETROLEUM	OIL-RANGE PETROLEUM HYDROCARBONS	500				830	510		940
PETROLEUM	DIESEL-RANGE PETROLEUM HYDROCARBONS	500		696		600		540	700

Notes:

[1] Metals results in this table are based on total metals analyses. Results for arsenic and lead are biased high (see text for discussion).

Approximate sample locations are shown on Figure 10.

µg/L = micrograms per liter.

VOCs = Volatile organic compounds.

Table 4

Description and Detailed Evaluation of Cleanup Action Alternatives

Rainier Court Phase IV Site

Seattle, Washington

	Alternative 1 - Removal of Upper 1.5 Feet of Contaminated Soil with Containment/Capping and Institutional Controls	Alternative 2 - Removal of Upper 3 Feet of Contaminated Soil with Containment/Capping and Institutional Controls	Alternative 3 - Excavation of All Contaminated Soil with Containment and Institutional Controls if Needed
Alternatives Descriptions	Excavate the upper 1.5 feet of contaminated soil from across the entire Site (ground surface to 1.5' bgs). Place 1 foot of clean Type 17 fill across majority of the Site where contaminated soil remains. Isolate and contain remaining contaminated soil beneath apartments, townhomes, alley and surface parking areas by capping with concrete building foundations/floor slabs, and concrete-asphalt pavement. Construct a 3-inch thick concrete slab beneath the Type 17 fill and topsoil in landscape/permeable surface areas where contaminated soil remains. Install drainage collection system at base of clean fill/top of concrete slab in landscape/permeable areas to capture infiltrating rainwater and irrigation water. Route captured water to storm drain. Conduct groundwater monitoring. Implement institutional controls for contaminated soil that will remain, including cap maintenance and land use/groundwater use restrictions. Institutional controls will be described in an environmental covenant if a NFA opinion is to be provided by Ecology.	Excavate the upper 3 feet of contaminated soil from across the entire Site (ground surface to 3' bgs). Contaminated soil excavation is 2' deep in NE portion of Site where fill layer on ridge is thinner. Removal of this shallow contaminated soil eliminates the highest concentrations of cPAH contaminated soil at the Site. Place 2 feet of Type 17 fill across majority of Site where contaminated soil remains. Isolate and contain remaining contaminated soil beneath apartments, townhomes, alley and surface parking areas by capping with concrete building foundations/floor slabs and concrete-asphalt pavement. Construct a 3-inch thick concrete slab beneath approximately 2 feet of Type 17 fill and topsoil in landscape/permeable surface areas where contaminated soil remains . Install drainage collection system at base of clean fill/top of 3-inch concrete slab in landscape/permeable surface areas with residual contaminated soil to capture infiltrating rainwater and irrigation water. Route captured water to storm drain. Conduct groundwater monitoring. Implement institutional controls for contaminated soil that will remain, including cap maintenance and land use/groundwater use restrictions. Institutional controls will be described in an environmental covenant if a NFA opinion is to be provided by Ecology.	Excavate all contaminated soil beneath the Site (contaminated fill is present from ground surface to depths of 6 to 10 feet across much of the site) . Isolate and contain any remaining contaminated soil beneath or at the edge of the Site that is not accessible due to utilities/right-of-way restrictions by capping with asphalt pavement, concrete. Conduct groundwater monitoring. If contaminated soil remains at limits of remedial excavation, implement institutional controls including cap maintenance and land use restrictions. Institutional controls, if needed, will be described in an environmental covenant if a NFA opinion is to be provided by Ecology.
Area of Containment	79,000 sq. ft.	79,000 sq. ft.	0 sq. ft.
Approximate Volume of Contaminated Soil Removed	5,270 cubic yards (7,380 tons)	8,970 cubic yards (12,560 tons)	17,140 cubic yards (24,000 tons)
Alternative Ranking Under MTCA			
1. Compliance with MTCA Threshold Criteria			
Protection of Human Health and the Environment	Yes - Alternative will protect human health and the environment. Residual contaminated soil managed by a combination of isolation/containment and institutional controls.	Yes - Alternative will protect human health and the environment. Residual contaminated soil managed by a combination of isolation/containment and institutional controls.	Yes - Alternative will protect human health and the environment. Residual contaminated soil, if any, would be managed by a combination of isolation/containment and institutional controls.
Compliance with Cleanup Standards	Yes - Active remedial measures (removal and containment) are used for soils not complying with cleanup standards.	Yes - Active remedial measures (removal and containment) are used for soils not complying with cleanup standards.	Yes - Active remedial measure (removal) is used for soils not complying with cleanup standards.
Compliance with Applicable State and Federal Laws	Yes - Alternative complies with applicable state and federal laws.	Yes - Alternative complies with applicable state and federal laws.	Yes - Alternative complies with applicable state and federal laws.
Provision for Compliance Monitoring	Yes - Alternative includes provisions for compliance monitoring (i.e., compliance soil sampling during remedial excavation and post-cleanup groundwater monitoring).	Yes - Alternative includes provisions for compliance monitoring (i.e., compliance soil sampling during remedial excavation and post-cleanup groundwater monitoring).	Yes - Alternative includes provisions for compliance monitoring (i.e., compliance soil sampling during remedial excavation and post-cleanup groundwater monitoring).
2. Restoration Time Frame			
	Restoration timeframe is 1 to 2 years for design and construction. Groundwater monitoring likely for several years.	Restoration timeframe is 1 to 2 years for design and construction. Groundwater monitoring likely for several years.	Restoration timeframe is 1 to 2 years for design and construction. Groundwater monitoring likely for several years.

	Alternative 1	Alternative 2	Alternative 3
3. Disproportionate Cost Analysis - Relative Benefits Ranking (Scored from 1-lowest to 10-highest)			
Protectiveness (30% weighting factor)	**Score = 6**. Achieves medium level of protectiveness. Approximately 30 perecent of contaminated soil is removed and remaining contaminated soil is isolated/contained beneath engineered caps. Low potential for human contact with residual impacted soil because caps cover 100% of Site. No volatile contaminants on the Site so vapor intrusion potential is low. Thin zone of shallow, perched groundwater with no nearby drinking water wells or surface water receptors. Deep groundwater isolated from residual soil contamination by thick silt-clay confining layer. Protectiveness depends on cap maintenance and institutional controls to prevent contact with residual impacted soil.	**Score = 8**. Achieves medium-high level of protectiveness. Approximately 52 percent of the contaminated soil is removed and replaced with clean fill. Shallow soil with cPAH concentrations that pose highest risk to human and ecological receptors at the site is removed. cPAH concentrations decrease in magnitude and extent with depth--16 of the 26 cPAH exceedances were from depths of 0 to 2 feet bgs. Remaining contaminated soil is isolated/contained beneath engineered caps. Low potential for human contact with residual impacted soil because caps cover 100% of Site. No volatile contaminants at Site so vapor intrusion potential is low. Thin zone of shallow, perched groundwater with no nearby drinking water wells or surface water receptors. Deep groundwater isolated from residual soil contamination by thick silt-clay confining layer. Protectiveness depends on cap maintenance and institutional controls to prevent contact with residual impacted soil.	**Score = 9**. Achieves high level of protectiveness. All (or nearly all) contaminated soil that poses risk to human and ecological receptors at the Site is removed. Any limited areas of remaining contaminated soil are isolated/contained beneath caps. Minimal potential for human contact with residual impacted soil. No volatile contaminants at Site so vapor intrusion potential is low. Thin zone of shallow, perched groundwater with no nearby drinking water wells or surface water receptors.
Permanence (20% weighting factor)	**Score = 5**. Achieves some permanent reduction in toxicity and volume of hazardous substances at the Site by removal and off-site treatment/disposal of about 30% of the contaminated soil. Remaining contaminated soil is isolated/contained. Not as permanent as Alternatives 2 and 3.	**Score = 7**. Achieves permanent reduction in toxicity and volume of hazardous substances at the Site by removal and off-site treatment/disposal of about 52% of the contaminated soil. Remaining contaminated soil is isolated/contained. Not as permanent as Alternative 3.	**Score = 9**. Achieves permanent reduction in toxicity and volume of hazardous substances at the Site by removal and off-site treatment/disposal of all (or nearly all) the contaminated soil.
Long-Term Effectiveness (20% weighting factor)	**Score = 5**. Relies primarily on on-site containment. Removal and off-site treatment/disposal of some contaminated soil. Engineering and institutional controls are used to prevent human and ecological contact with contaminated soil left in place. Long-term effectiveness depends on maintaining integrity of concrete and asphalt caps.	**Score = 7**. Relies primarily on removal and off-site treatment/disposal of contaminated soil and on-site containment of residual impacted soil. Engineering and institutional controls are used to prevent human and ecological contact with contaminated soil left in place. Long-term effectiveness depends on maintaining integrity of concrete and asphalt caps.	**Score = 9**. Relies on removal and off-site treatment/disposal of all (or nearly all) contaminated soil. On-site containment may be used for small areas of residual impacted soil. Engineering and institutional controls may be used to prevent human and ecological contact with contaminated soil left in place.
Management of Short-Term Risks (10% weighting factor)	**Score = 9.** Least disturbance of impacted soils compared to other alternatives. Shallowest remedial excavation (minimal slope stability concerns and potential impacts to right-of-way; least amount of truck traffic).	**Score = 7.** Medium disturbance of impacted soils compared to other alternatives. More extensive excavation compared to Alternative 1 (moderate perimeter slope stability concerns, more truck traffic, etc).	**Score = 5.** Most disturbance of impacted soils compared to other alternatives. Much deeper excavations compared to Alternatives 1 and 2 (more slope stability concerns, longer duration of truck traffic etc). Highest potential for worker injury due to depth and duration of excavation.
Technical and Administrative Implementability (10% weighting factor)	**Score = 9.** Straightforward to implement. May involve administration of environmental covenant.	**Score = 9.** Straightforward to implement. May involve administration of environmental covenant.	**Score = 6**. Most difficult to implement. Would likely involve installation of temporary shoring around perimeter of Site to enable excavation of deeper contaminated soil adjacent to public right-of-ways. May include administration of environmental covenant if some contaminated soil remains in place.
Consideration of Public Concerns (10% weighting factor)	**Score = 6**. Removes some shallow contaminated soil most likely to impact public. About 70 percent of the contaminated soil would remain after cleanup. Cap maintenance and institutional controls required for remaining contaminated soil.	**Score = 7**. Removes shallow contaminated soil most likely to impact public/environment and replaces with clean fill. About 48 percent of the contaminated soil would remain after cleanup. Cap maintenance and institutional controls required for remaining contaminated soil.	**Score = 8**. Removes all (or nearly all) of the contaminated soil, so public concerns with potential exposure to contaminants would be addressed to the maximum extent possible. However, disturbance to nearby neighborhood residents is greatest for this Alternative (duration of cleanup-related truck traffic, noise, dust etc).

Table 5

Summary of Cleanup Action Alternatives Evaluation and Ranking

Rainier Court Phase IV Site

Seattle, Washington

	Alternative 1	Alternative 2	Alternative 3
Alternative Ranking Under MTCA			
1. Compliance with MTCA Threshold Criteria[1]	Yes	Yes	Yes
2. Restoration Time Frame	1 to 2 years	1 to 2 years	1 to 2 years
3. DCA MTCA Relative Benefits Ranking			
Protectiveness (30% weighting)	*1.8 (raw score = 6)*	*2.4 (raw score = 8)*	*2.7 (raw score = 9)*
Permanence (20% weighting)	*1.0 (raw score = 5)*	*1.4 (raw score = 7)*	*1.8 (raw score = 9)*
Long-Term Effectiveness (20% weighting)	*1.0 (raw score = 5)*	*1.4 (raw score = 7)*	*1.8 (raw score = 9)*
Management of Short-Term Risks (10% weighting)	*0.9 (raw score = 9)*	*0.7 (raw score = 7)*	*0.5 (raw score = 5)*
Technical and Administrative Implementability (10% weighting)	*0.9 (raw score = 9)*	*0.9 (raw score = 9)*	*0.6 (raw score = 6)*
Consideration of Public Concerns (10% weighting)	*0.6 (raw score = 6)*	*0.7 (raw score = 7)*	*0.8 (raw score = 8)*
Total of Weighted Scores	***6.2***	***7.5***	***8.2***
4. Disproportionate Cost Analysis			
Probable Remedy Cost[2] (nearest thousand)	**$1,314,000**	**$1,921,000**	**$2,924,000**
Costs Disproportionate to Incremental Benefits	NA[3]	No	Yes
Overall Alternative Ranking	**3rd**	**1st**	**2nd**

Notes:

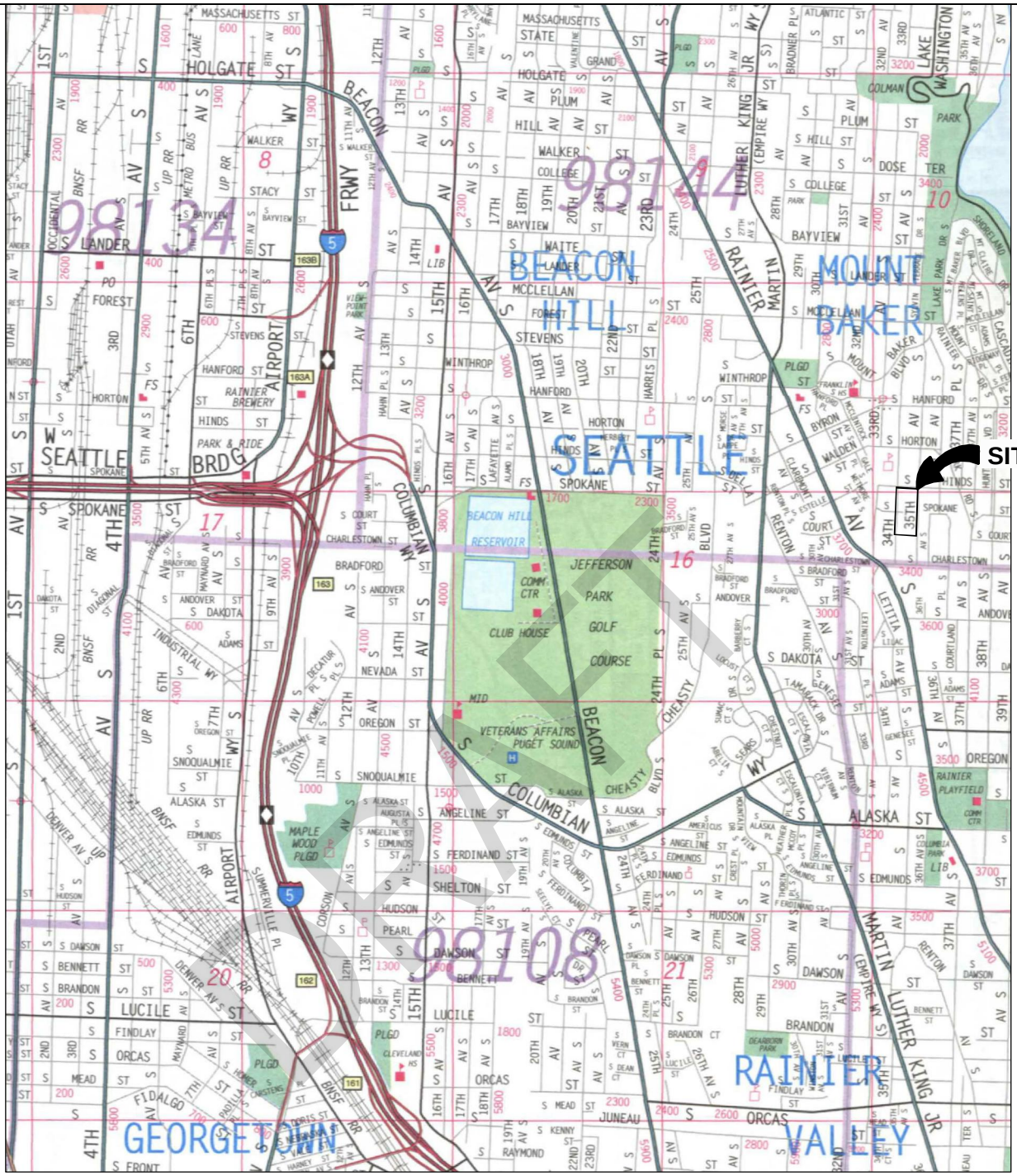
[1] Non-compliant alternatives were not considered in this evaluation.

[2] Remedial Cost Estimate Spreadsheets are provided in Appendix E.

[3] Not applicable since this is the lowest cost alternative.

DCA = Disproportionate Cost Analysis

MTCA = Model Toxics Control Act



N
W E
S

2000 0 2000

Feet

Vicinity Map

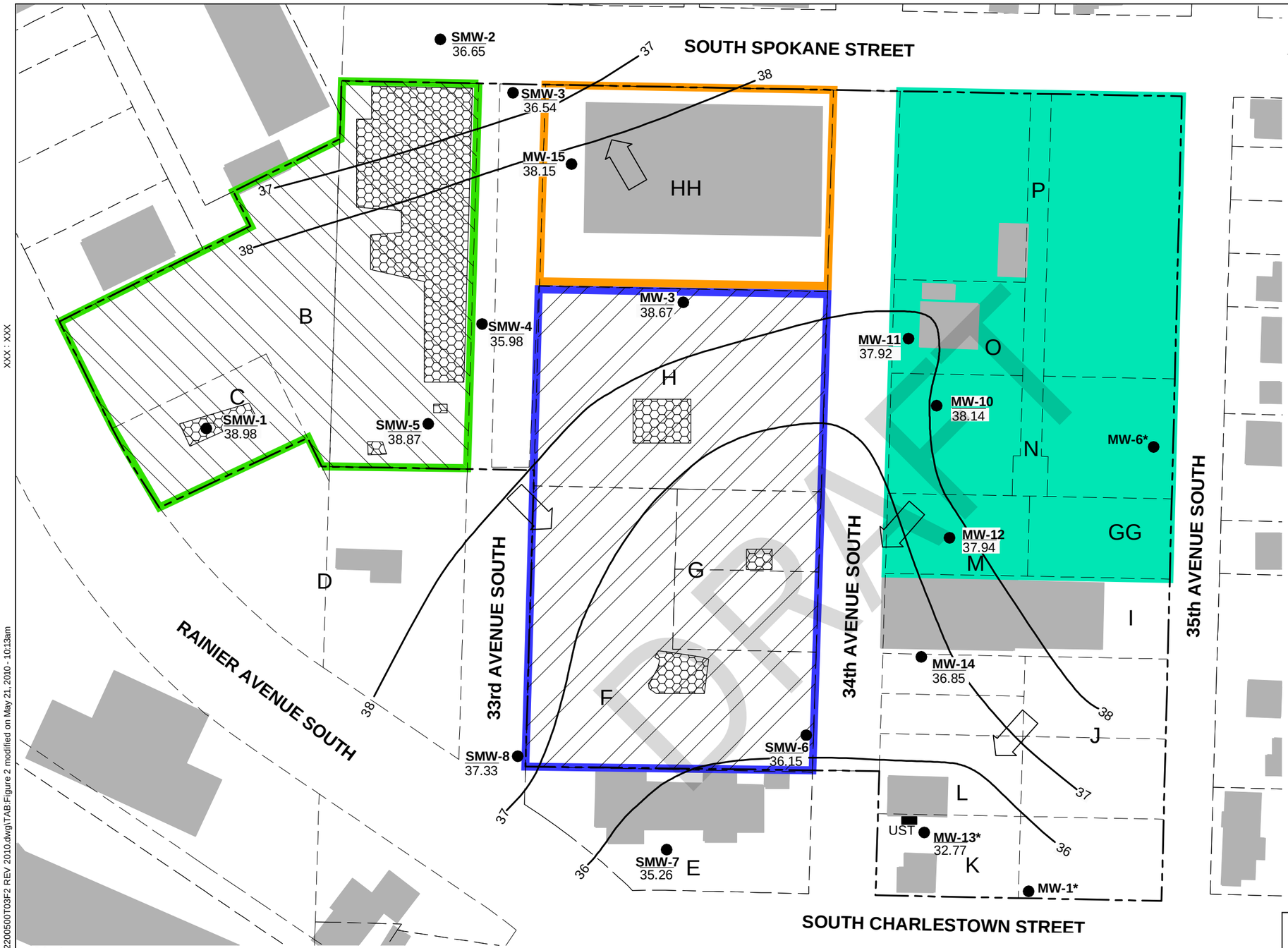
Rainier Court Phase IV
Seattle, Washington

GeoEngineers

Figure 1

XXX : XXX

P:\8\8322005\00\CAD\T03\8322005T03 Fig 1.dwg\TAB:Figure 1 modified on May 21, 2010 - 10:23am



Legend:

- RAINIER COURT PROJECT BOUNDARY
- PHASE I SITE BOUNDARY — Metals contaminated soil removed from hatched area. Area now capped by building and hardscapes.
- PHASE II SITE BOUNDARY — Metals and PAH contaminated soil removed from hatched area. Area now capped by building and hardscapes.
- PHASE III SITE BOUNDARY
- PHASE IV SITE BOUNDARY
- 38 — Groundwater Elevation Contour (Anomalous groundwater elevation in SMW-4 was not used for contouring)
- Generalized Groundwater Flow Direction
- Existing Monitoring Well
- MW-14 34.50 — Groundwater Elevation Based on 02/13/07 Mesurements
  * MW-1 and MW-6 Could Not be Located.
  * MW-13 Groundwater Elevation Corrected for Presence of Free Product
- Hot-spot Remedial Excavation for Petroleum UST on parcels C, H, G and F. PCE and PCB remedial excavations on parcel B.
- 1997 Parcels From Seattle GIS
- J — Project-specific Parcels Labels
- Buildings
- UST = Underground Storage Tank

N W E S

80 0 80
Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Drawings entitled "Preliminary Grading, Drainage and Utility Plan, Rainier Court Family Housing" dated 08/05/03, "Rainier Court Family Housing, Portions of NW 1/4, SEC. 15, NE 1/4, SEC. 16, T. 24N, R.4E, W.M." dated 03/24/03 by Barghausen Consulting Engineers and "Ground Level Floor Plan" CAD file by Johnson Braund Design Group Inc., received 09/08/03; City of Seattle GIS.

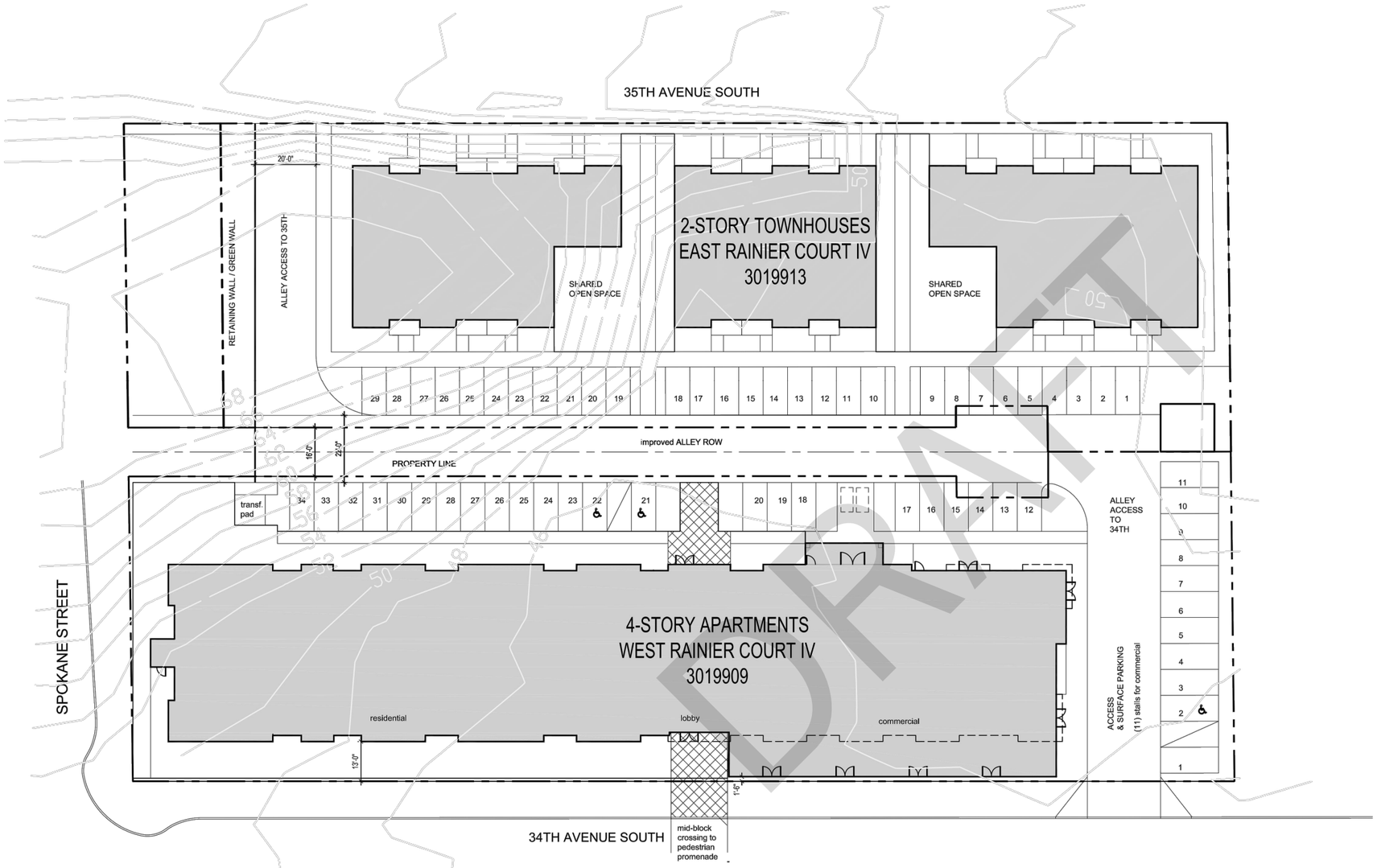
Rainier Court Site and Monitoring Wells

Rainier Court Phase IV
Seattle, Washington

GeoEngineers

Figure 2

\\9\8322005\00\CAD\T03\8322005000T03F2 REV 2010.dwg\TAB-Figure 2 modified on May 21, 2010 - 10:13am



SITE INFORMATION

WEST SITE ADDRESS: 3616 34th AVENUE S. SEATTLE, WA
EAST SITE ADDRESS: 3603 35TH AVENUE S. SEATTLE, WA
OWNERS NAME: RAINIER COURT ASSOCIATES 2015-IV, LLC

ZONING: C1-40 WEST & LR2-RC EAST

LEGAL DESCRIPTIONS:

PARCEL# 9835200150: York 2ND ADD, PLAT BLOCK: 3, PLAT LOT: 1-2-3
PARCEL# 9835200170: York 2ND ADD ALL 4 & 5 & S 10 FT OF 6, PLAT BLOCK: 3, PLAT LOT: 4-5-6
PARCEL# 9835200175: York 2ND ADD LESS S 10 FT, PLAT BLOCK: 3, PLAT LOT: 6
PARCEL# 9835200180: York 2ND ADD, PLAT BLOCK: 3, PLAT LOT: 7
PARCEL# 9835200185: York 2ND ADD, PLAT BLOCK: 3, PLAT LOT: 8
PARCEL# 9835200190: York 2ND ADD, PLAT BLOCK: 3, PLAT LOT: 9
PARCEL# 9835200195: York 2ND ADD, PLAT BLOCK: 3, PLAT LOT: 10
PARCEL# 9835200200: York 2ND ADD PLAT BLOCK: 3, PLAT LOT: 11
PARCEL# 9835200205: York 2nd ADD PLAT BLOCK: 3, PLAT LOT: 12
PARCEL# 9835200210: York 2nd ADD PLAT BLOCK: 3, PLAT LOT: 13
PARCEL# 9835200215: York 2nd ADD PLAT BLOCK: 3, PLAT LOT: 14
PARCEL# 9835200220: York 2nd ADD PLAT BLOCK: 3, PLAT LOT: 15
PARCEL# 9835200225: York 2nd ADD PLAT BLOCK: 3, PLAT LOT: 16
PARCEL# 9835200226: York 2nd ADD PLAT BLOCK: 3, PLAT LOT: 17
PARCEL# 9835200230: York 2nd ADD PLAT BLOCK: 3, PLAT LOT: 18-19-20
PARCEL# 3357400005: HILLMANS C D RAINIER BLVD. GARDEN, PLAT BLOCK: 44 PLAT LOT: 1-2
PARCEL# 3357400095: HILLMANS C D RAINIER BLVD. GARDEN, PLAT BLOCK: 44 PLAT LOT: 19-20

APPROVED ALLEY EXCEPTION REQUEST:

3019909 & 3019913
ALLEY CONFIGURATION HAS BEEN APPROVED AS SHOWN:
NO CONNECTION TO SPOKANE STREET DUE TO STEEP SLOPE
DEAD-END ALLEY ROW TO BE EXTENDED TO 34TH STREET AT THE SOUTHWEST END OF SITE AND TO 35TH STREET AT THE NORTHEAST END OF SITE.

DEDICATIONS:

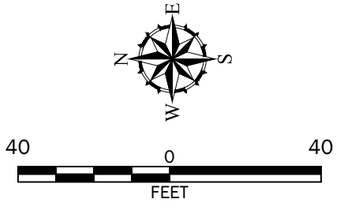
3.5 FT R.O.W. DEDICATION TO 35TH AVE. S.
1 FT R.O.W. DEDICATION TO 34TH AVE. S.
ALLEY DEDICATION: 2 FT. EACH SIDE & FOR CONNECTIONS TO 34TH & 35TH.

SEE ALTA SURVEY FOR LOCATION OF EXISTING BUILDINGS & SITE ELEMENTS

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source:
Sheet P1 "Preliminary Site Plan" for Rainier Court IV by Johnson Braund, Inc. dated 8-28-15.



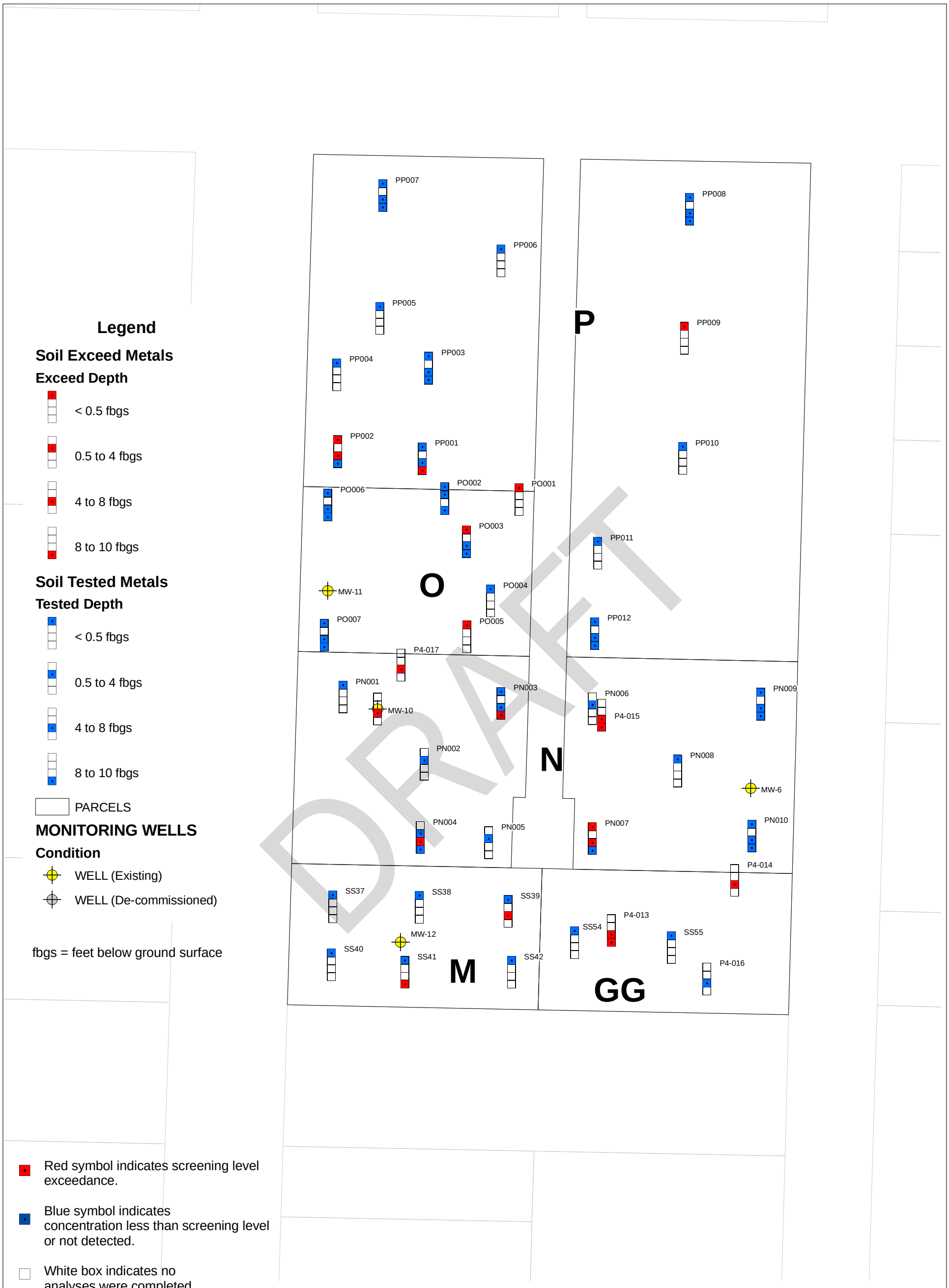
Rainier Court IV Site Plan with Project Elements

Rainier Court IV
Seattle, Washington

GeoEngineers

Figure 3

OfficeLocation: SEA P:\8\8322005\GIS\8322005_Figure4_Metals_rev.mxd Map Revised: March 19, 2010 KKS



Reference: Parcel boundaries from City of Seattle, 2003

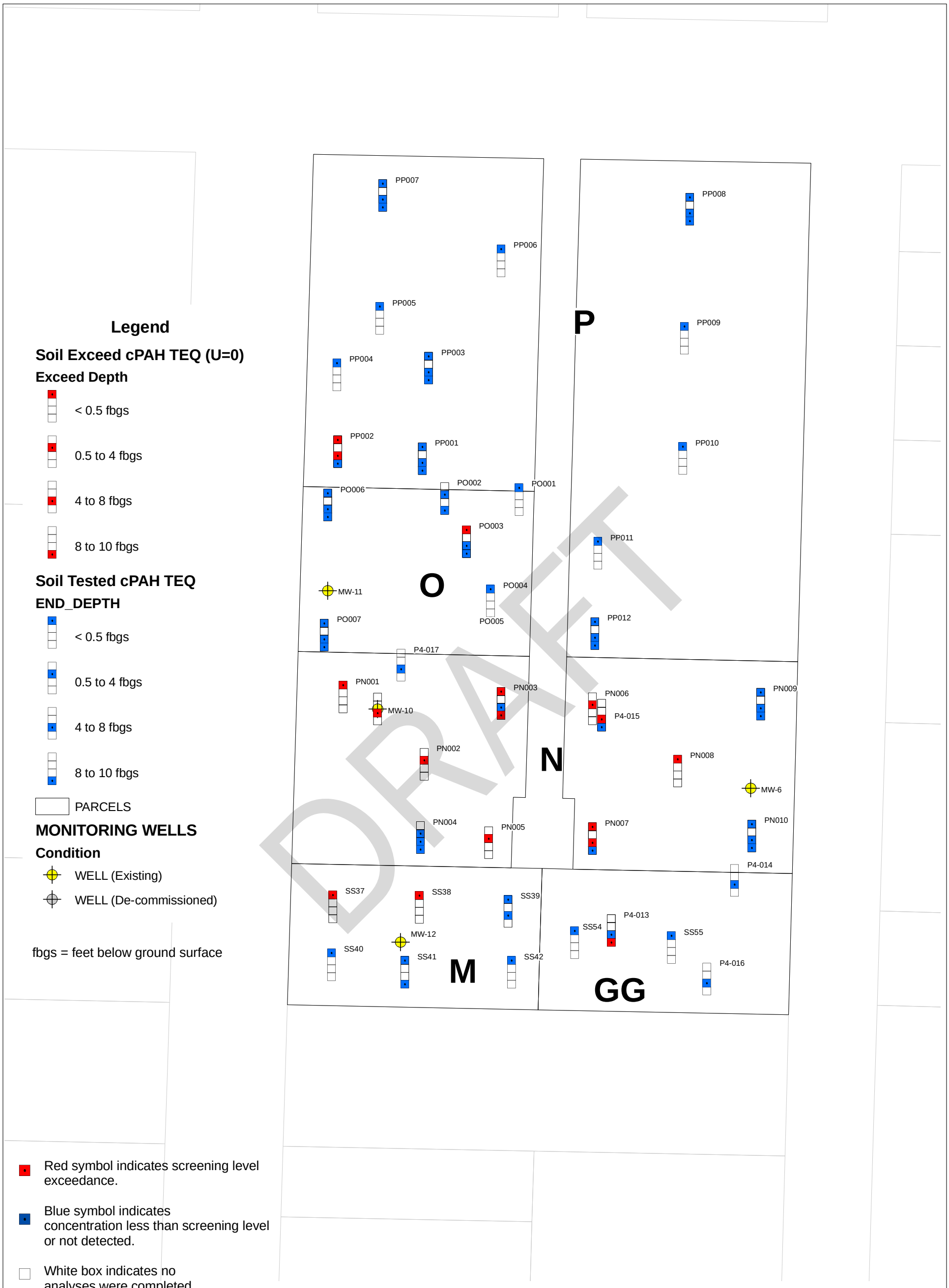
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for infomation purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record oth this communication.

METALS EXCEEDANCES IN SOIL

RAINIER COURT PHASE IV
SEATTLE, WASHINGTON

GeoEngineers

Figure 4



Reference: Parcel boundaries from City of Seattle, 2003

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for infomation purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record oth this communication.

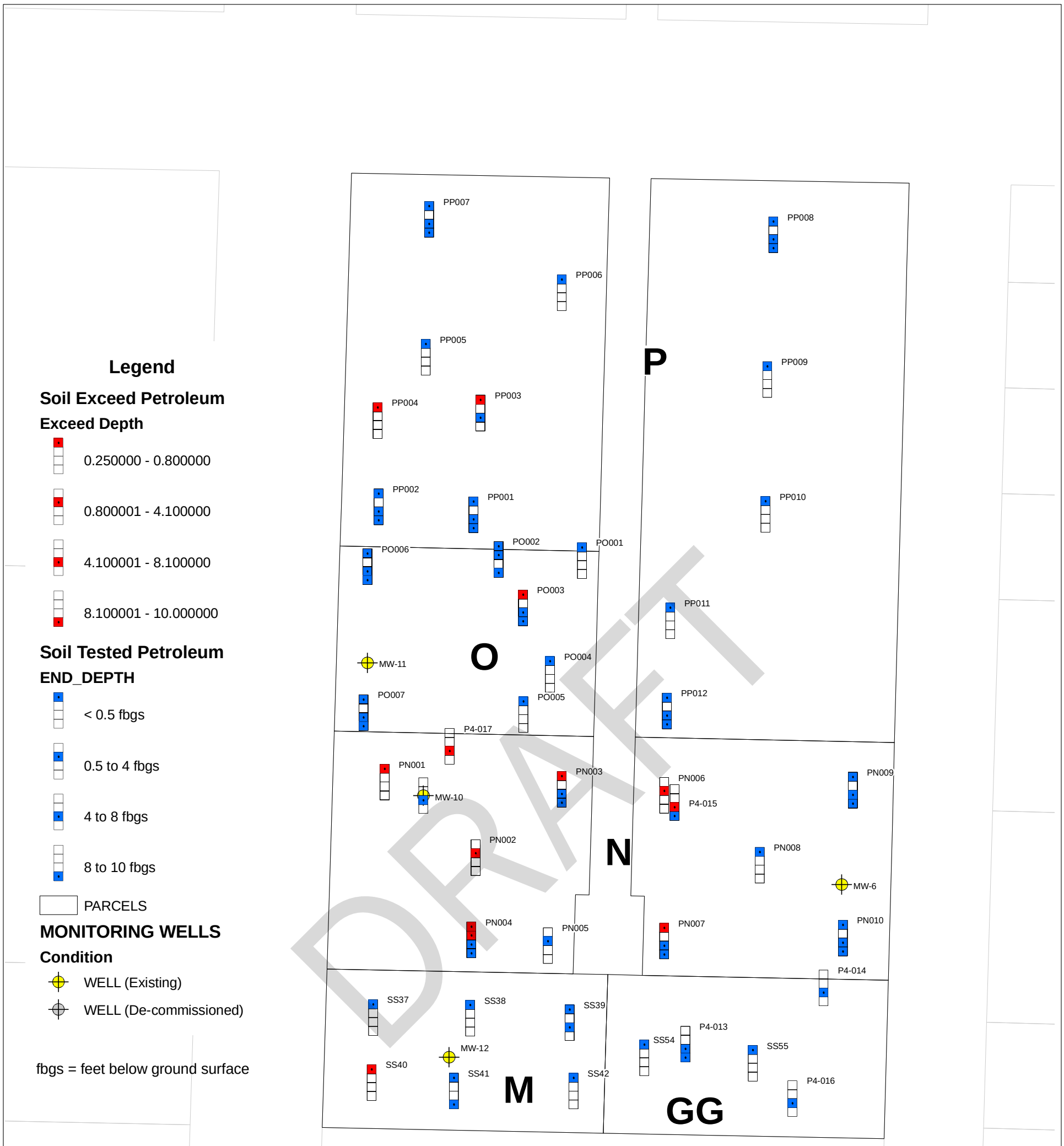
CPAH TEQ EXCEEDANCES IN SOIL

RAINIER COURT PHASE IV
SEATTLE, WASHINGTON

GeoEngineers

Figure 5

OfficeLocation: SEA P:\8\8322005\GIS\8322005_Figure6_TPH_rev.mxd Map Revised: March 19, 2010 KKS



Reference: Parcel boundaries from City of Seattle, 2003

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for infomation purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record oth this communication.

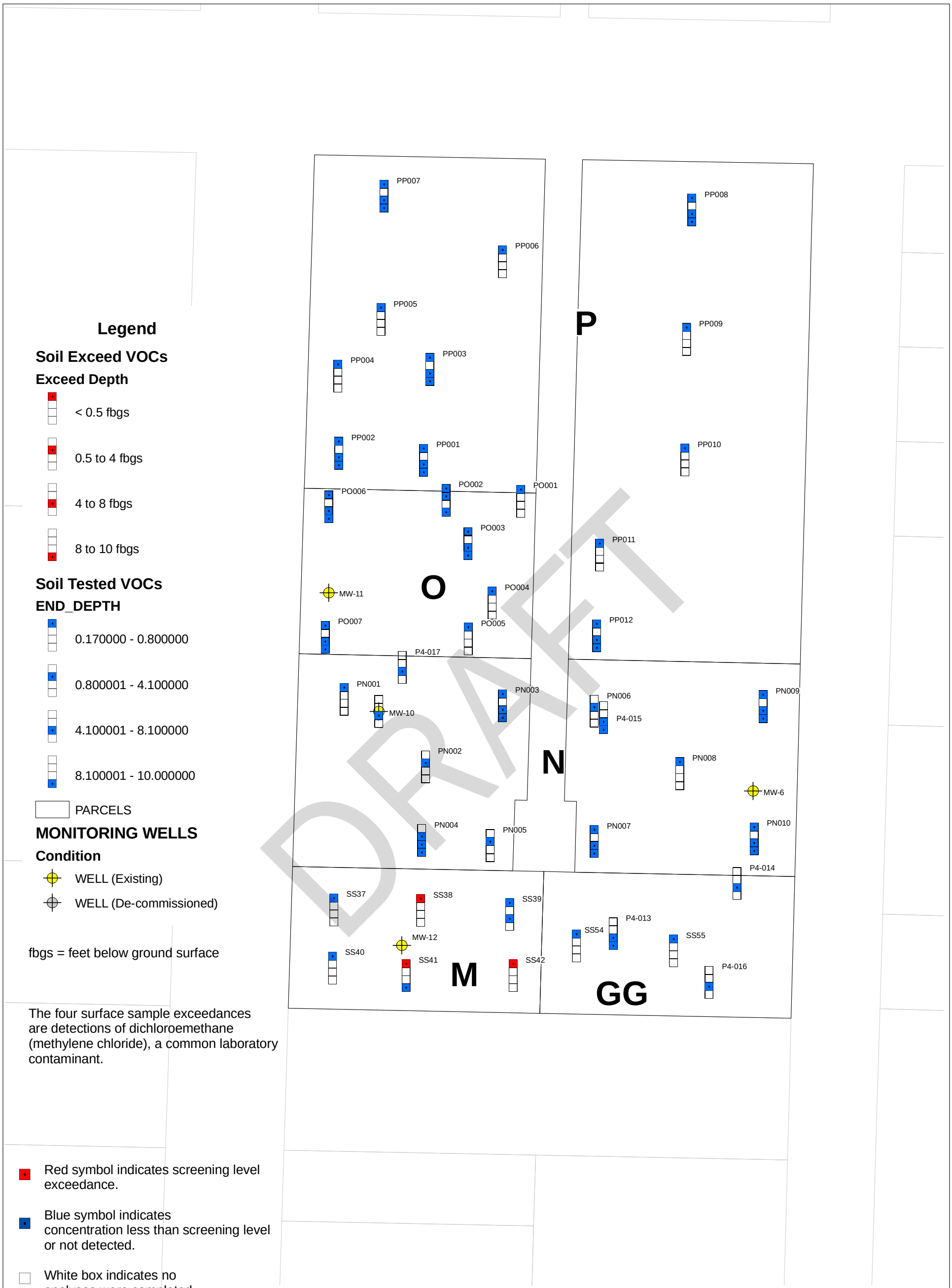
PETROLEUM EXCEEDANCES IN SOIL

RAINIER COURT PHASE IV
SEATTLE, WASHINGTON

GeoEngineers

Figure 6

OfficeLocation: SEA P:\8\8322005\GIS\8322005_Figure7_VOCs_rev.mxd Map Revised: March 19, 2010 KKS



Legend

Soil Exceed VOCs

Exceed Depth

- < 0.5 fbgs
- 0.5 to 4 fbgs
- 4 to 8 fbgs
- 8 to 10 fbgs

Soil Tested VOCs

END_DEPTH

- 0.170000 - 0.800000
- 0.800001 - 4.100000
- 4.100001 - 8.100000
- 8.100001 - 10.000000

PARCELS

MONITORING WELLS

Condition

- WELL (Existing)
- WELL (De-commissioned)

fbgs = feet below ground surface

The four surface sample exceedances are detections of dichloroemethane (methylene chloride), a common laboratory contaminant.

- Red symbol indicates screening level exceedance.
- Blue symbol indicates concentration less than screening level or not detected.
- White box indicates no analyses were completed.

Reference: Parcel boundaries from City of Seattle, 2003

N W E S

50 0 50

Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for infomation purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record oth this communication.

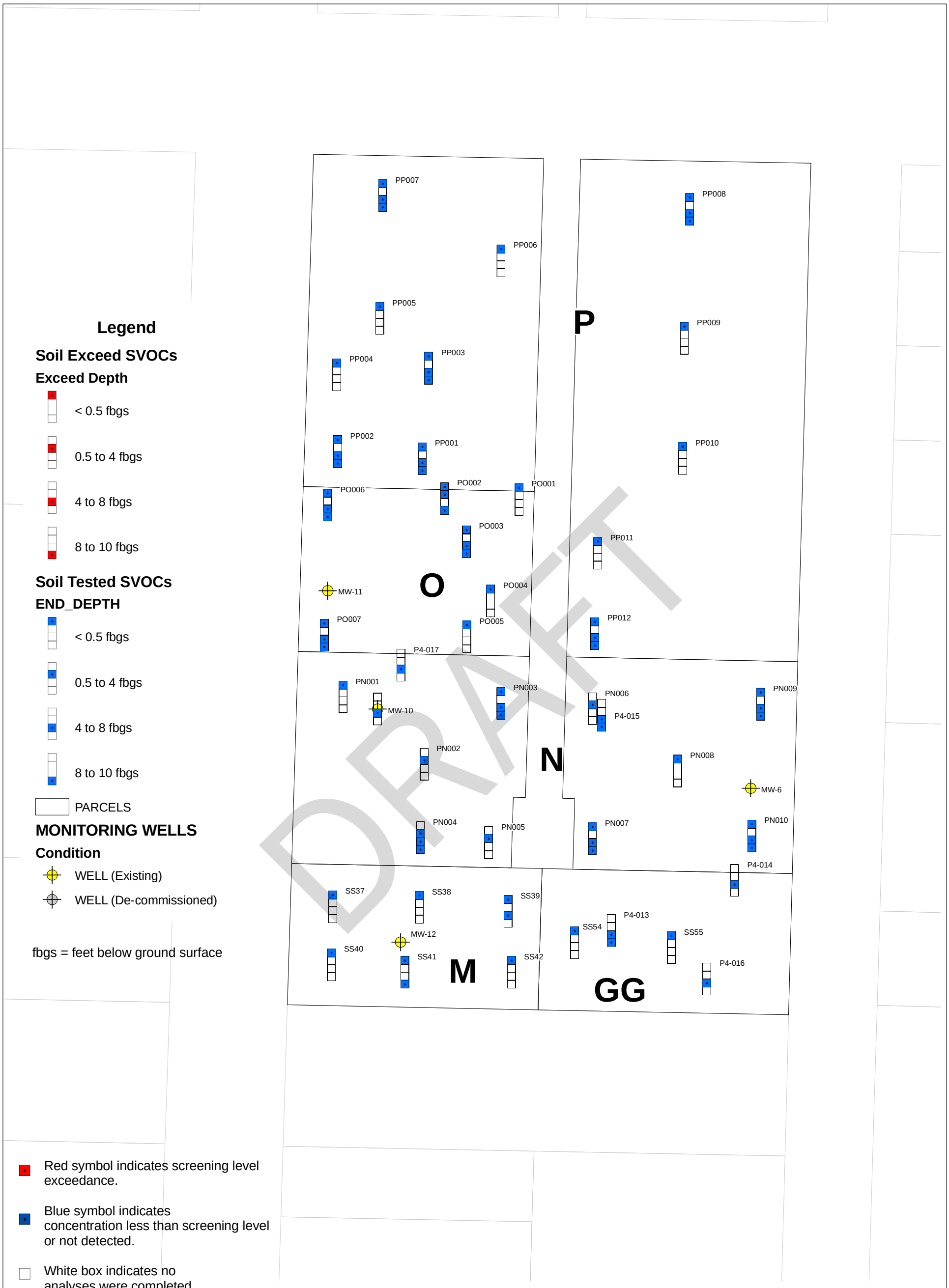
VOC EXCEEDANCES IN SOIL

RAINIER COURT PHASE IV
SEATTLE, WASHINGTON

GeoEngineers

Figure 7

OfficeLocation: SEA P:\8\8322005\GIS\8322005_Figure8_SVOC_rev.mxd Map Revised: March 19, 2010 KKS



Legend

Soil Exceed SVOCs

Exceed Depth

- < 0.5 fbgs
- 0.5 to 4 fbgs
- 4 to 8 fbgs
- 8 to 10 fbgs

Soil Tested SVOCs

END_DEPTH

- < 0.5 fbgs
- 0.5 to 4 fbgs
- 4 to 8 fbgs
- 8 to 10 fbgs

PARCELS

MONITORING WELLS

Condition

- WELL (Existing)
- WELL (De-commissioned)

fbgs = feet below ground surface

- Red symbol indicates screening level exceedance.
- Blue symbol indicates concentration less than screening level or not detected.
- White box indicates no analyses were completed.

N
W E
S

50 0 50
Feet

Reference: Parcel boundaries from City of Seattle, 2003

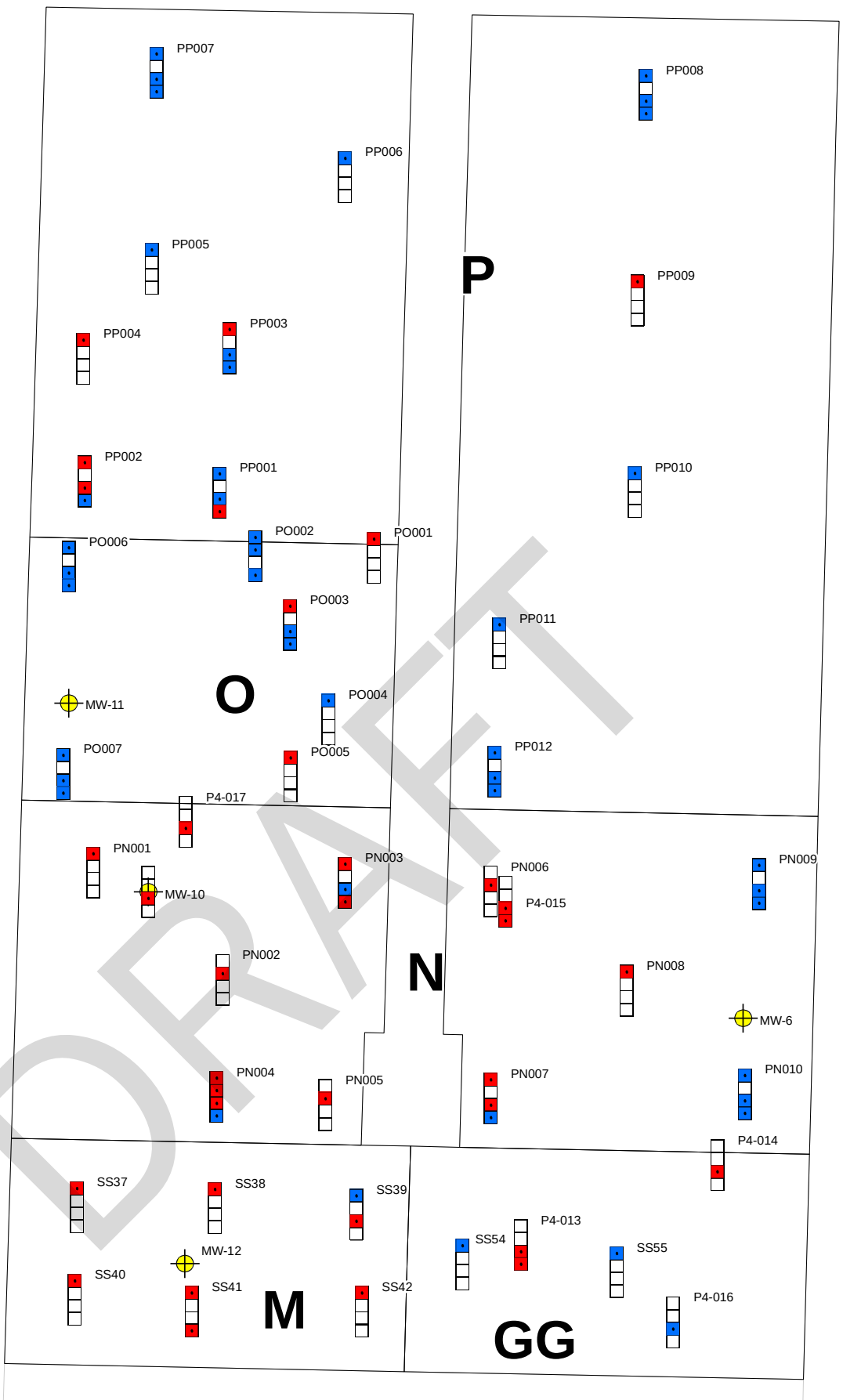
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for infomation purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record oth this communication.

SVOC EXCEEDANCES IN SOIL

RAINIER COURT PHASE IV
SEATTLE, WASHINGTON

GeoEngineers

Figure 8



Legend

Soil Exceed (all analytes)

Exceed Depth

- < 0.5 fbgs
- 0.5 to 4 fbgs
- 4 to 8 fbgs
- 8 to 10 fbgs

Soil Tested (all analytes)

END_DEPTH

- < 0.5 fbgs
- 0.5 to 4 fbgs
- 4 to 8 fbgs
- 8 to 10 fbgs

PARCELS

MONITORING WELLS

Condition

- WELL (Existing)
- WELL (De-commissioned)

fbgs = feet below ground surface

Red symbol indicates screening level exceedance.

Blue symbol indicates concentration less than screening level or not detected.

White box indicates no analyses were completed.

N
W E
S

50 0 50
Feet

Reference: Parcel boundaries from City of Seattle, 2003

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for infomation purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record oth this communication.

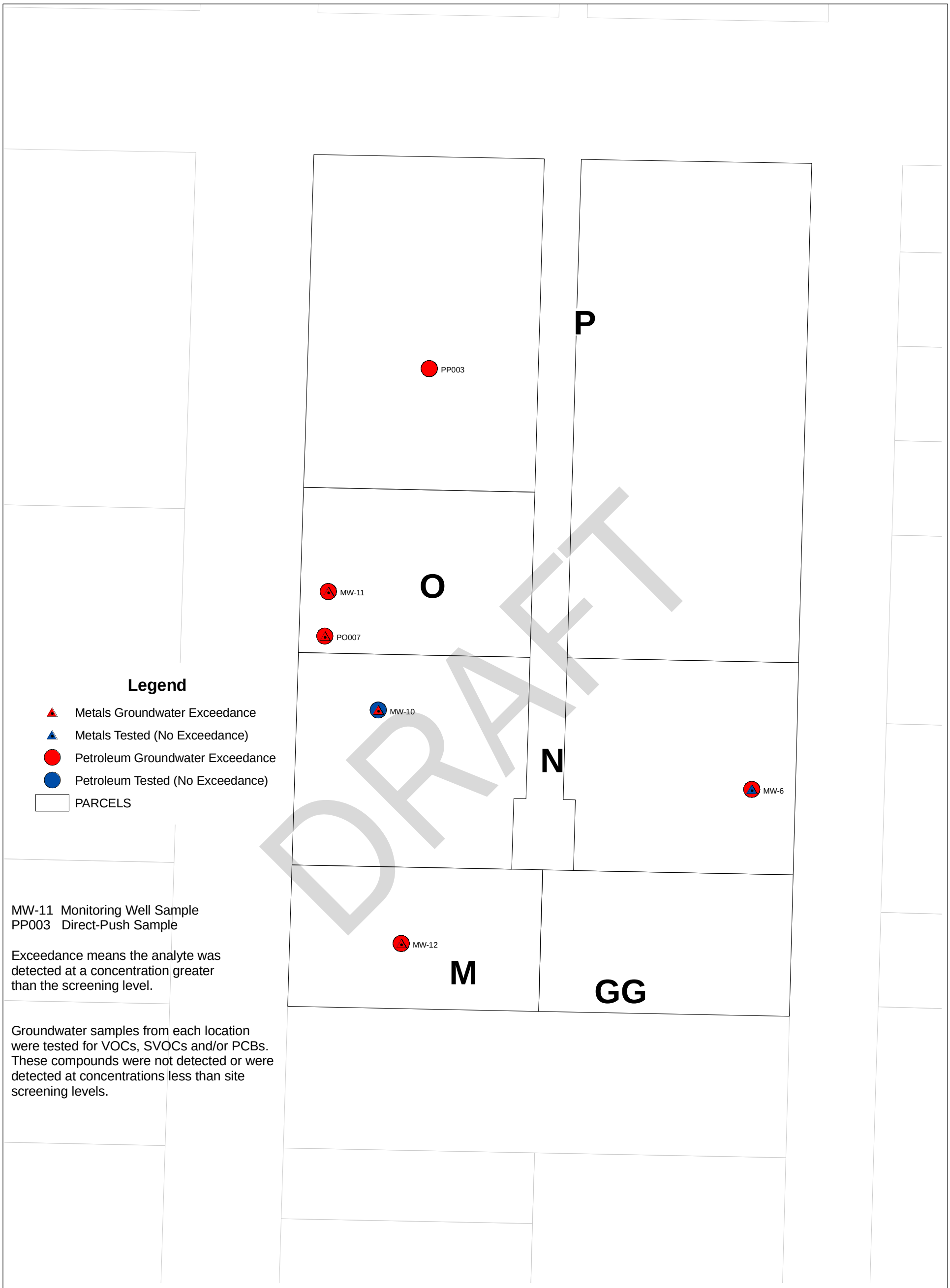
ALL CONTAMINANT EXCEEDANCES IN SOIL

RAINIER COURT PHASE IV
SEATTLE, WASHINGTON

GeoEngineers

Figure 9

OfficeLocation: SEA Path: P:\8\8322005\GIS\8322005_Figure10_Groundwater.MXD Map Revised: March 19, 2010 KKS



Reference: Parcel boundaries from City of Seattle, 2003

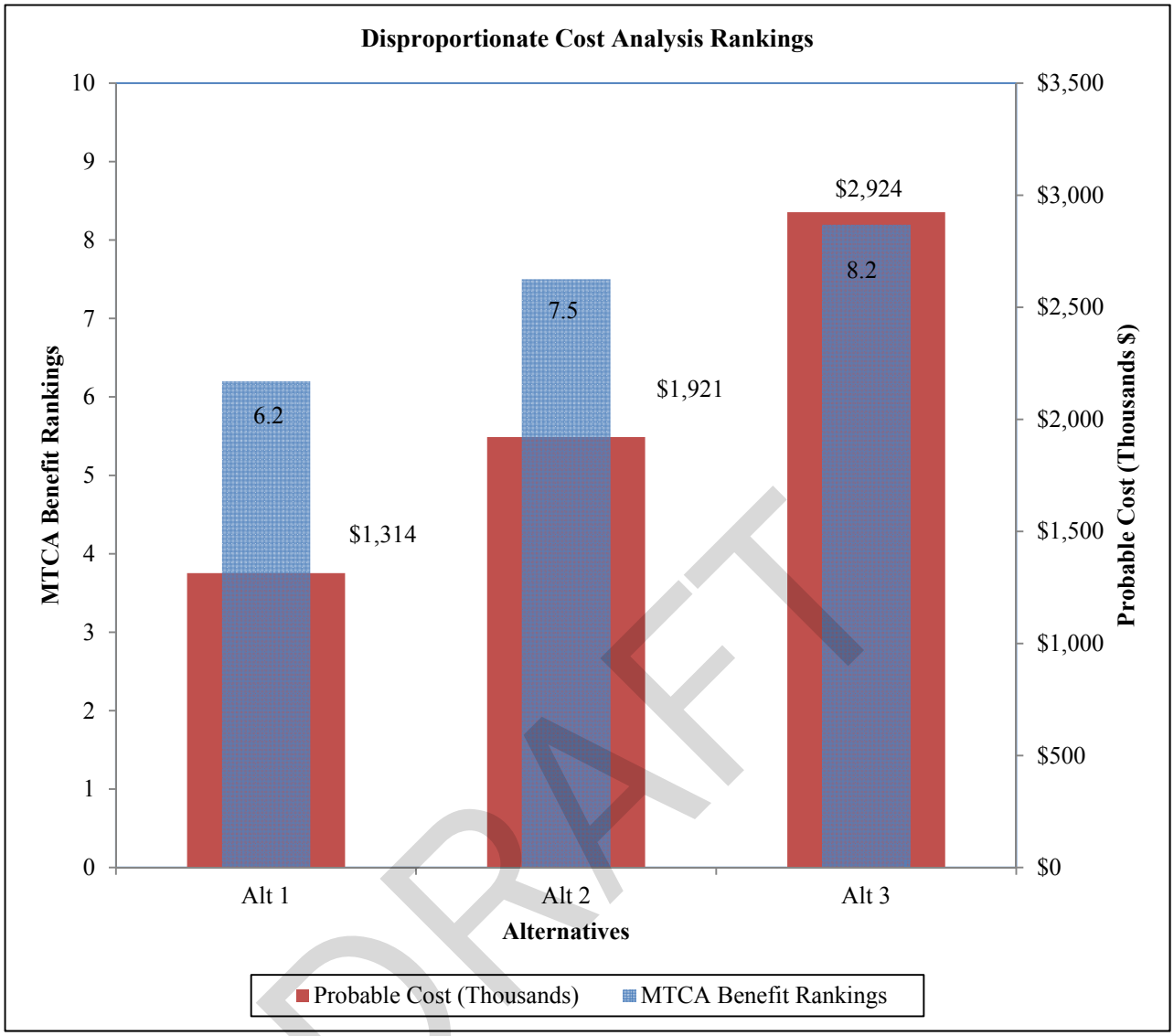
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for infomation purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record oth this communication.

METALS AND PETROLEUM EXCEEDANCES IN GROUNDWATER

RAINIER COURT PHASE IV
SEATTLE, WASHINGTON

GeoEngineers

Figure 10



Benefit Summary		Alt 1		Alt 2		Alt 3	
Factor	**Weighting**	**Rank**	**Value**	**Rank**	**Value**	**Rank**	**Value**
Protectiveness	0.3	6	1.8	8	2.4	9	2.7
Permanence	0.2	5	1	7	1.4	9	1.8
Long-Term Effectiveness	0.2	5	1	7	1.4	9	1.8
Short-Term Risk	0.1	9	0.9	7	0.7	5	0.5
Implementability	0.1	9	0.9	9	0.9	6	0.6
Public Concerns	0.1	6	0.6	7	0.7	8	0.8
Sum	1	6.2		7.5		8.2	

Notes:
1. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

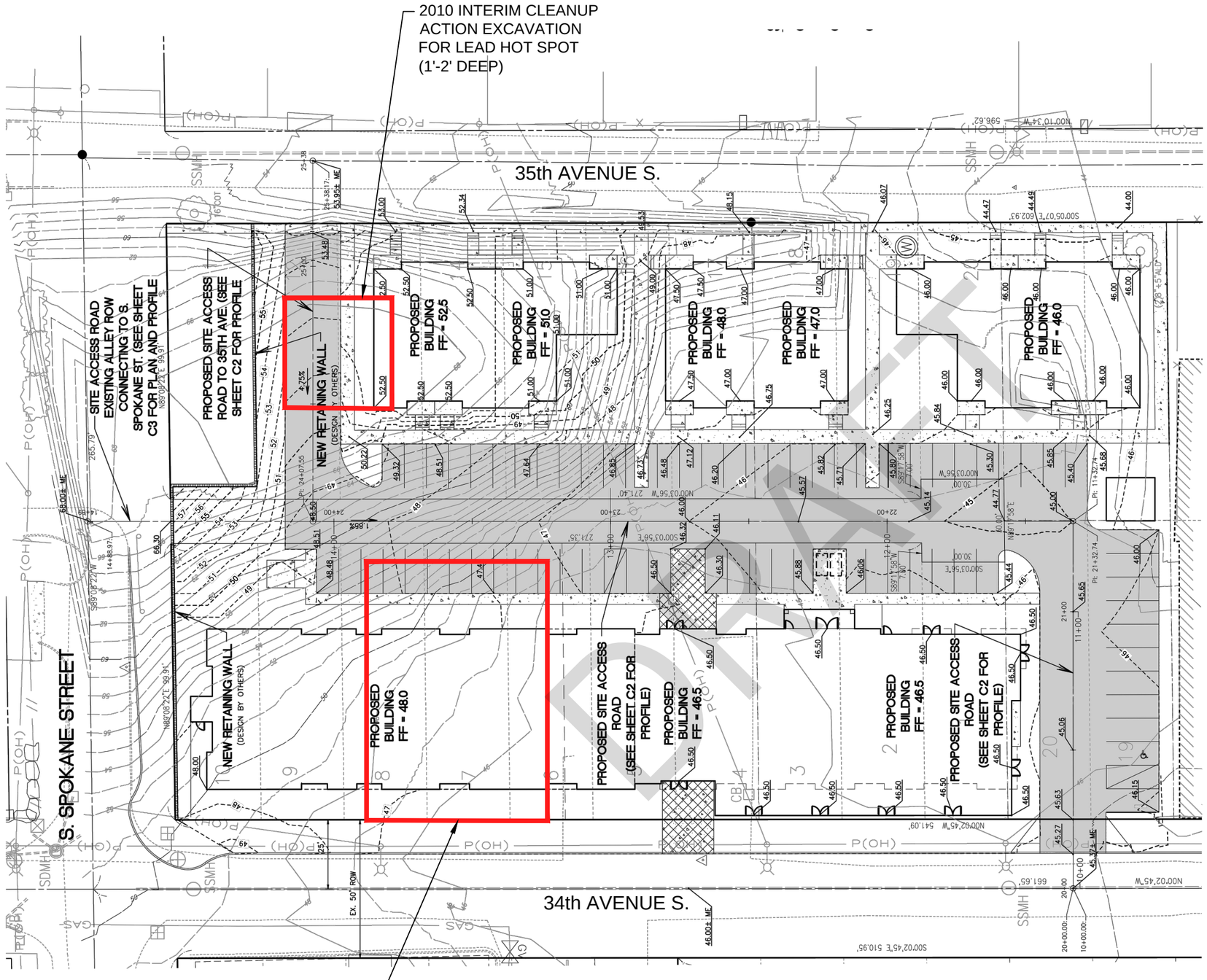
Disproportionate Cost Analysis Ranking

Rainier Court Phase IV
Seattle, Washington

GeoEngineers

Figure 11

XXXXX-XXX-XX Date Exported: 04/09/15



Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source:
Sheet C1 "Site Access Road Proposed Plan" Exhibit for Rainier Court Phase 4 by Barghausen Consulting Engineers, Inc., revised 9-9-15.

Preliminary Grading Plan

Rainier Court IV
Seattle, Washington

GeoEngineers

Figure 12

APPENDIX A
Architectural Drawings of Proposed Development

BUILDING MASSING FROM SOUTHWEST LOOKING NORTHEAST

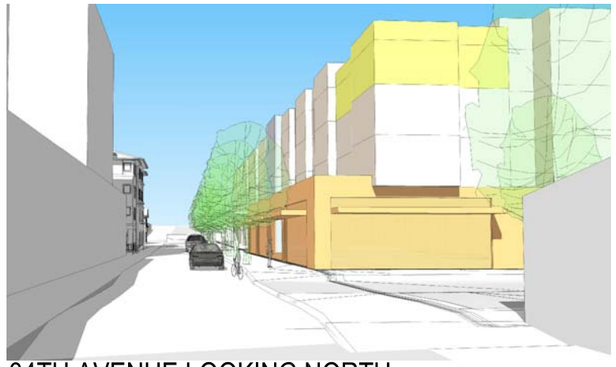
BUILDING MASSING FROM SOUTHEAST LOOKING NORTHEAST

VIEW TOWARDS ENTRY FROM PEDESTRIAN PROMENADE

ALLEY WAY LOOKING SOUTH

ALLEY WAY LOOKING NORTH

34TH AVENUE LOOKING SOUTH



34TH AVENUE LOOKING NORTH

JOHNSON BRAUND INC.
15200 52nd Ave. South
Suite 300
Seattle, WA 98188
Phone 206.766.8300

concept view from 35th

concept view from alley

JOHNSON BRAUND INC.
15200 52nd Ave. South
Suite 300
Seattle, WA 98188
Phone 206 766 8300

APPENDIX B
Soil and Groundwater Data Tables

Table B-1
Summary of Soil Analytical Results
Rainier Court Phase IV Site
Seattle, Washington

Group	Analyte	Screening Level (mg/kg)	M SS37 0-0.5	M SS38 0-0.5	M SS40 0-0.5	M SS42 0-0.5	M SS39 4-8	M SS41 4.5-8.5	N MW-10 2-6	N P4-014 2-6	N P4-015 2-6	N P4-015 6-10	N PN001 0.75-1	N PN002 0.75-1.1	N PN003 0-0.5	N PN003 2-6	N PN003 6-10	N PN004 0-0.5	N PN004 1-1.5	N PN004 2-6	N PN004 6-10	N PN005 0-1	N PN006 0-1
	Parcel:		M	M	M	M	M	M	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	Sample Location:		SS37	SS38	SS40	SS42	SS39	SS41	MW-10	P4-014	P4-015	P4-015	PN001	PN002	PN003	PN003	PN003	PN004	PN004	PN004	PN004	PN005	PN006
	Depth (ft bgs):		0-0.5	0-0.5	0-0.5	0-0.5	4-8	4.5-8.5	2-6	2-6	2-6	6-10	0.75-1	0.75-1.1	0-0.5	2-6	6-10	0-0.5	1-1.5	2-6	6-10	0-1	0-1
BTEX	BENZENE	0.03							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
BTEX	ETHYLBENZENE	6							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	**.004 J**	.016 U		**.032**	.014 U	.014 U	.011 U	.01 U
BTEX	TOLUENE	7							**.016**	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	**.022**	.014 U	**.009 J**	.01 U
BTEX	XYLENE (TOTAL)	9							.016 U	.01 U	.01 U	.012 U	.011 U	**.005 J**	.011 U	**.02**	**.002 J**		**.12**	.014 U	.014 U	.011 U	.01 U
cPAHs	BENZO(A)ANTHRACENE	0.137	**.16**	**.25**	.014 U	.017 U	**.0076**	**.014**	**.21**	.45 U	**.085 J**	.33 U	**1.5**	**.097 J**	**1.8**	.158 U	**.35 J**		.28 U	.096 U	.09 U	**.11 J**	**.78 J**
cPAHs	BENZO(A)PYRENE	0.137	**.19**	**.49**	.014 U	.017 U			**.27**	.45 U	**.085 J**	.33 U	**1.8**	**.11 J**	**2.2**	.158 U	**.32 J**		.28 U	.096 U	.09 U	**.13 J**	**.91 J**
cPAHs	BENZO(B)FLUORANTHENE	0.137							**.22**	.45 U	**.082 J**	.33 U	**2.7**	.07 UJ	**1.8**	.158 U	**.34 J**		.28 U	.096 U	.09 U	.072 U	**1.3 J**
cPAHs	BENZO(K)FLUORANTHENE	0.137							**.22**	.45 U	**.13**	.33 U	.28 U	.07 UJ	**1.8 JK**	.158 UJK	**.18 J**		.28 U	.096 U	.09 U	.072 U	.28 U
cPAHs	BENZOFLUORANTHENES (SUM)		**.15**	**.54**	.014 U	**.067**	**.016**	**.0083**															
cPAHs	CHRYSENE	0.137	**.17**	**.31**	**.061**	**.072**	**.0098**	.0038 U	**.32**	.45 U	**.15**	.33 U	**2**	**.18 J**	**2.3**	.158 U	**.39 J**		**.37 J**	.096 U	.09 U	**.14 J**	**.88 J**
cPAHs	DIBENZO(A,H)ANTHRACENE	0.137							.11 U	.45 U	.36 U	.33 U	.28 U	.07 UJ	**.45 J**	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
cPAHs	INDENO(1,2,3-CD)PYRENE	0.137	**.083**	**.35**	.014 U	.017 U			**.17**	.45 U	.36 U	.33 U	**1.5**	**.11 J**	**1.6**	.158 U	**.18 J**		.28 U	.096 U	.09 U	**.14 J**	**.68 J**
EPH	C10-C12 ALIPHATICS																		**300**				
EPH	C10-C12 AROMATICS																		**67**				
EPH	C12-C16 ALIPHATICS		5.6 U	5.6 U	5.5 U	**7.3**													**1500**				
EPH	C12-C16 AROMATICS																		**550**				
EPH	C16-C18 ALIPHATIC		5.6 U	5.6 U	**7.5**	**9.2**																	
EPH	C16-C21 AROMATICS																		**1800**				
EPH	C18-C21 ALIPHATIC		**7.2**	**8.5**	**66**	**18**	7 U	**8.9**															
EPH	C18-C21 AROMATIC		5.6 U	5.6 U	**15**	**17 J**																	
EPH	C21-C28 ALIPHATICS		**100**	**76**	**650**	**82**	**26**	**41**															
EPH	C21-C28 AROMATICS		**17**	**27**	**63**	**58**	**17**	**14 J**															
EPH	C21-C34 ALIPHATICS																		**1300**				
EPH	C28-C36 ALIPHATICS		**210**	**190**	**1400 J**	**230**	**63**	**45 J**															
EPH	C28-C36 AROMATICS		**20**	**36**	**60**	**71**	**25**	**15**															
EPH	C5-C6 ALIPHATICS																		5 U				
EPH	C6-C8 ALIPHATICS																		5 U				
EPH	C8-C10 ALIPHATICS																		**74**				
EPH	C8-C10 AROMATICS																		**78**				
EPH	TOTAL ALPHATIC		**320**	**270**	**2100 J**	**350**	**89**	**95 J**										**4600**	**78**				
EPH	TOTAL AROMATIC		**37**	**63**	**140**	**150 J**	**41**	**30 J**										**3**	**3700**				
EPH	HYDROCARBONS	2000	**357**	**333**	**2240**	**500**												**4603**	**3778**				
METALS	ALUMINUM	76000	**8240**	**8020**	**5380**	**10500**	**22500**	**24300**	**22200**	**20400**	**15900**	**16900**	**7760**	**9510**	**7320**	**12400**	**11400**		**9060**	**24000**	**11400**	**9800**	**8850**
METALS	ANTIMONY	32					1.2 U	**2.3 JB**	**4 J**	**4.2 J**	**3.8 J**	**3.9 J**	**.95 J**	**1.1 J**	.35 UJ	**1.2 J**	**.78 J**		**.6 J**	**2.9 J**	**.51 J**	**1.6 J**	.36 UJ
METALS	ARSENIC	20	**4.7**	**5.2**	**3.6**	**6**	**15.7**	**24.2**	**18**	**18.7**	**14.8**	**5.3**	**6.6**	**5.8**	2.8 U	**8.6**	2.9 U		**3.7**	**18.3**	**4.9**	**5.9**	**3.5**
METALS	BARIUM	5600	**109**	**236**	**53.5**	**101**	**902**	**1180**	**1590**	**868**	**629**	**316**	**161**	**81.3**	**46.7**	**261**	**194**		**89**	**1310**	**243**	**289**	**56.1**
METALS	BERYLLIUM	160					**.6 JB**	.03 U	**1.7**	**1.1**	**.94**	**.43 J**	**.17**	**.15**	**.11**	**.44**	**.5**		**.15**	**1.7**	**1.1**	**.23**	**.16**
METALS	CADMIUM	2							.66 U	**.85**	**.34 J**	.69 U	**.33**	**.11**	**.09**	.09 U	.11 U		**.39**	**.37**	.11 U	.22 U	.08 U
METALS	CALCIUM METAL		**6470**	**4750**	**4870**	**5620**	**19800**	**15300**	**21200**	**15200**	**12200**	**6970**	**5170**	**12700**	**2640**	**5060**	**3160**		**6660**	**18900**	**5700**	**5990**	**7310**
METALS	CHROMIUM	2000	**42.1**	**16.7**	**14.2**	**22.8**	**22.9**	**39.5**	**57.4 J**	**26.9 J**	**106 J**	**63.3 J**	**21.2 J**	**29.1 J**	**16.6 J**	**66.8 J**	**28 J**		**24.6 J**	**18.4**	**17.8**	**33**	**20.9 J**
METALS	COBALT	4700	**6 JB**	**7.8 JB**	**4.6 JB**	**8.4 JB**	**9.6 JB**	**9.9 JB**	**13.5**	**10.2**	**9.2**	**10.6**	**7.9**	**8.2**	**4.7**	**6.3**	**3**		**12**	**7.8**	**4.3**	**7.5**	**7.5**
METALS	COPPER	2960	**48.1**	**73.6**	**46.8**	**35.6**	**125**	**3240**	**154 J**	**140 J**	**156 J**	**72.6 J**	**32.5**	**44.8**	**19.6**	**79.4**	**47**		**65.3**	**246**	**64.1**	**89.7**	**30.8**

METALS	IRON	58700	12700	20100	9680	16400	33800	45300	68300 J	31500 J	34000 J	29200 J	15200	23300	11600	30200	8720		21700	27300	10900	21600	16300
METALS	LEAD	250	45.6	66.5	29.9	43.6	331	1590	511 J	358 J	516 J	176 J	87.2 J	46.1 J	22.2 J	217 J	287 J		76 J	1460 J	80.2 J	77.6 J	30.5 J
METALS	MAGNESIUM		4350	4930	2760	4920	2520	2040	3280 J	2700 J	1830 J	4560 J	3910	6140	3840	3370	1580		8260	1890	2230	5010	5750
METALS	MANGANESE	11200	914	261	187	290	309	351	765 J	253 J	356 J	466 J	325 J	291 J	197 J	335 J	196 J		276 J	286	244	319 J	335 J
METALS	MERCURY	2	.06 U	.07 JB	.05 U	.23	.14	.23	.31 J+	.99 J+	.41 J+	7.4 J+	.05	.05 U	.05 U	.09	.14		.04	.1	.11	.08 J	.1
METALS	NICKEL	1600	22.1	24.4	71.6	25.6	22.1	27.5	31.6	27	39.7	37.4	31.8	28.8	28.1	30.1	27.8		32.4	22.3	16.7	27.3	31.8
METALS	POTASSIUM		398 JB	732 JB	324 JB	785 JB	1180 JB	1150 JB	1230 J	1320 J	1250 J	1010 J	444	712	465	479	444		496	1310 J	911 J	531 J	442
METALS	SELENIUM	400	.82 U	.82 U	.79 U	1.1 JB	1.3	1.1 U	1.6 J	1.8 J	1.8 J	1.4 J	.57 UJ	.57 UJ	.57 UJ	.63 UJ	.87 J		.56 UJ	.74 U	.75 U	.68 J	.59 UJ
METALS	SILVER	400	.45 JB	.48 JB	.37 JB	.46 JB			1.3 UJ	1.4 UJ	1.3 UJ	1.4 UJ	.1 U	.1 U	.1 U	.11 U	.14 U		.1 U	.39	.98	.11 U	.1 U
METALS	SODIUM		356 JB	451 JB	330 JB	448 JB	3500 J	1860	1090 J+	1020 J+	1630 J+	229 J	555 J	657 J	405 J	660 J	451 J		730 J	2570	6440	772 U	690 J
METALS	THALLIUM	5.2	2.5	1.7 JB	1.5 JB	2.7	1.5 U	4.7	3.3 UJ	3.5 UJ	3.1 UJ	3.5 UJ											
METALS	VANADIUM (FUME OR DUST)	560	29.6	39.7	21.6	40	92.3	110	112 J	117 J	155 J	53.8 J	38.2	37.4	24.6	43.8	27		49.4	106	31.2	46.5	38.6
METALS	ZINC	24000	89.9	107	102	81.6	265	1710	1000	358	674	253	123	75.5	68	182	85.6		106	352 J	85 J	202	56.4
PAHs	1,1'-BIPHENYL	4000							.43 U	.45 U	.36 U	.33 U	1.2 J	.19 J	.28 U	.58 J	.098 J		1.7	.096 U	.09 U	.072 U	.28 U
PAHs	2-METHYLNAPHTHALENE		.029	.057	.019	.017 U	.027	.0038 U	.11 U	.45 U	.36 U	.33 U	1.4	1.7	.28 U	2.1	.26 J		6.5	.096 U	.11 J	.072 U	.28 U
PAHs	ACENAPHTHENE	4800	.061	.013 JQ	.012 JQ	.017 U			.11 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.27 J	.13 J		.28 U	.096 U	.09 U	.072 U	.28 U
PAHs	ACENAPHTHYLENE		.035	.05	.014 U	.017 U			.11 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
PAHs	ANTHRACENE	24000	.13	.053	.032	.012 JQ	.0044	.003 JQ	.11 U	.45 U	.36 U	.33 U	.72 J	.07 UJ	.44 J	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
PAHs	BENZO(A)ANTHRACENE	0.137	.16	.25	.014 U	.017 U	.0076	.014	.21	.45 U	.085 J	.33 U	1.5	.097 J	1.8	.158 U	.35 J		.28 U	.096 U	.09 U	.11 J	.78 J
PAHs	BENZO(A)PYRENE	0.137	.19	.49	.014 U	.017 U			.27	.45 U	.085 J	.33 U	1.8	.11 J	2.2	.158 U	.32 J		.28 U	.096 U	.09 U	.13 J	.91 J
PAHs	BENZO(B)FLUORANTHENE	0.137							.22	.45 U	.082 J	.33 U	2.7	.07 UJ	1.8	.158 U	.34 J		.28 U	.096 U	.09 U	.072 U	1.3 J
PAHs	BENZO(GHI)PERYLENE		.11	.34	.082	.017 U			.26	.45 U	.36 U	.33 U	1.6	.2 J	1.9	.158 U	.2 J		.28 U	.096 U	.09 U	.23 J	.77 J
PAHs	BENZO(K)FLUORANTHENE	0.137							.22	.45 U	.13	.33 U	.28 U	.07 UJ	1.8 JK	.158 UJK	.18 J		.28 U	.096 U	.09 U	.072 U	.28 U
PAHs	BENZOFLUORANTHENES (SUM)		.15	.54	.014 U	.067	.016	.0083															
PAHs	CHRYSENE	0.137	.17	.31	.061	.072	.0098	.0038 U	.32	.45 U	.15	.33 U	2	.18 J	2.3	.158 U	.39 J		.37 J	.096 U	.09 U	.14 J	.88 J
PAHs	DIBENZO(A,H)ANTHRACENE	0.137							.11 U	.45 U	.36 U	.33 U	.28 U	.07 UJ	.45 J	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
PAHs	FLUORANTHENE	3200	.34	.27	.014 U	.059	.0065	.0038 U	.56	.45 U	.23	.33 U	3.6	.23 J	4.1	.28 J	.82		.28 U	.096 U	.09 U	.13 J	1.7
PAHs	FLUORENE	3200	.057	.018	.014 U	.012 JQ			.11 U	.45 U	.36 U	.33 U	1.7	.94	.28 U	.55 J	.25 J		2.5	.096 U	.09 U	.072 U	.28 U
PAHs	INDENO(1,2,3-CD)PYRENE	0.137	.083	.35	.014 U	.017 U			.17	.45 U	.36 U	.33 U	1.5	.11 J	1.6	.158 U	.18 J		.28 U	.096 U	.09 U	.14 J	.68 J
PAHs	NAPHTHALENE	5	.024	.046	.015	.017 U	.021	.0049	.11 U	.45 U	.36 U	.33 U	.28 U	.35	.28 U	.54 J	.11 J		2.5	.096 U	.09 U	.072 U	.28 U
PAHs	PHENANTHRENE		.43	.14	.015	.039	.02	.01	.39	.45 U	.17	.33 U	6.3	2.4 J	2.8	1.5	.91		3.7	.096 U	.09 U	.083 J	1.4
PAHs	PYRENE	2400	.47	.34	.014 U	.056	.0091	.011	.52	.45 U	.25	.33 U	3.3	.43 J	4.9	.29 J	.83		.69 J	.096 U	.09 U	.15 J	1.8
PEST/PCBs	METHOXPHENYL)-ETHANE	400											.018 U	.018 UJ	.018 UJ	.02 UJ	.027 UJ		.019 UJ	.024 U	.024 U	.018 U	.018 UJ
PEST/PCBs	4,4'-DDD	4.17											.0067	.0078	.0019 J	.0049 J	.0052 UJ		.0018 J	.0047 U	.0047 U	.0036 U	.0034 U
PEST/PCBs	4,4'-DDE	2.94											.0035 U	.0035 U	.0013 J	.0039 U	.0052 UJ		.0036 U	.0047 U	.0047 U	.0036 U	.0034 U
PEST/PCBs	4,4'-DDT	3	.0037 U	.0036 U	.0036 U	.013							.017	.01 J	.0027 J	.0024 J	.0026 J		.0033 J	.0047 U	.0047 U	.0028 J	.0034 UJ
PEST/PCBs	ALDRIN	0.0588											.0018 U	.0018 U	.0018 U	.002 U	.0027 UJ		.0019 U	.0024 U	.0024 U	.0019 U	.0018 U
PEST/PCBs	ALPHA-BHC	0.159											.00052 J	.0018 U	.0018 U	.002 U	.0027 UJ		.0019 U	.0024 U	.0024 U	.0019 U	.0018 U
PEST/PCBs	AROCLOR-1016	5.6											.035 U	.035 U	.035 U	.039 U	.052 UJ		.036 U	.046 U	.047 U	.036 U	.034 U
PEST/PCBs	AROCLOR-1221	0.22											.071 U	.071 U	.071 U	.079 U	.1 UJ		.074 U	.094 U	.096 U	.073 U	.07 U
PEST/PCBs	AROCLOR-1232	0.22											.035 U	.035 U	.035 U	.039 U	.052 UJ		.036 U	.046 U	.047 U	.036 U	.034 U
PEST/PCBs	AROCLOR-1242	0.22											.035 U	.035 U	.035 U	.039 U	.052 UJ		.036 U	.046 U	.047 U	.036 U	.034 U
PEST/PCBs	AROCLOR-1248	0.22											.035 U	.035 U	.035 U	.039 U	.052 UJ		.036 U	.038 J	.047 U	.036 U	.034 U
PEST/PCBs	AROCLOR-1254	1.6	.037 U	.035 JQ	.036 U	.042 U							.035 U	.035 U	.035 U	.039 U	.052 UJ		.036 U	.046 U	.047 U	.036 U	.034 U
PEST/PCBs	AROCLOR-1260	0.22											.035 U	.035 U	.035 U	.039 U	.052 UJ		.036 U	.046 U	.047 U	.036 U	.034 U
PEST/PCBs	BETA-BHC	0.556											.0018 U	.0018 U	.0018 U	.002 U	.0027 UJ		.0019 U	.0024 U	.0024 U	.0019 U	.0018 U
PEST/PCBs	CAMPHECHLOR	0.909											.18 U	.18 U	.18 U	.2 U	.27 UJ		.19 U	.24 U	.24 U	.18 U	.18 U
PEST/PCBs	CAPROLACTAM	40000							.43 U				.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
PEST/PCBs	CHLORDANE, ALPHA	2.86	.0019 U	.0019 U	.0019 U	.0022 U							.0018 U	.0018 U	.0017 J	.002 U	.0027 UJ		.0019 U	.0024 U	.0024 U	.0019 U	.0018 U
PEST/PCBs	CHLORDANE, GAMMA	2.86	.0019 U	.0019 U	.0019 U	.0022 U							.0018 U	.0018 U	.0018 U	.0006 J	.0027 UJ		.0019 U	.0024 U	.0024 U	.0019 U	.0018 U
PEST/PCBs	DELTA-BHC												.0018 U	.0018 U	.0018 U	.002 U	.0027 UJ		.0019 U	.0024 U	.0024 U	.0019 U	.0018 U
PEST/PCBs	DIELDRIN	0.0625	.012	.0036 U	.0036 U	.0093	.0045 U	.0097					.0066	.0035 U	.0035 U	.0039 U	.0052 UJ		.0036 U	.0047 U	.0047 U	.0036 U	.0034 U

PEST/PCBs	ENDOSULFAN I	480											**.003**	.0018 U	.0018 U	.002 U	.0027 UJ		.0019 U	.0024 U	.0024 U	.0019 U	.0018 U
PEST/PCBs	ENDOSULFAN II	480											**.0016 J**	.0035 U	.0035 U	.0039 U	.0052 UJ		.0036 U	.0047 U	.0047 U	.0036 U	.0034 U
PEST/PCBs	ENDOSULFAN SULFATE	480											**.0026 J**	**.0084**	.0035 U	.0039 U	.0052 UJ		**.0012 J**	.0047 U	.0047 U	.0036 U	.0034 U
PEST/PCBs	ENDRIN	24											**.0059**	**.003 J**	.0035 U	.0039 U	.0052 UJ		.0036 U	.0047 U	.0047 U	.0036 U	.0034 U
PEST/PCBs	ENDRIN ALDEHYDE												**.0027 J**	**.0083**	**.0041 J**	.0039 U	.0052 UJ		**.0026 J**	.0047 U	.0047 U	.0036 U	**.00073 J**
PEST/PCBs	ENDRIN KETONE						**.0047**	.0046 U					.0035 U	**.0042**	.0035 U	.0039 U	.0052 UJ		.0036 U	.0047 U	.0047 U	.0036 U	.0034 U
PEST/PCBs	GAMMA-BHC (LINDANE)	0.01											.0018 U	.0018 U	.0018 U	.002 U	.0027 UJ		.0019 U	.0024 U	.0024 U	.0019 U	.0018 U
PEST/PCBs	HEPTACHLOR	0.222											.0018 U	.0018 U	.0018 U	.002 U	.0027 UJ		.0019 U	.0024 U	.0024 U	.0019 U	.0018 U
PEST/PCBs	HEPTACHLOR EPOXIDE	0.11					**.0024**	.0023 U					**.0017 J**	**.0022**	.0018 U	.002 U	.0027 UJ		.0019 U	.0024 U	.0024 U	.0019 U	.0018 U
PETROLEUM	HYDROCARBONS	2000							**1100 D**	**370**	**2700**	**1100**	**5800 D**	**8200 D**	**8800 D**	1000 U	1000 U		**12000 D**	1000 U	**140**	1000 U	**4000 D**
PETROLEUM	PHC AS DIESEL FUEL	2000							**170 D**	**51**	**330**	**230**	**7100 D**	**6700 D**	**1600 D**	1000 U	1000 U		**11000 D**	1000 U	34 U	1000 U	**360 D**
PETROLEUM	PHC AS GASOLINE	30											30 U	30 U	30 U	30 U	30 U		30 U	30 U	30 U	30 U	30 U
PETROLEUM	TOTAL ALPHATIC		**320**	**270**	**2100 J**	**350**	**89**	**95 J**										**4600**	**78**				
PETROLEUM	TOTAL AROMATIC		**37**	**63**	**140**	**150 J**	**41**	**30 J**										**3**	**3700**				
PETROLEUM	HYDROCARBONS	2000	**357**	**333**	**2240**	**500**												**4603**	**3778**				
SVOCs	2,2'-OXYBIS(1-CHLORO)PROPANE	14.3							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U					.28 U	.096 U	.09 U	.072 UJK	.28 U
SVOCs	2,4,5-TRICHLOROPHENOL	8000							1.1 U	1.1 U	.9 U	.83 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	2,4,6-TRICHLOROPHENOL	90.9							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	2,4-DICHLOROPHENOL	240							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	2,4-DIMETHYLPHENOL	1600							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	2,4-DINITROPHENOL	160							1.1 UJ	1.1 UJ	.9 UJ	.83 U	.56 U	.142 U	.56 UJK	.32 UJK	.164 UJK		.56 U	.19 U	.18 U	.144 UJK	.56 U
SVOCs	2,4-DINITROTOLUENE	1.47							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	2,6-DINITROTOLUENE	1.47							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	2-CHLORONAPHTHALENE	6400							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	2-CHLOROPHENOL	400							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	2-NITROANILINE	3.5							1.1 U	1.1 U	.9 U	.83 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	2-NITROPHENOL								.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	3,3'-DICHLOROBENZIDINE	2.22							.43 U	.45 UJ	.36 UJ	.33 U	.28 U	.07 UJ	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	3-NITROANILINE								1.1 U	1.1 UJ	.9 UJ	.83 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	4,6-DINITRO-O-CRESOL								1.1 UJ	1.1 U	.9 U	.83 U	.28 U	.07 UJ	.28 UJK	.158 UJK	.082 UJK		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	4-BROMOPHENYL PHENYL ETHER								.43 U	.45 U	.36 U	.33 U	.28 U	.07 UJ	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	4-CHLOROPHENYL PHENYL ETHER								.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	4-METHYLPHENOL	400							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 UJK	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	4-NITROPHENOL	490							1.1 U	1.1 UJ	.9 UJ	.83 UJ	.28 U	.07 U	.28 UJK	.158 UJK	.082 UJK		.28 U	.096 U	.09 U	.072 UJK	.28 U
SVOCs	ACETOPHENONE	8000							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	ATRAZINE	4.55							.43 U	.45 U	.36 U	.33 U	.28 U	.07 UJ	.28 UJK	.158 UJK	.082 UJK		.28 U	.096 U	.09 U	.072 UJK	.28 U
SVOCs	BENZALDEHYDE	8000					**.026**	**.04**	.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 UJK	.158 UJK	.082 UJK		.28 U	**.13 J**	.09 U	**.078 J**	.28 U
SVOCs	BENZYL BUTYL PHTHALATE	16000							.43 U	.45 U	.36 U	.33 U	.28 U	.07 UJ	**2**	.158 U	.082 U		**1 J**	**.13 J**	**.092 J**	.072 U	**.47 J**
SVOCs	BIS(2-CHLOROETHOXY)METHANE								.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	0.909							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	71.4	.041 UJ	.07 UJ	.069 UJ	.084 UJ			**.21 J**	**.2 J**	**.41**	**.1 J**	**1.5**	**2.2 J**	**5.7**	**.29 J**	**.15 J**		**1.4 J**	**.24 J**	**.14 J**	**.2 J**	**.37 J**
SVOCs	CARBAZOLE	50	**.035**	.07 U	.069 U	.084 U			.43 U	.45 UJ	.36 UJ	.33 U	.28 U	.07 UJ	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	DIBENZOFURAN	290	**.013 JQ**	.07 U	.069 U	.084 U	**.0076 JQ**	.019 U	.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	DIBUTYL PHTHALATE	8000					.036 U	**.025 JQ**	.43 U	.45 U	.36 U	.33 U	.28 U	.07 UJ	.58 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	DIETHYL PHTHALATE	64000							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	DIMETHYL PHTHALATE	80000	.015 U	**.074**	**.017 JQ**	**.064 JQ**			.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	DI-N-OCTYL PHTHALATE	1600							.43 U	.45 U	.36 U	.33 U	.28 U	**.14 J**	.28 U	**.4 J**	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	HEXACHLOROBENZENE	0.625							.43 U	.45 U	.36 U	.33 U	.28 U	.07 UJ	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	480							.43 UJ	.45 U	.36 U	.33 U	.28 U	.07 U	.28 UJK	.158 UJK	.082 UJK		.28 U	.096 U	.09 U	.072 UJK	.28 U
SVOCs	HEXACHLOROETHANE	71.4							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	NITROBENZENE	40							.43 U	.45 U	.36 U	.33 UJ	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	N-NITROSODI-N-PROPYLAMINE	0.143							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U

SVOCs	N-NITROSODIPHENYLAMINE	204							.43 U	.45 U	.36 U	.33 U	.28 U	.07 UJ	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	O-CRESOL	4000							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 UJK	.158 U	.082 UJK		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	P-CHLOROANILINE	320							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	P-CHLORO-M-CRESOL								.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	PENTACHLOROPHENOL	8.33							1.1 U	1.1 UJ	.9 UJ	.83 UJ	.28 U	.07 UJ	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
SVOCs	PHENOL	48000							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
VOCs	1,1,1-TRICHLOROETHANE	2							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	1,1,2,2-TETRACHLOROETHANE	5							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	**.002 J**	.014 U	.011 U	.01 U
VOCs	1,1,2-TRICHLOROETHANE	17.5							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	1,1-DICHLOROETHANE	8000							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	1,1-DICHLOROETHYLENE	1.67							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	1,2,4-TRICHLOROBENZENE	800							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	(DBCP)	0.714							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 UJ	.014 UJ	.011 UJ	.01 U
VOCs	1,2-DICHLOROBENZENE	7200							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	1,2-DICHLOROETHANE	11							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	1,2-DICHLOROPROPANE	14.7							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	1,4-DICHLOROBENZENE	41.7							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	2-BUTANONE	48000					**.012 JQ**	**.008 Q**	.016 U	.01 U	**.11 D**	.012 U	.011 U	.011 U	.011 U	**.002 J**	**.009 J**		.011 U	.014 U	**.005 J**	.011 U	.01 U
VOCs	4-METHYL-2-PENTANONE	6400							.016 U	.01 U	.01 U	.012 U	.011 U	**.002 J**	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	ACETONE	8000	.012 U	.011 U	**.006 JQ**	.013 U	**.082**	**.041**	.016 U	.01 U	**.33 D**	**.11**	.011 U	**.081**	.011 U	.012 U	**.051**		.013 U	.015 U	.017 U	.011 U	.01 U
VOCs	BENZENE	0.03							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	BROMODICHLOROMETHANE	16.1							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	BROMOMETHANE	112							.016 U	.01 UJ	.01 UJ	.012 UJ	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 UJ	.014 UJ	.011 U	.01 U
VOCs	CARBON DISULFIDE	8000							.016 U	.01 U	**.003 J**	.012 U	.011 U	**.002 J**	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	CARBON TETRACHLORIDE	7.69							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	CFC-11	24000							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 UJ	.014 UJ	.011 U	.01 U
VOCs	CFC-12	16000							.016 UJ	.01 UJ	.01 UJ	.012 UJ	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 UJ	.01 U
VOCs	(FREON 113)	2400000							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	CHLOROBENZENE	1600							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	CHLORODIBROMOMETHANE	11.9							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	CHLOROETHANE	3							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 UJ	.014 UJ	.011 UJ	.01 U
VOCs	CHLOROFORM	164							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	CHLOROMETHANE	76.9							.016 UJ	.01 UJ	.01 UJ	.012 UJ	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	**.002 J**	**.002 J**	.011 U	.01 U
VOCs	CIS-1,2-DICHLOROETHENE	800							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	CIS-1,3-DICHLOROPROPENE								.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	CUMENE	8000							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	**.005 J**	.016 U		**.026**	.014 U	.014 U	.011 U	.01 U
VOCs	CYCLOHEXANE	140							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	DIBROMODIFLUOROMETHANE																						
VOCs	DICHLOROMETHANE	0.02	**.019**	**.024**	**.018**	**.021**			.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	ETHYLBENZENE	6							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	**.004 J**	.016 U		**.032**	.014 U	.014 U	.011 U	.01 U
VOCs	ETHYLENE DIBROMIDE	0.0069							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	HEXACHLORO-1,3-BUTADIENE	12.8							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
VOCs	ISOPHORONE	1050							.43 U	.45 U	.36 U	.33 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
VOCs	M-DICHLOROBENZENE	13							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	METHYL ACETATE	80000							.016 U	.01 U	.01 U	.012 U	.011 U	**.002 J**	**.002 J**	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	METHYL N-BUTYL KETONE								.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	METHYLCYLOHEXANE	2600							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	**.004 J**	.016 U		**.007 J**	.014 U	.014 U	.011 U	.01 U
VOCs	METHYL-tert-BUTYL ETHER	0.1							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	P-NITROANILINE		.015 U	.07 U	.069 U	.084 U			1.1 U	1.1 UJ	.9 UJ	.83 U	.28 U	.07 U	.28 U	.158 U	.082 U		.28 U	.096 U	.09 U	.072 U	.28 U
VOCs	STYRENE (MONOMER)	33.3							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	TETRACHLOROETHENE	0.05							.016 UJ	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	TOLUENE	7							**.016**	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	**.022**	.014 U	**.009 J**	.01 U

VOCs	TRANS-1,2-DICHLOROETHENE	1600							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	TRANS-1,3-DICHLOROPROPENE								.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	TRIBROMOMETHANE	127							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	TRICHLOROETHYLENE	0.03							.016 U	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	VINYL CHLORIDE	0.667							.016 UJ	.01 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.016 U		.011 U	.014 U	.014 U	.011 U	.01 U
VOCs	XYLENE (TOTAL)	9							.016 U	.01 U	.01 U	.012 U	.011 U	**.005 J**	.011 U	**.02**	**.002 J**		**.12**	.014 U	.014 U	.011 U	.01 U

Group	Analyte	Screening Level (mg/kg) Parcel: Sample Location: Depth (ft bgs):	N PN007 0-0.5	N PN007 2- 6	N PN007 6-10	N PN008 0-0.5	N PN009 0-0.5	N PN009 2-6	N PN009 6-10	N PN010 0-0.75	N PN010 2-6	N PN010 6-10	O P4-017 2-6	O PO001 0-0.5	O PO002 0- 0.5	O PO002 3-4	O PO002 8-9	O PO003 0-0.5	O PO003 2-6	O PO003 6-10	O PO004 0-0.5	O PO005 0-0.5	O PO006 0-0.5
BTEX	BENZENE	0.03	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
BTEX	ETHYLBENZENE	6	.011 U	.014 U	.016 U	.011 U	.01 U	**.001 J**	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
BTEX	TOLUENE	7	.011 U	**.016**	.016 U	**.019**	.01 U	**.034**	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	**.005 J**	.011 U	**.002 J**	.01 U	.011 U	.01 U
BTEX	XYLENE (TOTAL)	9	.011 U	.014 U	.016 U	.011 U	.01 U	**.006 J**	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	**.004 J**	.011 U	.012 UJ	.01 U	.011 U	.01 U
cPAHs	BENZO(A)ANTHRACENE	0.137	**.27 J+**	**.084 J**	.102 U	**.69**	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U	.0091 U		.0078 U	**.0086**	**.44 J**	**.055 J**	.041 U	.0071 U		.0071 U
cPAHs	BENZO(A)PYRENE	0.137	**.35 J**	**.1 J**	.102 U	**.75**	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U			.0078 U	.024 UJ	**.45 J**	**.056 J**	.041 U	.0071 U		**.0078**
cPAHs	BENZO(B)FLUORANTHENE	0.137	**.31 J**	.084 U	.102 U	**1.1**	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U			.0078 U	.039 UJ		**.089 J**	.041 U	**.0099**		**.0078**
cPAHs	BENZO(K)FLUORANTHENE	0.137	**.13 J**	.084 UJK	.102 UJK	.07 U	.07 UJK	.08 UJK	.076 UJK	.142 UJK	.074 UJK	.076 UJK	.55 U			.0078 U	.024 UJ		**.03 J**	.041 U	**.0064 J**		.0071 U
cPAHs	BENZOFLUORANTHENES (SUM)																						
cPAHs	CHRYSENE	0.137	**.37 J+**	**.16 J**	.102 U	**.81**	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	**.48 J**	.0091 U		.0078 U	**.028**	**.58 J**	**.11 J**	.041 U	**.0092**		.0071 U
cPAHs	DIBENZO(A,H)ANTHRACENE	0.137	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U			.0078 U	.0079 U		.04 U	.041 U	.0071 U		.0071 U
cPAHs	INDENO(1,2,3-CD)PYRENE	0.137	**.34 J**	.084 U	.102 U	**.65**	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U			.0078 U	.0079 U	**.23 J**	**.048 J**	.041 U	.0071 U		.0071 U
EPH	C10-C12 ALIPHATICS							**130**															
EPH	C10-C12 AROMATICS							**23**															
EPH	C12-C16 ALIPHATICS							**440**															
EPH	C12-C16 AROMATICS							**120**															
EPH	C16-C18 ALIPHATIC																						
EPH	C16-C21 AROMATICS							**120**															
EPH	C18-C21 ALIPHATIC																						
EPH	C18-C21 AROMATIC																						
EPH	C21-C28 ALIPHATICS																						
EPH	C21-C28 AROMATICS																						
EPH	C21-C34 ALIPHATICS							**96**															
EPH	C28-C36 ALIPHATICS																						
EPH	C28-C36 AROMATICS																						
EPH	C5-C6 ALIPHATICS							5 U															
EPH	C6-C8 ALIPHATICS							5 U															
EPH	C8-C10 ALIPHATICS							**22**															
EPH	C8-C10 AROMATICS							**20**															
EPH	TOTAL ALPHATIC							**810**															
EPH	TOTAL AROMATIC							**360**															
EPH	HYDROCARBONS	2000						**1170**															
METALS	ALUMINUM	76000	**8620**	**19300**	**14600**	**7770**	**10100**	**13500**	**10700**	**13000**	**12500**	**11000**	**21400**	**7740**	**8790**	**9300**	**9950**	**5360**	**8210**	**12200**	**12300**	**8640**	**18300**
METALS	ANTIMONY	32	**2.5 J**	**3.3 J**	**.57 J**	**.42 J**	.34 UJ	**1.2 J**	**.45 J**	**.79 J**	**.36 J**	**.65 J**	**6.3 J**	**3.4 J**	13.1 U	13.9 U	13.9 U	**4.4 J**	**.71 J**	**.55 J**	**.89 J**	**2.2 J**	**.88 J**
METALS	ARSENIC	20	**8.4**	**12.4**	**14.8**	**2.1**	**3.3**	**7.1**	**2.2**	**7.4**	**2.4**	**4.8**	**39.5**	**7**	**4.3**	**7.8**	**6.9**	**10.9**	**3.1 J**	**2.9 J**	**4.6**	**11.2**	**2.6 J**
METALS	BARIUM	5600	**86.2**	**944**	**235**	**65**	**67.4**	**385**	**52.4**	**288**	**111**	**70.7**	**1150**	**76**	**77.8**	**80.5**	**83.8**	**109**	**65.2**	**136**	**58**	**126**	**74.6**
METALS	BERYLLIUM	160	.21 U	**1**	.41 U	.09 U	.23 U	.64 U	.24 U	.64 U	.32 U	.15 U	**1**	**.17 J**	**.17 J**	**.16 J**	**.16 J**	**.14 J**	**.17 J**	**.29 J**	**.14 J**	**.19 J**	**.12 J**
METALS	CADMIUM	2	.08 U	**1.5**	**.77**	.09 U	.08 U	.09 U	.09 U	.41 U	.08 U	.09 U	.69 U	**2.4**	1.1 U	1.2 U	1.2 U	**.13 J**	1.2 U	1.4 U	1.1 U	**.14 J**	1.1 U
METALS	CALCIUM METAL		**18000**	**8840**	**4440**	**6820**	**5680**	**5710**	**3070**	**5860**	**19400**	**4270**	**16100**	**4580**	**14100**	**4380**	**4810**	**6270**	**3140**	**3960**	**8890**	**6620**	**12400**
METALS	CHROMIUM	2000	**146**	**29.5**	**31.4**	**60.6**	**24**	**25.6**	**34.5**	**44.3**	**289**	**42.7**	**45.7 J**	**22.5**	**26.2**	**29.4**	**29.7**	**498**	**20**	**32.5**	**33.8**	**142**	**20.3**
METALS	COBALT	4700	**9.6**	**7.7**	**5.6**	**5.3**	**6.4**	**6.1**	**7.1**	**6.7**	**5**	**7.6**	**10.6**	**7.1 J**	**14.2**	**12.2**	**11.8**	**29.6**	**7.6 J**	**8.6 J**	**19.7**	**18.2**	**24.8**
METALS	COPPER	2960	**363**	**215**	**34.5**	**21.8**	**21.2**	**62.2**	**15.6**	**71.5**	**21.2**	**23.9**	**89.9 J**	**25.9**	**70**	**15.7**	**25.9**	**261**	**18.5**	**24.8**	**157**	**175**	**96.8**

METALS	IRON	58700	72400	58500	22100	12900	15600	24300	16100	15600	19300	20400	31300 J	23200	24100	17400	18100	96600	10600	15300	40700	61700	26200
METALS	LEAD	250	14 J	1630 J	120 J	10.9 J	19.3 J	171 J	4.5 J	117 J	7.5 J	4.7 J	917 J	140	52.2	4.6	3.3	324	32.7	19.6	48.2	204 J	80.7 J
METALS	MAGNESIUM		7010	2380	2390	4400	4840	3080	4820	4030	5250	6660	5210 J	2920	8600	6090	6860	6430	3600	3570	12500	6280	7480
METALS	MANGANESE	11200	1830	369	208	519 J	293	273	264	378		315	451 J	245	367	409	459	1030	201	171	618	722	310
METALS	MERCURY	2	.04 U	.23	.06 U	.05 UJ	.04 U	.1	.04 U	.1	.07	.06	.47 J+	.19	.05 J	.1 J	.06 J	.12	.13 J	.09 J	.03 J	.15	.03 J
METALS	NICKEL	1600	99.9	34.1	31.7	20.6	26.2	27.9	34.9	30.6	24.8	43.5	32.3	23.8	31.1	47.3	46.8	70	26	27.2	23	56.1	30
METALS	POTASSIUM		592 J	910 J	668 J	753 J	892 J	780 J	1220 J	536 J	457 J	786 J	1480 J	761 J	570 J	1020 J	1090 J	454 J	444 J	598 J	570 J	983 J	496 J
METALS	SELENIUM	400	.74 U	.71 U	1.1 U	.62 U	.55 U	.65 U	.6 U	.57 U	1.8 U	.68 U	4.8 U	10 U	7.6 U	8.1 U	88.1 U	7.6 U	8.1 U	9.9 U	7.6 U	8.6 U	7.5 U
METALS	SILVER	400	.31	.48	.19	.11 U	.1 U	.22	.11 U	.21	.26	.12 U	1.4 UJ	2.8 U	2.2 U	2.3 U	2.3 U	2.2 U	2.3 UJ	2.8 UJ	2.2 U	2.4 U	2.2 U
METALS	SODIUM		397	1690	637	656 U	611	911	480	685	453	585	1020 J+	163 J	431 J	203 J	263 J	855 J	1150 U	1420 U	610 J	375 J	2690 J
METALS	THALLIUM	5.2											3.5 UJ	7.1 U	5.5 U	5.8 U	5.8 U	5.4 U	5.8 U	7.1 U	5.4 U	6.1 U	5.4 U
METALS	VANADIUM (FUME OR DUST)	560	38.5	80.1	42.7	27.2	31.1	52.1	37.6	49	88.3	46.1	94.6 J	25.9	51.7	39.4	37.2	39.2	28.7	47.7	107	49.3	48.1
METALS	ZINC	24000	52.9 J	2590 J	413 J	34.9	48.4 J	157 J	30.2 J	188 J	41.8 J	43 J	400	117	258	43.3	38.2	3370	46.8	44.8	228	588	60.4
PAHs	1,1'-BIPHENYL	4000	.072 U	.084 U	.102 U	.07 U	.07 U	.4 J	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
PAHs	2-METHYLNAPHTHALENE		.072 U	.11 J	.102 U	.07 U	.07 U	5	.076 U	.57 J	.074 U	.076 U	.55 U	.44 U	.37 U	.38 U	.38 U	.24 J	.13 J	.15 J	.35 U	.43 U	.35 U
PAHs	ACENAPHTHENE	4800	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
PAHs	ACENAPHTHYLENE		.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.065 J	.35 U	.43 U	.35 U
PAHs	ANTHRACENE	24000	.072 U	.084 U	.102 U	.13 J	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U	.0091 U	.53 U	.0078 U	.0079 U	.55 U	.04 U	.041 U	.0071 U	.024 U	.0071 U
PAHs	BENZO(A)ANTHRACENE	0.137	.27 J+	.084 J	.102 U	.69	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U	.0091 U		.0078 U	.0086	.44 J	.055 J	.041 U	.0071 U		.0071 U
PAHs	BENZO(A)PYRENE	0.137	.35 J	.1 J	.102 U	.75	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U			.0078 U	.024 UJ	.45 J	.056 J	.041 U	.0071 U		.0078
PAHs	BENZO(B)FLUORANTHENE	0.137	.31 J	.084 U	.102 U	1.1	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U			.0078 U	.039 UJ		.089 J	.041 U	.0099		.0078
PAHs	BENZO(GHI)PERYLENE		.42	.097 J	.102 U	.59	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U			.0078 U	.016 UJ	.55 J	.13 J	.053 UJ	.014 UJ		.0071 U
PAHs	BENZO(K)FLUORANTHENE	0.137	.13 J	.084 UJK	.102 UJK	.07 U	.07 UJK	.08 UJK	.076 UJK	.142 UJK	.074 UJK	.076 UJK	.55 U			.0078 U	.024 UJ		.03 J	.041 U	.0064 J		.0071 U
PAHs	BENZOFLUORANTHENES (SUM)																						
PAHs	CHRYSENE	0.137	.37 J+	.16 J	.102 U	.81	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.48 J	.0091 U		.0078 U	.028	.58 J	.11 J	.041 U	.0092		.0071 U
PAHs	DIBENZO(A,H)ANTHRACENE	0.137	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U			.0078 U	.0079 U		.04 U	.041 U	.0071 U		.0071 U
PAHs	FLUORANTHENE	3200	.4	.13 J	.102 U	1.5	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	1	.0091 U	.53 U	.0078 U	.034	.32 J	.047 J	.041 U	.011	.076	.0086
PAHs	FLUORENE	3200	.072 U	.084 U	.102 U	.07 U	.07 U	.43	.076 U	.142 U	.074 U	.076 U	.55 U	.44 U	.37 UJ	.38 U	.38 U	.73 UJ	.38 U	.39 U	.35 UJ	.43 UJ	.35 UJ
PAHs	INDENO(1,2,3-CD)PYRENE	0.137	.34 J	.084 U	.102 U	.65	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.55 U			.0078 U	.0079 U	.23 J	.048 J	.041 U	.0071 U		.0071 U
PAHs	NAPHTHALENE	5	.072 U	.095 J	.102 U	.07 U	.07 U	1.4	.076 U	.23 J	.074 U	.076 U	.55 U	.44 U	.37 U	.38 U	.38 U	.73 U	.039 J	.082 J	.35 U	.43 U	.35 U
PAHs	PHENANTHRENE		.38	.15 J	.102 U	.91	.07 U	.49	.076 U	.142 U	.074 U	.076 U	.63	.0091 U	.53 U	.0078 U	.013	.25 J	.047 J	.041 U	.0071 U	.044	.0071 U
PAHs	PYRENE	2400	1.1 J+	.18 J	.102 U	1.4	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	.72	.0091 U	.18 J	.0078 U	.022	.88	.085 J	.071 J	.0099	.09	.011
PEST/PCBs	METHOXPHENYL)-ETHANE	400	.018 U	.023 U	.027 U	.018 U	.018 U	.02 U	.019 U	.018 U	.019 U	.02 U		.022 U	.019 U	.02 U	.02 U	.095 U	.019 U	.02 U	.018 U	.022 U	.018 U
PEST/PCBs	4,4'-DDD	4.17	.0035 U	.0045 U	.0053 U	.0035 U	.0034 U	.004 U	.0038 U	.0035 U	.0037 U	.0038 U		.0043 U	.0036 U	.0039 U	.0039 U	.025 JN	.0037 U	.004 U	.0035 U	.0042 U	.0035 U
PEST/PCBs	4,4'-DDE	2.94	.0035 U	.0045 U	.0053 U	.0035 U	.0013 J	.004 U	.0038 U	.0035 U	.0037 U	.0038 U		.0043 U	.0036 U	.0039 U	.0039 U	.018 U	.0037 U	.004 U	.0035 U	.0042 U	.0035 U
PEST/PCBs	4,4'-DDT	3	.0023 J	.0033 J	.0053 U	.0031 J	.0099	.004 U	.0038 U	.0035 U	.0037 U	.0038 U		.0043 U	.0036 U	.0039 U	.0039 U	.018 U	.0037 U	.004 U	.0035 U	.007 JN	.0035 U
PEST/PCBs	ALDRIN	0.0588	.0018 U	.0023 U	.0027 U	.0018 U	.0018 U	.0021 U	.0019 U	.0018 U	.0019 U	.002 U		.0022 U	.0019 U	.002 U	.002 U	.0094 U	.0019 U	.002 U	.0018 U	.0022 U	.0018 U
PEST/PCBs	ALPHA-BHC	0.159	.0018 U	.0023 U	.0027 U	.00079 J	.0018 U	.0021 U	.0019 U	.0018 U	.0019 U	.002 U		.0022 U	.0019 U	.002 U	.002 U	.0094 U	.0019 UJ	.002 UJ	.0018 U	.0022 U	.0018 U
PEST/PCBs	AROCLOR-1016	5.6	.035 U	.045 U	.053 U	.035 U	.034 U	.04 U	.038 U	.035 U	.037 U	.038 U		.043 U	.036 U	.039 U	.039 U	.18 U	.037 U	.04 U	.035 U	.042 U	.035 U
PEST/PCBs	AROCLOR-1221	0.22	.071 U	.092 U	.11 U	.071 U	.07 U	.081 U	.076 U	.071 U	.074 U	.078 U		.088 U	.074 U	.078 U	.078 U	.37 U	.076 U	.08 U	.07 U	.086 U	.071 U
PEST/PCBs	AROCLOR-1232	0.22	.035 U	.045 U	.053 U	.035 U	.034 U	.04 U	.038 U	.035 U	.037 U	.038 U		.043 U	.036 U	.039 U	.039 U	.18 U	.037 U	.04 U	.035 U	.042 U	.035 U
PEST/PCBs	AROCLOR-1242	0.22	.035 U	.045 U	.053 U	.035 U	.034 U	.04 U	.038 U	.035 U	.037 U	.038 U		.043 U	.036 U	.039 U	.039 U	.18 U	.037 U	.04 U	.035 U	.042 U	.035 U
PEST/PCBs	AROCLOR-1248	0.22	.035 U	.045 U	.053 U	.035 U	.034 U	.04 U	.038 U	.035 U	.037 U	.038 U		.043 U	.036 U	.039 U	.039 U	.63 U	.037 U	.04 U	.035 U	.042 U	.035 U
PEST/PCBs	AROCLOR-1254	1.6	.035 U	.045 U	.053 U	.035 U	.034 U	.04 U	.038 U	.035 U	.037 U	.038 U		.17 U	.036 U	.039 U	.039 U	.18 U	.037 U	.04 U	.035 U	.042 U	.035 U
PEST/PCBs	AROCLOR-1260	0.22	.035 U	.045 U	.053 U	.035 U	.034 U	.04 U	.038 U	.035 U	.037 U	.038 U		.043 U	.036 U	.039 U	.039 U	.18 U	.12	.04 U	.035 U	.14 U	.035 U
PEST/PCBs	BETA-BHC	0.556	.0018 U	.0023 U	.0027 U	.0018 U	.0018 U	.0021 U	.0019 U	.0018 U	.0019 U	.002 U		.0022 U	.0019 U	.002 U	.002 U	.0094 U	.0019 U	.002 U	.0018 U	.0022 U	.0018 U
PEST/PCBs	CAMPHECHLOR	0.909	.18 U	.23 U	.27 U	.18 U	.18 U	.2 U	.19 U	.18 U	.19 U	.2 U		.22 U	.19 U	.2 U	.2 U	.94 U	.19 U	.2 U	.18 U	.22 U	.18 U
PEST/PCBs	CAPROLACTAM	40000	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 UJ	.38 U	.39 U	.35 UJ	.43 UJ	.35 UJ
PEST/PCBs	CHLORDANE, ALPHA	2.86	.0018 U	.0023 U	.0027 U	.0028	.017	.0021 U	.0019 U	.0018 U	.0019 U	.002 U		.0022 U	.0019 U	.002 U	.002 U	.16	.0019 U	.002 U	.0018 U	.0022 U	.0018 U
PEST/PCBs	CHLORDANE, GAMMA	2.86	.0018 U	.00059 J	.0027 U	.0024	.013	.0021 U	.0019 U	.0018 U	.0019 U	.002 U		.0051 JN	.0019 U	.002 U	.002 U	.016 JN	.0019 U	.002 U	.0018 U	.0022 U	.0018 U
PEST/PCBs	DELTA-BHC		.0018 U	.0023 U	.0027 U	.0018 U	.0018 U	.0021 U	.0019 U	.0018 U	.0019 U	.002 U		.0022 U	.0031 U	.002 U	.002 U	.0094 U	.0019 UJ	.002 UJ	.0018 U	.0022 U	.0018 U
PEST/PCBs	DIELDRIN	0.0625	.0035 U	.0045 U	.0053 U	.0035 U	.0034 U	.004 U	.0038 U	.0035 U	.0037 U	.0038 U		.0043 U	.0036 U	.0039 U	.0039 U	.018 U	.0037 U	.004 U	.0035 U	.0042 U	.0035 U

PEST/PCBs	ENDOSULFAN I	480	.0018 U	.0023 U	.0027 U	.0018 U	.0018 U	.0021 U	.0019 U	.0018 U	.0019 U	.002 U		**.0027 JN**	.0019 U	.002 U	.002 U	**.025 JN**	.0019 U	.002 U	.0018 U	**.0064**	.0018 U
PEST/PCBs	ENDOSULFAN II	480	.0035 U	.0045 U	.0053 U	.0035 U	.0034 U	.004 U	.0038 U	.0035 U	.0037 U	.0038 U		.0043 U	.0036 U	.0039 U	.0039 U	**.021 JN**	.0037 U	.004 U	.0035 U	.0042 U	.0035 U
PEST/PCBs	ENDOSULFAN SULFATE	480	.0035 U	.0045 U	.0053 U	.0035 U	.0034 U	.004 U	.0038 U	.0035 U	.0037 U	.0038 U		.0043 U	.0036 U	.0039 U	.0039 U	.018 U	**.0085 JN**	.004 U	.0035 U	.0042 U	.0035 U
PEST/PCBs	ENDRIN	24	.0035 U	.0045 U	.0053 U	.0035 U	.0034 U	.004 U	.0038 U	.0035 U	.0037 U	.0038 U		.0043 U	.0036 U	.0039 U	.0039 U	.018 U	.0037 U	.004 U	.0035 U	.0042 U	.0035 U
PEST/PCBs	ENDRIN ALDEHYDE		**.0019 J**	.0045 U	.0053 U	.0035 U	.0034 U	.004 U	.0038 U	.0035 U	.0037 U	.0038 U		.0043 U	**.006 JN**	.0039 U	.0039 U	.023 U	.0037 U	.004 U	.0035 U	.0083 U	.0035 U
PEST/PCBs	ENDRIN KETONE		.0035 U	.0045 U	.0053 U	.0035 U	.0034 U	.004 U	.0038 U	.0035 U	.0037 U	.0038 U		.014 U	.0045 U	.0039 U	.0039 U	.018 U	.0037 U	.004 U	.0035 U	.0042 U	.0035 U
PEST/PCBs	GAMMA-BHC (LINDANE)	0.01	.0018 U	.0023 U	.0027 U	.0018 U	.0018 U	.0021 U	.0019 U	.0018 U	.0019 U	.002 U		.0022 U	.0019 U	.002 U	.002 U	.0094 U	.0019 UJ	.002 UJ	.0018 U	.0022 U	.0018 U
PEST/PCBs	HEPTACHLOR	0.222	.0018 U	.0023 U	.0027 U	.0018 U	.0018 U	.0021 U	.0019 U	.0018 U	.0019 U	.002 U		.0022 U	**.0053**	.002 U	.002 U	**.46**	.0019 U	.002 U	.0018 U	.0022 U	.0018 U
PEST/PCBs	HEPTACHLOR EPOXIDE	0.11	.0018 U	.0023 U	.0027 U	**.00053 J**	**.0032**	**.0018 J**	.0019 U	.0018 U	.0019 U	.002 U		.0022 U	.0019 U	.002 U	.002 U	.0094 U	.0019 U	.002 U	.0018 U	.0022 U	.0018 U
PETROLEUM	HYDROCARBONS	2000	**7400 D**	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	**2000 DJ**	930 UJ	32000 UJ	10 U	10 U	32000 UJ	700 UJ	1000 UJ	110 UJ	570 UJ	64 UJ
PETROLEUM	PHC AS DIESEL FUEL	2000	**3700 D**	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	**3600 DJ**	230 UJ	13000 UJ	5 U	5 U	83000 UJ	250 UJ	320 UJ	38 UJ	110 UJ	22 UJ
PETROLEUM	PHC AS GASOLINE	30	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U		6.8 U	5.4 U	5.9 U	6.1 U	**34**	5.7 U	5.9 U	5.4 U	7.4 U	5.4 U
PETROLEUM	TOTAL ALPHATIC							**810**															
PETROLEUM	TOTAL AROMATIC							**360**															
PETROLEUM	HYDROCARBONS	2000						**1170**															
SVOCs	2,2'-OXYBIS(1-CHLORO)PROPANE	14.3				.07 UJK							2.2 UJ	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	2,4,5-TRICHLOROPHENOL	8000	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	5.5 U	1.1 U	.93 UJ	.96 U	.96 U	1.8 U	.95 U	.98 U	.87 U	1.1 U	.88 U
SVOCs	2,4,6-TRICHLOROPHENOL	90.9	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	2,4-DICHLOROPHENOL	240	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	2,4-DIMETHYLPHENOL	1600	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 UJ	.38 U	.39 U	.35 UJ	.43 UJ	.35 UJ
SVOCs	2,4-DINITROPHENOL	160	.144 UJK	.168 UJK	.2 UJK	.14 UJK	.138 UJK	.16 UJK	.154 UJK	.28 UJK	.148 UJK	.154 UJK	5.5 U	1.1 UJ	.93 UJ	.96 U	.96 U	1.8 U	.95 U	.98 U	.87 U	1.1 U	.88 U
SVOCs	2,4-DINITROTOLUENE	1.47	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	2,6-DINITROTOLUENE	1.47	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	2-CHLORONAPHTHALENE	6400	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	2-CHLOROPHENOL	400	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 UJK	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	2-NITROANILINE	3.5	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	5.5 U	1.1 U	.93 UJ	.96 U	.96 U	1.8 U	.95 U	.98 U	.87 U	1.1 U	.88 U
SVOCs	2-NITROPHENOL		.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	3,3'-DICHLOROBENZIDINE	2.22	.072 UJK	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 UJ		.38 UJ	.38 UJ		.38 U	.39 U	.35 UJ		.35 UJ
SVOCs	3-NITROANILINE		.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	5.5 U	1.1 U	.93 UJ	.96 U	.96 U	1.8 UJ	.95 U	.98 U	.87 UJ	1.1 UJ	.88 UJ
SVOCs	4,6-DINITRO-O-CRESOL		.072 UJK	.084 UJK	.102 UJK	.07 U	.07 UJK	.08 UJK	.076 UJK	.142 UJK	.074 UJK	.076 UJK	5.5 U	.44 U	.93 UJ	.96 U	.96 U	1.8 UJ	.95 U	.98 U	.87 U	1.1 U	.88 U
SVOCs	4-BROMOPHENYL PHENYL ETHER		.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 UJ	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	4-CHLOROPHENYL PHENYL ETHER		.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	4-METHYLPHENOL	400	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	4-NITROPHENOL	490	.072 UJK	.084 UJK	.102 UJK	.07 UJK	.07 UJK	.08 UJK	.076 UJK	.142 UJK	.074 UJK	.076 UJK	5.5 U	1.1 U	.93 UJ	.96 U	.96 U	1.8 U	.95 U	.98 U	.87 U	1.1 U	.88 U
SVOCs	ACETOPHENONE	8000	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 U	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	ATRAZINE	4.55	.072 UJK	.084 UJK	.102 UJK	.07 UJK	.07 UJK	.08 UJK	.076 UJK	.142 UJK	.074 UJK	.076 UJK	2.2 U	.44 UJ	.37 UJ	.38 U	.38 U	.73 UJ	.38 U	.39 U	.35 UJ	.43 UJ	.35 UJ
SVOCs	BENZALDEHYDE	8000	.072 UJK	**.18 J**	**.12 JK**	.07 U	.07 UJK	.08 UJK	.076 UJK	.142 UJK	.074 UJK	.076 UJK	2.2 U	**.077 J**	.37 U	.38 UJ	.38 UJ	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	BENZYL BUTYL PHTHALATE	16000	.072 UJK	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	**.11 J**	2.2 U	.44 UJ		.38 U	.38 U		.38 U	.39 U	.35 U	**.073 J**	.35 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE		.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 U	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	0.909	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 U	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	71.4	**.68 J+**	**.13 J**	.102 U	**.25 J**	.07 U	.08 U	**.17 J**	.142 U	.074 U	**.19 J**	2.2 U	**.47 J**	**4.6 J**	.38 U	.38 U	**.82 J**	.38 U	**.11 J**	.35 U	.43 UJ	.35 UJ
SVOCs	CARBAZOLE	50	.072 U	.084 U	.102 U	**.081 J**	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 UJ	.44 UJ	.37 UJ	.38 U	.38 U	.73 UJ	.38 U	.39 U	.35 UJ	.43 UJ	.35 UJ
SVOCs	DIBENZOFURAN	290	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	DIBUTYL PHTHALATE	8000	.072 U	.58 U	.58 U	.07 U	.58 U	.08 U	.58 U	.142 U	.074 U	.58 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	**.15 J**	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	DIETHYL PHTHALATE	64000	.072 U	**.11 J**	**.12 J**	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 UJ	.38 U	.39 U	.35 UJ	.43 UJ	.35 UJ
SVOCs	DIMETHYL PHTHALATE	80000	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	DI-N-OCTYL PHTHALATE	1600	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U			.38 U	.38 U		.38 U	.39 U	.35 U		.35 U
SVOCs	HEXACHLOROBENZENE	0.625	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 UJ	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	480	.072 UJK	.084 UJK	.102 UJK	.07 UJK	.07 UJK	.08 UJK	.076 UJK	.142 UJK	.074 UJK	.076 UJK	2.2 UJ	.44 U	.37 UJ	.38 UJ	.38 UJ	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	HEXACHLOROETHANE	71.4	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 U	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	NITROBENZENE	40	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 U	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	N-NITROSODI-N-PROPYLAMINE	0.143	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 U	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U

SVOCs	N-NITROSODIPHENYLAMINE	204	.072 U	.084 U	.102 U	.07 U	.07 U	**1.3**	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 UJ	.38 U	.39 U	.35 UJ	.43 UJ	.35 UJ
SVOCs	O-CRESOL	4000	.072 UJK	.084 UJK	.102 UJK	.07 U	.07 UJK	.08 UJK	.076 U	.142 UJK	.074 UJK	.076 UJK	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	P-CHLOROANILINE	320	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U			.38 UJ	.38 UJ		.38 U	.39 U			
SVOCs	P-CHLORO-M-CRESOL		.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
SVOCs	PENTACHLOROPHENOL	8.33	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	5.5 UJ	1.1 U	.93 UJ	.96 U	.96 U	1.8 UJ	.95 U	.98 U	.87 U	1.1 U	.88 U
SVOCs	PHENOL	48000	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 UJ	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
VOCs	1,1,1-TRICHLOROETHANE	2	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 UJ	.011 UJ	.012 UJ	.011 U	.011 UJ	.011 U	.012 UJ	.01 UJ	.011 UJ	.01 UJ
VOCs	1,1,2,2-TETRACHLOROETHANE	5	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	1,1,2-TRICHLOROETHANE	17.5	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	1,1-DICHLOROETHANE	8000	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	1,1-DICHLOROETHYLENE	1.67	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	1,2,4-TRICHLOROBENZENE	800	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 UJ	.012 UJ	.01 U	.011 U	.01 U
VOCs	(DBCP)	0.714	.011 UJ	.014 UJ	.016 UJ	.011 UJ	.01 UJ	.012 UJ	.011 UJ	.011 UJ	.011 UJ	.012 UJ	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	1,2-DICHLOROBENZENE	7200	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	1,2-DICHLOROETHANE	11	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	1,2-DICHLOROPROPANE	14.7	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	1,4-DICHLOROBENZENE	41.7	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	2-BUTANONE	48000	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 UJ	.012 UJ	.01 U	.011 U	.01 U
VOCs	4-METHYL-2-PENTANONE	6400	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 UJ	.011 UJ	.012 UJ	.011 U	.011 UJ	.011 U	.012 UJ	.01 UJ	.011 UJ	.01 UJ
VOCs	ACETONE	8000	.011 U	.014 U	.018 U	.011 U	.01 U	.027 U	.011 U	.011 U	.011 U	.012 U	.009 UJB	.013 U	.011 U	.012 U	.011 U	**.02 J**	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	BENZENE	0.03	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	BROMODICHLOROMETHANE	16.1	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	BROMOMETHANE	112	.011 UJ	.014 UJ	.016 UJ	.011 U	.01 UJ	.012 UJ	.011 UJ	.011 UJ	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	CARBON DISULFIDE	8000	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	CARBON TETRACHLORIDE	7.69	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 UJ	.011 UJ	.012 UJ	.011 U	.011 UJ	.011 U	.012 UJ	.01 UJ	.011 UJ	.01 UJ
VOCs	CFC-11	24000	.011 UJ	.014 UJ	.016 UJ	.011 U	.01 UJ	.012 UJ	.011 UJ	.011 UJ	.011 U	.012 U	.012 U	.013 UJ	.011 UJ	.012 UJ	.011 U	.011 UJ	.011 U	.012 UJ	.01 UJ	.011 UJ	.01 UJ
VOCs	CFC-12	16000	.011 U	.014 U	.016 U	.011 UJ	.01 U	.012 U	.011 U	.011 U	.011 UJ	.012 UJ	**.035 J**										
VOCs	(FREON 113)	2400000	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 UJ	.011 UJ	.012 UJ	.011 U	.011 UJ	.011 U	.012 UJ	.01 UJ	.011 UJ	.01 UJ
VOCs	CHLOROBENZENE	1600	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	CHLORODIBROMOMETHANE	11.9	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	CHLOROETHANE	3	.011 UJ	.014 UJ	.016 UJ	.011 UJ	.01 UJ	.012 UJ	.011 UJ	.011 UJ	.011 UJ	.012 UJ	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	CHLOROFORM	164	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	CHLOROMETHANE	76.9	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	CIS-1,2-DICHLOROETHENE	800	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	CIS-1,3-DICHLOROPROPENE		.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	CUMENE	8000	.011 U	.014 U	.016 U	.011 U	.01 U	**.001 J**	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	CYCLOHEXANE	140	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	DIBROMODIFLUOROMETHANE													.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	DICHLOROMETHANE	0.02	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	**.008 J**		.01 U	.011 U	.01 U
VOCs	ETHYLBENZENE	6	.011 U	.014 U	.016 U	.011 U	.01 U	**.001 J**	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	ETHYLENE DIBROMIDE	0.0069	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	HEXACHLORO-1,3-BUTADIENE	12.8	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 U	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
VOCs	ISOPHORONE	1050	.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	2.2 U	.44 U	.37 U	.38 U	.38 U	.73 U	.38 U	.39 U	.35 U	.43 U	.35 U
VOCs	M-DICHLOROBENZENE	13	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	METHYL ACETATE	80000	**.001 J**	.014 U	**.002 J**	.011 U	.01 U	.012 U	.011 U	**.001 J**	**.001 J**	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	METHYL N-BUTYL KETONE		.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 UJ	.011 UJ	.012 UJ	.011 U	.011 UJ	.011 U	.012 UJ	.01 UJ	.011 UJ	.01 UJ
VOCs	METHYLCYLOHEXANE	2600	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	METHYL-tert-BUTYL ETHER	0.1	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	P-NITROANILINE		.072 U	.084 U	.102 U	.07 U	.07 U	.08 U	.076 U	.142 U	.074 U	.076 U	5.5 U	1.1 UJ	.93 UJ	.96 U	.96 U	1.8 U	.95 U	.98 U	.87 U	1.1 U	.88 U
VOCs	STYRENE (MONOMER)	33.3	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	TETRACHLOROETHENE	0.05	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	TOLUENE	7	.011 U	**.016**	.016 U	**.019**	.01 U	**.034**	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	**.005 J**	.011 U	**.002 J**	.01 U	.011 U	.01 U

VOCs	TRANS-1,2-DICHLOROETHENE	1600	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	TRANS-1,3-DICHLOROPROPENE		.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	TRIBROMOMETHANE	127	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	TRICHLOROETHYLENE	0.03	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	VINYL CHLORIDE	0.667	.011 U	.014 U	.016 U	.011 U	.01 U	.012 U	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	.011 UJ	.011 U	.012 UJ	.01 U	.011 U	.01 U
VOCs	XYLENE (TOTAL)	9	.011 U	.014 U	.016 U	.011 U	.01 U	**.006 J**	.011 U	.011 U	.011 U	.012 U	.012 U	.013 U	.011 U	.012 U	.011 U	**.004 J**	.011 U	.012 UJ	.01 U	.011 U	.01 U

Group	Analyte	Screening Level (mg/kg) Parcel: Sample Location: Depth (ft bgs):	0 P0006 2- 6	0 P0006 6- 10	0 P0007 0-0.5	0 P0007 2- 6	0 P0007 6- 10	P PP001 0-0.17	P PP001 2- 6	P PP001 6- 10	P PP002 0-0.5	P PP002 2- 6	P PP002 6- 10	P PP003 0-0.5	P PP003 2- 6	P PP003 6- 10	P PP004 0-0.5	P PP005 0-0.5	P PP006 0-0.5	P PP007 0-0.5	P PP007 2- 6	P PP007 6- 10	P PP008 0-0.5
BTEX	BENZENE	0.03	.011 U		.011 U			**.001 J**	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
BTEX	ETHYLBENZENE	6	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
BTEX	TOLUENE	7	.011 U	**.002 J**	.011 U	**.01 J**	**.004 J**	**.038**	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	**.009 J**	.01 U
BTEX	XYLENE (TOTAL)	9	.011 U	.018 U	.011 U	.011 U	.015 U	**.004 J**	.011 U	.014 U	.01 U	.012 U	.014 U	**.001 J**	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
cPAHs	BENZO(A)ANTHRACENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.28 J**	**.23 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
cPAHs	BENZO(A)PYRENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.29 J**	**.24 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
cPAHs	BENZO(B)FLUORANTHENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.26 J**	**.33 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
cPAHs	BENZO(K)FLUORANTHENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.23 J**	**.18 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 UJK	.074 U	.074 U	.068 UJK
cPAHs	BENZOFLUORANTHENES (SUM)																						
cPAHs	CHRYSENE	0.137	**.0074**	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.32 J**	**.32 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	**.083 J**	.068 U
cPAHs	DIBENZO(A,H)ANTHRACENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
cPAHs	INDENO(1,2,3-CD)PYRENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.16 J**	**.2 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
EPH	C10-C12 ALIPHATICS																**10**						
EPH	C10-C12 AROMATICS																5 U						
EPH	C12-C16 ALIPHATICS																**380**						
EPH	C12-C16 AROMATICS																**40**						
EPH	C16-C18 ALIPHATIC																						
EPH	C16-C21 AROMATICS																**1100**						
EPH	C18-C21 ALIPHATIC																						
EPH	C18-C21 AROMATIC																						
EPH	C21-C28 ALIPHATICS																						
EPH	C21-C28 AROMATICS																						
EPH	C21-C34 ALIPHATICS																**3500**						
EPH	C28-C36 ALIPHATICS																						
EPH	C28-C36 AROMATICS																						
EPH	C5-C6 ALIPHATICS																5 U						
EPH	C6-C8 ALIPHATICS																5 U						
EPH	C8-C10 ALIPHATICS																5 U						
EPH	C8-C10 AROMATICS																5 U						
EPH	TOTAL ALPHATIC																**10000**						
EPH	TOTAL AROMATIC																**4600**						
EPH	HYDROCARBONS	2000																					
METALS	ALUMINUM	76000	**7470**	**12700**	**9680**	**10800**	**13000**	**11300**	**10600**	**12700**	**9880**	**10400**	**12700**	**7960**	**11600**	**13700**	**10900**	**9780**	**9420**	**12400**	**10500**	**12900**	**10100**
METALS	ANTIMONY	32	**.76 J**	**.77 J**	14 U	13.6 U	15.6 U	**.68 J**	**1.2 J**	.45 UJ	**.79 J**	**1.1 J**	.48 UJ	.87 U	**.44 J**	.51 UJ	**.73 J**	**.53 J**	**2.5 J**	**.36 J**	.69 U	.37 UJ	**.83 J**
METALS	ARSENIC	20	**3.2 J**	**2.5 J**	**1.2 J**	**3.9**	**3.3 J**	**2.7**	**7.1**	**6.1**	**46.1**	**8.3**	**4.2**	**4.5**	**4.6**	**6.2**	**4.4**	**10.6**	**8.7**	**3.5**	**6.5**	**1.9**	**2.2**
METALS	BARIUM	5600	**44.1**	**146**	**23.4 J**	**77.3**	**136**	**58.4**	**124**	**92.3**	**71.7**	**250**	**113**	**80.8**	**83.2**	**56.2**	**98.8**	**85.1**	**68.8**	**59.3**	**68.8**	**58.2**	**64.1**
METALS	BERYLLIUM	160	**.13 J**	**.37 J**	**.21 J**	**.22 J**	**.3 J**	**.18**	**.14**	**.26**	**.17**	**.26**	**.23**	**.19**	**.2**	**.23**	**.22**	**.21**	**.2**	.16 U	**.18**	**.22**	.19 U
METALS	CADMIUM	2	1.1 U	1.5 U	1.2 U	1.1 U	1.3 U	.08 U	**.23**	**.23**	.08 U	.51 U	.11 U	.08 U	.09 U	.12 U	.09 U	**.24**	**.08**	.08 U	.1 U	.09 U	.08 U
METALS	CALCIUM METAL		**5990**	**2930**	**17600**	**4200**	**2640**	**10800**	**3250**	**4540**	**9750**	**7630**	**3710**	**16700**	**3410**	**3450**	**6680**	**3430**	**4620**	**6090**	**4010**	**3270**	**2380**
METALS	CHROMIUM	2000	**27.6**	**28.2**	**29.8**	**23.9**	**30.6**	**34.5 J**	**28.3 J**	**31.5 J**	**29.5 J**	**26**	**30.3 J**	**19**	**25.1 J**	**41.9 J**	**23.3 J**	**23.6 J**	**18.7 J**	**26.3**	**25.1**	**24.6**	**22.7**
METALS	COBALT	4700	**8.2 J**	**5.7 J**	**28.5**	**11.7**	**7.1 J**	**15.6**	**7.7**	**9.2**	**7.9**	**5.8**	**5.9**	**6.7**	**5.1**	**6.8**	**5.4**	**5.9**	**6.8**	**9.2**	**6.7**	**6.5**	**6.6**
METALS	COPPER	2960	**19.1**	**31.8**	**97.1**	**26.3**	**14.2**	**96.5**	**44.6**	**35.4**	**42.6**	**39.7**	**19.5**	**36.1**	**13.1**	**15.6**	**27.4**	**32.8**	**40.3**	**45.7**	**18.6**	**18.5**	**16.9**

METALS	IRON	58700	**11700**	**7340**	**39200**	**16100**	**9340**	**29600**	**21600**	**20600**	**23700**	**13200**	**12300**	**14200**	**13000**	**17600**	**13800**	**14400**	**15800**	**18300**	**15200**	**15600**	**12700**
METALS	LEAD	250	**80.9**	**5.5**	**42.3 J**	**14.2**	**11.8**	**55.1 J**	**81.8 J**	**309 J**	**57.6 J**	**330 J**	**36.7 J**	**17.3 J**	**17.4 J**	**3.7 J**	**83 J**	**86.6 J**	**62.3 J**	**34.3 J**	**11.7 J**	**12.5 J**	**19 J**
METALS	MAGNESIUM		**4220**	**2400**	**15700**	**5410**	**2650**	**10400**	**4260**	**4890**	**5370**	**3370**	**3430**	**4900**	**3280**	**4430**	**3810**	**3770**	**4540**	**7010**	**4790**	**4310**	**3940**
METALS	MANGANESE	11200	**289**	**145**	**738**	**363**	**253**	**367 J**	**231 J**	**255 J**	**368 J**	**251**	**210 J**	**213**	**179 J**	**190 J**	**232 J**	**265 J**	**309 J**	**306**	**272**	**209**	**315**
METALS	MERCURY	2	**.04 J**	**.05 J**	**.05 J**	**.04 J**	.13 U	**.08**	**.09**	**.1**	.05 U	**.18**	**.17**	.05 U	**.05**	.06 U	**.06**	**.13**	**.06**	**.07**	.05 U	.04 U	**.04**
METALS	NICKEL	1600	**25.5**	**29.5**	**44.1**	**32**	**20.6**	**36.3**	**40.8**	**34.4**	**28.5**	**29.7**	**24.7**	**20.9**	**27.3**	**37.5**	**25.9**	**30.3**	**21.5**	**37**	**32.7**	**27.5**	**31**
METALS	POTASSIUM		**296 J**	**325 J**	**240 J**	**563 J**	**567 J**	**518**	**518**	**431**	**758**	**595 J**	**451**	**560 J**	**390**	**596**	**365**	**429**	**447**	**771 J**	**603 J**	**467 J**	**433 J**
METALS	SELENIUM	400	7.6 U	10.4 U	8.2 U	7.9 U	9.1 U	.57 UJ	.6 UJ	.73 UJ	.53 UJ	1.1 U	.78 UJ	.58 U	.66 UJ	.84 UJ	.59 UJ	.57 UJ	.54 UJ	.65 U	.88 U	.88 U	.56 U
METALS	SILVER	400	2.2 UJ	3 UJ	2.3 U	2.3 UJ	2.6 UJ	.1 U	.11 U	.13 U	.1 U	**.23**	.14 U	**.17**	.12 U	.15 U	.11 U	.1 U	.1 U	.1 U	.12 U	.11 U	.1 U
METALS	SODIUM		**132 J**	1490 U	**658 J**	**271 J**	**86.7 J**	**1200 J**	**456 J**	**617 J**	**624 J**	**601 J**	**569 J**	**688**	**452 J**	**533 J**	**530 J**	**415 J**	**740 J**	**1270**	**586 J**	**724 J**	**357**
METALS	THALLIUM	5.2	5.4 U	7.4 U	**1.9 J**	5.6 U	6.5 U																
METALS	VANADIUM (FUME OR DUST)	560	**30.7**	**29.5**	**72.4**	**37.9**	**31**	**63.5**	**45.8**	**44.9**	**33.9**	**38.6**	**33.8**	**35.8**	**33.1**	**46.8**	**33.2**	**32.8**	**37.8**	**44.3**	**33.8**	**38.3**	**27.4**
METALS	ZINC	24000	**36.5**	**19**	**97.9**	**37.9**	**34.4**	**144**	**169**	**133**	**108**	**195**	**45.2**	**141 J**	**61.8**	**30.2**	**229**	**113**	**84.7**	**58.8 J**	**37.5**	**31.1**	**48 J**
PAHs	1,1'-BIPHENYL	4000	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	2-METHYLNAPHTHALENE		.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	**.17 J**	.084 U	.068 U	**.25 J**	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	ACENAPHTHENE	4800	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	**.11 J**	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	ACENAPHTHYLENE		.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	ANTHRACENE	24000	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.18 J**	**.12 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	BENZO(A)ANTHRACENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.28 J**	**.23 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	BENZO(A)PYRENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.29 J**	**.24 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	BENZO(B)FLUORANTHENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.26 J**	**.33 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	BENZO(GHI)PERYLENE		.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.19 J**	**.25 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	**.12 J**	.068 U
PAHs	BENZO(K)FLUORANTHENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.23 J**	**.18 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 UJK	.074 U	.074 U	.068 UJK
PAHs	BENZOFLUORANTHENES (SUM)																						
PAHs	CHRYSENE	0.137	**.0074**	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.32 J**	**.32 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	**.083 J**	.068 U
PAHs	DIBENZO(A,H)ANTHRACENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	FLUORANTHENE	3200	**.012**	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.71**	**.52**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	**.08 J**	.07 U	.28 U	.074 U	**.099 J**	.068 U
PAHs	FLUORENE	3200	.35 U	.59 U	.38 UJ	.37 U	.48 U	.068 U	.076 U	.084 U	**.091 J**	**.091 J**	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	INDENO(1,2,3-CD)PYRENE	0.137	.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.16 J**	**.2 J**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	NAPHTHALENE	5	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	**.078 J**	.084 U	.068 U	**.23 J**	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	PHENANTHRENE		.0074 U	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	**.12 J**	.084 U	**.72**	**.52**	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PAHs	PYRENE	2400	**.013**	.0096 U	.0077 U	.0082 U	.0092 U	.068 U	.076 U	.084 U	**.71**	**.58**	.086 U	**.91 J**	.078 U	.076 U	**.86 J+**	**.09 J**	**.072 J**	.28 U	.074 U	**.13 J**	.068 U
PEST/PCBs	METHOXPHENYL)-ETHANE	400	.018 U	.03 U	.02 U	.019 U	.024 U	.017 UJ	.019 UJ	.023 UJ	.018 U	.021 UJ	.023 UJ	.018 UJ	.019 UJ	.019 UJ		.018 U	.018 U	.018 U	.019 U	.02 U	.018 U
PEST/PCBs	4,4'-DDD	4.17	.0035 U	.0058 U	.0038 U	.0037 U	.0047 U	.0034 U	.0038 U	.0045 U	**.0019 J**	**.01**	**.0018 J**	.0035 UJ	.0038 U	.0038 U		**.021**	.0034 U	.0035 U	.0037 U	.0039 U	.0034 U
PEST/PCBs	4,4'-DDE	2.94	.0035 U	.0058 U	.0038 U	.0037 U	.0047 U	.0034 U	.0038 U	.0045 U	**.0015 J**	**.0014 J**	.0045 U	.0035 UJ	.0038 U	.0038 U	**.0092 J**	**.16**	**.005**	**.0042**	**.0014 J**	.0039 U	.0034 U
PEST/PCBs	4,4'-DDT	3	.0035 U	.0058 U	.0038 U	.0037 U	.0047 U	**.002 J**	**.0051 J**	.0045 UJ	**.018**	.004 UJ	.0045 UJ	.0035 UJ	.0038 UJ	.0038 UJ		**.17**	.0034 U	**.012**	**.0036 J**	.0039 U	**.0019 J**
PEST/PCBs	ALDRIN	0.0588	.0018 U	.003 U	.002 U	.0019 U	.0024 U	.0017 U	.0019 U	.0023 U	.0018 U	.0021 U	.0023 U	.0018 UJ	.0019 U	.0019 U	**.0023 J**	.0018 U	.0018 U	.0018 U	.0019 U	.002 U	.0018 U
PEST/PCBs	ALPHA-BHC	0.159	.0018 U	.003 U	.002 U	.0019 U	.0024 U	.0017 U	.0019 U	.0023 U	.0018 U	.0021 U	.0023 U	.0018 UJ	**.00049 J**	.0019 U		.0018 U	.0018 U	.0018 U	.0019 U	.002 U	.0018 U
PEST/PCBs	AROCLOR-1016	5.6	.035 U	.058 U	.038 U	.037 U	.047 U	.034 U	.038 U	.045 U	.034 U	.04 U	.045 U	.035 UJ	.038 U	.038 U		.035 U	.034 U	.035 U	.037 U	.039 U	.034 U
PEST/PCBs	AROCLOR-1221	0.22	.071 U	.12 U	.077 U	.076 U	.963 U	.068 U	.076 U	.092 U	.069 U	.082 U	.091 U	.071 UJ	.076 U	.076 U		.071 U	.07 U	.071 U	.074 U	.079 U	.069 U
PEST/PCBs	AROCLOR-1232	0.22	.035 U	.058 U	.038 U	.037 U	.047 U	.034 U	.038 U	.045 U	.034 U	.04 U	.045 U	.035 UJ	.038 U	.038 U		.035 U	.034 U	.035 U	.037 U	.039 U	.034 U
PEST/PCBs	AROCLOR-1242	0.22	.035 U	.058 U	.038 U	.037 U	.047 U	.034 U	.038 U	.045 U	.034 U	.04 U	.045 U	.035 UJ	.038 U	.038 U		.035 U	.034 U	.035 U	.037 U	.039 U	.034 U
PEST/PCBs	AROCLOR-1248	0.22	.035 U	.058 U	.038 U	.037 U	.047 U	.034 U	.038 U	.045 U	.034 U	.04 U	.045 U	.035 UJ	.038 U	.038 U		.035 U	.034 U	.035 U	.037 U	.039 U	.034 U
PEST/PCBs	AROCLOR-1254	1.6	.035 U	.058 U	.038 U	.037 U	.047 U	.034 U	.038 U	.045 U	.034 U	.04 U	.045 U	.035 UJ	.038 U	.038 U		.035 U	.034 U	.035 U	.037 U	.039 U	.034 U
PEST/PCBs	AROCLOR-1260	0.22	.035 U	.058 U	.038 U	.037 U	.047 U	.034 U	.038 U	.045 U	.034 U	.04 U	.045 U	.035 UJ	.038 U	.038 U		.035 U	**.041**	.035 U	.037 U	.039 U	.034 U
PEST/PCBs	BETA-BHC	0.556	.0018 U	.003 U	.002 U	.0019 U	.0024 U	.0017 U	.0019 U	.0023 U	**.00086 J**	**.001 J**	.0023 U	.0018 UJ	.0019 U	.0019 U		.0018 U	**.00053 J**	.0018 U	.0019 U	.002 U	.0018 U
PEST/PCBs	CAMPHECHLOR	0.909	.18 U	.3 U	.2 U	.19 U	.24 U	.17 U	.19 U	.23 U	.18 U	.21 U	.23 U	.18 UJ	.19 U	.19 U		.18 U	.18 U	.18 U	.19 U	.2 U	.18 U
PEST/PCBs	CAPROLACTAM	40000	.35 U	.59 U	.38 UJ	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
PEST/PCBs	CHLORDANE, ALPHA	2.86	.0018 U	.003 U	.002 U	.0019 U	.0024 U	.0017 U	.0019 U	.0023 U	**.0031**	.0021 U	.0023 U	.0018 UJ	.0019 U	.0019 U	**.0034 J**	**.0031**	**.00075 J**	.0018 U	.0019 U	.002 U	.0018 U
PEST/PCBs	CHLORDANE, GAMMA	2.86	.0018 U	.003 U	.002 U	.0019 U	.0024 U	.0017 U	.0019 U	.0023 U	**.0024**	**.0005 J**	.0023 U	**.00083 J**	.0019 U	.0019 U	**.002 J**	**.0014 J**	**.0021**	.0018 U	.0019 U	.002 U	**.00068 J**
PEST/PCBs	DELTA-BHC		.0018 U	.003 U	.002 U	.0019 U	.0024 U	.0017 U	.0019 U	.0023 U	.0018 U	.0021 U	.0023 U	.0018 UJ	**.0018 J**	.0019 U	**.0018 J**	.0018 U	.0018 U	.0018 U	.0019 U	.002 U	.0018 U
PEST/PCBs	DIELDRIN	0.0625	.0035 U	.0058 U	.0038 U	.0037 U	.0047 U	.0034 U	.0038 U	**.0019 J**	**.0027 J**	.004 U	.0045 U	**.0035 J**	.0038 U	.0038 U	**.0022 J**	.0035 U	**.013**	.0035 U	**.0016 J**	.0039 U	.0034 U

PEST/PCBs	ENDOSULFAN I	480	.0018 U	.003 U	.002 U	.0019 U	.0024 U	.0017 U	.0019 U	.0023 U	.0018 U	.0021 U	.0023 U	.0018 UJ	.0019 U	.0019 U		.0018 U	.0018 U	.0018 U	.0019 U	.002 U	.0018 U
PEST/PCBs	ENDOSULFAN II	480	.0035 U	.0058 U	.0038 U	.0037 U	.0047 U	.0034 U	.0038 U	.0045 U	.0034 U	.004 U	.0045 U	.0035 UJ	.0038 U	.0038 U	**.0035 J**	.0035 U	.0034 U	.0035 U	.0037 U	.0039 U	.0034 U
PEST/PCBs	ENDOSULFAN SULFATE	480	.0035 U	.0058 U	.0038 U	.0037 U	.0047 U	.0034 U	.0038 U	.0045 U	**.0012 J**	.004 U	.0045 U	.0035 UJ	.0038 U	.0038 U	**.0015 J**	.0035 U	.0034 U	.0035 U	.0037 U	.0039 U	.0034 U
PEST/PCBs	ENDRIN	24	.0035 U	.0058 U	.0038 U	.0037 U	.0047 U	.0034 U	.0038 U	.0045 U	.0034 U	.004 U	.0045 U	.0035 UJ	.0038 U	.0038 U		.0035 U	.0034 U	.0035 U	.0037 U	.0039 U	.0034 U
PEST/PCBs	ENDRIN ALDEHYDE		.0035 U	.0058 U	.0038 U	.0037 U	.0047 U	.0034 U	.0038 U	.0045 U	.0034 U	.004 U	.0045 U	.0035 UJ	.0038 U	.0038 U		.0035 U	.0034 U	.0035 U	.0037 U	.0039 U	.0034 U
PEST/PCBs	ENDRIN KETONE		.0035 U	.0058 U	.0038 U	.0037 U	.0047 U	.0034 U	.0038 U	.0045 U	.0034 U	.004 U	.0045 U	.0035 UJ	.0038 U	.0038 U		.0035 U	.0034 U	.0035 U	.0037 U	.0039 U	.0034 U
PEST/PCBs	GAMMA-BHC (LINDANE)	0.01	.0018 U	.003 U	.002 U	.0019 U	.0024 U	.0017 U	.0019 U	.0023 U	.0018 U	.0021 U	.0023 U	**.0016 J**	.0019 U	.0019 U	**.002 J**	.0018 U	.0018 U	.0018 U	.0019 U	.002 U	.0018 U
PEST/PCBs	HEPTACHLOR	0.222	.0018 U	.003 U	.002 U	.0019 U	.0024 U	.0017 U	.0019 U	.0023 U	.0018 U	.0021 U	.0023 U	**.0037 J**	.0019 U	.0019 U	**.0046 J**	.0018 U	.0018 U	.0018 U	.0019 U	.002 U	.0018 U
PEST/PCBs	HEPTACHLOR EPOXIDE	0.11	.0018 U	.003 U	.002 U	.0019 U	.0024 U	.0017 U	.0019 U	.0023 U	.0018 U	.0021 U	.0023 U	.0018 UJ	.0019 U	.0019 U		**.00064 J**	.0018 U	.0018 U	.0019 U	.002 U	**.00097 J**
PETROLEUM	HYDROCARBONS	2000	15 UJ	10 U	35 UJ	17 UJ	18 UJ	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	**70000 D**	1000 U		**52000 D**	1000 U	1000 U	1500 U	1000 U	1000 U	1000 U
PETROLEUM	PHC AS DIESEL FUEL	2000	5 U	5 U	9.2 UJ	9 UJ	6.6 UJ	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	**22000 D**	1000 U		**15000 D**	1000 U	1000 U	500 U	1000 U	1000 U	1000 U
PETROLEUM	PHC AS GASOLINE	30	5.5 U	6 U		5.9 U	9.3 U	30 U	30 U	30 U	30 U	30 U	30 U	**20**	30 U		**12**	30 U	30 U	30 U	30 U	30 U	30 U
PETROLEUM	TOTAL ALPHATIC																**10000**						
PETROLEUM	TOTAL AROMATIC																**4600**						
PETROLEUM	HYDROCARBONS	2000																					
SVOCs	2,2'-OXYBIS(1-CHLORO)PROPANE	14.3	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U			.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U		.074 UJK	.074 UJK	
SVOCs	2,4,5-TRICHLOROPHENOL	8000	.88 U	1.5 U	.96 U	.92 U	1.2 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U		.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	2,4,6-TRICHLOROPHENOL	90.9	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U		.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	2,4-DICHLOROPHENOL	240	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U		.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	2,4-DIMETHYLPHENOL	1600	.35 U	.59 U	.38 UJ	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	**.11 J**	.52 U	.078 U	.076 U		.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	2,4-DINITROPHENOL	160	.88 U	1.5 U	.96 U	.92 U	1.2 U	.136 U	.154 U	.168 U	.138 UJK	.166 UJK	.17 U	1.04 U	.156 U	.154 U		.138 U	.138 U	.56 UJK	.15 UJK	.15 UJK	.138 UJK
SVOCs	2,4-DINITROTOLUENE	1.47	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	2,6-DINITROTOLUENE	1.47	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	2-CHLORONAPHTHALENE	6400	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	2-CHLOROPHENOL	400	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U		.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	2-NITROANILINE	3.5	.88 U	1.5 U	.96 U	.92 U	1.2 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	2-NITROPHENOL		.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U		.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	3,3'-DICHLOROBENZIDINE	2.22	.35 U	.59 U	.38 UJ	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	3-NITROANILINE		.88 U	1.5 U	.96 UJ	.92 U	1.2 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	4,6-DINITRO-O-CRESOL		.88 U	1.5 U	.96 U	.92 U	1.2 U	.068 U	.076 U	.084 U	.068 UJK	.084 UJK	.086 U	.52 UJ+	.078 U	.076 U		.07 U	.07 U	.28 UJK	.074 U	.074 U	.068 UJK
SVOCs	4-BROMOPHENYL PHENYL ETHER		.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	4-CHLOROPHENYL PHENYL ETHER		.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	4-METHYLPHENOL	400	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	**.14 J**	.52 U	.078 U	.076 U		.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	4-NITROPHENOL	490	.88 U	1.5 U	.96 U	.92 U	1.2 U	.068 U	.076 U	.084 U	.068 UJK	.084 UJK	.086 U	.52 U	.078 U	.076 U		.07 U	.07 U	.28 UJK	.074 UJK	.074 UJK	.068 UJK
SVOCs	ACETOPHENONE	8000	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	ATRAZINE	4.55	.35 UJ	.59 UJ	.38 UJ	.37 UJ	.48 UJ	.068 U	.076 U	.084 U	.068 UJK	.084 UJK	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 UJK	.074 UJK	.074 UJK	.068 UJK
SVOCs	BENZALDEHYDE	8000	.35 UJ	.59 UJ	.38 U	.37 UJ	.48 UJ	.068 U	.076 U	.084 U	.068 UJK	**.11 JK**	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 UJK	.074 U	.074 U	.068 UJK
SVOCs	BENZYL BUTYL PHTHALATE	16000	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	**.16 J**	.084 U	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	BIS(2-CHLOROETHOXY)METHANE		.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	BIS(2-CHLOROETHYL)ETHER	0.909	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	71.4	.35 U	.59 UJ	.38 U	.37 U	.48 U	**.24 J**	**.092 J**	.084 U	**.13 J**	.084 U	.086 U	**8.3 J**	.078 U	**.24 J**	**4.8 J+**	**.16 J**	**.11 J**	.28 U	**.079 J**	**.28 J**	.068 U
SVOCs	CARBAZOLE	50	.35 U	.59 U	.38 UJ	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	DIBENZOFURAN	290	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	DIBUTYL PHTHALATE	8000	.35 U	.59 U	.38 U	.37 U	.48 U	**.1 J**	.076 U	.084 U	.068 U	.084 U	.086 U	**2.9 J**	.078 U	.076 U	**.6 J+**	**.83**	.07 U	.58 U	.074 U	**.41**	.58 U
SVOCs	DIETHYL PHTHALATE	64000	.35 U	.59 U	.38 UJ	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	DIMETHYL PHTHALATE	80000	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	DI-N-OCTYL PHTHALATE	1600	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	HEXACHLOROBENZENE	0.625	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	HEXACHLOROCYCLOPENTADIENE	480	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 UJK	.084 UJK	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 UJK	.074 UJK	.074 UJK	.068 U
SVOCs	HEXACHLOROETHANE	71.4	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	NITROBENZENE	40	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	N-NITROSODI-N-PROPYLAMINE	0.143	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U

SVOCs	N-NITROSODIPHENYLAMINE	204	.35 U	.59 U	.38 UJ	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 UJ	.078 U	.076 U	.138 UJ+	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	O-CRESOL	4000	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 UJK	.084 UJ	.086 U	.52 U	.078 U	.076 U		.07 U	.07 U	.28 UJK	.074 U	.074 U	.068 UJK
SVOCs	P-CHLOROANILINE	320						.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	P-CHLORO-M-CRESOL		.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U		.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	PENTACHLOROPHENOL	8.33	.88 U	1.5 U	.96 U	.92 U	1.2 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 UJ	.078 U	.076 U		.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
SVOCs	PHENOL	48000	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U		.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
VOCs	1,1,1-TRICHLOROETHANE	2	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	1,1,2,2-TETRACHLOROETHANE	5	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	1,1,2-TRICHLOROETHANE	17.5	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	1,1-DICHLOROETHANE	8000	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	1,1-DICHLOROETHYLENE	1.67	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	1,2,4-TRICHLOROBENZENE	800	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	**.008 J**	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	(DBCP)	0.714	.011 U		.011 U			.01 U	.011 U	.014 U	.01 UJ	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 UJ	.011 UJ	.01 UJ	.011 UJ	.011 UJ	.012 UJ	.01 UJ
VOCs	1,2-DICHLOROBENZENE	7200	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	**.002 J**	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	1,2-DICHLOROETHANE	11	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	1,2-DICHLOROPROPANE	14.7	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	1,4-DICHLOROBENZENE	41.7	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	**.001 J**	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	2-BUTANONE	48000	.011 UJ		.011 U			.01 U	.011 U	.014 U	.01 U	**.037**	.014 U	**.008 J**	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	4-METHYL-2-PENTANONE	6400	.011 UJ		.011 U			**.001 J**	.011 U	.014 U	.01 U	.012 U	.014 U	**.007 J**	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	ACETONE	8000	.011 U		.011 U			.016 U	.011 U	.014 U	.01 U	**.13**	.016 U	.025 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	BENZENE	0.03	.011 U		.011 U			**.001 J**	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	BROMODICHLOROMETHANE	16.1	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	BROMOMETHANE	112	.011 U		.011 U			.01 U	.011 U	.014 U	.01 UJ	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 U	.011 U	.01 U	.011 UJ	.011 U	.012 U	.01 UJ
VOCs	CARBON DISULFIDE	8000	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	**.004 J**	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	CARBON TETRACHLORIDE	7.69	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	CFC-11	24000	.011 U	.018 U	.011 U	.011 U	.015 UJ	.01 U	.011 U	.014 U	.01 UJ	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 U	.011 U	.01 U	.011 UJ	.011 U	.012 U	.01 UJ
VOCs	CFC-12	16000						.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 UJ	.011 UJ	.01 UJ	.011 U	.011 UJ	.012 UJ	.01 U
VOCs	(FREON 113)	2400000	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	CHLOROBENZENE	1600	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	CHLORODIBROMOMETHANE	11.9	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	CHLOROETHANE	3	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 UJ	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 U	.011 U	.01 U	.011 UJ	.011 UJ	.012 UJ	.01 UJ
VOCs	CHLOROFORM	164	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	**.001 J**	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	CHLOROMETHANE	76.9	.011 UJ	.018 UJ	.011 U	.011 UJ	.015 U	.01 U	.011 U	.014 U	**.002 J**	.012 U	.014 U	**.05**	.011 U	.011 U	**.001 J**	.011 UJ	.01 UJ	.011 U	.011 U	.012 U	.01 U
VOCs	CIS-1,2-DICHLOROETHENE	800	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	CIS-1,3-DICHLOROPROPENE		.011 U	.018 U	.011 U	.011 U	.015 UJ	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	CUMENE	8000	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	CYCLOHEXANE	140	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	DIBROMODIFLUOROMETHANE		.011 U	.018 U	.011 U	.011 U	.015 U																
VOCs	DICHLOROMETHANE	0.02	.011 U	.018 U	.011 U	.028 U	.024 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	ETHYLBENZENE	6	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	ETHYLENE DIBROMIDE	0.0069	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	HEXACHLORO-1,3-BUTADIENE	12.8	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 UJK
VOCs	ISOPHORONE	1050	.35 U	.59 U	.38 U	.37 U	.48 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
VOCs	M-DICHLOROBENZENE	13	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	**.001 J**	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	METHYL ACETATE	80000	.011 U	.018 U	.011 U	.011 U	.015 U	**.003 J**	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	**.001 J**	.011 U	.011 U	.012 U	.01 U
VOCs	METHYL N-BUTYL KETONE		.011 UJ		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	**.006 J**	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	METHYLCYLOHEXANE	2600	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	METHYL-tert-BUTYL ETHER	0.1	.011 U	.018 U	.011 U	.011 U	.015 UJ	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	P-NITROANILINE		.88 U	1.5 U	.96 U	.92 U	1.2 U	.068 U	.076 U	.084 U	.068 U	.084 U	.086 U	.52 U	.078 U	.076 U	.138 U	.07 U	.07 U	.28 U	.074 U	.074 U	.068 U
VOCs	STYRENE (MONOMER)	33.3	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 UJ	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	TETRACHLOROETHENE	0.05	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	**.008 J**	.011 U	.011 U	**.001 J**	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	TOLUENE	7	.011 U	**.002 J**	.011 U	**.01 J**	**.004 J**	**.038**	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	**.009 J**	.01 U

VOCs	TRANS-1,2-DICHLOROETHENE	1600	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	TRANS-1,3-DICHLOROPROPENE		.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	TRIBROMOMETHANE	127	.011 U		.011 U			.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	TRICHLOROETHYLENE	0.03	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 U	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U
VOCs	VINYL CHLORIDE	0.667	.011 U	.018 U	.011 U	.011 U	.015 U	.01 U	.011 U	.014 U	.01 U	.012 U	.014 U	.011 U	.011 U	.011 U	.01 UJ	.011 UJ	.01 UJ	.011 U	.011 U	.012 U	.01 U
VOCs	XYLENE (TOTAL)	9	.011 U	.018 U	.011 U	.011 U	.015 U	**.004 J**	.011 U	.014 U	.01 U	.012 U	.014 U	**.001 J**	.011 U	.011 U	.01 UJ	.011 U	.01 U	.011 U	.011 U	.012 U	.01 U

Group	Analyte	Screening Level (mg/kg) Parcel: Sample Location: Depth (ft bgs):	P PP008 2- 6	P PP008 6- 10	P PP009 0-0.5	P PP010 0-0.5	P PP011 0-0.5	P PP012 0-0.75	P PP012 2- 6	P PP012 6- 10	GG P4-013 2- 6	GG P4-013 6- 10	GG P4-016 2- 6	GG SS54 0- 0.5	GG SS55 0-0.5
BTEX	BENZENE	0.03	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
BTEX	ETHYLBENZENE	6	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
BTEX	TOLUENE	7	.011 U	**.027**	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	**.015**	.01 U	.01 U		
BTEX	XYLENE (TOTAL)	9	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
cPAHs	BENZO(A)ANTHRACENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	**.23**	.091 U	**.0079**	**.011**
cPAHs	BENZO(A)PYRENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	**.21**	.091 U	**.021**	**.03**
cPAHs	BENZO(B)FLUORANTHENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	**.17**	.091 U		
cPAHs	BENZO(K)FLUORANTHENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 UJK	.078 UJ	.074 UJ	.42 U	**.27**	.091 U		
cPAHs	BENZOFLUORANTHENES (SUM)													**.031**	**.043**
cPAHs	CHRYSENE	0.137	.07 U	.068 U	.068 U	.07 U	**.069 J**	.072 U	.078 U	.074 U	.42 U	**.25**	.091 U	**.012**	**.026**
cPAHs	DIBENZO(A,H)ANTHRACENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.091 U		
cPAHs	INDENO(1,2,3-CD)PYRENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.091 U	.0027 U	**.018**
EPH	C10-C12 ALIPHATICS			5 U											
EPH	C10-C12 AROMATICS			5 U											
EPH	C12-C16 ALIPHATICS			5 U											
EPH	C12-C16 AROMATICS			5 U											
EPH	C16-C18 ALIPHATIC														
EPH	C16-C21 AROMATICS			5 U											
EPH	C18-C21 ALIPHATIC													**6.3**	6.3 U
EPH	C18-C21 AROMATIC														
EPH	C21-C28 ALIPHATICS													**40 J**	**44 J**
EPH	C21-C28 AROMATICS													**8.8**	**10**
EPH	C21-C34 ALIPHATICS			5 U											
EPH	C28-C36 ALIPHATICS													**52 J**	**96 J**
EPH	C28-C36 AROMATICS													**8.3**	**12**
EPH	C5-C6 ALIPHATICS			5 U											
EPH	C6-C8 ALIPHATICS			5 U											
EPH	C8-C10 ALIPHATICS			5 U											
EPH	C8-C10 AROMATICS			5 U											
EPH	TOTAL ALPHATIC			**68**										**99 J**	**140 J**
EPH	TOTAL AROMATIC			10 U										**17**	**22**
EPH	HYDROCARBONS	2000												**116**	**162**
METALS	ALUMINUM	76000	**8040**	**9160**	**9550**	**11400**	**8350**	**13700**	**13600**	**11800**	**14600**	**11000**	**11100**	**8510**	**8380**
METALS	ANTIMONY	32	.35 UJ	.34 UJ	.34 UJ	.35 UJ	**.93 J**	.35 UJ	.36 UJ	.38 UJ	**4 J**	**7.5**	6.5 U		
METALS	ARSENIC	20	**1.6**	**1.8**	**2.7**	**4.3**	**5.8**	**4.5**	**4.4**	**5.6**	**14**	**22.8**	**3.5**	**2.9**	**3.8**
METALS	BARIUM	5600	**42.8**	**60.8**	**189**	**74.8**	**133**	**88.5**	**80.9**	**62.8**	**909**	**530**	**79.1**	**44.8**	**49.9**
METALS	BERYLLIUM	160	.08 U	**.13**	.08 U	**.22**	**.19**	.22 U	.28 U	.21 U	**.51 J**	**.42 J**	**.21 J**		
METALS	CADMIUM	2	.08 U	.08 U	**.13**	.08 U	**.08**	.08 U	.08 U	.09 U	.61 U	**6.7**	.54 U		
METALS	CALCIUM METAL		**2190**	**2580**	**2690**	**2470**	**4590**	**4040**	**3350**	**4320**	**5760**	**5030**	**3650**	**3610**	**3630**
METALS	CHROMIUM	2000	**19.6**	**25.5**	**21.3 J**	**20.8 J**	**36.3 J**	**33**	**33.1**	**32.4**	**27.6 J**	**111 J**	**25 J**	**18.2**	**20.7**
METALS	COBALT	4700	**5.2**	**6**	**4.7**	**5.7**	**6.6**	**8.1**	**7.4**	**7.7**	**10.4**	**17.1**	**8.7**	**7.6 JB**	**7.6 JB**
METALS	COPPER	2960	**11.4**	**14.6**	**14.2**	**19**	**35.8**	**26.5**	**20.8**	**28.7**	**62.7 J**	**607 J**	**22.5 J**	**30.1**	**26.4**

METALS	IRON	58700	**10700**	**12900**	**11300**	**13300**	**15600**	**17700**	**18000**	**19700**	**51600 J**	**94200 J**	**15900 J**	**15500**	**15100**
METALS	LEAD	250	**7.8 J**	**10.6 J**	**685 J**	**103 J**	**103 J**	**51.4 J**	**24.5 J**	**17.9 J**	**353 J**	**455 J**	**16.3 J**	**8.8**	**22.9**
METALS	MAGNESIUM		**4230**	**4210**	**3410**	**4080**	**3750**	**5110**	**4990**	**5090**	**3730 J**	**2230 J**	**4890 J**	**4880**	**5000**
METALS	MANGANESE	11200	**221 J**	**292**	**179 J**	**251 J**	**326 J**	**341**	**287**	**305**	**388 J**	**632 J**	**325 J**	**244**	**264**
METALS	MERCURY	2	.05 UJ	.04 U	**.39**	**.1**	**.06**	**.08**	**.07**	**.05**	.12 U	**.19 J+**	**.068 J**		
METALS	NICKEL	1600	**27.7**	**32.8**	**25.7**	**27.5**	**29.2**	**35.8**	**32.5**	**32**	**34.4**	**73.3**	**36.6**	**22.5**	**24.7**
METALS	POTASSIUM		**404 J**	**516 J**	**247**	**657**	**498**	**728 J**	**693 J**	**754 J**	**1170 J**	**581 J**	**633 J**	**705 JB**	**684 JB**
METALS	SELENIUM	400	.58 U	.56 U	.56 UJ	.58 UJ	.56 UJ	.58 U	.59 U	.63 U	**2.4 J**	**3 J**	3.8 U		
METALS	SILVER	400	.1 U	.1 U	.1 U	**.12**	.1 U	.1 U	.11 U	.11 U	1.2 UJ	1.2 UJ	1.1 UJ		
METALS	SODIUM		415 U	**407 J**	**303 J**	**786 J**	**764 J**	**566**	**511**	**966**	**595 J**	**386 J**	**130 J**	**316 JB**	**303 JB**
METALS	THALLIUM	5.2									3 UJ	3.1 UJ	2.7 UJ	**1.4 JB**	**2 JB**
METALS	VANADIUM (FUME OR DUST)	560	**25.5**	**29.3**	**24.3**	**30.2**	**37.9**	**39.7**	**41.2**	**44.3**	**49.4 J**	**65.6 J**	**34.8 J**	**29.5**	**29.4**
METALS	ZINC	24000	**26.7**	**32.5**	**169**	**88.2**	**123**	**72.8 J**	**60.7 J**	**46.2 J**	**545**	**2010**	**85.6**	**40.5**	**56.4**
PAHs	1,1'-BIPHENYL	4000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
PAHs	2-METHYLNAPHTHALENE		.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.091 U	**.0024 JQ**	**.0058**
PAHs	ACENAPHTHENE	4800	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.091 U	.0027 U	**.002 JQ**
PAHs	ACENAPHTHYLENE		.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.091 U	**.0041**	**.01**
PAHs	ANTHRACENE	24000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.091 U	**.0043**	**.013**
PAHs	BENZO(A)ANTHRACENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	**.23**	.091 U	**.0079**	**.011**
PAHs	BENZO(A)PYRENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	**.21**	.091 U	**.021**	**.03**
PAHs	BENZO(B)FLUORANTHENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	**.17**	.091 U		
PAHs	BENZO(GHI)PERYLENE		.07 U	.068 U	**.072 J**	.07 U	.07 U	**.091 J**	.078 U	.074 U	.42 U	.45 U	.091 U		
PAHs	BENZO(K)FLUORANTHENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 UJK	.078 UJ	.074 UJ	.42 U	**.27**	.091 U		
PAHs	BENZOFLUORANTHENES (SUM)													**.031**	**.043**
PAHs	CHRYSENE	0.137	.07 U	.068 U	.068 U	.07 U	**.069 J**	.072 U	.078 U	.074 U	.42 U	**.25**	.091 U	**.012**	**.026**
PAHs	DIBENZO(A,H)ANTHRACENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.091 U		
PAHs	FLUORANTHENE	3200	.07 U	.068 U	**.077 J**	.07 U	**.09 J**	.072 U	.078 U	.074 U	.42 U	**.49**	.091 U	**.02**	**.041**
PAHs	FLUORENE	3200	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.091 U	**.0014 JQ**	**.0041**
PAHs	INDENO(1,2,3-CD)PYRENE	0.137	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.091 U	.0027 U	**.018**
PAHs	NAPHTHALENE	5	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.091 U	**.0043**	**.01**
PAHs	PHENANTHRENE		.07 U	.068 U	.068 U	.07 U	**.074 J**	.072 U	.078 U	.074 U	.42 U	**.12**	.091 U	**.01**	**.027**
PAHs	PYRENE	2400	.07 U	.068 U	**.11 J**	.07 U	**.11 J**	**.072 J**	.078 U	.074 U	.42 U	**.46**	.091 U	**.019**	**.039**
PEST/PCBs	METHOXPHENYL)-ETHANE	400	.019 U	.018 U	.018 U	.018 U	.018 U	.018 U	.019 U	.019 U					
PEST/PCBs	4,4'-DDD	4.17	.0037 U	.0034 U	.0034 U	.0034 U	**.014**	**.002 J**	**.0022 J**	.0037 U					
PEST/PCBs	4,4'-DDE	2.94	.0037 U	.0034 U	.0034 U	.0034 U	**.016**	**.0036**	**.0034 J**	.0037 U					
PEST/PCBs	4,4'-DDT	3	.0037 U	.0034 U	.0034 U	**.0026 J**	**.069**	.0035 U	**.0019 J**	.0037 U					
PEST/PCBs	ALDRIN	0.0588	.0019 U	.0018 U	.0018 U	.0018 U	.0018 U	.0018 U	.0019 U	.0019 U					
PEST/PCBs	ALPHA-BHC	0.159	.0019 U	.0018 U	.0018 U	.0018 U	.0018 U	.0018 U	.0019 U	.0019 U					
PEST/PCBs	AROCLOR-1016	5.6	.037 U	.034 U	.034 U	.034 U	.034 U	.035 U	.037 U	.037 U					
PEST/PCBs	AROCLOR-1221	0.22	.074 U	.069 U	.069 U	.07 U	.07 U	.071 U	.074 U	.075 U					
PEST/PCBs	AROCLOR-1232	0.22	.037 U	.034 U	.034 U	.034 U	.034 U	.035 U	.037 U	.037 U					
PEST/PCBs	AROCLOR-1242	0.22	.037 U	.034 U	.034 U	.034 U	.034 U	.035 U	.037 U	.037 U					
PEST/PCBs	AROCLOR-1248	0.22	.037 U	.034 U	.034 U	.034 U	.034 U	.035 U	.037 U	.037 U					
PEST/PCBs	AROCLOR-1254	1.6	.037 U	.034 U	**.342**	.034 U	.034 U	.035 U	.037 U	.037 U					
PEST/PCBs	AROCLOR-1260	0.22	.037 U	.034 U	.034 U	.034 U	.034 U	.035 U	.037 U	.037 U				**.017 JQ**	.037 U
PEST/PCBs	BETA-BHC	0.556	.0019 U	.0018 U	.0018 U	.0018 U	.0018 U	.0018 U	.0019 U	.0019 U					
PEST/PCBs	CAMPHECHLOR	0.909	.19 U	.18 U	.18 U	.18 U	.18 U	.18 U	.19 U	.19 U					
PEST/PCBs	CAPROLACTAM	40000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U			.36 U		
PEST/PCBs	CHLORDANE, ALPHA	2.86	.0019 U	.0018 U	.0018 U	**.0011 J**	**.00065 J**	.0018 U	.0019 U	.0019 U					
PEST/PCBs	CHLORDANE, GAMMA	2.86	.0019 U	.0018 U	.0018 U	**.00092 J**	**.0012 J**	**.00063 J**	**.00056 J**	.0019 U					
PEST/PCBs	DELTA-BHC		.0019 U	.0018 U	.0018 U	.0018 U	.0018 U	.0018 U	.0019 U	**.00063 J**					
PEST/PCBs	DIELDRIN	0.0625	.0037 U	.0034 U	.0034 U	**.0053**	**.044**	**.002 J**	**.0017 J**	.0037 U					

PEST/PCBs	ENDOSULFAN I	480	.0019 U	.0018 U	.0018 U	.0018 U	.0018 U	.0018 U	.0019 U	.0019 U					
PEST/PCBs	ENDOSULFAN II	480	.0037 U	.0034 U	.0034 U	.0034 U	.0034 U	.0035 U	.0037 U	.0037 U					
PEST/PCBs	ENDOSULFAN SULFATE	480	.0037 U	.0034 U	**.0054**	.0034 U	.0034 U	.0035 U	.0037 U	.0037 U					
PEST/PCBs	ENDRIN	24	.0037 U	.0034 U	.0034 U	.0034 U	.0034 U	.0035 U	.0037 U	.0037 U					
PEST/PCBs	ENDRIN ALDEHYDE		.0037 U	.0034 U	**.0061**	.0034 U	**.00092 J**	.0035 U	.0037 U	.0037 U					
PEST/PCBs	ENDRIN KETONE		.0037 U	.0034 U	.0034 U	.0034 U	.0034 U	.0035 U	.0037 U	.0037 U					
PEST/PCBs	GAMMA-BHC (LINDANE)	0.01	.0019 U	.0018 U	.0018 U	.0018 U	.0018 U	.0018 U	.0019 U	.0019 U					
PEST/PCBs	HEPTACHLOR	0.222	.0019 U	.0018 U	.0018 U	.0018 U	.0018 U	.0018 U	.0019 U	.0019 U					
PEST/PCBs	HEPTACHLOR EPOXIDE	0.11	.0019 U	.0018 U	.0018 U	.0018 U	**.00079 J**	.0018 U	.0019 U	.0019 U					
PETROLEUM	HYDROCARBONS	2000	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	**120**	**230**	**120**		
PETROLEUM	PHC AS DIESEL FUEL	2000	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	1000 U	**31**	**62**	27 U		
PETROLEUM	PHC AS GASOLINE	30	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U					
PETROLEUM	TOTAL ALPHATIC			**68**										**99 J**	**140 J**
PETROLEUM	TOTAL AROMATIC			10 U										**17**	**22**
PETROLEUM	HYDROCARBONS	2000												**116**	**162**
SVOCs	2,2'-OXYBIS(1-CHLORO)PROPANE	14.3	.07 UJK	.068 UJK	.068 U	.07 U	.07 U				.42 U	.45 U	.36 U		
SVOCs	2,4,5-TRICHLOROPHENOL	8000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	1.1 U	1.1 U	.91 U		
SVOCs	2,4,6-TRICHLOROPHENOL	90.9	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	2,4-DICHLOROPHENOL	240	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	2,4-DIMETHYLPHENOL	1600	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	2,4-DINITROPHENOL	160	.138 UJK	.138 UJK	.136 U	.138 U	.138 U	.144 UJK	.156 UJK	.148 UJK	1.1 UJ	1.1 UJ	.91 UJ		
SVOCs	2,4-DINITROTOLUENE	1.47	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	2,6-DINITROTOLUENE	1.47	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	2-CHLORONAPHTHALENE	6400	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	2-CHLOROPHENOL	400	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	2-NITROANILINE	3.5	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	1.1 U	1.1 U	.91 U		
SVOCs	2-NITROPHENOL		.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	3,3'-DICHLOROBENZIDINE	2.22	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 UJ	.45 UJ	.36 U		
SVOCs	3-NITROANILINE		.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	1.1 UJ	1.1 UJ	.91 U		
SVOCs	4,6-DINITRO-O-CRESOL		.07 U	.068 U	.068 U	.07 U	.07 U	.072 UJK	.078 UJ	.074 UJ	1.1 U	1.1 U	.91 UJ		
SVOCs	4-BROMOPHENYL PHENYL ETHER		.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 UJ	.074 UJ	.42 U	.45 U	.36 U		
SVOCs	4-CHLOROPHENYL PHENYL ETHER		.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	4-METHYLPHENOL	400	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	4-NITROPHENOL	490	.07 UJK	.068 UJK	.068 U	.07 U	.07 U	.072 UJK	.078 UJK	.074 UJK	1.1 UJ	1.1 UJ	.91 U		
SVOCs	ACETOPHENONE	8000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	ATRAZINE	4.55	.07 UJK	.068 UJK	.068 U	.07 U	.07 U	.072 UJ	.078 UJ	.074 UJ	.42 U	.45 U	.36 U		
SVOCs	BENZALDEHYDE	8000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 UJK	.078 UJK	.074 UJK	.42 U	.45 U	.36 U	.014 U	**.017**
SVOCs	BENZYL BUTYL PHTHALATE	16000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U	.014 U	**.018**
SVOCs	BIS(2-CHLOROETHOXY)METHANE		.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	BIS(2-CHLOROETHYL)ETHER	0.909	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	BIS(2-ETHYLHEXYL)PHTHALATE	71.4	**.15 J**	**.31 J**	.068 U	**.11 J**	**.078 J**	.072 U	.078 U	**.22 J**	.42 U	**.33 J**	**.2 J**		
SVOCs	CARBAZOLE	50	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 UJ	.45 UJ	.36 U	.014 U	**.0098 JQ**
SVOCs	DIBENZOFURAN	290	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U	.014 U	**.0038 JQ**
SVOCs	DIBUTYL PHTHALATE	8000	**.09 J**	**.79**	**.34**	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	DIETHYL PHTHALATE	64000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	DIMETHYL PHTHALATE	80000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	DI-N-OCTYL PHTHALATE	1600	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	HEXACHLOROBENZENE	0.625	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 UJ	.074 UJ	.42 U	.45 U	.36 U		
SVOCs	HEXACHLOROCYCLOPENTADIENE	480	.07 UJK	.068 UJK	.068 U	.07 U	.07 U	.072 UJK	.078 UJK	.074 UJK	.42 U	.45 U	.36 UJ		
SVOCs	HEXACHLOROETHANE	71.4	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	NITROBENZENE	40	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	N-NITROSODI-N-PROPYLAMINE	0.143	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		

SVOCs	N-NITROSODIPHENYLAMINE	204	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	O-CRESOL	4000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 UJK	.078 UJK	.074 UJK	.42 U	.45 U	.36 U		
SVOCs	P-CHLOROANILINE	320	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	P-CHLORO-M-CRESOL		.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
SVOCs	PENTACHLOROPHENOL	8.33	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	1.1 UJ	1.1 UJ	.91 U		
SVOCs	PHENOL	48000	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
VOCs	1,1,1-TRICHLOROETHANE	2	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	1,1,2,2-TETRACHLOROETHANE	5	**.001 J**	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	1,1,2-TRICHLOROETHANE	17.5	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	1,1-DICHLOROETHANE	8000	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	1,1-DICHLOROETHYLENE	1.67	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	1,2,4-TRICHLOROBENZENE	800	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	(DBCP)	0.714	.011 UJ	.01 UJ	.01 UJ	.01 UJ	.01 U	.011 UJ	.011 UJ	.011 UJ	.01 U	.01 U	.01 U		
VOCs	1,2-DICHLOROBENZENE	7200	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	1,2-DICHLOROETHANE	11	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	1,2-DICHLOROPROPANE	14.7	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	1,4-DICHLOROBENZENE	41.7	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	2-BUTANONE	48000	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U	**.005 JQ**	.012 U
VOCs	4-METHYL-2-PENTANONE	6400	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	ACETONE	8000	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.025 U	**.013**	**.031**	.01 U	**.004 JQ**	.012 U
VOCs	BENZENE	0.03	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	BROMODICHLOROMETHANE	16.1	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	BROMOMETHANE	112	.011 U	.01 U	.01 U	.01 U	.01 U	.011 UJ	.011 UJ	.011 UJ	.01 UJ	.01 UJ	.01 U		
VOCs	CARBON DISULFIDE	8000	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	CARBON TETRACHLORIDE	7.69	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	CFC-11	24000	.011 U	.01 U	.01 U	.01 U	.01 U	.011 UJ	.011 UJ	.011 UJ	.01 U	.01 U	.01 U		
VOCs	CFC-12	16000	.011 UJ	.01 UJ	.01 UJ	.01 UJ	.01 U	.011 U	.011 U	.011 U	.01 UJ	.01 UJ	.01 UJ		
VOCs	(FREON 113)	2400000	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	CHLOROBENZENE	1600	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	CHLORODIBROMOMETHANE	11.9	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	CHLOROETHANE	3	.011 UJ	.01 UJ	.01 U	.01 U	.01 U	.011 UJ	.011 UJ	.011 UJ	.01 U	.01 U	.01 U		
VOCs	CHLOROFORM	164	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	CHLOROMETHANE	76.9	.011 U	.01 U	.01 UJ	.01 UJ	.01 U	.011 U	.011 U	**.001 J**	.01 UJ	.01 UJ	.01 UJ		
VOCs	CIS-1,2-DICHLOROETHENE	800	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	CIS-1,3-DICHLOROPROPENE		.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	CUMENE	8000	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	CYCLOHEXANE	140	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	DIBROMODIFLUOROMETHANE														
VOCs	DICHLOROMETHANE	0.02	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	ETHYLBENZENE	6	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	ETHYLENE DIBROMIDE	0.0069	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	HEXACHLORO-1,3-BUTADIENE	12.8	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
VOCs	ISOPHORONE	1050	.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	.42 U	.45 U	.36 U		
VOCs	M-DICHLOROBENZENE	13	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	METHYL ACETATE	80000	.011 U	.01 U	.01 U	.01 U	.01 U	**.003 J**	.011 U	.011 U	.01 U	.01 U	.01 U	**.004 JQ**	.012 U
VOCs	METHYL N-BUTYL KETONE		.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	METHYLCYLOHEXANE	2600	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	METHYL-tert-BUTYL ETHER	0.1	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	P-NITROANILINE		.07 U	.068 U	.068 U	.07 U	.07 U	.072 U	.078 U	.074 U	1.1 UJ	1.1 UJ	.91 U		
VOCs	STYRENE (MONOMER)	33.3	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	TETRACHLOROETHENE	0.05	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 UJ		
VOCs	TOLUENE	7	.011 U	**.027**	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	**.015**	.01 U	.01 U		

VOCs	TRANS-1,2-DICHLOROETHENE	1600	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	TRANS-1,3-DICHLOROPROPENE		.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	TRIBROMOMETHANE	127	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	TRICHLOROETHYLENE	0.03	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		
VOCs	VINYL CHLORIDE	0.667	.011 U	.01 U	.01 UJ	.01 UJ	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 UJ		
VOCs	XYLENE (TOTAL)	9	.011 U	.01 U	.01 U	.01 U	.01 U	.011 U	.011 U	.011 U	.01 U	.01 U	.01 U		

Notes:

Bold	Detected result
+	Qualifier indicating a result is biased high.
B	Analyte detected in an associated blank.
J	Estimated value based on validation or value reported below quantitation limits.
K	Off-scale low based on calibration standard or dilution.
U	Undetected at the concentration reported.

Groundwater Data Tables

Groundwater sampling location on Rainier Court Phase IV Site

TABLE 3A
SUMMARY OF GROUND WATER RESULTS
PETROLEUM HYDROCARBONS, BTEX AND VOC's

Rainier Court
Seattle, Washington

Sample Number[2]	Date Sampled	Volatile Hydrocarbons[3] (ug/l)				Gasoline-range Hydrocarbons[4]	Diesel-range Hydrocarbons[5]	Lube Oil-range Hydrocarbons[5]	VOC's[6] (ug/l)		
		B	T	E	X	(ug/l)	(mg/l)	(mg/l)	Carbon Tetrachloride	Chloroform	Tetrachloroethene
MW-1	12/07/01	<0.500	<0.500	<0.500	<1.00	<50.0	<0.250	<0.500	2.02	1.10	<1.00
MW-2	12/07/01	<0.500	<0.500	<0.500	<1.00	<50.0	0.439	<0.500	<1.00	<1.00	<1.00
MW-3	12/07/01	<0.500	<0.500	<0.500	<1.00	<50.0	0.311	<0.500	<1.00	<1.00	<1.00
MW-4	12/07/01	<0.500	<0.500	<0.500	<1.00	<50.0	0.797	0.611	<1.00	<1.00	<1.00
MW-5	12/07/01	<0.500	<0.500	<0.500	<1.00	<50.0	<0.250	<0.500	<1.00	<1.00	18.0
MW-6	01/14/02	<0.500	<0.500	<0.500	<1.00	<50.0	0.696	<0.500	<1.00	<1.00	<1.00
Trip Blank	12/07/01	<0.500	<0.500	<0.500	<1.00	<50.0	--	--	<1.00	<1.00	<1.00
Trip Blank	12/12/01	<0.500	<0.500	<0.500	<1.00	<50.0	--	--	<1.00	<1.00	<1.00
MTCA Method A Cleanup Level or site specific screening level		5	1000	700	1000	800.0	0.500	0.500	0.337	7.17	5

Notes:

[1]Chemical analyses conducted by North Creek Analytical in Bothell, Washington.

[2]Approximate monitoring well locations are shown in Figure 3.

[3]By EPA Method 8021B.

[4]By Ecology Method NWTPH-G.

[5]By Ecology Method NWTPH-D Extended.

[6]Volatile organic compounds (VOC's) by EPA Method 8260. Only detected compounds are listed. A list of VOCs is presented in Appendix B.

mg/l = milligrams per liter

µg/l = micrograms per liter

MTCA = Model Toxics Control Act

NA = not available

Shaded and bolded values indicate a concentration greater than the MTCA Method A cleanup level or selected project specific screening level.

Groundwater sampling location on Rainier Court Phase IV Site

TABLE 3B
SUMMARY OF GROUND WATER RESULTS
PAH'S AND DISSOLVED METALS[1]
RAINIER COURT
SEATTLE, WASHINGTON

Sample Number[2]	Date Sampled	PAH's[3] (ug/l)	Metals[4] (mg/l)									
		1-Methylnaphthalene	Arsenic	Barium	Cadmuim	Chromium	Copper	Mercury	Manganese	Nickel	Lead	Vanadium
MW-1	12/07/01	<0.10	0.00204	0.118	0.00127	0.00142	0.00724	<0.00100	0.150	0.0122	0.00106	0.00326
MW-2	12/07/01	0.17	0.00209	0.107	<0.00100	0.00135	0.00551	0.00152	0.339	0.00387	0.00326	0.00422
MW-3	12/07/01	<0.10	0.00387	0.188	<0.00100	0.00148	0.00299	<0.00100	1.36	0.00857	<0.00100	0.00973
MW-4	12/07/01	0.17	0.00762	0.183	<0.00100	0.00180	0.00109	<0.00100	3.13	0.00582	<0.00100	0.00441
MW-5	12/07/01	<0.10	<0.00100	0.0673	<0.00100	0.00113	0.00234	<0.00100	0.0401	0.00423	<0.00100	0.00711
MW-6	1/14/02	<0.10	0.00122	0.141	<0.00100	<0.00100	0.00192	<0.00100	0.662	0.00863	<0.00100	0.00423
MTCA Method A Cleanup Level or site specific screening level		160	0.005	0.560	0.500	0.050	0.592	0.002	2.24	0.320	0.015	0.112

Notes:
[1]Chemical analyses conducted by North Creek Analytical in Bothell, Washington.
[2]Approximate monitoring well locations are shown in Figure 3.
[3]Polycyclic aromatic hydrocarbons (PAH's) by EPA Method 8270SIM. Only detected compounds are listed.
[4]Dissolved metals by EPA Method 600/700 Series. Only detected compounds are listed.
mg/l = milligrams per liter
µg/l = micrograms per liter
MTCA = Model Toxics Control Act
NA = not available
Shaded and bolded values indicate a concentration greater than the MTCA Method A cleanup level or selected project specific screening level.

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Parcel O Groundwater Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PO007 / RC-GW-PO007-0000 / 03204300 / N/A
Chloroethane		4.6	0.50 U
Chloroform		7.17	0.50 U
Chloromethane		3.37	0.50 U
cis-1,2-Dichloroethene		80	0.50 U
cis-1,3-Dichloropropene		0.243	0.50 U
Cyclohexane		35000	0.50 U
Dibromochloromethane		0.521	0.50 U
Dichlorodifluoromethane		1600	0.50 U
Ethylbenzene		700	0.50 U
Isopropylbenzene		1600	0.50 U
Methyl Acetate		8000	0.50 R
Methyl tert-Butyl Ether		20	0.50 U
Methylcyclohexane		5200	0.50 U
Methylene Chloride		5	0.50 U
Styrene		1.46	0.50 U
Tetrachloroethene		0.86	0.50 U
Toluene		1000	0.90
trans-1,2-Dichloroethene		160	0.50 U
trans-1,3-Dichloropropene		0.243	0.50 U
Trichloroethene		3.98	0.50 U
Trichlorofluoromethane		2400	0.50 U
Vinyl Chloride		0.02	0.50 U
Xylenes (total)		1000	0.50 U
BNAs (ug/l)			
1,1'-Biphenyl		800	5.0 U
1,2,4,5-Tetrachlorobenzene		n/a	5.0 U

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3POGWSD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Parcel O Groundwater Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PO007 / RC-GW-PO007-0000 / 03204300 / N/A
VOCs (ug/l)			
1,1,1-Trichloroethane		200	0.50 U
1,1,2,2-Tetrachloroethane		0.219	0.50 U
1,1,2-Trichloro-1,2,2-triflu		480000	0.50 U
1,1,2-Trichloroethane		0.768	0.50 U
1,1-Dichloroethane		800	0.50 U
1,1-Dichloroethene		0.0729	0.50 U
1,2,4-Trichlorobenzene		80	0.50 U
1,2-Dibromo-3-chloropropane		0.0313	0.50 U
1,2-Dibromoethane		0.000515	0.50 U
1,2-Dichlorobenzene		720	0.50 U
1,2-Dichloroethane		0.48	0.50 U
1,2-Dichloropropane		0.643	0.50 U
1,3-Dichlorobenzene		5.5	0.50 U
1,4-Dichlorobenzene		1.82	0.50 U
2-Butanone		4800	5.0 U
2-Hexanone		n/a	5.0 U
4-Methyl-2-pentanone		640	5.0 U
Acetone		800	5.0 U
Benzene		0.795	0.50 U
Bromodichloromethane		0.706	0.50 U
Bromoform		5.54	0.50 U
Bromomethane		11.2	0.50 U
Carbon Disulfide		800	0.50 U
Carbon Tetrachloride		0.337	0.50 U
Chlorobenzene		160	0.50 U

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3POGWSD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Parcel O Groundwater Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PO007 / RC-GW-PO007-0000 / 03204300 / N/A
2,2'-oxybis (1-Chloropropane		1.25	5.0 U
2,4,5-Trichlorophenol		1600	20.0 U
2,4,6-Trichlorophenol		7.95	5.0 U
2,4-Dichlorophenol		48	5.0 U
2,4-Dimethylphenol		320	5.0 U
2,4-Dinitrophenol		32	20.0 U
2,4-Dinitrotoluene		32	5.0 U
2,6-Dinitrotoluene		16	5.0 U
2-Chloronaphthalene		490	5.0 U
2-Chlorophenol		80	5.0 U
2-Methylnaphthalene		53.3	5.0 U
2-Methylphenol		1800	5.0 U
2-Nitroaniline		1	20.0 U
2-Nitrophenol		n/a	5.0 U
3,3'-Dichlorobenzidine		0.194	5.0 U
3-Nitroaniline		n/a	20.0 U
4,6-Dinitro-2-Methylphenol		n/a	20.0 U
4-Bromophenyl-phenylether		n/a	5.0 U
4-Chloro-3-methylphenol		n/a	5.0 U
4-Chloroaniline		64	5.0 U
4-Chlorophenyl-phenylether		n/a	5.0 U
4-Methylphenol		180	5.0 U
4-Nitroaniline		n/a	20.0 U
4-Nitrophenol		290	20.0 U
Acenaphthene		960	5.0 U
Acenaphthylene		n/a	5.0 U

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3POGWSD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Parcel O Groundwater Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PO007 / RC-GW-PO007-0000 / 03204300 / N/A
Acetophenone		1600	5.0 U
Anthracene		2400	0.10 U
Atrazine		0.398	5.0 U
Benzaldehyde		1600	5.0 U
Benzo(a)anthracene		0.012	0.10 U
Benzo(a)pyrene		0.012	0.10 U
Benzo(b)fluoranthene		0.012	0.10 U
Benzo(g,h,i)perylene		n/a	0.10 U
Benzo(k)fluoranthene		0.012	0.10 U
bis(2-Chloroethoxy)methane		n/a	5.0 U
bis(2-Chloroethyl)ether		0.0398	5.0 U
bis(2-Ethylhexyl)phthalate		6.25	5.0 U
Butylbenzylphthalate		3300	5.0 U
Caprolactam		8000	5.0 U
Chrysene		0.012	0.10 U
Di-n-butylphthalate		3600	5.0 U
Di-n-octylphthalate		320	5.0 U
Dibenzo(a,h)anthracene		0.0092	0.10 U
Dibenzofuran		24	5.0 U
Diethylphthalate		12800	5.0 U
Dimethylphthalate		360000	5.0 U
Fluoranthene		640	0.10 U
Fluorene		640	5.0 U
Hexachlorobenzene		0.0547	5.0 U
Hexachlorobutadiene		0.06	5.0 U
Hexachlorocyclopentadiene		96	5.0 U

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3POGWSD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Parcel O Groundwater Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PO007 / RC-GW-PO007-0000 / 03204300 / N/A
Hexachloroethane		6.25	5.0 U
Indeno(1,2,3-cd)pyrene		0.092	0.10 U
Isophorone		92.1	5.0 U
N-Nitroso-di-n-propylamine		0.0125	5.0 U
N-Nitrosodiphenylamine		17.9	5.0 U
Naphthalene		160	5.0 U
Nitrobenzene		8	5.0 U
Pentachlorophenol		0.729	5.0 U
Phenanthrene		n/a	0.10 U
Phenol		9600	5.0 U
Pyrene		480	0.10 U
PESTICIDES/PCBS (ug/l)			
4,4'-DDD		0.365	0.020 U
4,4'-DDE		0.257	0.020 U
4,4'-DDT		0.257	0.020 U
Aldrin		0.00515	0.010 U
alpha-BHC		0.0139	0.010 U
alpha-Chlordane		0.25	0.010 U
Aroclor-1016		1.12	0.20 U
Aroclor-1221		0.034	0.40 U
Aroclor-1232		0.034	0.20 U
Aroclor-1242		0.034	0.20 U
Aroclor-1248		0.034	0.20 U
Aroclor-1254		0.34	0.20 U
Aroclor-1260		0.034	0.20 U
Total PCBs		n/a	0.4 UT

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level. Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3POGWSD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Parcel O Groundwater Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PO007 / RC-GW-PO007-0000 / 03204300 / N/A
beta-BHC		0.0486	0.010 U
delta-BHC		n/a	0.010 U
Dieldrin		0.00547	0.020 U
Endosulfan I		96	0.010 U
Endosulfan II		96	0.020 U
Endosulfan sulfate		96	0.020 U
Endrin		4.8	0.020 U
Endrin aldehyde		n/a	0.020 U
Endrin ketone		n/a	0.020 U
gamma-BHC (Lindane)		0.07	0.010 U
gamma-Chlordane		0.25	0.010 U
Heptachlor		0.0194	0.010 U
Heptachlor epoxide		0.00962	0.010 U
Methoxychlor		80	0.10 U
Toxaphene		0.0795	1.0 U
TPHs (ug/l)			
Mineral Oil		n/a	500 U
Motor Oil		500	500 U
TPH Diesel		500	540
TPH Gas		800	250 U
INORGANICS-TOTAL (ug/l)			
Aluminum		36000	14200
Antimony		1.4	60.0 U
Arsenic		0.6	8.4 J
Barium		1120	477
Beryllium		0.0203	0.76 J

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3POGWSD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Parcel O Groundwater Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PO007 / RC-GW-PO007-0000 / 03204300 / N/A
Cadmium		5	5.0 U
Calcium		n/a	48000
Chromium		50	36.0
Cobalt		730	15.4 J
Copper		592	78.2
Iron		11000	28800
Lead		15	16.9
Magnesium		n/a	35100
Manganese		2240	3530
Mercury		2	0.11 J
Nickel		320	49.9
Potassium		n/a	5990 J
Selenium		80	3.7 J
Silver		80	10.0 UJ
Sodium		n/a	14300 J
Thallium		1.12	25.0 U
Vanadium		112	50.4
Zinc		4800	80.6
INORGANICS-DISSOLVED (ug/l)			
Aluminum		n/a	49.7 J
Antimony		n/a	60.0 U
Arsenic		n/a	15.0 U
Barium		n/a	137 J
Beryllium		n/a	0.28 J
Cadmium		n/a	5.0 U
Calcium		n/a	43200

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3POGWSD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Parcel O Groundwater Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PO007 / RC-GW-PO007-0000 / 03204300 / N/A
Chromium		n/a	10.0 U
Cobalt		n/a	2.6 J
Copper		n/a	25.0 U
Iron		n/a	12500
Lead		n/a	10.0 U
Magnesium		n/a	29800
Manganese		n/a	3260
Mercury		n/a	0.10 J
Nickel		n/a	4.4 J
Potassium		n/a	4940 J
Selenium		n/a	3.5 J
Silver		n/a	10.0 UJ
Sodium		n/a	13900 J
Thallium		n/a	25.0 U
Vanadium		n/a	2.3 J
Zinc		n/a	60.0 U

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level. Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3POGWSD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 2 TBA - Groundwater Sample Data Listing for Parcel P Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PP003 / RC-GW-PP003-0080 / 01334060 / 8.0
Volatile Organic Compounds (ug/l)			
1,1,1,2-Tetrachloroethane		n/a	0.020 U
1,1,1-Trichloroethane		200	0.020 U
1,1,2,2-Tetrachloroethane		0.219	0.020 U
1,1,2-Trichloro-1,2,2-triflu		480000	0.020 U
1,1,2-Trichloroethane		0.768	0.020 U
1,1-Dichloroethane		800	0.020 U
1,1-Dichloroethene		0.0729	0.020 U
1,1-Dichloropropanone		n/a	5.0 U
1,1-Dichloropropene		n/a	0.020 U
1,2,3-Trichlorobenzene		n/a	0.020 U
1,2,3-Trichloropropane		n/a	1.0 U
1,2,4-Trichlorobenzene		80	0.020 U
1,2-Dibromo-3-chloropropane		0.0313	0.050 UJ
1,2-Dibromoethane		0.000515	0.020 U
1,2-Dichlorobenzene		720	0.020 U
1,2-Dichloroethane		5	0.020 U
1,2-Dichloropropane		0.643	0.020 U
1,3-Dichlorobenzene		5.5	0.020 U
1,3-Dichloropropane		n/a	0.020 U
1,4-Dichlorobenzene		1.82	0.020 U
1-Chlorobutane		n/a	2.0 U
2,2-Dichloropropane		n/a	0.020 U
2-Butanone		4800	2.0 U
2-Chlorotoluene		n/a	0.020 U
2-Hexanone		n/a	10.0 U

A blank cell indicates analysis was not performed. Boxed cell indicates the detected analyte concentration exceeds the screening level.

Reproduction Codes: RCPP13SD.DBF - chFDEref.frx Boxed Cells Standard:WBSLS-DET, Shaded Cells:

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 2 TBA - Groundwater Sample Data Listing for Parcel P Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PP003 / RC-GW-PP003-0080 / 01334060 / 8.0
2-Nitropropane		n/a	1.0 U
2-Propenoic acid, 2-methyl-,		n/a	5.0 U
4-Chlorotoluene		n/a	0.020 U
4-Methyl-2-pentanone		640	10.0 U
Acetone		800	33.1
Acrylonitrile		n/a	1.0 U
Allyl Chloride		n/a	1.0 U
Benzene		5	0.039
Benzene, 1,2,4-trimethyl-		n/a	0.020 U
Benzene, 1,3,5-trimethyl-		n/a	0.020 U
Benzene, 1-methyl-4-(1-methy		n/a	0.020 U
Benzene, propyl-		n/a	0.020 U
Benzene, tert-butyl-		n/a	0.020 U
Bromobenzene		n/a	1.0 U
Bromochloromethane		n/a	0.020 U
Bromodichloromethane		0.706	0.020 U
Bromoform		5.54	0.020 U
Bromomethane		11.2	0.020 U
Carbon Disulfide		800	2.0 U
Carbon Tetrachloride		0.337	0.020 U
Chlorobenzene		160	0.020 U
Chloroethane		4.6	0.029
Chloroform		7.17	0.020 U
Chloromethane		3.37	0.053 U
cis-1,2-Dichloroethene		80	0.020 U
cis-1,3-Dichloropropene		0.243	0.021 U

A blank cell indicates analysis was not performed. Boxed cell indicates the detected analyte concentration exceeds the screening level.

Reproduction Codes: RCPP13SD.DBF - chFDEref.frx Boxed Cells Standard:WBSLS-DET, Shaded Cells:

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 2 TBA - Groundwater Sample Data Listing for Parcel P Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PP003 / RC-GW-PP003-0080 / 01334060 / 8.0
Cyclohexane		35000	1.0 U
Dibromochloromethane		0.521	0.020 U
Dibromomethane		n/a	1.0 U
Dichlorodifluoromethane		1600	0.050 U
Diethyl ether		n/a	1.0 U
Ethylbenzene		700	0.020 U
Ethylmethacrylate		n/a	5.0 U
Furan, tetrahydro-		n/a	1.0 UJ
Hexachlorobutadiene		n/a	0.050 U
Hexachloroethane		n/a	0.10 U
Isopropylbenzene		640	0.020 U
Methacrylonitrile		n/a	5.0 U
Methyl Acetate		8000	1.0 U
Methyl acrylate		n/a	5.0 U
Methyl Iodide		n/a	1.0 U
Methyl tert-Butyl Ether		20	1.0 U
Methylcyclohexane		5200	1.0 U
Methylene Chloride		5	0.10 U
MP-Xylene		n/a	0.040 U
n-Butylbenzene		n/a	0.020 U
Napthalene		n/a	0.050 U
o-Xylene		n/a	0.020 U
Pentachloroethane		n/a	0.020 U
sec-butylbenzene		n/a	0.020 U
Styrene		1.46	0.020 U
Tetrachloroethene		5	0.020 U

A blank cell indicates analysis was not performed. Boxed cell indicates the detected analyte concentration exceeds the screening level.

Reproduction Codes: RCPP13SD.DBF - chFDEref.frx Boxed Cells Standard:WBSLS-DET, Shaded Cells:

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 2 TBA - Groundwater Sample Data Listing for Parcel P Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	PP003 / RC-GW-PP003-0080 / 01334060 / 8.0
Toluene		1000	0.050 U
trans-1,2-Dichloroethene		160	0.020 U
trans-1,3-Dichloropropene		0.243	0.019 U
trans-1,4-Dichloro-2-butene		n/a	1.0 U
Trichloroethene		5	0.020 U
Trichlorofluoromethane		2400	0.050 U
Vinyl Chloride		0.2	0.034
TPH Diesel and Motor Oil (ug/l)			
Motor Oil		500	940
TPH Diesel		500	700
TPH Gas (ug/l)			
TPH Gas		800	25 U

A blank cell indicates analysis was not performed. Boxed cell indicates the detected analyte concentration exceeds the screening level.

Reproduction Codes: RCPP13SD.DBF - chFDEref.frx Boxed Cells Standard:WBSLS-DET, Shaded Cells:

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Monitoring Well Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	MW-006 / RC-GW-MW006-0000 / 03214201 / N/A	MW-007 / RC-GW-MW007-0000 / 03214211 / N/A	MW-008 / RC-GW-MW008-0000 / 03214207 / N/A	MW-009 / RC-GW-MW009-0000 / 03214209 / N/A
VOCs (ug/l)						
1,1,1-Trichloroethane		200	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane		0.219	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloro-1,2,2-triflu		480000	0.50 U	0.50 UJ	0.50 UJ	0.50 U
1,1,2-Trichloroethane		0.768	0.50 UJ	0.50 U	0.50 U	0.50 U
1,1-Dichloroethane		800	0.50 U	1.2	0.50 U	0.50 U
1,1-Dichloroethene		0.0729	0.50 U	0.50 U	0.50 U	0.50 U
1,2,4-Trichlorobenzene		80	0.50 U	7.4 J	0.50 UJ	0.50 U
1,2-Dibromo-3-chloropropane		0.0313	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dibromoethane		0.000515	0.50 UJ	0.50 U	0.50 U	0.50 U
1,2-Dichlorobenzene		720	0.50 U	1.7	0.50 U	0.50 U
1,2-Dichloroethane		0.48	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichloropropane		0.643	0.50 U	0.50 U	0.50 U	0.50 U
1,3-Dichlorobenzene		5.5	0.50 U	1.0	0.50 U	0.50 U
1,4-Dichlorobenzene		1.82	0.50 U	1.1	0.50 U	0.50 U
2-Butanone		4800	5.0 U	5.0 U	5.0 U	5.0 U
2-Hexanone		n/a	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone		640	5.0 U	5.0 U	5.0 U	5.0 U
Acetone		800	17	5.0 U	5.0 U	20.0
Benzene		0.795	0.50 U	0.50 U	0.50 U	0.50 U
Bromodichloromethane		0.706	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform		5.54	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U
Bromomethane		11.2	0.50 U	0.50 U	0.50 U	0.50 U
Carbon Disulfide		800	0.50 U	0.50 U	0.50 U	0.50 U
Carbon Tetrachloride		0.337	0.50 U	0.50 U	0.50 U	0.50 U
Chlorobenzene		160	0.50 U	2.6	0.50 U	0.50 U

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3MW01SD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Monitoring Well Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	MW-006 / RC-GW-MW006-0000 / 03214201 / N/A	MW-007 / RC-GW-MW007-0000 / 03214211 / N/A	MW-008 / RC-GW-MW008-0000 / 03214207 / N/A	MW-009 / RC-GW-MW009-0000 / 03214209 / N/A
Chloroethane		4.6	0.50 U	0.50 U	0.50 U	0.50 U
Chloroform		7.17	0.50 U	0.50 U	0.50 U	0.50 U
Chloromethane		3.37	0.50 U	0.50 U	0.50 U	0.50 U
cis-1,2-Dichloroethene		80	0.50 UJ	2.0	0.50 U	39 J
cis-1,3-Dichloropropene		0.243	0.50 UJ	0.50 U	0.50 U	0.50 U
Cyclohexane		35000	0.50 U	0.50 U	0.50 U	0.50 U
Dibromochloromethane		0.521	0.50 UJ	0.50 U	0.50 U	0.50 U
Dichlorodifluoromethane		1600	0.50 U	0.50 U	0.50 U	0.50 U
Ethylbenzene		700	0.50 U	0.50 U	0.50 U	0.50 U
Isopropylbenzene		1600	0.50 U	0.50 U	0.50 U	0.50 U
Methyl Acetate		8000	0.50 U	0.50 U	0.50 U	0.50 U
Methyl tert-Butyl Ether		20	0.50 U	0.50 UJ	0.50 UJ	0.50 U
Methylcyclohexane		5200	0.50 U	0.50 U	0.50 U	0.50 U
Methylene Chloride		5	0.60 U	1.1 J	0.60 U	0.50 UJ
Styrene		1.46	0.50 U	0.50 U	0.50 U	0.50 U
Tetrachloroethene		0.86	0.50 U	9.3	0.50 U	36
Toluene		1000	0.50 U	0.50 U	0.50 U	0.50 U
trans-1,2-Dichloroethene		160	0.50 UJ	0.50 U	0.50 U	0.50 U
trans-1,3-Dichloropropene		0.243	0.50 UJ	0.50 U	0.50 U	0.50 U
Trichloroethene		3.98	0.50 U	0.60	0.48 J	47
Trichlorofluoromethane		2400	0.50 U	0.50 U	0.50 U	0.50 U
Vinyl Chloride		0.02	0.50 U	0.50 U	0.50 U	2.5
Xylenes (total)		1000	0.50 U	0.50 U	0.50 U	0.50 U
BNAs (ug/l)						
1,1'-Biphenyl		800	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4,5-Tetrachlorobenzene		n/a	5.0 U	5.0 U	5.0 U	5.0 U

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3MW01SD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Monitoring Well Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	MW-006 / RC-GW-MW006-0000 / 03214201 / N/A	MW-007 / RC-GW-MW007-0000 / 03214211 / N/A	MW-008 / RC-GW-MW008-0000 / 03214207 / N/A	MW-009 / RC-GW-MW009-0000 / 03214209 / N/A
2,2'-oxybis (1-Chloropropane		1.25	5.0 U	5.0 U	5.0 U	5.0 U
2,4,5-Trichlorophenol		1600	20.0 U	20.0 U	20.0 U	20.0 U
2,4,6-Trichlorophenol		7.95	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dichlorophenol		48	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dimethylphenol		320	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol		32	20.0 U	20.0 U	20.0 U	20.0 U
2,4-Dinitrotoluene		32	5.0 U	5.0 U	5.0 U	5.0 U
2,6-Dinitrotoluene		16	5.0 U	5.0 U	5.0 U	5.0 U
2-Chloronaphthalene		490	5.0 U	5.0 U	5.0 U	5.0 U
2-Chlorophenol		80	5.0 U	5.0 U	5.0 U	5.0 U
2-Methylnaphthalene		53.3	5.0 U	5.0 U	5.0 U	5.0 U
2-Methylphenol		1800	5.0 U	5.0 U	5.0 U	5.0 U
2-Nitroaniline		1	20.0 U	20.0 U	20.0 U	20.0 U
2-Nitrophenol		n/a	5.0 U	5.0 U	5.0 U	5.0 U
3,3'-Dichlorobenzidine		0.194	5.0 U	5.0 U	5.0 U	5.0 U
3-Nitroaniline		n/a	20.0 U	20.0 U	20.0 U	20.0 U
4,6-Dinitro-2-Methylphenol		n/a	20.0 U	20.0 U	20.0 U	20.0 U
4-Bromophenyl-phenylether		n/a	5.0 U	5.0 U	5.0 U	5.0 U
4-Chloro-3-methylphenol		n/a	5.0 U	5.0 U	5.0 U	5.0 U
4-Chloroaniline		64	5.0 U	5.0 U	5.0 U	5.0 U
4-Chlorophenyl-phenylether		n/a	5.0 U	5.0 U	5.0 U	5.0 U
4-Methylphenol		180	5.0 U	5.0 U	5.0 U	5.0 U
4-Nitroaniline		n/a	20.0 U	20.0 U	20.0 U	20.0 U
4-Nitrophenol		290	20.0 U	20.0 U	20.0 U	20.0 U
Acenaphthene		960	5.0 U	5.0 U	5.0 U	5.0 U
Acenaphthylene		n/a	5.0 U	5.0 U	5.0 U	5.0 U

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3MW01SD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Monitoring Well Sample Data Listing Compared to Screening Levels

Station ID:		MW-006	MW-007	MW-008	MW-009
Sample ID:		RC-GW-MW006-0000	RC-GW-MW007-0000	RC-GW-MW008-0000	RC-GW-MW009-0000
EPA Sample ID:		03214201	03214211	03214207	03214209
Constituent	Depth (ft bgs): Screening Level	N/A	N/A	N/A	N/A
Acetophenone	1600	5.0 U	5.0 U	5.0 U	5.0 U
Anthracene	2400	0.10 U	0.10 U	0.10 U	0.10 U
Atrazine	0.398	5.0 U	5.0 U	5.0 U	5.0 U
Benzaldehyde	1600	5.0 U	5.0 U	5.0 U	5.0 U
Benzo(a)anthracene	0.012	0.10 U	0.10 U	0.10 U	0.10 U
Benzo(a)pyrene	0.012	0.10 U	0.10 U	0.10 U	0.10 U
Benzo(b)fluoranthene	0.012	0.10 U	0.10 U	0.10 U	0.10 U
Benzo(g,h,i)perylene	n/a	0.10 U	0.10 U	0.10 U	0.10 U
Benzo(k)fluoranthene	0.012	0.10 U	0.10 U	0.10 U	0.10 U
bis(2-Chloroethoxy)methane	n/a	5.0 U	5.0 U	5.0 U	5.0 U
bis(2-Chloroethyl)ether	0.0398	5.0 U	5.0 U	5.0 U	5.0 U
bis(2-Ethylhexyl)phthalate	6.25	5.0 U	5.0 U	5.0 U	5.0 U
Butylbenzylphthalate	3300	5.0 U	5.0 U	5.0 U	5.0 U
Caprolactam	8000	5.0 U	5.0 U	5.0 U	5.0 U
Chrysene	0.012	0.10 U	0.10 U	0.10 U	0.10 U
Di-n-butylphthalate	3600	5.0 U	5.0 U	5.0 U	5.0 U
Di-n-octylphthalate	320	5.0 U	5.0 U	5.0 U	5.0 U
Dibenzo(a,h)anthracene	0.0092	0.10 U	0.10 U	0.10 U	0.10 U
Dibenzofuran	24	5.0 U	5.0 U	5.0 U	5.0 U
Diethylphthalate	12800	5.0 U	5.0 U	5.0 U	5.0 U
Dimethylphthalate	360000	5.0 U	5.0 U	5.0 U	5.0 U
Fluoranthene	640	0.10 U	0.10 U	0.10 U	0.10 U
Fluorene	640	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobenzene	0.0547	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorobutadiene	0.06	5.0 U	5.0 U	5.0 U	5.0 U
Hexachlorocyclopentadiene	96	5.0 U	5.0 U	5.0 U	5.0 U

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3MW01SD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Monitoring Well Sample Data Listing Compared to Screening Levels

Station ID:		MW-006	MW-007	MW-008	MW-009
Sample ID:		RC-GW-MW006-0000	RC-GW-MW007-0000	RC-GW-MW008-0000	RC-GW-MW009-0000
EPA Sample ID:		03214201	03214211	03214207	03214209
Constituent	Depth (ft bgs): Screening Level	N/A	N/A	N/A	N/A
Hexachloroethane	6.25	5.0 U	5.0 U	5.0 U	5.0 U
Indeno(1,2,3-cd)pyrene	0.092	0.10 U	0.10 U	0.10 U	0.10 U
Isophorone	92.1	5.0 U	5.0 U	5.0 U	5.0 U
N-Nitroso-di-n-propylamine	0.0125	5.0 U	5.0 U	5.0 U	5.0 U
N-Nitrosodiphenylamine	17.9	5.0 U	5.0 U	5.0 U	5.0 U
Naphthalene	160	5.0 U	5.0 U	5.0 U	5.0 U
Nitrobenzene	8	5.0 U	5.0 U	5.0 U	5.0 U
Pentachlorophenol	0.729	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene	n/a	0.10 U	0.10 U	0.10 U	0.10 U
Phenol	9600	5.0 U	5.0 U	5.0 U	5.0 U
Pyrene	480	0.10 U	0.10 U	0.10 U	0.10 U
PESTICIDES/PCBS (ug/l)					
4,4'-DDD	0.365	0.020 U	0.020 U	0.020 U	0.020 U
4,4'-DDE	0.257	0.020 U	0.020 U	0.020 U	0.020 U
4,4'-DDT	0.257	0.020 U	0.020 U	0.020 U	0.020 U
Aldrin	0.00515	0.010 U	0.010 U	0.010 U	0.010 U
alpha-BHC	0.0139	0.010 U	0.010 U	0.010 U	0.010 U
alpha-Chlordane	0.25	0.010 U	0.010 U	0.010 U	0.010 U
Aroclor-1016	1.12	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1221	0.034	0.40 U	0.40 U	0.40 U	0.40 U
Aroclor-1232	0.034	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1242	0.034	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1248	0.034	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1254	0.34	0.20 U	0.20 U	0.20 U	0.20 U
Aroclor-1260	0.034	0.20 U	0.20 U	0.20 U	0.20 U
Total PCBs	n/a	0.4 UT	0.4 UT	0.4 UT	0.4 UT

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3MW01SD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Monitoring Well Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	MW-006 / RC-GW-MW006-0000 / 03214201 / N/A	MW-007 / RC-GW-MW007-0000 / 03214211 / N/A	MW-008 / RC-GW-MW008-0000 / 03214207 / N/A	MW-009 / RC-GW-MW009-0000 / 03214209 / N/A
beta-BHC		0.0486	0.010 U	0.010 U	0.010 U	0.010 U
delta-BHC		n/a	0.010 U	0.010 U	0.010 U	0.010 U
Dieldrin		0.00547	0.020 U	0.020 U	0.020 U	0.020 U
Endosulfan I		96	0.010 U	0.010 U	0.010 U	0.010 U
Endosulfan II		96	0.020 U	0.020 U	0.020 U	0.020 U
Endosulfan sulfate		96	0.020 U	0.020 U	0.020 U	0.020 U
Endrin		4.8	0.020 U	0.020 U	0.020 U	0.020 U
Endrin aldehyde		n/a	0.020 U	0.020 U	0.020 U	0.020 U
Endrin ketone		n/a	0.020 U	0.020 U	0.020 U	0.020 U
gamma-BHC (Lindane)		0.07	0.010 U	0.010 U	0.010 U	0.010 U
gamma-Chlordane		0.25	0.010 U	0.010 U	0.010 U	0.010 U
Heptachlor		0.0194	0.010 U	0.010 U	0.010 U	0.010 U
Heptachlor epoxide		0.00962	0.010 U	0.010 U	0.010 U	0.010 U
Methoxychlor		80	0.10 U	0.10 U	0.10 U	0.10 U
Toxaphene		0.0795	1.0 U	1.0 U	1.0 U	1.0 U
TPHs (ug/l)						
Mineral Oil		n/a	500 U	500 U	500 U	500 U
Motor Oil		500	500 U	500 U	500 U	500 U
TPH Diesel		500	500 UJ	250 U	250 U	250 U
TPH Gas		800	250 U	250 U	250 U	250 U
INORGANICS-TOTAL (ug/l)						
Aluminum		36000	108 J	138 J	85.0 J	245
Antimony		1.4	60.0 U	60.0 U	60.0 U	60.0 U
Arsenic		0.6	15.0 U	15.0 U	15.0 U	15.0 U
Barium		1120	89.3 J	165 J	120 J	105 J
Beryllium		0.0203	5.0 U	5.0 U	5.0 U	0.26 J

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3MW01SD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Monitoring Well Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	MW-006 / RC-GW-MW006-0000 / 03214201 / N/A	MW-007 / RC-GW-MW007-0000 / 03214211 / N/A	MW-008 / RC-GW-MW008-0000 / 03214207 / N/A	MW-009 / RC-GW-MW009-0000 / 03214209 / N/A
Cadmium		5	5.0 U	5.0 U	5.0 U	5.0 U
Calcium		n/a	87400	107000	51800	43000
Chromium		50	10.0 U	0.78 J	10.0 U	1.4 J
Cobalt		730	2.9 J	2.6 J	2.1 J	3.1 J
Copper		592	25.0 U	2.5 J	25.0 U	1.1 J
Iron		11000	1270	83.4 J	7040	2080
Lead		15	10.0 U	10.0 U	10.0 U	10.0 U
Magnesium		n/a	70800	35800	37200	4460 J
Manganese		2240	1160	741	2710	453
Mercury		2	0.04 J	0.20 U	0.06 J	0.06 J
Nickel		320	6.5 J	6.4 J	40.0 U	4.9 J
Potassium		n/a	5680 J	18100 J	1190 J	2340 J
Selenium		80	35.0 U	2.9 J	3.7 J	2.6 J
Silver		80	10.0 UJ	10.0 UJ	10.0 UJ	0.79 J
Sodium		n/a	54500 J	30200 J	40400 J	5210 J
Thallium		1.12	25.0 U	25.0 U	25.0 U	25.0 U
Vanadium		112	1.4 J	2.6 J	1.7 J	2.0 J
Zinc		4800	6.5 J	11.9 J	60.0 U	129
INORGANICS-DISSOLVED (ug/l)						
Aluminum		n/a	44.1 J	26.9 J	38.6 J	35.4 J
Antimony		n/a	60.0 U	60.0 U	60.0 U	60.0 U
Arsenic		n/a	15.0 U	15.0 U	15.0 U	15.0 U
Barium		n/a	77.1 J	173 J	105 J	107 J
Beryllium		n/a	0.24	5.0 U	5.0 U	0.25 J
Cadmium		n/a	5.0 U	5.0 U	5.0 U	5.0 U
Calcium		n/a	78100	118000	48800	46900

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level.
Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3MW01SD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Rainier Court Area 3 TBA - Monitoring Well Sample Data Listing Compared to Screening Levels

Constituent	Station ID: / Sample ID: / EPA Sample ID: / Depth (ft bgs):	Screening Level	MW-006 / RC-GW-MW006-0000 / 03214201 / N/A	MW-007 / RC-GW-MW007-0000 / 03214211 / N/A	MW-008 / RC-GW-MW008-0000 / 03214207 / N/A	MW-009 / RC-GW-MW009-0000 / 03214209 / N/A
Chromium		n/a	10.0 U	10.0 U	10.0 U	10.0 U
Cobalt		n/a	2.3 J	2.7 J	50.0 U	2.9 J
Copper		n/a	25.0 U	9.9 J	25.0 U	25.0 U
Iron		n/a	996	100 U	6750	1370
Lead		n/a	10.0 U	10.0 U	10.0 U	10.0 U
Magnesium		n/a	63000	41600	35600	7510
Manganese		n/a	1040	845	2520	553
Mercury		n/a	0.20 U	0.20 U	0.20 U	0.20 U
Nickel		n/a	5.1 J	8.9 J	40.0 U	5.8 J
Potassium		n/a	5380 J	19100 J	840 J	2290 J
Selenium		n/a	35.0 U	2.0 J	35.0 U	35.0 U
Silver		n/a	10.0 UJ	10.0 UJ	10.0 UJ	10.0 UJ
Sodium		n/a	50500 J	33800 J	36900 J	7320 J
Thallium		n/a	25.0 U	25.0 U	25.0 U	25.0 U
Vanadium		n/a	50.0 U	2.0 J	1.2 J	50.0 U
Zinc		n/a	13.4 J	18.3 J	5.7 J	170

Blank cells indicate analysis was not performed. Boxed cells indicate the detection limit for the non-detected result exceeded the screening level. Shaded cells indicate the detected concentration exceeds the screening level.

Reproduction Codes: R3MW01SD.DBF - chFDEref.frx Boxed Cells Standard:WBGWR3, Shaded Cells:WBGWR3-DET

Groundwater sampling location on Rainier Court Phase IV Site

Table 4
Results Summary Groundwater Samples
Rainer Court Area 4 TBA
Seattle, Washington

Description	MTCA Method A	Parcel M	Parcel N	Parcel O
Monitoring Well Number	Residential	MW-12	MW-10	MW-11
EPA Number	Groundwater	05434051	05434050	05384262
CLP Number	Clean Up Levels	J66P2	J66P1	J66M5
VOCs (µg/L)				
Acetone	-	**3.8 J**	**2.7 J**	**4 J**
Cyclohexane	-	0.50 U	**0.17 J**	10 U
Benzene	5	**0.16 J**	0.50 U	10 U
Toluene	1000	**0.61**	**0.40 J**	10 U
Ethylbenzene	700	**0.10 J**	0.50 U	10 U
Xylenes (total)	1000	**0.65**	**0.52**	10 U
SVOCs (µg/L)			**None Detected**	
TPH				
Gasoline-Range Organics (µg/L)	1000	25 U	NA	NA
Diesel-Range Organics (mg/L)	0.5	**0.49**	**0.49**	**0.60**
Motor Oil-Range Organics (mg/L)	0.5	**0.51**	**0.35**	**0.83**
Inorganics (µg/L)				
Aluminum	-	**2070**	**86.0 J**	**293**
Barium	-	**283**	**191 J**	**120 J**
Calcium	-	**195000**	**148000**	**52600**
Chromium (Total)	50	**5.9 J**	10.0 U	10.0 U
Cobalt	-	**2.8 J**	**1.9 J**	50.0 U
Copper	-	**12.9 J**	25.0 U	**2.5 J**
Iron	-	**23200**	**32500**	**27900**
Lead	15	**27.4**	10.0 U	10.0 U
Magnesium	-	**31800**	**19200**	**24600**
Manganese	-	**4360**	**2340**	**3330**
Nickel	-	**13.0 J**	**2.4 J**	40.0 U
Potassium	-	**17200 J**	**12900 J**	**12600 J**
Silver	-	10.0 U	**2.2 J**	10.0 UJ
Sodium	-	**27000 J**	**20300 J**	**14300**
Vanadium	-	**7.9 J**	**1.2 J**	50.0 U
Zinc	-	**58.7 J**	**16.4 J**	**23.7 J**

Notes:

Bold type indicates the sample concentration above the detection limit.

Bold underlined type indicates a sample concentration that is above MTCA cleanup levels.

CLP: Contract Laboratory Program

mg/kg: milligram per kilogram

µg/kg: microgram per kilogram

MTCA: Model Toxics Control Act

NA: Not analyzed

J: The analyte was positively identified. The associated numerical value is an estimate due to detection below the sample quantitation limit (SQL) or QC exceedance.

U: The analyte was not detected. The associated numerical value is the sample quantitation limit.

UJ: The analyte was not detected at or above the reported concentration, which is an estimate of the SQL due to QC exceedance(s).

- : No MTCA standard

Groundwater sampling location on Rainier Court Phase IV Site

TABLE 1
SUMMARY OF FIELD MEASUREMENTS AND GROUNDWATER CHEMICAL ANALYTICAL DATA
PETROLEUM HYDROCARBONS, PAHs, PCBs AND METALS
RAINIER COURT
SEATTLE, WASHINGTON

Monitoring Well[1]	Sample Date	Depth to Water (feet)	Groundwater Elevation (feet)	Petroleum Hydrocarbons[2] (µg/l)		PAHs[3] (µg/l)	PCBs[4] (µg/l)	Dissolved RCRA Metals[5] (µg/l)				
				Diesel	Lube Oil			Arsenic	Barium	Chromium	Lead	Selenium
Compliance Wells												
MW-3	02/13/06	7.53	38.85	<236	<472	ND	<0.100	<1.00	80.7	3.10	<1.00	<1.00
	10/31/06	7.94	38.44	<238	<476	ND	--	<1.00	115.0	4.47	<1.00	<1.00
	02/13/07	7.71	38.67	--	--	--	--	--	--	--	--	--
	03/09/07	7.77	38.61	<236	<472	ND	--	<1.00	106	3.94	<1.00	<1.00
SMW-6	02/13/06	7.98	36.60	<236	<472	naphthalene=0.202	<0.100	1.88	142	1.65	<1.00	<1.00
	10/31/06	8.8	35.78	<238	<476	ND	--	1.14	29.4	<1.00	<1.00	<1.00
	02/13/07	8.43	36.15	<236	<472	ND	--	<1.00	51.1	<1.00	<1.00	<1.00
SMW-7	10/31/06	16.15	30.77	<238	<476	ND	--	4.41	27.6	<1.00	<1.00	<1.00
	02/13/07	11.66	35.26	<236	<472	naphthalene=0.705	--	<1.00	89	<1.00	<1.00	<1.00
Other Wells in Site Vicinity												
MW-12	02/13/06	8.13	38.40	<236	<472	ND	<0.100	1.36	257	<1.00	1.12	<1.00
MW-14	02/13/06	6.95	37.31	<236	<472	ND	<0.100	<1.00	147	<1.00	<1.00	<1.00
SMW-5	02/13/06	7.46	39.04	<236	<472	ND	<0.100	<1.00	109	<1.00	<1.00	<1.00
SMW-8	10/31/06	10.06	37.10	--	--	--	--	--	--	--	--	--
	02/13/07	10.37	37.33	--	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Level				500	500	varies [6]	0.1	5	560 [6]	50	15	80 [7]

Notes:

[1]The approximate exploration locations are shown in Figure 2.

[2]Petroleum hydrocarbons analyzed by NW TPH-Dx with acid/silica gel clean-up.

[3]Polycyclic aromatic hydrocarbons; analyzed by EPA Method 8270 SIM. Refer to the analytical reports for the full list of analytes tested. Values are only shown for detected constituents.

[4]Polychlorinated biphenyls; analyzed by EPA Method 8082 MOD.

[5]Analyzed by EPA 6000/7000 Series methods. Refer to the analytical reports for the full list of analytes tested. Values are only shown for detected constituents.

[6]The MTCA Method A cleanup level for naphthalene is 160 ug/l.

[7]The MTCA Method B cleanup level is shown because a MTCA Method A cleanup level is not available.

MW-12, MW-14 and SMW-5 were not sampled per approval by Ecology on 10/5/06. SMW-8 was installed to provide water elevation data only and is not sampled.

µg/l = micrograms per liter

"--" = not tested ND = not detected MTCA = Model Toxics Control Act

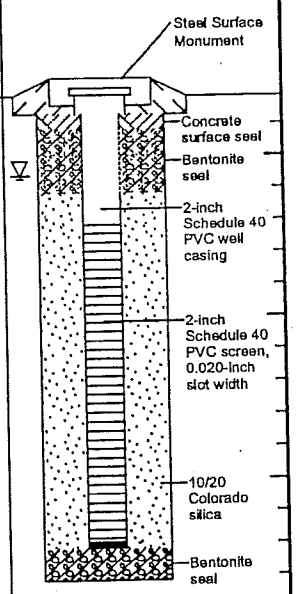
Chemical analyses conducted by North Creek Analytical Laboratory of Bothell, Washington.

APPENDIX C
Logs of Phase IV Monitoring Wells

Date(s) Drilled	12/27/01	Logged By	TMK	Checked By	BPP
Drilling Contractor	Holt Drilling	Drilling Method	HSA	Sampling Methods	Dames & Moore
Total Boring Depth (ft)	24.5	Hammer Data	300 (lb) hammer/ 30 (in) drop	Drilling Equipment	B-52 Truck Rig
Well Depth (ft)	14	Top of Well Elevation (ft)	96.86	Ground Water Level (ft. bgs)	2.46
System/ Datum					

Elevation feet	Depth feet	SAMPLES Interval	Testing	Recovered (in)	Blows/foot	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor PID(ppm)
	0						AC	2 inches asphalt		
95							ML	Gray silt with sand (soft, moist) (fill)	NS	<100
	5			18	33		SM	Light brown silty fine to medium sand (hard, moist) (fill)	SS	<100
90							SM	Blue/gray silty fine to medium sand (loose, moist)		
							ML	Brown silty fine to medium sand (hard, moist) (fill)	NS	<100
	10			18	57				NS	<100
				18	50/5½"					
85							CL	Gray to brown clay (hard, moist)	NS	<100
	15			18	65					
80									NS	<100
	20			18	20					
75									NS	<100
				18	50/5"					
	25							Boring completed at 24.5 feet on 12/27/01 Ground water not observed during drilling Ground water observed in well at 2.46 feet on 01/14/02		
70										
	30									
65										
	35									

WELL CONSTRUCTION



Note: See Figure C-2 for explanation of symbols

8322-002-01 GEI_ENVWELL_2.1.0 W:\SEATTLE\PROJECTS\8\8322002\01\FINALS\8322002.GPJ GEIV2_2.GDT 2/6/02

LOG OF MONITORING WELL MW-6

Geo Engineers

Project: SEED-Rainier Court
Project Location: Seattle, Washington
Project Number: 8322-002-01

Figure: C-8
Sheet 1 of 1

Monitoring Well MW-12

PROJECT Rainier Court Area 4 TBA
JOB NUMBER 12644-001-003-0174-00
DATE COMPLETED September 21, 2005
DRILLING METHOD Direct Push
TOP OF CASING ELEV (ft) NA
GROUND SURFACE ELEV (ft) NA
LOGGED BY J. Foslien

Depth (ft)	PID Reading (ppm)	Sample No.	Blows Per Foot	Sample Recovery	Graphic Log	USCS Classification	Lithologic Description
0							No recovery, (Fill).
5	1.2					ML	Gravelly SILT (ML), Gray, 10% gravel, 30% silt, 60% fines, dry, glass, plastic, wood debris no odor/stain, (Fill).
10	0.6					ML	Sandy SILT (ML), Medium brown, wet, no odor or stain,, (Alluvium).
						CL	Silty CLAY (CL), Gray, 100% fines, moist, No odor or stain, (Alluvium).
15							Bottom of hole @ 16 feet

Well Diagram

- Concrete surface seal
- Bentonite chips
- 3/4-inch Sch. 40 PVC riser
- 3/4-inch Sch. 40 PVC with 0.010" factory cut slots
- 2/12 sand

Plate
3

Monitoring Well MW-11

PROJECT Rainier Court Area 4 TBA
JOB NUMBER 12644-001-003-0174-00
DATE COMPLETED September 21, 2005
DRILLING METHOD Direct Push
TOP OF CASING ELEV (ft) NA
GROUND SURFACE ELEV (ft) NA
LOGGED BY J. Foslien

Depth (ft)	PID Reading (ppm)	Sample No.	Blows Per Foot	Sample Recovery	Graphic Log	USCS Classification	Lithologic Description
0						ML	Gravelly SILT with COBBLES (ML), Brownish gray, 10% gravel, 40% silt, 50% fines, moist, No odor or stain, wet to saturated at 9 ft, (Fill).
	0.4						
5	0.2						
10	0.0					CL	Silty CLAY (CL), Gray, 100% fines, moist, No odor or stain, (Alluvium).
	0.0						
15							Bottom of hole @ 16 feet

Well Diagram

- Concrete surface seal
- Bentonite chips
- 3/4-inch Sch. 40 PVC riser
- 3/4-inch Sch. 40 PVC with 0.010" factory cut slots
- 2/12 sand

Plate 2

Monitoring Well MW-10

PROJECT Rainier Court Area 4 TBA
JOB NUMBER 12644-001-003-0174-00
DATE COMPLETED September 21, 2005
DRILLING METHOD Direct Push
TOP OF CASING ELEV (ft) NA
GROUND SURFACE ELEV (ft) NA
LOGGED BY J. Foslien

Depth (ft)	PID Reading (ppm)	Sample No.	Blows Per Foot	Sample Recovery	Graphic Log	USCS Classification	Lithologic Description
0						ML	Gravelly SILT with SAND and COBBLES (ML), Medium brown, 30% gravel, 30% sand, 40% fines, dry, (Fill).
	0.1	RCT-SO-P4MW010-0020				ML	SILT with GRAVEL and SAND (ML), Redish brown, 10% gravel, 20% sand, 70% fines, dry, no odor or stain, brick, plastic, charcoal, and glass fragments, (Fill).
5	0.1						No samples 6-16' bgs.
10							
15							Bottom of hole @ 16 feet

Well Diagram

- Concrete surface seal
- Bentonite chips
- 3/4-inch Sch. 40 PVC riser
- 3/4-inch Sch. 40 PVC with 0.010" factory cut slots
- 2/12 sand

Notes:
1. Analytes for samples collected: TAL metals, SVOC, VOC, PAH, TPH-D

Plate 1

APPENDIX D
Terrestrial Ecological Evaluation Form

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation. You still need to submit your evaluation as part of your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: Rainier Court Phase IV Development	
Facility/Site Address: 3616 34th Avenue South, Seattle, WA	
Facility/Site No: 62285426	VCP Project No.: NW0716

Step 2: IDENTIFY EVALUATOR			
Please identify below the person who conducted the evaluation and their contact information.			
Name: Jim Roth		Title: Sr. Hydrogeologist	
Organization: GeoEngineers, Inc			
Mailing address: 600 Stewart St. Suite 1700			
City: Seattle	State: WA	Zip code: 98101	
Phone: 206-728-2674	Fax: 206-728-2732	E-mail: jroth@geoengineers.com	

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

☒ Yes *If you answered **"YES,"** then answer **Question 2**.*

☐ No or Unknown *If you answered **"NO" or "UKNOWN,"** then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? *Check all that apply. Then skip to **Step 4** of this form.*

Point of Compliance: WAC 173-340-7491(1)(a)

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

☐ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

☒ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☒ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☐ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☐ No *If you answered **"NO,"** then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? *Check all that apply. Then skip to **Step 4** of this form.*

Exposure Analysis: WAC 173-340-7492(2)(a)

☐ Area of soil contamination at the Site is not more than 350 square feet.

☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. *See* WAC 173-340-7493(1)(c).

1. Was there a problem? *See* WAC 173-340-7493(2).

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? *See* WAC 173-340-7493(3).

- ☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- ☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use? *Check all that apply. See* WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

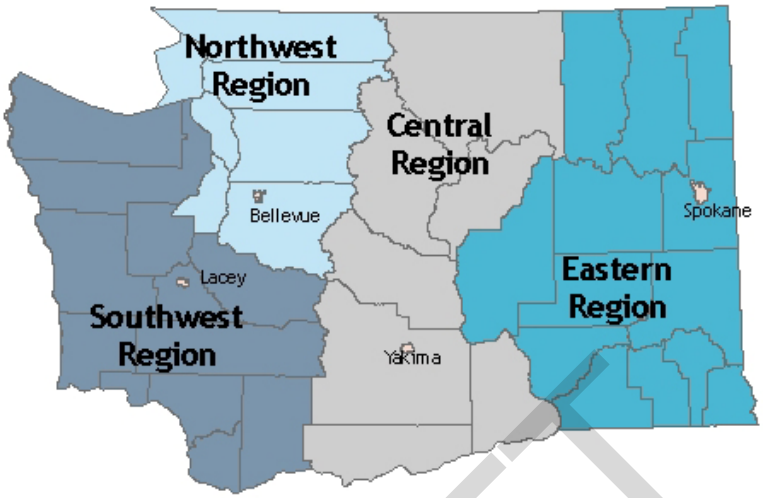
5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ Yes If so, please identify the Ecology staff who approved those steps:

☐ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: Sara Nied 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: Mark Dunbar 15 W. Yakima Ave., Suite 200 Yakima, WA 98902
Southwest Region: Attn: Scott Rose P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: Patti Carter N. 4601 Monroe Spokane WA 99205-1295

APPENDIX E
Cost Estimates for Remedial Alternatives 1 – 3

Table E-1

Cleanup Cost Estimate

Remedial Alternative 1

Removal of Upper 1.5 Feet of Contaminated soil with Containment and Institutional Controls

Rainier Court Phase IV
Seattle, Washington

Owner: SEED			**Computed By:**	**CDV/J. Roth**
Site: Revised Phase IV Rainier Court Project (Parcels GG, M, N, O, P)			**Date:**	**5-Oct-15**
			Page:	**1 of 1**

Item	Quantity	Unit	Unit Cost	Total Cost
CLEANUP COSTS				
Preparation (Env Consultant)				
Supplemental Environmental Site Characterization	0	Lump Sum	$ 30,000	$ -
Concrete Cap/Cap Drainage Design Input for Landscape/Permeable Paved Areas	1	Lump Sum	$ 4,000	$ 4,000
Preparation of Soil Handling-Disposal Plan; Cleanup Planning Meetings, Discussions	1	Lump Sum	$ 15,000	$ 15,000
Waste Disposal Profile Prep/Disposal Authorization	1	Lump Sum	$ 4,000	$ 4,000
Project Management-Communications	50	hours	$ 200	$ 10,000
Sub Total				**$ 33,000**
Remedial Action (Contractor)				
UST and Product Piping Removal (Assume 1 UST encountered during excavation)	1	UST	$ 8,000	$ 8,000
Decommission (4) Monitoring Wells in Parcels M, N , O	1	Lump Sum	$ 3,000	$ 3,000
Excavate Upper 1.5' of Contaminated Soil	5,270	cubic yards	$ 5	$ 26,350
Transport Contaminated Soil to Waste Management Faciity in Seattle (1.4 tons/cubic yard)	7,380	ton	$ 10	$ 73,800
Off-site Contaminated Soil Disposal at Permitted Landfill Facility (1.4 tons/cubic yard)	7,380	ton	$ 48	$ 354,240
Backfill with 1' Avg. Thickness of Seattle Type 17	3,360	ton	$ 30	$ 100,800
Install 3" Concrete Cap Beneath Landscape/Permeable Surfaces Outside Building/Alley/Parking Areas	1	Lump Sum	$ 137,500	$ 137,500
Install Perf Pipe Drainage System Above 3" Concrete Cap; 3' Vert Tie-in of Cap to Bldg Foundations-Alley	1	Lump Sum	$ 63,400	$ 63,400
Contractor Fee, General Conditions, B&O Tax	1	Lump Sum	$ 50,000	$ 50,000
WA State Sales Tax (9.5%) on Contractor Remedial Action Items				$ 77,624
Sub Total				**$ 894,714**
Remedial Action (Env Consultant)				
Chemical Analysis (30 samples for metals, PAHs, petroleum on 24-48 hr TAT)	30	sample	$ 750	$ 22,500
Chemical Analysis (40 samples for metals, PAHs, petroleum on STD TAT)	40	sample	$ 400	$ 16,000
Preconstruction Meetings, Regulatory Liason, Health & Safety	1	Lump Sum	$ 10,000	$ 10,000
Monitor-Document Cleanup Action (Contaminated Soil Excv, Sampling & Cap Install)	240	hours	$ 137	$ 32,880
Project Management,Communications and Chemical Data Evaluation	140	hours	$ 200	$ 28,000
Prepare Cleanup Report	1	Lump Sum	$ 15,000	$ 15,000
Sub Total				**$ 124,380**
Institutional Controls (Completed after Remedial Excavation-Env Consultant)				
Prepare Groundwater Monitoring Plan	1	Lump Sum	$ 6,000	$ 6,000
Install New Groundwater Monitoring Wells (Drilling & Consultant)	4	well	$ 4,000	$ 16,000
Prepare Environmental Covenant to Address Remaining Contamination	1	Lump Sum	$ 12,000	$ 12,000
Project Management and Dept. of Ecology Liason-Coordination	70	hour	$ 200	$ 14,000
Sub Total				**$ 48,000**
Costs for 2 Semiannual Groundwater Monitoring Events Over 1 Year				
Semiannual Groundwater Monitoring	2	Lump Sum	$ 2,000	$ 4,000
Chemical Analysis (Assume 4 Wells Sampled, 2 Events)	8	Lump Sum	$ 500	$ 4,000
Project Management, Data Evaluation and Reports	60	hours	$ 200	$ 12,000
Sub Total				**$ 20,000**
			Total Estimated Cleanup Costs	**$ 1,095,094**
			20% Contingency	**$ 219,019**
			TOTAL ESTIMATED COST	**$1,314,112**

Notes:

Estimated cleanup costs are for planning and comparison purposes--actual costs will vary. Costs do not include site development-related permitting; structure removal; disposal of clean soil. Remedial Action Contractor Costs are based on cost estimate information provided by Inter-City Contractors. This cost estimate assumes no soil is characterized as Dangerous Waste. Assumes that remedial excavation removes 1.5 feet of contaminated fill soil across the RC IV site. A 20% contingency has been included for excavation/disposal of additional contaminated soil that may be encountered in areas where clean soil is currently expected based on widely spaced sampling locations.

Table E-2

Cleanup Cost Estimate

Remedial Alternative 2

Removal of Upper 3 Feet of Contaminated Soil with Containment and Institutional Controls

Rainier Court Phase IV
Seattle, Washington

Owner: SEED			**Computed By:**	**J. Roth**
Site: Revised Phase IV Rainier Court Project (Parcels GG, M, N, O, P)			**Date:**	**11-Sep-15**
			Page:	**1 of 1**

Item	Quantity	Unit	Unit Cost	Total Cost
CLEANUP COSTS				
Preparation (Env Consultant)				
Supplemental Environmental Site Characterization	0	Lump Sum	$ 30,000	$ -
Concrete Cap/Cap Drainage Design Input for Landscape/Permeable Paved Areas	1	Lump Sum	$ 4,000	$ 4,000
Preparation of Soil Handling-Disposal Plan; Cleanup Planning Meetings, Discussions	1	Lump Sum	$ 15,000	$ 15,000
Waste Disposal Profile Prep/Disposal Authorization	1	Lump Sum	$ 4,000	$ 4,000
Project Management-Communications	50	hours	$ 200	$ 10,000
Sub Total				**$ 33,000**
Remedial Action (Contractor)				
UST and Product Piping Removal (Assume 1 UST encountered during excavation)	1	UST	$ 8,000	$ 8,000
Decommission (4) Monitoring Wells in Parcels M, N , O	1	Lump Sum	$ 3,000	$ 3,000
Excavate Upper 3' of Contaminated Soil (2' in NE Portion where fill on ridge is thinner)	8,970	cubic yards	$ 5	$ 44,850
Transport Contaminated Soil to Waste Management Faciity in Seattle (1.4 tons/cubic yard)	12,560	ton	$ 10	$ 125,600
Off-site Contaminated Soil Disposal at Permitted Landfill Facility (1.4 tons/cubic yard)	12,560	ton	$ 48	$ 602,880
Backfill with 2' Avg. Thickness of Seattle Type 17	6,720	ton	$ 30	$ 201,600
Install 3" Concrete Cap Beneath Landscape/Permeable Surfaces Outside Building/Alley/Parking Areas	1	Lump Sum	$ 137,500	$ 137,500
Install Perf Pipe Drainage System Above 3" Concrete Cap; 3' Vert Tie-in of Cap to Bldg Foundations-Alley	1	Lump Sum	$ 63,400	$ 63,400
Contractor Fee, General Conditions, B&O Tax	1	Lump Sum	$ 77,000	$ 77,000
WA State Sales Tax (9.5%) on Contractor Remedial Action Items				$ 120,064
Sub Total				**$ 1,383,894**
Remedial Action (Env Consultant)				
Chemical Analysis (30 samples for metals, PAHs, petroleum on 24-48 hr TAT)	30	sample	$ 750	$ 22,500
Chemical Analysis (40 samples for metals, PAHs, petroleum on STD TAT)	40	sample	$ 400	$ 16,000
Preconstruction Meetings, Regulatory Liason, Health & Safety	1	Lump Sum	$ 10,000	$ 10,000
Monitor-Document Cleanup Action (Contaminated Soil Excv, Sampling & Cap Install)	300	hours	$ 137	$ 41,100
Project Management,Communications and Chemical Data Evaluation	180	hours	$ 200	$ 36,000
Prepare Cleanup Report	1	Lump Sum	$ 15,000	$ 15,000
Sub Total				**$ 140,600**
Institutional Controls (Completed after Remedial Excavation-Env Consultant)				
Prepare Groundwater Monitoring Plan	1	Lump Sum	$ 6,000	$ 6,000
Install New Groundwater Monitoring Wells (Drilling & Consultant)	4	well	$ 4,000	$ 16,000
Prepare Environmental Covenant to Address Remaining Contamination	1	Lump Sum	$ 12,000	$ 12,000
Project Management and Dept. of Ecology Liason-Coordination	70	hour	$ 200	$ 14,000
Sub Total				**$ 48,000**
Costs for 2 Semiannual Groundwater Monitoring Events Over 1 Year				
Semiannual Groundwater Monitoring	2	Lump Sum	$ 2,000	$ 4,000
Chemical Analysis (Assume 4 Wells Sampled, 2 Events)	8	Lump Sum	$ 500	$ 4,000
Project Management, Data Evaluation and Reports	60	hours	$ 200	$ 12,000
Sub Total				**$ 20,000**

Total Estimated Cleanup Costs	**$ 1,600,494**
20% Contingency	**$ 320,099**
TOTAL ESTIMATED COST	**$1,920,593**

Notes:

Estimated cleanup costs are for planning and comparison purposes--actual costs will vary. Costs do not include site development-related permitting; structure removal; disposal of clean soil. Remedial Action Contractor Costs are based on cost estimate information provided by Inter-City Contractors. This cost estimate assumes no soil is characterized as Dangerous Waste. Assumes that remedial excavation removes 3 feet of contaminated fill soil across the RC IV site (2 feet in NE portion where ridge/knoll is present). A 20% contingency has been included for excavation/disposal of additional contaminated soil that may be encountered in areas where clean soil is currently expected based on widely spaced sampling locations.

Table E-3

Cleanup Cost Estimate

Remedial Alternative 3

Excavation of All Contaminated Soil with Containment & Institutional Controls if Needed

Rainier Court Phase IV
Seattle, Washington

Owner: SEED			**Computed By:**	**CDV, J. Roth**
Site: Revised Phase IV Rainier Court Project (Parcels GG, M, N, O, P)			**Date:**	**5-Oct-15**
			Page:	**1 of 1**

Item	Quantity	Unit	Unit Cost	Total Cost
CLEANUP COSTS				
Preparation (Env Consultant)				
Supplemental Environmental Site Characterization	0	Lump Sum	$ 30,000	$ -
Concrete Cap/Cap Drainage Design Input for Landscape/Permeable Paved Areas	0	Lump Sum	$ 4,000	$ -
Preparation of Soil Handling-Disposal Plan; Cleanup Planning Meetings, Discussions	1	Lump Sum	$ 15,000	$ 15,000
Waste Disposal Profile Prep/Disposal Authorization	1	Lump Sum	$ 4,000	$ 4,000
Project Management-Communications	50	hours	$ 200	$ 10,000
Sub Total				**$ 29,000**
Remedial Action (Contractor)				
UST and Product Piping Removal (Assume 1 UST encountered during excavation)	1	UST	$ 8,000	$ 8,000
Decommission (4) Monitoring Wells in Parcels M, N , O	1	Lump Sum	$ 3,000	$ 3,000
Excavate All Contaminated Soil	17,140	cubic yards	$ 5	$ 85,700
Transport Contaminated Soil to Waste Management Faciity in Seattle (1.4 tons/cubic yard)	24,000	ton	$ 10	$ 240,000
Off-site Contaminated Soil Disposal at Permitted Landfill Facility (1.4 tons/cubic yard)	24,000	ton	$ 48	$ 1,152,000
Backfill with 4' Avg. Thickness of Seattle Type 17	13,440	ton	$ 30	$ 403,200
Install 3" Concrete Cap Beneath Landscape/Permeable Surfaces Outside Building/Alley/Parking Areas	0	Lump Sum	$ 137,500	$ -
Install Perf Pipe Drainage System Above 3" Concrete Cap; 3' Vert Tie-in of Cap to Bldg Foundations-Alley	0	Lump Sum	$ 63,400	$ -
Contractor Fee, General Conditions, B&O Tax	1	Lump Sum	$ 100,000	$ 100,000
WA State Sales Tax (9.5%) on Contractor Remedial Action Items				$ 189,231
Sub Total				**$ 2,181,131**
Remedial Action (Env Consultant)				
Chemical Analysis (30 samples for metals, PAHs, petroleum on 24-48 hr TAT)	30	sample	$ 750	$ 22,500
Chemical Analysis (40 samples for metals, PAHs, petroleum on STD TAT)	40	sample	$ 400	$ 16,000
Preconstruction Meetings, Regulatory Liason, Health & Safety	1	Lump Sum	$ 10,000	$ 10,000
Monitor-Document Cleanup Action (Contaminated Soil Excv, Sampling & Cap Install)	450	hours	$ 137	$ 61,650
Project Management,Communications and Chemical Data Evaluation	270	hours	$ 200	$ 54,000
Prepare Cleanup Report	1	Lump Sum	$ 15,000	$ 15,000
Sub Total				**$ 179,150**
Institutional Controls (Completed after Remedial Excavation-Env Consultant)				
Prepare Groundwater Monitoring Plan	1	Lump Sum	$ 6,000	$ 6,000
Install New Groundwater Monitoring Wells (Drilling & Consultant)	4	well	$ 4,000	$ 16,000
Prepare Environmental Covenant to Address Remaining Contamination	1	Lump Sum	$ 12,000	$ 12,000
Project Management and Dept. of Ecology Liason-Coordination	70	hour	$ 200	$ 14,000
Sub Total				**$ 48,000**
Costs for 2 Semiannual Groundwater Monitoring Events Over 1 Year (Env Consultant)				
Semiannual Groundwater Monitoring	2	Lump Sum	$ 2,000	$ 4,000
Chemical Analysis (Assume 4 Wells Sampled, 2 Events)	8	Lump Sum	$ 500	$ 4,000
Project Management, Data Evaluation and Reports	60	hours	$ 200	$ 12,000
Sub Total				**$ 20,000**
			Total Estimated Cleanup Costs	**$ 2,436,281**
			20% Contingency	**$ 487,256**
			TOTAL ESTIMATED COST	**$2,923,537**

Notes:

Estimated cleanup costs are for planning and comparison purposes–actual costs will vary. Costs do not include site development-related permitting; structure removal; disposal of clean soil. Remedial Action Contractor Costs are based on cost estimate information provided by Inter-City Contractors. This cost estimate assumes no soil is characterized as Dangerous Waste. Assumes that remedial excavation removes all contaminated fill soil across the RC IV site. A 20% contingency has been included for excavation/disposal of additional contaminated soil that may be encountered in areas where clean soil is currently expected based on widely spaced sampling locations.

APPENDIX F
Report Limitations and Guidelines for Use

APPENDIX F
REPORT LIMITATIONS AND GUIDELINES FOR USE[2]

This appendix provides information to help you manage your risks with respect to the use of this report. Please confer with GeoEngineers if you need to know more about how these "Report Limitations and Guidelines for Use" apply to your project or property.

Read These Provisions Closely

It is important to recognize that environmental engineering and geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce the risk of misunderstandings or unrealistic expectations that lead to disappointments, claims and disputes.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

GeoEngineers has prepared this RI/FS and CAP report of the Rainier Court Phase IV Site in general accordance with the scope and limitations of our proposal, dated June 19, 2015. This report has been prepared for the exclusive use of Rainier Court Associates 2015-IV, LLC. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

GeoEngineers structures its services to meet the specific needs of its clients. For example, an environmental site assessment study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. Use of this report is not recommended for any purpose or project other than as expressly stated in this report.

This Environmental Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the Rainier Court Phase IV Site. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this Project. Unless GeoEngineers specifically indicates otherwise, it is important not to rely on this report if it was:

- not prepared for you,
- not prepared for your Project,
- not prepared for the specific site explored, or
- completed before Project changes were made.

If changes to the Project or property occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity

2 Developed based on material provided by GBA, GeoProfessional Business Association; www.geoprofessional.org.

to review our interpretations and recommendations in the context of such changes. Based on that review, we can provide written modifications or confirmation, as appropriate.

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the party(ies) to whom this report is addressed. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. Within the limitations of the agreed Project scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

Understand That Geotechnical Issues Have Not Been Addressed

Unless geotechnical engineering was specifically included in our scope of service, this report does not provide any geotechnical findings, conclusions, or recommendations, including but not limited to, the suitability of subsurface materials for construction purposes.

Do Not Separate Documentation from the Report

Environmental reports often include supplemental documentation, such as maps, figures and table. Do not separate such documentation from the report. Further, do not, and do not permit any other party to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.

Environmental Regulations Change and Evolve

Some substances may be present in the vicinity of the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or if more stringent environmental standards are developed in the future.

Subsurface Conditions Can Change

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the subject property, by new releases of hazardous substances, new information or technology that become available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

Soil and Groundwater End Use

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject property or reuse of the affected soil or groundwater

on-site to evaluate the potential for associated environmental liabilities. GeoEngineers will not assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject property to another location, or the reuse of such soil and/or groundwater on-site in any instances that we did not recommend, know of, or control.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the subject property. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied its professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ significantly from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design documents. Only photographic or electronic reproduction that preserves the entire original boring log is acceptable, but separating logs from the report can create increase the risk of potential misinterpretation.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this Project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.